



16323 SHOEMAKER AVENUE INDUSTRIAL TRAFFIC IMPACT ANALYSIS

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1 EXECUTIVE SUMMARY

This Traffic Impact Analysis (TIA) has been prepared by EPD Solutions, Inc. (EPD) to analyze the proposed industrial building proposed located at 16323 Shoemaker Avenue in the northeastern part of the City of Cerritos (City). Regional access to the project site would be provided by Interstate 5 to the north, State Route 91 to the south, and Interstate 605 to the west. Local access to the site is provided by Shoemaker Avenue and Moore Street. The project site currently has an existing 64,160 square foot building used for research and development. The project would redevelop the site with a 159,627 square foot warehouse building inclusive of 20 truck loading docks. Approximately 10% of the building would be used for cold storage. The proposed warehouse would generate approximately 440 daily passenger car equivalent (PCE) trips which includes 43 AM peak hour and 47 PM peak hour PCE trips. The existing research and development building generates 711 daily trips which includes 66 AM peak hour trips and 63 PM peak hour trips. When accounting for the existing land use, the project would result in a net negative trip generation. Thus, the proposed land use would generate less than the existing land use with -271 daily PCE trips, including -23 AM peak hour trips, and -16 PM peak hour trips. To conservatively analyze the impacts of the proposed project the full warehouse trip generation was used, and no existing uses were factored in the analysis.

The following intersections were analyzed as a part of the study area:

1. Bloomfield Avenue/Alondra Boulevard
2. Bloomfield Avenue/166th Street
3. Bloomfield Avenue/Artesia Boulevard
4. Shoemaker Avenue/Alondra Boulevard
5. Shoemaker Avenue/166th Street
6. Shoemaker Avenue/Oak Crest Street
7. Shoemaker Avenue/Artesia Boulevard
8. Moore Street/Project Driveway 1
9. Shoemaker Avenue/Project Driveway 2
10. Shoemaker Avenue/Project Driveway 3

The study area intersections were evaluated during the AM and PM peak hours, which are defined as the hours with the highest traffic volumes during the 7 AM to 9 AM and 4 PM to 6 PM peak commute periods.

AM and PM peak hour traffic operations were evaluated for the following scenarios:

- Existing Conditions
- Existing plus Project Conditions
- Opening Year (2024)
- Opening Year (2024) plus Project

Level of Service Analysis Results

All study area intersections would operate at satisfactory Level of Service (LOS) in all analysis scenarios using both the Intersection Capacity Utilization Methodology (ICU) and Highway Capacity Manual (HCM) intersection analysis methodologies.

Truck Analysis

The distribution for truck traffic generally follows the truck routes designated in the City's General Plan Circulation Element. The addition of project truck traffic would not result in deficient queuing operations at any of the study intersections. The project site is expected to have 20 loading docks, and the project truck court provides enough space to accommodate truck turning on-site. No truck traffic is expected to disrupt either Moore Street or Shoemaker Avenue. Truck traffic appears to have adequate turning radii at the study area intersections.

Queueing Analysis

Existing queuing deficiencies were noted at the following intersections. No queueing deficiencies were noted as a result of the project.

1. Bloomfield Avenue/Alondra Boulevard
2. Bloomfield Avenue/166th Street
3. Bloomfield Avenue/Artesia Boulevard
6. Shoemaker Avenue/Oak Crest Street
7. Shoemaker Avenue/Artesia Boulevard

2 INTRODUCTION

This Traffic Impact Analysis (TIA) has been prepared by EPD Solutions, Inc. (EPD) to analyze the proposed warehouse located at 16323 Shoemaker Avenue in the City of Cerritos (City). The project site currently has an existing 64,160 square foot building used for research and development. The project would redevelop the site with a 159,627 square foot warehouse building inclusive of 20 truck loading docks. Approximately 10% of the building would be used for cold storage. To conservatively analyze the impacts of the proposed project the full warehouse was analyzed as a new use.

The scope of work for this TIA was reviewed and approved by the City of Cerritos and is provided in Appendix A. The TIA was prepared according to the approved scope of work using methodologies and significances criteria consistent as per the Los Angeles County Traffic Impact Analysis Report Guidelines, 1997.

2.1 Project Description

As noted previously, the proposed project is located within the northeastern portion of the City of Cerritos on one parcel at 16323 Shoemaker Avenue. Regional access to the project site would be provided by Interstate 5 to the north, State Route 91 to the south, and Interstate 605 to the west. Local access to the site is via Shoemaker Avenue and Moore Street. A 64,160 square foot building used for research and development is currently on the site. The project proposes to demolish the existing building, surface parking and attached infrastructure and redevelop the site with a new 159,627 square foot warehouse building with 20 loading docks. This building would have 10% of its space dedicated for cold storage.

The location of the project is shown in Figure 1 and the project site plan is shown in Figure 2. The project would be accessible via one driveway on Moore Street and two driveways on Shoemaker Avenue. Truck access would be provided via the driveway on Moore Street and the north-most project driveway on Shoemaker Avenue. The driveway on Moore Street has a length of approximately 240 feet from the driveway to the gate which can stack 3 trucks. The north driveway on Shoemaker Avenue has a length of approximately 360 feet from the driveway which can hold 4 trucks. Passenger car access would be provided by all three driveways. The warehouse building would have 20 dock positions and 97 parking spaces for passenger cars.

Figure 1: Project Location

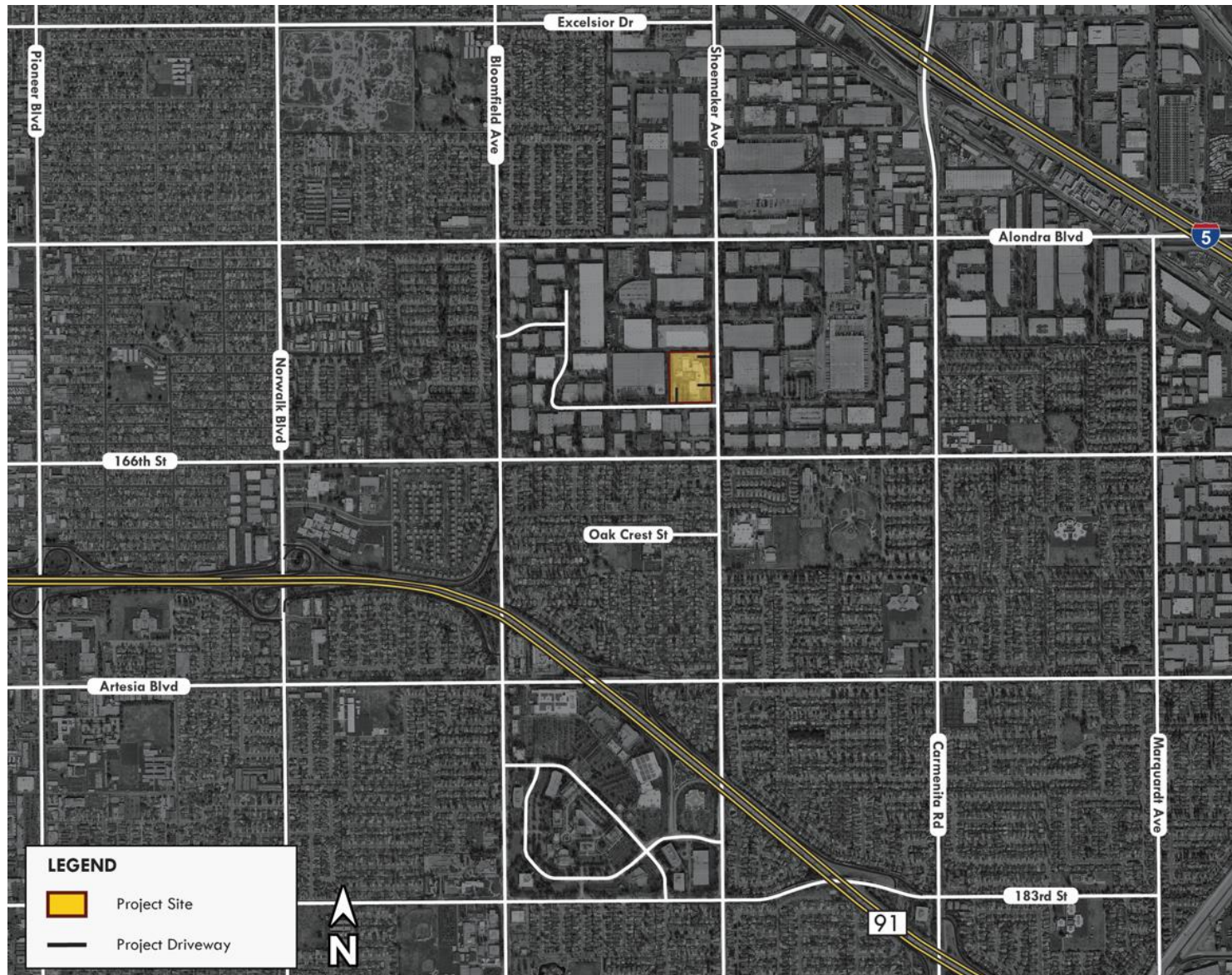
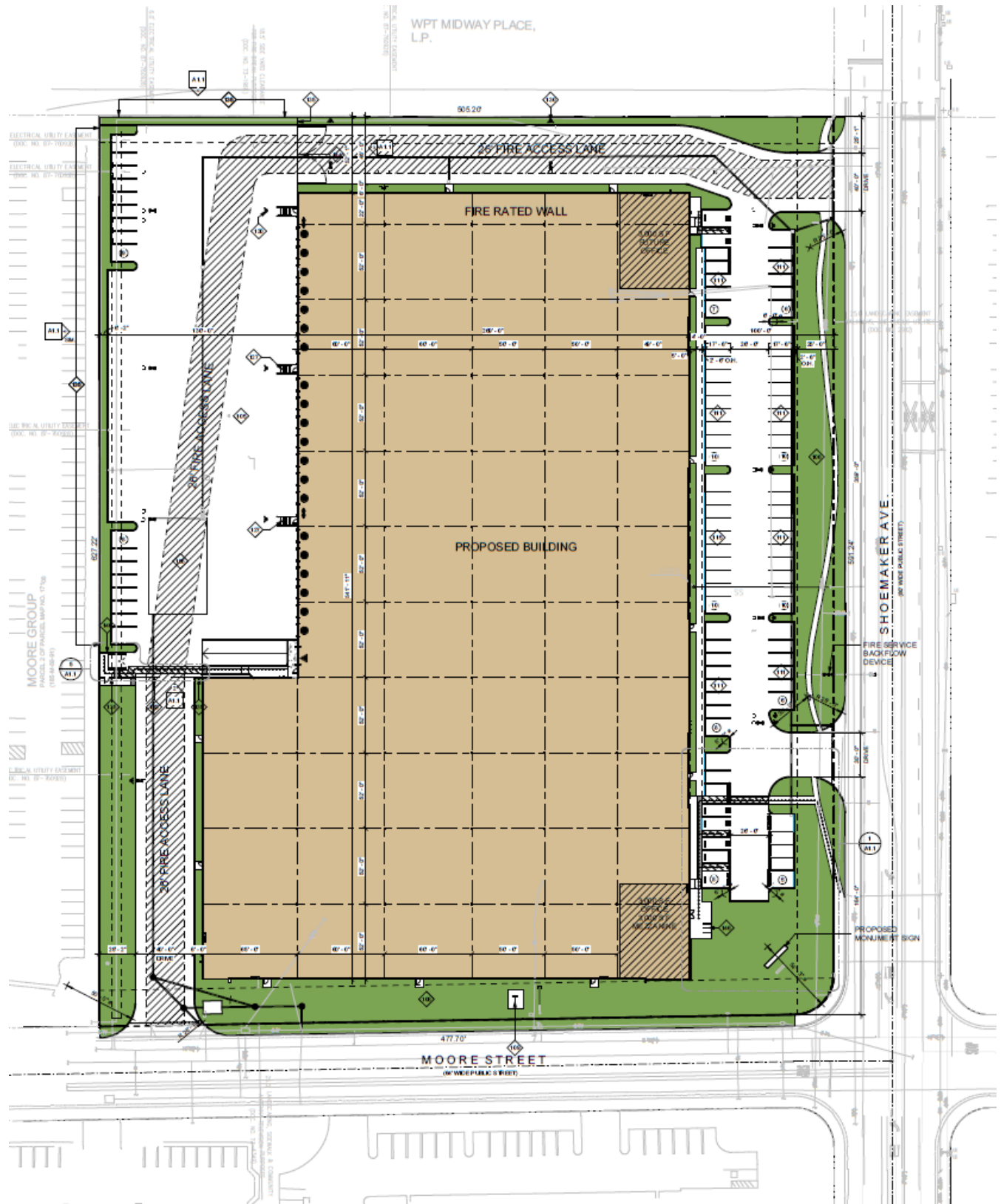


Figure 2: Project Site Plan



2.2 Study Area and Analysis Scenarios

The City of Cerritos refers to the *County of Los Angeles Traffic Study Guidelines, 1997*. Additionally, City staff requested that a truck analysis discussing truck routes, docks, and potential truck queuing be discussed in this TIA.

The following intersections were included in the analysis as a part of the study area:

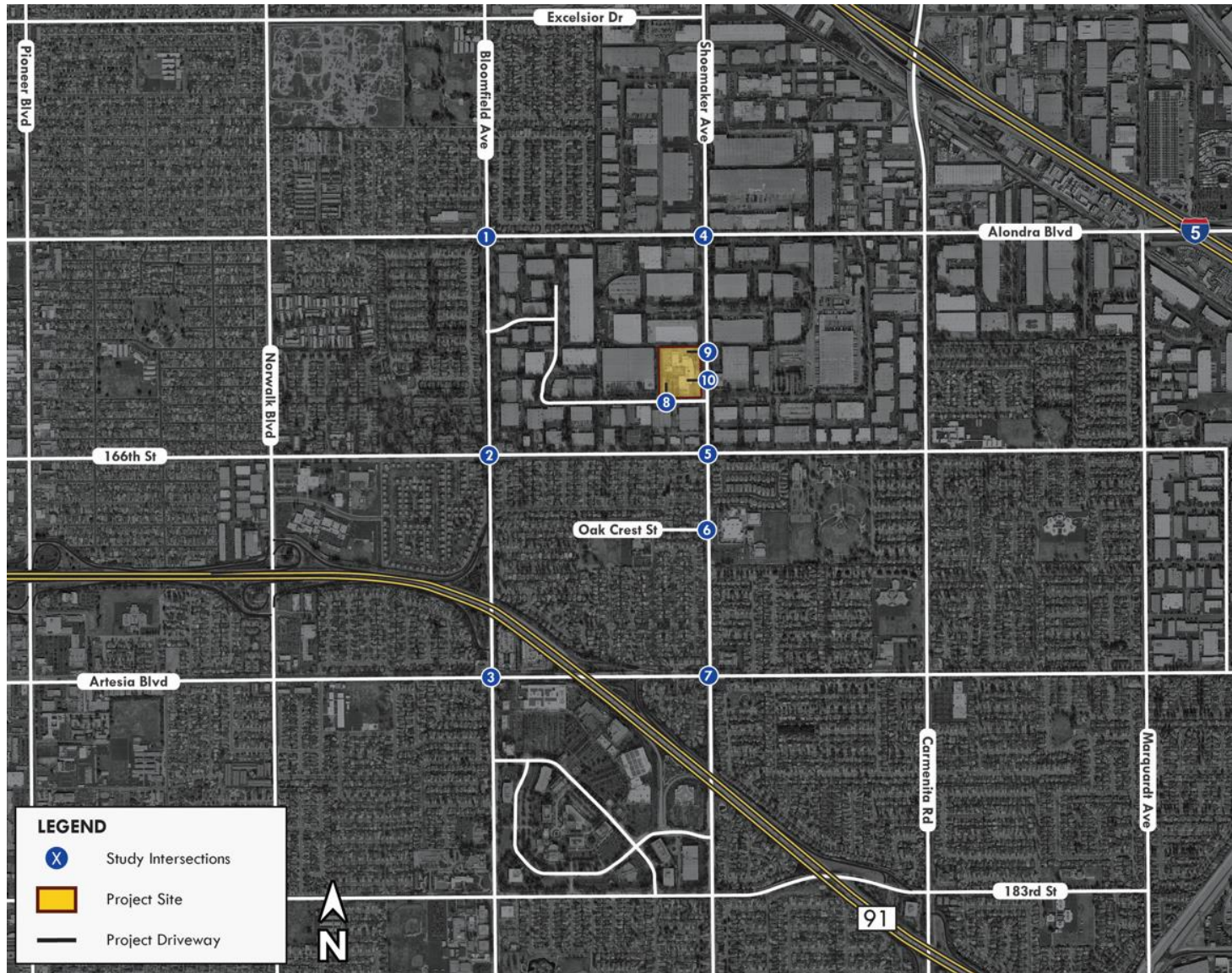
1. Bloomfield Avenue/Alondra Boulevard
2. Bloomfield Avenue/166th Street
3. Bloomfield Avenue/Artesia Boulevard
4. Shoemaker Avenue/Alondra Boulevard
5. Shoemaker Avenue/166th Street
6. Shoemaker Avenue/Oak Crest Street
7. Shoemaker Avenue/Artesia Boulevard
8. Moore Street/Project Driveway 1
9. Shoemaker Avenue/Project Driveway 2
10. Shoemaker Avenue/Project Driveway 3

The study area is shown on Figure 3, *Project Study Area*. Study area intersections were evaluated during the AM and PM peak hours, which are defined as the hour with the highest traffic volumes during the 7 AM to 9 AM and 4 PM to 6 PM peak commute periods. The following scenarios are included in this analysis:

- Existing Conditions
- Existing plus Project Conditions
- Project Opening Year (2024)
- Project Opening Year (2024) plus Project Conditions

EPD contracted with a traffic counting and data collection firm to collect traffic counts at the study area intersections on Tuesday, September 13th of 2022. At the time the counts were collected, schools and businesses would be considered to operate normally and no adjustments to the counts would be necessary.

Figure 3: Project Study Area



2.3 Methodology

Intersection operations are evaluated using Level of Service (LOS), which is a measure of the delay experienced by drivers on a roadway facility. LOS A indicates free-flow traffic conditions and is generally the best operating conditions. LOS F is an extremely congested condition and is the worst operating condition from the driver's perspective. Please note that although the City of Cerritos (City) is located within Los Angeles County, the approved scoping agreement with City staff directed this study to use the Intersection Capacity Utilization Methodology (ICU) to assess impacts, Highway Capacity Manual (HCM), 7th Edition methodology was also used to assess queueing deficiency. Unsignalized intersections were calculated using the Highway Capacity Manual (HCM), 7th Edition methodology as well as ICU can be utilized only for signalized intersections. LOS results utilizing both the methodologies for each scenario are presented in this document.

For ICU methodology, the Level of Service (LOS) of a signalized intersection or an arterial roadway shall be based upon the sum of the volume-capacity ratios (V/C) of the critical movements. Table 1 shows the relationship between V/C range and LOS.

Table 1: Relationship between V/C Range and LOS at a Signalized Intersection for ICU Methodology

LOS	V/C Range
A	0.00-0.60
B	0.61-0.70
C	0.71-0.80
D	0.81-0.90
E	0.91-1.00
F	1.00+

For HCM 7th Edition methodology, LOS at signalized intersections is defined in terms of the weighted average control delay for the intersection as a whole. Control delay is a measure of the increase in travel time that is experienced due to traffic signal control and is expressed in terms of average control delay per vehicle (in seconds). Control delay is determined based on the intersection geometry and volume, signal cycle length, phasing and coordination along the arterial corridor. Table 2 shows the relationship between control delay and LOS.

Table 2: Relationship between Control Delay and LOS at a Signalized Intersection for HCM Methodology

LOS	Delay (Seconds per Vehicle)
A	≤ 10
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	>80

Unsignalized intersections are categorized as either all-way stop control (AWSC) or two-way stop control (TWSC). LOS at AWSC intersections is determined by the weighted average control delay

of the overall intersection. The HCM TWSC intersection methodology calculates LOS based on the delay experienced by drivers on the minor (stop-controlled) approaches to the intersection. For TWSC intersections, LOS is determined for each minor-street movement, as well as the major-street left-turns. The relationship between delay and LOS at unsignalized intersections is shown in Table 2.

Table 3: Relationship between Delay and LOS an Unsignalized Intersection

LOS	Delay (seconds)
A	0-10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F	>50

Intersection and roadway analysis parameters for analysis were taken from the County of Los Angeles, *2010 Congestion Management Program*. Additionally, it is important to note that analysis for both the HCM methodology and ICU methodologies will be presented in this study.

2.4 Significance Criteria

City of Cerritos

The City of Cerritos refers to the *Los Angeles County Traffic Impact Study Guidelines, 1997* for traffic study impacts. The City's General Plan states that the minimum threshold is LOS "D" FOR planning purposes.

The impact is considered significant if the project related increase in the volume to capacity (v/c) ratio equals or exceeds the threshold shown in Table 4.

Table 4: Significant Impact Threshold

INTERSECTIONS		
PRE-PROJECT		PROJECT V/C INCREASE
LOS	V/C	
C	0.71 to 0.80	0.04 or more
D	0.81 to 0.90	0.02 or more
E/F	0.91 or more	0.01 or more

3 BASELINE CONDITIONS

This section discusses the baseline (without project) conditions. Baseline conditions are those conditions that exist within the study area in the existing condition and that are forecast to occur in the future, without the proposed project.

3.1 Existing Transportation System

The project site is located on the northwest corner of Shoemaker Avenue and Moore Street in the City of Cerritos. Access to the project site is provided from Shoemaker Avenue and Moore Street. Regional access to the project site would be provided by Interstate 5 to the north, State Route 91 to the south, and Interstate 605 to the west.

Shoemaker Avenue is a north-south secondary arterial according to the City's General Plan. It is a four-lane divided highway with sidewalks in the project's vicinity. The posted speed limit is 45 miles per hour (mph). There are no bicycle lanes within the project's vicinity. There are transit stops located at Artesia Boulevard and Alondra Boulevard for Los Angeles County Metro Bus Line 128.

Bloomfield Avenue is a north-south major arterial according to the City's General Plan. It is a four-lane divided highway with sidewalks. The posted speed limit is 40 mph. There are bicycle lanes within the project's study area at Bloomfield Avenue. There are transit stops located at Alondra Boulevard for Los Angeles County Metro Bus Lines 3 and 128.

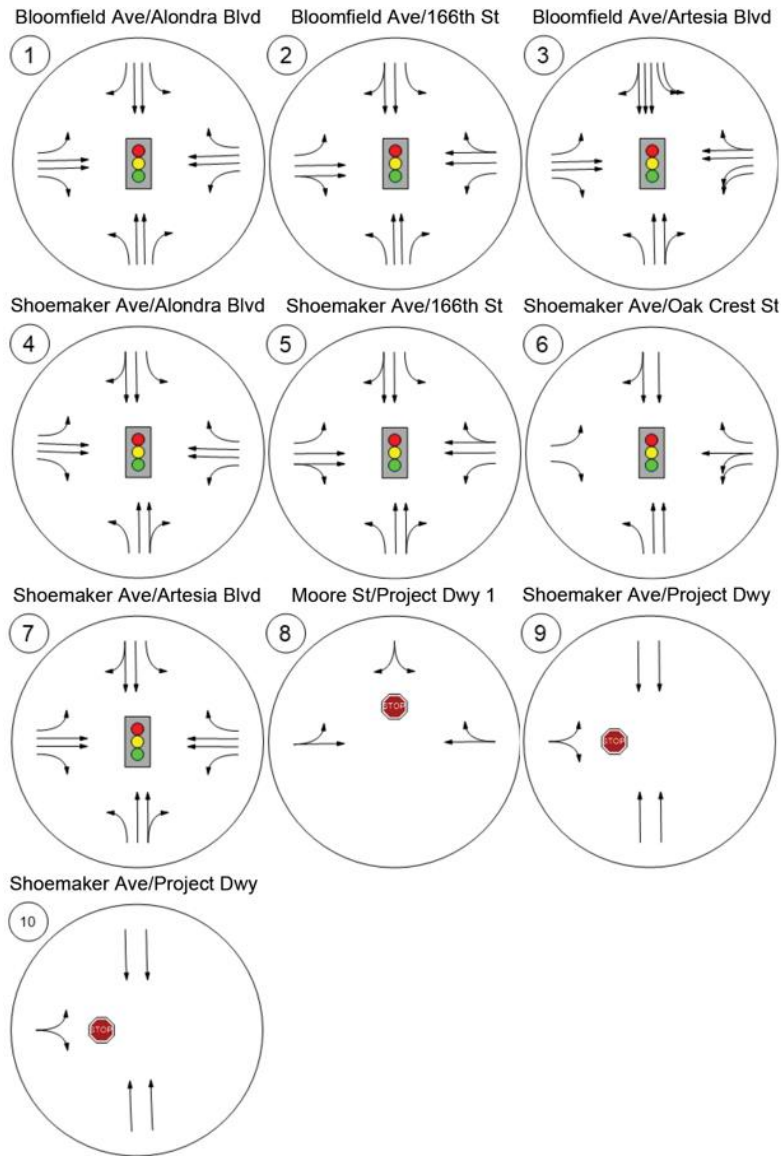
Alondra Boulevard is an east-west major arterial according to the City's General Plan. It is four-lane divided highway with sidewalks. The posted speed limit is 40 mph. There are no bicycle lanes within the project's study area at Alondra Boulevard. There are transit stops located at Bloomfield Avenue, Alondra Boulevard, and Shoemaker Avenue for Los Angeles County Metro Bus Lines 128.

166th Street is an east-west secondary arterial according to the City's General Plan. It is a four-lane divided highway with sidewalks. The posted speed limit is 40 mph. There are sidewalks and bicycle lanes within the project's study area at 166th Street. There are transit stops at Montecristo, Bloomfield Avenue, and Shoemaker Avenue for Los Angeles County Metro Bus Lines 1A and 2A.

Artesia Boulevard is an east-west major arterial according to the City's General Plan. It is a four-lane divided highway with sidewalks. The posted speed limit is 40 mph. There are sidewalks within the project's study area at Artesia Boulevard. However, there are no bicycle lanes. There are transit stops on Artesia Boulevard and Shoemaker Avenue for Los Angeles County Metro Bus Lines 1A, 2A, and 128.

The existing traffic control and intersection geometrics at study area intersections are shown in Figure 4, *Existing Conditions Lane Geometrics and Traffic Control*.

Figure 4: Existing Conditions Lane Geometries and Traffic Control



3.2 Existing Conditions Traffic Volumes and Intersection Operations

Existing AM and PM peak hour traffic volumes at the study area intersections are shown in Figures 5 and 6. The existing Levels of Service at the study area intersections were determined using the HCM methodology as well as ICU methodology, described previously in Section 2.3. Table 5 shows the existing AM and PM peak hour levels of service using HCM methodology at study intersections. Table 6 shows the existing AM and PM peak hour levels of service using ICU methodology at study intersections. All LOS calculations are provided in Appendix C. As shown in Table 5 and Table 6, all of the study area intersections operate at a satisfactory LOS D or better under the Existing Conditions scenario.

Table 5: Existing Conditions AM and PM Peak Hour LOS using HCM Methodology

Intersection	Control Type	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1. Bloomfield Ave/Alondra Blvd	Signal	32.9	C	36.0	D
2. Bloomfield Ave/166th St	Signal	25.3	C	23.2	C
3. Bloomfield Ave/Artesia Blvd	Signal	37.9	D	39.9	D
4. Shoemaker Ave/Alondra Blvd	Signal	29.5	C	28.2	C
5. Shoemaker Ave/166th St	Signal	21.4	C	22.3	C
6. Shoemaker Ave/Oak Crest St	Signal	23.0	C	11.1	B
7. Shoemaker Ave/Artesia Blvd	Signal	45.1	D	40.7	D
8. Moore St/Project Dwy 1	TWSC	-	-	-	-
9. Shoemaker Ave/Project Dwy 2	TWSC	-	-	-	-
10. Shoemaker Ave/Project Dwy 3	TWSC	-	-	-	-

TWSC = Two Way Stop Control

Delay Reported in Seconds per Vehicle

LOS = Level of Service

Table 6: Existing Conditions AM and PM Peak Hour LOS using ICU Methodology

Intersection	Control Type	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1. Bloomfield Ave/Alondra Blvd	Signal	0.732	C	0.760	C
2. Bloomfield Ave/166th St	Signal	0.814	D	0.755	C
3. Bloomfield Ave/Artesia Blvd	Signal	0.776	C	0.793	C
4. Shoemaker Ave/Alondra Blvd	Signal	0.607	B	0.624	B
5. Shoemaker Ave/166th St	Signal	0.731	C	0.646	B
6. Shoemaker Ave/Oak Crest St	Signal	0.663	B	0.432	A
7. Shoemaker Ave/Artesia Blvd	Signal	0.884	D	0.827	D

TWSC = Two Way Stop Control

Delay reported volume to capacity

LOS = Level of Service

Figure 5: Existing Conditions AM Peak Hour Traffic Volumes

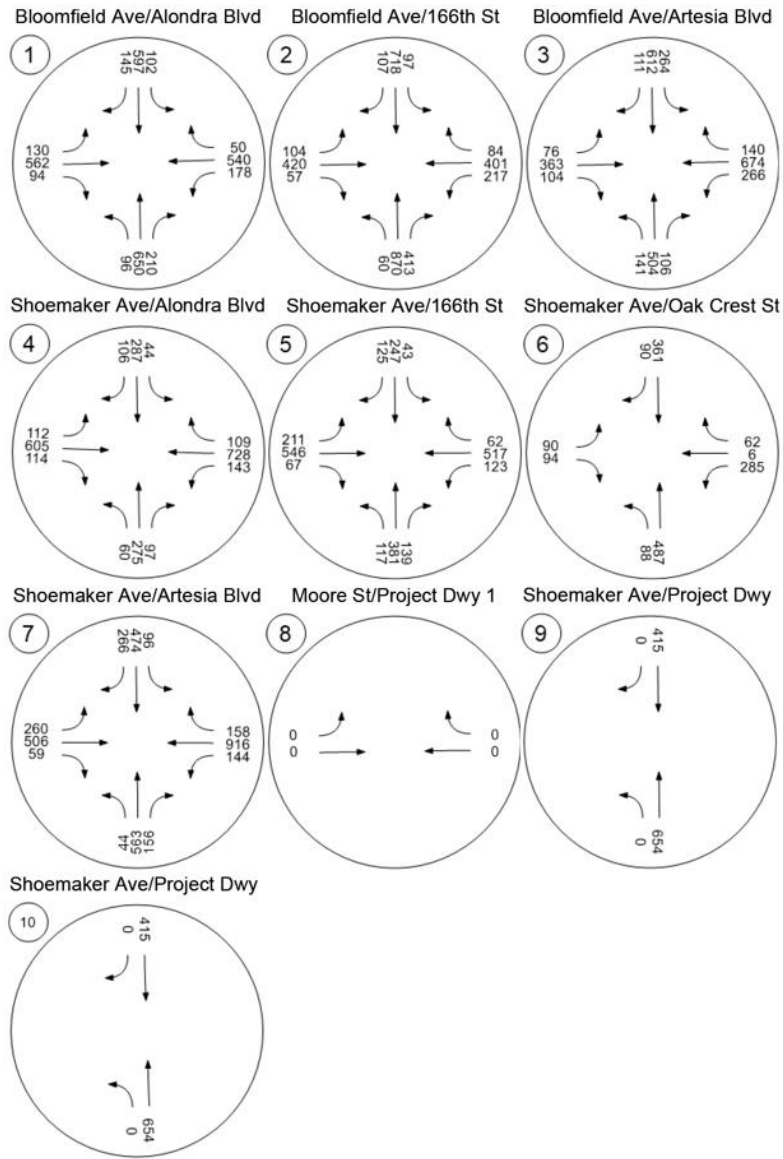
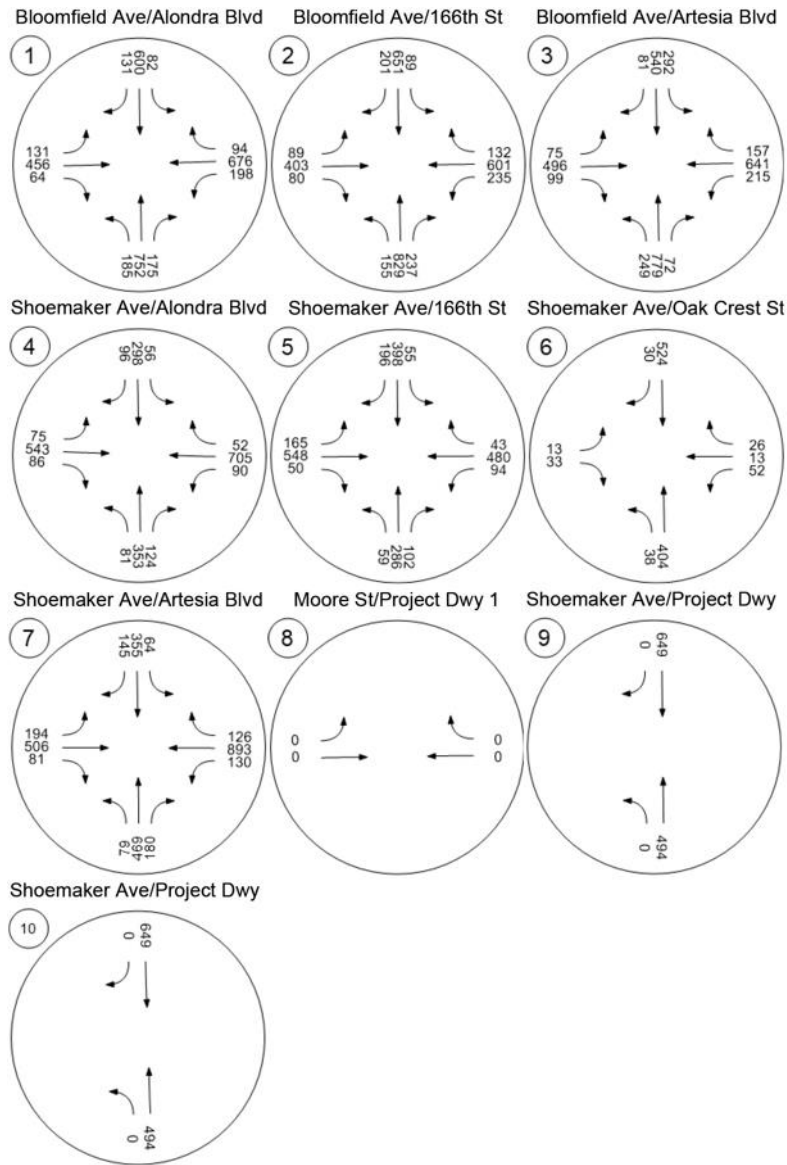


Figure 6 : Existing Conditions PM Peak Hour Traffic Volumes



3.3 Opening Year (2024) Traffic Volumes and Intersection Operations

Project Opening Year (2024) traffic volumes were developed by applying a growth factor of 1.0048 to the traffic volumes collected in September of 2022. This growth factor was calculated using growth rates from the Los Angeles County's 2010 Congestion Management Program, Appendix D, Exhibit D-1 for Regional Statistical Area (RSA) 22 Downey. The growth factors for years 2020 to 2025 were interpolated to determine the growth factor for 2024. No cumulative or approved or pending projects were added to the Project Opening Year (2024) condition as the study area appears to be build out.

The Opening Year (2024) Baseline traffic volumes are illustrated in Figures 7 and 8. Table 7 shows the Opening Year AM and PM peak hour levels of service using HCM methodology at study intersections. Table 8 shows the Opening Year AM and PM peak hour levels of service using ICU methodology at study intersections. All LOS calculations are provided in Appendix C. As shown in Table 7 and Table 8, all of the study area intersections operate at a satisfactory LOS D or better under the Project Opening Year (2024) scenario.

Table 7: Opening Year (2024) AM and PM Peak Hour LOS using HCM Methodology

Intersection	Control Type	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1. Bloomfield Ave/Alondra Blvd	Signal	33.0	C	36.1	D
2. Bloomfield Ave/166th St	Signal	25.5	C	23.3	C
3. Bloomfield Ave/Artesia Blvd	Signal	38.1	D	40.1	D
4. Shoemaker Ave/Alondra Blvd	Signal	29.5	C	28.2	C
5. Shoemaker Ave/166th St	Signal	21.4	C	22.3	C
6. Shoemaker Ave/Oak Crest St	Signal	23.0	C	11.1	B
7. Shoemaker Ave/Artesia Blvd	Signal	45.6	D	40.9	D
8. Moore St/Project Dwy 1	TWSC	-	-	-	-
9. Shoemaker Ave/Project Dwy 2	TWSC	-	-	-	-
10. Shoemaker Ave/Project Dwy 3	TWSC	-	-	-	-

TWSC = Two Way Stop Control

Delay Reported in Seconds per Vehicle

LOS = Level of Service

Table 8: Opening Year (2024) AM and PM Peak Hour LOS using ICU Methodology

Intersection	Control Type	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1. Bloomfield Ave/Alondra Blvd	Signal	0.734	C	0.764	C
2. Bloomfield Ave/166th St	Signal	0.817	D	0.758	C
3. Bloomfield Ave/Artesia Blvd	Signal	0.779	C	0.796	C
4. Shoemaker Ave/Alondra Blvd	Signal	0.609	B	0.626	B
5. Shoemaker Ave/166th St	Signal	0.734	C	0.648	B
6. Shoemaker Ave/Oak Crest St	Signal	0.665	B	0.433	A
7. Shoemaker Ave/Artesia Blvd	Signal	0.887	D	0.830	D

TWSC = Two Way Stop Control

Delay reported volume to capacity

LOS = Level of Service

Figure 7: Opening Year (2024) AM Peak Hour Traffic Volumes

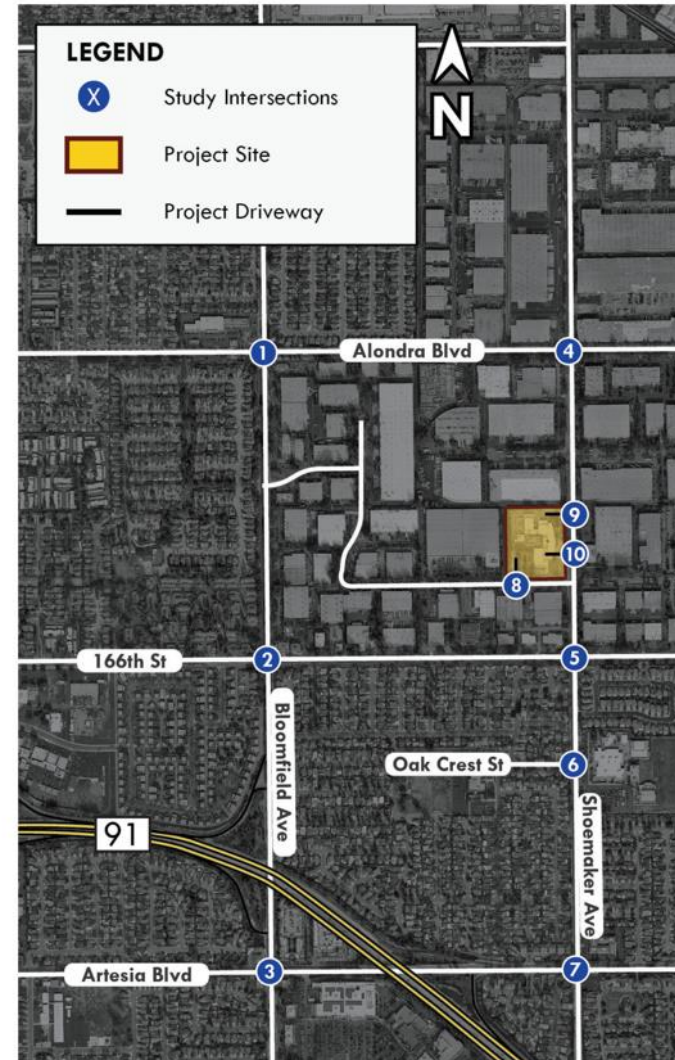
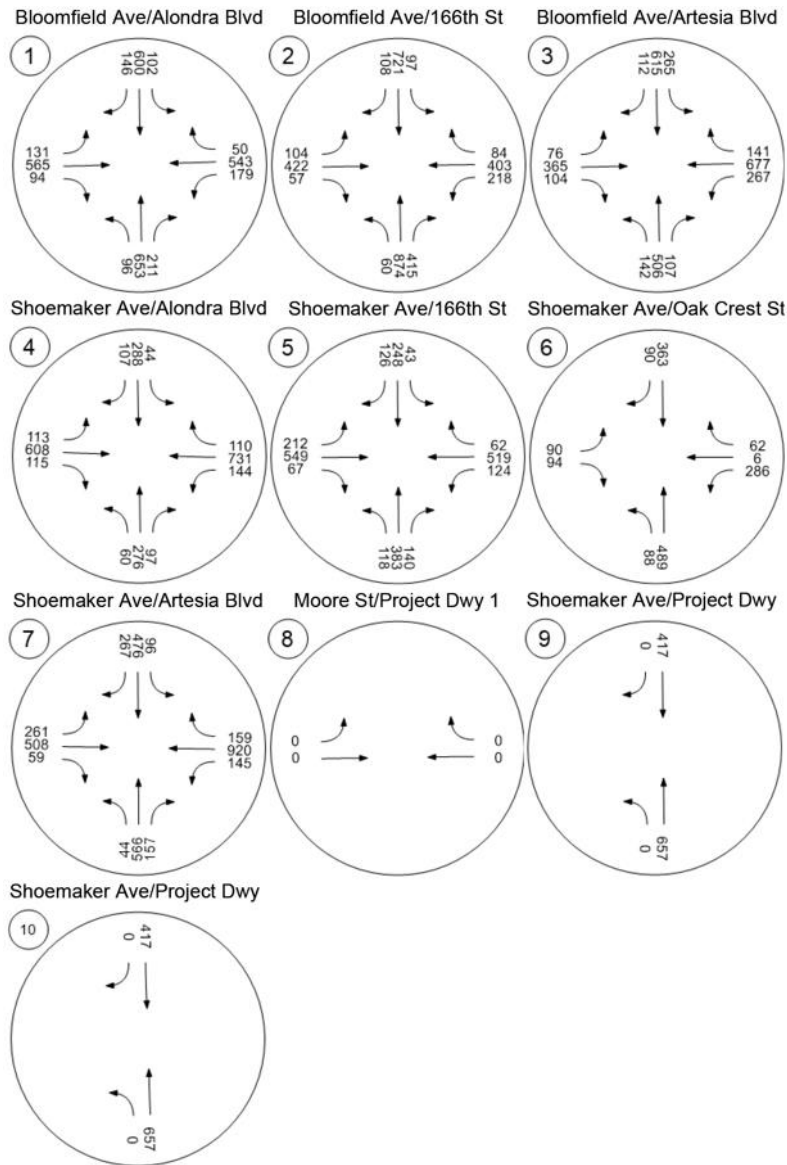
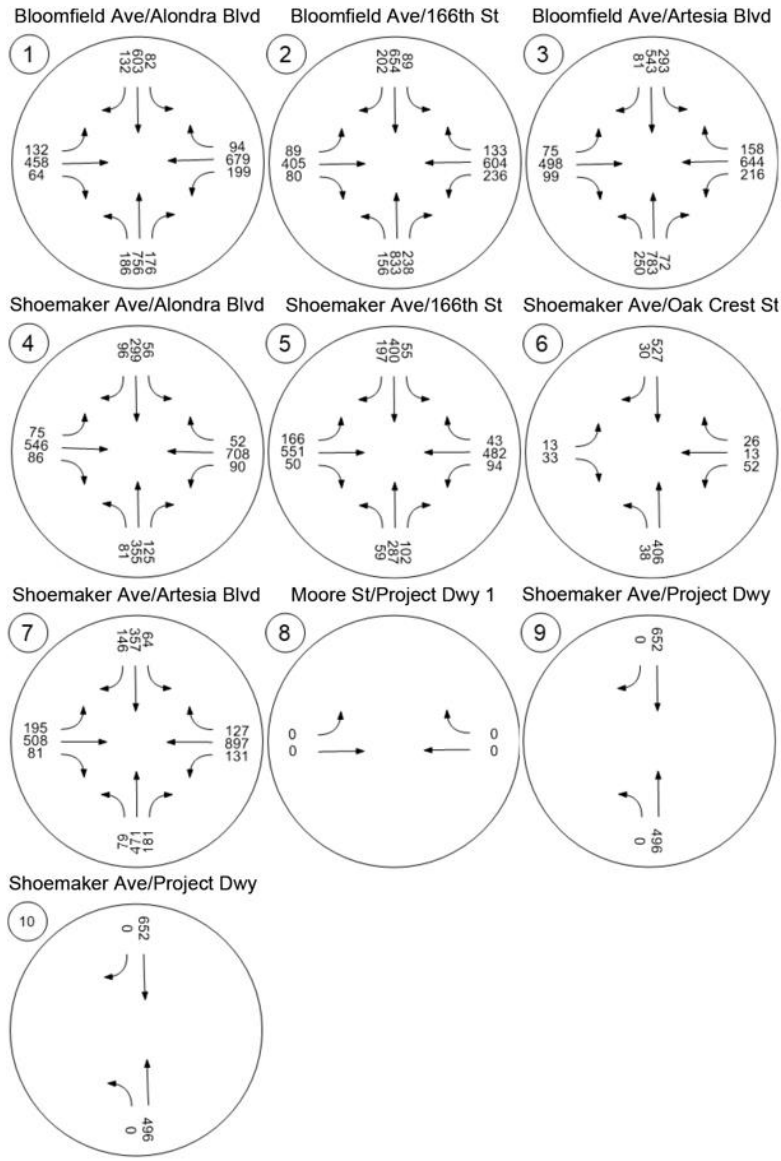


Figure 8: Opening Year (2024) PM Peak Hour Traffic Volumes



4 PROPOSED PROJECT

4.1 Project Trip Generation

Vehicle trips were generated for the project using trip rates for the warehouse land use from the Institute of Transportation Engineers (ITE) Trip Generation (11th Edition, 2021), a vehicle mix from the Warehouse Truck Trip Study Data Results and Usage, July 17th, 2014, and Passenger Car Equivalent (PCE) factors from the San Bernardino County CMP, Appendix B – Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County, 2016. Existing trips for the research and development building were generated using trip rates from the Institute of Transportation Engineers (ITE) Trip Generation (11th Edition, 2021). The project trip generation is shown in Table 9.

The proposed warehouse would generate approximately 440 daily PCE trips which includes 43 AM peak hour and 47 PM peak hour PCE trips. According to the ITE trip rates, the existing research and development building generates 711 daily trips with 66 trips in the AM peak hour and 63 trips occurring in the PM peak hour. Therefore, the net trip generation for the project site is -271 daily PCE trips, with -23 trips occurring in the AM peak hour and -16 trips occurring during the PM peak hour. As discussed previously, to more conservatively analyze this project, the full warehouse trip generation was used, and no credits for existing trips were analyzed.

4.2 Project Trips

Project trips were distributed to the study area intersections based on the location of the project and logical routes of travel to and from the site. Project trips were assigned to the study area intersections by multiplying the project trip generation by the trip distribution percent at each location. As noted in the project description, the project will be accessible via a driveway on Moore Street and two driveways on Shoemaker Avenue.

Truck traffic would be limited to the driveway on Moore Street and the north most driveway on Shoemaker Avenue. Passenger car traffic would be accessible through all driveways.

The project trip distributions assumes that the project's passenger car traffic would use the driveways on Shoemaker Avenue. Truck traffic was distributed through either Moore Street or the northern most driveway on Shoemaker Avenue.

The project trip distribution for the passenger cars associated with the proposed warehouse building is shown in Figure 9. The project trip distribution for the trucks associated with the warehouse building is shown in Figure 10. The project trip assignment for AM and PM peak hours are shown in Figure 11 and Figure 12, respectively.

