17713 SLOVER AVE BLOOMINGTON

TRAFFIC IMPACT ANALYSIS

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1 EXECUTIVE SUMMARY

This Focused Traffic Impact Analysis (FTIA) has been prepared by EPD Solutions, Inc. (EPD) to analyze the potential transportation-related impacts of the proposed industrial building located southeast corner of Alder Avenue and Slover Avenue in unincorporated San Bernardino County. The project proposes to construct a 259,481 square foot speculative high-cube warehouse with 38 dock doors. Access will be provided via two driveways on Slover Avenue and one driveway on Alder Avenue. The existing site is currently vacant.

The project trip generation was prepared using trip rates for High Cube Transload and Short-Term Storage Warehouse from the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition (2021). The truck percentages were determined using data from the SCAQMD Warehouse Truck Trip Study, July 17, 2017. A Passenger Car Equivalent (PCE) factor was added to the truck trips to account for the larger vehicle size and increased roadway capacity utilized by large trucks. the project is forecast to generate 531 daily PCE trips including 30 PCE trips during the AM peak hour and 38 PCE trips during the PM peak hour.

The following 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.

1. Alder Avenue/Slover Avenue
2. Project Driveway 1/Slover Avenue
3. Project Driveway 2/Slover Avenue
4. Alder Avenue/Project Driveway 3

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

- Existing Year Traffic Conditions
- Existing Year plus Project Traffic Conditions
- Project Opening Year Traffic Conditions
- Project Opening Year plus Project Traffic Conditions

Existing Conditions Intersection Analysis Results

The intersection of Alder Ave/Slover Ave operates at an unsatisfactory LOS F during the AM and PM peak hour.

Existing Plus Project Conditions Intersection Analysis Results

All intersections operate at satisfactory LOS except for the intersection of Alder Ave/Slover Ave operates at an unsatisfactory LOS F during the AM and PM peak hour.

Opening Year (2023) Intersection Analysis Results

The intersection of Alder Ave/Slover Ave operates at an unsatisfactory LOS F during the AM and PM peak hour.

Opening Year (2023) Plus Project Intersection Analysis Results

All intersections operate at satisfactory LOS except for the intersection of Alder Ave/Slover Ave operates at an unsatisfactory LOS F during the AM and PM peak hour.

Project Improvements

It is recommended that a signal be added as a part of project improvements to the intersection of Alder Ave/Slover Ave for satisfactory intersection operations, and also to improve NB/SB turning movement safety at the intersection.

2 INTRODUCTION

This Focused Traffic Impact Analysis (FTIA) has been prepared by EPD Solutions, Inc. (EPD) to analyze the potential transportation-related impacts of the proposed industrial building located the southeast corner of Alder Avenue and Slover Avenue in unincorporated San Bernardino County.

The scope of work for this FTIA was reviewed and approved by the County of San Bernardino and is provided in Appendix A. Although the project would not need a TIA based on the peak hour trip generation of the proposed project, this study was conducted at the request of the County due to concerns over the proximity to Bloomington High School and the fact that Slover Avenue is a Major Highway and Alder Avenue is a Secondary Highway. The FTIA was prepared according to the approved scope of work using methodologies and significance criteria consistent as per the County of San Bernardino Traffic Impact Analysis (TIA) Guidelines.

2.1 Project Description

The project proposes to construct a 259,481 square foot speculative high-cube warehouse with 38 dock doors. The existing site is currently vacant. The location of the project is shown in Figure 1 and the project site plan is shown in Figure 2. Access will be provided via two driveways on Slover Avenue (Project Dwy 1and 2) and one driveway on Alder Avenue (Project Dwy 3). It is to be noted that Project Dwy 1 is only accessible to trucks. Project Dwy 2 is accessible to both passenger vehicles and trucks, and Project Dwy 3 is only accessible to passenger vehicles.

Figure 1: Project Location

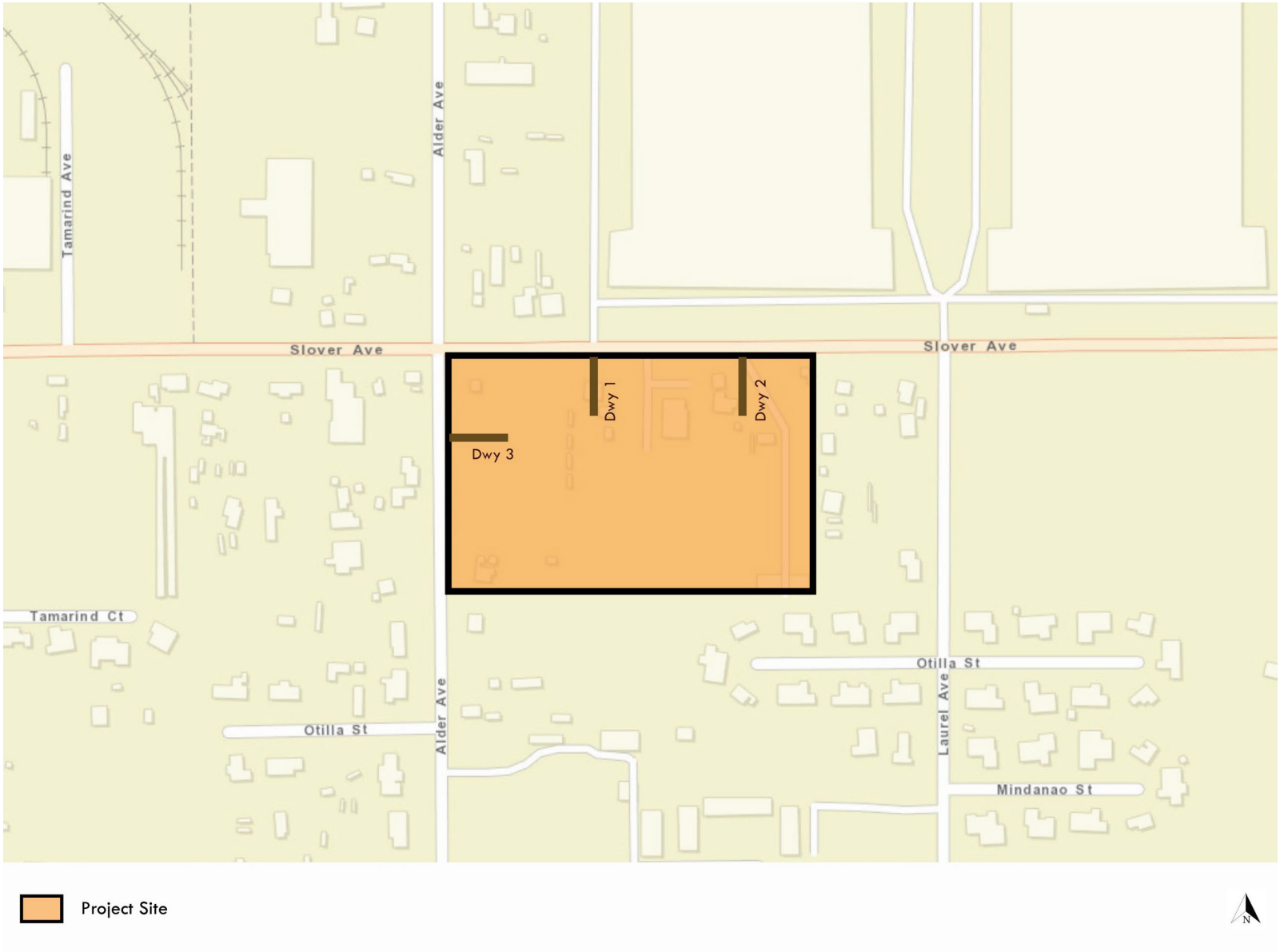
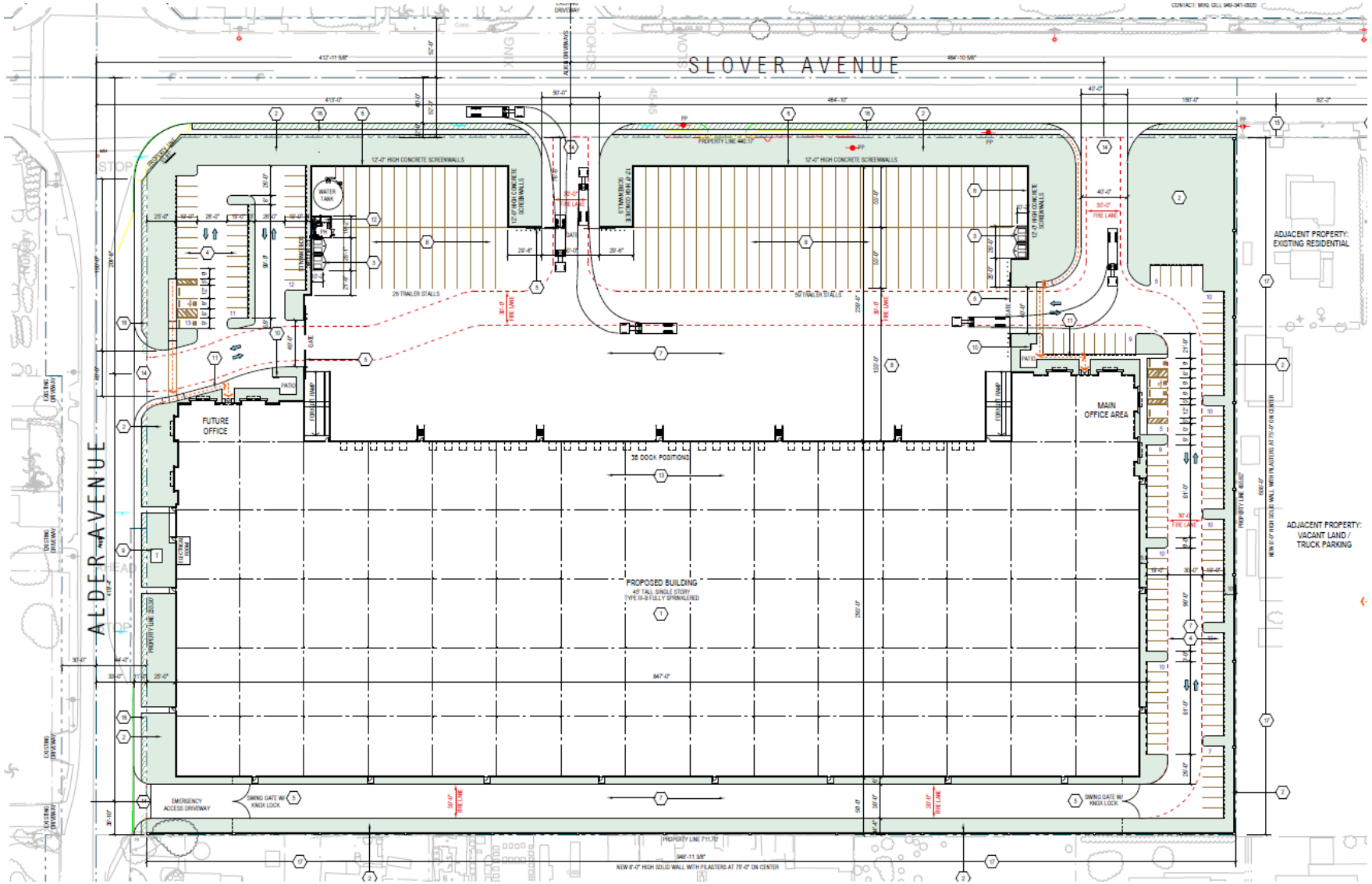