Table 9: Project Trip Generation

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	
<u>Trip Rates¹</u>									
Research and Development Center	TSF	11.08	0.84	0.19	1.03	0.16	0.82	0.98	
Warehousing	TSF	1.71	0.13	0.04	0.17	0.05	0.13	0.18	
<u>Existing Land Use Trip Generation</u>									
Existing Research and Development Bldg	64,160 TSF	711	54	12	66	10	53	63	
<u>Proposed Land Use Trip Generation</u>									
Warehousing Bldg	159,627 TSF	273	21	6	27	8	21	29	
<u>Vehicle Mix²</u>									
		<u>Percent</u>							
Passenger Vehicles	55.30%	151	12	3	14	4	12	16	
2-Axle truck	15.50%	42	3	1	4	1	3	4	
3-Axle truck	4.90%	13	1	0	1	1	1	1	
4+-Axle Trucks	24.30%	66	5	1	7	2	5	7	
	100%	273	21	6	27	8	21	29	
<u>PCE Trip Generation³</u>									
		<u>PCE Factor</u>							
Passenger Vehicles	1.0	151	12	3	14	4	12	16	
2-Axle truck	1.5	63	5	2	6	2	5	7	
3-Axle truck	2.0	27	2	1	3	2	2	3	
4+-Axle Trucks	3.0	199	15	4	20	6	15	21	
		440	33	10	43	14	33	47	
Net PCE Trip Generation			-271	-21	-2	-23	4	-20	-16

TSF = Thousand Square Feet

PCE = Passenger Car Equivalent

¹ Trip rates from the Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021. Land Use Code 760 Research and Development Center, Land Use Code 150 Warehousing² Vehicle Mix from the Warehouse Truck Trip Study Data Results and Usage, July 17, 2014. With Cold Storage³ Passenger Car Equivalent (PCE) factors from the San Bernardino County CMP, Appendix B - Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County, 2016

Figure 9: Project Passenger Car Trip Distribution



Figure 10: Project Truck Trip Distribution

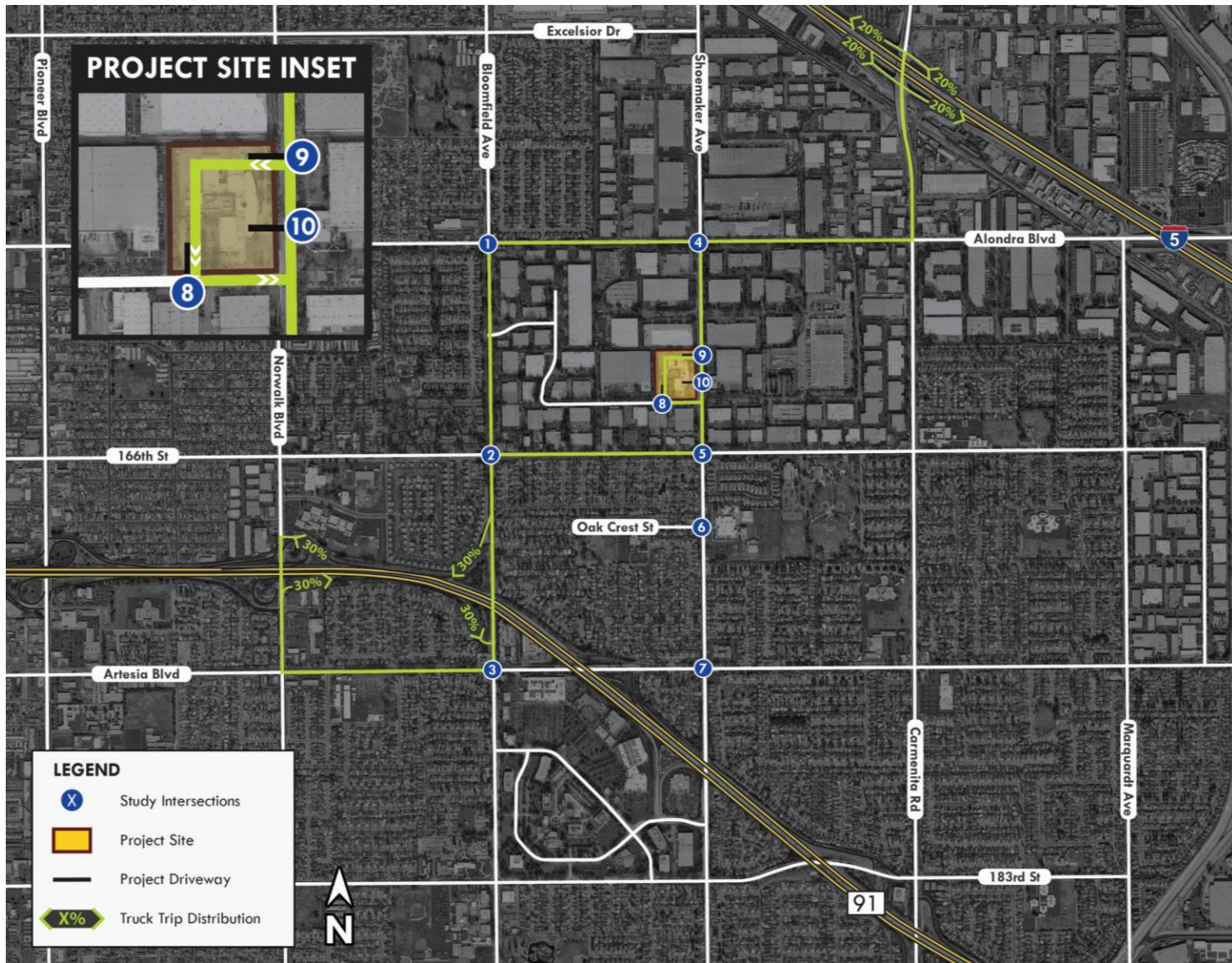


Figure 11: Project AM Peak Hour Trip Assignment

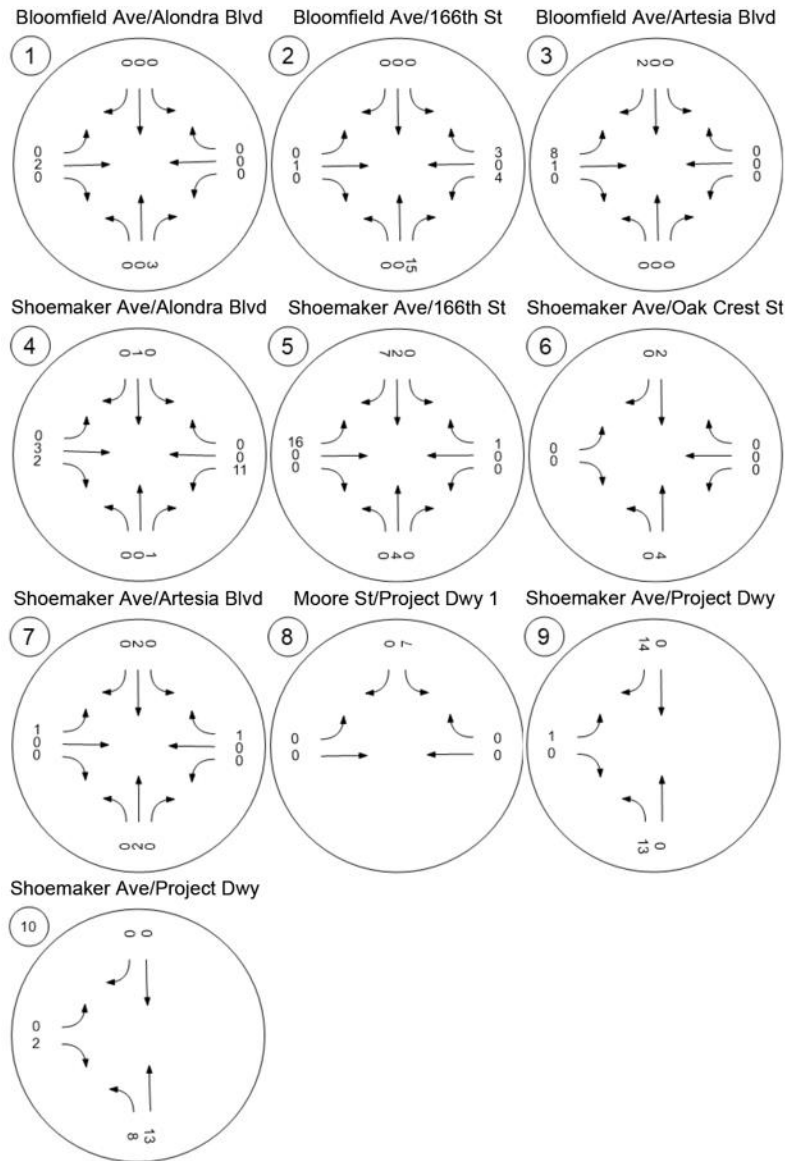
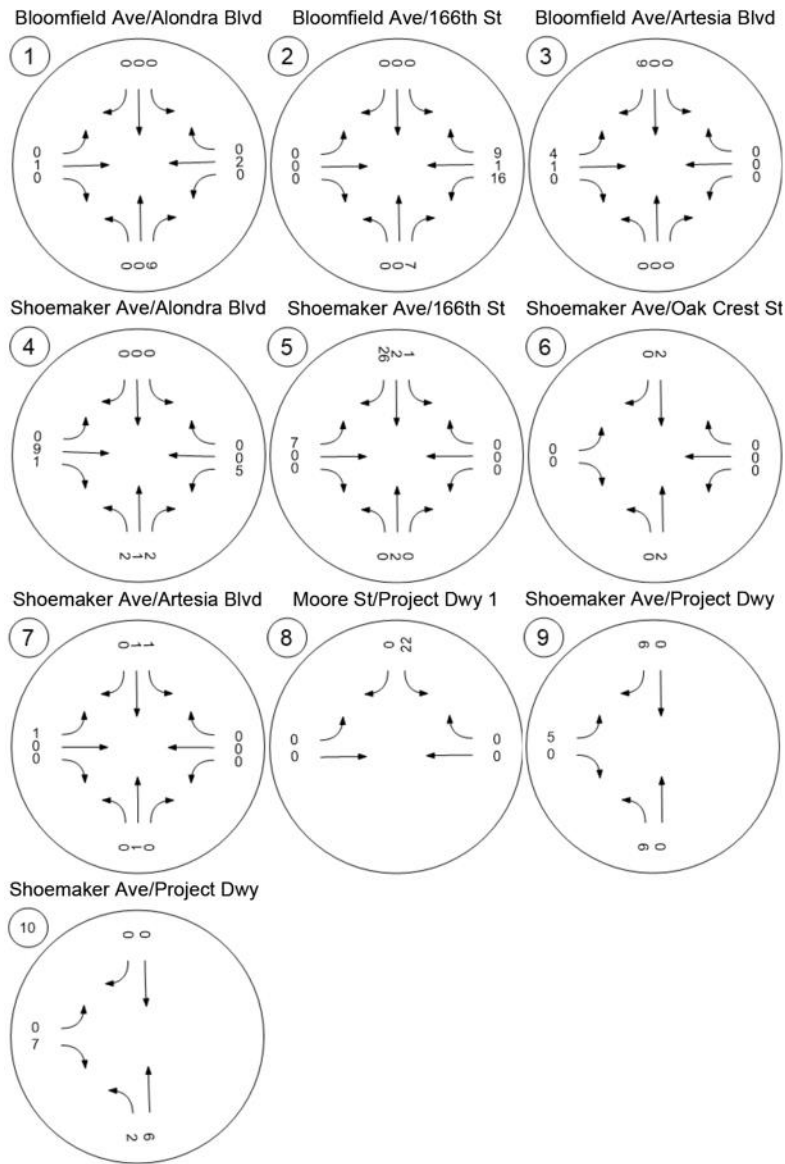


Figure 12: Project PM Peak Hour Trip Assignment



5 PROJECT EFFECT ON LEVEL OF SERVICE

5.1 Existing plus Project Traffic Volumes and Intersection Operations

The Existing plus Project traffic volumes were developed by adding the project's trip assignment to the Existing traffic volumes. The Existing plus Project traffic volumes are shown in Figures 13 and 14. Levels of Service at the study area intersections were determined using both the HCM and ICU methodologies, described previously in section 2.3. Table 10 shows the Existing plus Project AM and PM peak hour levels of service using HCM methodology at study intersections. Table 11 shows the existing AM and PM peak hour levels of service using ICU methodology at study intersections. All LOS calculations are provided in *Appendix C*.

As shown in Table 10 and Table 11, all of the study area intersections operate at a satisfactory LOS D or better under the Existing plus Project Conditions scenario using HCM and ICU methodologies.

Table 10: Existing plus Project AM and PM Peak Hour LOS using HCM Methodology

Intersection	Control Type	Existing Conditions				Existing plus Project				Increase in Delay		Impact	
		AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS				
1. Bloomfield Ave/Alondra Blvd	Signal	32.9	C	36	D	32.9	C	36.0	D	0.0	0.0	NO	NO
2. Bloomfield Ave/166th St	Signal	25.3	C	23.2	C	25.7	C	23.5	C	0.4	0.3	NO	NO
3. Bloomfield Ave/Artesia Blvd	Signal	37.9	D	39.9	D	38.2	D	40.2	D	0.3	0.3	NO	NO
4. Shoemaker Ave/Alondra Blvd	Signal	29.5	C	28.2	C	29.7	C	28.4	C	0.2	0.2	NO	NO
5. Shoemaker Ave/166th St	Signal	21.4	C	22.3	C	21.6	C	22.3	C	0.2	0.0	NO	NO
6. Shoemaker Ave/Oak Crest St	Signal	23	C	11.1	B	22.9	C	11.1	B	-0.1	0.0	NO	NO
7. Shoemaker Ave/Artesia Blvd	Signal	45.1	D	40.7	D	45.3	D	40.7	D	0.2	0.0	NO	NO
8. Moore St/Project Dwy 1	TWSC	-	-	-	-	8.5	A	8.6	A	-	-	NO	NO
9. Shoemaker Ave/Project Dwy 2	TWSC	-	-	-	-	21.0	C	20.7	C	-	-	NO	NO
10. Shoemaker Ave/Project Dwy 3	TWSC	-	-	-	-	10.2	B	10.8	B	-	-	NO	NO

TWSC = Two Way Stop Control

Delay Reported in Seconds per Vehicle

LOS = Level of Service

Table 11: Existing plus Project AM and PM Peak Hour LOS using ICU Methodology

Intersection	Control Type	Existing Conditions				Existing plus Project				Increase in Delay		Impact	
		AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS				
1. Bloomfield Ave/Alondra Blvd	Signal	0.732	C	0.76	C	0.732	C	0.761	C	0.000	0.001	NO	NO
2. Bloomfield Ave/166th St	Signal	0.814	D	0.755	C	0.817	D	0.765	C	0.003	0.010	NO	NO
3. Bloomfield Ave/Artesia Blvd	Signal	0.776	C	0.793	C	0.782	C	0.796	C	0.006	0.003	NO	NO
4. Shoemaker Ave/Alondra Blvd	Signal	0.607	B	0.624	B	0.607	B	0.624	B	0.000	0.000	NO	NO
5. Shoemaker Ave/166th St	Signal	0.731	C	0.646	B	0.747	C	0.658	B	0.016	0.012	NO	NO
6. Shoemaker Ave/Oak Crest St	Signal	0.663	B	0.432	A	0.664	B	0.432	A	0.001	0.000	NO	NO
7. Shoemaker Ave/Artesia Blvd	Signal	0.884	D	0.827	D	0.885	D	0.828	D	0.001	0.001	NO	NO

TWSC = Two Way Stop Control

Delay reported volume to capacity

LOS = Level of Service

Figure 13: Existing plus Project AM Peak Hour Volumes

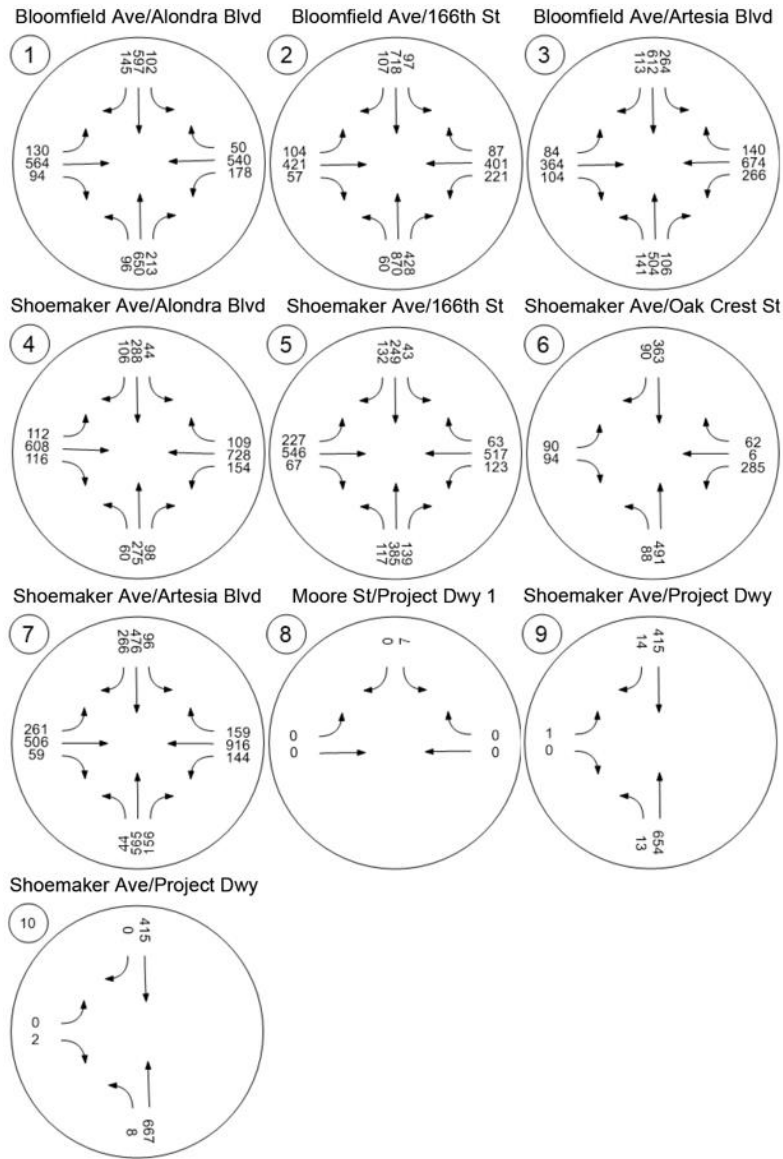
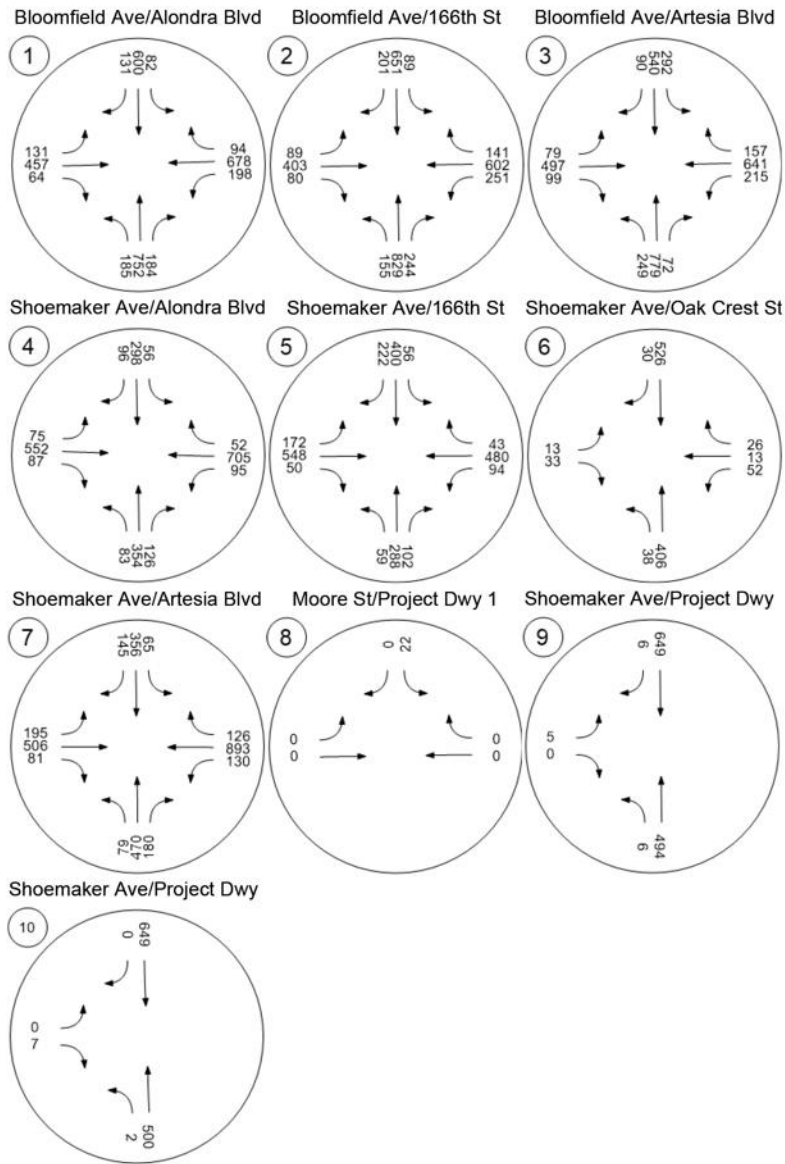


Figure 14: Existing plus Project PM Peak Hour Volumes



5.2 Opening Year (2024) plus Project Traffic Volumes and Intersection Operations

The Project Opening Year (2024) plus Project traffic volumes were developed by adding the project's trip assignment to the Project Opening Year (2024) traffic volumes. The Project Opening Year (2024) plus Project traffic volumes are shown in Figures 15 and 16. Levels of Service at the study area intersections were determined using the HCM methodology, as described previously in Section 2.3. Table 12 shows the Project Opening plus Project AM and PM peak hour levels of service using HCM methodology at study intersections. Table 13 shows the Project Opening plus AM and PM peak hour levels of service using ICU methodology at study intersections. All LOS calculations are provided in Appendix C.

As shown in Table 12 and Table 13, all of the study area intersections operate at a satisfactory LOS D or better under the Opening Year plus Project Conditions scenario using both HCM and ICU methodologies.

Table 12: Opening Year (2024) Plus Project AM and PM Peak Hour LOS using HCM Methodology

Intersection	Control Type	Opening Year				Opening Year Plus Project				Increase in Delay		Impact	
		AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS				
1. Bloomfield Ave/Alondra Blvd	Signal	33.0	C	36.1	D	33.0	C	36.1	D	0.0	0.0	NO	NO
2. Bloomfield Ave/166th St	Signal	25.5	C	23.3	C	25.9	C	23.6	C	0.4	0.3	NO	NO
3. Bloomfield Ave/Artesia Blvd	Signal	38.1	D	40.1	D	38.4	D	40.4	D	0.3	0.3	NO	NO
4. Shoemaker Ave/Alondra Blvd	Signal	29.5	C	28.2	C	29.7	C	28.4	C	0.2	0.2	NO	NO
5. Shoemaker Ave/166th St	Signal	21.4	C	22.3	C	21.7	C	22.4	C	0.3	0.1	NO	NO
6. Shoemaker Ave/Oak Crest St	Signal	23.0	C	11.1	B	23.0	C	11.1	B	0.0	0.0	NO	NO
7. Shoemaker Ave/Artesia Blvd	Signal	45.6	D	40.9	D	45.7	D	41.0	D	0.1	0.1	NO	NO
8. Moore St/Project Dwy 1	TWSC	-	-	-	-	8.5	A	8.6	A	-	-	NO	NO
9. Shoemaker Ave/Project Dwy 2	TWSC	-	-	-	-	21.1	C	20.3	C	-	-	NO	NO
10. Shoemaker Ave/Project Dwy 3	TWSC	-	-	-	-	10.2	B	10.8	B	-	-	NO	NO

TWSC = Two Way Stop Control
 Delay Reported in Seconds per Vehicle
 LOS = Level of Service

Table 13: Opening Year (2024) Plus Project AM and PM Peak Hour LOS using ICU Methodology

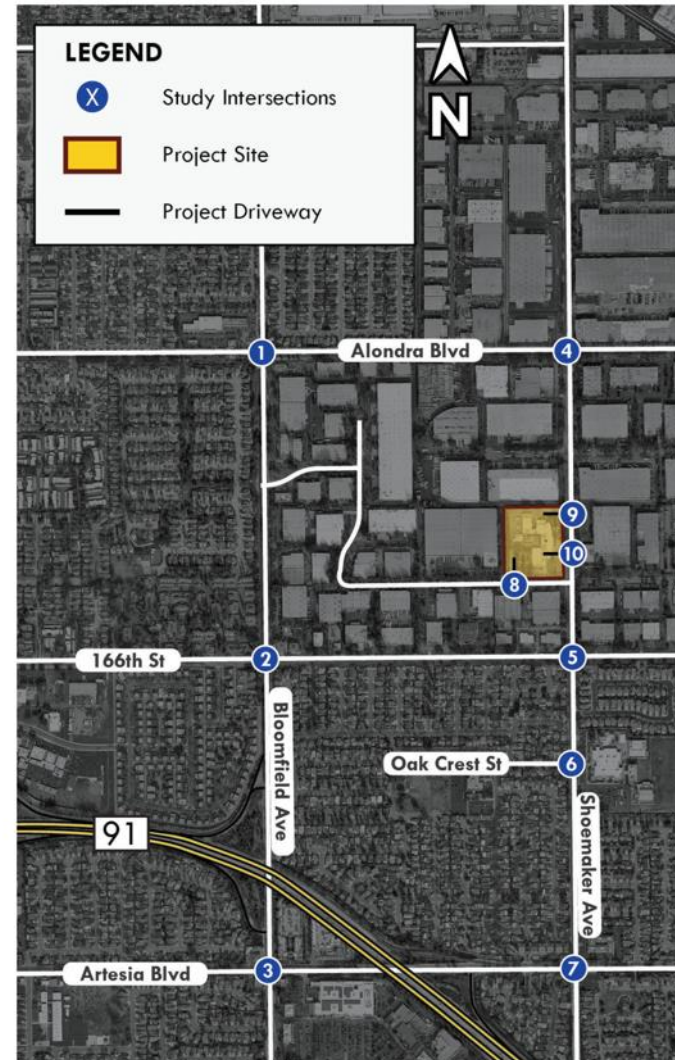
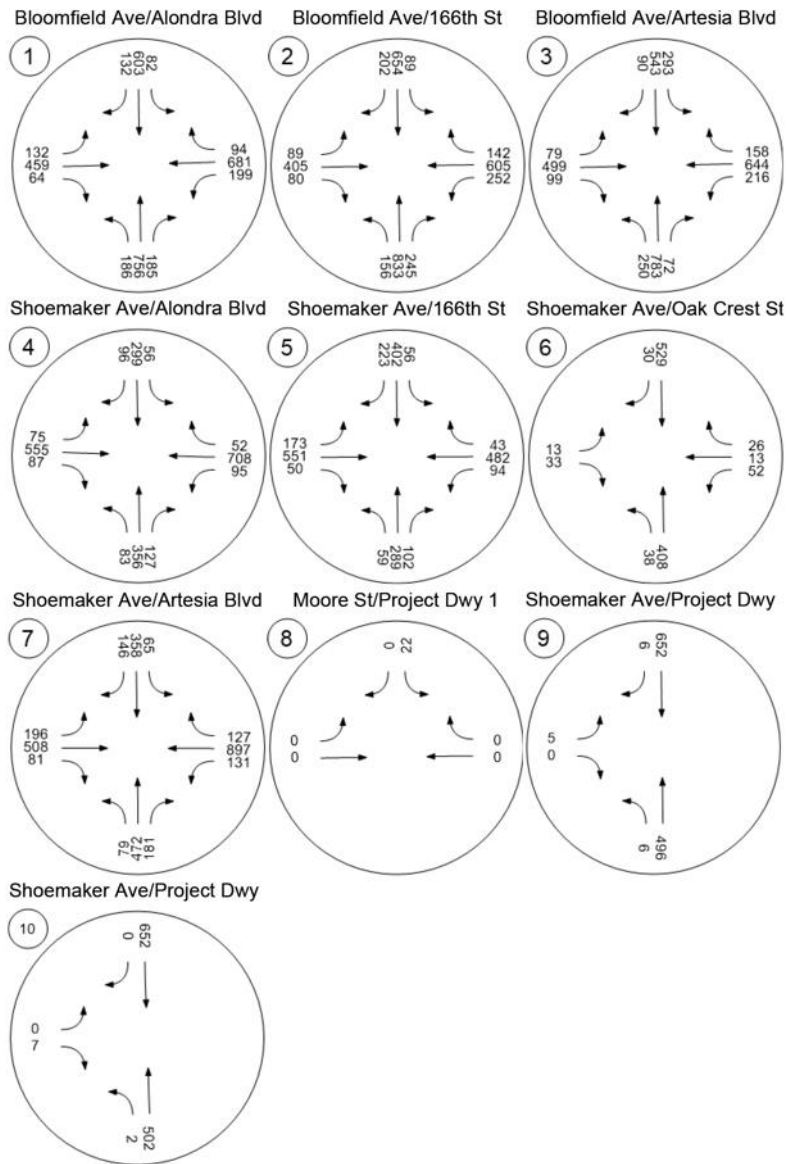
		Existing Conditions				Existing plus Project				Increase in Delay		Impact	
Intersection	Control Type	AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS				
1. Bloomfield Ave/Alondra Blvd	Signal	0.732	C	0.76	C	0.732	C	0.761	C	0.000	0.001	NO	NO
2. Bloomfield Ave/166th St	Signal	0.814	D	0.755	C	0.817	D	0.765	C	0.003	0.010	NO	NO
3. Bloomfield Ave/Artesia Blvd	Signal	0.776	C	0.793	C	0.782	C	0.796	C	0.006	0.003	NO	NO
4. Shoemaker Ave/Alondra Blvd	Signal	0.607	B	0.624	B	0.607	B	0.624	B	0.000	0.000	NO	NO
5. Shoemaker Ave/166th St	Signal	0.731	C	0.646	B	0.747	C	0.658	B	0.016	0.012	NO	NO
6. Shoemaker Ave/Oak Crest St	Signal	0.663	B	0.432	A	0.664	B	0.432	A	0.001	0.000	NO	NO
7. Shoemaker Ave/Artesia Blvd	Signal	0.884	D	0.827	D	0.885	D	0.828	D	0.001	0.001	NO	NO

TWSC = Two Way Stop Control

Delay reported volume to capacity

LOS = Level of Service

Figure 16: Opening Year (2024) plus Project PM Peak Hour Volumes



6 TRUCK ANALYSIS AND QUEUEING

City staff noted in the scope of work to include a discussion on the truck traffic that would be circulating in the project's study area evaluating truck routes, truck egress and ingress at the project site, loading docks, and turning radii at intersections.

6.1 Truck Routes

The City's General Plan Circulation Element has designated specific roadways as truck routes. The intent is to minimize the noise and intrusion into neighborhoods and optimal access to freeways. City truck routes are shown in Exhibit CIR-3, *Truck Routes* and is attached for reference in *Appendix D*. The project's trip distribution shown in Figure 10 generally follows truck routes along Artesia Boulevard to SR 91 and uses a segment of Bloomfield Avenue to access Interstate 5 via Carmentita Road. While these are designated truck routes, truck traffic may use other routes for deliveries.

6.1 Truck Ingress and Egress

Based on a review of the project's site plan, the project site provides adequate ingress and egress for truck traffic. The driveway on Moore Street has a distance of 240 feet from Moore Street to the gate. This can adequately store a queue of 3 trucks while waiting for the gate on Moore Street to open. The driveway length for the northern most project driveway measures a distance of 360 feet and can hold a queue of 4 trucks waiting to enter through this gate.

6.2 Loading Docks

Based on the project's site plan, the site is expected to have 20 loading docks. There appears to be adequate spaces for trucks to maneuver in and out of the loading docks without disrupting circulation on either Shoemaker Avenue or Moore Street.

6.3 Turning Radius at Intersections

Based on a review of the study area and study area intersections, trucks are not expected to have any turning issues at study area intersections. Most roadways in the area are already next to similar warehousing and industrial uses, and appear adequate for truck traffic in the area.

6.4 Queuing Analysis

A queuing analysis as shown in Table 14, was conducted to determine the project's effects on queuing particularly with the truck traffic generated by the project. Existing queuing deficiencies were noted at the following intersections. The project does not result in deficient queuing.

4. Bloomfield Avenue/Alondra Boulevard
5. Bloomfield Avenue/166th Street
6. Bloomfield Avenue/Artesia Boulevard
8. Shoemaker Avenue/Oak Crest Street
9. Shoemaker Avenue/Artesia Boulevard

Table 14: Project Queuing Analysis

			Opening Year		Queue Exceed Pocket Length		Opening Year Plus Project		Queue Exceed Pocket Length		Remarks	Opening Year Plus Project with Improvements	
Intersection	Movement	Pocket Length (ft)	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak		AM Peak	PM Peak
1. Bloomfield Ave/Alondra Blvd	NBL	225	113	229	NO	YES	113	229	NO	YES	Existng deficiency. Project does not cause increase in queuing hence no improvements are required.	-	-
	SBL	190	155	114	NO	NO	155	114	NO	NO		-	-
	EBL	190	154	171	NO	NO	154	171	NO	NO		-	-
	WBL	182	244	251	YES	YES	244	251	YES	YES		-	-
2. Bloomfield Ave/166th St	NBL	130	27	66	NO	NO	28	66	NO	NO	Existng deficiency. Project does not cause increase in queuing hence no improvements are required.	-	-
	SBL	220	56	40	NO	NO	57	40	NO	NO		-	-
	EBL	152	58	47	NO	NO	57	47	NO	NO		-	-
	WBL	155	178	147	YES	NO	182	161	YES	YES		-	-
3. Bloomfield Ave/Artesia Blvd	NBL	225	213	319	NO	YES	213	319	NO	YES	Existng deficiency. Project does not cause increase in queuing hence no improvements are required.	-	-
	SBL	330	154	168	NO	NO	154	168	NO	NO		-	-
	EBL	210	99	107	NO	NO	109	124	NO	NO		-	-
	WBL	280	163	135	NO	NO	163	135	NO	NO		-	-
4. Shoemaker Ave/Alondra Blvd	NBL	158	89	97	NO	NO	90	98	NO	NO		-	-
	SBL	178	51	71	NO	NO	51	71	NO	NO		-	-
	EBL	158	126	90	NO	NO	126	90	NO	NO		-	-
	WBL	192	152	107	NO	NO	158	112	NO	NO		-	-
5. Shoemaker Ave/166th St	NBL	185	58	20	NO	NO	58	19	NO	NO		-	-
	SBL	190	25	20	NO	NO	26	21	NO	NO		-	-
	EBL	205	112	93	NO	NO	127	97	NO	NO		-	-
	WBL	210	66	52	NO	NO	66	52	NO	NO		-	-
6. Shoemaker Ave/Oak Crest St	NBL	50	32	9	NO	NO	33	8	NO	NO	Existng deficiency. Project does not cause increase in queuing hence no improvements are required.	-	-
	EBR	100	93	40	NO	NO	93	40	NO	NO		-	-
	WBL	180	218	40	YES	NO	218	40	YES	NO		-	-
	WBR ¹	112	59	23	NO	NO	59	23	NO	NO		-	-
7. Shoemaker Ave/Artesia Blvd	NBL	220	63	129	NO	NO	63	129	NO	NO	Existng deficiency on SBL and EBL. Project does not cause increase in queuing on SBL and causes a maximum increase of 4 feet (less than 1 passenger car) on EBL , hence no improvements are required.	-	-
	SBL	140	144	109	YES	NO	144	110	YES	NO		-	-
	EBL	170	309	258	YES	YES	311	262	YES	YES		202	210
	WBL	210	194	201	NO	NO	194	201	NO	NO		-	-

Note all lengths are in feet. The project would result in a queuing deficiency if the project adds 1 passenger car length, i.e. 25 feet or more to a turn pocket with existing queuing deficiency.

7 VEHICLE MILES TRAVELED ANALYSIS

Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating Transportation impacts. SB743 specified that the new criteria should promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks and a diversity of land uses. The bill also specified that delay-based level of service could no longer be considered an indicator of a significant impact on the environment. In response, Section 15064.3 was added to the CEQA Guidelines beginning January 1, 2019. Section 15064.3 - Determining the Significance of Transportation Impacts states that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. The provisions of Section 15064.3(c) were implemented statewide beginning on July 1, 2020.

As the City of Cerritos refers to the LA County TIA guidelines which include screening thresholds to identify if a project would be considered to have a less-than significant impact on VMT and therefore could be screened out from further VMT analysis. Section 3.1.2.1 – Non-Retail Project Trip Generation Screening Criteria, as stated in the LA County TIA guidelines, would apply to this project:

“If the answer is no to the question below, further analysis is not required, and a less than significant determination can be made.

- *Does the development project generate a net increase of 110 or more daily vehicle¹ trips?”*

A project's daily vehicle trip generation should be estimated using the most recent edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. If the project proposed land use is not listed in the ITE Trip Generation Manual, please submit a trip generation study to Public Works for review and approval”.

Based on Table 9 discussed previously in Section 4.2, the project would generate fewer trips with the development of the proposed warehouse compared to the existing research and development center land use. The proposed project trip generation would result in net negative trips, fewer than the net increase of 110 or more daily vehicle trips threshold as stated in the LA County TIA guidelines. Therefore, no further analysis is required.

APPENDIX A – SCOPE OF WORK

ENVIRONMENT | PLANNING | DEVELOPMENT SOLUTIONS, INC.

TRANSPORTATION STUDY SCOPING AGREEMENT

TO: CITY OF CERRITOS PLANNING DEPARTMENT
FROM: Daji Yuan, Abby Pal | EPD SOLUTIONS, INC.
DATE: September 16, 2022
PROJECT: Shoemaker Avenue Industrial Project
EPD PROJECT #: 22-036

Introduction

The purpose of this scoping agreement is to outline the proposed transportation analysis parameters and assumptions for the Shoemaker Avenue Industrial Project (“Project”) for review/concurrence by City of Cerritos staff.

Project Description

The proposed Project is located within the northeastern portion of the City of Cerritos, on one parcel at 16323 Shoemaker Avenue, Cerritos, CA 90703. Regional access to the Project site is provided by Interstate 5 (I-5) to the north, Interstate 605 (I-605) to the west, and State Route 91 (SR-91) to the south. Local access to the site is via Shoemaker Avenue and Moore Street. The existing site and surrounding area are shown in Figure 1, Project Location. The Project proposes to demolish the existing building, surface parking and related infrastructure and to redevelop the site with a new warehouse building. The proposed Project would include 159,627 square feet (SF), 10 % of which would be cold storage. The Project site plan is shown in Figure 2.

Study Area

The study area for the Transportation Study is shown on Figure 3. The following intersections have been identified for inclusion in the Transportation Study:

1. Bloomfield Ave and Alondra Blvd
2. Bloomfield Ave and 166th St
3. Bloomfield Ave and Artesia Blvd
4. Shoemaker Ave and Alondra Blvd
5. Shoemaker Ave and 166th St
6. Shoemaker Ave and Oak Crest St
7. Shoemaker Ave and Artesia Blvd
8. Moore St and Project Dwy 1
9. Shoemaker Ave and Project Dwy 2

10. Shoemaker Ave and Project Dwy 3

Analysis Scenarios

The following scenarios will be analyzed in the Transportation Study:

- Existing Conditions
- Project Opening Year (2024) - Existing traffic conditions plus ambient growth and traffic from other developments within the study area

Background growth for the Project Opening Year conditions will be based on an applicable ambient growth rate which will be determined in consultation with City of Cerritos staff. EPD will request from the City of Cerritos Planning Department a most current list of cumulative projects. Cumulative projects which likely share travel routes with the project will be included in the TIA study regardless of distance from the project.

In addition, this traffic study will include a discussion on truck routes and the effect on level of service at intersections which would be frequented by trucks generated by the project.

Project Trip Generation

The Project's trip generation has been calculated using trip rates for Research and Development Center (Land Use Code 760) and Warehousing (Land Use 150) from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, 2021. The project trip generation is provided in Table 1. As shown in Table 1, the project generates net 271 fewer daily PCE trips, including net 23 fewer PCE trips during the AM peak hour and net 16 fewer PCE trips during the PM peak hour. The study would evaluate the total project trips, rather than the net trip generation since the project generates fewer trips than the existing land use.

Project Trip Distribution

Project trips have been distributed to the study area intersections based on the location of the project and logical routes of travel to and from the Project site. The Project trip distribution for trucks is shown on Figure 4, and the Project trip distribution for passenger vehicles is shown on Figure 5.

Level of Service (LOS) Analysis Methodology

Intersection operations will be evaluated using Level of Service (LOS). LOS at signalized and unsignalized intersections will be calculated using the Highway Capacity Manual (HCM), 7th Edition methodology.

Transportation Effect Threshold

As per the Los Angeles County Traffic Impact Analysis Report Guidelines, 1997, for intersections, the impact is considered significant if the project related increase in the volume to capacity (v/c) ratio equals or exceeds the threshold shown below.

INTERSECTIONS		
Preproject		Project V/C Increase
LOS	V/C	
C	0.71 to 0.80	0.04 or more
D	0.81 to 0.90	0.02 or more
E/F	0.91 or more	0.01 or more

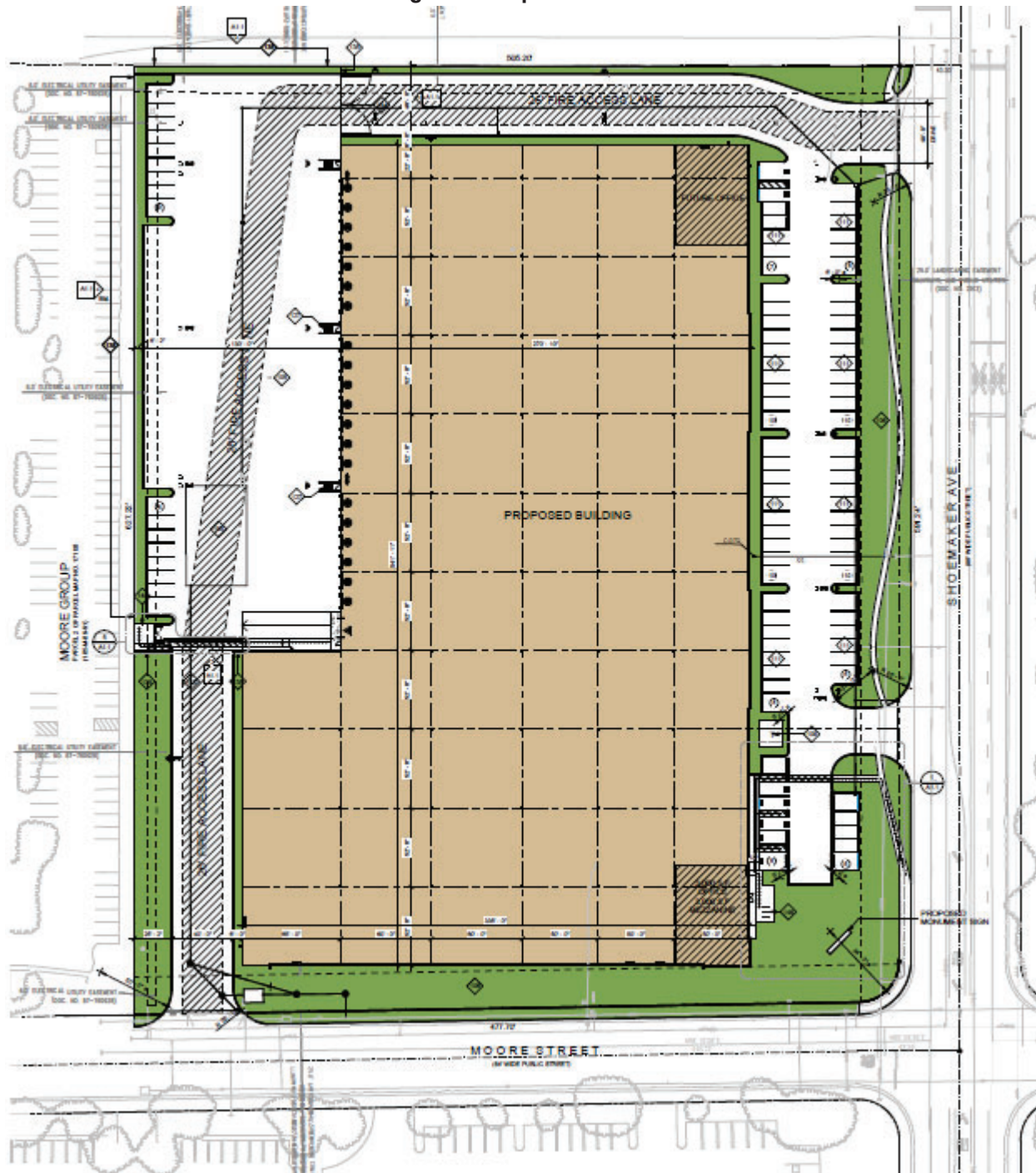
Conclusion

We appreciate the opportunity to provide this scoping document for your review. Should you have any questions or comments regarding the proposed scope, please contact us at 949-794-1180 or daji@epdsolutions.com, abby@epdsolutions.com.

Figure 1: Project Location



Figure 2: Project Site Plan



Source: Herdman Architecture + Design

Figure 3: Project Study Area



Table 1: Project Trip Generation

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	
<u>Trip Rates¹</u>									
Research and Development Center	TSF	11.08	0.84	0.19	1.03	0.16	0.82	0.98	
Warehousing	TSF	1.71	0.13	0.04	0.17	0.05	0.13	0.18	
<u>Existing Land Use Trip Generation</u>									
Existing Research and Development Bldg	64.160	TSF	711	54	12	66	10	53	63
<u>Proposed Land Use Trip Generation</u>									
Warehousing Bldg	159.627	TSF	273	21	6	27	8	21	29
<u>Vehicle Mix²</u>									
		<u>Percent</u>							
Passenger Vehicles		55.30%	151	12	3	14	4	12	16
2-Axle truck		15.50%	42	3	1	4	1	3	4
3-Axle truck		4.90%	13	1	0	1	1	1	1
4+-Axle Trucks		24.30%	66	5	1	7	2	5	7
		100%	273	21	6	27	8	21	29
<u>PCE Trip Generation³</u>									
		<u>PCE Factor</u>							
Passenger Vehicles		1.0	151	12	3	14	4	12	16
2-Axle truck		1.5	63	5	2	6	2	5	7
3-Axle truck		2.0	27	2	1	3	2	2	3
4+-Axle Trucks		3.0	199	15	4	20	6	15	21
			440	33	10	43	14	33	47
Net PCE Trip Generation			-271	-21	-2	-23	4	-20	-16

TSF = Thousand Square Feet

PCE = Passenger Car Equivalent

¹ Trip rates from the Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021. Land Use Code 760 Research and Development Center, Land Use Code 150 Warehousing

² Vehicle Mix from the Warehouse Truck Trip Study Data Results and Usage, July 17, 2014. With Cold Storage

³ Passenger Car Equivalent (PCE) factors from the San Bernardino County CMP, Appendix B - Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County, 2016

Figure 4: Project Trip Distribution for Trucks



Figure 5: Project Trip Distribution for Passenger Vehicles



APPENDIX B – COUNT SHEETS

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
9/13/22
TUESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Cerritos
Bloomfield
Alondra

PROJECT #: SC3625
LOCATION #: 1
CONTROL: SIGNAL

PCE Adjusted	NOTES:							AM PM MD OTHER OTHER	◀ W	▲ N ▼ S	E ▶
	Class	1	2	3	4	5	6				
	Factor	1	1.5	2	3	2	2				

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Bloomfield			Bloomfield			Alondra			Alondra			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	1	1	2	0	1	2	0	

AM	7:00 AM	8	129	57	30	142	29	36	85	16	42	109	12	692
		7:15 AM	23	157	35	17	114	30	27	110	21	50	143	8
	7:30 AM	25	170	44	31	195	41	24	140	28	45	150	13	904
	7:45 AM	28	149	62	31	195	41	31	154	27	45	150	13	925
	8:00 AM	22	166	55	11	88	26	44	141	19	23	77	4	673
	8:15 AM	21	166	49	30	119	37	32	128	20	65	163	21	849
	8:30 AM	32	132	39	32	117	17	21	115	16	47	155	8	729
	8:45 AM	25	146	40	32	117	36	23	93	18	36	142	14	719
	VOLUMES	183	1,214	380	212	1,085	256	236	964	164	352	1,088	90	6,222
	APPROACH %	10%	68%	21%	14%	70%	16%	17%	71%	12%	23%	71%	6%	
	APP/DEPART	1,776	/	1,539	1,553	/	1,601	1,364	/	1,556	1,530	/	1,527	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	96	650	210	102	597	145	130	562	94	178	540	50	3,351
	APPROACH %	10%	68%	22%	12%	71%	17%	17%	72%	12%	23%	70%	7%	
	PEAK HR FACTOR	0.983		0.789		0.928		0.772		0.906				
	APP/DEPART	955	/	830	843	/	868	786	/	874	767	/	780	0
PM	4:00 PM	42	245	48	21	151	29	40	112	20	46	135	15	901
		4:15 PM	33	213	49	14	127	23	37	108	16	55	144	16
	4:30 PM	48	206	47	22	156	56	36	93	14	36	166	25	903
	4:45 PM	46	147	50	20	117	33	35	110	13	49	190	16	823
	5:00 PM	40	203	46	19	163	28	26	119	11	54	183	41	931
	5:15 PM	44	199	44	18	164	27	38	106	21	49	148	20	876
	5:30 PM	56	204	35	25	157	44	33	122	19	46	156	18	912
	5:45 PM	40	199	39	22	136	41	26	125	18	30	125	21	819
	VOLUMES	348	1,614	357	160	1,170	279	269	893	130	364	1,245	170	6,995
	APPROACH %	15%	70%	15%	10%	73%	17%	21%	69%	10%	20%	70%	10%	
	APP/DEPART	2,318	/	2,052	1,608	/	1,663	1,291	/	1,409	1,778	/	1,871	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	185	752	175	82	600	131	131	456	64	198	676	94	3,541
	APPROACH %	17%	68%	16%	10%	74%	16%	20%	70%	10%	20%	70%	10%	
	PEAK HR FACTOR	0.944		0.900		0.942		0.871		0.951				
	APP/DEPART	1,112	/	977	812	/	861	650	/	712	967	/	992	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
9/13/22
TUESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Cerritos
Bloomfield
166th

PROJECT #: SC3625
LOCATION #: 2
CONTROL: SIGNAL

PCE Adjusted	NOTES:							AM PM MD OTHER OTHER	◀ W	▲ N ▼ S	E ▶
	Class	1	2	3	4	5	6				
	Factor	1	1.5	2	3	2	2				

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Bloomfield			Bloomfield			166th			166th			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	1	1	2	0	1	2	0	1	2	0	

AM	Time	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	7:00 AM	5	185	97	12	161	13	17	43	12	38	47	3	631
	7:15 AM	9	210	97	23	170	16	19	96	15	41	57	9	760
	7:30 AM	11	207	92	38	204	26	24	127	12	60	114	26	939
	7:45 AM	27	242	108	23	166	37	34	111	15	58	138	33	989
	8:00 AM	14	212	117	13	179	29	27	87	15	58	93	17	858
	8:15 AM	22	178	84	18	123	22	31	94	12	52	98	22	753
	8:30 AM	26	176	84	20	129	27	30	96	15	48	95	21	764
	8:45 AM	26	177	81	21	124	26	21	95	19	50	95	16	749
	VOLUMES	139	1,584	758	168	1,254	193	202	747	114	404	735	145	6,441
	APPROACH %	6%	64%	31%	10%	78%	12%	19%	70%	11%	31%	57%	11%	
	APP/DEPART	2,481	/	1,930	1,615	/	1,771	1,063	/	1,673	1,283	/	1,067	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	60	870	413	97	718	107	104	420	57	217	401	84	3,545
	APPROACH %	4%	65%	31%	11%	78%	12%	18%	72%	10%	31%	57%	12%	
	PEAK HR FACTOR	0.892					0.861		0.892		0.769			0.896
	APP/DEPART	1,342	/	1,057	921	/	991	580	/	930	702	/	568	0
	4:00 PM	37	168	67	18	124	27	25	93	24	54	124	24	783
	4:15 PM	38	219	67	20	150	33	22	89	21	52	130	23	861
	4:30 PM	39	216	67	16	168	37	22	97	25	59	134	23	902
	4:45 PM	38	210	70	18	139	35	25	92	21	63	142	29	879
	5:00 PM	41	202	57	24	163	56	21	93	22	65	145	32	917
	5:15 PM	40	211	61	23	168	52	25	103	18	62	148	34	942
	5:30 PM	38	214	60	25	162	53	21	105	19	56	156	35	941
	5:45 PM	37	203	60	17	159	41	22	103	21	53	153	32	899
	VOLUMES	306	1,641	507	160	1,230	332	182	773	171	462	1,130	230	7,123
	APPROACH %	12%	67%	21%	9%	71%	19%	16%	69%	15%	25%	62%	13%	
	APP/DEPART	2,454	/	2,053	1,722	/	1,863	1,126	/	1,440	1,822	/	1,768	0
	BEGIN PEAK HR	5:00 PM												
	VOLUMES	155	829	237	89	651	201	89	403	80	235	601	132	3,699
	APPROACH %	13%	68%	19%	9%	69%	21%	15%	70%	14%	24%	62%	14%	
	PEAK HR FACTOR	0.980					0.969		0.981		0.981			0.982
	APP/DEPART	1,221	/	1,050	940	/	965	571	/	728	968	/	957	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
9/13/22
TUESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Cerritos
Bloomfield
Artesia

PROJECT #:
LOCATION #:
CONTROL:

SC3625
3
SIGNAL

PCE Adjusted	NOTES:							AM	PM	MD	OTHER	OTHER	▲ N ▼ S	◀ W E ▶
	Class	1	2	3	4	5	6							
	Factor	1	1.5	2	3	2	2							

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Bloomfield			Bloomfield			Artesia			Artesia			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	2	3	0	1	2	1	1	2	0	

AM	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	VOLUMES			APPROACH %			APP/DEPART			TOTAL																	
		20	23	35	27	40	40	41	36	260	862	172	509	999	176	123	665		183	397	1,137	262	5,741												
	65	87	87	123	126	169	111	96	67%	13%	30%	59%	10%	/	/	/	/	1,247	1,683	1,579	971	1,345	1,796	1,572	0										
	7:30 AM		106			111			76			363			104			266			674			140			3,359								
	19%		67%			14%			27%			62%			11%			14%			67%			19%			25%			62%			13%		
	0.727		0.889			0.876			0.874			0.868			0.868			0.868			0.868			0.868			0.868								
	750		719			987			982			543			733			1,079			926			0											

PM	4:00 PM	4:15 PM	4:30 PM	4:45 PM	5:00 PM	5:15 PM	5:30 PM	5:45 PM	VOLUMES			APPROACH %			APP/DEPART			TOTAL																	
		52	49	40	59	63	66	62	54	443	1,522	141	562	979	157	166	915		190	422	1,141	269	6,905												
	196	186	158	185	196	196	203	204	21%	72%	7%	33%	58%	9%	13%	72%	15%	23%	62%	15%	2,106	1,957	1,698	1,591	1,271	1,617	1,832	1,741	0						
	4:45 PM		72			81			75			496			99			215			641			157			3,694								
	23%		71%			7%			32%			59%			9%			11%			74%			15%			21%			63%			15%		
	0.961		0.891			0.922			0.922			0.922			0.922			0.922			0.922			0.922			0.922								
	1,100		1,010			913			854			670			860			1,013			971			0											

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
9/13/22
TUESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Cerritos
Shoemaker
Alondra

PROJECT #: SC3625
LOCATION #: 4
CONTROL: SIGNAL

PCE Adjusted	NOTES:							AM	PM	MD	OTHER	OTHER	▲ N	◀ W	E ▶	S	▼	
	Class	1	2	3	4	5	6											
	Factor	1	1.5	2	3	2	2											

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Shoemaker			Shoemaker			Alondra			Alondra			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	1	1	2	1	

AM	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	VOLUMES			APPROACH %			APP/DEPART		TOTAL				
		4	18	14	27	6	13	19	15	115	465	179	86	515	178	186		1,082	190	244	1,366
	14	27	27	33	27	30	29	12	15%	61%	24%	11%	66%	23%	13%	74%	13%	14%	77%	9%	0
	14	27	27	33	27	30	29	12	759	/	807	778	/	949	1,457	/	1,347	1,767	/	1,658	0
	BEGIN PEAK HR		7:30 AM																		
	60	275	97	44	287	106	112	605	114	143	728	109	2,677								
	14%	64%	22%	10%	66%	24%	13%	73%	14%	15%	74%	11%									
	PEAK HR FACTOR		0.710			0.912			0.889			0.929			0.921						
	432	/	496	436	/	543	830	/	745	979	/	893	0								
PM	4:00 PM	4:15 PM	4:30 PM	4:45 PM	5:00 PM	5:15 PM	5:30 PM	5:45 PM	VOLUMES			APPROACH %			APP/DEPART		TOTAL				
	18	19	21	16	25	18	29	15	161	622	213	92	535	162	159	1,093		180	144	1,312	124
	19	21	16	25	18	29	15	16%	63%	21%	12%	68%	20%	11%	76%	13%	9%	83%	8%	0	
	21	16	25	18	29	15	16%	63%	21%	12%	68%	20%	11%	76%	13%	9%	83%	8%	0		
	BEGIN PEAK HR		4:15 PM																		
	81	353	124	56	298	96	75	543	86	90	705	52	2,555								
	15%	63%	22%	12%	66%	21%	11%	77%	12%	11%	83%	6%									
	PEAK HR FACTOR		0.870			0.850			0.875			0.821			0.890						
	557	/	479	449	/	473	704	/	722	846	/	882	0								

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
9/13/22
TUESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Cerritos
Shoemaker
166th

PROJECT #: SC3625
LOCATION #: 5
CONTROL: SIGNAL

PCE Adjusted	NOTES:							AM	PM	MD	OTHER	OTHER	▲ N	◀ W	S	▶ E	▼	
	Class	1	2	3	4	5	6											
	Factor	1	1.5	2	3	2	2											

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Shoemaker			Shoemaker			166th			166th			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	

AM	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	VOLUMES			APPROACH %			APP/DEPART			TOTAL									
		12	15	28	39	27	23	9	13	166	652	195	67	425	213	384	1,003		114	167	812	110	4,305				
	50	73	80	126	88	88	69	79	64%	19%	9%	60%	30%	/	/	/	1,146	704	/	706	1,501	/	1,264	1,089	/	1,190	0
	7	22	47	28	24	41	15	12	9%	22%	10%	60%	30%	704	/	706	1,501	/	706	1,501	/	1,264	1,089	/	1,190	0	
	6	6	20	10	5	9	6	6	26%	8%	26%	66%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	37	50	94	49	49	55	29	63	67%	8%	67%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	25	26	37	28	27	33	17	21	8%	17%	8%	17%	9%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	36	30	33	71	57	51	51	58	8%	9%	8%	9%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	93	126	165	154	116	112	127	111	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	11	22	19	14	17	18	7	7	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	8	20	44	44	18	18	6	11	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	54	89	120	170	140	88	81	72	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,501	/	1,264	1,501	/	1,264	1,501	/	1,264	1,089	/	1,190	0	
	6	14	15	23	15	10	12	16	8%	8%	8%	8%	8%	1,50													

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
9/13/22
TUESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Cerritos
Shoemaker
Artesia

PROJECT #:
LOCATION #:
CONTROL:

SC3625
7
SIGNAL

PCE Adjusted	NOTES:							AM	PM	MD	OTHER	OTHER	▲ N	◀ W	E ▶	S	▼	
	Class	1	2	3	4	5	6											
	Factor	1	1.5	2	3	2	2											

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Shoemaker			Shoemaker			Artesia			Artesia			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	1	1	2	1	

AM													TOTAL				
	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	VOLUMES	APPROACH %	APP/DEPART	BEGIN PEAK HR		VOLUMES	APPROACH %	PEAK HR FACTOR	APP/DEPART
	9	64	21	7	48	21	36	71	13	9	149	12	459				
	11	116	38	17	108	36	58	129	17	19	205	39	790				
	17	123	61	19	107	71	58	139	12	28	216	45	893				
	18	131	30	30	108	77	63	119	18	45	254	36	926				
	7	160	27	18	106	60	75	115	13	42	258	41	921				
	3	149	38	29	154	59	65	135	16	30	189	36	901				
	9	54	24	20	57	15	53	104	14	22	171	10	551				
	11	67	33	12	64	24	41	109	26	37	154	13	589				
	84	863	271	152	750	361	448	918	127	231	1,595	231	6,028				
	7%	71%	22%	12%	59%	29%	30%	62%	8%	11%	78%	11%					
	1,217	/	1,541	1,263	/	1,107	1,492	/	1,340	2,056	/	2,040	0				
	BEGIN PEAK HR 7:30 AM																
	44	563	156	96	474	266	260	506	59	144	916	158	3,640				
	6%	74%	20%	11%	57%	32%	32%	61%	7%	12%	75%	13%					
	0.950		0.864		0.956		0.893		0.983								
	762	/	980	836	/	677	825	/	758	1,218	/	1,226	0				
PM													TOTAL				
	4:00 PM	4:15 PM	4:30 PM	4:45 PM	5:00 PM	5:15 PM	5:30 PM	5:45 PM	VOLUMES	APPROACH %	APP/DEPART	BEGIN PEAK HR		VOLUMES	APPROACH %	PEAK HR FACTOR	APP/DEPART
	15	81	36	25	92	26	33	122	15	16	240	25	723				
	16	69	30	16	96	33	25	98	11	19	226	19	657				
	12	80	27	21	103	44	35	111	13	16	239	17	716				
	14	102	34	23	114	42	36	137	24	21	245	19	809				
	18	107	49	23	105	44	45	133	16	40	237	28	843				
	19	78	46	12	93	35	42	127	15	30	284	23	802				
	19	147	48	10	77	27	46	125	23	24	179	25	748				
	24	137	38	20	81	40	61	122	27	37	194	50	828				
	135	799	307	148	759	290	322	973	143	201	1,842	205	6,123				
	11%	64%	25%	12%	63%	24%	22%	68%	10%	9%	82%	9%					
	1,241	/	1,326	1,197	/	1,103	1,438	/	1,427	2,248	/	2,267	0				
	BEGIN PEAK HR 5:00 PM																
	79	469	180	64	355	145	194	506	81	130	893	126	3,219				
	11%	64%	25%	11%	63%	26%	25%	65%	10%	11%	78%	11%					
	0.854		0.821		0.931		0.853		0.955								
	728	/	788	564	/	566	780	/	750	1,148	/	1,116	0				

APPENDIX C – LEVEL OF SERVICE CALCULATIONS

HCM

Vistro File: C:\...\Vistro HCM.vistro

Scenario 1 EX AM

Report File: C:\...\EX AM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.709	32.9	C
2	Bloomfield Ave/166th St	Signalized	HCM 7th Edition	EB Right	0.717	25.3	C
3	Bloomfield Ave/Artesia Blvd	Signalized	HCM 7th Edition	EB Left	0.748	37.9	D
4	Shoemaker Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.577	29.5	C
5	Shoemaker Ave/166th St	Signalized	HCM 7th Edition	WB Right	0.631	21.4	C
6	Shoemaker Ave/Oak Crest St	Signalized	HCM 7th Edition	EB Left	0.536	23.0	C
7	Shoemaker Ave/Artesia Blvd	Signalized	HCM 7th Edition	NB Left	0.865	45.1	D
8	Moore St/Project Dwy 1	Two-way stop	HCM 7th Edition		0.000	0.0	
9	Shoemaker Ave/Project Dwy 2	Two-way stop	HCM 7th Edition	NB Thru	0.008	0.0	A
10	Shoemaker Ave/Project Dwy 3	Two-way stop	HCM 7th Edition	NB Thru	0.008	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	32.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.709

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	96	650	210	102	597	145	130	562	94	178	540	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	53	0	0	36	0	0	24	0	0	13
Total Hourly Volume [veh/h]	96	650	157	102	597	109	130	562	70	178	540	37
Peak Hour Factor	0.9830	0.9830	0.9830	0.7890	0.7890	0.7890	0.9280	0.9280	0.9280	0.7720	0.7720	0.7720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	165	40	32	189	35	35	151	19	58	175	12
Total Analysis Volume [veh/h]	98	661	160	129	757	138	140	606	75	231	699	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	12	31	0	14	30	0	18	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	32	32	8	34	34	9	20	20	14	24	24
g / C, Green / Cycle	0.08	0.36	0.36	0.09	0.37	0.37	0.10	0.22	0.22	0.16	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.21	0.11	0.08	0.24	0.10	0.09	0.19	0.05	0.14	0.22	0.03
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	121	1149	513	142	1192	532	168	702	314	249	864	386
d1, Uniform Delay [s]	40.97	23.32	20.84	40.63	23.23	19.64	39.50	33.83	28.95	37.49	30.69	24.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.05	2.10	1.58	18.28	2.59	1.18	10.09	3.31	0.39	13.85	1.86	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.58	0.31	0.91	0.63	0.26	0.83	0.86	0.24	0.93	0.81	0.12
d, Delay for Lane Group [s/veh]	53.02	25.42	22.43	58.91	25.82	20.82	49.58	37.14	29.34	51.35	32.55	24.97
Lane Group LOS	D	C	C	E	C	C	D	D	C	D	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.52	5.80	2.59	3.45	6.54	2.06	3.39	6.38	1.32	5.76	6.90	0.76
50th-Percentile Queue Length [ft/ln]	62.91	145.01	64.75	86.27	163.52	51.46	84.81	159.47	32.92	143.91	172.55	18.93
95th-Percentile Queue Length [veh/ln]	4.53	9.75	4.66	6.21	10.73	3.70	6.11	10.52	2.37	9.69	11.21	1.36
95th-Percentile Queue Length [ft/ln]	113.24	243.75	116.55	155.28	268.37	92.62	152.66	263.03	59.26	242.28	280.27	34.08

Movement, Approach, & Intersection Results

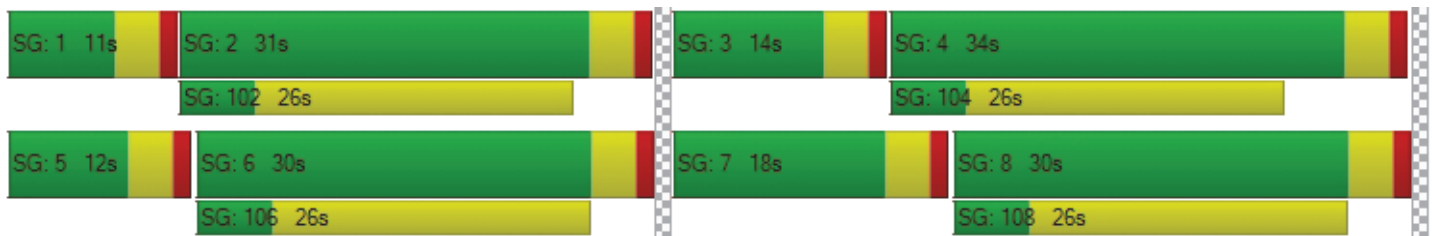
d_M, Delay for Movement [s/veh]	53.02	25.42	22.43	58.91	25.82	20.82	49.58	37.14	29.34	51.35	32.55	24.97
Movement LOS	D	C	C	E	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	27.84			29.31			38.55			36.62		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.89											
Intersection LOS	C											
Intersection V/C	0.709											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.864	2.922	2.882	2.893
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	600	578	667
d_b, Bicycle Delay [s]	22.76	22.05	22.76	20.00
I_b,int, Bicycle LOS Score for Intersection	2.362	2.434	2.257	2.377
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	60	870	413	97	718	107	104	420	57	217	401	84
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	103	0	0	27	0	0	14	0	0	21
Total Hourly Volume [veh/h]	60	870	310	97	718	80	104	420	43	217	401	63
Peak Hour Factor	0.8920	0.8920	0.8920	0.8610	0.8610	0.8610	0.8920	0.8920	0.8920	0.7690	0.7690	0.7690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	244	87	28	208	23	29	118	12	71	130	20
Total Analysis Volume [veh/h]	67	975	348	113	834	93	117	471	48	282	521	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	34	0	11	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	24	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	40	31	31	40	32	32	32	21	21	32	23	23
g / C, Green / Cycle	0.50	0.39	0.39	0.50	0.40	0.40	0.40	0.27	0.27	0.40	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.10	0.30	0.24	0.19	0.28	0.28	0.13	0.16	0.16	0.28	0.18	0.18
s, saturation flow rate [veh/h]	700	3204	1431	580	1683	1624	923	1683	1629	1020	1683	1604
c, Capacity [veh/h]	347	1244	556	316	671	647	389	447	433	436	489	466
d1, Uniform Delay [s]	13.20	21.51	19.78	15.20	20.11	20.11	16.51	25.57	25.59	19.59	24.65	24.65
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.23	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.27	4.98	5.27	3.14	6.09	6.30	0.43	1.24	1.29	3.34	1.35	1.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.19	0.78	0.63	0.36	0.70	0.70	0.30	0.59	0.59	0.65	0.63	0.63
d, Delay for Lane Group [s/veh]	13.47	26.49	25.04	18.34	26.20	26.41	16.94	26.81	26.88	22.93	26.00	26.07
Lane Group LOS	B	C	C	B	C	C	B	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	8.36	5.73	1.23	7.71	7.48	1.30	4.20	4.09	3.96	5.05	4.83
50th-Percentile Queue Length [ft/ln]	15.15	209.01	143.37	30.72	192.66	186.96	32.48	105.11	102.34	98.92	126.30	120.65
95th-Percentile Queue Length [veh/ln]	1.09	13.10	9.66	2.21	12.26	11.96	2.34	7.57	7.37	7.12	8.74	8.43
95th-Percentile Queue Length [ft/ln]	27.27	327.56	241.56	55.30	306.48	299.08	58.47	189.17	184.22	178.05	218.45	210.72

Movement, Approach, & Intersection Results

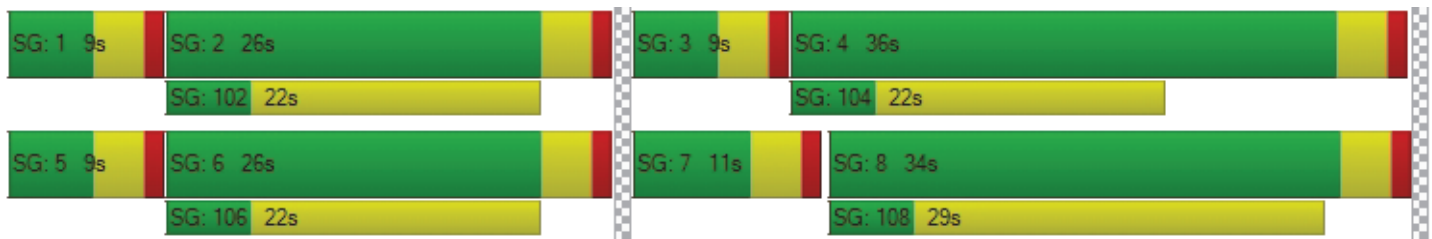
d_M, Delay for Movement [s/veh]	13.47	26.49	25.04	18.34	26.29	26.41	16.94	26.84	26.88	22.93	26.03	26.07
Movement LOS	B	C	C	B	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	25.50			25.44			25.02			25.04		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.30											
Intersection LOS	C											
Intersection V/C	0.717											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	3.225	2.975	2.709	2.770
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	550	550	750	800
d_b, Bicycle Delay [s]	21.03	21.03	15.63	14.40
I_b,int, Bicycle LOS Score for Intersection	2.791	2.440	2.096	2.307
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	37.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	141	504	106	264	612	111	76	363	104	266	674	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	27	0	0	28	0	0	26	0	0	35
Total Hourly Volume [veh/h]	141	504	79	264	612	83	76	363	78	266	674	105
Peak Hour Factor	0.7270	0.7270	0.7270	0.8890	0.8890	0.8890	0.8760	0.8760	0.8760	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	173	27	74	172	23	22	104	22	76	193	30
Total Analysis Volume [veh/h]	194	693	109	297	688	93	87	414	89	304	771	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	32	0	14	30	0	11	30	0	14	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	31	31	10	29	29	6	23	23	10	27	27
g / C, Green / Cycle	0.13	0.35	0.35	0.11	0.32	0.32	0.07	0.25	0.25	0.11	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.12	0.24	0.24	0.10	0.16	0.16	0.05	0.13	0.06	0.10	0.27	0.27
s, saturation flow rate [veh/h]	1603	1683	1604	3113	3204	1583	1603	3204	1431	3113	1683	1605
c, Capacity [veh/h]	214	581	554	346	1035	511	109	816	364	346	501	477
d1, Uniform Delay [s]	38.45	25.51	25.51	39.31	24.63	24.65	41.30	28.71	26.66	39.40	30.45	30.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.31	0.31
l, Upstream Filtering 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
d2, Incremental Delay [s]	13.51	7.07	7.41	6.23	1.75	3.55	12.14	0.49	0.34	7.21	16.23	17.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.91	0.71	0.71	0.86	0.50	0.51	0.79	0.51	0.24	0.88	0.91	0.91
d, Delay for Lane Group [s/veh]	51.97	32.58	32.92	45.53	26.38	28.20	53.45	29.20	27.00	46.62	46.69	47.64
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.85	8.20	7.87	3.40	4.48	4.70	2.21	3.70	1.49	3.60	11.43	11.06
50th-Percentile Queue Length [ft/ln]	121.19	205.09	196.77	84.98	112.00	117.54	55.16	92.45	37.23	90.10	285.84	276.39
95th-Percentile Queue Length [veh/ln]	8.46	12.90	12.47	6.12	7.95	8.26	3.97	6.66	2.68	6.49	16.98	16.51
95th-Percentile Queue Length [ft/ln]	211.46	322.53	311.79	152.96	198.79	206.43	99.29	166.41	67.01	162.18	424.48	412.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.97	32.72	32.92	45.53	26.82	28.20	53.45	29.20	27.00	46.62	47.08	47.64
Movement LOS	D	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	36.49			32.10			32.44			47.02		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	37.90											
Intersection LOS	D											
Intersection V/C	0.748											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.954	3.014	2.860	2.842
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	622	578	578	644
d_b, Bicycle Delay [s]	21.36	22.76	22.76	20.67
I_b,int, Bicycle LOS Score for Intersection	2.404	2.168	2.068	2.574
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	29.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.577

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	60	275	97	44	287	106	112	605	114	143	728	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	24	0	0	27	0	0	29	0	0	27
Total Hourly Volume [veh/h]	60	275	73	44	287	79	112	605	85	143	728	82
Peak Hour Factor	0.7100	0.7100	0.7100	0.9120	0.9120	0.9120	0.8890	0.8890	0.8890	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	97	26	12	79	22	31	170	24	38	196	22
Total Analysis Volume [veh/h]	85	387	103	48	315	87	126	681	96	154	784	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	11	30	0	12	26	0	13	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	31	31	3	29	29	8	20	20	9	22	22
g / C, Green / Cycle	0.07	0.39	0.39	0.04	0.37	0.37	0.10	0.25	0.25	0.11	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.15	0.03	0.12	0.13	0.08	0.21	0.07	0.10	0.24	0.06
s, saturation flow rate [veh/h]	1603	1683	1563	1603	1683	1560	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	106	658	611	68	618	573	154	814	363	180	867	387
d1, Uniform Delay [s]	36.83	17.46	17.49	37.81	18.26	18.31	35.48	28.26	23.86	34.86	28.18	22.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.84	1.69	1.86	12.52	1.45	1.62	10.16	2.37	0.38	10.83	3.89	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.80	0.38	0.39	0.71	0.33	0.34	0.82	0.84	0.26	0.85	0.90	0.23
d, Delay for Lane Group [s/veh]	49.67	19.15	19.35	50.33	19.71	19.93	45.63	30.63	24.24	45.69	32.06	22.97
Lane Group LOS	D	B	B	D	B	B	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.98	3.47	3.29	1.13	2.77	2.65	2.79	6.19	1.45	3.33	7.15	1.24
50th-Percentile Queue Length [ft/ln]	49.57	86.72	82.29	28.13	69.29	66.34	69.67	154.72	36.20	83.35	178.71	30.97
95th-Percentile Queue Length [veh/ln]	3.57	6.24	5.93	2.03	4.99	4.78	5.02	10.27	2.61	6.00	11.53	2.23
95th-Percentile Queue Length [ft/ln]	89.23	156.10	148.13	50.63	124.73	119.41	125.41	256.71	65.16	150.03	288.33	55.75

Movement, Approach, & Intersection Results

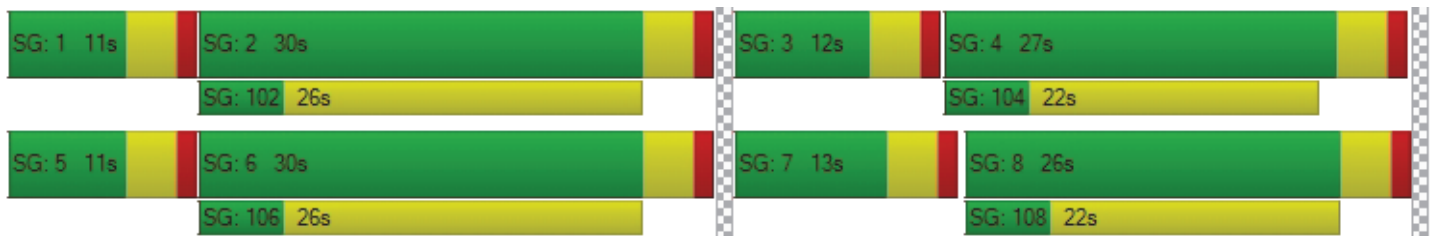
d_M, Delay for Movement [s/veh]	49.67	19.22	19.35	50.33	19.79	19.93	45.63	30.63	24.24	45.69	32.06	22.97
Movement LOS	D	B	B	D	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	23.74			23.07			32.04			33.33		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.51											
Intersection LOS	C											
Intersection V/C	0.577											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	2.562	2.621	2.801	2.901
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	650	650	550	575
d_b, Bicycle Delay [s]	18.23	18.23	21.03	20.31
I_b,int, Bicycle LOS Score for Intersection	2.054	1.953	2.329	2.428
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.631

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	117	381	139	43	247	125	211	546	67	123	517	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	35	0	0	31	0	0	17	0	0	16
Total Hourly Volume [veh/h]	117	381	104	43	247	94	211	546	50	123	517	46
Peak Hour Factor	0.8290	0.8290	0.8290	0.6900	0.6900	0.6900	0.8670	0.8670	0.8670	0.7430	0.7430	0.7430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	115	31	16	89	34	61	157	14	41	174	15
Total Analysis Volume [veh/h]	141	460	125	62	358	136	243	630	58	166	696	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	24	24	31	22	22	31	22	22	31	22	22
g / C, Green / Cycle	0.44	0.34	0.34	0.44	0.32	0.32	0.44	0.31	0.31	0.44	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.14	0.18	0.18	0.07	0.15	0.16	0.28	0.21	0.21	0.19	0.23	0.23
s, saturation flow rate [veh/h]	989	1683	1561	898	1683	1528	856	1683	1634	889	1683	1635
c, Capacity [veh/h]	494	572	530	446	536	487	390	522	507	412	522	507
d1, Uniform Delay [s]	12.34	18.61	18.63	11.88	19.19	19.25	15.55	21.01	21.01	13.92	21.58	21.58
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.20	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.31	3.49	3.79	0.65	3.05	3.47	3.03	1.49	1.53	0.64	2.04	2.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.29	0.53	0.53	0.14	0.48	0.49	0.62	0.67	0.67	0.40	0.74	0.74
d, Delay for Lane Group [s/veh]	12.66	22.09	22.42	12.53	22.25	22.72	18.59	22.50	22.54	14.56	23.63	23.69
Lane Group LOS	B	C	C	B	C	C	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.27	4.24	4.00	0.56	3.47	3.26	2.49	4.64	4.51	1.47	5.30	5.15
50th-Percentile Queue Length [ft/ln]	31.65	106.11	100.02	14.04	86.79	81.61	62.18	115.90	112.67	36.70	132.42	128.87
95th-Percentile Queue Length [veh/ln]	2.28	7.62	7.20	1.01	6.25	5.88	4.48	8.17	7.99	2.64	9.07	8.88
95th-Percentile Queue Length [ft/ln]	56.97	190.57	180.04	25.27	156.22	146.89	111.92	204.18	199.70	66.06	226.78	221.96

Movement, Approach, & Intersection Results

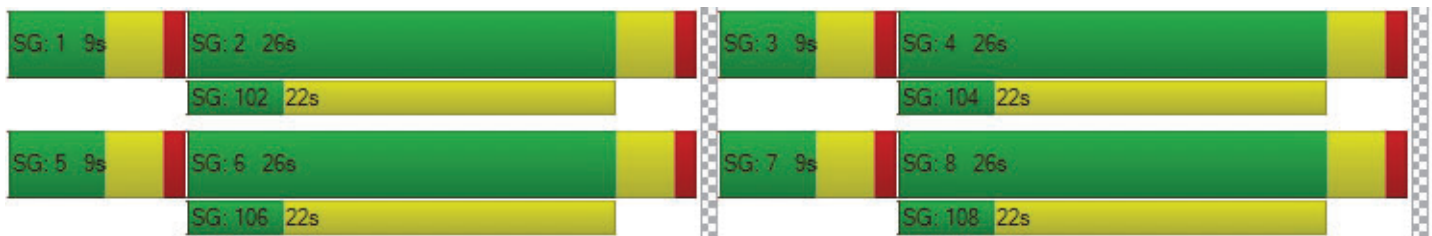
d_M, Delay for Movement [s/veh]	12.66	22.21	22.42	12.53	22.38	22.72	18.59	22.52	22.54	14.56	23.65	23.69
Movement LOS	B	C	C	B	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	20.39			21.36			21.49			22.02		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.37											
Intersection LOS	C											
Intersection V/C	0.631											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
I_p,int, Pedestrian LOS Score for Intersection	2.684	2.806	2.890	2.810
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	629	629	629
d_b, Bicycle Delay [s]	16.46	16.46	16.46	16.46
I_b,int, Bicycle LOS Score for Intersection	2.187	2.044	2.342	2.335
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	23.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	88	487	0	0	361	90	90	0	94	285	6	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	23	0	0	24	0	0	16
Total Hourly Volume [veh/h]	88	487	0	0	361	67	90	0	70	285	6	46
Peak Hour Factor	0.9330	0.9330	1.0000	1.0000	0.6750	0.6750	0.6700	1.0000	0.6700	0.5830	0.5830	0.5830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	130	0	0	134	25	34	0	26	122	3	20
Total Analysis Volume [veh/h]	94	522	0	0	535	99	134	0	104	489	10	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	9	28	0	0	19	0	29	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	17	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	36	36	9	9	15	15	15
g / C, Green / Cycle	0.55	0.55	0.45	0.45	0.11	0.11	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.11	0.16	0.19	0.20	0.08	0.07	0.16	0.16	0.06
s, saturation flow rate [veh/h]	843	3204	1683	1595	1603	1431	1603	1606	1431
c, Capacity [veh/h]	486	1766	751	712	182	163	297	297	265
d1, Uniform Delay [s]	9.64	9.63	15.12	15.31	34.28	33.87	31.46	31.46	28.12
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.43	1.74	2.02	5.63	4.11	6.35	6.34	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.19	0.30	0.42	0.45	0.73	0.64	0.84	0.84	0.30
d, Delay for Lane Group [s/veh]	9.83	10.05	16.86	17.33	39.90	37.99	37.81	37.80	28.74
Lane Group LOS	A	B	B	B	D	D	D	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.73	2.31	3.86	3.94	2.75	2.07	5.02	5.03	1.32
50th-Percentile Queue Length [ft/ln]	18.29	57.70	96.39	98.41	68.65	51.84	125.47	125.67	32.98
95th-Percentile Queue Length [veh/ln]	1.32	4.15	6.94	7.09	4.94	3.73	8.69	8.70	2.37
95th-Percentile Queue Length [ft/ln]	32.92	103.85	173.50	177.13	123.57	93.31	217.32	217.59	59.37

Movement, Approach, & Intersection Results

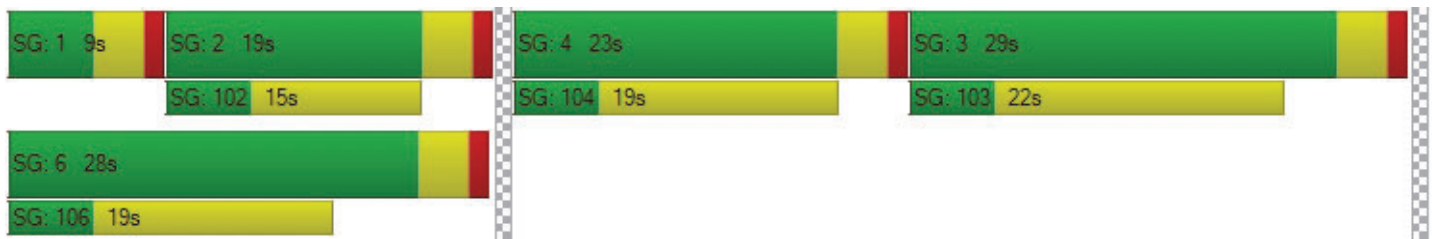
d_M, Delay for Movement [s/veh]	9.83	10.05	0.00	0.00	17.05	17.33	39.90	0.00	37.99	37.80	37.80	28.74
Movement LOS	A	B			B	B	D		D	D	D	C
d_A, Approach Delay [s/veh]	10.02				17.09		39.07		36.57			
Approach LOS	B				B		D		D			
d_I, Intersection Delay [s/veh]	22.96											
Intersection LOS	C											
Intersection V/C	0.536											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	2.640	2.617	2.192	2.294
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	375	625	475
d_b, Bicycle Delay [s]	19.60	26.41	18.91	23.26
I_b,int, Bicycle LOS Score for Intersection	2.068	2.102	1.560	2.540
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	45.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.865

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	44	563	156	96	474	266	260	506	59	144	916	158
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	39	0	0	67	0	0	15	0	0	40
Total Hourly Volume [veh/h]	44	563	117	96	474	199	260	506	44	144	916	118
Peak Hour Factor	0.9500	0.9500	0.9500	0.8640	0.8640	0.8640	0.9560	0.9560	0.9560	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	148	31	28	137	58	68	132	12	40	256	33
Total Analysis Volume [veh/h]	46	593	123	111	549	230	272	529	46	161	1026	132
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing m	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing mi	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	12	33	0	22	41	0	17	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	26	26	8	30	30	18	38	38	12	32	32
g / C, Green / Cycle	0.04	0.26	0.26	0.08	0.30	0.30	0.18	0.38	0.38	0.12	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.22	0.07	0.24	0.24	0.17	0.17	0.03	0.10	0.32	0.09
s, saturation flow rate [veh/h]	1603	1683	1584	1603	1683	1516	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	61	438	412	128	509	458	289	1222	546	190	1025	458
d1, Uniform Delay [s]	47.66	35.05	35.08	45.47	32.18	32.19	40.49	22.92	19.77	43.17	34.00	25.47
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.13	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	17.42	17.56	18.69	15.55	12.79	14.06	16.51	0.24	0.07	9.87	13.20	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.76	0.84	0.84	0.87	0.81	0.81	0.94	0.43	0.08	0.85	1.00	0.29
d, Delay for Lane Group [s/veh]	65.08	52.61	53.77	61.01	44.97	46.25	57.00	23.16	19.84	53.04	47.20	25.81
Lane Group LOS	E	D	D	E	D	D	E	C	B	D	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.40	10.25	9.81	3.20	10.48	9.61	7.69	4.42	0.67	4.31	13.60	2.31
50th-Percentile Queue Length [ft/ln]	35.05	256.32	245.17	80.08	262.03	240.32	192.29	110.57	16.68	107.72	340.12	57.63
95th-Percentile Queue Length [veh/ln]	2.52	15.50	14.94	5.77	15.79	14.70	12.24	7.87	1.20	7.71	19.66	4.15
95th-Percentile Queue Length [ft/ln]	63.09	387.61	373.57	144.15	394.76	367.44	305.99	196.79	30.03	192.82	491.53	103.73

Movement, Approach, & Intersection Results

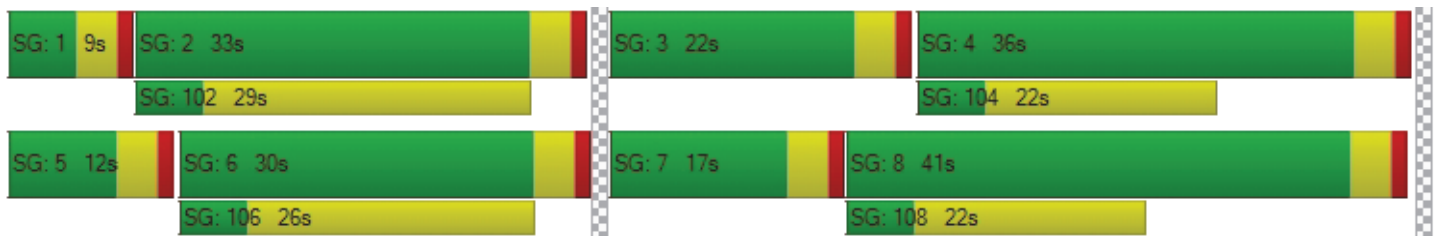
d_M, Delay for Movement [s/veh]	65.08	53.05	53.77	61.01	45.29	46.25	57.00	23.16	19.84	53.04	47.20	25.81
Movement LOS	E	D	D	E	D	D	E	C	B	D	F	C
d_A, Approach Delay [s/veh]	53.89			47.50			33.85			45.77		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	45.15											
Intersection LOS	D											
Intersection V/C	0.865											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.771	2.920	3.036	2.985
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	580	740	640
d_b, Bicycle Delay [s]	27.38	25.21	19.85	23.12
I_b,int, Bicycle LOS Score for Intersection	2.220	2.349	2.271	2.681
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 8: Moore St/Project Dwy 1**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Project Dwy 1		Moore St			
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy 1		Moore St			
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.52	8.32	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.42		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.01					
Intersection LOS						

Intersection Level Of Service Report
Intersection 9: Shoemaker Ave/Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Base Volume Input [veh/h]	0	654	415	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	654	415	0	0	0
Peak Hour Factor	1.0000	0.8290	0.6900	1.0000	1.0000	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	197	150	0	0	0
Total Analysis Volume [veh/h]	0	789	601	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.70	0.00	0.00	0.00	19.92	10.18
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		15.05	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Shoemaker Ave/Project Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	49.21	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Base Volume Input [veh/h]	0	654	415	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	654	415	0	0	0
Peak Hour Factor	1.0000	0.8290	0.6900	1.0000	1.0000	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	197	150	0	0	0
Total Analysis Volume [veh/h]	0	789	601	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.70	0.00	0.00	0.00	19.92	10.18
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		15.05	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

HCM

Vistro File: C:\...\Vistro HCM.vistro

Scenario 2 EX PM

Report File: C:\...\EX PM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.733	36.0	D
2	Bloomfield Ave/166th St	Signalized	HCM 7th Edition	WB Right	0.648	23.2	C
3	Bloomfield Ave/Artesia Blvd	Signalized	HCM 7th Edition	NB Left	0.764	39.9	D
4	Shoemaker Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.596	28.2	C
5	Shoemaker Ave/166th St	Signalized	HCM 7th Edition	EB Right	0.571	22.3	C
6	Shoemaker Ave/Oak Crest St	Signalized	HCM 7th Edition	EB Right	0.279	11.1	B
7	Shoemaker Ave/Artesia Blvd	Signalized	HCM 7th Edition	SB Left	0.796	40.7	D
8	Moore St/Project Dwy 1	Two-way stop	HCM 7th Edition		0.000	0.0	
9	Shoemaker Ave/Project Dwy 2	Two-way stop	HCM 7th Edition	SB Thru	0.007	0.0	A
10	Shoemaker Ave/Project Dwy 3	Two-way stop	HCM 7th Edition	SB Thru	0.007	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	36.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.733

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	185	752	175	82	600	131	131	456	64	198	676	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	44	0	0	33	0	0	16	0	0	24
Total Hourly Volume [veh/h]	185	752	131	82	600	98	131	456	48	198	676	70
Peak Hour Factor	0.9440	0.9440	0.9440	0.9000	0.9000	0.9000	0.9420	0.9420	0.9420	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	199	35	23	167	27	35	121	13	57	194	20
Total Analysis Volume [veh/h]	196	797	139	91	667	109	139	484	51	227	776	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	32	0	17	30	0	15	30	0	21	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	40	40	7	33	33	10	21	21	16	27	27
g / C, Green / Cycle	0.14	0.40	0.40	0.07	0.33	0.33	0.10	0.21	0.21	0.16	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.12	0.25	0.10	0.06	0.21	0.08	0.09	0.15	0.04	0.14	0.24	0.06
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	224	1268	566	115	1050	469	165	684	305	255	863	385
d1, Uniform Delay [s]	42.14	24.31	20.23	45.66	28.55	24.47	44.03	36.45	32.09	41.18	35.22	28.27
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	10.22	2.37	1.03	11.35	2.94	1.16	10.75	1.37	0.26	10.18	3.71	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.87	0.63	0.25	0.79	0.64	0.23	0.84	0.71	0.17	0.89	0.90	0.21
d, Delay for Lane Group [s/veh]	52.36	26.68	21.26	57.01	31.49	25.63	54.78	37.81	32.34	51.36	38.93	28.54
Lane Group LOS	D	C	C	E	C	C	D	D	C	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.33	7.78	2.30	2.53	6.89	1.96	3.78	5.41	1.00	6.02	9.13	1.47
50th-Percentile Queue Length [ft/ln]	133.20	194.47	57.47	63.26	172.13	49.00	94.45	135.21	25.03	150.40	228.24	36.64
95th-Percentile Queue Length [veh/ln]	9.11	12.35	4.14	4.55	11.19	3.53	6.80	9.22	1.80	10.04	14.09	2.64
95th-Percentile Queue Length [ft/ln]	227.84	308.82	103.45	113.87	279.71	88.20	170.00	230.56	45.05	250.96	352.13	65.96

Movement, Approach, & Intersection Results

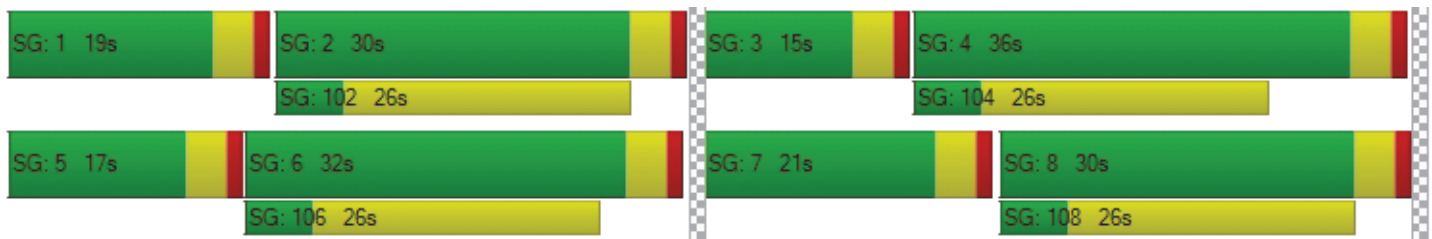
d_M, Delay for Movement [s/veh]	52.36	26.68	21.26	57.01	31.49	25.63	54.78	37.81	32.34	51.36	38.93	28.54
Movement LOS	D	C	C	E	C	C	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	30.46			33.43			40.90			40.77		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.99											
Intersection LOS	D											
Intersection V/C	0.733											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.869	2.927	2.873	2.898
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	520	520	640
d_b, Bicycle Delay [s]	25.92	27.38	27.38	23.12
I_b,int, Bicycle LOS Score for Intersection	2.530	2.302	2.129	2.473
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.648