Figure 2: Project Site Plan



2.2 Study Area and Analysis Scenarios

At the request of the County due to concerns over the proximity to Bloomington High School and the fact that Slover Avenue is a Major Highway and Alder Avenue is a Secondary Highway, the following study area intersections were evaluated during the AM and PM peak hours for the FTIA. AM and PM peak hours 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. The following intersections were included in the analysis:

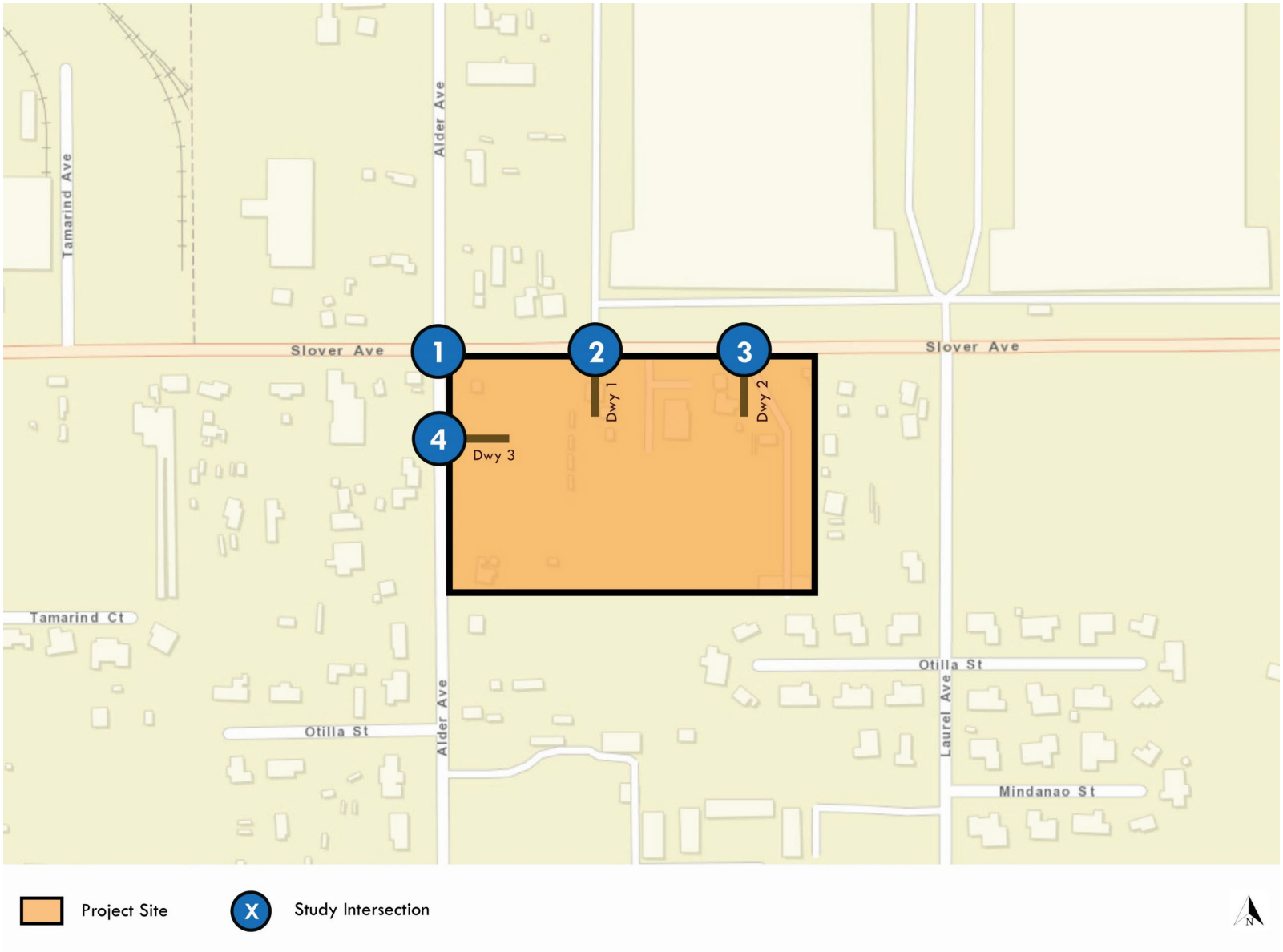
1. Alder Avenue/Slover Avenue
2. Project Driveway 1/Slover Avenue
3. Project Driveway 2/Slover Avenue
4. Alder Avenue/Project Driveway 3

The locations of the study area intersections are shown on Figure 3. AM and PM peak hour traffic operations were evaluated for the following scenarios:

- Existing Year Traffic Conditions
- Existing Year plus Project Traffic Conditions
- Project Opening Year Traffic Conditions
- Project Opening Year plus Project Traffic Conditions

EPD collected counts for the study intersections on Tuesday, October 7th, 2021. As per the County of San Bernardino TIA guidelines, forecast traffic volumes for the Project Opening Year (2023) baseline conditions were developed by applying a growth rate of 2 percent per year to the existing (2021) traffic counts. All traffic count data are provided in *Appendix B*

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. In this report, LOS at signalized and unsignalized intersections is calculated using the Highway Capacity Manual (HCM), 6th 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 1: Relationship between Control Delay and LOS at a Signalized Intersection

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 3.

Table 2: 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

2.4 Significance Criteria

The County of San Bernardino Traffic Impact Study Guidelines provides the following criteria for the determination of traffic impacts. It should be noted that the project is located in the Valley region.

Signalized Intersections

"Any study intersection that is operating at a LOS A, B, C or D for any study scenario without project traffic in which the addition of project traffic causes the intersection to degrade to a LOS E or F shall mitigate the impact to bring the intersection back to at least LOS D.

Any study intersection that is operating at a LOS E or F for any study scenario without project traffic shall mitigate any impacts so as to bring the intersection back to the overall level of delay established prior to project traffic being added.

For scenarios which include the addition of Cumulative Project Traffic (i.e. shared impacts), study intersections shall be mitigated to LOS D or better in the Valley and Mountain regions and LOS C or better in the Desert regions of the County."

Unsignalized Intersections

"An impact is considered significant if the study determines that either section a) or both sections b) and c) occur.

a) The addition of project related traffic causes the intersection to move from a LOS D or better to a LOS E or worse

OR

b) The project contributes additional traffic to an intersection that is already projected to operate at an LOS E or F with background traffic

AND

c) One or both of the following conditions are met:
    1) The project adds ten (10) or more trips to any approach
    2) The intersection meets the peak hour traffic signal warrant after the addition of project traffic"

"Once a significant impact has been identified, mitigation shall be provided as follows:

1. For scenarios involving project traffic but not Cumulative Project Traffic, the LOS shall be mitigated to either LOS D or better for case a) above or to pre-project LOS and delay for case b) above.
2. For scenarios that include Cumulative Project Traffic study intersections shall be mitigated to LOS D or better in the Valley and Mountain regions and LOS C or better in the Desert regions of the County."

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.

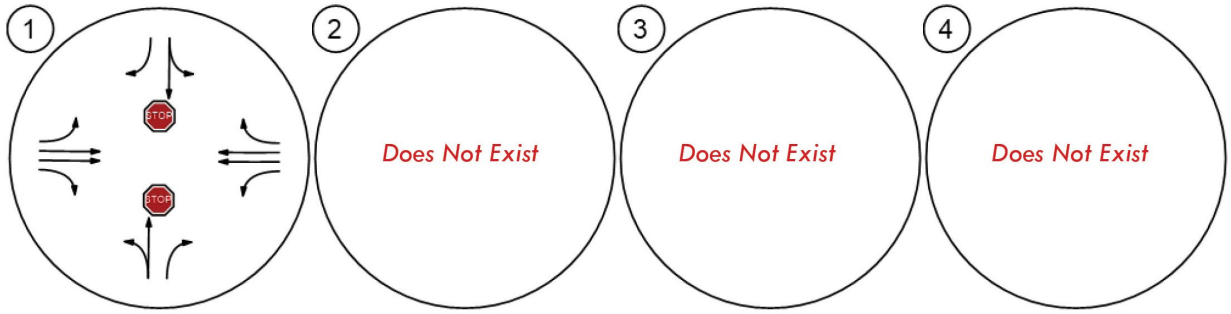
3.1 Existing Transportation System and Access

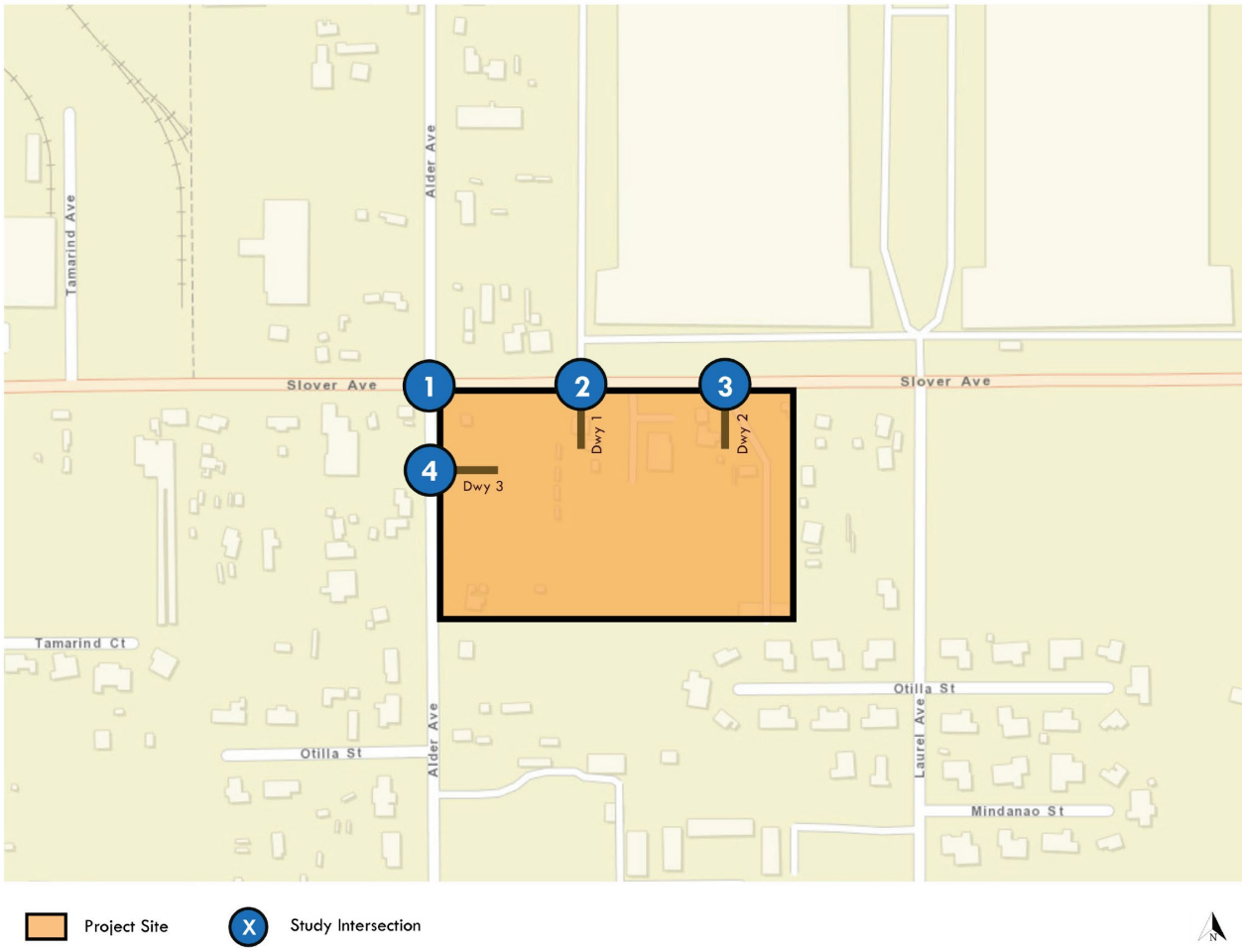
The project is located on the southeast corner of Alder Avenue and Slover Avenue in unincorporated San Bernardino County. Roadways providing access to the project site include I-15, Cedar Avenue, Sierra Avenue, Slover Avenue and Alder Avenue. The characteristics of each roadway are discussed below:

- Regional access is provided to the project via interstate highway I-15 which provides connections to Los Angeles County and San Diego County.
- Slover Avenue is a three-lane to six-lane roadway orientated in an east -west direction. Between Alder Avenue and Cedar Avenue, Slover Avenue is four lanes with two-way-left-turn-lanes. Slover Avenue is classified as a Major Highway according to the Bloomington Community Circulation Element. Class II bike lanes are not provided on either side of the roadway and the posted speed limit is 45mph west of Locust Avenue and 50 mph east of Locust Avenue.
- Sierra Avenue is a six-lane roadway with a raised median oriented in a north-south direction. Sierra Avenue is classified as a Major Highway north of the I-10 freeway and a Major Divided Highway between the I-10 freeway and Jurupa Avenue according to the Bloomington Community Circulation Element. South of Jurupa Avenue, Sierra Avenue is classified as a Major Arterial Highway. The posted speed limit is 40 mph north of the I-10 freeway and 50 mph south of the I-10 freeway. Class II bike lanes are not provided on either side of the roadway.
- Cedar Avenue is a four-lane undivided roadway and is generally oriented in a north-south direction. The Bloomington Community Circulation Element classifies Cedar Avenue as a Major Highway from the northern to southern boundaries of Bloomington. The posted speed limit along Cedar Avenue between Valley Boulevard and Slover Avenue is 40 mph.
- Alder Avenue is a two-lane undivided roadway and is oriented in a north-south direction. As per the County of San Bernardino General Plan, Alder Avenue is designated as a Secondary Highway which would have an ultimate build out of four-lanes undivided roadway. There are no sidewalks or bike lanes provided on Alder Avenue in the vicinity of the proposed project. As Bloomington High is located on Alder Avenue, the posted speed limit on Alder Avenue is 25 mph in the vicinity of the project.

The existing traffic control and intersection geometrics at study area intersections are shown in Figure 4.

Figure 4: Existing Lane Geometries and Traffic Control





3.2 Existing Traffic Volumes and Intersection Operations

Existing AM and PM peak hour traffic volumes at the study area intersections is shown in Figure 5. The existing Levels of Service at the study area intersections were determined using the HCM methodology, described previously in section 2.3. Table 3 shows the existing AM and PM peak hour levels of service at study intersections. All LOS calculations are provided in Appendix C. As shown in Table 3, the intersection of Alder Ave/Slover Ave operates at an unsatisfactory LOS F during both AM and PM peak hours.

Table 3: Existing AM and PM Peak Hour Level of Service

Intersection	Traffic Control	Existing			
		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
1. Alder Ave/Slover Ave	TWSC	513.5	F	73.0	F
2. Proj Dwy 1/Slover Ave	TWSC	-	-	-	-
3. Proj Dwy 2/Slover Ave	TWSC	-	-	-	-
4. Alder Ave/Proj Dwy 3	TWSC	-	-	-	-

=Unsatisfactory Intersection Operation

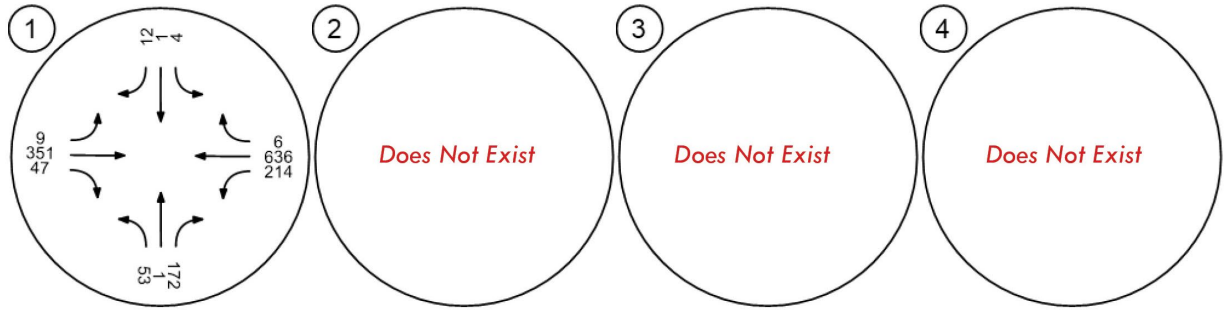
TWSC = Two-Way Stop Controlled

[1] Delay in Seconds

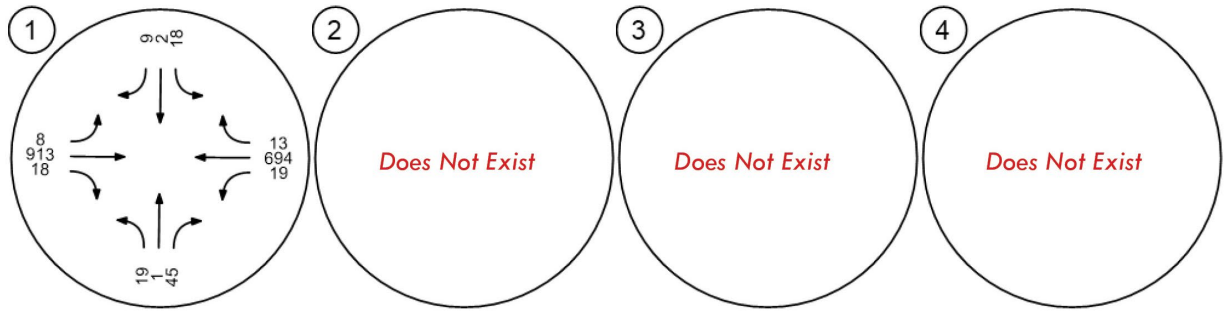
[2] Level of Service

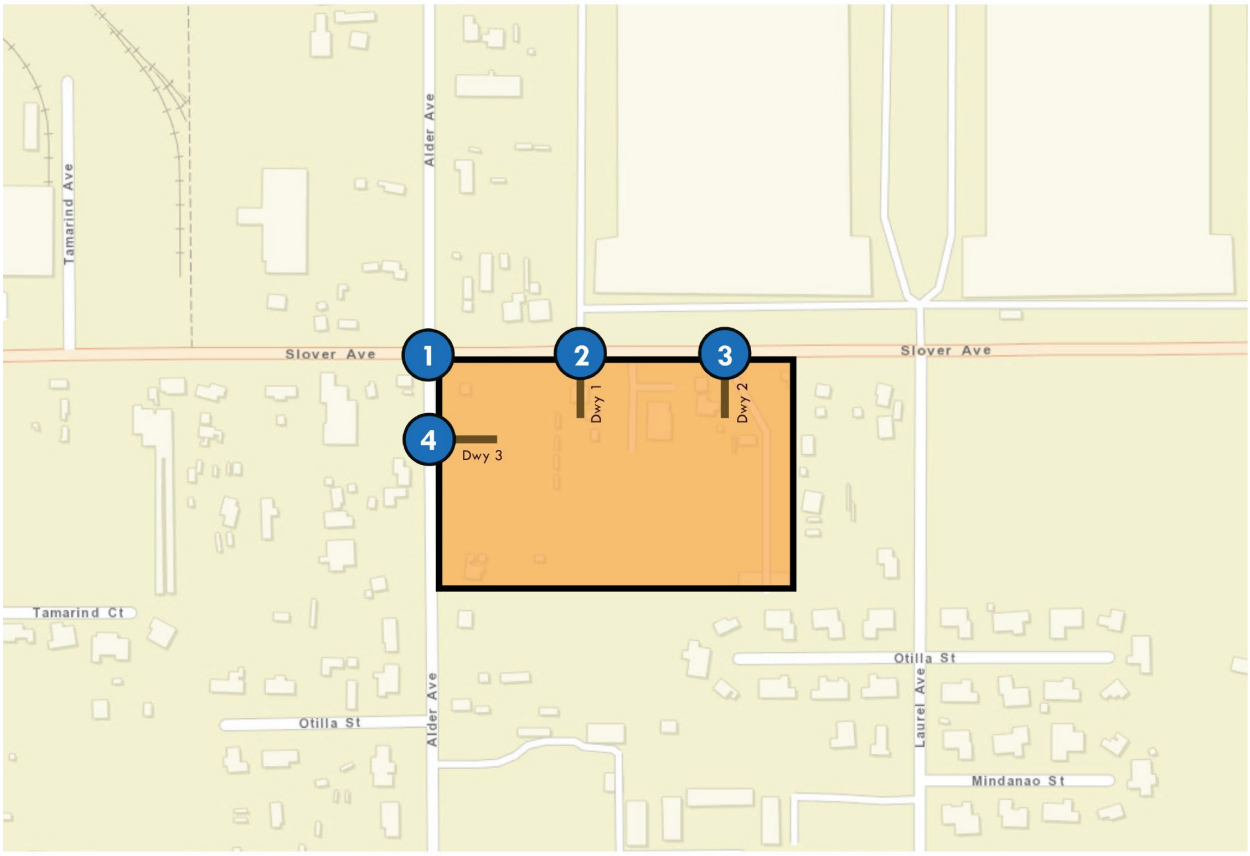
Figure 5: Existing AM and PM Peak Hour Traffic Volumes

Existing AM Peak Hour Traffic Voumes



Existing PM Peak Hour Traffic Voumes





3.3 Opening Year Traffic Volumes and Intersection Operations

Opening Year Baseline (2023) traffic volumes were developed by applying a growth rate of two percent per year to the existing (2021) traffic volumes The Opening Year (2023) Baseline traffic volumes are illustrated in Figures 6. Table 4 below shows the Opening Year AM and PM peak hour levels of service at study intersections. All LOS calculations are provided in *Appendix* C. As shown in Table 4, the intersection of Alder Ave/Slover Ave operates at an unsatisfactory LOS F during both AM and PM peak hours.