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	155	829	237	89	651	201	89	403	80	235	601	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	59	0	0	50	0	0	20	0	0	33
Total Hourly Volume [veh/h]	155	829	178	89	651	151	89	403	60	235	601	99
Peak Hour Factor	0.9800	0.9800	0.9800	0.9690	0.9690	0.9690	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	211	45	23	168	39	23	103	15	60	153	25
Total Analysis Volume [veh/h]	158	846	182	92	672	156	91	411	61	240	613	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	36	0	9	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	24	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	41	33	33	41	32	32	31	22	22	31	22	22
g / C, Green / Cycle	0.52	0.41	0.41	0.52	0.40	0.40	0.38	0.27	0.27	0.38	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.21	0.26	0.13	0.14	0.25	0.25	0.11	0.14	0.14	0.24	0.22	0.22
s, saturation flow rate [veh/h]	766	3204	1431	664	1683	1575	858	1683	1608	1006	1683	1601
c, Capacity [veh/h]	408	1322	590	372	681	637	322	455	435	410	469	446
d1, Uniform Delay [s]	12.48	18.75	15.81	11.98	19.02	19.02	18.10	24.84	24.87	20.66	26.60	26.60
k, delay calibration	0.12	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.15	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.67	2.38	1.35	1.58	4.35	4.65	0.47	0.95	1.01	1.81	2.91	3.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.39	0.64	0.31	0.25	0.63	0.63	0.28	0.53	0.53	0.59	0.78	0.78
d, Delay for Lane Group [s/veh]	13.15	21.14	17.17	13.56	23.37	23.67	18.58	25.79	25.88	22.48	29.51	29.66
Lane Group LOS	B	C	B	B	C	C	B	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.45	6.28	2.34	0.88	6.49	6.13	1.04	3.73	3.61	3.26	6.53	6.23
50th-Percentile Queue Length [ft/ln]	36.25	156.96	58.53	22.12	162.35	153.24	26.10	93.34	90.18	81.62	163.21	155.71
95th-Percentile Queue Length [veh/ln]	2.61	10.39	4.21	1.59	10.67	10.19	1.88	6.72	6.49	5.88	10.72	10.32
95th-Percentile Queue Length [ft/ln]	65.26	259.69	105.35	39.81	266.83	254.75	46.98	168.01	162.32	146.92	267.97	258.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.15	21.14	17.17	13.56	23.48	23.67	18.58	25.83	25.88	22.48	29.57	29.66
Movement LOS	B	C	B	B	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.46			22.52			24.66			27.79		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	23.24											
Intersection LOS	C											
Intersection V/C	0.648											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	3.086	2.937	2.826	2.737
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	550	550	800	800
d_b, Bicycle Delay [s]	21.03	21.03	14.40	14.40
I_b,int, Bicycle LOS Score for Intersection	2.587	2.360	2.041	2.374
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	39.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	249	779	72	292	540	81	75	496	99	215	641	157
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	20	0	0	25	0	0	39
Total Hourly Volume [veh/h]	249	779	54	292	540	61	75	496	74	215	641	118
Peak Hour Factor	0.9610	0.9610	0.9610	0.8910	0.8910	0.8910	0.9220	0.9220	0.9220	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	203	14	82	152	17	20	134	20	61	182	33
Total Analysis Volume [veh/h]	259	811	56	328	606	68	81	538	80	244	727	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	33	0	15	30	0	9	30	0	12	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	32	32	11	29	29	5	23	23	8	26	26
g / C, Green / Cycle	0.16	0.36	0.36	0.12	0.32	0.32	0.06	0.26	0.26	0.09	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.26	0.11	0.14	0.14	0.05	0.17	0.06	0.08	0.26	0.26
s, saturation flow rate [veh/h]	1603	1683	1645	3113	3204	1598	1603	3204	1431	3113	1683	1593
c, Capacity [veh/h]	249	597	584	380	1030	514	89	821	367	277	487	461
d1, Uniform Delay [s]	38.00	25.33	25.33	38.76	24.09	24.11	42.28	29.91	26.37	40.53	30.80	30.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.30	0.30
l, Upstream Filtering 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
d2, Incremental Delay [s]	37.10	7.81	7.99	5.84	1.34	2.70	26.58	0.89	0.30	8.98	15.53	16.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	1.04	0.73	0.73	0.86	0.44	0.44	0.91	0.66	0.22	0.88	0.91	0.91
d, Delay for Lane Group [s/veh]	75.10	33.13	33.32	44.60	25.43	26.81	68.86	30.81	26.66	49.51	46.33	47.15
Lane Group LOS	F	C	C	D	C	C	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.82	8.86	8.70	3.72	3.74	3.95	2.39	5.04	1.32	2.98	11.04	10.56
50th-Percentile Queue Length [ft/ln]	195.44	221.53	217.43	92.99	93.57	98.68	59.68	126.04	33.12	74.46	275.92	264.05
95th-Percentile Queue Length [veh/ln]	12.62	13.74	13.53	6.70	6.74	7.10	4.30	8.72	2.38	5.36	16.49	15.89
95th-Percentile Queue Length [ft/ln]	315.40	343.58	338.34	167.39	168.43	177.62	107.42	218.10	59.62	134.03	412.13	397.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	75.10	33.22	33.32	44.60	25.79	26.81	68.86	30.81	26.66	49.51	46.65	47.15
Movement LOS	F	C	C	D	C	C	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	42.86			32.02			34.74			47.34		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	39.91											
Intersection LOS	D											
Intersection V/C	0.764											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.935			3.011			2.880			2.849		
Crosswalk LOS	C			C			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	644			578			578			644		
d_b, Bicycle Delay [s]	20.67			22.76			22.76			20.67		
I_b,int, Bicycle LOS Score for Intersection	2.503			2.122			2.157			2.503		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	81	353	124	56	298	96	75	543	86	90	705	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	31	0	0	24	0	0	22	0	0	13
Total Hourly Volume [veh/h]	81	353	93	56	298	72	75	543	64	90	705	39
Peak Hour Factor	0.8700	0.8700	0.8700	0.8500	0.8500	0.8500	0.8750	0.8750	0.8750	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	101	27	16	88	21	21	155	18	27	215	12
Total Analysis Volume [veh/h]	93	406	107	66	351	85	86	621	73	110	859	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	30	0	10	30	0	10	26	0	14	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	31	31	4	29	29	5	22	22	7	24	24
g / C, Green / Cycle	0.07	0.38	0.38	0.05	0.36	0.36	0.07	0.28	0.28	0.09	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.06	0.16	0.16	0.04	0.13	0.14	0.05	0.19	0.05	0.07	0.27	0.03
s, saturation flow rate [veh/h]	1603	1683	1564	1603	1683	1572	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	115	646	600	83	612	572	107	889	397	139	953	425
d1, Uniform Delay [s]	36.57	18.02	18.06	37.49	18.67	18.72	36.81	25.90	22.01	35.81	26.98	20.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.32	1.92	2.10	15.29	1.68	1.85	12.89	1.01	0.22	9.57	3.46	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.41	0.41	0.79	0.37	0.37	0.80	0.70	0.18	0.79	0.90	0.11
d, Delay for Lane Group [s/veh]	48.90	19.94	20.16	52.78	20.35	20.56	49.70	26.91	22.23	45.39	30.44	20.55
Lane Group LOS	D	B	C	D	C	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.15	3.73	3.54	1.58	3.07	2.94	2.01	5.19	1.04	2.38	7.66	0.62
50th-Percentile Queue Length [ft/ln]	53.66	93.27	88.38	39.38	76.76	73.52	50.16	129.81	25.91	59.38	191.58	15.59
95th-Percentile Queue Length [veh/ln]	3.86	6.72	6.36	2.84	5.53	5.29	3.61	8.93	1.87	4.28	12.20	1.12
95th-Percentile Queue Length [ft/ln]	96.58	167.89	159.09	70.89	138.16	132.33	90.29	223.23	46.65	106.89	305.08	28.06

Movement, Approach, & Intersection Results

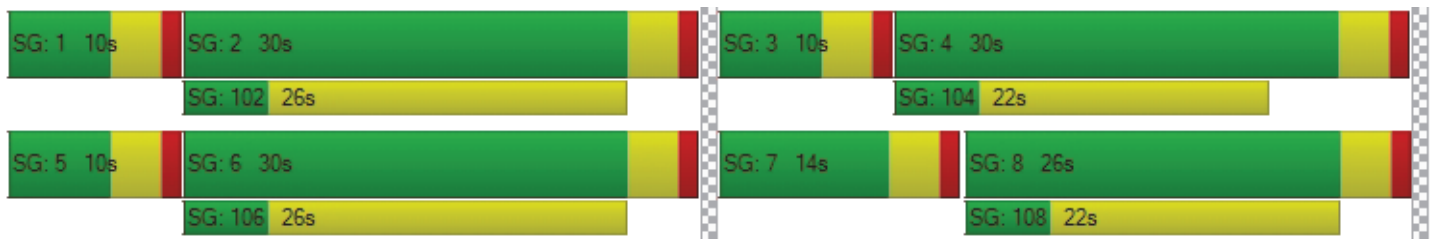
d_M, Delay for Movement [s/veh]	48.90	20.02	20.16	52.78	20.43	20.56	49.70	26.91	22.23	45.39	30.44	20.55
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	24.47			24.71			28.98			31.59		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.22											
Intersection LOS	C											
Intersection V/C	0.596											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	2.572	2.610	2.783	2.869
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	650	650	550	650
d_b, Bicycle Delay [s]	18.23	18.23	21.03	18.23
I_b,int, Bicycle LOS Score for Intersection	2.085	1.994	2.221	2.409
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	22.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	59	286	102	55	398	196	165	548	50	94	480	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	26	0	0	49	0	0	13	0	0	11
Total Hourly Volume [veh/h]	59	286	76	55	398	147	165	548	37	94	480	32
Peak Hour Factor	0.9580	0.9580	0.9580	0.8830	0.8830	0.8830	0.8650	0.8650	0.8650	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	75	20	16	113	42	48	158	11	29	146	10
Total Analysis Volume [veh/h]	62	299	79	62	451	166	191	634	43	114	585	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	36	29	29	36	29	29	26	17	17	26	17	17
g / C, Green / Cycle	0.52	0.41	0.41	0.52	0.41	0.41	0.37	0.24	0.24	0.37	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.12	0.06	0.19	0.19	0.20	0.20	0.20	0.12	0.19	0.19
s, saturation flow rate [veh/h]	861	1683	1565	1012	1683	1531	960	1683	1646	926	1683	1646
c, Capacity [veh/h]	481	688	639	589	688	626	385	410	401	366	404	395
d1, Uniform Delay [s]	9.41	13.83	13.87	8.80	15.13	15.16	17.12	25.15	25.15	16.40	24.87	24.88
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.12	1.02	1.13	0.36	2.28	2.54	0.99	4.54	4.64	0.48	3.31	3.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.13	0.28	0.29	0.11	0.47	0.47	0.50	0.84	0.84	0.31	0.78	0.78
d, Delay for Lane Group [s/veh]	9.53	14.86	15.01	9.16	17.42	17.71	18.11	29.68	29.79	16.88	28.19	28.28
Lane Group LOS	A	B	B	A	B	B	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	2.08	1.99	0.45	3.67	3.42	2.05	5.41	5.30	1.15	4.81	4.73
50th-Percentile Queue Length [ft/ln]	10.86	51.94	49.84	11.20	91.81	85.42	51.19	135.26	132.59	28.69	120.36	118.15
95th-Percentile Queue Length [veh/ln]	0.78	3.74	3.59	0.81	6.61	6.15	3.69	9.23	9.08	2.07	8.41	8.29
95th-Percentile Queue Length [ft/ln]	19.56	93.49	89.71	20.16	165.25	153.75	92.15	230.63	227.01	51.65	210.32	207.29

Movement, Approach, & Intersection Results

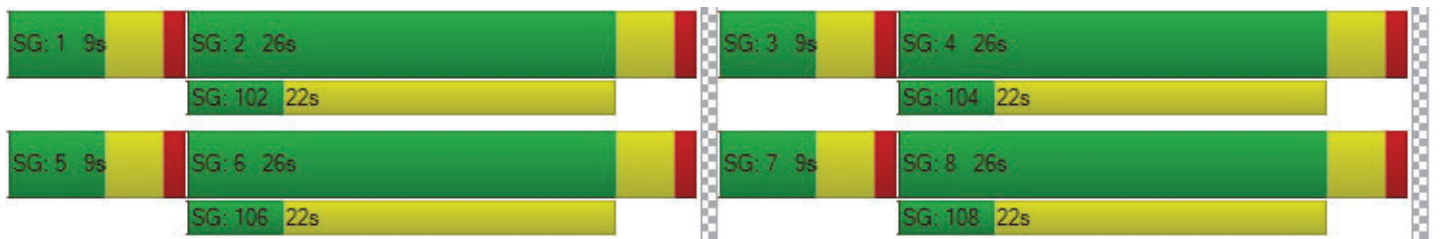
d_M, Delay for Movement [s/veh]	9.53	14.91	15.01	9.16	17.50	17.71	18.11	29.73	29.79	16.88	28.23	28.28
Movement LOS	A	B	B	A	B	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	14.17			16.79			27.18			26.48		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	22.30											
Intersection LOS	C											
Intersection V/C	0.571											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	26.58			26.58			26.58			26.58		
I_p,int, Pedestrian LOS Score for Intersection	2.582			2.761			2.799			2.746		
Crosswalk LOS	B			C			C			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	629			629			629			629		
d_b, Bicycle Delay [s]	16.46			16.46			16.46			16.46		
I_b,int, Bicycle LOS Score for Intersection	1.944			2.160			2.286			2.178		
Bicycle LOS	A			B			B			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.279

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	38	404	0	0	524	30	13	0	33	52	13	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	8	0	0	8	0	0	7
Total Hourly Volume [veh/h]	38	404	0	0	524	22	13	0	25	52	13	19
Peak Hour Factor	0.8730	0.8730	1.0000	1.0000	0.9380	0.9380	0.6390	1.0000	0.6390	0.6500	0.6500	0.6500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	116	0	0	140	6	5	0	10	20	5	7
Total Analysis Volume [veh/h]	44	463	0	0	559	23	20	0	39	80	20	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	9	28	0	0	19	0	29	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	17	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	55	48	48	4	4	9	9	9
g / C, Green / Cycle	0.69	0.69	0.60	0.60	0.05	0.05	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.05	0.14	0.17	0.18	0.01	0.03	0.03	0.03	0.02
s, saturation flow rate [veh/h]	829	3204	1683	1660	1603	1431	1603	1634	1431
c, Capacity [veh/h]	627	2195	1003	989	75	67	190	193	169
d1, Uniform Delay [s]	4.47	4.64	7.90	7.92	36.81	37.37	32.09	32.08	31.74
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.22	0.73	0.76	1.88	7.84	0.73	0.70	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.21	0.29	0.29	0.27	0.58	0.26	0.26	0.17
d, Delay for Lane Group [s/veh]	4.51	4.86	8.63	8.68	38.69	45.21	32.82	32.78	32.21
Lane Group LOS	A	A	A	A	D	D	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.19	1.18	2.18	2.19	0.41	0.88	0.90	0.90	0.52
50th-Percentile Queue Length [ft/ln]	4.84	29.41	54.58	54.82	10.25	21.99	22.42	22.60	12.93
95th-Percentile Queue Length [veh/ln]	0.35	2.12	3.93	3.95	0.74	1.58	1.61	1.63	0.93
95th-Percentile Queue Length [ft/ln]	8.71	52.93	98.24	98.68	18.45	39.58	40.36	40.67	23.27

Movement, Approach, & Intersection Results

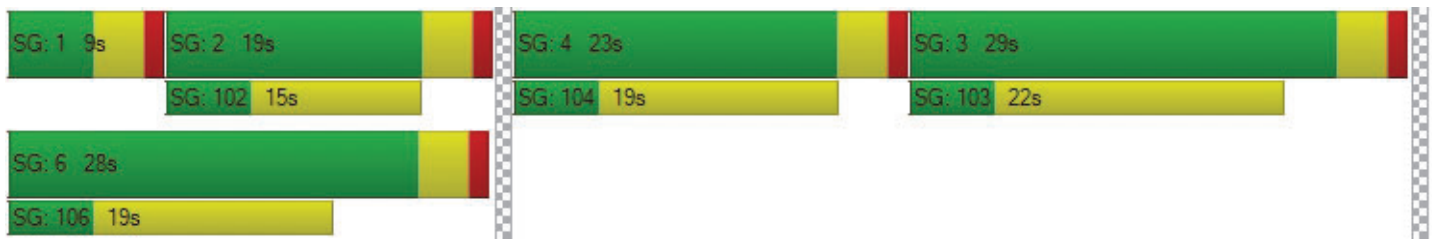
d_M, Delay for Movement [s/veh]	4.51	4.86	0.00	0.00	8.65	8.68	38.69	0.00	45.21	32.80	32.78	32.21
Movement LOS	A	A			A	A	D		D	C	C	C
d_A, Approach Delay [s/veh]	4.83				8.65		43.00		32.67			
Approach LOS	A				A		D		C			
d_I, Intersection Delay [s/veh]	11.15											
Intersection LOS	B											
Intersection V/C	0.279											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0		9.0		9.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	31.51		31.51		31.51		31.51	
l_p,int, Pedestrian LOS Score for Intersection	2.528		2.499		2.039		2.170	
Crosswalk LOS	B		B		B		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	600		375		625		475	
d_b, Bicycle Delay [s]	19.60		26.41		18.91		23.26	
l_b,int, Bicycle LOS Score for Intersection	1.978		2.046		1.560		1.784	
Bicycle LOS	A		B		A		A	

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	40.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.796

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	79	469	180	64	355	145	194	506	81	130	893	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	45	0	0	36	0	0	20	0	0	32
Total Hourly Volume [veh/h]	79	469	135	64	355	109	194	506	61	130	893	94
Peak Hour Factor	0.8540	0.8540	0.8540	0.8210	0.8210	0.8210	0.9310	0.9310	0.9310	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	137	40	19	108	33	52	136	16	38	262	28
Total Analysis Volume [veh/h]	93	549	158	78	432	133	208	544	66	152	1047	110
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	30	0	18	33	0	20	36	0	26	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	34	34	7	33	33	16	41	41	12	38	38
g / C, Green / Cycle	0.07	0.31	0.31	0.06	0.30	0.30	0.15	0.37	0.37	0.11	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.06	0.22	0.22	0.05	0.17	0.18	0.13	0.17	0.05	0.09	0.33	0.08
s, saturation flow rate [veh/h]	1603	1683	1555	1603	1683	1549	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	115	514	475	100	498	458	233	1197	534	182	1095	489
d1, Uniform Delay [s]	50.29	33.94	33.97	50.84	33.04	33.10	46.16	26.01	22.64	47.74	35.41	25.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.30	8.23	8.93	12.40	5.04	5.58	11.26	0.27	0.10	9.57	5.98	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.71	0.72	0.78	0.59	0.59	0.89	0.45	0.12	0.83	0.96	0.23
d, Delay for Lane Group [s/veh]	62.59	42.17	42.90	63.24	38.08	38.68	57.42	26.28	22.74	57.32	41.39	26.06
Lane Group LOS	E	D	D	E	D	D	E	C	C	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.87	9.56	8.95	2.42	7.14	6.71	6.17	5.22	1.11	4.48	13.96	2.03
50th-Percentile Queue Length [ft/ln]	71.63	238.95	223.74	60.53	178.53	167.73	154.31	130.39	27.68	111.91	348.93	50.77
95th-Percentile Queue Length [veh/ln]	5.16	14.63	13.86	4.36	11.52	10.96	10.25	8.96	1.99	7.95	20.08	3.66
95th-Percentile Queue Length [ft/ln]	128.94	365.70	346.40	108.96	288.09	273.93	256.17	224.02	49.82	198.66	502.11	91.39

Movement, Approach, & Intersection Results

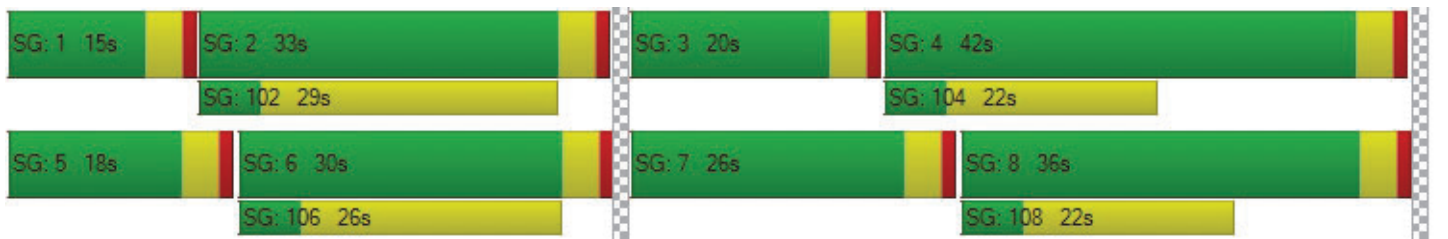
d_M, Delay for Movement [s/veh]	62.59	42.41	42.90	63.24	38.27	38.68	57.42	26.28	22.74	57.32	41.39	26.06
Movement LOS	E	D	D	E	D	D	E	C	C	E	D	C
d_A, Approach Delay [s/veh]	44.85			41.39			33.91			41.96		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	40.66											
Intersection LOS	D											
Intersection V/C	0.796											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
I_p,int, Pedestrian LOS Score for Intersection	2.769	2.773	3.032	2.979
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	473	527	582	691
d_b, Bicycle Delay [s]	32.07	29.82	27.65	23.56
I_b,int, Bicycle LOS Score for Intersection	2.257	2.120	2.251	2.666
Bicycle LOS	B	B	B	B

Sequence




Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 8: Moore St/Project Dwy 1**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Project Dwy 1		Moore St		Westbound	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy 1		Moore St		Westbound	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.52	8.32	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.42		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.01					
Intersection LOS						

Intersection Level Of Service Report
Intersection 9: Shoemaker Ave/Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Base Volume Input [veh/h]	0	494	649	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	494	649	0	0	0
Peak Hour Factor	1.0000	0.9580	0.8830	1.0000	1.0000	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	129	184	0	0	0
Total Analysis Volume [veh/h]	0	516	735	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.16	0.00	0.00	0.00	19.86	10.72
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		15.29	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Shoemaker Ave/Project Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇐⇐		⇐⇐		⇐	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	49.21	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Base Volume Input [veh/h]	0	494	649	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	494	649	0	0	0
Peak Hour Factor	1.0000	0.9580	0.8830	1.0000	1.0000	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	129	184	0	0	0
Total Analysis Volume [veh/h]	0	516	735	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.16	0.00	0.00	0.00	19.86	10.72
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		15.29	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

HCM

Vistro File: C:\...\Vistro HCM.vistro

Scenario 5 OP AM

Report File: C:\...\IOP AM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.712	33.0	C
2	Bloomfield Ave/166th St	Signalized	HCM 7th Edition	NB Thru	0.720	25.5	C
3	Bloomfield Ave/Artesia Blvd	Signalized	HCM 7th Edition	EB Left	0.752	38.1	D
4	Shoemaker Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.580	29.5	C
5	Shoemaker Ave/166th St	Signalized	HCM 7th Edition	WB Right	0.634	21.4	C
6	Shoemaker Ave/Oak Crest St	Signalized	HCM 7th Edition	EB Left	0.538	23.0	C
7	Shoemaker Ave/Artesia Blvd	Signalized	HCM 7th Edition	NB Left	0.869	45.6	D
8	Moore St/Project Dwy 1	Two-way stop	HCM 7th Edition		0.000	0.0	
9	Shoemaker Ave/Project Dwy 2	Two-way stop	HCM 7th Edition	NB Thru	0.008	0.0	A
10	Shoemaker Ave/Project Dwy 3	Two-way stop	HCM 7th Edition	NB Thru	0.008	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.712

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	96	650	210	102	597	145	130	562	94	178	540	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	53	0	0	37	0	0	24	0	0	13
Total Hourly Volume [veh/h]	96	653	158	102	600	109	131	565	70	179	543	37
Peak Hour Factor	0.9830	0.9830	0.9830	0.7890	0.7890	0.7890	0.9280	0.9280	0.9280	0.7720	0.7720	0.7720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	166	40	32	190	35	35	152	19	58	176	12
Total Analysis Volume [veh/h]	98	664	161	129	760	138	141	609	75	232	703	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	12	31	0	14	30	0	18	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	32	32	8	34	34	9	20	20	14	24	24
g / C, Green / Cycle	0.08	0.36	0.36	0.09	0.37	0.37	0.11	0.22	0.22	0.16	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.21	0.11	0.08	0.24	0.10	0.09	0.19	0.05	0.14	0.22	0.03
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	121	1146	512	142	1189	531	169	705	315	249	865	386
d1, Uniform Delay [s]	40.97	23.42	20.92	40.63	23.33	19.69	39.47	33.80	28.89	37.52	30.72	24.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.05	2.14	1.61	18.28	2.64	1.19	10.09	3.31	0.39	14.32	1.91	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.58	0.31	0.91	0.64	0.26	0.83	0.86	0.24	0.93	0.81	0.12
d, Delay for Lane Group [s/veh]	53.02	25.55	22.52	58.91	25.96	20.88	49.56	37.11	29.27	51.84	32.63	24.96
Lane Group LOS	D	C	C	E	C	C	D	D	C	D	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.52	5.85	2.61	3.45	6.59	2.06	3.42	6.41	1.31	5.81	6.95	0.76
50th-Percentile Queue Length [ft/ln]	62.91	146.16	65.34	86.27	164.77	51.56	85.39	160.24	32.87	145.33	173.84	18.93
95th-Percentile Queue Length [veh/ln]	4.53	9.81	4.70	6.21	10.80	3.71	6.15	10.56	2.37	9.77	11.28	1.36
95th-Percentile Queue Length [ft/ln]	113.24	245.29	117.61	155.28	270.03	92.80	153.71	264.04	59.17	244.18	281.96	34.07

Movement, Approach, & Intersection Results

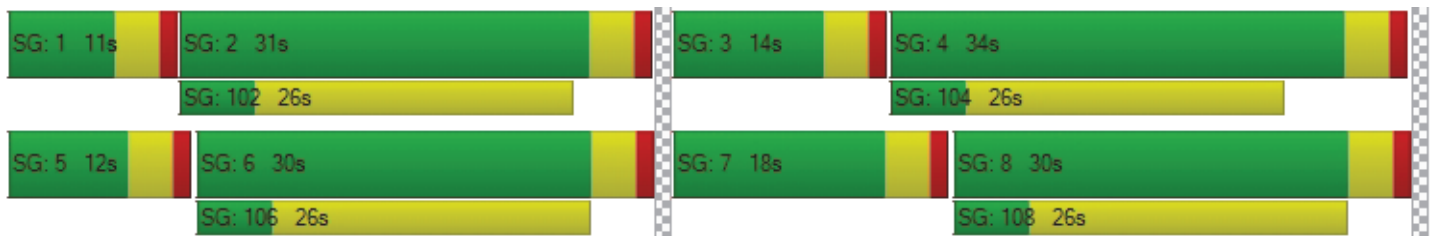
d_M, Delay for Movement [s/veh]	53.02	25.55	22.52	58.91	25.96	20.88	49.56	37.11	29.27	51.84	32.63	24.96
Movement LOS	D	C	C	E	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	27.94			29.42			38.53			36.79		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.98											
Intersection LOS	C											
Intersection V/C	0.712											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.866	2.925	2.884	2.895
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	600	578	667
d_b, Bicycle Delay [s]	22.76	22.05	22.76	20.00
l_b,int, Bicycle LOS Score for Intersection	2.365	2.437	2.260	2.381
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	25.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	60	870	413	97	718	107	104	420	57	217	401	84
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	104	0	0	27	0	0	14	0	0	21
Total Hourly Volume [veh/h]	60	874	311	97	721	81	104	422	43	218	403	63
Peak Hour Factor	0.8920	0.8920	0.8920	0.8610	0.8610	0.8610	0.8920	0.8920	0.8920	0.7690	0.7690	0.7690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	245	87	28	209	24	29	118	12	71	131	20
Total Analysis Volume [veh/h]	67	980	349	113	837	94	117	473	48	283	524	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	34	0	11	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	24	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	40	31	31	40	32	32	32	21	21	32	23	23
g / C, Green / Cycle	0.50	0.39	0.39	0.50	0.40	0.40	0.40	0.27	0.27	0.40	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.10	0.31	0.24	0.20	0.28	0.28	0.13	0.16	0.16	0.28	0.18	0.18
s, saturation flow rate [veh/h]	698	3204	1431	579	1683	1624	921	1683	1629	1018	1683	1604
c, Capacity [veh/h]	345	1239	553	314	668	644	389	450	435	437	492	469
d1, Uniform Delay [s]	13.32	21.68	19.91	15.37	20.25	20.26	16.43	25.48	25.49	19.53	24.56	24.56
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.23	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.27	5.21	5.39	3.18	6.28	6.50	0.43	1.22	1.27	3.39	1.34	1.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.19	0.79	0.63	0.36	0.71	0.71	0.30	0.59	0.59	0.65	0.63	0.63
d, Delay for Lane Group [s/veh]	13.59	26.89	25.30	18.55	26.53	26.75	16.86	26.70	26.77	22.92	25.90	25.97
Lane Group LOS	B	C	C	B	C	C	B	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	8.48	5.79	1.24	7.80	7.57	1.29	4.21	4.10	3.97	5.07	4.84
50th-Percentile Queue Length [ft/ln]	15.22	212.02	144.70	30.90	195.08	189.28	32.36	105.24	102.48	99.14	126.65	121.01
95th-Percentile Queue Length [veh/ln]	1.10	13.26	9.73	2.22	12.38	12.08	2.33	7.57	7.38	7.14	8.76	8.45
95th-Percentile Queue Length [ft/ln]	27.40	331.42	243.34	55.62	309.61	302.09	58.24	189.36	184.46	178.46	218.93	211.21

Movement, Approach, & Intersection Results

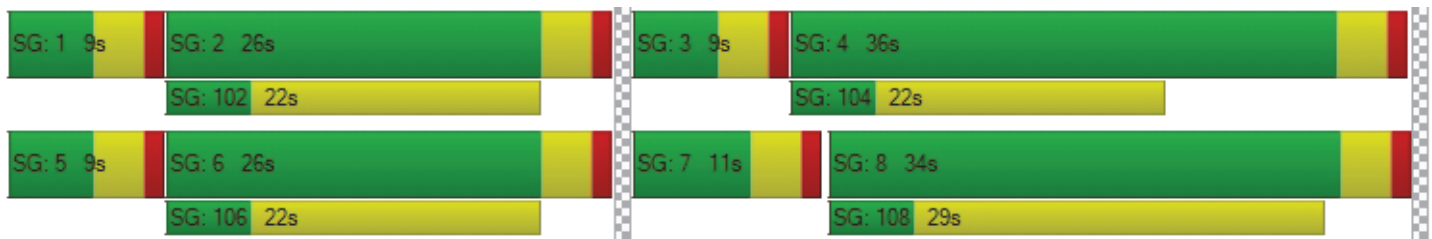
d_M, Delay for Movement [s/veh]	13.59	26.89	25.30	18.55	26.63	26.75	16.86	26.73	26.77	22.92	25.93	25.97
Movement LOS	B	C	C	B	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	25.86			25.76			24.92			24.98		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.49											
Intersection LOS	C											
Intersection V/C	0.720											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	3.229	2.977	2.710	2.772
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	550	550	750	800
d_b, Bicycle Delay [s]	21.03	21.03	15.63	14.40
I_b,int, Bicycle LOS Score for Intersection	2.797	2.443	2.098	2.310
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	38.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	141	504	106	264	612	111	76	363	104	266	674	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	27	0	0	28	0	0	26	0	0	35
Total Hourly Volume [veh/h]	142	506	80	265	615	84	76	365	78	267	677	106
Peak Hour Factor	0.7270	0.7270	0.7270	0.8890	0.8890	0.8890	0.8760	0.8760	0.8760	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	174	28	75	173	24	22	104	22	76	194	30
Total Analysis Volume [veh/h]	195	696	110	298	692	94	87	417	89	305	775	121
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	32	0	14	30	0	11	30	0	14	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	31	31	10	29	29	6	23	23	10	27	27
g / C, Green / Cycle	0.13	0.35	0.35	0.11	0.32	0.32	0.07	0.25	0.25	0.11	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.12	0.25	0.25	0.10	0.16	0.16	0.05	0.13	0.06	0.10	0.27	0.27
s, saturation flow rate [veh/h]	1603	1683	1604	3113	3204	1582	1603	3204	1431	3113	1683	1605
c, Capacity [veh/h]	214	579	552	346	1031	509	109	820	366	346	503	479
d1, Uniform Delay [s]	38.48	25.65	25.65	39.32	24.75	24.77	41.30	28.64	26.57	39.42	30.41	30.44
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.32	0.32
l, Upstream Filtering 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
d2, Incremental Delay [s]	13.99	7.30	7.64	6.35	1.80	3.64	12.14	0.49	0.34	7.37	16.45	17.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.91	0.71	0.71	0.86	0.51	0.51	0.79	0.51	0.24	0.88	0.91	0.91
d, Delay for Lane Group [s/veh]	52.48	32.95	33.29	45.67	26.55	28.42	53.45	29.13	26.91	46.79	46.85	47.84
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.90	8.30	7.96	3.42	4.53	4.75	2.21	3.72	1.49	3.62	11.52	11.15
50th-Percentile Queue Length [ft/ln]	122.50	207.53	199.09	85.42	113.22	118.83	55.16	93.01	37.14	90.59	288.08	278.65
95th-Percentile Queue Length [veh/ln]	8.53	13.03	12.59	6.15	8.02	8.33	3.97	6.70	2.67	6.52	17.09	16.62
95th-Percentile Queue Length [ft/ln]	213.26	325.66	314.79	153.76	200.48	208.22	99.29	167.42	66.86	163.06	427.26	415.53

Movement, Approach, & Intersection Results

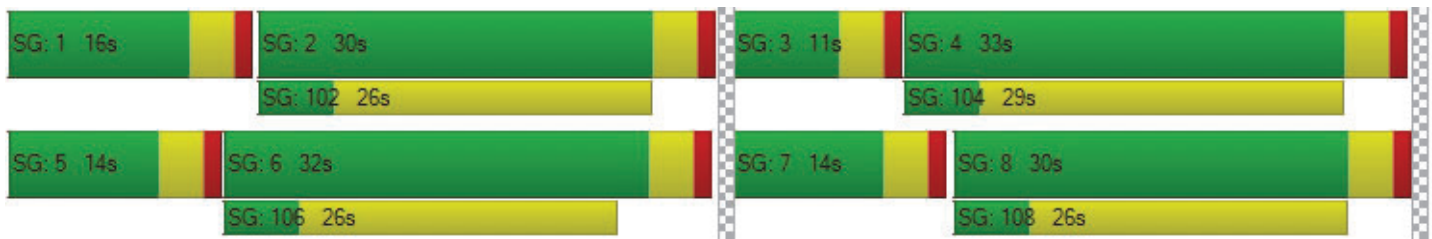
d_M, Delay for Movement [s/veh]	52.48	33.09	33.29	45.67	27.00	28.42	53.45	29.13	26.91	46.79	47.26	47.84
Movement LOS	D	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	36.89			32.26			32.36			47.20		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	38.09											
Intersection LOS	D											
Intersection V/C	0.752											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.956	3.016	2.862	2.843
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	622	578	578	644
d_b, Bicycle Delay [s]	21.36	22.76	22.76	20.67
I_b,int, Bicycle LOS Score for Intersection	2.408	2.171	2.070	2.579
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	29.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	60	275	97	44	287	106	112	605	114	143	728	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	24	0	0	27	0	0	29	0	0	28
Total Hourly Volume [veh/h]	60	276	73	44	288	80	113	608	86	144	731	82
Peak Hour Factor	0.7100	0.7100	0.7100	0.9120	0.9120	0.9120	0.8890	0.8890	0.8890	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	97	26	12	79	22	32	171	24	39	197	22
Total Analysis Volume [veh/h]	85	389	103	48	316	88	127	684	97	155	787	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	11	30	0	12	26	0	13	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	31	31	3	29	29	8	20	20	9	22	22
g / C, Green / Cycle	0.07	0.39	0.39	0.04	0.37	0.37	0.10	0.26	0.26	0.11	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.15	0.03	0.12	0.13	0.08	0.21	0.07	0.10	0.25	0.06
s, saturation flow rate [veh/h]	1603	1683	1564	1603	1683	1560	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	106	656	609	68	616	571	155	818	365	180	869	388
d1, Uniform Delay [s]	36.83	17.54	17.58	37.81	18.35	18.40	35.45	28.20	23.79	34.88	28.16	22.64
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.84	1.72	1.89	12.52	1.48	1.65	10.12	2.34	0.38	11.21	3.93	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.80	0.39	0.39	0.71	0.34	0.34	0.82	0.84	0.27	0.86	0.91	0.23
d, Delay for Lane Group [s/veh]	49.67	19.26	19.47	50.33	19.83	20.05	45.57	30.54	24.18	46.09	32.09	22.93
Lane Group LOS	D	B	B	D	B	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.98	3.50	3.32	1.13	2.80	2.68	2.81	6.21	1.46	3.37	7.18	1.24
50th-Percentile Queue Length [ft/ln]	49.57	87.41	82.95	28.13	69.93	66.92	70.17	155.20	36.52	84.33	179.55	30.94
95th-Percentile Queue Length [veh/ln]	3.57	6.29	5.97	2.03	5.03	4.82	5.05	10.29	2.63	6.07	11.58	2.23
95th-Percentile Queue Length [ft/ln]	89.23	157.33	149.31	50.63	125.87	120.45	126.31	257.36	65.74	151.79	289.42	55.68

Movement, Approach, & Intersection Results

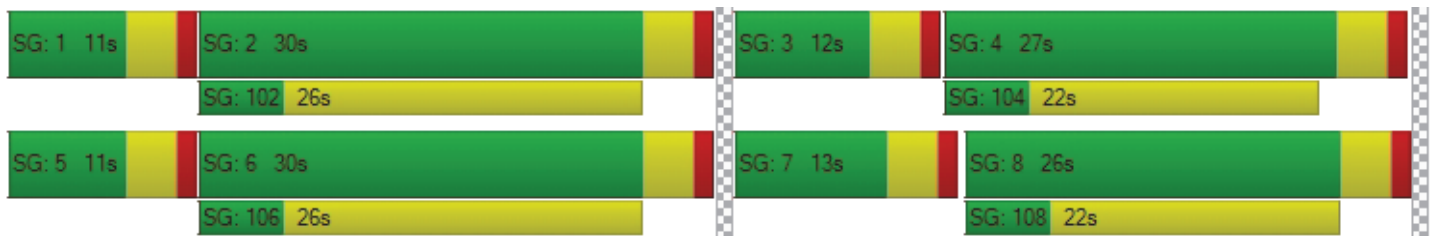
d_M, Delay for Movement [s/veh]	49.67	19.33	19.47	50.33	19.90	20.05	45.57	30.54	24.18	46.09	32.09	22.93
Movement LOS	D	B	B	D	B	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	23.83			23.16			31.96			33.42		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.55											
Intersection LOS	C											
Intersection V/C	0.580											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	2.563	2.623	2.802	2.904
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	650	650	550	575
d_b, Bicycle Delay [s]	18.23	18.23	21.03	20.31
I_b,int, Bicycle LOS Score for Intersection	2.055	1.955	2.333	2.432
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.634

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	117	381	139	43	247	125	211	546	67	123	517	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	35	0	0	32	0	0	17	0	0	16
Total Hourly Volume [veh/h]	118	383	105	43	248	94	212	549	50	124	519	46
Peak Hour Factor	0.8290	0.8290	0.8290	0.6900	0.6900	0.6900	0.8670	0.8670	0.8670	0.7430	0.7430	0.7430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	116	32	16	90	34	61	158	14	42	175	15
Total Analysis Volume [veh/h]	142	462	127	62	359	136	245	633	58	167	699	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	23	23	31	22	22	31	22	22	31	22	22
g / C, Green / Cycle	0.44	0.33	0.33	0.44	0.31	0.31	0.44	0.31	0.31	0.44	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.14	0.18	0.18	0.07	0.15	0.16	0.29	0.21	0.21	0.19	0.23	0.23
s, saturation flow rate [veh/h]	990	1683	1560	902	1683	1529	853	1683	1634	886	1683	1635
c, Capacity [veh/h]	487	560	519	435	529	480	398	529	513	420	529	514
d1, Uniform Delay [s]	12.57	19.02	19.04	12.18	19.43	19.49	15.24	20.79	20.79	13.62	21.35	21.35
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.21	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.33	3.77	4.10	0.69	3.18	3.61	2.98	1.43	1.47	0.61	1.98	2.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.29	0.54	0.55	0.14	0.49	0.49	0.62	0.66	0.66	0.40	0.73	0.73
d, Delay for Lane Group [s/veh]	12.90	22.78	23.13	12.87	22.61	23.10	18.21	22.22	22.26	14.23	23.33	23.39
Lane Group LOS	B	C	C	B	C	C	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.28	4.33	4.08	0.57	3.50	3.30	2.50	4.64	4.51	1.47	5.30	5.15
50th-Percentile Queue Length [ft/ln]	32.07	108.34	102.09	14.16	87.58	82.38	62.42	115.93	112.70	36.72	132.41	128.87
95th-Percentile Queue Length [veh/ln]	2.31	7.75	7.35	1.02	6.31	5.93	4.49	8.17	7.99	2.64	9.07	8.88
95th-Percentile Queue Length [ft/ln]	57.73	193.69	183.77	25.49	157.65	148.29	112.35	204.22	199.76	66.09	226.76	221.96

Movement, Approach, & Intersection Results

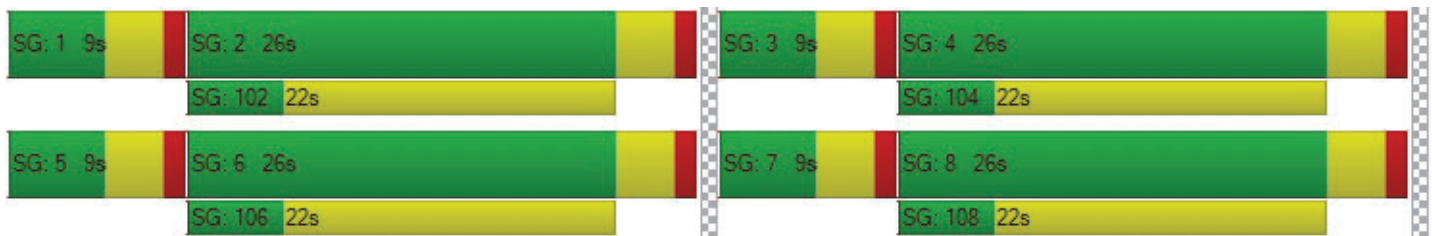
d_M, Delay for Movement [s/veh]	12.90	22.90	23.13	12.87	22.75	23.10	18.21	22.24	22.26	14.23	23.36	23.39
Movement LOS	B	C	C	B	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	21.00			21.73			21.19			21.72		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.40											
Intersection LOS	C											
Intersection V/C	0.634											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
I_p,int, Pedestrian LOS Score for Intersection	2.686	2.811	2.892	2.812
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	629	629	629
d_b, Bicycle Delay [s]	16.46	16.46	16.46	16.46
I_b,int, Bicycle LOS Score for Intersection	2.192	2.046	2.346	2.338
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	23.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.538

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	88	487	0	0	361	90	90	0	94	285	6	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	23	0	0	24	0	0	16
Total Hourly Volume [veh/h]	88	489	0	0	363	67	90	0	70	286	6	46
Peak Hour Factor	0.9330	0.9330	1.0000	1.0000	0.6750	0.6750	0.6700	1.0000	0.6700	0.5830	0.5830	0.5830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	131	0	0	134	25	34	0	26	123	3	20
Total Analysis Volume [veh/h]	94	524	0	0	538	99	134	0	104	491	10	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	9	28	0	0	19	0	29	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	17	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	36	36	9	9	15	15	15
g / C, Green / Cycle	0.55	0.55	0.45	0.45	0.11	0.11	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.11	0.16	0.19	0.20	0.08	0.07	0.16	0.16	0.06
s, saturation flow rate [veh/h]	841	3204	1683	1595	1603	1431	1603	1606	1431
c, Capacity [veh/h]	484	1764	750	711	182	163	297	298	266
d1, Uniform Delay [s]	9.67	9.66	15.16	15.36	34.28	33.87	31.44	31.44	28.08
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.43	1.76	2.04	5.63	4.11	6.36	6.35	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.19	0.30	0.42	0.45	0.73	0.64	0.84	0.84	0.30
d, Delay for Lane Group [s/veh]	9.86	10.09	16.93	17.40	39.90	37.99	37.80	37.79	28.70
Lane Group LOS	A	B	B	B	D	D	D	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.73	2.32	3.88	3.97	2.75	2.07	5.04	5.05	1.32
50th-Percentile Queue Length [ft/ln]	18.32	58.07	97.12	99.16	68.65	51.84	125.97	126.17	32.95
95th-Percentile Queue Length [veh/ln]	1.32	4.18	6.99	7.14	4.94	3.73	8.72	8.73	2.37
95th-Percentile Queue Length [ft/ln]	32.98	104.52	174.81	178.48	123.57	93.31	218.00	218.28	59.31

Movement, Approach, & Intersection Results

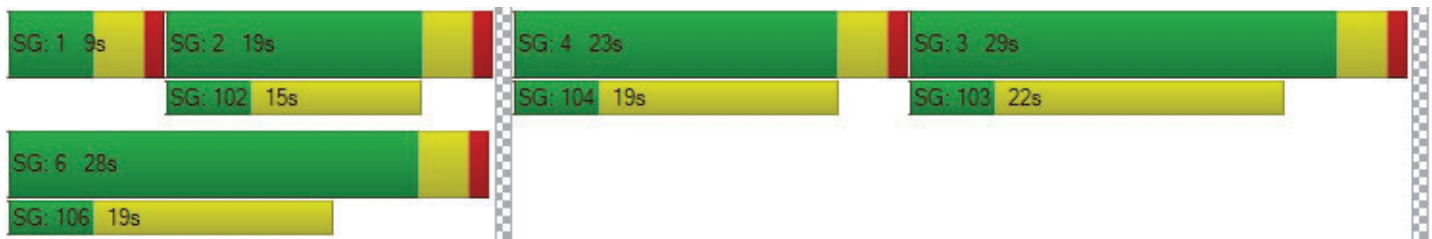
d_M, Delay for Movement [s/veh]	9.86	10.09	0.00	0.00	17.12	17.40	39.90	0.00	37.99	37.79	37.79	28.70
Movement LOS	A	B			B	B	D		D	D	D	C
d_A, Approach Delay [s/veh]	10.06				17.16		39.07		36.56			
Approach LOS	B				B		D		D			
d_I, Intersection Delay [s/veh]	22.98											
Intersection LOS	C											
Intersection V/C	0.538											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0		9.0		9.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	31.51		31.51		31.51		31.51	
I_p,int, Pedestrian LOS Score for Intersection	2.642		2.619		2.192		2.295	
Crosswalk LOS	B		B		B		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	600		375		625		475	
d_b, Bicycle Delay [s]	19.60		26.41		18.91		23.26	
I_b,int, Bicycle LOS Score for Intersection	2.069		2.104		1.560		2.543	
Bicycle LOS	B		B		A		B	

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	45.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.869

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	44	563	156	96	474	266	260	506	59	144	916	158
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	39	0	0	67	0	0	15	0	0	40
Total Hourly Volume [veh/h]	44	566	118	96	476	200	261	508	44	145	920	119
Peak Hour Factor	0.9500	0.9500	0.9500	0.8640	0.8640	0.8640	0.9560	0.9560	0.9560	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	149	31	28	138	58	68	133	12	41	258	33
Total Analysis Volume [veh/h]	46	596	124	111	551	231	273	531	46	162	1030	133
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	12	33	0	22	41	0	17	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	26	26	8	30	30	18	38	38	12	32	32
g / C, Green / Cycle	0.04	0.26	0.26	0.08	0.30	0.30	0.18	0.38	0.38	0.12	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.22	0.07	0.24	0.24	0.17	0.17	0.03	0.10	0.32	0.09
s, saturation flow rate [veh/h]	1603	1683	1584	1603	1683	1516	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	61	438	412	128	509	458	289	1220	545	191	1025	458
d1, Uniform Delay [s]	47.66	35.11	35.13	45.47	32.22	32.23	40.52	22.98	19.81	43.15	34.00	25.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.13	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	17.42	18.00	19.15	15.55	12.99	14.28	17.14	0.25	0.07	9.90	14.14	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.76	0.85	0.85	0.87	0.81	0.81	0.95	0.44	0.08	0.85	1.00	0.29
d, Delay for Lane Group [s/veh]	65.08	53.11	54.29	61.01	45.21	46.51	57.66	23.23	19.88	53.05	48.14	25.84
Lane Group LOS	E	D	D	E	D	D	E	C	B	D	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.40	10.37	9.91	3.20	10.56	9.68	7.77	4.45	0.67	4.34	13.74	2.32
50th-Percentile Queue Length [ft/ln]	35.05	259.17	247.85	80.08	263.88	242.01	194.25	111.20	16.70	108.40	343.47	58.11
95th-Percentile Queue Length [veh/ln]	2.52	15.65	15.08	5.77	15.88	14.78	12.34	7.91	1.20	7.75	19.87	4.18
95th-Percentile Queue Length [ft/ln]	63.09	391.18	376.95	144.15	397.08	369.57	308.54	197.68	30.06	193.77	496.87	104.60

Movement, Approach, & Intersection Results

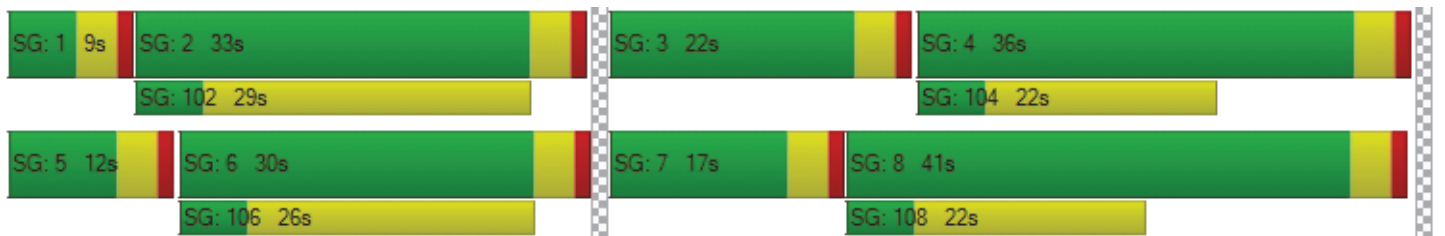
d_M, Delay for Movement [s/veh]	65.08	53.56	54.29	61.01	45.54	46.51	57.66	23.23	19.88	53.05	48.14	25.84
Movement LOS	E	D	D	E	D	D	E	C	B	D	F	C
d_A, Approach Delay [s/veh]	54.37			47.71			34.10			46.50		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	45.61											
Intersection LOS	D											
Intersection V/C	0.869											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.772	2.922	3.038	2.987
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	580	740	640
d_b, Bicycle Delay [s]	27.38	25.21	19.85	23.12
I_b,int, Bicycle LOS Score for Intersection	2.224	2.352	2.273	2.686
Bicycle LOS	B	B	B	B

Sequence




Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 8: Moore St/Project Dwy 1**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Project Dwy 1		Moore St			
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy 1		Moore St			
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.52	8.32	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.42		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.01					
Intersection LOS						

Intersection Level Of Service Report
Intersection 9: Shoemaker Ave/Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Base Volume Input [veh/h]	0	654	415	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	657	417	0	0	0
Peak Hour Factor	1.0000	0.8290	0.6900	1.0000	1.0000	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	198	151	0	0	0
Total Analysis Volume [veh/h]	0	793	604	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.71	0.00	0.00	0.00	20.03	10.19
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		15.11	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

**Intersection Level Of Service Report
Intersection 10: Shoemaker Ave/Project Dwy 3**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇐⇐		⇐⇐		⇐	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	49.21	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Base Volume Input [veh/h]	0	654	415	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	657	417	0	0	0
Peak Hour Factor	1.0000	0.8290	0.6900	1.0000	1.0000	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	198	151	0	0	0
Total Analysis Volume [veh/h]	0	793	604	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.71	0.00	0.00	0.00	20.03	10.19
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		15.11	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

HCM

Vistro File: C:\...\Vistro HCM.vistro

Scenario 6 OP PM

Report File: C:\...\IOP PM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.736	36.1	D
2	Bloomfield Ave/166th St	Signalized	HCM 7th Edition	WB Right	0.651	23.3	C
3	Bloomfield Ave/Artesia Blvd	Signalized	HCM 7th Edition	NB Left	0.767	40.1	D
4	Shoemaker Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.598	28.2	C
5	Shoemaker Ave/166th St	Signalized	HCM 7th Edition	EB Right	0.574	22.3	C
6	Shoemaker Ave/Oak Crest St	Signalized	HCM 7th Edition	EB Right	0.280	11.1	B
7	Shoemaker Ave/Artesia Blvd	Signalized	HCM 7th Edition	SB Left	0.800	40.9	D
8	Moore St/Project Dwy 1	Two-way stop	HCM 7th Edition		0.000	0.0	
9	Shoemaker Ave/Project Dwy 2	Two-way stop	HCM 7th Edition	SB Thru	0.007	0.0	A
10	Shoemaker Ave/Project Dwy 3	Two-way stop	HCM 7th Edition	SB Thru	0.007	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	← ↑ →			← ↑ →			← ↑ →			← ↑ →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	185	752	175	82	600	131	131	456	64	198	676	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	44	0	0	33	0	0	16	0	0	24
Total Hourly Volume [veh/h]	186	756	132	82	603	99	132	458	48	199	679	70
Peak Hour Factor	0.9440	0.9440	0.9440	0.9000	0.9000	0.9000	0.9420	0.9420	0.9420	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	200	35	23	168	28	35	122	13	57	195	20
Total Analysis Volume [veh/h]	197	801	140	91	670	110	140	486	51	228	780	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	31	0	17	30	0	15	30	0	22	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	39	39	7	33	33	10	21	21	16	27	27
g / C, Green / Cycle	0.14	0.39	0.39	0.07	0.33	0.33	0.10	0.21	0.21	0.16	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.12	0.25	0.10	0.06	0.21	0.08	0.09	0.15	0.04	0.14	0.24	0.06
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	224	1259	562	115	1041	465	166	688	307	257	869	388
d1, Uniform Delay [s]	42.17	24.57	20.42	45.66	28.81	24.69	44.00	36.34	31.97	41.10	35.09	28.12
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	10.50	2.46	1.06	11.35	3.06	1.20	10.75	1.34	0.25	9.94	3.62	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.88	0.64	0.25	0.79	0.64	0.24	0.84	0.71	0.17	0.89	0.90	0.21
d, Delay for Lane Group [s/veh]	52.67	27.03	21.48	57.01	31.88	25.88	54.75	37.68	32.22	51.03	38.71	28.38
Lane Group LOS	D	C	C	E	C	C	D	D	C	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.37	7.88	2.33	2.53	6.97	1.99	3.80	5.42	1.00	6.02	9.15	1.46
50th-Percentile Queue Length [ft/ln]	134.31	196.99	58.26	63.26	174.23	49.76	95.10	135.52	24.96	150.57	228.81	36.52
95th-Percentile Queue Length [veh/ln]	9.17	12.48	4.19	4.55	11.30	3.58	6.85	9.24	1.80	10.05	14.11	2.63
95th-Percentile Queue Length [ft/ln]	229.35	312.08	104.86	113.87	282.47	89.58	171.18	230.98	44.94	251.20	352.85	65.74

Movement, Approach, & Intersection Results

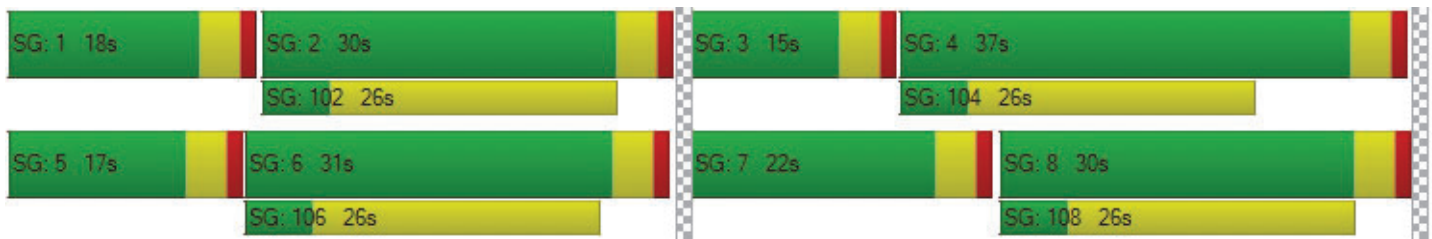
d_M, Delay for Movement [s/veh]	52.67	27.03	21.48	57.01	31.88	25.88	54.75	37.68	32.22	51.03	38.71	28.38
Movement LOS	D	C	C	E	C	C	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	30.78			33.75			40.80			40.53		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	36.07											
Intersection LOS	D											
Intersection V/C	0.736											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.871	2.929	2.875	2.899
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	540	520	520	660
d_b, Bicycle Delay [s]	26.65	27.38	27.38	22.45
I_b,int, Bicycle LOS Score for Intersection	2.535	2.305	2.131	2.477
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	155	829	237	89	651	201	89	403	80	235	601	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	60	0	0	51	0	0	20	0	0	33
Total Hourly Volume [veh/h]	156	833	178	89	654	151	89	405	60	236	604	100
Peak Hour Factor	0.9800	0.9800	0.9800	0.9690	0.9690	0.9690	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	213	45	23	169	39	23	103	15	60	154	25
Total Analysis Volume [veh/h]	159	850	182	92	675	156	91	413	61	241	616	102
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	36	0	9	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	24	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	41	33	33	41	32	32	31	22	22	31	22	22
g / C, Green / Cycle	0.52	0.41	0.41	0.52	0.40	0.40	0.38	0.27	0.27	0.38	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.21	0.27	0.13	0.14	0.26	0.26	0.11	0.14	0.14	0.24	0.22	0.22
s, saturation flow rate [veh/h]	765	3204	1431	663	1683	1575	855	1683	1609	1004	1683	1601
c, Capacity [veh/h]	406	1316	588	370	678	634	323	458	438	411	472	449
d1, Uniform Delay [s]	12.61	18.90	15.91	12.09	19.16	19.16	18.03	24.73	24.76	20.60	26.50	26.50
k, delay calibration	0.12	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.15	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.70	2.46	1.37	1.61	4.47	4.77	0.47	0.94	1.00	1.85	2.93	3.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.39	0.65	0.31	0.25	0.63	0.63	0.28	0.53	0.53	0.59	0.78	0.78
d, Delay for Lane Group [s/veh]	13.31	21.36	17.28	13.70	23.62	23.93	18.50	25.67	25.76	22.45	29.44	29.58
Lane Group LOS	B	C	B	B	C	C	B	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.47	6.35	2.35	0.89	6.56	6.19	1.04	3.74	3.61	3.27	6.56	6.26
50th-Percentile Queue Length [ft/ln]	36.75	158.74	58.76	22.25	164.02	154.85	26.00	93.49	90.33	81.83	164.01	156.45
95th-Percentile Queue Length [veh/ln]	2.65	10.48	4.23	1.60	10.76	10.28	1.87	6.73	6.50	5.89	10.76	10.36
95th-Percentile Queue Length [ft/ln]	66.15	262.05	105.78	40.04	269.03	256.89	46.81	168.28	162.59	147.30	269.03	259.02

Movement, Approach, & Intersection Results

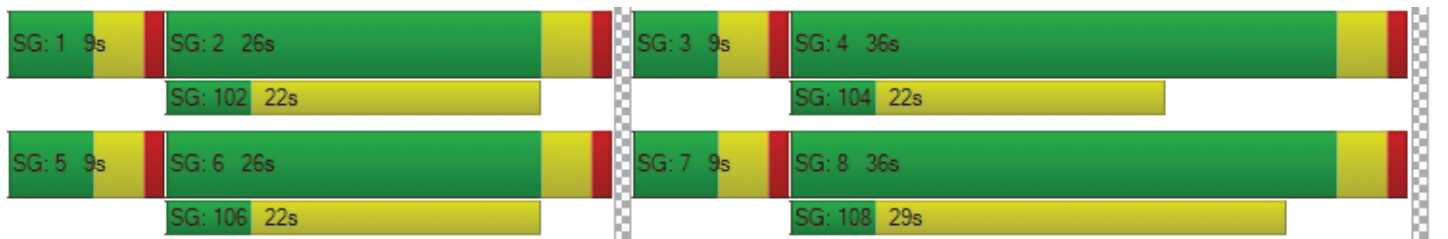
d_M, Delay for Movement [s/veh]	13.31	21.36	17.28	13.70	23.73	23.93	18.50	25.71	25.76	22.45	29.50	29.58
Movement LOS	B	C	B	B	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.66			22.77			24.55			27.73		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	23.34											
Intersection LOS	C											
Intersection V/C	0.651											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	3.090	2.941	2.828	2.739
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	550	550	800	800
d_b, Bicycle Delay [s]	21.03	21.03	14.40	14.40
I_b,int, Bicycle LOS Score for Intersection	2.592	2.363	2.042	2.378
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	40.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	249	779	72	292	540	81	75	496	99	215	641	157
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	20	0	0	25	0	0	40
Total Hourly Volume [veh/h]	250	783	54	293	543	61	75	498	74	216	644	118
Peak Hour Factor	0.9610	0.9610	0.9610	0.8910	0.8910	0.8910	0.9220	0.9220	0.9220	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	204	14	82	152	17	20	135	20	61	183	33
Total Analysis Volume [veh/h]	260	815	56	329	609	68	81	540	80	245	730	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	33	0	15	30	0	9	30	0	12	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	32	32	11	29	29	5	23	23	8	26	26
g / C, Green / Cycle	0.16	0.36	0.36	0.12	0.32	0.32	0.06	0.26	0.26	0.09	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.26	0.11	0.14	0.14	0.05	0.17	0.06	0.08	0.26	0.26
s, saturation flow rate [veh/h]	1603	1683	1645	3113	3204	1598	1603	3204	1431	3113	1683	1593
c, Capacity [veh/h]	249	596	583	380	1028	513	89	824	368	277	489	463
d1, Uniform Delay [s]	38.00	25.42	25.43	38.77	24.16	24.18	42.28	29.88	26.31	40.55	30.77	30.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.30	0.30
l, Upstream Filtering 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
d2, Incremental Delay [s]	38.34	8.00	8.19	5.95	1.36	2.74	26.58	0.89	0.29	9.22	15.66	16.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	1.04	0.74	0.74	0.86	0.44	0.44	0.91	0.66	0.22	0.89	0.91	0.91
d, Delay for Lane Group [s/veh]	76.34	33.42	33.62	44.72	25.52	26.92	68.86	30.77	26.61	49.77	46.43	47.26
Lane Group LOS	F	C	C	D	C	C	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.90	8.95	8.78	3.74	3.77	3.98	2.39	5.06	1.32	3.00	11.09	10.62
50th-Percentile Queue Length [ft/ln]	197.59	223.72	219.62	93.43	94.21	99.38	59.68	126.45	33.08	74.99	277.22	265.39
95th-Percentile Queue Length [veh/ln]	12.75	13.85	13.65	6.73	6.78	7.16	4.30	8.75	2.38	5.40	16.55	15.96
95th-Percentile Queue Length [ft/ln]	318.78	346.37	341.14	168.17	169.58	178.89	107.42	218.65	59.54	134.97	413.75	398.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.34	33.51	33.62	44.72	25.88	26.92	68.86	30.77	26.61	49.77	46.76	47.26
Movement LOS	F	C	C	D	C	C	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	43.37			32.12			34.70			47.48		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	40.12											
Intersection LOS	D											
Intersection V/C	0.767											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.937	3.013	2.881	2.851
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	644	578	578	644
d_b, Bicycle Delay [s]	20.67	22.76	22.76	20.67
I_b,int, Bicycle LOS Score for Intersection	2.508	2.124	2.159	2.508
Bicycle LOS	B	B	B	B

Sequence





Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	81	353	124	56	298	96	75	543	86	90	705	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	31	0	0	24	0	0	22	0	0	13
Total Hourly Volume [veh/h]	81	355	94	56	299	72	75	546	64	90	708	39
Peak Hour Factor	0.8700	0.8700	0.8700	0.8500	0.8500	0.8500	0.8750	0.8750	0.8750	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	102	27	16	88	21	21	156	18	27	216	12
Total Analysis Volume [veh/h]	93	408	108	66	352	85	86	624	73	110	862	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	30	0	10	30	0	10	26	0	14	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	31	31	4	29	29	5	22	22	7	24	24
g / C, Green / Cycle	0.07	0.38	0.38	0.05	0.36	0.36	0.07	0.28	0.28	0.09	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.06	0.16	0.16	0.04	0.13	0.14	0.05	0.19	0.05	0.07	0.27	0.03
s, saturation flow rate [veh/h]	1603	1683	1564	1603	1683	1572	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	115	645	599	83	611	571	107	892	398	139	956	427
d1, Uniform Delay [s]	36.57	18.09	18.12	37.49	18.72	18.77	36.81	25.88	21.96	35.81	26.95	20.39
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.32	1.95	2.13	15.29	1.70	1.86	12.89	1.01	0.22	9.57	3.48	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.41	0.42	0.79	0.37	0.37	0.80	0.70	0.18	0.79	0.90	0.11
d, Delay for Lane Group [s/veh]	48.90	20.04	20.26	52.78	20.42	20.63	49.70	26.89	22.18	45.39	30.43	20.50
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.15	3.77	3.57	1.58	3.08	2.95	2.01	5.22	1.04	2.38	7.69	0.62
50th-Percentile Queue Length [ft/ln]	53.66	94.14	89.17	39.38	77.10	73.85	50.16	130.41	25.88	59.38	192.27	15.57
95th-Percentile Queue Length [veh/ln]	3.86	6.78	6.42	2.84	5.55	5.32	3.61	8.96	1.86	4.28	12.24	1.12
95th-Percentile Queue Length [ft/ln]	96.58	169.44	160.51	70.89	138.79	132.94	90.29	224.06	46.58	106.89	305.97	28.02

Movement, Approach, & Intersection Results

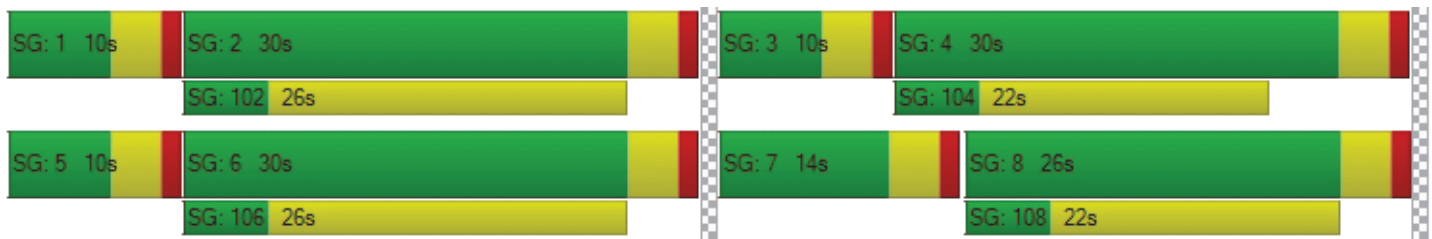
d_M, Delay for Movement [s/veh]	48.90	20.12	20.26	52.78	20.50	20.63	49.70	26.89	22.18	45.39	30.43	20.50
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	24.54			24.76			28.95			31.57		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.22											
Intersection LOS	C											
Intersection V/C	0.598											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	2.573	2.611	2.784	2.870
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	650	650	550	650
d_b, Bicycle Delay [s]	18.23	18.23	21.03	18.23
I_b,int, Bicycle LOS Score for Intersection	2.088	1.994	2.224	2.412
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	22.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	59	286	102	55	398	196	165	548	50	94	480	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	26	0	0	49	0	0	13	0	0	11
Total Hourly Volume [veh/h]	59	287	76	55	400	148	166	551	37	94	482	32
Peak Hour Factor	0.9580	0.9580	0.9580	0.8830	0.8830	0.8830	0.8650	0.8650	0.8650	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	75	20	16	113	42	48	159	11	29	147	10
Total Analysis Volume [veh/h]	62	300	79	62	453	168	192	637	43	114	587	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	36	29	29	36	29	29	26	17	17	26	17	17
g / C, Green / Cycle	0.52	0.41	0.41	0.52	0.41	0.41	0.37	0.24	0.24	0.37	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.12	0.06	0.19	0.19	0.20	0.20	0.20	0.12	0.19	0.19
s, saturation flow rate [veh/h]	859	1683	1565	1012	1683	1530	958	1683	1646	924	1683	1646
c, Capacity [veh/h]	479	686	638	588	686	624	385	411	402	366	405	396
d1, Uniform Delay [s]	9.45	13.88	13.92	8.83	15.20	15.23	17.10	25.12	25.12	16.37	24.84	24.85
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.12	1.03	1.14	0.36	2.32	2.59	1.00	4.54	4.65	0.48	3.30	3.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.13	0.28	0.29	0.11	0.47	0.48	0.50	0.84	0.84	0.31	0.78	0.78
d, Delay for Lane Group [s/veh]	9.57	14.91	15.06	9.19	17.52	17.82	18.11	29.66	29.77	16.86	28.14	28.24
Lane Group LOS	A	B	B	A	B	B	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.44	2.09	2.00	0.45	3.71	3.45	2.06	5.43	5.33	1.15	4.83	4.74
50th-Percentile Queue Length [ft/ln]	10.89	52.19	50.09	11.23	92.82	86.31	51.42	135.83	133.16	28.65	120.64	118.43
95th-Percentile Queue Length [veh/ln]	0.78	3.76	3.61	0.81	6.68	6.21	3.70	9.26	9.11	2.06	8.43	8.31
95th-Percentile Queue Length [ft/ln]	19.61	93.95	90.16	20.22	167.08	155.36	92.56	231.40	227.78	51.56	210.71	207.67

Movement, Approach, & Intersection Results

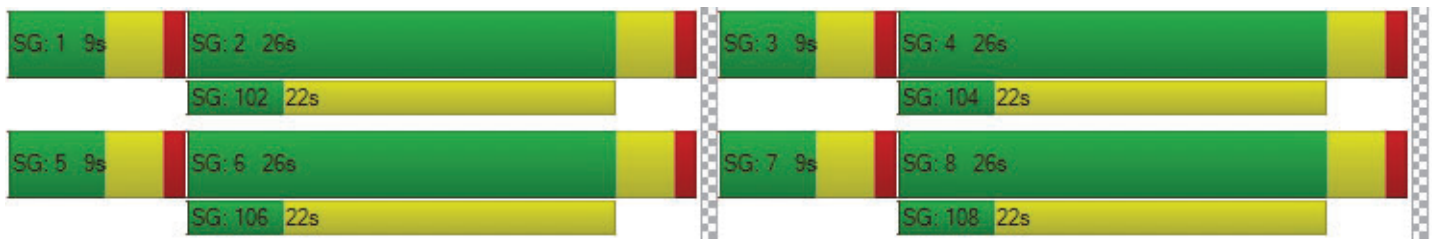
d_M, Delay for Movement [s/veh]	9.57	14.96	15.06	9.19	17.61	17.82	18.11	29.71	29.77	16.86	28.18	28.24
Movement LOS	A	B	B	A	B	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	14.22			16.90			27.16			26.44		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	22.32											
Intersection LOS	C											
Intersection V/C	0.574											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
I_p,int, Pedestrian LOS Score for Intersection	2.582	2.763	2.801	2.747
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	629	629	629
d_b, Bicycle Delay [s]	16.46	16.46	16.46	16.46
I_b,int, Bicycle LOS Score for Intersection	1.945	2.164	2.290	2.179
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.280

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	38	404	0	0	524	30	13	0	33	52	13	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	8	0	0	8	0	0	7
Total Hourly Volume [veh/h]	38	406	0	0	527	22	13	0	25	52	13	19
Peak Hour Factor	0.8730	0.8730	1.0000	1.0000	0.9380	0.9380	0.6390	1.0000	0.6390	0.6500	0.6500	0.6500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	116	0	0	140	6	5	0	10	20	5	7
Total Analysis Volume [veh/h]	44	465	0	0	562	23	20	0	39	80	20	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	9	28	0	0	19	0	29	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	17	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	55	48	48	4	4	9	9	9
g / C, Green / Cycle	0.69	0.69	0.60	0.60	0.05	0.05	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.17	0.18	0.01	0.03	0.03	0.03	0.02
s, saturation flow rate [veh/h]	827	3204	1683	1660	1603	1431	1603	1634	1431
c, Capacity [veh/h]	625	2195	1003	989	75	67	190	193	169
d1, Uniform Delay [s]	4.47	4.64	7.91	7.93	36.81	37.37	32.09	32.08	31.74
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.22	0.74	0.76	1.88	7.84	0.73	0.70	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.21	0.29	0.30	0.27	0.58	0.26	0.26	0.17
d, Delay for Lane Group [s/veh]	4.52	4.86	8.64	8.69	38.69	45.21	32.82	32.78	32.21
Lane Group LOS	A	A	A	A	D	D	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.19	1.18	2.20	2.21	0.41	0.88	0.90	0.90	0.52
50th-Percentile Queue Length [ft/ln]	4.84	29.56	54.92	55.17	10.25	21.99	22.42	22.60	12.93
95th-Percentile Queue Length [veh/ln]	0.35	2.13	3.95	3.97	0.74	1.58	1.61	1.63	0.93
95th-Percentile Queue Length [ft/ln]	8.72	53.20	98.86	99.31	18.45	39.58	40.36	40.67	23.27

Movement, Approach, & Intersection Results

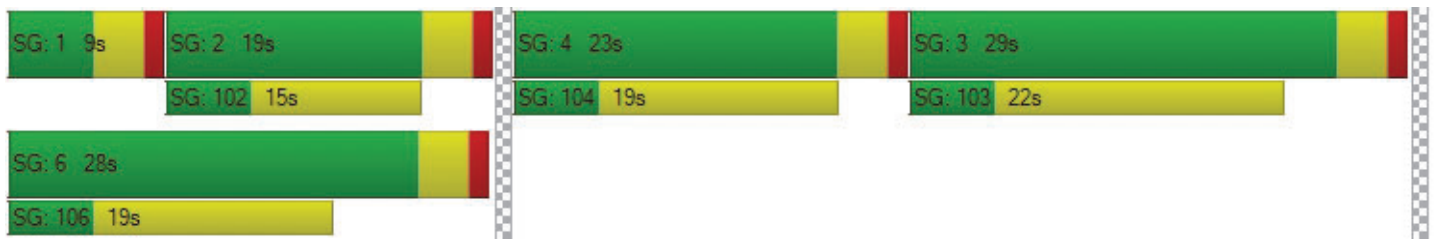
d_M, Delay for Movement [s/veh]	4.52	4.86	0.00	0.00	8.67	8.69	38.69	0.00	45.21	32.80	32.78	32.21
Movement LOS	A	A			A	A	D		D	C	C	C
d_A, Approach Delay [s/veh]	4.83				8.67		43.00		32.67			
Approach LOS	A				A		D		C			
d_I, Intersection Delay [s/veh]	11.14											
Intersection LOS	B											
Intersection V/C	0.280											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0		9.0		9.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	31.51		31.51		31.51		31.51	
I_p,int, Pedestrian LOS Score for Intersection	2.529		2.500		2.039		2.170	
Crosswalk LOS	B		B		B		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	600		375		625		475	
d_b, Bicycle Delay [s]	19.60		26.41		18.91		23.26	
I_b,int, Bicycle LOS Score for Intersection	1.980		2.049		1.560		1.784	
Bicycle LOS	A		B		A		A	

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	40.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.800

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	79	469	180	64	355	145	194	506	81	130	893	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	45	0	0	37	0	0	20	0	0	32
Total Hourly Volume [veh/h]	79	471	136	64	357	109	195	508	61	131	897	95
Peak Hour Factor	0.8540	0.8540	0.8540	0.8210	0.8210	0.8210	0.9310	0.9310	0.9310	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	138	40	19	109	33	52	136	16	38	263	28
Total Analysis Volume [veh/h]	93	552	159	78	435	133	209	546	66	154	1052	111
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	30	0	18	33	0	20	36	0	26	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	34	34	7	32	32	16	41	41	13	38	38
g / C, Green / Cycle	0.07	0.31	0.31	0.06	0.29	0.29	0.15	0.37	0.37	0.11	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.06	0.22	0.22	0.05	0.17	0.18	0.13	0.17	0.05	0.10	0.33	0.08
s, saturation flow rate [veh/h]	1603	1683	1555	1603	1683	1550	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	115	512	473	100	496	457	233	1196	534	184	1098	490
d1, Uniform Delay [s]	50.29	34.10	34.12	50.84	33.17	33.23	46.19	26.05	22.66	47.67	35.39	25.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.30	8.50	9.22	12.40	5.16	5.71	11.57	0.27	0.10	9.58	6.15	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.72	0.72	0.78	0.59	0.60	0.90	0.46	0.12	0.84	0.96	0.23
d, Delay for Lane Group [s/veh]	62.59	42.59	43.33	63.24	38.33	38.94	57.76	26.32	22.76	57.25	41.54	26.01
Lane Group LOS	E	D	D	E	D	D	E	C	C	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.87	9.67	9.05	2.42	7.21	6.77	6.22	5.24	1.11	4.53	14.06	2.05
50th-Percentile Queue Length [ft/ln]	71.63	241.71	226.32	60.53	180.17	169.32	155.56	131.03	27.69	113.34	351.39	51.19
95th-Percentile Queue Length [veh/ln]	5.16	14.77	13.99	4.36	11.61	11.04	10.31	9.00	1.99	8.03	20.20	3.69
95th-Percentile Queue Length [ft/ln]	128.94	369.19	349.68	108.96	290.24	276.02	257.84	224.90	49.85	200.64	505.10	92.14

Movement, Approach, & Intersection Results

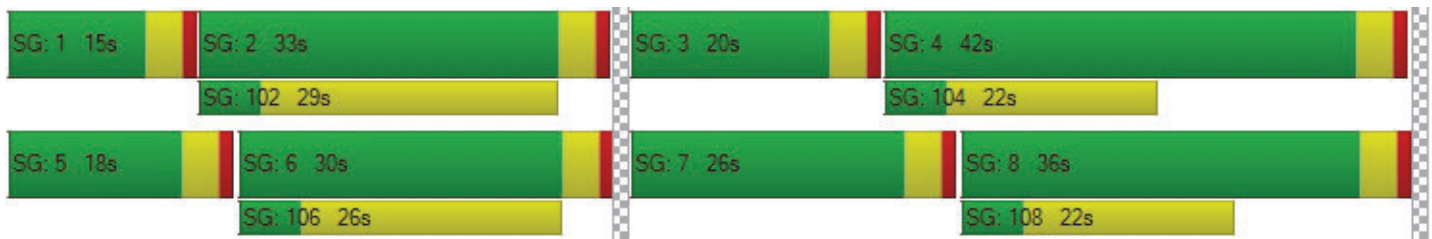
d_M, Delay for Movement [s/veh]	62.59	42.84	43.33	63.24	38.53	38.94	57.76	26.32	22.76	57.25	41.54	26.01
Movement LOS	E	D	D	E	D	D	E	C	C	E	D	C
d_A, Approach Delay [s/veh]	45.22			41.60			34.04			42.07		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	40.85											
Intersection LOS	D											
Intersection V/C	0.800											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
I_p,int, Pedestrian LOS Score for Intersection	2.771	2.776	3.034	2.981
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	473	527	582	691
d_b, Bicycle Delay [s]	32.07	29.82	27.65	23.56
I_b,int, Bicycle LOS Score for Intersection	2.260	2.123	2.253	2.673
Bicycle LOS	B	B	B	B

Sequence




Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 8: Moore St/Project Dwy 1**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Project Dwy 1		Moore St			
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy 1		Moore St			
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.52	8.32	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.42		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.01					
Intersection LOS						

Intersection Level Of Service Report
Intersection 9: Shoemaker Ave/Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Base Volume Input [veh/h]	0	494	649	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	496	652	0	0	0
Peak Hour Factor	1.0000	0.9580	0.8830	1.0000	1.0000	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	129	185	0	0	0
Total Analysis Volume [veh/h]	0	518	738	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.17	0.00	0.00	0.00	19.95	10.73
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		15.34	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: Shoemaker Ave/Project Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	49.21	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Base Volume Input [veh/h]	0	494	649	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	496	652	0	0	0
Peak Hour Factor	1.0000	0.9580	0.8830	1.0000	1.0000	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	129	185	0	0	0
Total Analysis Volume [veh/h]	0	518	738	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.17	0.00	0.00	0.00	19.95	10.73
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		15.34	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

HCM

Vistro File: C:\...\Vistro HCM.vistro

Scenario 3 EX + P AM

Report File: C:\...\EX + P AM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.710	32.9	C
2	Bloomfield Ave/166th St	Signalized	HCM 7th Edition	NB Thru	0.719	25.7	C
3	Bloomfield Ave/Artesia Blvd	Signalized	HCM 7th Edition	EB Left	0.754	38.2	D
4	Shoemaker Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.577	29.7	C
5	Shoemaker Ave/166th St	Signalized	HCM 7th Edition	WB Right	0.645	21.6	C
6	Shoemaker Ave/Oak Crest St	Signalized	HCM 7th Edition	EB Left	0.537	22.9	C
7	Shoemaker Ave/Artesia Blvd	Signalized	HCM 7th Edition	NB Left	0.866	45.3	D
8	Moore St/Project Dwy 1	Two-way stop	HCM 7th Edition	SB Left	0.007	8.5	A
9	Shoemaker Ave/Project Dwy 2	Two-way stop	HCM 7th Edition	EB Left	0.004	21.0	C
10	Shoemaker Ave/Project Dwy 3	Two-way stop	HCM 7th Edition	EB Right	0.003	10.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	32.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.710

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
	Base Volume Input [veh/h]	96	650	210	102	597	145	130	562	94	178	540
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	0	2	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	53	0	0	36	0	0	24	0	0	13
Total Hourly Volume [veh/h]	96	650	160	102	597	109	130	564	70	178	540	37
Peak Hour Factor	0.9830	0.9830	0.9830	0.7890	0.7890	0.7890	0.9280	0.9280	0.9280	0.7720	0.7720	0.7720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	165	41	32	189	35	35	152	19	58	175	12
Total Analysis Volume [veh/h]	98	661	163	129	757	138	140	608	75	231	699	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	12	31	0	14	30	0	18	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	32	32	8	34	34	9	20	20	14	24	24
g / C, Green / Cycle	0.08	0.36	0.36	0.09	0.37	0.37	0.10	0.22	0.22	0.16	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.21	0.11	0.08	0.24	0.10	0.09	0.19	0.05	0.14	0.22	0.03
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	121	1147	512	142	1190	531	168	704	314	249	866	387
d1, Uniform Delay [s]	40.97	23.37	20.93	40.63	23.28	19.68	39.50	33.81	28.91	37.49	30.64	24.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.05	2.11	1.63	18.28	2.60	1.18	10.09	3.31	0.39	13.85	1.84	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.58	0.32	0.91	0.64	0.26	0.83	0.86	0.24	0.93	0.81	0.12
d, Delay for Lane Group [s/veh]	53.02	25.48	22.56	58.91	25.88	20.86	49.58	37.12	29.30	51.35	32.48	24.93
Lane Group LOS	D	C	C	E	C	C	D	D	C	D	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.52	5.81	2.65	3.45	6.55	2.06	3.39	6.40	1.32	5.76	6.89	0.76
50th-Percentile Queue Length [ft/ln]	62.91	145.19	66.24	86.27	163.75	51.52	84.81	159.98	32.89	143.91	172.33	18.92
95th-Percentile Queue Length [veh/ln]	4.53	9.76	4.77	6.21	10.75	3.71	6.11	10.55	2.37	9.69	11.20	1.36
95th-Percentile Queue Length [ft/ln]	113.24	244.00	119.23	155.28	268.68	92.74	152.66	263.70	59.20	242.28	279.97	34.05

Movement, Approach, & Intersection Results

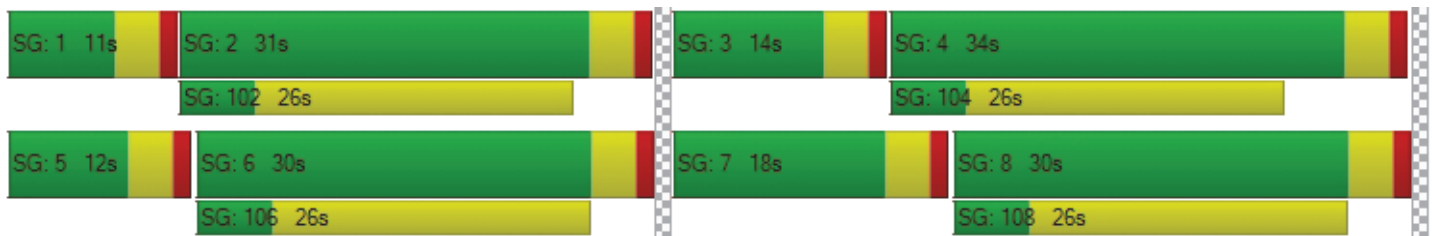
d_M, Delay for Movement [s/veh]	53.02	25.48	22.56	58.91	25.88	20.86	49.58	37.12	29.30	51.35	32.48	24.93
Movement LOS	D	C	C	E	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	27.89			29.36			38.53			36.57		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.89											
Intersection LOS	C											
Intersection V/C	0.710											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.865	2.922	2.882	2.894
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	600	578	667
d_b, Bicycle Delay [s]	22.76	22.05	22.76	20.00
I_b,int, Bicycle LOS Score for Intersection	2.364	2.434	2.258	2.377
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.719

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	60	870	413	97	718	107	104	420	57	217	401	84
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	15	0	0	0	0	1	0	4	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	107	0	0	27	0	0	14	0	0	22
Total Hourly Volume [veh/h]	60	870	321	97	718	80	104	421	43	221	401	65
Peak Hour Factor	0.8920	0.8920	0.8920	0.8610	0.8610	0.8610	0.8920	0.8920	0.8920	0.7690	0.7690	0.7690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	244	90	28	208	23	29	118	12	72	130	21
Total Analysis Volume [veh/h]	67	975	360	113	834	93	117	472	48	287	521	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	34	0	11	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	24	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	39	31	31	39	31	31	33	22	22	33	24	24
g / C, Green / Cycle	0.49	0.38	0.38	0.49	0.39	0.39	0.41	0.27	0.27	0.41	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.10	0.30	0.25	0.20	0.28	0.28	0.13	0.16	0.16	0.28	0.18	0.18
s, saturation flow rate [veh/h]	701	3204	1431	579	1683	1624	919	1683	1629	1016	1683	1602
c, Capacity [veh/h]	343	1227	548	313	662	639	392	456	441	441	498	474
d1, Uniform Delay [s]	13.46	21.90	20.36	15.52	20.45	20.45	16.25	25.22	25.24	19.48	24.33	24.33
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.24	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.27	5.37	6.06	3.21	6.42	6.64	0.42	1.17	1.21	3.54	1.29	1.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.20	0.79	0.66	0.36	0.71	0.71	0.30	0.58	0.58	0.65	0.62	0.62
d, Delay for Lane Group [s/veh]	13.73	27.26	26.42	18.73	26.87	27.10	16.67	26.39	26.46	23.02	25.61	25.68
Lane Group LOS	B	C	C	B	C	C	B	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	8.50	6.13	1.25	7.83	7.60	1.28	4.17	4.06	4.02	5.03	4.80
50th-Percentile Queue Length [ft/ln]	15.37	212.61	153.33	31.19	195.82	190.04	32.08	104.23	101.49	100.48	125.86	120.04
95th-Percentile Queue Length [veh/ln]	1.11	13.29	10.19	2.25	12.42	12.12	2.31	7.50	7.31	7.23	8.71	8.40
95th-Percentile Queue Length [ft/ln]	27.66	332.18	254.87	56.14	310.57	303.08	57.75	187.62	182.69	180.86	217.85	209.88

Movement, Approach, & Intersection Results

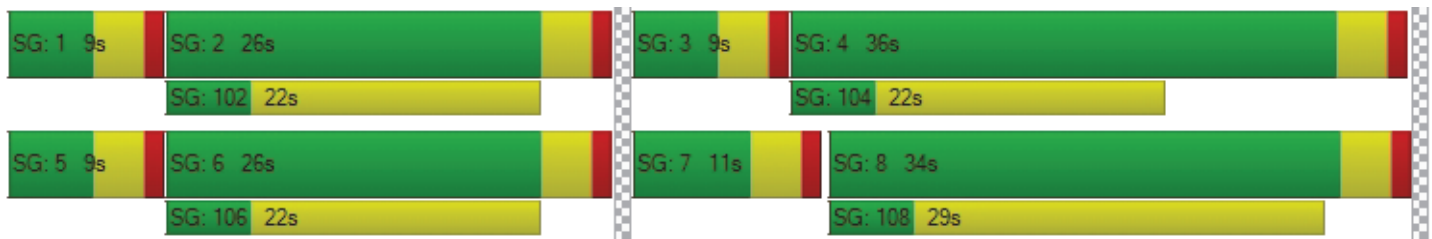
d_M, Delay for Movement [s/veh]	13.73	27.26	26.42	18.73	26.97	27.10	16.67	26.42	26.46	23.02	25.64	25.68
Movement LOS	B	C	C	B	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	26.40			26.09			24.63			24.80		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.67											
Intersection LOS	C											
Intersection V/C	0.719											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	3.238	2.977	2.709	2.776
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	550	550	750	800
d_b, Bicycle Delay [s]	21.03	21.03	15.63	14.40
I_b,int, Bicycle LOS Score for Intersection	2.805	2.440	2.097	2.314
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.754

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	141	504	106	264	612	111	76	363	104	266	674	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	2	8	1	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	27	0	0	28	0	0	26	0	0	35
Total Hourly Volume [veh/h]	141	504	79	264	612	85	84	364	78	266	674	105
Peak Hour Factor	0.7270	0.7270	0.7270	0.8890	0.8890	0.8890	0.8760	0.8760	0.8760	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	173	27	74	172	24	24	104	22	76	193	30
Total Analysis Volume [veh/h]	194	693	109	297	688	96	96	416	89	304	771	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	32	0	14	30	0	11	30	0	14	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	31	31	10	29	29	7	23	23	10	27	27
g / C, Green / Cycle	0.13	0.34	0.34	0.11	0.32	0.32	0.07	0.26	0.26	0.11	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.12	0.24	0.24	0.10	0.16	0.16	0.06	0.13	0.06	0.10	0.27	0.27
s, saturation flow rate [veh/h]	1603	1683	1604	3113	3204	1580	1603	3204	1431	3113	1683	1605
c, Capacity [veh/h]	214	572	545	346	1018	502	119	833	372	346	500	476
d1, Uniform Delay [s]	38.45	25.93	25.93	39.31	25.04	25.06	41.02	28.32	26.28	39.40	30.51	30.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.31	0.31
l, Upstream Filtering 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
d2, Incremental Delay [s]	13.51	7.54	7.90	6.23	1.86	3.77	11.97	0.46	0.33	7.21	16.48	17.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.91	0.72	0.72	0.86	0.51	0.52	0.81	0.50	0.24	0.88	0.91	0.91
d, Delay for Lane Group [s/veh]	51.97	33.47	33.82	45.53	26.90	28.84	52.99	28.78	26.61	46.62	46.98	47.95
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.85	8.34	8.00	3.40	4.56	4.78	2.42	3.68	1.47	3.60	11.47	11.10
50th-Percentile Queue Length [ft/ln]	121.19	208.40	199.98	84.98	113.92	119.53	60.47	92.08	36.87	90.10	286.87	277.41
95th-Percentile Queue Length [veh/ln]	8.46	13.07	12.64	6.12	8.06	8.37	4.35	6.63	2.65	6.49	17.03	16.56
95th-Percentile Queue Length [ft/ln]	211.46	326.78	315.93	152.96	201.44	209.18	108.85	165.74	66.37	162.18	425.76	413.98

Movement, Approach, & Intersection Results

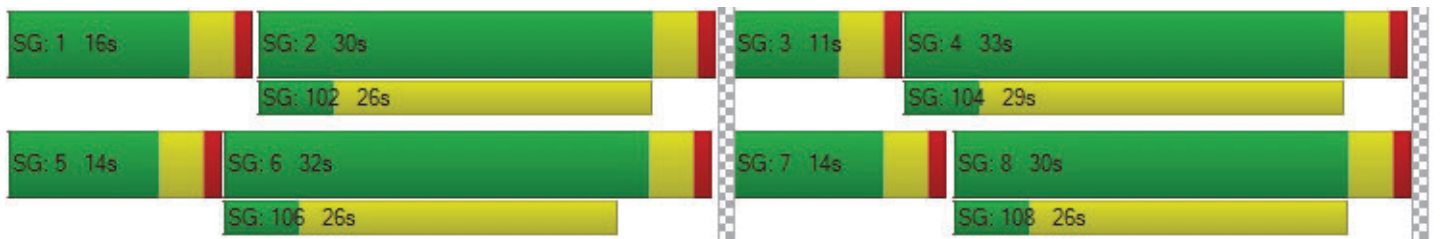
d_M, Delay for Movement [s/veh]	51.97	33.61	33.82	45.53	27.36	28.84	52.99	28.78	26.61	46.62	47.38	47.95
Movement LOS	D	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	37.21			32.49			32.33			47.24		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	38.23											
Intersection LOS	D											
Intersection V/C	0.754											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.954	3.017	2.863	2.842
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	622	578	578	644
d_b, Bicycle Delay [s]	21.36	22.76	22.76	20.67
I_b,int, Bicycle LOS Score for Intersection	2.404	2.170	2.077	2.574
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.577

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	60	275	97	44	287	106	112	605	114	143	728	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	0	1	0	0	3	2	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	25	0	0	27	0	0	29	0	0	27
Total Hourly Volume [veh/h]	60	275	73	44	288	79	112	608	87	154	728	82
Peak Hour Factor	0.7100	0.7100	0.7100	0.9120	0.9120	0.9120	0.8890	0.8890	0.8890	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	97	26	12	79	22	31	171	24	41	196	22
Total Analysis Volume [veh/h]	85	387	103	48	316	87	126	684	98	166	784	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	30	0	10	30	0	12	26	0	14	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	31	31	3	29	29	8	20	20	10	22	22
g / C, Green / Cycle	0.07	0.39	0.39	0.04	0.37	0.37	0.10	0.25	0.25	0.12	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.15	0.03	0.12	0.13	0.08	0.21	0.07	0.10	0.24	0.06
s, saturation flow rate [veh/h]	1603	1683	1563	1603	1683	1561	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	106	655	608	67	615	570	154	788	352	197	875	390
d1, Uniform Delay [s]	36.86	17.57	17.61	37.84	18.38	18.44	35.48	28.93	24.43	34.31	27.99	22.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	13.23	1.72	1.88	12.97	1.48	1.65	10.16	3.10	0.43	9.22	3.57	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.39	0.39	0.71	0.34	0.34	0.82	0.87	0.28	0.84	0.90	0.23
d, Delay for Lane Group [s/veh]	50.09	19.29	19.49	50.81	19.86	20.08	45.63	32.03	24.85	43.52	31.57	22.82
Lane Group LOS	D	B	B	D	B	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.99	3.49	3.31	1.13	2.79	2.67	2.79	6.37	1.50	3.50	7.09	1.23
50th-Percentile Queue Length [ft/ln]	49.82	87.14	82.69	28.29	69.82	66.84	69.67	159.34	37.55	87.39	177.19	30.84
95th-Percentile Queue Length [veh/ln]	3.59	6.27	5.95	2.04	5.03	4.81	5.02	10.51	2.70	6.29	11.45	2.22
95th-Percentile Queue Length [ft/ln]	89.67	156.85	148.85	50.93	125.67	120.32	125.41	262.85	67.58	157.30	286.35	55.51

Movement, Approach, & Intersection Results

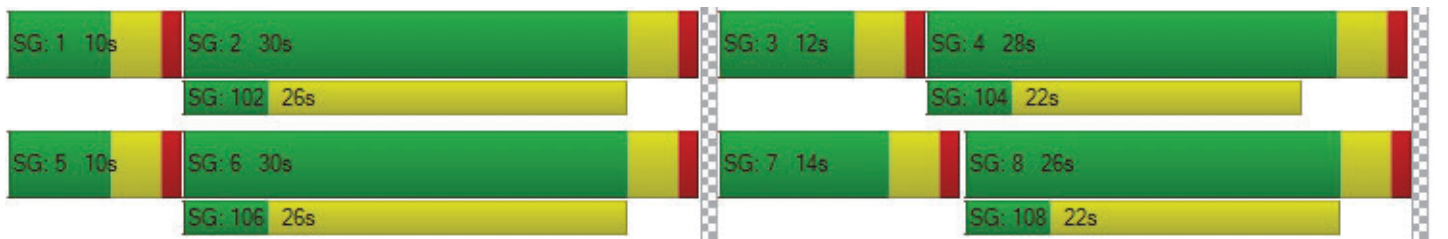
d_M, Delay for Movement [s/veh]	50.09	19.36	19.49	50.81	19.94	20.08	45.63	32.03	24.85	43.52	31.57	22.82
Movement LOS	D	B	B	D	B	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	23.92			23.25			33.14			32.74		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.72											
Intersection LOS	C											
Intersection V/C	0.577											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	2.567	2.621	2.802	2.904
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	650	650	550	600
d_b, Bicycle Delay [s]	18.23	18.23	21.03	19.60
I_b,int, Bicycle LOS Score for Intersection	2.055	1.954	2.333	2.438
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	117	381	139	43	247	125	211	546	67	123	517	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	2	7	16	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	35	0	0	33	0	0	17	0	0	16
Total Hourly Volume [veh/h]	117	385	104	43	249	99	227	546	50	123	517	47
Peak Hour Factor	0.8290	0.8290	0.8290	0.6900	0.6900	0.6900	0.8670	0.8670	0.8670	0.7430	0.7430	0.7430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	116	31	16	90	36	65	157	14	41	174	16
Total Analysis Volume [veh/h]	141	464	125	62	361	143	262	630	58	166	696	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	23	23	31	22	22	31	22	22	31	22	22
g / C, Green / Cycle	0.44	0.33	0.33	0.44	0.31	0.31	0.44	0.31	0.31	0.44	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.14	0.18	0.18	0.07	0.16	0.16	0.31	0.21	0.21	0.19	0.23	0.23
s, saturation flow rate [veh/h]	985	1683	1562	902	1683	1524	854	1683	1634	888	1683	1634
c, Capacity [veh/h]	483	560	520	435	529	479	398	529	513	421	529	514
d1, Uniform Delay [s]	12.59	19.02	19.03	12.18	19.50	19.56	16.50	20.76	20.76	13.59	21.34	21.34
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.24	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.33	3.76	4.09	0.69	3.30	3.76	4.10	1.41	1.46	0.60	1.94	2.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.29	0.54	0.55	0.14	0.50	0.50	0.66	0.66	0.66	0.39	0.73	0.73
d, Delay for Lane Group [s/veh]	12.92	22.78	23.12	12.87	22.80	23.32	20.59	22.18	22.22	14.19	23.28	23.34
Lane Group LOS	B	C	C	B	C	C	C	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.27	4.33	4.08	0.57	3.59	3.37	2.80	4.61	4.48	1.46	5.28	5.13
50th-Percentile Queue Length [ft/ln]	31.84	108.26	102.11	14.16	89.82	84.26	70.02	115.27	112.04	36.46	131.90	128.31
95th-Percentile Queue Length [veh/ln]	2.29	7.74	7.35	1.02	6.47	6.07	5.04	8.13	7.95	2.62	9.04	8.85
95th-Percentile Queue Length [ft/ln]	57.30	193.58	183.81	25.49	161.67	151.67	126.04	203.31	198.84	65.62	226.08	221.20