Table 4: Opening Year AM and PM Peak Hour Level of Service

Intersection	Traffic Control	Opening Year			
		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
1. Alder Ave/Slover Ave	TWSC	663.4	F	84.8	F
2. Proj Dwy 1/Slover Ave	TWSC	-	-	-	-
3. Proj Dwy 2/Slover Ave	TWSC	-	-	-	-
4. Alder Ave/Proj Dwy 3	TWSC	-	-	-	-

=Unsatisfactory Intersection Operation

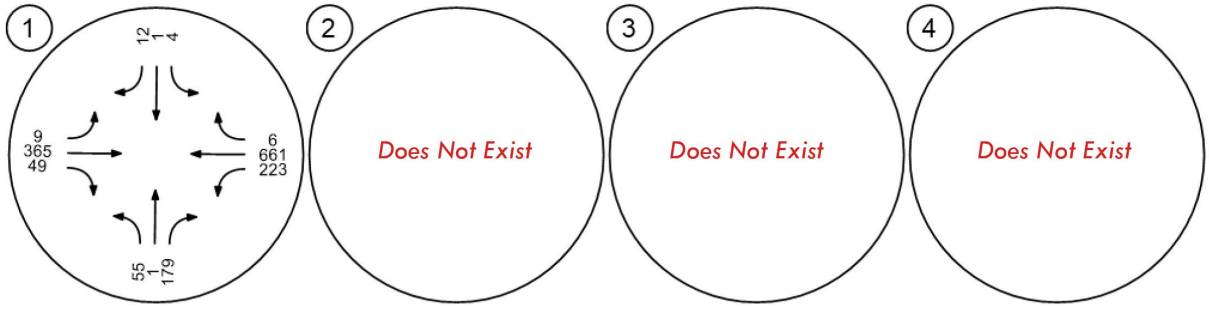
TWSC = Two-Way Stop Controlled

[1] Delay in Seconds

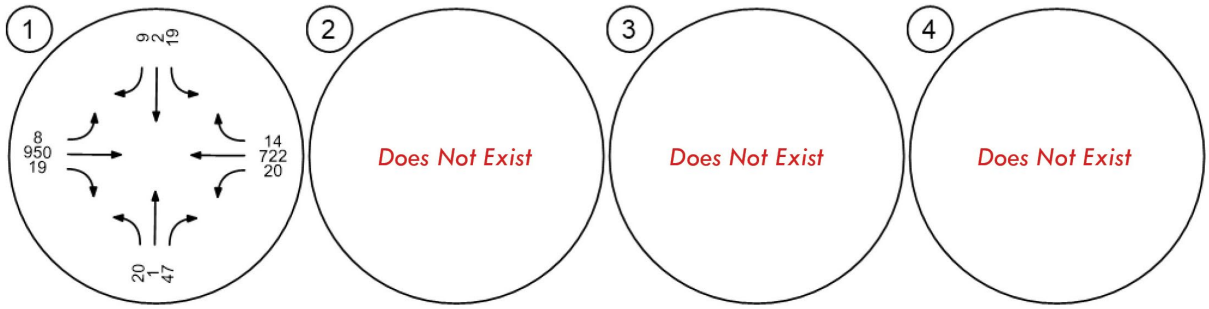
[2] Level of Service

Figure 6: Opening Year AM and PM Peak Hour Traffic Volumes

Opening Year AM Peak Hour Traffic Voumes



Opening Year PM Peak Hour Traffic Voumes



4 PROPOSED PROJECT

4.1 Project Trip Generation

The project trip generation was prepared using trip rates for High Cube Transload and Short-Term Storage Warehouse from the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition (2021). The truck percentages were determined using data from the SCAQMD Warehouse Truck Trip Study, July 17, 2017. A Passenger Car Equivalent (PCE) factor was added to the truck trips to account for the larger vehicle size and increased roadway capacity utilized by large trucks. Table 5 presents the trip generation estimate for the proposed project. As shown in Table 5, the project is forecast to generate 531 daily PCE trips including 30 PCE trips during the AM peak hour and 38 PCE trips during the PM peak hour.

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. The passenger vehicle trip distribution for the proposed industrial building is shown in Figure 7. The truck trip distribution for the proposed industrial building is shown in Figure 8. The project automobile trip assignment for AM and PM peak hours is shown in Figure 9. The project truck trip assignment in PCE for AM and PM peak hours is shown in Figure 10.

Table 5: Project Trip Generation

				AM Peak Hour			PM Peak Hour		
Land Use		**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates									
High Cube Transload and Short-Term Storage Warehouse[1]		TSF	1.40	0.06	0.02	0.08	0.03	0.07	0.10
Total Vehicle Trip Generation									
Slover/Alder Warehouse	259.481	TSF	363	16	5	21	7	19	26
Vehicle Mix[2]		***Percent***							
Passenger Vehicles		69.00%	251	11	3	14	5	13	18
2-Axle Trucks		6.80%	25	1	0	1	0	1	2
3-Axle Trucks		5.50%	20	1	0	1	0	1	1
4+-Axle Trucks		18.70%	68	3	1	4	1	3	5
		100%	363	16	5	21	7	19	26
PCE Trip Generation[3]		***PCE Factor***							
Passenger Vehicles		1.0	251	11	3	14	5	13	18
2-Axle Trucks		1.5	37	2	0	2	1	2	3
3-Axle Trucks		2.0	40	2	1	2	1	2	3
4+-Axle Trucks		3.0	204	9	3	12	4	10	15
Total PCE Trip Generation			531	23	7	30	11	27	38

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 154 - High-Cube Transload and Short-Term Storage Warehouse.

[2] Vehicle Mix from the *SCAQMD Warehouse Truck Trip Study* . July 17, 2017.

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

Figure 7: Project Passenger Vehicle Trip Distribution

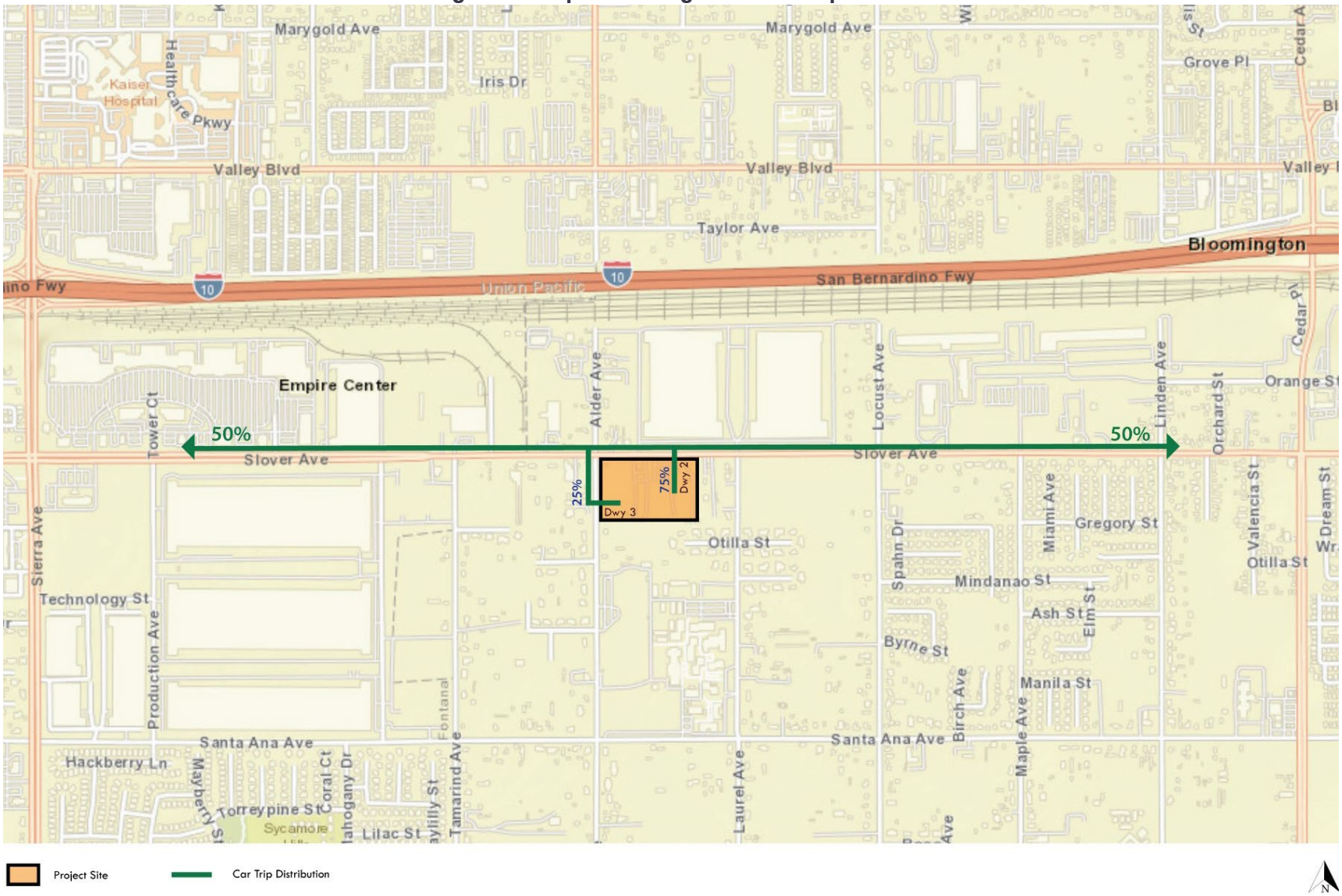


Figure 8: Project Truck Trip Distribution

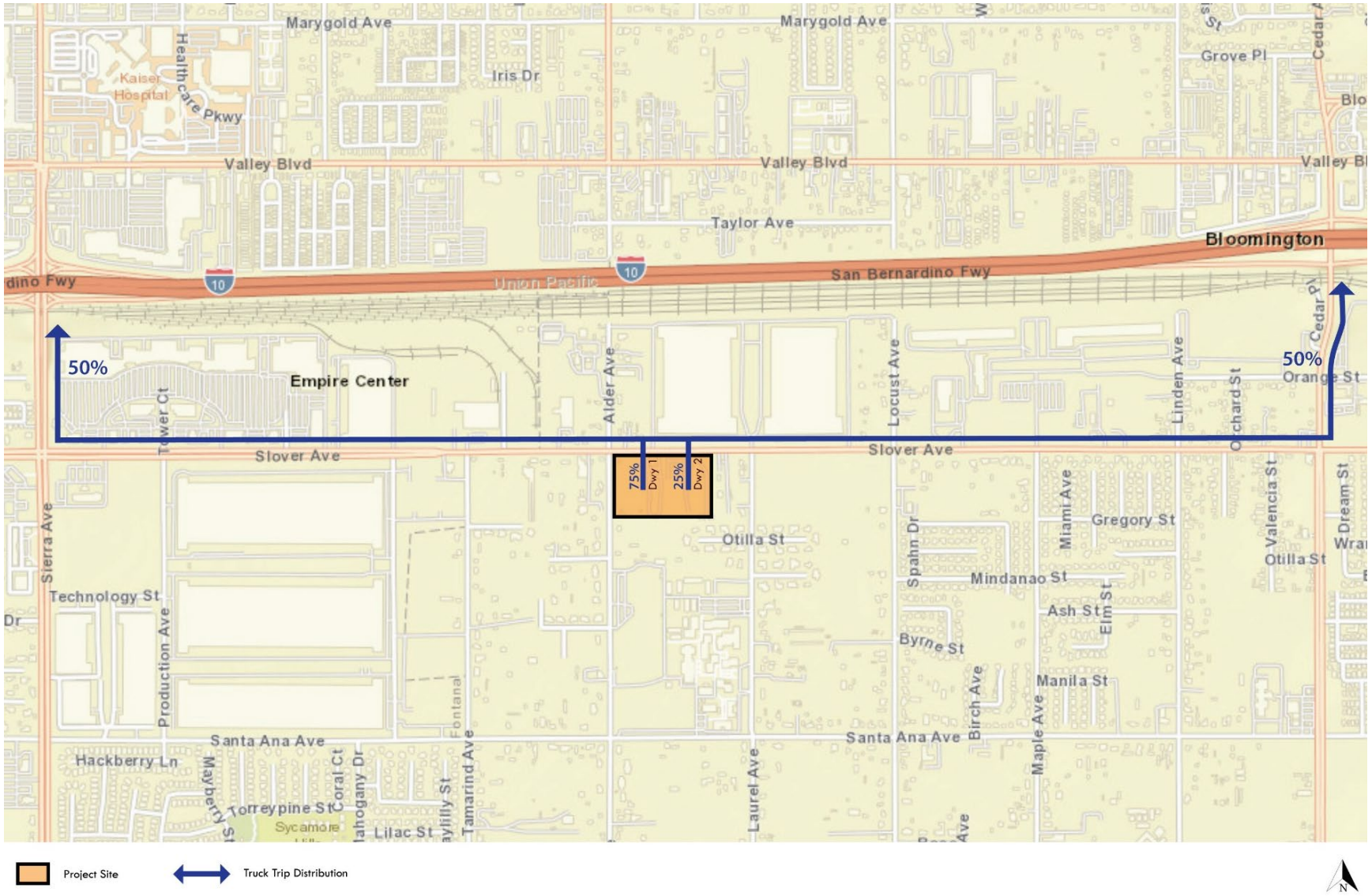
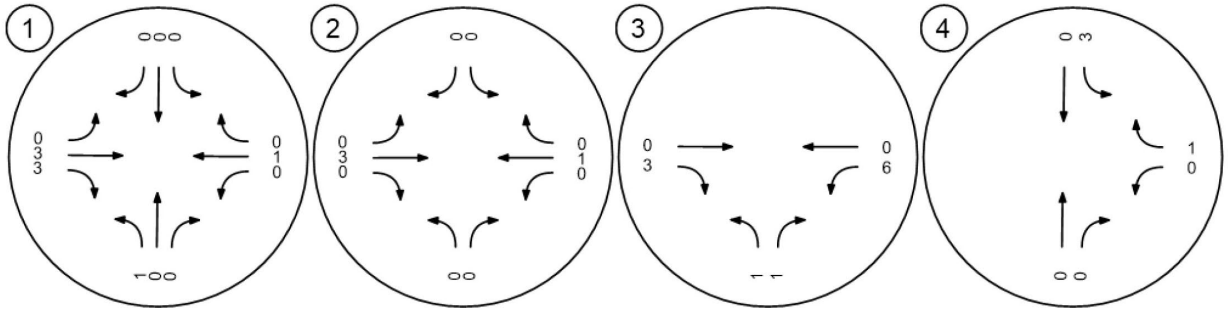
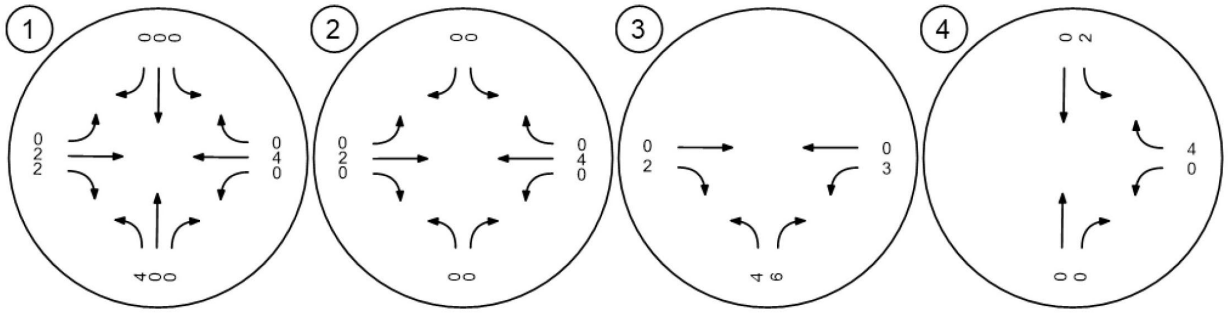