Movement, Approach, & Intersection Results

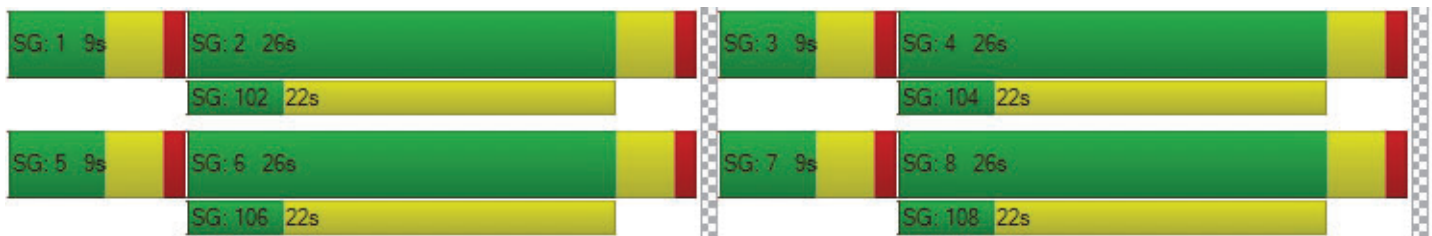
d_M, Delay for Movement [s/veh]	12.92	22.89	23.12	12.87	22.94	23.32	20.59	22.20	22.22	14.19	23.31	23.34
Movement LOS	B	C	C	B	C	C	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	21.01			21.93			21.76			21.68		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.59											
Intersection LOS	C											
Intersection V/C	0.645											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
I_p,int, Pedestrian LOS Score for Intersection	2.686	2.828	2.896	2.810
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	629	629	629
d_b, Bicycle Delay [s]	16.46	16.46	16.46	16.46
I_b,int, Bicycle LOS Score for Intersection	2.191	2.054	2.357	2.336
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	88	487	0	0	361	90	90	0	94	285	6	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	23	0	0	24	0	0	16
Total Hourly Volume [veh/h]	88	491	0	0	363	67	90	0	70	285	6	46
Peak Hour Factor	0.9330	0.9330	1.0000	1.0000	0.6750	0.6750	0.6700	1.0000	0.6700	0.5830	0.5830	0.5830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	132	0	0	134	25	34	0	26	122	3	20
Total Analysis Volume [veh/h]	94	526	0	0	538	99	134	0	104	489	10	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	9	28	0	0	19	0	29	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	17	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	36	36	9	9	15	15	15
g / C, Green / Cycle	0.55	0.55	0.45	0.45	0.11	0.11	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.11	0.16	0.19	0.20	0.08	0.07	0.16	0.16	0.06
s, saturation flow rate [veh/h]	841	3204	1683	1595	1603	1431	1603	1606	1431
c, Capacity [veh/h]	484	1766	751	712	182	163	297	297	265
d1, Uniform Delay [s]	9.65	9.64	15.13	15.33	34.28	33.87	31.46	31.46	28.12
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.43	1.75	2.03	5.63	4.11	6.35	6.34	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.19	0.30	0.42	0.45	0.73	0.64	0.84	0.84	0.30
d, Delay for Lane Group [s/veh]	9.84	10.07	16.89	17.36	39.90	37.99	37.81	37.80	28.74
Lane Group LOS	A	B	B	B	D	D	D	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.73	2.33	3.88	3.96	2.75	2.07	5.02	5.03	1.32
50th-Percentile Queue Length [ft/ln]	18.29	58.23	96.97	99.00	68.65	51.84	125.47	125.67	32.98
95th-Percentile Queue Length [veh/ln]	1.32	4.19	6.98	7.13	4.94	3.73	8.69	8.70	2.37
95th-Percentile Queue Length [ft/ln]	32.92	104.81	174.55	178.21	123.57	93.31	217.32	217.59	59.37

Movement, Approach, & Intersection Results

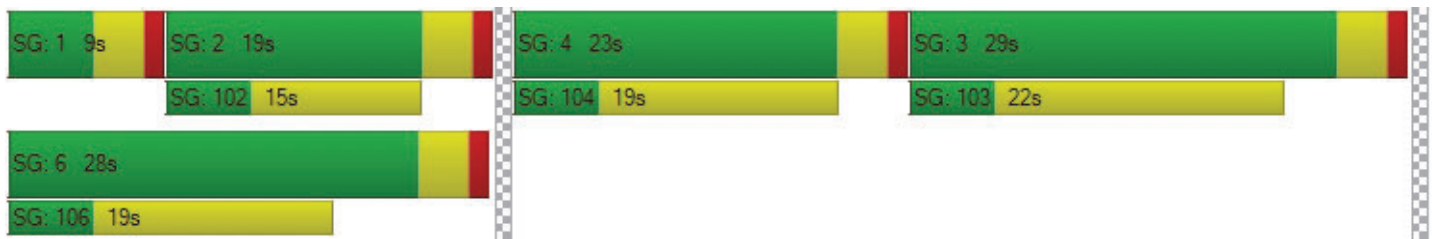
d_M, Delay for Movement [s/veh]	9.84	10.07	0.00	0.00	17.08	17.36	39.90	0.00	37.99	37.80	37.80	28.74
Movement LOS	A	B			B	B	D		D	D	D	C
d_A, Approach Delay [s/veh]	10.04			17.12			39.07			36.57		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.94											
Intersection LOS	C											
Intersection V/C	0.537											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0		9.0		9.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	31.51		31.51		31.51		31.51	
l_p,int, Pedestrian LOS Score for Intersection	2.642		2.619		2.192		2.294	
Crosswalk LOS	B		B		B		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	600		375		625		475	
d_b, Bicycle Delay [s]	19.60		26.41		18.91		23.26	
l_b,int, Bicycle LOS Score for Intersection	2.071		2.104		1.560		2.540	
Bicycle LOS	B		B		A		B	

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	45.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.866

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	44	563	156	96	474	266	260	506	59	144	916	158
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	2	0	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	39	0	0	67	0	0	15	0	0	40
Total Hourly Volume [veh/h]	44	565	117	96	476	199	261	506	44	144	916	119
Peak Hour Factor	0.9500	0.9500	0.9500	0.8640	0.8640	0.8640	0.9560	0.9560	0.9560	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	149	31	28	138	58	68	132	12	40	256	33
Total Analysis Volume [veh/h]	46	595	123	111	551	230	273	529	46	161	1026	133
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	12	33	0	22	41	0	17	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	26	26	8	30	30	18	38	38	12	32	32
g / C, Green / Cycle	0.04	0.26	0.26	0.08	0.30	0.30	0.18	0.38	0.38	0.12	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.22	0.07	0.24	0.24	0.17	0.17	0.03	0.10	0.32	0.09
s, saturation flow rate [veh/h]	1603	1683	1584	1603	1683	1517	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	61	438	412	128	509	458	289	1222	546	190	1025	458
d1, Uniform Delay [s]	47.66	35.08	35.11	45.47	32.20	32.21	40.52	22.92	19.77	43.17	34.00	25.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.13	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	17.42	17.77	18.90	15.55	12.92	14.19	17.14	0.24	0.07	9.87	13.20	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.76	0.84	0.85	0.87	0.81	0.81	0.95	0.43	0.08	0.85	1.00	0.29
d, Delay for Lane Group [s/veh]	65.08	52.85	54.01	61.01	45.12	46.41	57.66	23.16	19.84	53.04	47.20	25.84
Lane Group LOS	E	D	D	E	D	D	E	C	B	D	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.40	10.31	9.86	3.20	10.53	9.66	7.77	4.42	0.67	4.31	13.60	2.32
50th-Percentile Queue Length [ft/ln]	35.05	257.69	246.50	80.08	263.19	241.44	194.25	110.57	16.68	107.72	340.12	58.11
95th-Percentile Queue Length [veh/ln]	2.52	15.57	15.01	5.77	15.85	14.75	12.34	7.87	1.20	7.71	19.66	4.18
95th-Percentile Queue Length [ft/ln]	63.09	389.32	375.24	144.15	396.22	368.86	308.54	196.79	30.03	192.82	491.53	104.60

Movement, Approach, & Intersection Results

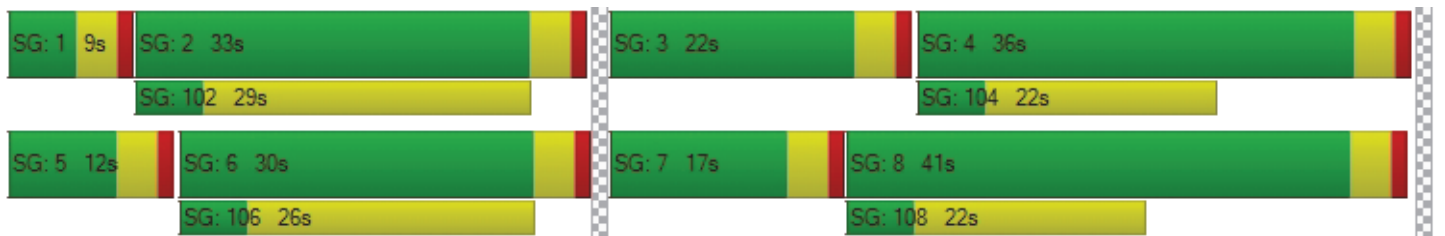
d_M, Delay for Movement [s/veh]	65.08	53.29	54.01	61.01	45.45	46.41	57.66	23.16	19.84	53.04	47.20	25.84
Movement LOS	E	D	D	E	D	D	E	C	B	D	F	C
d_A, Approach Delay [s/veh]	54.11			47.63			34.09			45.76		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	45.28											
Intersection LOS	D											
Intersection V/C	0.866											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.772	2.922	3.036	2.985
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	580	740	640
d_b, Bicycle Delay [s]	27.38	25.21	19.85	23.12
I_b,int, Bicycle LOS Score for Intersection	2.222	2.351	2.272	2.682
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 8: Moore St/Project Dwy 1**

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Project Dwy 1		Moore St		Westbound	
Approach	Southbound		Eastbound			
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy 1		Moore St		Westbound	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	0	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	0
Total Analysis Volume [veh/h]	7	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.54	8.34	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.52	0.52	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.54		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.54					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Shoemaker Ave/Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	21.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Base Volume Input [veh/h]	0	654	415	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	14	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	654	415	14	1	0
Peak Hour Factor	1.0000	0.8290	0.6900	1.0000	1.0000	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	197	150	4	0	0
Total Analysis Volume [veh/h]	13	789	601	14	1	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.76	0.00	0.00	0.00	21.01	10.30
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.02	0.01	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.55	0.27	0.00	0.00	0.33	0.33
d_A, Approach Delay [s/veh]	0.14		0.00		21.01	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 10: Shoemaker Ave/Project Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	49.21	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Base Volume Input [veh/h]	0	654	415	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	13	0	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	667	415	0	0	2
Peak Hour Factor	1.0000	0.8290	0.6900	1.0000	1.0000	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	201	150	0	0	1
Total Analysis Volume [veh/h]	8	805	601	0	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.71	0.00	0.00	0.00	20.64	10.19
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.33	0.17	0.00	0.00	0.22	0.22
d_A, Approach Delay [s/veh]	0.09		0.00		10.19	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	B					

HCM

Vistro File: C:\...\Vistro HCM.vistro

Scenario 4 EX + P PM

Report File: C:\...\EX + P PM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.733	36.0	D
2	Bloomfield Ave/166th St	Signalized	HCM 7th Edition	WB Right	0.652	23.5	C
3	Bloomfield Ave/Artesia Blvd	Signalized	HCM 7th Edition	EB Left	0.768	40.2	D
4	Shoemaker Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.597	28.4	C
5	Shoemaker Ave/166th St	Signalized	HCM 7th Edition	EB Right	0.585	22.3	C
6	Shoemaker Ave/Oak Crest St	Signalized	HCM 7th Edition	EB Right	0.280	11.1	B
7	Shoemaker Ave/Artesia Blvd	Signalized	HCM 7th Edition	SB Left	0.798	40.7	D
8	Moore St/Project Dwy 1	Two-way stop	HCM 7th Edition	SB Left	0.021	8.6	A
9	Shoemaker Ave/Project Dwy 2	Two-way stop	HCM 7th Edition	EB Left	0.021	20.7	C
10	Shoemaker Ave/Project Dwy 3	Two-way stop	HCM 7th Edition	EB Right	0.013	10.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	36.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.733

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	185	752	175	82	600	131	131	456	64	198	676	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	9	0	0	0	0	1	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	46	0	0	33	0	0	16	0	0	24
Total Hourly Volume [veh/h]	185	752	138	82	600	98	131	457	48	198	678	70
Peak Hour Factor	0.9440	0.9440	0.9440	0.9000	0.9000	0.9000	0.9420	0.9420	0.9420	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	199	37	23	167	27	35	121	13	57	195	20
Total Analysis Volume [veh/h]	196	797	146	91	667	109	139	485	51	227	778	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	32	0	17	30	0	15	30	0	21	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	40	40	7	33	33	10	21	21	16	27	27
g / C, Green / Cycle	0.14	0.40	0.40	0.07	0.33	0.33	0.10	0.21	0.21	0.16	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.12	0.25	0.10	0.06	0.21	0.08	0.09	0.15	0.04	0.14	0.24	0.06
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	224	1266	565	115	1048	468	165	685	306	255	865	386
d1, Uniform Delay [s]	42.14	24.36	20.38	45.66	28.60	24.52	44.03	36.41	32.04	41.18	35.20	28.23
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	10.22	2.38	1.11	11.35	2.96	1.17	10.75	1.36	0.25	10.18	3.72	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.87	0.63	0.26	0.79	0.64	0.23	0.84	0.71	0.17	0.89	0.90	0.21
d, Delay for Lane Group [s/veh]	52.36	26.74	21.49	57.01	31.56	25.68	54.78	37.77	32.29	51.36	38.91	28.49
Lane Group LOS	D	C	C	E	C	C	D	D	C	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.33	7.79	2.43	2.53	6.89	1.96	3.78	5.42	1.00	6.02	9.15	1.46
50th-Percentile Queue Length [ft/ln]	133.20	194.72	60.82	63.26	172.35	49.06	94.45	135.41	25.00	150.40	228.81	36.61
95th-Percentile Queue Length [veh/ln]	9.11	12.37	4.38	4.55	11.20	3.53	6.80	9.23	1.80	10.04	14.11	2.64
95th-Percentile Queue Length [ft/ln]	227.84	309.15	109.47	113.87	280.01	88.30	170.00	230.83	45.00	250.96	352.85	65.89

Movement, Approach, & Intersection Results

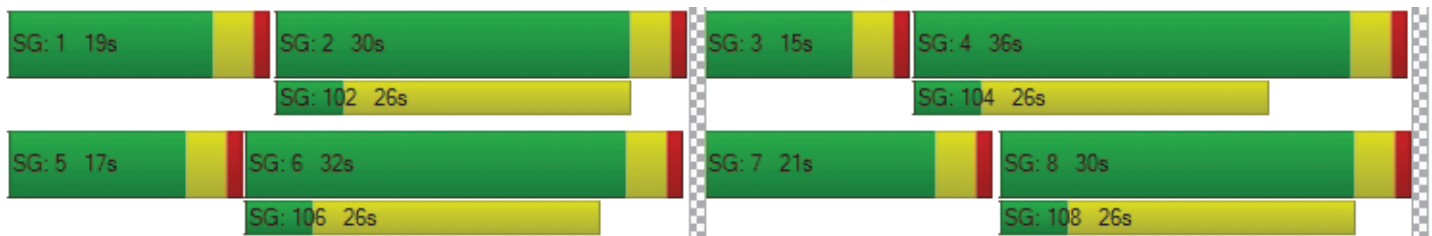
d_M, Delay for Movement [s/veh]	52.36	26.74	21.49	57.01	31.56	25.68	54.78	37.77	32.29	51.36	38.91	28.49
Movement LOS	D	C	C	E	C	C	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	30.48			33.49			40.86			40.75		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.99											
Intersection LOS	D											
Intersection V/C	0.733											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.874	2.927	2.874	2.900
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	520	520	640
d_b, Bicycle Delay [s]	25.92	27.38	27.38	23.12
I_b,int, Bicycle LOS Score for Intersection	2.537	2.302	2.130	2.475
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	23.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	155	829	237	89	651	201	89	403	80	235	601	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	7	0	0	0	0	0	0	16	1	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	61	0	0	50	0	0	20	0	0	35
Total Hourly Volume [veh/h]	155	829	183	89	651	151	89	403	60	251	602	106
Peak Hour Factor	0.9800	0.9800	0.9800	0.9690	0.9690	0.9690	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	211	47	23	168	39	23	103	15	64	153	27
Total Analysis Volume [veh/h]	158	846	187	92	672	156	91	411	61	256	614	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	35	0	10	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	24	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	41	33	33	41	32	32	31	21	21	31	22	22
g / C, Green / Cycle	0.52	0.41	0.41	0.52	0.40	0.40	0.38	0.26	0.26	0.38	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.21	0.26	0.13	0.14	0.25	0.25	0.11	0.14	0.14	0.25	0.22	0.22
s, saturation flow rate [veh/h]	766	3204	1431	662	1683	1575	854	1683	1608	1032	1683	1596
c, Capacity [veh/h]	408	1324	591	371	682	638	320	433	414	418	468	444
d1, Uniform Delay [s]	12.47	18.72	15.85	11.97	18.99	18.99	18.19	25.73	25.76	20.55	26.73	26.73
k, delay calibration	0.12	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.17	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.67	2.37	1.40	1.59	4.34	4.63	0.48	1.11	1.18	2.22	3.24	3.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.39	0.64	0.32	0.25	0.63	0.63	0.28	0.55	0.56	0.61	0.79	0.79
d, Delay for Lane Group [s/veh]	13.13	21.10	17.25	13.55	23.32	23.62	18.67	26.84	26.95	22.78	29.97	30.14
Lane Group LOS	B	C	B	B	C	C	B	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.45	6.28	2.42	0.88	6.49	6.13	1.04	3.83	3.70	3.56	6.67	6.35
50th-Percentile Queue Length [ft/ln]	36.25	156.89	60.40	22.12	162.26	153.15	26.12	95.64	92.41	88.99	166.77	158.72
95th-Percentile Queue Length [veh/ln]	2.61	10.38	4.35	1.59	10.67	10.19	1.88	6.89	6.65	6.41	10.91	10.48
95th-Percentile Queue Length [ft/ln]	65.24	259.60	108.72	39.81	266.72	254.63	47.01	172.14	166.34	160.18	272.67	262.03

Movement, Approach, & Intersection Results

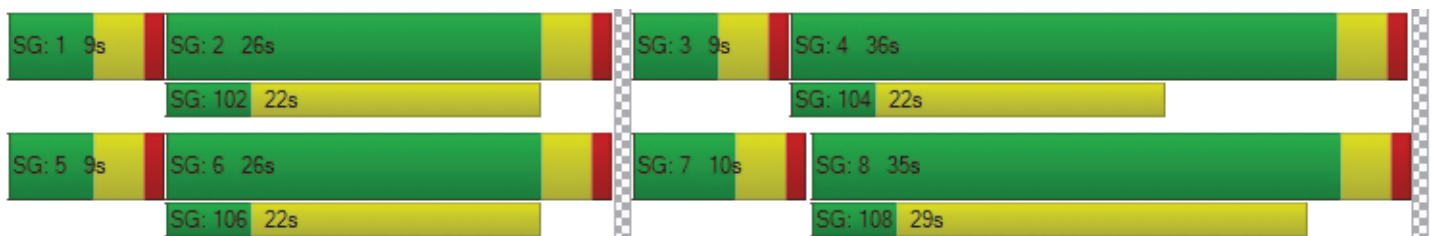
d_M, Delay for Movement [s/veh]	13.13	21.10	17.25	13.55	23.43	23.62	18.67	26.88	26.95	22.78	30.03	30.14
Movement LOS	B	C	B	B	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.44			22.47			25.56			28.15		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	23.48											
Intersection LOS	C											
Intersection V/C	0.652											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	31.51			31.51			31.51			31.51		
l_p,int, Pedestrian LOS Score for Intersection	3.094			2.939			2.826			2.747		
Crosswalk LOS	C			C			C			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	550			550			775			800		
d_b, Bicycle Delay [s]	21.03			21.03			15.01			14.40		
l_b,int, Bicycle LOS Score for Intersection	2.593			2.360			2.041			2.395		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	40.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	249	779	72	292	540	81	75	496	99	215	641	157
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	9	4	1	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	23	0	0	25	0	0	39
Total Hourly Volume [veh/h]	249	779	54	292	540	67	79	497	74	215	641	118
Peak Hour Factor	0.9610	0.9610	0.9610	0.8910	0.8910	0.8910	0.9220	0.9220	0.9220	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	203	14	82	152	19	21	135	20	61	182	33
Total Analysis Volume [veh/h]	259	811	56	328	606	75	86	539	80	244	727	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	33	0	15	30	0	9	30	0	12	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	32	32	11	29	29	5	23	23	8	26	26
g / C, Green / Cycle	0.16	0.36	0.36	0.12	0.32	0.32	0.06	0.26	0.26	0.09	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.26	0.11	0.14	0.14	0.05	0.17	0.06	0.08	0.26	0.26
s, saturation flow rate [veh/h]	1603	1683	1645	3113	3204	1590	1603	3204	1431	3113	1683	1593
c, Capacity [veh/h]	249	597	584	380	1030	511	89	821	367	277	487	461
d1, Uniform Delay [s]	38.00	25.33	25.33	38.76	24.14	24.16	42.41	29.93	26.37	40.53	30.80	30.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.30	0.30
l, Upstream Filtering 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
d2, Incremental Delay [s]	37.10	7.81	7.99	5.84	1.37	2.77	36.54	0.90	0.30	8.98	15.53	16.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	1.04	0.73	0.73	0.86	0.44	0.44	0.97	0.66	0.22	0.88	0.91	0.91
d, Delay for Lane Group [s/veh]	75.10	33.13	33.32	44.60	25.51	26.93	78.96	30.83	26.66	49.51	46.33	47.15
Lane Group LOS	F	C	C	D	C	C	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.82	8.86	8.70	3.72	3.80	3.99	2.75	5.05	1.32	2.98	11.04	10.56
50th-Percentile Queue Length [ft/ln]	195.44	221.53	217.43	92.99	94.90	99.72	68.66	126.33	33.12	74.46	275.92	264.05
95th-Percentile Queue Length [veh/ln]	12.62	13.74	13.53	6.70	6.83	7.18	4.94	8.74	2.38	5.36	16.49	15.89
95th-Percentile Queue Length [ft/ln]	315.40	343.58	338.34	167.39	170.83	179.49	123.58	218.50	59.62	134.03	412.13	397.30

Movement, Approach, & Intersection Results

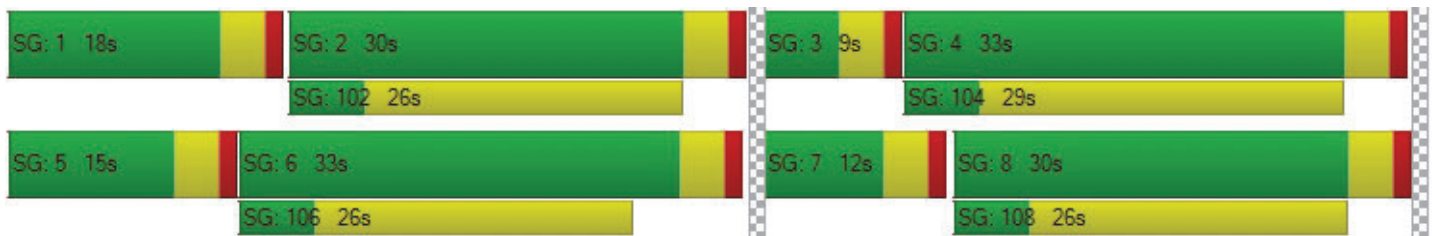
d_M, Delay for Movement [s/veh]	75.10	33.22	33.32	44.60	25.86	26.93	78.96	30.83	26.66	49.51	46.65	47.15
Movement LOS	F	C	C	D	C	C	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	42.86			32.03			36.22			47.34		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	40.16											
Intersection LOS	D											
Intersection V/C	0.768											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.935			3.019			2.883			2.849		
Crosswalk LOS	C			C			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	644			578			578			644		
d_b, Bicycle Delay [s]	20.67			22.76			22.76			20.67		
I_b,int, Bicycle LOS Score for Intersection	2.503			2.127			2.162			2.503		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	28.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.597

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	81	353	124	56	298	96	75	543	86	90	705	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	2	0	0	0	0	9	1	5	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	32	0	0	24	0	0	22	0	0	13
Total Hourly Volume [veh/h]	83	354	94	56	298	72	75	552	65	95	705	39
Peak Hour Factor	0.8700	0.8700	0.8700	0.8500	0.8500	0.8500	0.8750	0.8750	0.8750	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	102	27	16	88	21	21	158	19	29	215	12
Total Analysis Volume [veh/h]	95	407	108	66	351	85	86	631	74	116	859	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	30	0	10	30	0	10	26	0	14	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	31	31	4	29	29	5	22	22	7	24	24
g / C, Green / Cycle	0.07	0.38	0.38	0.05	0.36	0.36	0.07	0.27	0.27	0.09	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.06	0.16	0.16	0.04	0.13	0.14	0.05	0.20	0.05	0.07	0.27	0.03
s, saturation flow rate [veh/h]	1603	1683	1563	1603	1683	1572	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	118	646	600	83	610	570	107	876	391	146	953	425
d1, Uniform Delay [s]	36.51	18.04	18.07	37.49	18.76	18.80	36.81	26.30	22.27	35.64	26.98	20.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.18	1.93	2.12	15.29	1.70	1.86	12.89	1.13	0.23	9.44	3.46	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.41	0.42	0.79	0.37	0.37	0.80	0.72	0.19	0.80	0.90	0.11
d, Delay for Lane Group [s/veh]	48.69	19.97	20.19	52.78	20.46	20.67	49.70	27.44	22.51	45.08	30.44	20.55
Lane Group LOS	D	B	C	D	C	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.19	3.75	3.55	1.58	3.08	2.95	2.01	5.34	1.06	2.49	7.66	0.62
50th-Percentile Queue Length [ft/ln]	54.66	93.75	88.79	39.38	77.01	73.77	50.16	133.61	26.49	62.34	191.58	15.59
95th-Percentile Queue Length [veh/ln]	3.94	6.75	6.39	2.84	5.55	5.31	3.61	9.14	1.91	4.49	12.20	1.12
95th-Percentile Queue Length [ft/ln]	98.38	168.75	159.82	70.89	138.63	132.78	90.29	228.40	47.67	112.21	305.08	28.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.69	20.05	20.19	52.78	20.53	20.67	49.70	27.44	22.51	45.08	30.44	20.55
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	24.53			24.79			29.39			31.63		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.37											
Intersection LOS	C											
Intersection V/C	0.597											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	2.576	2.610	2.785	2.873
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	650	650	550	650
d_b, Bicycle Delay [s]	18.23	18.23	21.03	18.23
I_b,int, Bicycle LOS Score for Intersection	2.089	1.994	2.230	2.414
Bicycle LOS	B	A	B	B

Sequence





Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	22.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.585

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	59	286	102	55	398	196	165	548	50	94	480	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	1	2	26	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	26	0	0	56	0	0	13	0	0	11
Total Hourly Volume [veh/h]	59	288	76	56	400	166	172	548	37	94	480	32
Peak Hour Factor	0.9580	0.9580	0.9580	0.8830	0.8830	0.8830	0.8650	0.8650	0.8650	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	75	20	16	113	47	50	158	11	29	146	10
Total Analysis Volume [veh/h]	62	301	79	63	453	188	199	634	43	114	585	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	36	29	29	36	29	29	26	17	17	26	17	17
g / C, Green / Cycle	0.52	0.41	0.41	0.52	0.41	0.41	0.37	0.24	0.24	0.37	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.12	0.06	0.20	0.20	0.21	0.20	0.20	0.12	0.19	0.19
s, saturation flow rate [veh/h]	847	1683	1565	1011	1683	1518	960	1683	1646	926	1683	1646
c, Capacity [veh/h]	471	687	639	589	687	620	385	410	401	366	404	395
d1, Uniform Delay [s]	9.51	13.87	13.91	8.82	15.30	15.33	17.22	25.13	25.14	16.39	24.86	24.87
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.12	1.04	1.15	0.37	2.47	2.78	1.08	4.52	4.62	0.48	3.30	3.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.13	0.28	0.29	0.11	0.49	0.49	0.52	0.83	0.83	0.31	0.78	0.78
d, Delay for Lane Group [s/veh]	9.64	14.90	15.05	9.18	17.77	18.11	18.30	29.65	29.75	16.87	28.16	28.26
Lane Group LOS	A	B	B	A	B	B	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.44	2.09	2.01	0.46	3.89	3.59	2.15	5.41	5.30	1.15	4.81	4.72
50th-Percentile Queue Length [ft/ln]	10.88	52.32	50.21	11.40	97.16	89.68	53.72	135.19	132.51	28.68	120.31	118.10
95th-Percentile Queue Length [veh/ln]	0.78	3.77	3.62	0.82	7.00	6.46	3.87	9.22	9.08	2.07	8.41	8.29
95th-Percentile Queue Length [ft/ln]	19.58	94.18	90.38	20.52	174.89	161.42	96.70	230.53	226.90	51.63	210.25	207.21

Movement, Approach, & Intersection Results

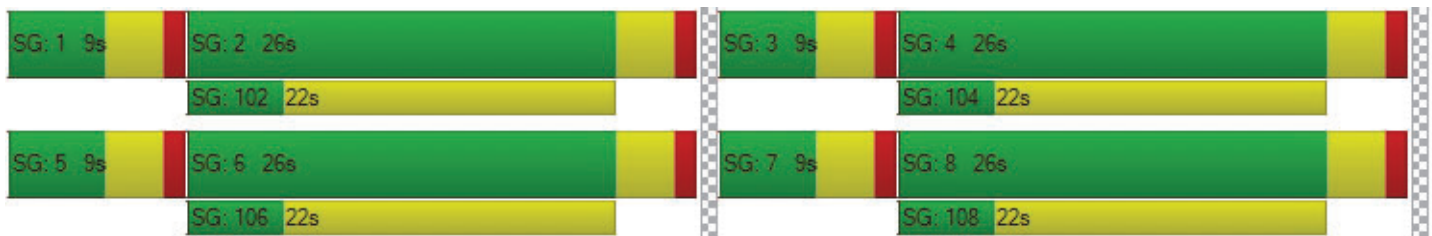
d_M, Delay for Movement [s/veh]	9.64	14.96	15.05	9.18	17.86	18.11	18.30	29.70	29.75	16.87	28.21	28.26
Movement LOS	A	B	B	A	B	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	14.23			17.15			27.11			26.46		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	22.33											
Intersection LOS	C											
Intersection V/C	0.585											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
I_p,int, Pedestrian LOS Score for Intersection	2.582	2.785	2.809	2.747
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	629	629	629
d_b, Bicycle Delay [s]	16.46	16.46	16.46	16.46
I_b,int, Bicycle LOS Score for Intersection	1.946	2.187	2.293	2.178
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.280

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	38	404	0	0	524	30	13	0	33	52	13	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	8	0	0	8	0	0	7
Total Hourly Volume [veh/h]	38	406	0	0	526	22	13	0	25	52	13	19
Peak Hour Factor	0.8730	0.8730	1.0000	1.0000	0.9380	0.9380	0.6390	1.0000	0.6390	0.6500	0.6500	0.6500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	116	0	0	140	6	5	0	10	20	5	7
Total Analysis Volume [veh/h]	44	465	0	0	561	23	20	0	39	80	20	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	9	28	0	0	19	0	29	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	17	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	55	48	48	4	4	9	9	9
g / C, Green / Cycle	0.69	0.69	0.60	0.60	0.05	0.05	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.17	0.18	0.01	0.03	0.03	0.03	0.02
s, saturation flow rate [veh/h]	828	3204	1683	1660	1603	1431	1603	1634	1431
c, Capacity [veh/h]	626	2195	1003	989	75	67	190	193	169
d1, Uniform Delay [s]	4.47	4.64	7.90	7.93	36.81	37.37	32.09	32.08	31.74
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.22	0.74	0.76	1.88	7.84	0.73	0.70	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.21	0.29	0.30	0.27	0.58	0.26	0.26	0.17
d, Delay for Lane Group [s/veh]	4.52	4.86	8.64	8.69	38.69	45.21	32.82	32.78	32.21
Lane Group LOS	A	A	A	A	D	D	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.19	1.18	2.19	2.20	0.41	0.88	0.90	0.90	0.52
50th-Percentile Queue Length [ft/ln]	4.84	29.56	54.81	55.05	10.25	21.99	22.42	22.60	12.93
95th-Percentile Queue Length [veh/ln]	0.35	2.13	3.95	3.96	0.74	1.58	1.61	1.63	0.93
95th-Percentile Queue Length [ft/ln]	8.72	53.20	98.65	99.10	18.45	39.58	40.36	40.67	23.27

Movement, Approach, & Intersection Results

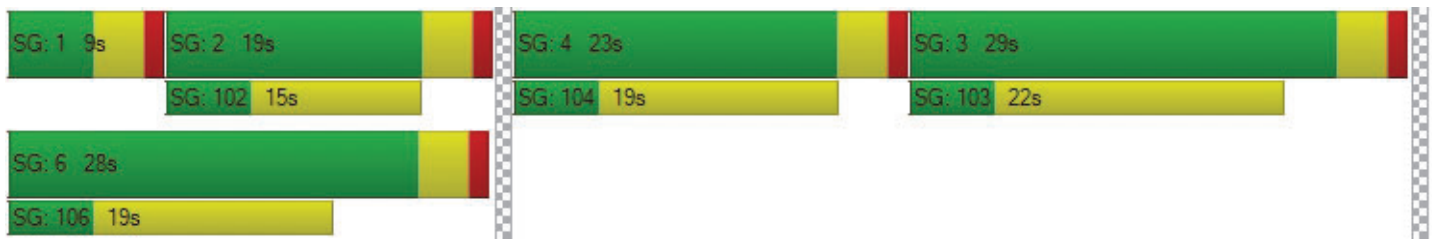
d_M, Delay for Movement [s/veh]	4.52	4.86	0.00	0.00	8.66	8.69	38.69	0.00	45.21	32.80	32.78	32.21
Movement LOS	A	A			A	A	D		D	C	C	C
d_A, Approach Delay [s/veh]	4.83				8.66		43.00		32.67			
Approach LOS	A				A		D		C			
d_I, Intersection Delay [s/veh]	11.14											
Intersection LOS	B											
Intersection V/C	0.280											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0		9.0		9.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	31.51		31.51		31.51		31.51	
l_p,int, Pedestrian LOS Score for Intersection	2.529		2.500		2.039		2.170	
Crosswalk LOS	B		B		B		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	600		375		625		475	
d_b, Bicycle Delay [s]	19.60		26.41		18.91		23.26	
l_b,int, Bicycle LOS Score for Intersection	1.980		2.048		1.560		1.784	
Bicycle LOS	A		B		A		A	

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	40.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.798

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	79	469	180	64	355	145	194	506	81	130	893	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	1	1	0	1	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	45	0	0	36	0	0	20	0	0	32
Total Hourly Volume [veh/h]	79	470	135	65	356	109	195	506	61	130	893	94
Peak Hour Factor	0.8540	0.8540	0.8540	0.8210	0.8210	0.8210	0.9310	0.9310	0.9310	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	138	40	20	108	33	52	136	16	38	262	28
Total Analysis Volume [veh/h]	93	550	158	79	434	133	209	544	66	152	1047	110
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	30	0	18	33	0	20	36	0	26	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	34	34	7	33	33	16	41	41	12	38	38
g / C, Green / Cycle	0.07	0.31	0.31	0.06	0.30	0.30	0.15	0.37	0.37	0.11	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.06	0.22	0.22	0.05	0.17	0.18	0.13	0.17	0.05	0.09	0.33	0.08
s, saturation flow rate [veh/h]	1603	1683	1556	1603	1683	1550	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	115	513	474	101	497	458	233	1197	534	182	1095	489
d1, Uniform Delay [s]	50.29	34.03	34.06	50.79	33.07	33.13	46.19	26.01	22.64	47.74	35.42	25.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.30	8.35	9.06	12.33	5.09	5.63	11.57	0.27	0.10	9.57	5.99	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.72	0.72	0.78	0.59	0.60	0.90	0.45	0.12	0.83	0.96	0.23
d, Delay for Lane Group [s/veh]	62.59	42.38	43.11	63.12	38.15	38.76	57.76	26.28	22.74	57.32	41.41	26.06
Lane Group LOS	E	D	D	E	D	D	E	C	C	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.87	9.60	8.99	2.45	7.17	6.74	6.22	5.21	1.11	4.48	13.96	2.03
50th-Percentile Queue Length [ft/ln]	71.63	239.96	224.72	61.24	179.37	168.53	155.56	130.37	27.68	111.91	348.98	50.78
95th-Percentile Queue Length [veh/ln]	5.16	14.68	13.91	4.41	11.57	11.00	10.31	8.96	1.99	7.95	20.09	3.66
95th-Percentile Queue Length [ft/ln]	128.94	366.98	347.64	110.23	289.20	274.99	257.84	224.00	49.82	198.66	502.16	91.40

Movement, Approach, & Intersection Results

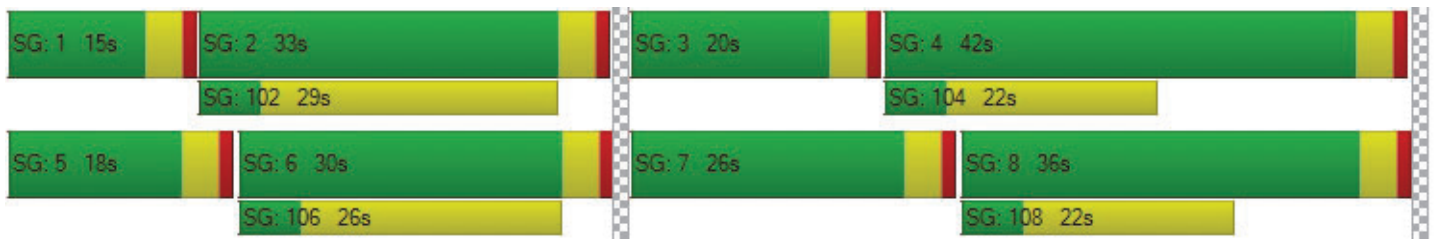
d_M, Delay for Movement [s/veh]	62.59	42.63	43.11	63.12	38.35	38.76	57.76	26.28	22.74	57.32	41.41	26.06
Movement LOS	E	D	D	E	D	D	E	C	C	E	D	C
d_A, Approach Delay [s/veh]	45.04			41.46			34.02			41.96		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	40.74											
Intersection LOS	D											
Intersection V/C	0.798											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	46.37			46.37			46.37			46.37		
I_p,int, Pedestrian LOS Score for Intersection	2.770			2.774			3.032			2.979		
Crosswalk LOS	C			C			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	473			527			582			691		
d_b, Bicycle Delay [s]	32.07			29.82			27.65			23.56		
I_b,int, Bicycle LOS Score for Intersection	2.258			2.122			2.252			2.666		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 8: Moore St/Project Dwy 1**

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name	Project Dwy 1		Moore St		Westbound	
Approach	Southbound		Eastbound			
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy 1		Moore St		Westbound	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	0	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	0	0	0	0
Total Analysis Volume [veh/h]	22	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.60	8.40	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.65	1.65	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.60		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.60					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Shoemaker Ave/Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	20.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇐		⇐		⇐	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Base Volume Input [veh/h]	0	494	649	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	6	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	494	649	6	5	0
Peak Hour Factor	1.0000	0.9580	0.8830	1.0000	1.0000	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	129	184	2	1	0
Total Analysis Volume [veh/h]	6	516	735	6	5	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	9.18	0.00	0.00	0.00	20.65	11.08
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.25	0.13	0.00	0.00	1.63	1.63
d_A, Approach Delay [s/veh]	0.11		0.00		20.65	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 10: Shoemaker Ave/Project Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	49.21	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Base Volume Input [veh/h]	0	494	649	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	6	0	0	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	500	649	0	0	7
Peak Hour Factor	1.0000	0.9580	0.8830	1.0000	1.0000	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	130	184	0	0	2
Total Analysis Volume [veh/h]	2	522	735	0	0	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	9.16	0.00	0.00	0.00	20.13	10.79
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.08	0.04	0.00	0.00	0.96	0.96
d_A, Approach Delay [s/veh]	0.03		0.00		10.79	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	B					

HCM

Vistro File: C:\...\Vistro HCM.vistro

Scenario 7 OP + P AM

Report File: C:\...\IOP + P AM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.713	33.0	C
2	Bloomfield Ave/166th St	Signalized	HCM 7th Edition	NB Thru	0.722	25.9	C
3	Bloomfield Ave/Artesia Blvd	Signalized	HCM 7th Edition	EB Left	0.758	38.4	D
4	Shoemaker Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.580	29.7	C
5	Shoemaker Ave/166th St	Signalized	HCM 7th Edition	WB Right	0.648	21.7	C
6	Shoemaker Ave/Oak Crest St	Signalized	HCM 7th Edition	EB Left	0.539	23.0	C
7	Shoemaker Ave/Artesia Blvd	Signalized	HCM 7th Edition	NB Left	0.870	45.7	D
8	Moore St/Project Dwy 1	Two-way stop	HCM 7th Edition	SB Left	0.007	8.5	A
9	Shoemaker Ave/Project Dwy 2	Two-way stop	HCM 7th Edition	EB Left	0.004	21.1	C
10	Shoemaker Ave/Project Dwy 3	Two-way stop	HCM 7th Edition	EB Right	0.003	10.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.713

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	96	650	210	102	597	145	130	562	94	178	540	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	0	2	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	54	0	0	37	0	0	24	0	0	13
Total Hourly Volume [veh/h]	96	653	160	102	600	109	131	567	70	179	543	37
Peak Hour Factor	0.9830	0.9830	0.9830	0.7890	0.7890	0.7890	0.9280	0.9280	0.9280	0.7720	0.7720	0.7720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	166	41	32	190	35	35	153	19	58	176	12
Total Analysis Volume [veh/h]	98	664	163	129	760	138	141	611	75	232	703	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	12	31	0	14	30	0	18	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	32	32	8	33	33	9	20	20	14	24	24
g / C, Green / Cycle	0.08	0.36	0.36	0.09	0.37	0.37	0.11	0.22	0.22	0.16	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.21	0.11	0.08	0.24	0.10	0.09	0.19	0.05	0.14	0.22	0.03
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	121	1144	511	142	1187	530	169	707	316	249	867	387
d1, Uniform Delay [s]	40.97	23.46	20.99	40.63	23.37	19.73	39.47	33.77	28.84	37.52	30.67	24.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.05	2.15	1.64	18.28	2.65	1.19	10.09	3.32	0.38	14.32	1.88	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.58	0.32	0.91	0.64	0.26	0.83	0.86	0.24	0.93	0.81	0.12
d, Delay for Lane Group [s/veh]	53.02	25.61	22.63	58.91	26.02	20.92	49.56	37.09	29.23	51.84	32.55	24.92
Lane Group LOS	D	C	C	E	C	C	D	D	C	D	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.52	5.85	2.65	3.45	6.60	2.06	3.42	6.43	1.31	5.81	6.94	0.76
50th-Percentile Queue Length [ft/ln]	62.91	146.35	66.36	86.27	165.00	51.62	85.39	160.75	32.84	145.33	173.61	18.91
95th-Percentile Queue Length [veh/ln]	4.53	9.82	4.78	6.21	10.81	3.72	6.15	10.59	2.36	9.77	11.27	1.36
95th-Percentile Queue Length [ft/ln]	113.24	245.55	119.45	155.28	270.34	92.92	153.71	264.72	59.11	244.18	281.66	34.03

Movement, Approach, & Intersection Results

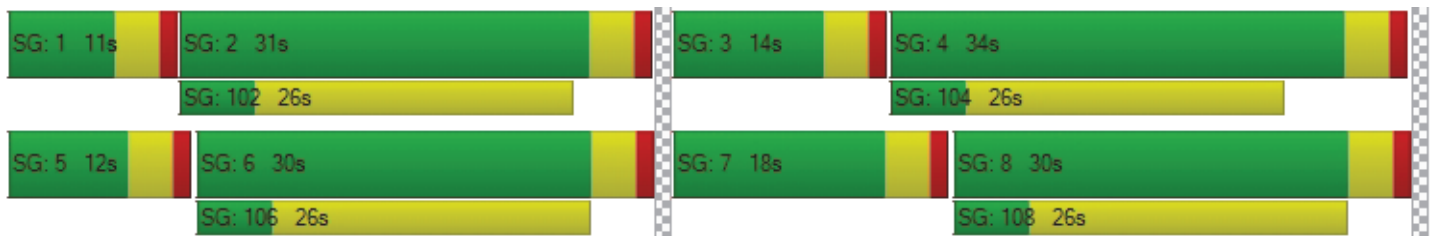
d_M, Delay for Movement [s/veh]	53.02	25.61	22.63	58.91	26.02	20.92	49.56	37.09	29.23	51.84	32.55	24.92
Movement LOS	D	C	C	E	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	27.99			29.47			38.50			36.73		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.99											
Intersection LOS	C											
Intersection V/C	0.713											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.868	2.925	2.884	2.896
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	600	578	667
d_b, Bicycle Delay [s]	22.76	22.05	22.76	20.00
I_b,int, Bicycle LOS Score for Intersection	2.367	2.437	2.262	2.381
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	25.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.722

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	60	870	413	97	718	107	104	420	57	217	401	84
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	15	0	0	0	0	1	0	4	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	108	0	0	27	0	0	14	0	0	22
Total Hourly Volume [veh/h]	60	874	322	97	721	81	104	423	43	222	403	65
Peak Hour Factor	0.8920	0.8920	0.8920	0.8610	0.8610	0.8610	0.8920	0.8920	0.8920	0.7690	0.7690	0.7690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	245	90	28	209	24	29	119	12	72	131	21
Total Analysis Volume [veh/h]	67	980	361	113	837	94	117	474	48	289	524	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	34	0	11	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	24	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	39	30	30	39	31	31	33	22	22	33	24	24
g / C, Green / Cycle	0.49	0.38	0.38	0.49	0.39	0.39	0.41	0.27	0.27	0.41	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.10	0.31	0.25	0.20	0.28	0.28	0.13	0.16	0.16	0.29	0.19	0.19
s, saturation flow rate [veh/h]	700	3204	1431	579	1683	1624	916	1683	1629	1014	1683	1602
c, Capacity [veh/h]	340	1218	544	311	658	635	393	460	445	442	502	478
d1, Uniform Delay [s]	13.62	22.14	20.56	15.74	20.66	20.67	16.12	25.06	25.08	19.41	24.17	24.17
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.24	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.28	5.71	6.28	3.27	6.70	6.93	0.42	1.14	1.19	3.63	1.26	1.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.20	0.80	0.66	0.36	0.72	0.72	0.30	0.58	0.58	0.65	0.62	0.62
d, Delay for Lane Group [s/veh]	13.90	27.85	26.84	19.01	27.36	27.60	16.54	26.20	26.27	23.04	25.43	25.50
Lane Group LOS	B	C	C	B	C	C	B	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.62	8.66	6.21	1.26	7.96	7.72	1.28	4.17	4.06	4.04	5.04	4.81
50th-Percentile Queue Length [ft/ln]	15.48	216.46	155.25	31.45	198.92	193.03	31.89	104.16	101.42	101.02	125.95	120.15
95th-Percentile Queue Length [veh/ln]	1.11	13.48	10.30	2.26	12.58	12.28	2.30	7.50	7.30	7.27	8.72	8.40
95th-Percentile Queue Length [ft/ln]	27.87	337.10	257.42	56.61	314.57	306.96	57.39	187.49	182.56	181.83	217.98	210.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.90	27.85	26.84	19.01	27.46	27.60	16.54	26.23	26.27	23.04	25.46	25.50
Movement LOS	B	C	C	B	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	26.93			26.56			24.46			24.68		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.93											
Intersection LOS	C											
Intersection V/C	0.722											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	3.243	2.979	2.710	2.777
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	550	550	750	800
d_b, Bicycle Delay [s]	21.03	21.03	15.63	14.40
I_b,int, Bicycle LOS Score for Intersection	2.810	2.443	2.098	2.319
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	38.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	141	504	106	264	612	111	76	363	104	266	674	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	2	8	1	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	27	0	0	29	0	0	26	0	0	35
Total Hourly Volume [veh/h]	142	506	80	265	615	85	84	366	78	267	677	106
Peak Hour Factor	0.7270	0.7270	0.7270	0.8890	0.8890	0.8890	0.8760	0.8760	0.8760	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	174	28	75	173	24	24	104	22	76	194	30
Total Analysis Volume [veh/h]	195	696	110	298	692	96	96	418	89	305	775	121
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	32	0	14	30	0	11	30	0	14	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	31	31	10	29	29	7	23	23	10	27	27
g / C, Green / Cycle	0.13	0.34	0.34	0.11	0.32	0.32	0.07	0.26	0.26	0.11	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.12	0.25	0.25	0.10	0.16	0.17	0.06	0.13	0.06	0.10	0.27	0.27
s, saturation flow rate [veh/h]	1603	1683	1604	3113	3204	1580	1603	3204	1431	3113	1683	1605
c, Capacity [veh/h]	214	570	543	346	1014	500	119	837	374	346	502	478
d1, Uniform Delay [s]	38.48	26.07	26.07	39.32	25.16	25.18	41.02	28.24	26.19	39.42	30.46	30.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.32	0.32
l, Upstream Filtering 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
d2, Incremental Delay [s]	13.99	7.79	8.15	6.35	1.90	3.86	11.97	0.46	0.32	7.37	16.70	17.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.91	0.72	0.72	0.86	0.52	0.52	0.81	0.50	0.24	0.88	0.91	0.92
d, Delay for Lane Group [s/veh]	52.48	33.86	34.22	45.67	27.06	29.04	52.99	28.70	26.51	46.79	47.16	48.16
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.90	8.44	8.09	3.42	4.60	4.83	2.42	3.70	1.47	3.62	11.57	11.19
50th-Percentile Queue Length [ft/ln]	122.50	210.91	202.37	85.42	114.95	120.68	60.47	92.39	36.79	90.59	289.15	279.71
95th-Percentile Queue Length [veh/ln]	8.53	13.20	12.76	6.15	8.11	8.43	4.35	6.65	2.65	6.52	17.14	16.67
95th-Percentile Queue Length [ft/ln]	213.26	330.00	319.02	153.76	202.86	210.76	108.85	166.29	66.23	163.06	428.59	416.85

Movement, Approach, & Intersection Results

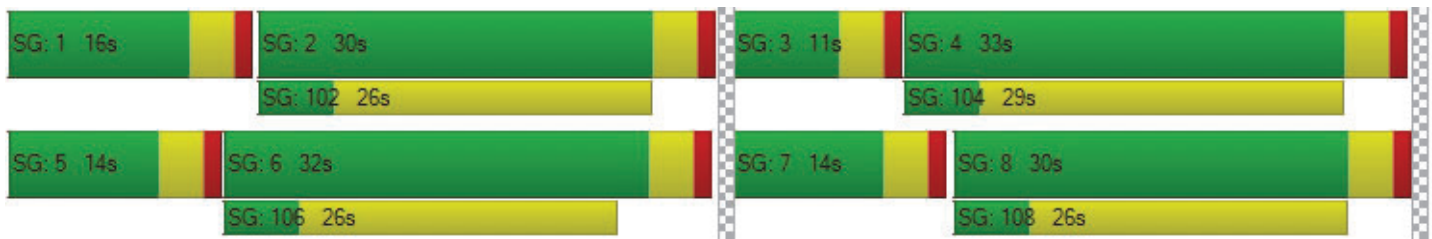
d_M, Delay for Movement [s/veh]	52.48	34.01	34.22	45.67	27.53	29.04	52.99	28.70	26.51	46.79	47.57	48.16
Movement LOS	D	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	37.63			32.64			32.25			47.43		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	38.43											
Intersection LOS	D											
Intersection V/C	0.758											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.956	3.020	2.865	2.844
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	622	578	578	644
d_b, Bicycle Delay [s]	21.36	22.76	22.76	20.67
I_b,int, Bicycle LOS Score for Intersection	2.408	2.173	2.079	2.579
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	60	275	97	44	287	106	112	605	114	143	728	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	0	1	0	0	3	2	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	25	0	0	27	0	0	29	0	0	28
Total Hourly Volume [veh/h]	60	276	73	44	289	80	113	611	88	155	731	82
Peak Hour Factor	0.7100	0.7100	0.7100	0.9120	0.9120	0.9120	0.8890	0.8890	0.8890	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	97	26	12	79	22	32	172	25	42	197	22
Total Analysis Volume [veh/h]	85	389	103	48	317	88	127	687	99	167	787	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	30	0	10	30	0	12	26	0	14	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	31	31	3	29	29	8	20	20	10	22	22
g / C, Green / Cycle	0.07	0.39	0.39	0.04	0.36	0.36	0.10	0.25	0.25	0.12	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.15	0.03	0.12	0.13	0.08	0.21	0.07	0.10	0.25	0.06
s, saturation flow rate [veh/h]	1603	1683	1564	1603	1683	1560	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	106	652	606	67	612	568	155	790	353	198	877	391
d1, Uniform Delay [s]	36.86	17.66	17.70	37.84	18.47	18.53	35.45	28.91	24.40	34.28	27.98	22.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	13.23	1.74	1.91	12.97	1.51	1.68	10.12	3.12	0.43	9.21	3.60	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.39	0.39	0.71	0.34	0.35	0.82	0.87	0.28	0.84	0.90	0.22
d, Delay for Lane Group [s/veh]	50.09	19.40	19.61	50.81	19.98	20.20	45.57	32.03	24.83	43.49	31.58	22.78
Lane Group LOS	D	B	B	D	B	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.99	3.51	3.33	1.13	2.82	2.70	2.81	6.40	1.52	3.52	7.12	1.23
50th-Percentile Queue Length [ft/ln]	49.82	87.84	83.36	28.29	70.46	67.43	70.17	160.10	37.91	87.88	177.97	30.80
95th-Percentile Queue Length [veh/ln]	3.59	6.32	6.00	2.04	5.07	4.86	5.05	10.55	2.73	6.33	11.49	2.22
95th-Percentile Queue Length [ft/ln]	89.67	158.11	150.06	50.93	126.83	121.38	126.31	263.85	68.25	158.19	287.36	55.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.09	19.48	19.61	50.81	20.06	20.20	45.57	32.03	24.83	43.49	31.58	22.78
Movement LOS	D	B	B	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	24.01			23.34			33.13			32.74		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.75											
Intersection LOS	C											
Intersection V/C	0.580											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	2.568	2.623	2.803	2.907
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	650	650	550	600
d_b, Bicycle Delay [s]	18.23	18.23	21.03	19.60
I_b,int, Bicycle LOS Score for Intersection	2.056	1.956	2.337	2.442
Bicycle LOS	B	A	B	B

Sequence





Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.648

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	117	381	139	43	247	125	211	546	67	123	517	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	2	7	16	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	35	0	0	33	0	0	17	0	0	16
Total Hourly Volume [veh/h]	118	387	105	43	250	100	228	549	50	124	519	47
Peak Hour Factor	0.8290	0.8290	0.8290	0.6900	0.6900	0.6900	0.8670	0.8670	0.8670	0.7430	0.7430	0.7430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	117	32	16	91	36	66	158	14	42	175	16
Total Analysis Volume [veh/h]	142	467	127	62	362	145	263	633	58	167	699	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	23	23	31	22	22	31	22	22	31	22	22
g / C, Green / Cycle	0.44	0.33	0.33	0.44	0.31	0.31	0.44	0.31	0.31	0.44	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.14	0.18	0.18	0.07	0.16	0.16	0.31	0.21	0.21	0.19	0.23	0.23
s, saturation flow rate [veh/h]	984	1683	1561	899	1683	1523	853	1683	1634	886	1683	1635
c, Capacity [veh/h]	482	560	520	433	529	479	397	529	513	420	529	514
d1, Uniform Delay [s]	12.61	19.05	19.07	12.20	19.52	19.58	16.59	20.79	20.79	13.62	21.36	21.36
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.25	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.34	3.83	4.17	0.69	3.34	3.81	4.22	1.43	1.47	0.61	2.00	2.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.29	0.55	0.55	0.14	0.50	0.51	0.66	0.66	0.66	0.40	0.73	0.73
d, Delay for Lane Group [s/veh]	12.95	22.89	23.24	12.89	22.86	23.39	20.82	22.22	22.26	14.23	23.36	23.42
Lane Group LOS	B	C	C	B	C	C	C	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.28	4.38	4.13	0.57	3.62	3.40	2.82	4.64	4.51	1.47	5.31	5.17
50th-Percentile Queue Length [ft/ln]	32.09	109.55	103.27	14.17	90.56	84.89	70.62	115.93	112.70	36.72	132.74	129.14
95th-Percentile Queue Length [veh/ln]	2.31	7.82	7.44	1.02	6.52	6.11	5.08	8.17	7.99	2.64	9.09	8.89
95th-Percentile Queue Length [ft/ln]	57.76	195.38	185.88	25.51	163.00	152.81	127.11	204.22	199.75	66.09	227.21	222.32

Movement, Approach, & Intersection Results

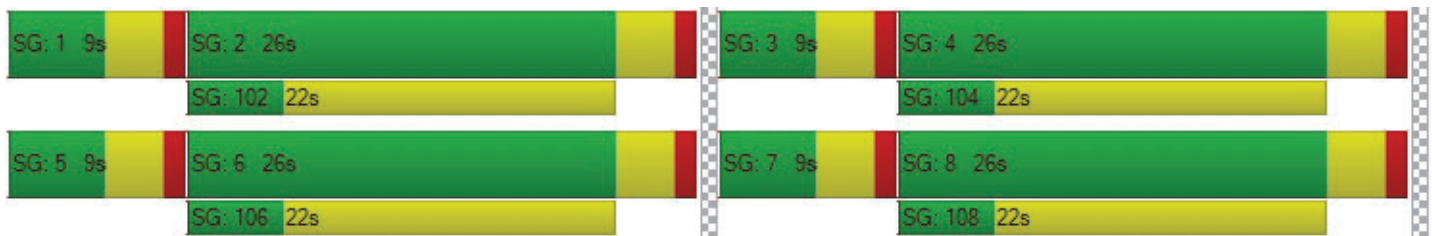
d_M, Delay for Movement [s/veh]	12.95	23.01	23.24	12.89	23.01	23.39	20.82	22.24	22.26	14.23	23.39	23.42
Movement LOS	B	C	C	B	C	C	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	21.11			22.00			21.85			21.75		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.67											
Intersection LOS	C											
Intersection V/C	0.648											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
I_p,int, Pedestrian LOS Score for Intersection	2.688	2.831	2.900	2.812
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	629	629	629
d_b, Bicycle Delay [s]	16.46	16.46	16.46	16.46
I_b,int, Bicycle LOS Score for Intersection	2.196	2.056	2.361	2.339
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	23.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	88	487	0	0	361	90	90	0	94	285	6	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	23	0	0	24	0	0	16
Total Hourly Volume [veh/h]	88	493	0	0	365	67	90	0	70	286	6	46
Peak Hour Factor	0.9330	0.9330	1.0000	1.0000	0.6750	0.6750	0.6700	1.0000	0.6700	0.5830	0.5830	0.5830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	132	0	0	135	25	34	0	26	123	3	20
Total Analysis Volume [veh/h]	94	528	0	0	541	99	134	0	104	491	10	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	9	28	0	0	19	0	29	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	17	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	44	44	36	36	9	9	15	15	15
g / C, Green / Cycle	0.55	0.55	0.45	0.45	0.11	0.11	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.11	0.16	0.19	0.20	0.08	0.07	0.16	0.16	0.06
s, saturation flow rate [veh/h]	840	3204	1683	1596	1603	1431	1603	1606	1431
c, Capacity [veh/h]	483	1764	750	711	182	163	297	298	266
d1, Uniform Delay [s]	9.68	9.67	15.18	15.38	34.28	33.87	31.44	31.44	28.08
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.44	1.77	2.05	5.63	4.11	6.36	6.35	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.19	0.30	0.43	0.45	0.73	0.64	0.84	0.84	0.30
d, Delay for Lane Group [s/veh]	9.88	10.11	16.96	17.43	39.90	37.99	37.80	37.79	28.70
Lane Group LOS	A	B	B	B	D	D	D	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.73	2.34	3.91	3.99	2.75	2.07	5.04	5.05	1.32
50th-Percentile Queue Length [ft/ln]	18.32	58.60	97.70	99.76	68.65	51.84	125.97	126.17	32.95
95th-Percentile Queue Length [veh/ln]	1.32	4.22	7.03	7.18	4.94	3.73	8.72	8.73	2.37
95th-Percentile Queue Length [ft/ln]	32.98	105.48	175.87	179.56	123.57	93.31	218.00	218.28	59.31

Movement, Approach, & Intersection Results

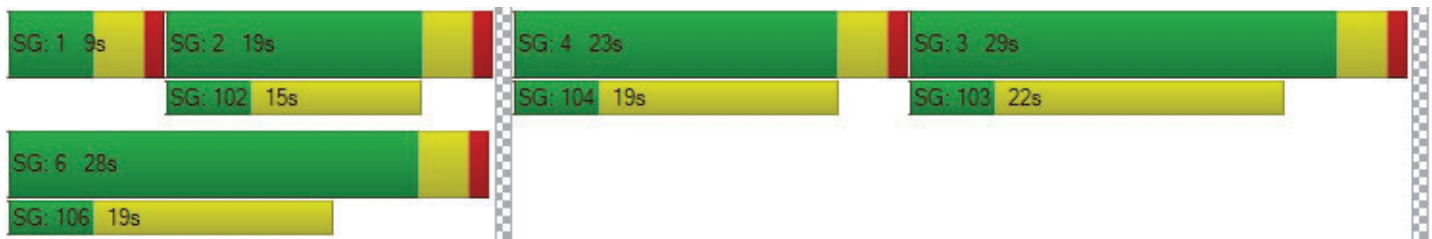
d_M, Delay for Movement [s/veh]	9.88	10.11	0.00	0.00	17.15	17.43	39.90	0.00	37.99	37.79	37.79	28.70
Movement LOS	A	B			B	B	D		D	D	D	C
d_A, Approach Delay [s/veh]	10.07				17.19		39.07		36.56			
Approach LOS	B				B		D		D			
d_I, Intersection Delay [s/veh]	22.97											
Intersection LOS	C											
Intersection V/C	0.539											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0		9.0		9.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	31.51		31.51		31.51		31.51	
l_p,int, Pedestrian LOS Score for Intersection	2.643		2.621		2.192		2.295	
Crosswalk LOS	B		B		B		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	600		375		625		475	
d_b, Bicycle Delay [s]	19.60		26.41		18.91		23.26	
l_b,int, Bicycle LOS Score for Intersection	2.073		2.107		1.560		2.543	
Bicycle LOS	B		B		A		B	

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	45.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.870

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
	Base Volume Input [veh/h]	44	563	156	96	474	266	260	506	59	144	916
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	2	0	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	39	0	0	67	0	0	15	0	0	40
Total Hourly Volume [veh/h]	44	568	118	96	478	200	262	508	44	145	920	120
Peak Hour Factor	0.9500	0.9500	0.9500	0.8640	0.8640	0.8640	0.9560	0.9560	0.9560	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	149	31	28	138	58	69	133	12	41	258	34
Total Analysis Volume [veh/h]	46	598	124	111	553	231	274	531	46	162	1030	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	12	33	0	22	41	0	17	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	26	26	8	30	30	18	38	38	12	32	32
g / C, Green / Cycle	0.04	0.26	0.26	0.08	0.30	0.30	0.18	0.38	0.38	0.12	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.22	0.07	0.24	0.25	0.17	0.17	0.03	0.10	0.32	0.09
s, saturation flow rate [veh/h]	1603	1683	1584	1603	1683	1517	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	61	438	412	128	509	458	289	1220	545	191	1025	458
d1, Uniform Delay [s]	47.66	35.13	35.16	45.47	32.25	32.25	40.55	22.98	19.81	43.15	34.00	25.51
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.13	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	17.42	18.22	19.38	15.55	13.13	14.42	17.79	0.25	0.07	9.90	14.14	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.76	0.85	0.85	0.87	0.81	0.81	0.95	0.44	0.08	0.85	1.00	0.29
d, Delay for Lane Group [s/veh]	65.08	53.36	54.54	61.01	45.37	46.67	58.34	23.23	19.88	53.05	48.14	25.86
Lane Group LOS	E	D	D	E	D	D	E	C	B	D	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.40	10.42	9.97	3.20	10.60	9.73	7.85	4.45	0.67	4.34	13.74	2.34
50th-Percentile Queue Length [ft/ln]	35.05	260.56	249.20	80.08	265.05	243.14	196.26	111.20	16.70	108.40	343.47	58.60
95th-Percentile Queue Length [veh/ln]	2.52	15.72	15.15	5.77	15.94	14.84	12.45	7.91	1.20	7.75	19.87	4.22
95th-Percentile Queue Length [ft/ln]	63.09	392.92	378.64	144.15	398.55	371.00	311.14	197.68	30.06	193.77	496.87	105.48

Movement, Approach, & Intersection Results

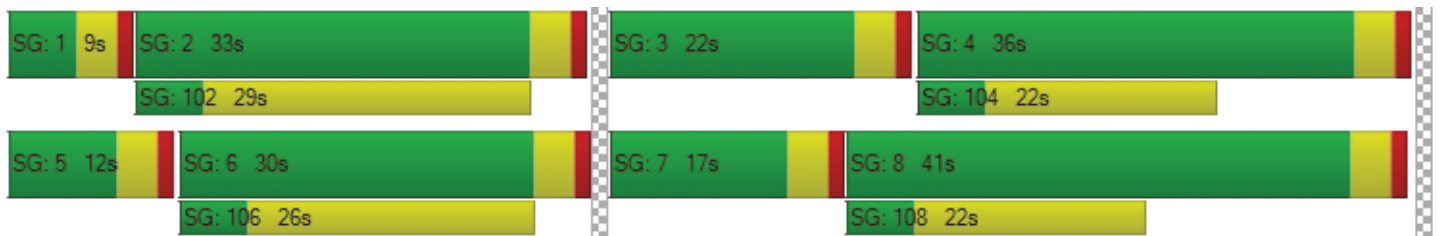
d_M, Delay for Movement [s/veh]	65.08	53.81	54.54	61.01	45.70	46.67	58.34	23.23	19.88	53.05	48.14	25.86
Movement LOS	E	D	D	E	D	D	E	C	B	D	F	C
d_A, Approach Delay [s/veh]	54.60			47.85			34.35			46.49		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	45.74											
Intersection LOS	D											
Intersection V/C	0.870											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.774	2.924	3.038	2.987
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	580	740	640
d_b, Bicycle Delay [s]	27.38	25.21	19.85	23.12
I_b,int, Bicycle LOS Score for Intersection	2.225	2.353	2.274	2.687
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 8: Moore St/Project Dwy 1**

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Project Dwy 1		Moore St		Westbound	
Approach	Southbound		Eastbound			
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy 1		Moore St		Westbound	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	0	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	0
Total Analysis Volume [veh/h]	7	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.54	8.34	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.52	0.52	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.54		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.54					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Shoemaker Ave/Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	21.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇐		⇐		⇐	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Base Volume Input [veh/h]	0	654	415	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	14	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	657	417	14	1	0
Peak Hour Factor	1.0000	0.8290	0.6900	1.0000	1.0000	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	198	151	4	0	0
Total Analysis Volume [veh/h]	13	793	604	14	1	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.77	0.00	0.00	0.00	21.14	10.31
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.02	0.01	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.55	0.27	0.00	0.00	0.34	0.34
d_A, Approach Delay [s/veh]	0.14		0.00		21.14	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 10: Shoemaker Ave/Project Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇐⇐		⇐⇐		⇐	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	49.21	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Base Volume Input [veh/h]	0	654	415	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	13	0	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	670	417	0	0	2
Peak Hour Factor	1.0000	0.8290	0.6900	1.0000	1.0000	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	202	151	0	0	1
Total Analysis Volume [veh/h]	8	808	604	0	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.72	0.00	0.00	0.00	20.74	10.20
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.33	0.17	0.00	0.00	0.22	0.22
d_A, Approach Delay [s/veh]	0.09		0.00		10.20	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	B					

HCM

Vistro File: C:\...\Vistro HCM.vistro

Scenario 8 OP + P PM

Report File: C:\...\IOP + P PM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.737	36.1	D
2	Bloomfield Ave/166th St	Signalized	HCM 7th Edition	WB Right	0.654	23.6	C
3	Bloomfield Ave/Artesia Blvd	Signalized	HCM 7th Edition	EB Left	0.771	40.4	D
4	Shoemaker Ave/Alondra Blvd	Signalized	HCM 7th Edition	SB Left	0.599	28.4	C
5	Shoemaker Ave/166th St	Signalized	HCM 7th Edition	EB Right	0.587	22.4	C
6	Shoemaker Ave/Oak Crest St	Signalized	HCM 7th Edition	EB Right	0.281	11.1	B
7	Shoemaker Ave/Artesia Blvd	Signalized	HCM 7th Edition	SB Left	0.802	41.0	D
8	Moore St/Project Dwy 1	Two-way stop	HCM 7th Edition	SB Left	0.021	8.6	A
9	Shoemaker Ave/Project Dwy 2	Two-way stop	HCM 7th Edition	EB Left	0.021	20.7	C
10	Shoemaker Ave/Project Dwy 3	Two-way stop	HCM 7th Edition	EB Right	0.013	10.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.737

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
	Base Volume Input [veh/h]	185	752	175	82	600	131	131	456	64	198	676
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	9	0	0	0	0	1	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	46	0	0	33	0	0	16	0	0	24
Total Hourly Volume [veh/h]	186	756	139	82	603	99	132	459	48	199	681	70
Peak Hour Factor	0.9440	0.9440	0.9440	0.9000	0.9000	0.9000	0.9420	0.9420	0.9420	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	200	37	23	168	28	35	122	13	57	195	20
Total Analysis Volume [veh/h]	197	801	147	91	670	110	140	487	51	228	782	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	31	0	17	30	0	15	30	0	22	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	39	39	7	32	32	10	22	22	16	27	27
g / C, Green / Cycle	0.14	0.39	0.39	0.07	0.32	0.32	0.10	0.22	0.22	0.16	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.12	0.25	0.10	0.06	0.21	0.08	0.09	0.15	0.04	0.14	0.24	0.06
s, saturation flow rate [veh/h]	1603	3204	1431	1603	3204	1431	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	224	1257	561	115	1039	464	166	690	308	257	871	389
d1, Uniform Delay [s]	42.17	24.61	20.58	45.66	28.86	24.73	44.00	36.30	31.92	41.10	35.06	28.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	10.50	2.48	1.13	11.35	3.08	1.20	10.75	1.34	0.25	9.94	3.62	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.88	0.64	0.26	0.79	0.64	0.24	0.84	0.71	0.17	0.89	0.90	0.21
d, Delay for Lane Group [s/veh]	52.67	27.09	21.71	57.01	31.95	25.93	54.75	37.63	32.17	51.03	38.68	28.33
Lane Group LOS	D	C	C	E	C	C	D	D	C	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.37	7.89	2.47	2.53	6.98	1.99	3.80	5.43	1.00	6.02	9.18	1.46
50th-Percentile Queue Length [ft/ln]	134.31	197.26	61.63	63.26	174.46	49.82	95.10	135.71	24.94	150.57	229.38	36.48
95th-Percentile Queue Length [veh/ln]	9.17	12.50	4.44	4.55	11.31	3.59	6.85	9.25	1.80	10.05	14.14	2.63
95th-Percentile Queue Length [ft/ln]	229.35	312.43	110.93	113.87	282.77	89.68	171.18	231.24	44.89	251.20	353.57	65.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.67	27.09	21.71	57.01	31.95	25.93	54.75	37.63	32.17	51.03	38.68	28.33
Movement LOS	D	C	C	E	C	C	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	30.80			33.81			40.76			40.51		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	36.07											
Intersection LOS	D											
Intersection V/C	0.737											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.875	2.929	2.876	2.902
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	540	520	520	660
d_b, Bicycle Delay [s]	26.65	27.38	27.38	22.45
I_b,int, Bicycle LOS Score for Intersection	2.542	2.305	2.132	2.479
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	155	829	237	89	651	201	89	403	80	235	601	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	7	0	0	0	0	0	0	16	1	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	61	0	0	51	0	0	20	0	0	36
Total Hourly Volume [veh/h]	156	833	184	89	654	151	89	405	60	252	605	106
Peak Hour Factor	0.9800	0.9800	0.9800	0.9690	0.9690	0.9690	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	213	47	23	169	39	23	103	15	64	154	27
Total Analysis Volume [veh/h]	159	850	188	92	675	156	91	413	61	257	617	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	35	0	10	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	24	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	41	33	33	41	32	32	31	21	21	31	22	22
g / C, Green / Cycle	0.52	0.41	0.41	0.52	0.40	0.40	0.38	0.26	0.26	0.38	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.21	0.27	0.13	0.14	0.26	0.26	0.11	0.14	0.14	0.25	0.22	0.22
s, saturation flow rate [veh/h]	765	3204	1431	661	1683	1575	851	1683	1609	1029	1683	1597
c, Capacity [veh/h]	406	1317	588	369	678	635	320	437	417	419	471	447
d1, Uniform Delay [s]	12.60	18.88	15.97	12.09	19.13	19.13	18.10	25.61	25.64	20.48	26.61	26.61
k, delay calibration	0.12	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.17	0.12	0.12
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.70	2.45	1.43	1.61	4.45	4.75	0.48	1.10	1.17	2.26	3.21	3.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.39	0.65	0.32	0.25	0.63	0.63	0.28	0.55	0.56	0.61	0.79	0.79
d, Delay for Lane Group [s/veh]	13.30	21.33	17.40	13.70	23.59	23.89	18.58	26.71	26.81	22.74	29.82	29.99
Lane Group LOS	B	C	B	B	C	C	B	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.47	6.35	2.44	0.89	6.56	6.19	1.04	3.83	3.70	3.57	6.68	6.36
50th-Percentile Queue Length [ft/ln]	36.75	158.69	61.04	22.25	163.95	154.78	26.02	95.78	92.56	89.19	167.10	159.06
95th-Percentile Queue Length [veh/ln]	2.65	10.48	4.39	1.60	10.76	10.27	1.87	6.90	6.66	6.42	10.92	10.50
95th-Percentile Queue Length [ft/ln]	66.14	261.99	109.87	40.05	268.94	256.80	46.83	172.41	166.61	160.54	273.10	262.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.30	21.33	17.40	13.70	23.70	23.89	18.58	26.75	26.81	22.74	29.89	29.99
Movement LOS	B	C	B	B	C	C	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.64			22.73			25.44			28.03		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	23.56											
Intersection LOS	C											
Intersection V/C	0.654											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	3.097	2.943	2.828	2.749
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	550	550	775	800
d_b, Bicycle Delay [s]	21.03	21.03	15.01	14.40
I_b,int, Bicycle LOS Score for Intersection	2.597	2.363	2.042	2.399
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	40.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.771

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	249	779	72	292	540	81	75	496	99	215	641	157
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	9	4	1	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	23	0	0	25	0	0	40
Total Hourly Volume [veh/h]	250	783	54	293	543	67	79	499	74	216	644	118
Peak Hour Factor	0.9610	0.9610	0.9610	0.8910	0.8910	0.8910	0.9220	0.9220	0.9220	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	204	14	82	152	19	21	135	20	61	183	33
Total Analysis Volume [veh/h]	260	815	56	329	609	75	86	541	80	245	730	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	33	0	15	30	0	9	30	0	12	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	32	32	11	29	29	5	23	23	8	26	26
g / C, Green / Cycle	0.16	0.36	0.36	0.12	0.32	0.32	0.06	0.26	0.26	0.09	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.26	0.11	0.14	0.14	0.05	0.17	0.06	0.08	0.26	0.26
s, saturation flow rate [veh/h]	1603	1683	1645	3113	3204	1591	1603	3204	1431	3113	1683	1593
c, Capacity [veh/h]	249	596	583	380	1028	510	89	824	368	277	489	463
d1, Uniform Delay [s]	38.00	25.42	25.43	38.77	24.21	24.23	42.41	29.89	26.31	40.55	30.77	30.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.30	0.30
l, Upstream Filtering 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
d2, Incremental Delay [s]	38.34	8.00	8.19	5.95	1.39	2.81	36.54	0.90	0.29	9.22	15.66	16.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	1.04	0.74	0.74	0.86	0.44	0.45	0.97	0.66	0.22	0.89	0.91	0.91
d, Delay for Lane Group [s/veh]	76.34	33.42	33.62	44.72	25.60	27.04	78.96	30.79	26.61	49.77	46.43	47.26
Lane Group LOS	F	C	C	D	C	C	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.90	8.95	8.78	3.74	3.82	4.02	2.75	5.07	1.32	3.00	11.09	10.62
50th-Percentile Queue Length [ft/ln]	197.59	223.72	219.62	93.43	95.55	100.43	68.66	126.73	33.08	74.99	277.22	265.39
95th-Percentile Queue Length [veh/ln]	12.75	13.85	13.65	6.73	6.88	7.23	4.94	8.76	2.38	5.40	16.55	15.96
95th-Percentile Queue Length [ft/ln]	318.78	346.37	341.14	168.17	171.99	180.77	123.58	219.05	59.54	134.97	413.75	398.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.34	33.51	33.62	44.72	25.96	27.04	78.96	30.79	26.61	49.77	46.76	47.26
Movement LOS	F	C	C	D	C	C	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	43.37			32.13			36.17			47.48		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	40.36											
Intersection LOS	D											
Intersection V/C	0.771											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.937	3.020	2.884	2.851
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	644	578	578	644
d_b, Bicycle Delay [s]	20.67	22.76	22.76	20.67
I_b,int, Bicycle LOS Score for Intersection	2.508	2.129	2.164	2.508
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	28.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.599

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	81	353	124	56	298	96	75	543	86	90	705	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	2	0	0	0	0	9	1	5	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	32	0	0	24	0	0	22	0	0	13
Total Hourly Volume [veh/h]	83	356	95	56	299	72	75	555	65	95	708	39
Peak Hour Factor	0.8700	0.8700	0.8700	0.8500	0.8500	0.8500	0.8750	0.8750	0.8750	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	102	27	16	88	21	21	159	19	29	216	12
Total Analysis Volume [veh/h]	95	409	109	66	352	85	86	634	74	116	862	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	30	0	10	30	0	10	26	0	14	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	31	31	4	29	29	5	22	22	7	24	24
g / C, Green / Cycle	0.07	0.38	0.38	0.05	0.36	0.36	0.07	0.27	0.27	0.09	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.06	0.16	0.16	0.04	0.13	0.14	0.05	0.20	0.05	0.07	0.27	0.03
s, saturation flow rate [veh/h]	1603	1683	1563	1603	1683	1572	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	118	645	599	83	609	568	107	878	392	146	956	427
d1, Uniform Delay [s]	36.51	18.10	18.14	37.49	18.81	18.85	36.81	26.27	22.23	35.64	26.95	20.39
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.18	1.96	2.15	15.29	1.72	1.88	12.89	1.14	0.23	9.44	3.48	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.41	0.42	0.79	0.37	0.37	0.80	0.72	0.19	0.80	0.90	0.11
d, Delay for Lane Group [s/veh]	48.69	20.07	20.29	52.78	20.52	20.74	49.70	27.41	22.46	45.08	30.43	20.50
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.19	3.78	3.58	1.58	3.09	2.96	2.01	5.37	1.06	2.49	7.69	0.62
50th-Percentile Queue Length [ft/ln]	54.66	94.62	89.58	39.38	77.36	74.10	50.16	134.23	26.45	62.34	192.27	15.57
95th-Percentile Queue Length [veh/ln]	3.94	6.81	6.45	2.84	5.57	5.34	3.61	9.17	1.90	4.49	12.24	1.12
95th-Percentile Queue Length [ft/ln]	98.38	170.31	161.24	70.89	139.25	133.39	90.29	229.24	47.61	112.21	305.97	28.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.69	20.14	20.29	52.78	20.60	20.74	49.70	27.41	22.46	45.08	30.43	20.50
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	24.59			24.85			29.37			31.62		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.38											
Intersection LOS	C											
Intersection V/C	0.599											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
I_p,int, Pedestrian LOS Score for Intersection	2.577	2.611	2.786	2.874
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	650	650	550	650
d_b, Bicycle Delay [s]	18.23	18.23	21.03	18.23
I_b,int, Bicycle LOS Score for Intersection	2.092	1.994	2.233	2.417
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	59	286	102	55	398	196	165	548	50	94	480	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	1	2	26	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	26	0	0	56	0	0	13	0	0	11
Total Hourly Volume [veh/h]	59	289	76	56	402	167	173	551	37	94	482	32
Peak Hour Factor	0.9580	0.9580	0.9580	0.8830	0.8830	0.8830	0.8650	0.8650	0.8650	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	75	20	16	114	47	50	159	11	29	147	10
Total Analysis Volume [veh/h]	62	302	79	63	455	189	200	637	43	114	587	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	36	29	29	36	29	29	26	17	17	26	17	17
g / C, Green / Cycle	0.52	0.41	0.41	0.52	0.41	0.41	0.37	0.24	0.24	0.37	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.12	0.06	0.20	0.20	0.21	0.20	0.20	0.12	0.19	0.19
s, saturation flow rate [veh/h]	846	1683	1565	1011	1683	1518	958	1683	1646	924	1683	1646
c, Capacity [veh/h]	469	685	638	587	686	619	385	411	402	366	406	397
d1, Uniform Delay [s]	9.55	13.91	13.95	8.85	15.36	15.39	17.20	25.11	25.11	16.37	24.83	24.84
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	0.13	1.04	1.16	0.37	2.51	2.82	1.09	4.53	4.63	0.48	3.29	3.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.13	0.29	0.29	0.11	0.49	0.50	0.52	0.84	0.84	0.31	0.78	0.78
d, Delay for Lane Group [s/veh]	9.68	14.95	15.11	9.22	17.87	18.21	18.29	29.63	29.74	16.85	28.12	28.21
Lane Group LOS	A	B	B	A	B	B	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.44	2.10	2.02	0.46	3.92	3.62	2.16	5.43	5.32	1.15	4.82	4.74
50th-Percentile Queue Length [ft/ln]	10.91	52.58	50.46	11.43	97.99	90.42	53.96	135.75	133.07	28.64	120.59	118.38
95th-Percentile Queue Length [veh/ln]	0.79	3.79	3.63	0.82	7.06	6.51	3.88	9.25	9.11	2.06	8.43	8.30
95th-Percentile Queue Length [ft/ln]	19.63	94.64	90.83	20.57	176.38	162.76	97.12	231.30	227.67	51.55	210.63	207.60

Movement, Approach, & Intersection Results

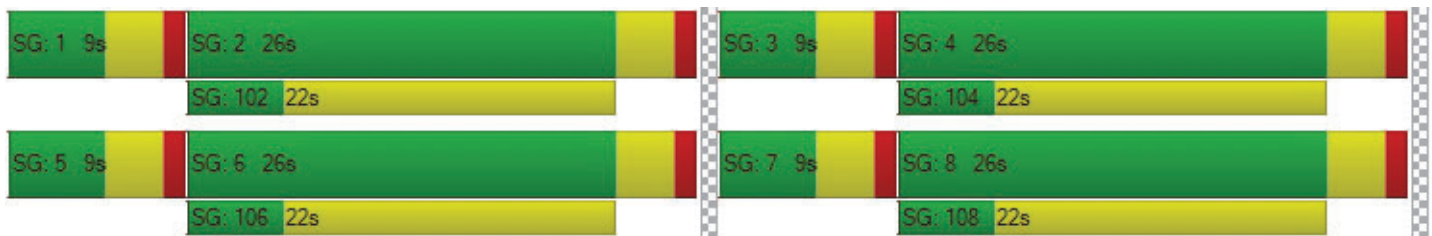
d_M, Delay for Movement [s/veh]	9.68	15.01	15.11	9.22	17.96	18.21	18.29	29.68	29.74	16.85	28.16	28.21
Movement LOS	A	B	B	A	B	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	14.28			17.25			27.10			26.42		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	22.35											
Intersection LOS	C											
Intersection V/C	0.587											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
I_p,int, Pedestrian LOS Score for Intersection	2.583	2.787	2.810	2.748
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	629	629	629
d_b, Bicycle Delay [s]	16.46	16.46	16.46	16.46
I_b,int, Bicycle LOS Score for Intersection	1.947	2.189	2.296	2.179
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.281

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	38	404	0	0	524	30	13	0	33	52	13	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	8	0	0	8	0	0	7
Total Hourly Volume [veh/h]	38	408	0	0	529	22	13	0	25	52	13	19
Peak Hour Factor	0.8730	0.8730	1.0000	1.0000	0.9380	0.9380	0.6390	1.0000	0.6390	0.6500	0.6500	0.6500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	117	0	0	141	6	5	0	10	20	5	7
Total Analysis Volume [veh/h]	44	467	0	0	564	23	20	0	39	80	20	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	9	28	0	0	19	0	29	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	17	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	55	48	48	4	4	9	9	9
g / C, Green / Cycle	0.69	0.69	0.60	0.60	0.05	0.05	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.17	0.18	0.01	0.03	0.03	0.03	0.02
s, saturation flow rate [veh/h]	826	3204	1683	1660	1603	1431	1603	1634	1431
c, Capacity [veh/h]	624	2195	1003	989	75	67	190	193	169
d1, Uniform Delay [s]	4.47	4.65	7.91	7.94	36.81	37.37	32.09	32.08	31.74
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.22	0.74	0.77	1.88	7.84	0.73	0.70	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.21	0.29	0.30	0.27	0.58	0.26	0.26	0.17
d, Delay for Lane Group [s/veh]	4.52	4.87	8.65	8.70	38.69	45.21	32.82	32.78	32.21
Lane Group LOS	A	A	A	A	D	D	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.19	1.19	2.21	2.22	0.41	0.88	0.90	0.90	0.52
50th-Percentile Queue Length [ft/ln]	4.84	29.71	55.15	55.40	10.25	21.99	22.42	22.60	12.93
95th-Percentile Queue Length [veh/ln]	0.35	2.14	3.97	3.99	0.74	1.58	1.61	1.63	0.93
95th-Percentile Queue Length [ft/ln]	8.72	53.47	99.28	99.72	18.45	39.58	40.36	40.67	23.27

Movement, Approach, & Intersection Results

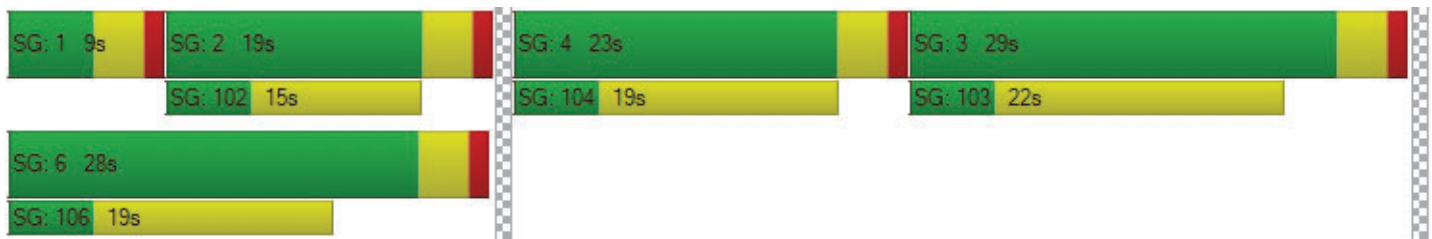
d_M, Delay for Movement [s/veh]	4.52	4.87	0.00	0.00	8.68	8.70	38.69	0.00	45.21	32.80	32.78	32.21
Movement LOS	A	A			A	A	D		D	C	C	C
d_A, Approach Delay [s/veh]	4.84				8.68		43.00		32.67			
Approach LOS	A				A		D		C			
d_I, Intersection Delay [s/veh]	11.13											
Intersection LOS	B											
Intersection V/C	0.281											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0		9.0		9.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	31.51		31.51		31.51		31.51	
I_p,int, Pedestrian LOS Score for Intersection	2.530		2.501		2.039		2.170	
Crosswalk LOS	B		B		B		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	600		375		625		475	
d_b, Bicycle Delay [s]	19.60		26.41		18.91		23.26	
I_b,int, Bicycle LOS Score for Intersection	1.981		2.050		1.560		1.784	
Bicycle LOS	A		B		A		A	

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	41.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.802

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	79	469	180	64	355	145	194	506	81	130	893	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	1	1	0	1	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	45	0	0	37	0	0	20	0	0	32
Total Hourly Volume [veh/h]	79	472	136	65	358	109	196	508	61	131	897	95
Peak Hour Factor	0.8540	0.8540	0.8540	0.8210	0.8210	0.8210	0.9310	0.9310	0.9310	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	138	40	20	109	33	53	136	16	38	263	28
Total Analysis Volume [veh/h]	93	553	159	79	436	133	211	546	66	154	1052	111
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	30	0	18	33	0	20	36	0	26	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	33	33	7	32	32	16	41	41	13	38	38
g / C, Green / Cycle	0.07	0.30	0.30	0.06	0.29	0.29	0.15	0.37	0.37	0.11	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.06	0.22	0.22	0.05	0.18	0.18	0.13	0.17	0.05	0.10	0.33	0.08
s, saturation flow rate [veh/h]	1603	1683	1556	1603	1683	1550	1603	3204	1431	1603	3204	1431
c, Capacity [veh/h]	115	511	472	101	496	457	233	1196	534	184	1098	490
d1, Uniform Delay [s]	50.29	34.18	34.20	50.79	33.18	33.25	46.25	26.05	22.66	47.67	35.39	25.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering 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
d2, Incremental Delay [s]	12.30	8.62	9.35	12.33	5.18	5.73	12.34	0.27	0.10	9.58	6.15	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression 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

Lane Group Results

X, volume / capacity	0.81	0.72	0.73	0.78	0.59	0.60	0.91	0.46	0.12	0.84	0.96	0.23
d, Delay for Lane Group [s/veh]	62.59	42.80	43.55	63.12	38.37	38.98	58.59	26.32	22.76	57.25	41.54	26.01
Lane Group LOS	E	D	D	E	D	D	E	C	C	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.87	9.71	9.09	2.45	7.22	6.79	6.33	5.24	1.11	4.53	14.06	2.05
50th-Percentile Queue Length [ft/ln]	71.63	242.71	227.28	61.24	180.59	169.71	158.31	131.03	27.69	113.34	351.39	51.19
95th-Percentile Queue Length [veh/ln]	5.16	14.82	14.04	4.41	11.63	11.06	10.46	9.00	1.99	8.03	20.20	3.69
95th-Percentile Queue Length [ft/ln]	128.94	370.45	350.90	110.23	290.79	276.53	261.49	224.90	49.85	200.64	505.10	92.14

Movement, Approach, & Intersection Results

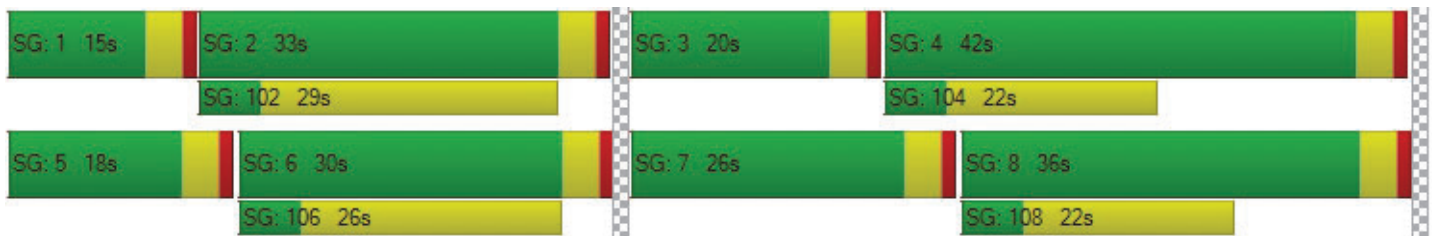
d_M, Delay for Movement [s/veh]	62.59	43.05	43.55	63.12	38.56	38.98	58.59	26.32	22.76	57.25	41.54	26.01
Movement LOS	E	D	D	E	D	D	E	C	C	E	D	C
d_A, Approach Delay [s/veh]	45.40			41.64			34.31			42.07		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	40.96											
Intersection LOS	D											
Intersection V/C	0.802											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
I_p,int, Pedestrian LOS Score for Intersection	2.772	2.778	3.034	2.981
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	473	527	582	691
d_b, Bicycle Delay [s]	32.07	29.82	27.65	23.56
I_b,int, Bicycle LOS Score for Intersection	2.261	2.125	2.255	2.673
Bicycle LOS	B	B	B	B

Sequence




Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 8: Moore St/Project Dwy 1**

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name	Project Dwy 1		Moore St		Westbound	
Approach	Southbound		Eastbound			
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Dwy 1		Moore St		Westbound	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	0	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	0	0	0	0
Total Analysis Volume [veh/h]	22	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.60	8.40	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.65	1.65	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.60		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.60					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Shoemaker Ave/Project Dwy 2

Control Type:	Two-way stop	Delay (sec / veh):	20.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Shoemaker Ave		Shoemaker Ave		Project Dwy 2	
Base Volume Input [veh/h]	0	494	649	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	6	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	496	652	6	5	0
Peak Hour Factor	1.0000	0.9580	0.8830	1.0000	1.0000	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	129	185	2	1	0
Total Analysis Volume [veh/h]	6	518	738	6	5	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	9.20	0.00	0.00	0.00	20.75	11.09
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.25	0.13	0.00	0.00	1.64	1.64
d_A, Approach Delay [s/veh]	0.11		0.00		20.75	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 10: Shoemaker Ave/Project Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇐⇐		⇐⇐		⇐	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	49.21	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Northbound		Shoemaker Ave		Project Dwy 3	
Base Volume Input [veh/h]	0	494	649	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	6	0	0	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	502	652	0	0	7
Peak Hour Factor	1.0000	0.9580	0.8830	1.0000	1.0000	0.8650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	131	185	0	0	2
Total Analysis Volume [veh/h]	2	524	738	0	0	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	9.17	0.00	0.00	0.00	20.22	10.81
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.08	0.04	0.00	0.00	0.97	0.97
d_A, Approach Delay [s/veh]	0.03		0.00		10.81	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	B					

Vistro File: C:\...\Vistro.vistro

Scenario 1 EX AM

Report File: C:\...\EX AM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	ICU 1	SB Thru	0.732	-	C
2	Bloomfield Ave/166th St	Signalized	ICU 1	NB Thru	0.814	-	D
3	Bloomfield Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.776	-	C
4	Shoemaker Ave/Alondra Blvd	Signalized	ICU 1	WB Thru	0.607	-	B
5	Shoemaker Ave/166th St	Signalized	ICU 1	WB Thru	0.731	-	C
6	Shoemaker Ave/Oak Crest St	Signalized	ICU 1	SB Thru	0.663	-	B
7	Shoemaker Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.884	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	96	650	210	102	597	145	130	562	94	178	540	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	650	157	102	597	109	130	562	70	178	540	37
Peak Hour Factor	0.9830	0.9830	0.9830	0.7890	0.7890	0.7890	0.9280	0.9280	0.9280	0.7720	0.7720	0.7720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	165	40	32	189	35	35	151	19	58	175	12
Total Analysis Volume [veh/h]	98	661	160	129	757	138	140	606	75	231	699	48
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.21	0.10	0.08	0.24	0.09	0.09	0.19	0.05	0.14	0.22	0.03
Intersection LOS	C											
Intersection V/C	0.732											

**Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.814

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	60	870	413	97	718	107	104	420	57	217	401	84
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	870	310	97	718	80	104	420	43	217	401	63
Peak Hour Factor	0.8920	0.8920	0.8920	0.8610	0.8610	0.8610	0.8920	0.8920	0.8920	0.7690	0.7690	0.7690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	244	87	28	208	23	29	118	12	71	130	20
Total Analysis Volume [veh/h]	67	975	348	113	834	93	117	471	48	282	521	82
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.30	0.22	0.07	0.29	0.29	0.07	0.16	0.16	0.18	0.19	0.19
Intersection LOS	D											
Intersection V/C	0.814											

Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.776

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T T			T T T			T T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	141	504	106	264	612	111	76	363	104	266	674	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	504	79	264	612	83	76	363	78	266	674	105
Peak Hour Factor	0.7270	0.7270	0.7270	0.8890	0.8890	0.8890	0.8760	0.8760	0.8760	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	173	27	74	172	23	22	104	22	76	193	30
Total Analysis Volume [veh/h]	194	693	109	297	688	93	87	414	89	304	771	120
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.25	0.25	0.09	0.16	0.16	0.05	0.13	0.06	0.10	0.28	0.28
Intersection LOS	C											
Intersection V/C	0.776											

Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.607

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	60	275	97	44	287	106	112	605	114	143	728	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	275	73	44	287	79	112	605	85	143	728	82
Peak Hour Factor	0.7100	0.7100	0.7100	0.9120	0.9120	0.9120	0.8890	0.8890	0.8890	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	97	26	12	79	22	31	170	24	38	196	22
Total Analysis Volume [veh/h]	85	387	103	48	315	87	126	681	96	154	784	88
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.15	0.15	0.03	0.13	0.13	0.08	0.21	0.06	0.10	0.25	0.06
Intersection LOS	B											
Intersection V/C	0.607											

**Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	117	381	139	43	247	125	211	546	67	123	517	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	381	104	43	247	94	211	546	50	123	517	46
Peak Hour Factor	0.8290	0.8290	0.8290	0.6900	0.6900	0.6900	0.8670	0.8670	0.8670	0.7430	0.7430	0.7430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	115	31	16	89	34	61	157	14	41	174	15
Total Analysis Volume [veh/h]	141	460	125	62	358	136	243	630	58	166	696	62
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.18	0.18	0.04	0.15	0.15	0.15	0.22	0.22	0.10	0.24	0.24
Intersection LOS	C											
Intersection V/C	0.731											

Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.663

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	88	487	0	0	361	90	90	0	94	285	6	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	487	0	0	361	67	90	0	70	285	6	46
Peak Hour Factor	0.9330	0.9330	1.0000	1.0000	0.6750	0.6750	0.6700	1.0000	0.6700	0.5830	0.5830	0.5830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	130	0	0	134	25	34	0	26	122	3	20
Total Analysis Volume [veh/h]	94	522	0	0	535	99	134	0	104	489	10	79
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	60
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.16	0.00	0.00	0.20	0.20	0.08	0.00	0.07	0.15	0.16	0.05
Intersection LOS	B											
Intersection V/C	0.663											

Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	44	563	156	96	474	266	260	506	59	144	916	158
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	563	117	96	474	199	260	506	44	144	916	118
Peak Hour Factor	0.9500	0.9500	0.9500	0.8640	0.8640	0.8640	0.9560	0.9560	0.9560	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	148	31	28	137	58	68	132	12	40	256	33
Total Analysis Volume [veh/h]	46	593	123	111	549	230	272	529	46	161	1026	132
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.22	0.22	0.07	0.24	0.24	0.17	0.17	0.03	0.10	0.32	0.08
Intersection LOS	D											
Intersection V/C	0.884											

Vistro File: C:\...\Vistro.vistro

Scenario 1 EX AM

Report File: C:\...\EX AM.pdf

11/10/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Bloomfield Ave/Alondra Blvd	96	650	210	102	597	145	130	562	94	178	540	50	3354

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Bloomfield Ave/166th St	60	870	413	97	718	107	104	420	57	217	401	84	3548

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Bloomfield Ave/Artesia Blvd	141	504	106	264	612	111	76	363	104	266	674	140	3361

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Shoemaker Ave/Alondra Blvd	60	275	97	44	287	106	112	605	114	143	728	109	2680

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Shoemaker Ave/166th St	117	381	139	43	247	125	211	546	67	123	517	62	2578

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
6	Shoemaker Ave/Oak Crest St	88	487	361	90	90	94	285	6	62	1563

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Shoemaker Ave/Artesia Blvd	44	563	156	96	474	266	260	506	59	144	916	158	3642

Vistro File: C:\...\Vistro.vistro

Scenario 2 EX PM

Report File: C:\...\EX PM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	ICU 1	NB Thru	0.760	-	C
2	Bloomfield Ave/166th St	Signalized	ICU 1	NB Thru	0.755	-	C
3	Bloomfield Ave/Artesia Blvd	Signalized	ICU 1	NB Thru	0.793	-	C
4	Shoemaker Ave/Alondra Blvd	Signalized	ICU 1	WB Thru	0.624	-	B
5	Shoemaker Ave/166th St	Signalized	ICU 1	EB Thru	0.646	-	B
6	Shoemaker Ave/Oak Crest St	Signalized	ICU 1	SB Right	0.432	-	A
7	Shoemaker Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.827	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	185	752	175	82	600	131	131	456	64	198	676	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	185	752	131	82	600	98	131	456	48	198	676	70
Peak Hour Factor	0.9440	0.9440	0.9440	0.9000	0.9000	0.9000	0.9420	0.9420	0.9420	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	199	35	23	167	27	35	121	13	57	194	20
Total Analysis Volume [veh/h]	196	797	139	91	667	109	139	484	51	227	776	80
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.25	0.09	0.06	0.21	0.07	0.09	0.15	0.03	0.14	0.24	0.05
Intersection LOS	C											
Intersection V/C	0.760											

**Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.755

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	155	829	237	89	651	201	89	403	80	235	601	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	155	829	178	89	651	151	89	403	60	235	601	99
Peak Hour Factor	0.9800	0.9800	0.9800	0.9690	0.9690	0.9690	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	211	45	23	168	39	23	103	15	60	153	25
Total Analysis Volume [veh/h]	158	846	182	92	672	156	91	411	61	240	613	101
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.26	0.11	0.06	0.26	0.26	0.06	0.15	0.15	0.15	0.22	0.22
Intersection LOS	C											
Intersection V/C	0.755											

Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T T			T T T			T T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	249	779	72	292	540	81	75	496	99	215	641	157
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	249	779	54	292	540	61	75	496	74	215	641	118
Peak Hour Factor	0.9610	0.9610	0.9610	0.8910	0.8910	0.8910	0.9220	0.9220	0.9220	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	203	14	82	152	17	20	134	20	61	182	33
Total Analysis Volume [veh/h]	259	811	56	328	606	68	81	538	80	244	727	134
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.27	0.27	0.10	0.14	0.14	0.05	0.17	0.05	0.08	0.27	0.27
Intersection LOS	C											
Intersection V/C	0.793											

Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.624

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	81	353	124	56	298	96	75	543	86	90	705	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	353	93	56	298	72	75	543	64	90	705	39
Peak Hour Factor	0.8700	0.8700	0.8700	0.8500	0.8500	0.8500	0.8750	0.8750	0.8750	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	101	27	16	88	21	21	155	18	27	215	12
Total Analysis Volume [veh/h]	93	406	107	66	351	85	86	621	73	110	859	48
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.16	0.16	0.04	0.14	0.14	0.05	0.19	0.05	0.07	0.27	0.03
Intersection LOS	B											
Intersection V/C	0.624											

**Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	59	286	102	55	398	196	165	548	50	94	480	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	286	76	55	398	147	165	548	37	94	480	32
Peak Hour Factor	0.9580	0.9580	0.9580	0.8830	0.8830	0.8830	0.8650	0.8650	0.8650	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	75	20	16	113	42	48	158	11	29	146	10
Total Analysis Volume [veh/h]	62	299	79	62	451	166	191	634	43	114	585	39
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.12	0.12	0.04	0.19	0.19	0.12	0.21	0.21	0.07	0.20	0.20
Intersection LOS	B											
Intersection V/C	0.646											

**Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵			↑			↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	38	404	0	0	524	30	13	0	33	52	13	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	404	0	0	524	22	13	0	25	52	13	19
Peak Hour Factor	0.8730	0.8730	1.0000	1.0000	0.9380	0.9380	0.6390	1.0000	0.6390	0.6500	0.6500	0.6500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	116	0	0	140	6	5	0	10	20	5	7
Total Analysis Volume [veh/h]	44	463	0	0	559	23	20	0	39	80	20	29
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	60
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.14	0.00	0.00	0.18	0.18	0.01	0.00	0.02	0.03	0.03	0.02
Intersection LOS	A											
Intersection V/C	0.432											

Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.827

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	79	469	180	64	355	145	194	506	81	130	893	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	469	135	64	355	109	194	506	61	130	893	94
Peak Hour Factor	0.8540	0.8540	0.8540	0.8210	0.8210	0.8210	0.9310	0.9310	0.9310	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	137	40	19	108	33	52	136	16	38	262	28
Total Analysis Volume [veh/h]	93	549	158	78	432	133	208	544	66	152	1047	110
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.22	0.22	0.05	0.18	0.18	0.13	0.17	0.04	0.10	0.33	0.07
Intersection LOS	D											
Intersection V/C	0.827											

Vistro File: C:\...\Vistro.vistro

Scenario 2 EX PM

Report File: C:\...\EX PM.pdf

11/10/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Bloomfield Ave/Alondra Blvd	185	752	175	82	600	131	131	456	64	198	676	94	3544

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Bloomfield Ave/166th St	155	829	237	89	651	201	89	403	80	235	601	132	3702

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Bloomfield Ave/Artesia Blvd	249	779	72	292	540	81	75	496	99	215	641	157	3696

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Shoemaker Ave/Alondra Blvd	81	353	124	56	298	96	75	543	86	90	705	52	2559

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Shoemaker Ave/166th St	59	286	102	55	398	196	165	548	50	94	480	43	2476

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
6	Shoemaker Ave/Oak Crest St	38	404	524	30	13	33	52	13	26	1133

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Shoemaker Ave/Artesia Blvd	79	469	180	64	355	145	194	506	81	130	893	126	3222

Vistro File: C:\...\Vistro.vistro
Report File: C:\...\OP AM.pdf

Scenario 5 OP AM
11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	ICU 1	SB Thru	0.734	-	C
2	Bloomfield Ave/166th St	Signalized	ICU 1	NB Thru	0.817	-	D
3	Bloomfield Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.779	-	C
4	Shoemaker Ave/Alondra Blvd	Signalized	ICU 1	WB Thru	0.609	-	B
5	Shoemaker Ave/166th St	Signalized	ICU 1	WB Right	0.734	-	C
6	Shoemaker Ave/Oak Crest St	Signalized	ICU 1	SB Right	0.665	-	B
7	Shoemaker Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.887	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	96	650	210	102	597	145	130	562	94	178	540	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	653	158	102	600	109	131	565	70	179	543	37
Peak Hour Factor	0.9830	0.9830	0.9830	0.7890	0.7890	0.7890	0.9280	0.9280	0.9280	0.7720	0.7720	0.7720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	166	40	32	190	35	35	152	19	58	176	12
Total Analysis Volume [veh/h]	98	664	161	129	760	138	141	609	75	232	703	48
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.21	0.10	0.08	0.24	0.09	0.09	0.19	0.05	0.15	0.22	0.03
Intersection LOS	C											
Intersection V/C	0.734											

**Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	60	870	413	97	718	107	104	420	57	217	401	84
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	874	311	97	721	81	104	422	43	218	403	63
Peak Hour Factor	0.8920	0.8920	0.8920	0.8610	0.8610	0.8610	0.8920	0.8920	0.8920	0.7690	0.7690	0.7690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	245	87	28	209	24	29	118	12	71	131	20
Total Analysis Volume [veh/h]	67	980	349	113	837	94	117	473	48	283	524	82
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.31	0.22	0.07	0.29	0.29	0.07	0.16	0.16	0.18	0.19	0.19
Intersection LOS	D											
Intersection V/C	0.817											

Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.779

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T T			T T T			T T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	141	504	106	264	612	111	76	363	104	266	674	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	506	80	265	615	84	76	365	78	267	677	106
Peak Hour Factor	0.7270	0.7270	0.7270	0.8890	0.8890	0.8890	0.8760	0.8760	0.8760	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	174	28	75	173	24	22	104	22	76	194	30
Total Analysis Volume [veh/h]	195	696	110	298	692	94	87	417	89	305	775	121
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.25	0.25	0.09	0.16	0.16	0.05	0.13	0.06	0.10	0.28	0.28
Intersection LOS	C											
Intersection V/C	0.779											

Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	60	275	97	44	287	106	112	605	114	143	728	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	276	73	44	288	80	113	608	86	144	731	82
Peak Hour Factor	0.7100	0.7100	0.7100	0.9120	0.9120	0.9120	0.8890	0.8890	0.8890	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	97	26	12	79	22	32	171	24	39	197	22
Total Analysis Volume [veh/h]	85	389	103	48	316	88	127	684	97	155	787	88
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.15	0.15	0.03	0.13	0.13	0.08	0.21	0.06	0.10	0.25	0.06
Intersection LOS	B											
Intersection V/C	0.609											

**Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	117	381	139	43	247	125	211	546	67	123	517	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	118	383	105	43	248	94	212	549	50	124	519	46
Peak Hour Factor	0.8290	0.8290	0.8290	0.6900	0.6900	0.6900	0.8670	0.8670	0.8670	0.7430	0.7430	0.7430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	116	32	16	90	34	61	158	14	42	175	15
Total Analysis Volume [veh/h]	142	462	127	62	359	136	245	633	58	167	699	62
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.18	0.18	0.04	0.15	0.15	0.15	0.22	0.22	0.10	0.24	0.24
Intersection LOS	C											
Intersection V/C	0.734											

Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵			↵			↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	88	487	0	0	361	90	90	0	94	285	6	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	489	0	0	363	67	90	0	70	286	6	46
Peak Hour Factor	0.9330	0.9330	1.0000	1.0000	0.6750	0.6750	0.6700	1.0000	0.6700	0.5830	0.5830	0.5830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	131	0	0	134	25	34	0	26	123	3	20
Total Analysis Volume [veh/h]	94	524	0	0	538	99	134	0	104	491	10	79
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	60
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.16	0.00	0.00	0.20	0.20	0.08	0.00	0.07	0.15	0.16	0.05
Intersection LOS	B											
Intersection V/C	0.665											

Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.887

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	44	563	156	96	474	266	260	506	59	144	916	158
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	566	118	96	476	200	261	508	44	145	920	119
Peak Hour Factor	0.9500	0.9500	0.9500	0.8640	0.8640	0.8640	0.9560	0.9560	0.9560	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	149	31	28	138	58	68	133	12	41	258	33
Total Analysis Volume [veh/h]	46	596	124	111	551	231	273	531	46	162	1030	133
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.23	0.23	0.07	0.24	0.24	0.17	0.17	0.03	0.10	0.32	0.08
Intersection LOS	D											
Intersection V/C	0.887											

Vistro File: C:\...\Vistro.vistro
Report File: C:\...\IOP AM.pdf

Scenario 5 OP AM
11/10/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Bloomfield Ave/Alondra Blvd	96	653	211	102	600	146	131	565	94	179	543	50	3370

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Bloomfield Ave/166th St	60	874	415	97	721	108	104	422	57	218	403	84	3563

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Bloomfield Ave/Artesia Blvd	142	506	107	265	615	112	76	365	104	267	677	141	3377

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Shoemaker Ave/Alondra Blvd	60	276	97	44	288	107	113	608	115	144	731	110	2693

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Shoemaker Ave/166th St	118	383	140	43	248	126	212	549	67	124	519	62	2591

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
6	Shoemaker Ave/Oak Crest St	88	489	363	90	90	94	286	6	62	1568

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Shoemaker Ave/Artesia Blvd	44	566	157	96	476	267	261	508	59	145	920	159	3658

Vistro File: C:\...\Vistro.vistro

Scenario 6 OP PM

Report File: C:\...\IOP PM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	ICU 1	NB Thru	0.764	-	C
2	Bloomfield Ave/166th St	Signalized	ICU 1	NB Thru	0.758	-	C
3	Bloomfield Ave/Artesia Blvd	Signalized	ICU 1	NB Thru	0.796	-	C
4	Shoemaker Ave/Alondra Blvd	Signalized	ICU 1	WB Thru	0.626	-	B
5	Shoemaker Ave/166th St	Signalized	ICU 1	EB Thru	0.648	-	B
6	Shoemaker Ave/Oak Crest St	Signalized	ICU 1	SB Right	0.433	-	A
7	Shoemaker Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.830	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	185	752	175	82	600	131	131	456	64	198	676	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	756	132	82	603	99	132	458	48	199	679	70
Peak Hour Factor	0.9440	0.9440	0.9440	0.9000	0.9000	0.9000	0.9420	0.9420	0.9420	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	200	35	23	168	28	35	122	13	57	195	20
Total Analysis Volume [veh/h]	197	801	140	91	670	110	140	486	51	228	780	80
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.25	0.09	0.06	0.21	0.07	0.09	0.15	0.03	0.14	0.24	0.05
Intersection LOS	C											
Intersection V/C	0.764											

**Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	155	829	237	89	651	201	89	403	80	235	601	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	156	833	178	89	654	151	89	405	60	236	604	100
Peak Hour Factor	0.9800	0.9800	0.9800	0.9690	0.9690	0.9690	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	213	45	23	169	39	23	103	15	60	154	25
Total Analysis Volume [veh/h]	159	850	182	92	675	156	91	413	61	241	616	102
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.27	0.11	0.06	0.26	0.26	0.06	0.15	0.15	0.15	0.22	0.22
Intersection LOS	C											
Intersection V/C	0.758											

Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.796

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	249	779	72	292	540	81	75	496	99	215	641	157
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	250	783	54	293	543	61	75	498	74	216	644	118
Peak Hour Factor	0.9610	0.9610	0.9610	0.8910	0.8910	0.8910	0.9220	0.9220	0.9220	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	204	14	82	152	17	20	135	20	61	183	33
Total Analysis Volume [veh/h]	260	815	56	329	609	68	81	540	80	245	730	134
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.27	0.27	0.10	0.14	0.14	0.05	0.17	0.05	0.08	0.27	0.27
Intersection LOS	C											
Intersection V/C	0.796											

Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	81	353	124	56	298	96	75	543	86	90	705	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	355	94	56	299	72	75	546	64	90	708	39
Peak Hour Factor	0.8700	0.8700	0.8700	0.8500	0.8500	0.8500	0.8750	0.8750	0.8750	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	102	27	16	88	21	21	156	18	27	216	12
Total Analysis Volume [veh/h]	93	408	108	66	352	85	86	624	73	110	862	48
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.16	0.16	0.04	0.14	0.14	0.05	0.20	0.05	0.07	0.27	0.03
Intersection LOS	B											
Intersection V/C	0.626											

**Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.648

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	59	286	102	55	398	196	165	548	50	94	480	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	287	76	55	400	148	166	551	37	94	482	32
Peak Hour Factor	0.9580	0.9580	0.9580	0.8830	0.8830	0.8830	0.8650	0.8650	0.8650	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	75	20	16	113	42	48	159	11	29	147	10
Total Analysis Volume [veh/h]	62	300	79	62	453	168	192	637	43	114	587	39
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.12	0.12	0.04	0.19	0.19	0.12	0.21	0.21	0.07	0.20	0.20
Intersection LOS	B											
Intersection V/C	0.648											

**Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵			↵			↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	38	404	0	0	524	30	13	0	33	52	13	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	406	0	0	527	22	13	0	25	52	13	19
Peak Hour Factor	0.8730	0.8730	1.0000	1.0000	0.9380	0.9380	0.6390	1.0000	0.6390	0.6500	0.6500	0.6500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	116	0	0	140	6	5	0	10	20	5	7
Total Analysis Volume [veh/h]	44	465	0	0	562	23	20	0	39	80	20	29
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	60
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.15	0.00	0.00	0.18	0.18	0.01	0.00	0.02	0.03	0.03	0.02
Intersection LOS	A											
Intersection V/C	0.433											

Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.830

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	79	469	180	64	355	145	194	506	81	130	893	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	471	136	64	357	109	195	508	61	131	897	95
Peak Hour Factor	0.8540	0.8540	0.8540	0.8210	0.8210	0.8210	0.9310	0.9310	0.9310	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	138	40	19	109	33	52	136	16	38	263	28
Total Analysis Volume [veh/h]	93	552	159	78	435	133	209	546	66	154	1052	111
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.22	0.22	0.05	0.18	0.18	0.13	0.17	0.04	0.10	0.33	0.07
Intersection LOS	D											
Intersection V/C	0.830											

Vistro File: C:\...\Vistro.vistro
Report File: C:\...\IOP PM.pdf

Scenario 6 OP PM
11/10/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Bloomfield Ave/Alondra Blvd	186	756	176	82	603	132	132	458	64	199	679	94	3561

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Bloomfield Ave/166th St	156	833	238	89	654	202	89	405	80	236	604	133	3719

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Bloomfield Ave/Artesia Blvd	250	783	72	293	543	81	75	498	99	216	644	158	3712

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Shoemaker Ave/Alondra Blvd	81	355	125	56	299	96	75	546	86	90	708	52	2569

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Shoemaker Ave/166th St	59	287	102	55	400	197	166	551	50	94	482	43	2486

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
6	Shoemaker Ave/Oak Crest St	38	406	527	30	13	33	52	13	26	1138

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Shoemaker Ave/Artesia Blvd	79	471	181	64	357	146	195	508	81	131	897	127	3237

Vistro File: C:\...\Vistro.vistro

Scenario 3 EX + P AM

Report File: C:\...\EX + P AM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	ICU 1	SB Thru	0.732	-	C
2	Bloomfield Ave/166th St	Signalized	ICU 1	NB Thru	0.817	-	D
3	Bloomfield Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.782	-	C
4	Shoemaker Ave/Alondra Blvd	Signalized	ICU 1	WB Thru	0.607	-	B
5	Shoemaker Ave/166th St	Signalized	ICU 1	WB Thru	0.747	-	C
6	Shoemaker Ave/Oak Crest St	Signalized	ICU 1	SB Right	0.664	-	B
7	Shoemaker Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.885	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	96	650	210	102	597	145	130	562	94	178	540	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	0	2	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	650	160	102	597	109	130	564	70	178	540	37
Peak Hour Factor	0.9830	0.9830	0.9830	0.7890	0.7890	0.7890	0.9280	0.9280	0.9280	0.7720	0.7720	0.7720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	165	41	32	189	35	35	152	19	58	175	12
Total Analysis Volume [veh/h]	98	661	163	129	757	138	140	608	75	231	699	48
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.21	0.10	0.08	0.24	0.09	0.09	0.19	0.05	0.14	0.22	0.03
Intersection LOS	C											
Intersection V/C	0.732											

**Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	60	870	413	97	718	107	104	420	57	217	401	84
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	15	0	0	0	0	1	0	4	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	870	321	97	718	80	104	421	43	221	401	65
Peak Hour Factor	0.8920	0.8920	0.8920	0.8610	0.8610	0.8610	0.8920	0.8920	0.8920	0.7690	0.7690	0.7690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	244	90	28	208	23	29	118	12	72	130	21
Total Analysis Volume [veh/h]	67	975	360	113	834	93	117	472	48	287	521	85
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.30	0.23	0.07	0.29	0.29	0.07	0.16	0.16	0.18	0.19	0.19
Intersection LOS	D											
Intersection V/C	0.817											

Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.782

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T T			T T T			T T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	141	504	106	264	612	111	76	363	104	266	674	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	2	8	1	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	504	79	264	612	85	84	364	78	266	674	105
Peak Hour Factor	0.7270	0.7270	0.7270	0.8890	0.8890	0.8890	0.8760	0.8760	0.8760	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	173	27	74	172	24	24	104	22	76	193	30
Total Analysis Volume [veh/h]	194	693	109	297	688	96	96	416	89	304	771	120
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.25	0.25	0.09	0.16	0.16	0.06	0.13	0.06	0.10	0.28	0.28
Intersection LOS	C											
Intersection V/C	0.782											

Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.607

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	60	275	97	44	287	106	112	605	114	143	728	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	0	1	0	0	3	2	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	275	73	44	288	79	112	608	87	154	728	82
Peak Hour Factor	0.7100	0.7100	0.7100	0.9120	0.9120	0.9120	0.8890	0.8890	0.8890	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	97	26	12	79	22	31	171	24	41	196	22
Total Analysis Volume [veh/h]	85	387	103	48	316	87	126	684	98	166	784	88
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.15	0.15	0.03	0.13	0.13	0.08	0.21	0.06	0.10	0.25	0.06
Intersection LOS	B											
Intersection V/C	0.607											

**Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.747

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	117	381	139	43	247	125	211	546	67	123	517	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	2	7	16	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	385	104	43	249	99	227	546	50	123	517	47
Peak Hour Factor	0.8290	0.8290	0.8290	0.6900	0.6900	0.6900	0.8670	0.8670	0.8670	0.7430	0.7430	0.7430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	116	31	16	90	36	65	157	14	41	174	16
Total Analysis Volume [veh/h]	141	464	125	62	361	143	262	630	58	166	696	63
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.18	0.18	0.04	0.16	0.16	0.16	0.22	0.22	0.10	0.24	0.24
Intersection LOS	C											
Intersection V/C	0.747											

Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵			↵			↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	88	487	0	0	361	90	90	0	94	285	6	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	491	0	0	363	67	90	0	70	285	6	46
Peak Hour Factor	0.9330	0.9330	1.0000	1.0000	0.6750	0.6750	0.6700	1.0000	0.6700	0.5830	0.5830	0.5830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	132	0	0	134	25	34	0	26	122	3	20
Total Analysis Volume [veh/h]	94	526	0	0	538	99	134	0	104	489	10	79
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	60
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.16	0.00	0.00	0.20	0.20	0.08	0.00	0.07	0.15	0.16	0.05
Intersection LOS	B											
Intersection V/C	0.664											

Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.885

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	44	563	156	96	474	266	260	506	59	144	916	158
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	2	0	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	565	117	96	476	199	261	506	44	144	916	119
Peak Hour Factor	0.9500	0.9500	0.9500	0.8640	0.8640	0.8640	0.9560	0.9560	0.9560	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	149	31	28	138	58	68	132	12	40	256	33
Total Analysis Volume [veh/h]	46	595	123	111	551	230	273	529	46	161	1026	133
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.22	0.22	0.07	0.24	0.24	0.17	0.17	0.03	0.10	0.32	0.08
Intersection LOS	D											
Intersection V/C	0.885											

Vistro File: C:\...\Vistro.vistro

Scenario 3 EX + P AM

Report File: C:\...\EX + P AM.pdf

11/10/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Bloomfield Ave/Alondra Blvd	96	650	213	102	597	145	130	564	94	178	540	50	3359

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Bloomfield Ave/166th St	60	870	428	97	718	107	104	421	57	221	401	87	3571

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Bloomfield Ave/Artesia Blvd	141	504	106	264	612	113	84	364	104	266	674	140	3372

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Shoemaker Ave/Alondra Blvd	60	275	98	44	288	106	112	608	116	154	728	109	2698

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Shoemaker Ave/166th St	117	385	139	43	249	132	227	546	67	123	517	63	2608

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
6	Shoemaker Ave/Oak Crest St	88	491	363	90	90	94	285	6	62	1569

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Shoemaker Ave/Artesia Blvd	44	565	156	96	476	266	261	506	59	144	916	159	3648

Vistro File: C:\...\Vistro.vistro

Scenario 4 EX + P PM

Report File: C:\...\EX + P PM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	ICU 1	NB Thru	0.761	-	C
2	Bloomfield Ave/166th St	Signalized	ICU 1	NB Thru	0.765	-	C
3	Bloomfield Ave/Artesia Blvd	Signalized	ICU 1	NB Thru	0.796	-	C
4	Shoemaker Ave/Alondra Blvd	Signalized	ICU 1	WB Thru	0.624	-	B
5	Shoemaker Ave/166th St	Signalized	ICU 1	EB Thru	0.658	-	B
6	Shoemaker Ave/Oak Crest St	Signalized	ICU 1	SB Thru	0.432	-	A
7	Shoemaker Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.828	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.761

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	185	752	175	82	600	131	131	456	64	198	676	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	9	0	0	0	0	1	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	185	752	138	82	600	98	131	457	48	198	678	70
Peak Hour Factor	0.9440	0.9440	0.9440	0.9000	0.9000	0.9000	0.9420	0.9420	0.9420	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	199	37	23	167	27	35	121	13	57	195	20
Total Analysis Volume [veh/h]	196	797	146	91	667	109	139	485	51	227	778	80
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.25	0.09	0.06	0.21	0.07	0.09	0.15	0.03	0.14	0.24	0.05
Intersection LOS	C											
Intersection V/C	0.761											

**Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.765

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	155	829	237	89	651	201	89	403	80	235	601	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	7	0	0	0	0	0	0	16	1	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	155	829	183	89	651	151	89	403	60	251	602	106
Peak Hour Factor	0.9800	0.9800	0.9800	0.9690	0.9690	0.9690	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	211	47	23	168	39	23	103	15	64	153	27
Total Analysis Volume [veh/h]	158	846	187	92	672	156	91	411	61	256	614	108
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.26	0.12	0.06	0.26	0.26	0.06	0.15	0.15	0.16	0.23	0.23
Intersection LOS	C											
Intersection V/C	0.765											

Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.796

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	249	779	72	292	540	81	75	496	99	215	641	157
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	9	4	1	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	249	779	54	292	540	67	79	497	74	215	641	118
Peak Hour Factor	0.9610	0.9610	0.9610	0.8910	0.8910	0.8910	0.9220	0.9220	0.9220	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	203	14	82	152	19	21	135	20	61	182	33
Total Analysis Volume [veh/h]	259	811	56	328	606	75	86	539	80	244	727	134
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.27	0.27	0.10	0.14	0.14	0.05	0.17	0.05	0.08	0.27	0.27
Intersection LOS	C											
Intersection V/C	0.796											

Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.624

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	81	353	124	56	298	96	75	543	86	90	705	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	2	0	0	0	0	9	1	5	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	354	94	56	298	72	75	552	65	95	705	39
Peak Hour Factor	0.8700	0.8700	0.8700	0.8500	0.8500	0.8500	0.8750	0.8750	0.8750	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	102	27	16	88	21	21	158	19	29	215	12
Total Analysis Volume [veh/h]	95	407	108	66	351	85	86	631	74	116	859	48
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.16	0.16	0.04	0.14	0.14	0.05	0.20	0.05	0.07	0.27	0.03
Intersection LOS	B											
Intersection V/C	0.624											

**Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	59	286	102	55	398	196	165	548	50	94	480	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	1	2	26	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	288	76	56	400	166	172	548	37	94	480	32
Peak Hour Factor	0.9580	0.9580	0.9580	0.8830	0.8830	0.8830	0.8650	0.8650	0.8650	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	75	20	16	113	47	50	158	11	29	146	10
Total Analysis Volume [veh/h]	62	301	79	63	453	188	199	634	43	114	585	39
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.12	0.12	0.04	0.20	0.20	0.12	0.21	0.21	0.07	0.20	0.20
Intersection LOS	B											
Intersection V/C	0.658											

Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	38	404	0	0	524	30	13	0	33	52	13	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	406	0	0	526	22	13	0	25	52	13	19
Peak Hour Factor	0.8730	0.8730	1.0000	1.0000	0.9380	0.9380	0.6390	1.0000	0.6390	0.6500	0.6500	0.6500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	116	0	0	140	6	5	0	10	20	5	7
Total Analysis Volume [veh/h]	44	465	0	0	561	23	20	0	39	80	20	29
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	60
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.15	0.00	0.00	0.18	0.18	0.01	0.00	0.02	0.03	0.03	0.02
Intersection LOS	A											
Intersection V/C	0.432											

Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.828

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	79	469	180	64	355	145	194	506	81	130	893	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	1	1	0	1	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	470	135	65	356	109	195	506	61	130	893	94
Peak Hour Factor	0.8540	0.8540	0.8540	0.8210	0.8210	0.8210	0.9310	0.9310	0.9310	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	138	40	20	108	33	52	136	16	38	262	28
Total Analysis Volume [veh/h]	93	550	158	79	434	133	209	544	66	152	1047	110
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.22	0.22	0.05	0.18	0.18	0.13	0.17	0.04	0.10	0.33	0.07
Intersection LOS	D											
Intersection V/C	0.828											

Vistro File: C:\...\Vistro.vistro

Scenario 4 EX + P PM

Report File: C:\...\EX + P PM.pdf

11/10/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Bloomfield Ave/Alondra Blvd	185	752	184	82	600	131	131	457	64	198	678	94	3556

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Bloomfield Ave/166th St	155	829	244	89	651	201	89	403	80	251	602	141	3735

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Bloomfield Ave/Artesia Blvd	249	779	72	292	540	90	79	497	99	215	641	157	3710

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Shoemaker Ave/Alondra Blvd	83	354	126	56	298	96	75	552	87	95	705	52	2579

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Shoemaker Ave/166th St	59	288	102	56	400	222	172	548	50	94	480	43	2514

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
6	Shoemaker Ave/Oak Crest St	38	406	526	30	13	33	52	13	26	1137

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Shoemaker Ave/Artesia Blvd	79	470	180	65	356	145	195	506	81	130	893	126	3226

Vistro File: C:\...\Vistro.vistro

Scenario 7 OP + P AM

Report File: C:\...\OP + P AM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	ICU 1	SB Thru	0.735	-	C
2	Bloomfield Ave/166th St	Signalized	ICU 1	NB Thru	0.821	-	D
3	Bloomfield Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.785	-	C
4	Shoemaker Ave/Alondra Blvd	Signalized	ICU 1	WB Thru	0.609	-	B
5	Shoemaker Ave/166th St	Signalized	ICU 1	WB Thru	0.750	-	C
6	Shoemaker Ave/Oak Crest St	Signalized	ICU 1	SB Thru	0.666	-	B
7	Shoemaker Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.888	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.735

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	96	650	210	102	597	145	130	562	94	178	540	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	0	2	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	653	160	102	600	109	131	567	70	179	543	37
Peak Hour Factor	0.9830	0.9830	0.9830	0.7890	0.7890	0.7890	0.9280	0.9280	0.9280	0.7720	0.7720	0.7720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	166	41	32	190	35	35	153	19	58	176	12
Total Analysis Volume [veh/h]	98	664	163	129	760	138	141	611	75	232	703	48
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.21	0.10	0.08	0.24	0.09	0.09	0.19	0.05	0.15	0.22	0.03
Intersection LOS	C											
Intersection V/C	0.735											

**Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.821

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	60	870	413	97	718	107	104	420	57	217	401	84
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	15	0	0	0	0	1	0	4	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	874	322	97	721	81	104	423	43	222	403	65
Peak Hour Factor	0.8920	0.8920	0.8920	0.8610	0.8610	0.8610	0.8920	0.8920	0.8920	0.7690	0.7690	0.7690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	245	90	28	209	24	29	119	12	72	131	21
Total Analysis Volume [veh/h]	67	980	361	113	837	94	117	474	48	289	524	85
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.31	0.23	0.07	0.29	0.29	0.07	0.16	0.16	0.18	0.19	0.19
Intersection LOS	D											
Intersection V/C	0.821											

Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.785

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	141	504	106	264	612	111	76	363	104	266	674	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	2	8	1	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	142	506	80	265	615	85	84	366	78	267	677	106
Peak Hour Factor	0.7270	0.7270	0.7270	0.8890	0.8890	0.8890	0.8760	0.8760	0.8760	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	174	28	75	173	24	24	104	22	76	194	30
Total Analysis Volume [veh/h]	195	696	110	298	692	96	96	418	89	305	775	121
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.25	0.25	0.09	0.16	0.16	0.06	0.13	0.06	0.10	0.28	0.28
Intersection LOS	C											
Intersection V/C	0.785											

Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	60	275	97	44	287	106	112	605	114	143	728	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	0	1	0	0	3	2	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	276	73	44	289	80	113	611	88	155	731	82
Peak Hour Factor	0.7100	0.7100	0.7100	0.9120	0.9120	0.9120	0.8890	0.8890	0.8890	0.9290	0.9290	0.9290
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	97	26	12	79	22	32	172	25	42	197	22
Total Analysis Volume [veh/h]	85	389	103	48	317	88	127	687	99	167	787	88
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.15	0.15	0.03	0.13	0.13	0.08	0.21	0.06	0.10	0.25	0.06
Intersection LOS	B											
Intersection V/C	0.609											

Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.750

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	117	381	139	43	247	125	211	546	67	123	517	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	2	7	16	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	118	387	105	43	250	100	228	549	50	124	519	47
Peak Hour Factor	0.8290	0.8290	0.8290	0.6900	0.6900	0.6900	0.8670	0.8670	0.8670	0.7430	0.7430	0.7430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	117	32	16	91	36	66	158	14	42	175	16
Total Analysis Volume [veh/h]	142	467	127	62	362	145	263	633	58	167	699	63
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.19	0.19	0.04	0.16	0.16	0.16	0.22	0.22	0.10	0.24	0.24
Intersection LOS	C											
Intersection V/C	0.750											

Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.666

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	88	487	0	0	361	90	90	0	94	285	6	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	493	0	0	365	67	90	0	70	286	6	46
Peak Hour Factor	0.9330	0.9330	1.0000	1.0000	0.6750	0.6750	0.6700	1.0000	0.6700	0.5830	0.5830	0.5830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	132	0	0	135	25	34	0	26	123	3	20
Total Analysis Volume [veh/h]	94	528	0	0	541	99	134	0	104	491	10	79
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	60
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.17	0.00	0.00	0.20	0.20	0.08	0.00	0.07	0.15	0.16	0.05
Intersection LOS	B											
Intersection V/C	0.666											

Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.888

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	44	563	156	96	474	266	260	506	59	144	916	158
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	2	0	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	568	118	96	478	200	262	508	44	145	920	120
Peak Hour Factor	0.9500	0.9500	0.9500	0.8640	0.8640	0.8640	0.9560	0.9560	0.9560	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	149	31	28	138	58	69	133	12	41	258	34
Total Analysis Volume [veh/h]	46	598	124	111	553	231	274	531	46	162	1030	134
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.23	0.23	0.07	0.25	0.25	0.17	0.17	0.03	0.10	0.32	0.08
Intersection LOS	D											
Intersection V/C	0.888											

Vistro File: C:\...\Vistro.vistro

Scenario 7 OP + P AM

Report File: C:\...\IOP + P AM.pdf

11/10/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Bloomfield Ave/Alondra Blvd	96	653	214	102	600	146	131	567	94	179	543	50	3375

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Bloomfield Ave/166th St	60	874	430	97	721	108	104	423	57	222	403	87	3586

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Bloomfield Ave/Artesia Blvd	142	506	107	265	615	114	84	366	104	267	677	141	3388

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Shoemaker Ave/Alondra Blvd	60	276	98	44	289	107	113	611	117	155	731	110	2711

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Shoemaker Ave/166th St	118	387	140	43	250	133	228	549	67	124	519	63	2621

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
6	Shoemaker Ave/Oak Crest St	88	493	365	90	90	94	286	6	62	1574

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Shoemaker Ave/Artesia Blvd	44	568	157	96	478	267	262	508	59	145	920	160	3664

Vistro File: C:\...\Vistro.vistro

Scenario 8 OP + P PM

Report File: C:\...\OP + P PM.pdf

11/10/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bloomfield Ave/Alondra Blvd	Signalized	ICU 1	NB Thru	0.764	-	C
2	Bloomfield Ave/166th St	Signalized	ICU 1	NB Thru	0.768	-	C
3	Bloomfield Ave/Artesia Blvd	Signalized	ICU 1	NB Thru	0.799	-	C
4	Shoemaker Ave/Alondra Blvd	Signalized	ICU 1	WB Thru	0.626	-	B
5	Shoemaker Ave/166th St	Signalized	ICU 1	EB Thru	0.661	-	B
6	Shoemaker Ave/Oak Crest St	Signalized	ICU 1	SB Thru	0.433	-	A
7	Shoemaker Ave/Artesia Blvd	Signalized	ICU 1	WB Thru	0.833	-	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bloomfield Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	210.00	100.00	84.00	160.00	100.00	121.00	170.00	100.00	100.00	179.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	185	752	175	82	600	131	131	456	64	198	676	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	9	0	0	0	0	1	0	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	756	139	82	603	99	132	459	48	199	681	70
Peak Hour Factor	0.9440	0.9440	0.9440	0.9000	0.9000	0.9000	0.9420	0.9420	0.9420	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	200	37	23	168	28	35	122	13	57	195	20
Total Analysis Volume [veh/h]	197	801	147	91	670	110	140	487	51	228	782	80
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.25	0.09	0.06	0.21	0.07	0.09	0.15	0.03	0.14	0.24	0.05
Intersection LOS	C											
Intersection V/C	0.764											

**Intersection Level Of Service Report
Intersection 2: Bloomfield Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	178.00	191.00	100.00	100.00	152.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			166th St			166th St		
Base Volume Input [veh/h]	155	829	237	89	651	201	89	403	80	235	601	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	7	0	0	0	0	0	0	16	1	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	156	833	184	89	654	151	89	405	60	252	605	106
Peak Hour Factor	0.9800	0.9800	0.9800	0.9690	0.9690	0.9690	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	213	47	23	169	39	23	103	15	64	154	27
Total Analysis Volume [veh/h]	159	850	188	92	675	156	91	413	61	257	617	108
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.27	0.12	0.06	0.26	0.26	0.06	0.15	0.15	0.16	0.23	0.23
Intersection LOS	C											
Intersection V/C	0.768											

Intersection Level Of Service Report
Intersection 3: Bloomfield Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.799

Intersection Setup

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	TLO			TLO			TLO			TLO		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	2	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	145.00	100.00	100.00	210.00	100.00	80.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bloomfield Ave			Bloomfield Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	249	779	72	292	540	81	75	496	99	215	641	157
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	9	4	1	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	250	783	54	293	543	67	79	499	74	216	644	118
Peak Hour Factor	0.9610	0.9610	0.9610	0.8910	0.8910	0.8910	0.9220	0.9220	0.9220	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	204	14	82	152	19	21	135	20	61	183	33
Total Analysis Volume [veh/h]	260	815	56	329	609	75	86	541	80	245	730	134
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.27	0.27	0.10	0.14	0.14	0.05	0.17	0.05	0.08	0.27	0.27
Intersection LOS	C											
Intersection V/C	0.799											

Intersection Level Of Service Report
Intersection 4: Shoemaker Ave/Alondra Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	158.00	100.00	100.00	178.00	100.00	100.00	158.00	100.00	158.00	192.00	100.00	192.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Alondra Blvd			Alondra Blvd		
Base Volume Input [veh/h]	81	353	124	56	298	96	75	543	86	90	705	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	2	0	0	0	0	9	1	5	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	356	95	56	299	72	75	555	65	95	708	39
Peak Hour Factor	0.8700	0.8700	0.8700	0.8500	0.8500	0.8500	0.8750	0.8750	0.8750	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	102	27	16	88	21	21	159	19	29	216	12
Total Analysis Volume [veh/h]	95	409	109	66	352	85	86	634	74	116	862	48
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.16	0.16	0.04	0.14	0.14	0.05	0.20	0.05	0.07	0.27	0.03
Intersection LOS	B											
Intersection V/C	0.626											

**Intersection Level Of Service Report
Intersection 5: Shoemaker Ave/166th St**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	171.00	100.00	100.00	170.00	100.00	100.00	198.00	100.00	100.00	196.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			166th St			166th St		
Base Volume Input [veh/h]	59	286	102	55	398	196	165	548	50	94	480	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	1	2	26	7	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	289	76	56	402	167	173	551	37	94	482	32
Peak Hour Factor	0.9580	0.9580	0.9580	0.8830	0.8830	0.8830	0.8650	0.8650	0.8650	0.8210	0.8210	0.8210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	75	20	16	114	47	50	159	11	29	147	10
Total Analysis Volume [veh/h]	62	302	79	63	455	189	200	637	43	114	587	39
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.12	0.12	0.04	0.20	0.20	0.13	0.21	0.21	0.07	0.20	0.20
Intersection LOS	B											
Intersection V/C	0.661											

Intersection Level Of Service Report
Intersection 6: Shoemaker Ave/Oak Crest St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	112.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Oak Crest St			Oak Crest St		
Base Volume Input [veh/h]	38	404	0	0	524	30	13	0	33	52	13	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	408	0	0	529	22	13	0	25	52	13	19
Peak Hour Factor	0.8730	0.8730	1.0000	1.0000	0.9380	0.9380	0.6390	1.0000	0.6390	0.6500	0.6500	0.6500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	117	0	0	141	6	5	0	10	20	5	7
Total Analysis Volume [veh/h]	44	467	0	0	564	23	20	0	39	80	20	29
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	60
Lost time [s]	10.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	1	6	0	0	2	0	3	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.15	0.00	0.00	0.18	0.18	0.01	0.00	0.02	0.03	0.03	0.02
Intersection LOS	A											
Intersection V/C	0.433											

Intersection Level Of Service Report
Intersection 7: Shoemaker Ave/Artesia Blvd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.833

Intersection Setup

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	182.00	100.00	100.00	125.00	100.00	100.00	147.00	100.00	127.00	192.00	100.00	72.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Shoemaker Ave			Shoemaker Ave			Artesia Blvd			Artesia Blvd		
Base Volume Input [veh/h]	79	469	180	64	355	145	194	506	81	130	893	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048	1.0048
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	1	1	0	1	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	472	136	65	358	109	196	508	61	131	897	95
Peak Hour Factor	0.8540	0.8540	0.8540	0.8210	0.8210	0.8210	0.9310	0.9310	0.9310	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	138	40	20	109	33	53	136	16	38	263	28
Total Analysis Volume [veh/h]	93	553	159	79	436	133	211	546	66	154	1052	111
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.22	0.22	0.05	0.18	0.18	0.13	0.17	0.04	0.10	0.33	0.07
Intersection LOS	D											
Intersection V/C	0.833											

Vistro File: C:\...\Vistro.vistro

Scenario 8 OP + P PM

Report File: C:\...\IOP + P PM.pdf

11/10/2022

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Bloomfield Ave/Alondra Blvd	186	756	185	82	603	132	132	459	64	199	681	94	3573

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Bloomfield Ave/166th St	156	833	245	89	654	202	89	405	80	252	605	142	3752

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Bloomfield Ave/Artesia Blvd	250	783	72	293	543	90	79	499	99	216	644	158	3726

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Shoemaker Ave/Alondra Blvd	83	356	127	56	299	96	75	555	87	95	708	52	2589

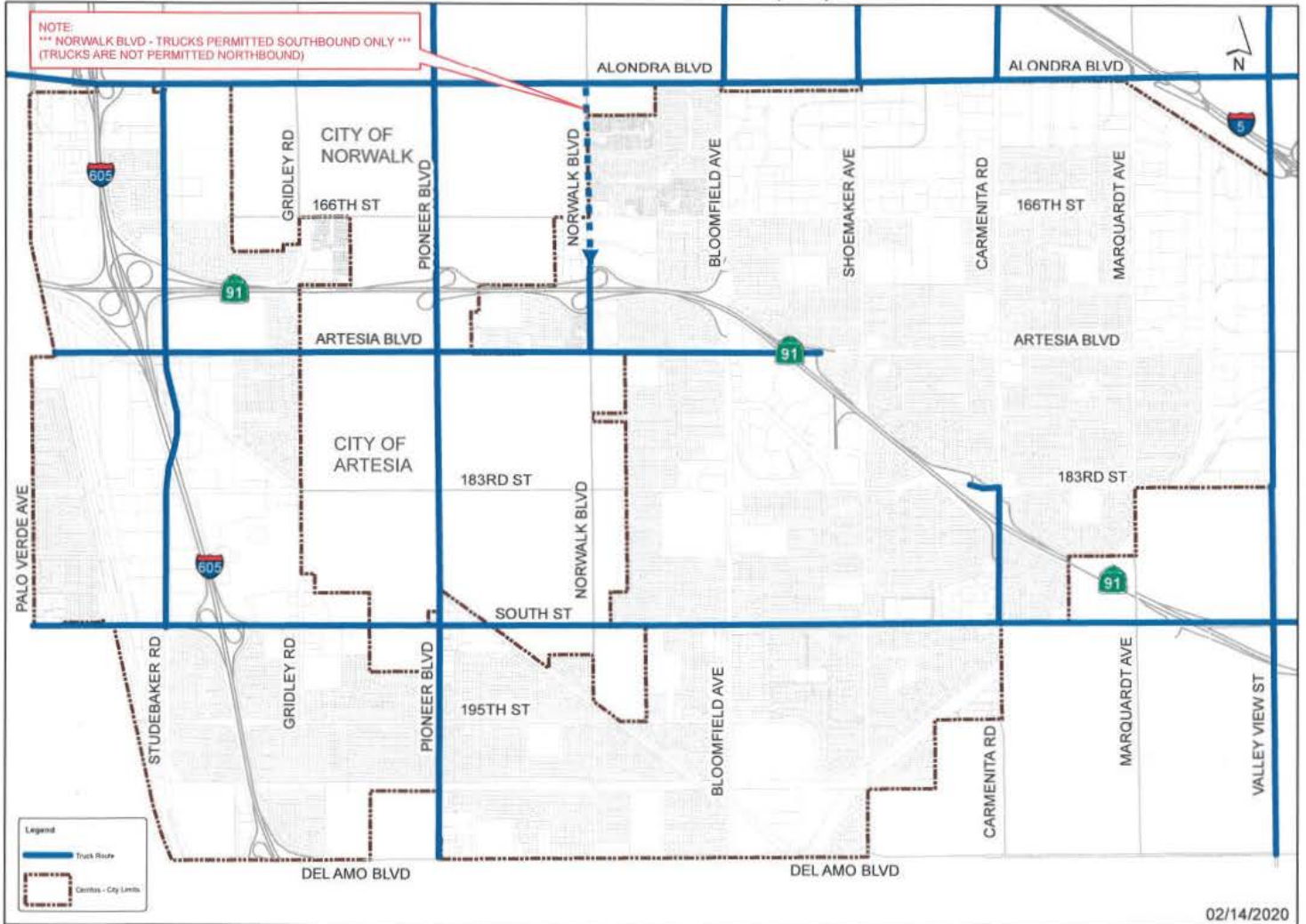
ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Shoemaker Ave/166th St	59	289	102	56	402	223	173	551	50	94	482	43	2524

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
6	Shoemaker Ave/Oak Crest St	38	408	529	30	13	33	52	13	26	1142

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	Shoemaker Ave/Artesia Blvd	79	472	181	65	358	146	196	508	81	131	897	127	3241

APPENDIX D – CITY OF CERRITOS TRUCK ROUTES

CITY OF CERRITOS
CERRITOS SHERIFF'S STATION (562)860-0044



PURSUANT TO CA. VEHICLE CODE SECTIONS 35701 AND 35703.

TRUCK ROUTES