Figure 9: Project Passenger Vehicle Trip Assignment

AM Automobile Trip Assignment



PM Automobile Trip Assignment



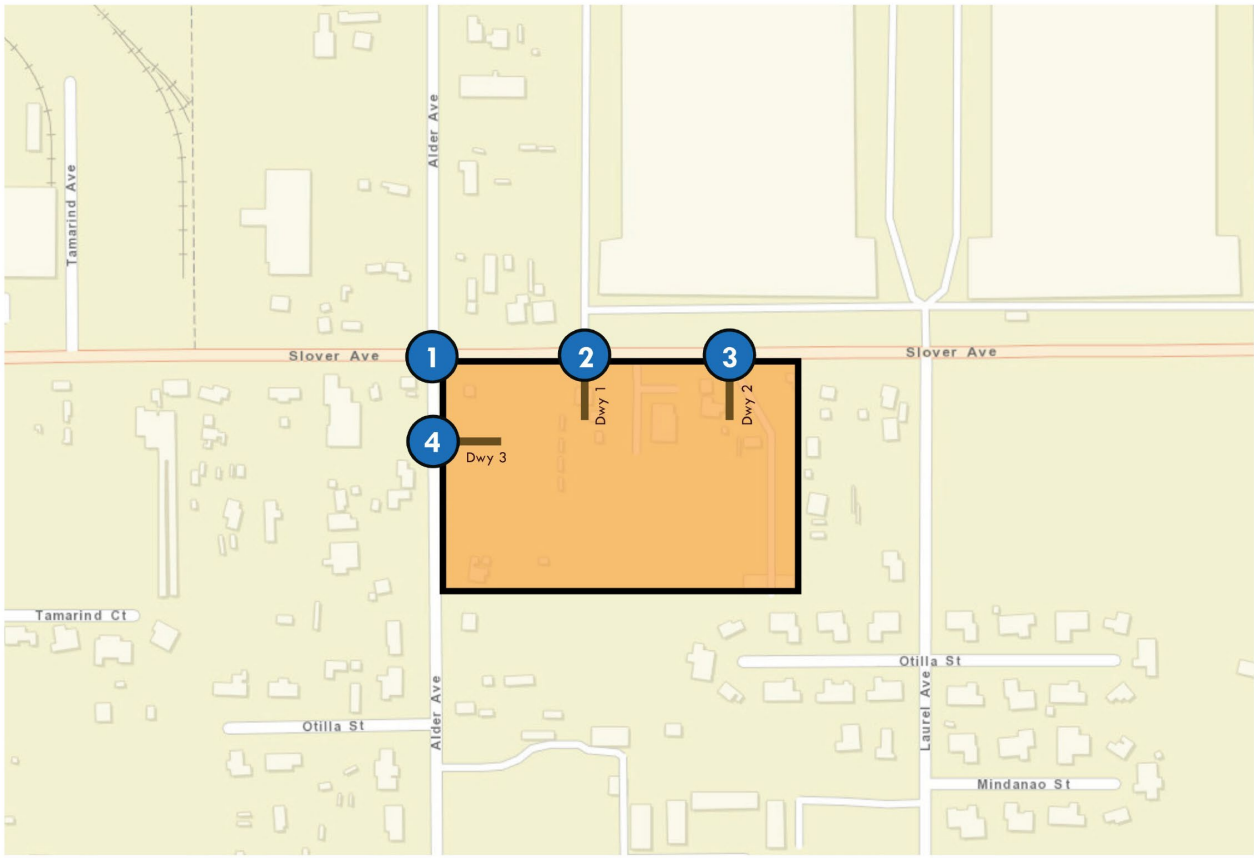
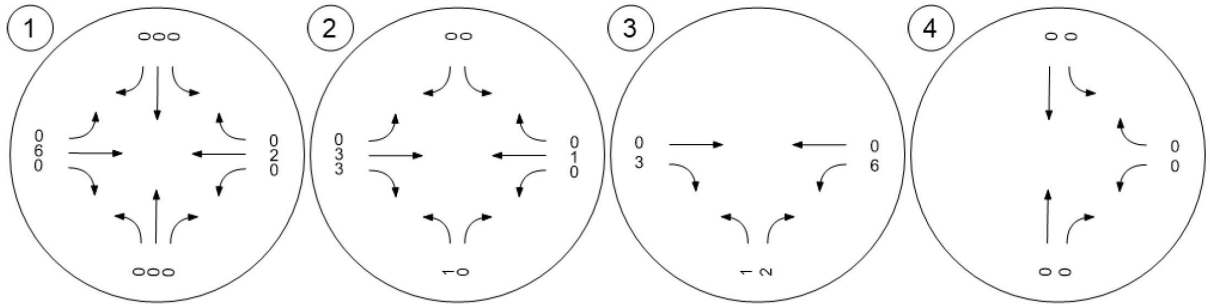
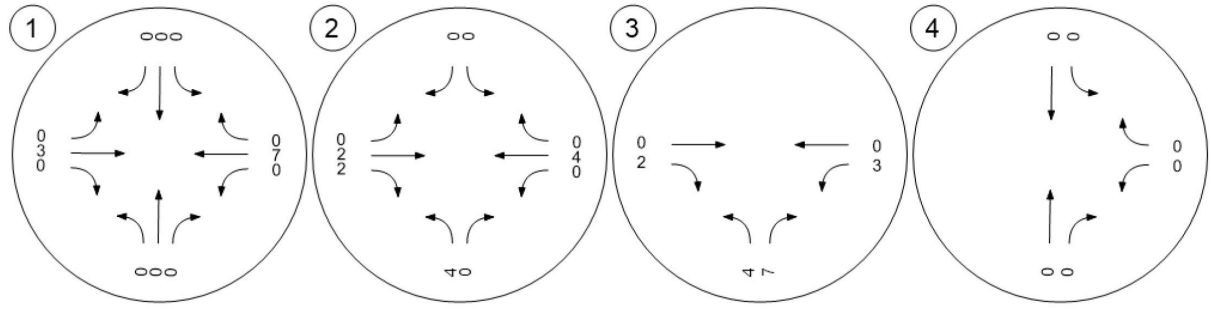


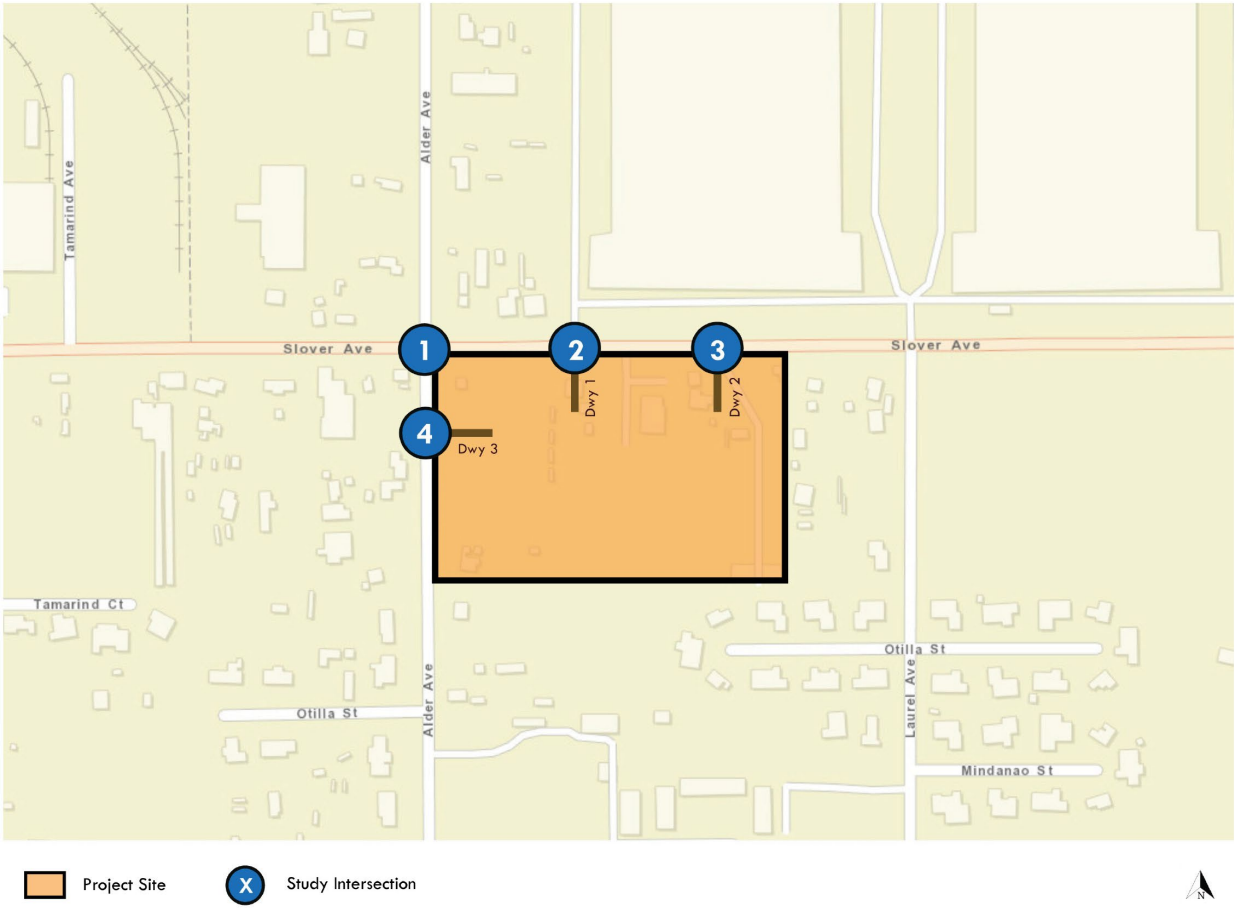
Figure 10: Project Truck Trip Assignment (PCE)

AM Truck Trip Assignment



PM Truck Trip Assignment





5 PROJECT IMPACTS

5.1 Existing Plus Project Traffic Volumes and Intersection Operations

Existing plus Project traffic volumes were developed by adding the project passenger vehicle and truck trip assignment to the Existing baseline traffic volumes. The traffic volumes for this scenario are shown in Figure 11. Levels of Service at the study area intersections were determined using the HCM methodology, described previously in section 2.3. Table 6 shows the Opening Year plus Other Projects plus Project AM and PM peak hour levels of service at study intersections. All LOS calculations are provided in *Appendix* C. As shown in Table 6, all intersections would operate at satisfactory LOS during both AM and PM peak hours except for the intersection of Alder Ave/Slover Ave which would operate at an unsatisfactory LOS F during the AM and PM peak hours.

Table 6: Existing Plus Project AM and PM Peak Hour Level of Service

Intersection	Traffic Control	Existing				Existing Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
1. Alder Ave/Slover Ave	TWSC	513.5	F	73.0	F	550.4	F	77.1	F
2. Proj Dwy 1/Slover Ave	TWSC	-	-	-	-	13.4	B	21.4	C
3. Proj Dwy 2/Slover Ave	TWSC	-	-	-	-	12.7	B	18.8	C
4. Alder Ave/Proj Dwy 3	TWSC	-	-	-	-	9.5	A	8.6	A

=Unsatisfactory Intersection Operation

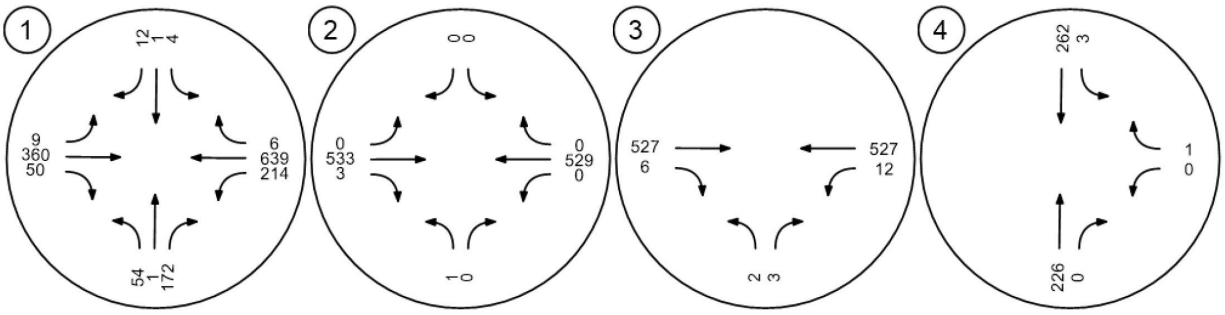
TWSC = Two-Way Stop Controlled

[1] Delay in Seconds

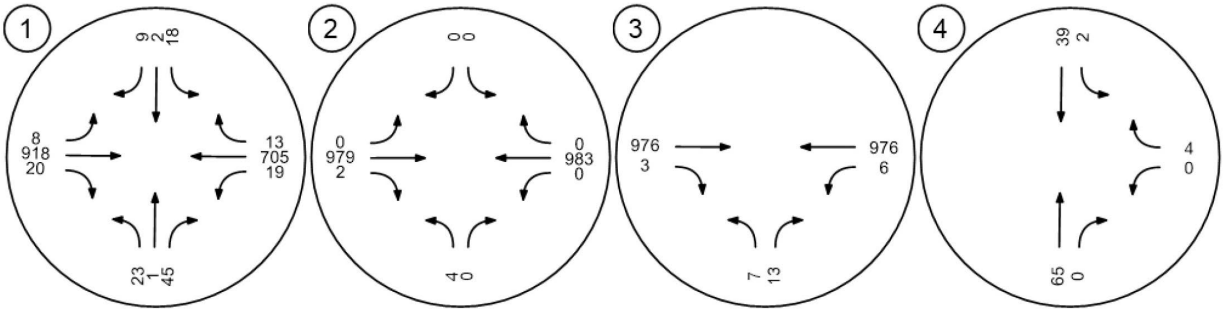
[2] Level of Service

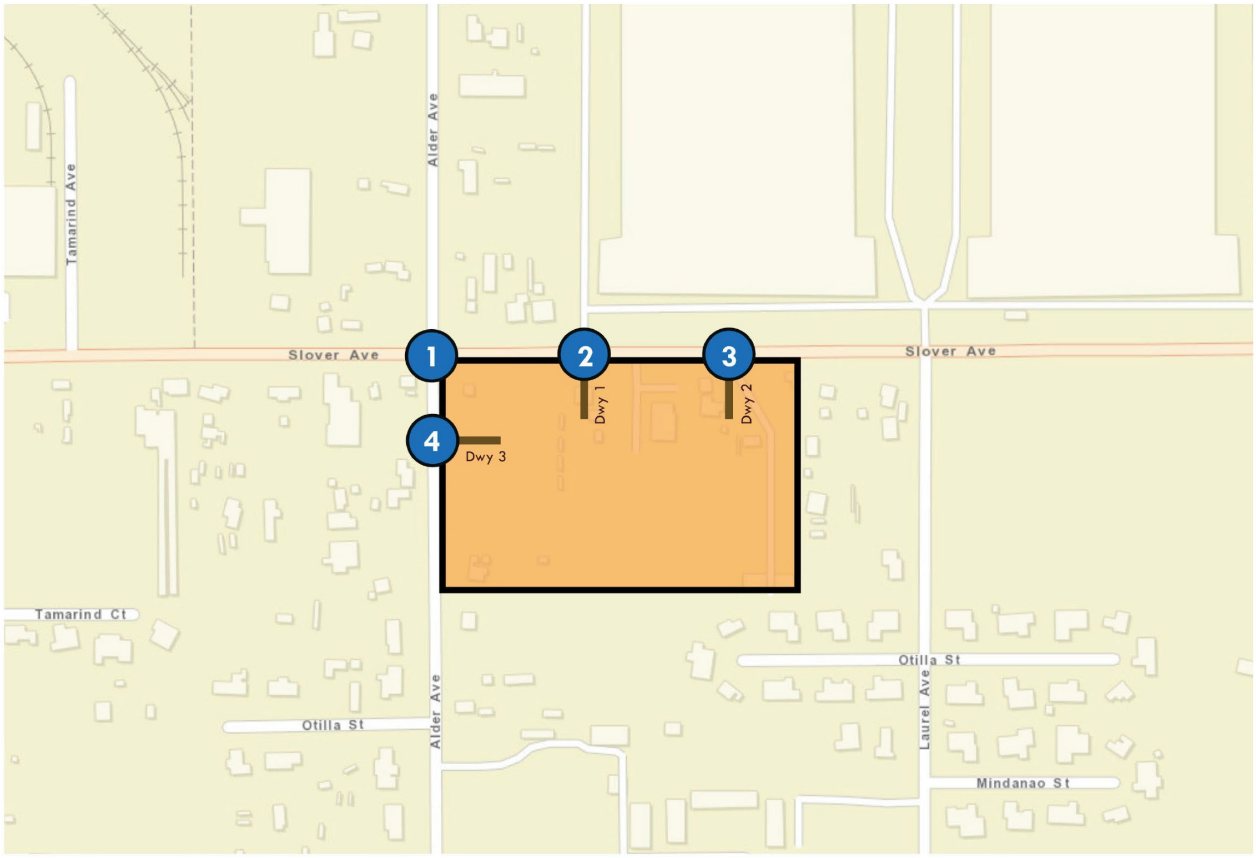
Figure 11: Existing Plus Project AM and PM Peak Hour Volumes

Existing AM Plus Project Peak Hour Traffic Voumes



Existing PM Plus Project Peak Hour Traffic Voumes





5.2 Opening Year Plus Project Traffic Volumes and Intersection Operations

Opening Year plus Project traffic volumes were determined by adding the project trips to baseline Opening Year traffic volumes. The Opening Year plus Project traffic volumes are shown in Figure 12. Levels of Service at the study area intersections were determined using the HCM methodology, described previously in section 2.3. Table 7 shows the Future Build-Out plus Project AM and PM peak hour levels of service at study intersections. All LOS calculations are provided in *Appendix* C. As shown in Table 7, all intersections would operate at satisfactory LOS during both AM and PM peak hours except for the intersection of Alder Ave/Slover Ave which would operate at an unsatisfactory LOS F during the AM and PM peak hours.

Mitigation for the impacted intersection is discussed in Section 7 Project Mitigation and Fair Share.

Table 7: Opening Year Plus Project AM and PM Peak Hour Level of Service

Intersection	Traffic Control	Opening Year				Opening Year Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
1. Alder Ave/Slover Ave	TWSC	663.4	F	84.8	F	715.6	F	90.4	F
2. Proj Dwy 1/Slover Ave	TWSC	-	-	-	-	13.7	B	22.4	C
3. Proj Dwy 2/Slover Ave	TWSC	-	-	-	-	12.9	B	19.5	C
4. Alder Ave/Proj Dwy 3	TWSC	-	-	-	-	9.5	A	8.6	A

=Unsatisfactory Intersection Operation

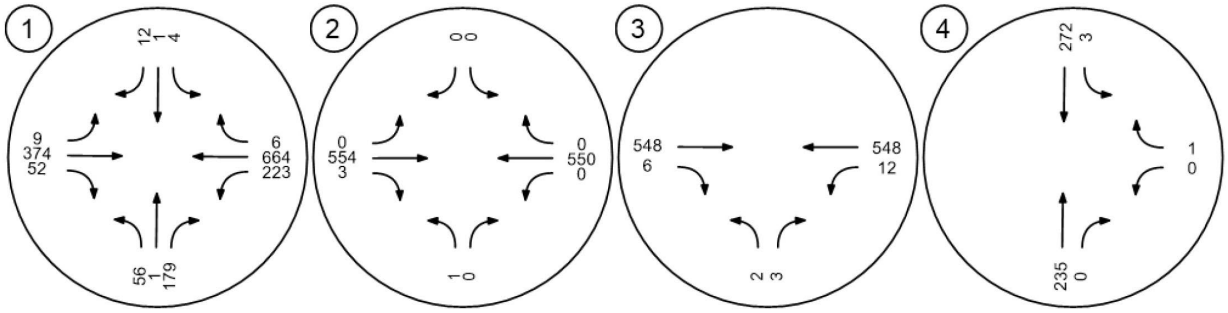
TWSC = Two-Way Stop Controlled

[1] Delay in Seconds

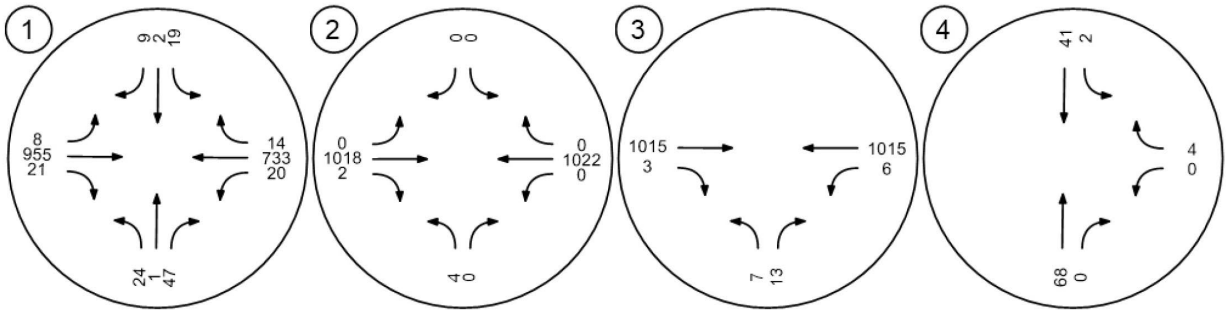
[2] Level of Service

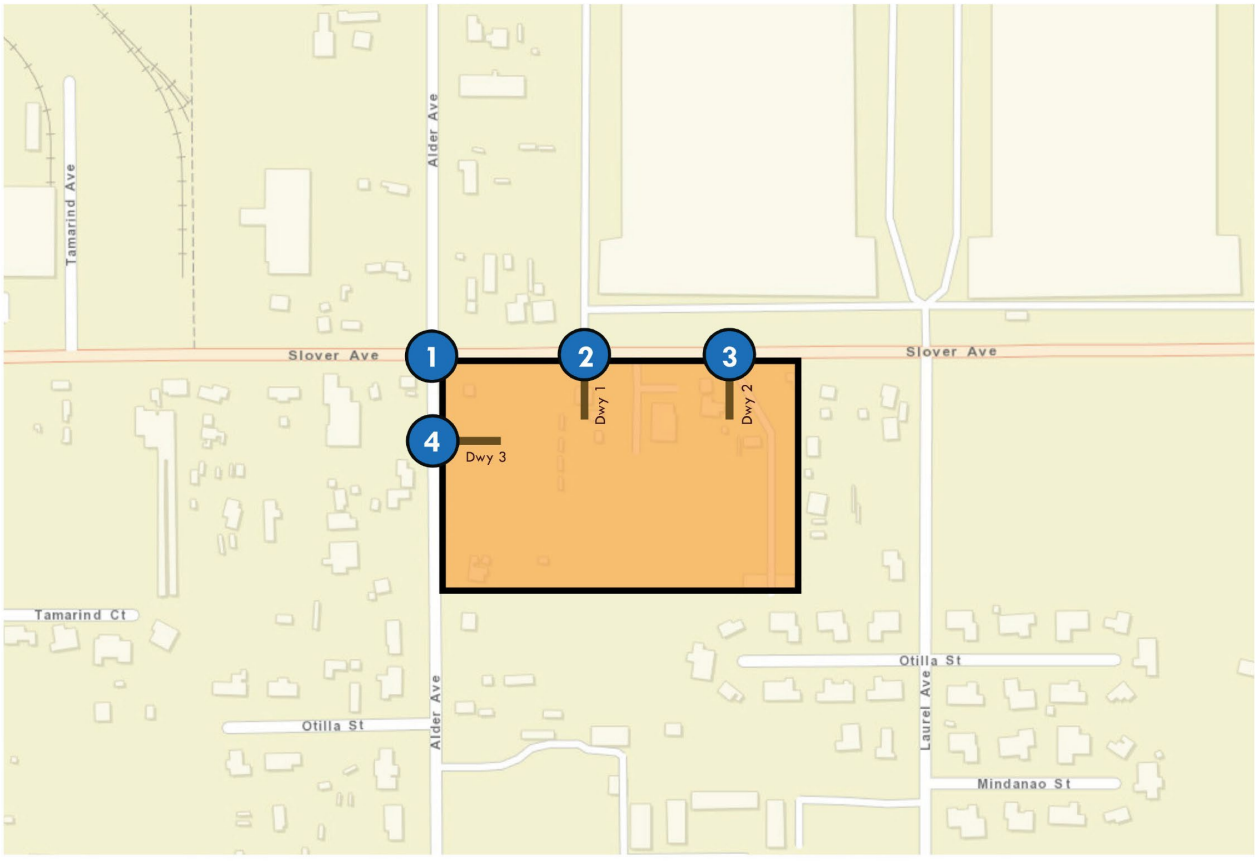
Figure 12: Opening Year Plus Project Peak Hour Traffic Volumes

Opening Year AM Plus Project Peak Hour Traffic Voumes



Opening Year PM Plus Project Peak Hour Traffic Voumes





6 RECOMMENDED IMPROVEMENTS AND WARRANT ANALYSIS

6.1 Recommended Improvements

Development of the proposed industrial building would result in unsatisfactory LOS at the intersection of Alder Ave/Slover Ave during both the Existing plus Project and Opening plus project conditions. It is recommended that a signal be added as a part of project improvements to the intersection for satisfactory intersection operations, and also to improve NB/SB turning movement safety at the intersection.

Table 8 shows the LOS at the intersection of Alder Ave/Slover Ave with the proposed improvements. As seen in Table 8, the intersection would operate at satisfactory LOS with the recommended improvements.

Table 8: Existing Plus Project and Opening Plus Project AM and PM Peak Hour Level of Service with Improvements

Scenario	Intersection	Without Improvements					With Improvements				
		Traffic Control	AM Peak Hour		PM Peak Hour		Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay[1]	LOS[2]	Delay[1]	LOS[2]		Delay[1]	LOS[2]	Delay[1]	LOS[2]
Existing Plus Project	1. Alder Ave/Slover Ave	TWSC	550.4	F	77.1	F	Signal	30.98	C	29.9	C
Opening Plus Project	1. Alder Ave/Slover Ave	TWSC	715.6	F	90.4	F	Signal	30.67	C	29.6	C

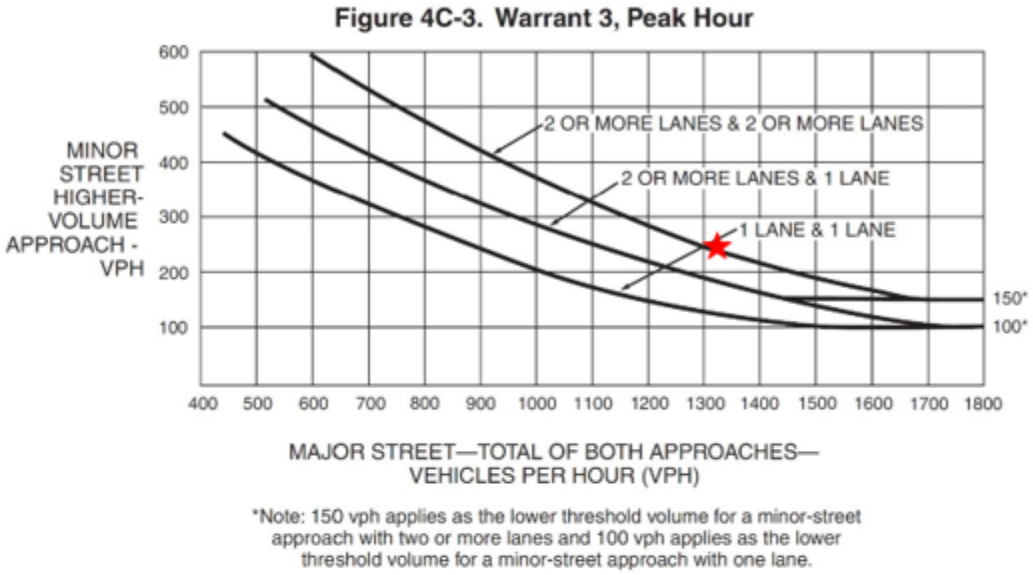
[1] Delay in Seconds
[2] Level of Service
=Unsatisfactory Intersection Operation
TWSC = Two-Way Stop Controlled

6.2 Signal Warrant for Alder Avenue/Slover Avenue

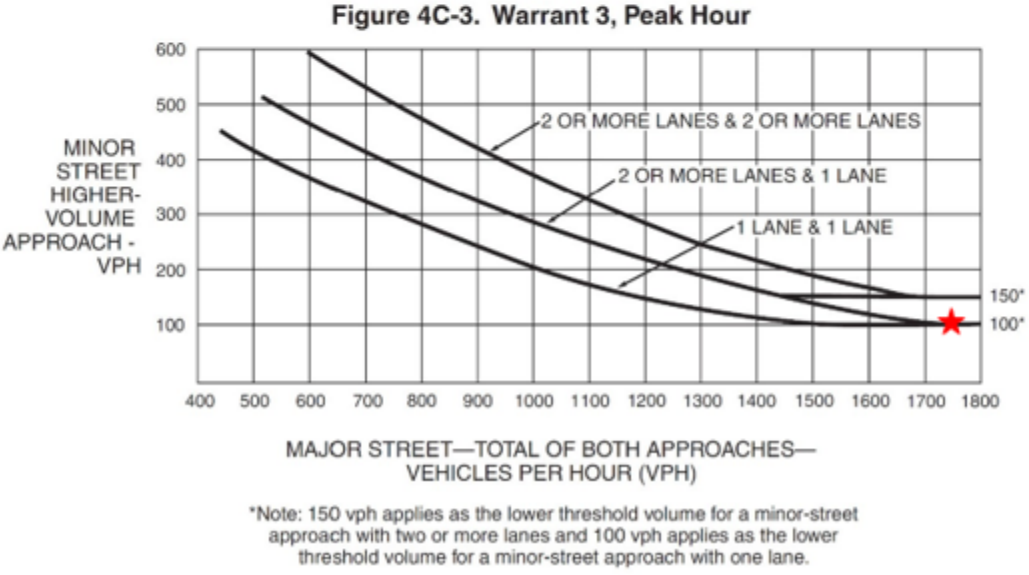
The California Manual of Uniform Traffic Control Devices (CA MUTCD) 2014 Revision 6 (March 30, 2021) provides a total of eight types of signal warrant analyses to determine whether a traffic signal may be warranted at a given location. Warrant 3, Peak Hour was evaluated as count data is unavailable to evaluate the other 7 warrants. Section 4.C.04 of the CA MUTCD notes that "traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street." Intersection #1 Alder Ave/Slover Ave was analyzed to substantiate the proposed signal for mitigation. As shown in Figure 13, traffic volume at the intersection with the project would meet the signal warrant due to high volume of traffic during both AM and PM peak hours in the Opening plus Project conditions.

Figure 13: Alder Ave/Slover Ave Signal Warrant

Alder Ave/Slover Ave
Opening AM Plus Project Peak Hour
Minor Street Approach – 253 vehicles
Major Street (Both Approaches) – 1,328 vehicles
Meets Warrant - Yes



Alder Ave/Slover Ave
Opening PM Plus Project Peak Hour
Minor Street Approach - 102 vehicles
Major Street (Both Approaches) – 1,751 vehicles
Meets Warrant - Yes



APPENDIX A – SCOPE OF WORK

SCOPE FOR TRAFFIC STUDY

Project Name:	Alder Avenue/Slover Avenue Industrial Project

This Scope for Traffic Study acknowledges San Bernardino County Department of Public Works, Traffic Division requirements of traffic impact analysis for the project and is subject to change:

Project Address:	Southeast corner of Alder Avenue and Slover Avenue in Bloomington (See Figure 1 attached)		
Project Description:	Construction of a 259,481 square foot speculative high-cube warehouse with 38 dock doors. Access will be provided via two driveways on Slover Avenue and one driveway on Alder Avenue. The site plan is provided as Figure 2 (attached).		
City:	Unincorporated San Bernardino County		
Project Buildout Year:	2023	**Ambient Growth Rate per Year:**	2%
Closest Intersection (Xtn) to the Project			
Xtn N/S Street Name:	Alder Avenue		
Xtn E/W Street Name:	Slover Avenue		
Thomas Guide Pg+Grid:		**County Supervisorial District:**	5

	Engineer	**Developer**
Company:	EPD Solutions	Duke Realty
Name:	Meghan Macias	Nancy Shultz
Address:	2 Park Plaza, Suite 1120	200 Spectrum Center Dr, St 1600
City, State, Zip Code:	Irvine, CA, 92614	Irvine, CA 92618
Phone #:	(949) 794-1186	(949) 797-7000
Fax #:		
Email:	meghan@epdsolutions.com	

By: Meghan Macias

Print Name: Meghan Macias

Consultant/Developer's Representative **Date 12/23/21**

Reviewed By:

Print Name:

Traffic Division Representative **Date**

SCOPE FOR TRAFFIC STUDY

Project Name:	Alder Avenue/Slover Avenue Industrial Project

1. Traffic Distribution: Please insert or attach Figure(s) illustrating project trip distribution in percentages and volumes at the study intersections analyzed.
Please see the attached trip generation analysis. The project does not meet the County's criteria of 100 peak hour trips or more for preparation of a TIA. However, the County has requested a study be provided due to concerns over the proximity to Bloomington High School and the fact that Slover Avenue is a Major Highway and Alder Avenue is a Secondary Highway. Please see the attached trip distribution figure.

2. Trip Credit: Exact amount of credit subject to approval by Traffic Division.

Transportation Demand Management (TDM)	Yes/no	No
Existing Active Land Use	Yes/no	No
Previous Land Use	Yes/no	No
Internal Trip Reduction	Yes/no	No
Pass-by Trip Reduction	Yes/no	No

3. Related Projects: Consultant should check with Planning in the San Bernardino County Department of Land Use Services and planning departments of adjoining Cities. Documentation of the consultation from these agencies shall be included in the traffic study. Related projects list shall be submitted to Traffic Division for review and approval before being incorporated in the study.

4. Freeway Analysis: The potential traffic impact on the following Freeway(s) must be considered.

_____

_____

_____

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) and can be obtained from http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf. If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using HCM procedures. Appendix A of the SANBAG CMP outlines allowable modifications to these procedures. The SANBAG CMP can be viewed online at: https://www.gosbcta.com/plans-projects/plans-traffic-mitigation.html

SCOPE FOR TRAFFIC STUDY

Project Name:	Alder Avenue/Slover Avenue Industrial Project

5. Trip Generation

Trip Generation Rate(s) Source: ITE Trip Generation	**I – Institute of Transportation Engineers; S – San Diego Traffic Generators; C – County; O – Other:**	**Edition:**	10th

Land Use Code	**Land Use**	**Rate Based on**	**Qty**	***AVTE vs**	**ADT**	Weekday a.m. peak		Weekday p.m. peak		Weekend peak hour	
						In	Out	In	Out	In	Out
154	High Cube Transload and Short-Term Storage Warehouse	**TSF**	259.481		363	23	7	11	27		

Please see the attached trip generation memo.

* - Average Vehicle Trip Ends.
For ITE Land Uses provide number and name of Land Use. e.g. LU 210 – Single Family Detached Housing

SCOPE FOR TRAFFIC STUDY

Project Name:	Alder Avenue/Slover Avenue Industrial Project

6. Study Intersections: At minimum, the study shall include the following intersections. The list is subject to change based on the determination of related projects, trip generation and distribution, and/or other sensitive intersections are identified based on study findings and/or concurrent development. Consultant should check with adjoining Cities regarding their requirements in addition to the following County/City intersections. Documentation of the consultation from these agencies shall be included in the traffic study.

Xtn #	% County	Thomas Guide Page+Grid	N/S + E/W Street Name	City	Signalized	CMP
1	100%		Alder Avenue/Slover Avenue	Unincorporated (Bloomington)	Yes/no	Yes/no
2	100%		Slover Avenue/Project Driveway 1	Unincorporated (Bloomington)	Yes/no	Yes/no
3	100%		Slover Avenue/Project Driveway 2	Unincorporated (Bloomington)	Yes/no	Yes/no
4	100%		Alder Avenue/Project Driveway 3	Unincorporated (Bloomington)	Yes/no	Yes/no
5					Yes/no	Yes/no
6					Yes/no	Yes/no
7					Yes/no	Yes/no
8					Yes/no	Yes/no
9					Yes/no	Yes/no
10					Yes/no	Yes/no

The County has requested a study be provided due to concerns over the proximity to Bloomington High School and the fact that Slover Avenue is a Major Highway and Alder Avenue is a Secondary Highway. Therefore, a focused study is proposed including the intersection of Alder Avenue/Slover Avenue along with the intersections of Slover Ave/Project Dwy 1, Slover Ave/Project Dwy 2 and Alder Ave/Project Dwy 3.

Cities to be consulted: _____

Project Name:	Alder Avenue/Slover Avenue Industrial Project

7. Other:

Traffic counts may be conducted immediately per the following:
• Must be taken on Tuesdays, Wednesdays or Thursdays.
• Counts in “tourist” and/or along travel corridors shall have counts on Fridays and Sundays.
• Must exclude holidays, and the first weekdays before and after the holiday.
• Must be taken on days when local schools or colleges are in session.
• Must be taken on days of good weather, and avoid atypical conditions (e.g., road construction, detours, or major traffic incidents).
• Traffic counts used for other traffic studies in the area shall **NOT** be reused again, unless 25% of the counts conducted for that particular traffic study are validated with new counts. The difference in volumes between the old and new counts at each corresponding movement should not be more than 10%.
• New traffic counts shall be checked to ensure the difference in volumes at corresponding approaches, if applicable, between two adjacent intersections is no more than 10% unless the difference can be justified.
• For all proposed mitigation measures, a conceptual plan for the improvements shall be submitted to our Traffic Studies section for review and approval prior to the approval of the Traffic Impact Analysis. All proposed improvements shall be within the right-of-way.
• For all cumulative mitigation measures, a cost estimate for the improvement shall be submitted.

This analysis must follow the most current Traffic Impact Study Guidelines for the County as stated in the County’s Road Planning and Design Standards.

VMT Screening: *The project was compared to the VMT analysis screening criteria in the County’s Transportation Impact Study Guidelines. The project is located in a low VMT area and would there be considered to have a less than significant impact on VMT. The project would screen out of further analysis. Please see attached Trip Generation and VMT Screening Memo.*

8. Fees

The County charges on an actual cost basis for review of traffic studies. An initial deposit of $2000 is required at the time that the Traffic Impact study is a land use application is filed with the Department of Land Use Services If the review costs exceed the initial deposit, the applicant will be expected to provide additional funds and the review will be suspended until the additional funds are deposited.

9. Contact Information:

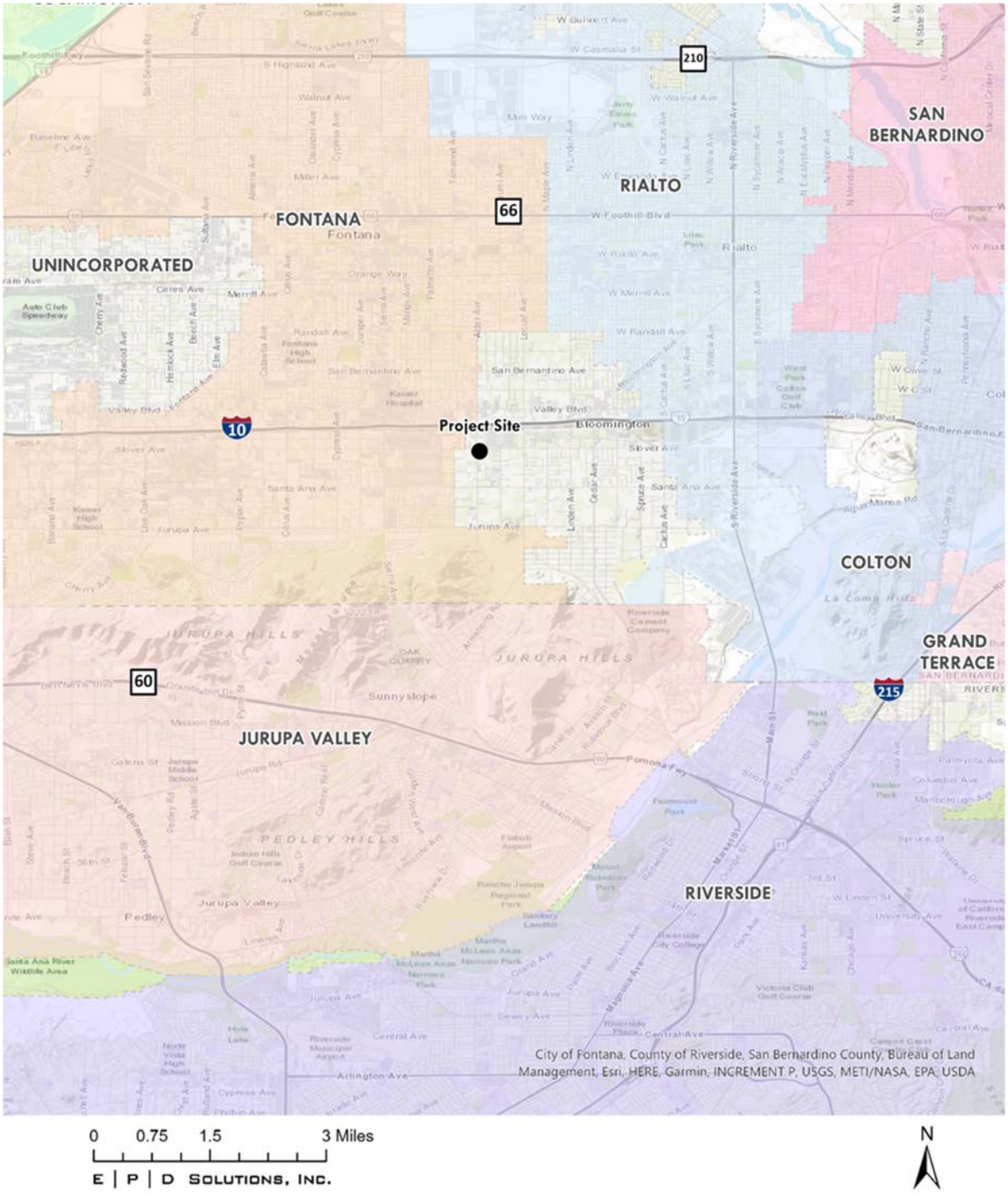
Please submit a final copy of this scope to the Traffic Division. Draft scopes may be sent electronically or by physical mail to the contact information below.

County of San Bernardino
Dept. of Public Works, Traffic Division
825 E. 3rd Street, Rm 115
San Bernardino, CA 92415-0835

Phone: 909-387-8186
Fax: 909-387-7809
Email: Anthony.Pham@dpw.sbcounty.gov

Project Name:	Alder Avenue/Slover Avenue Industrial Project

Figure 1: Project Location



SCOPE FOR TRAFFIC STUDY

Project Name:	Alder Avenue/Slover Avenue Industrial Project

Figure 2: Project Site Plan

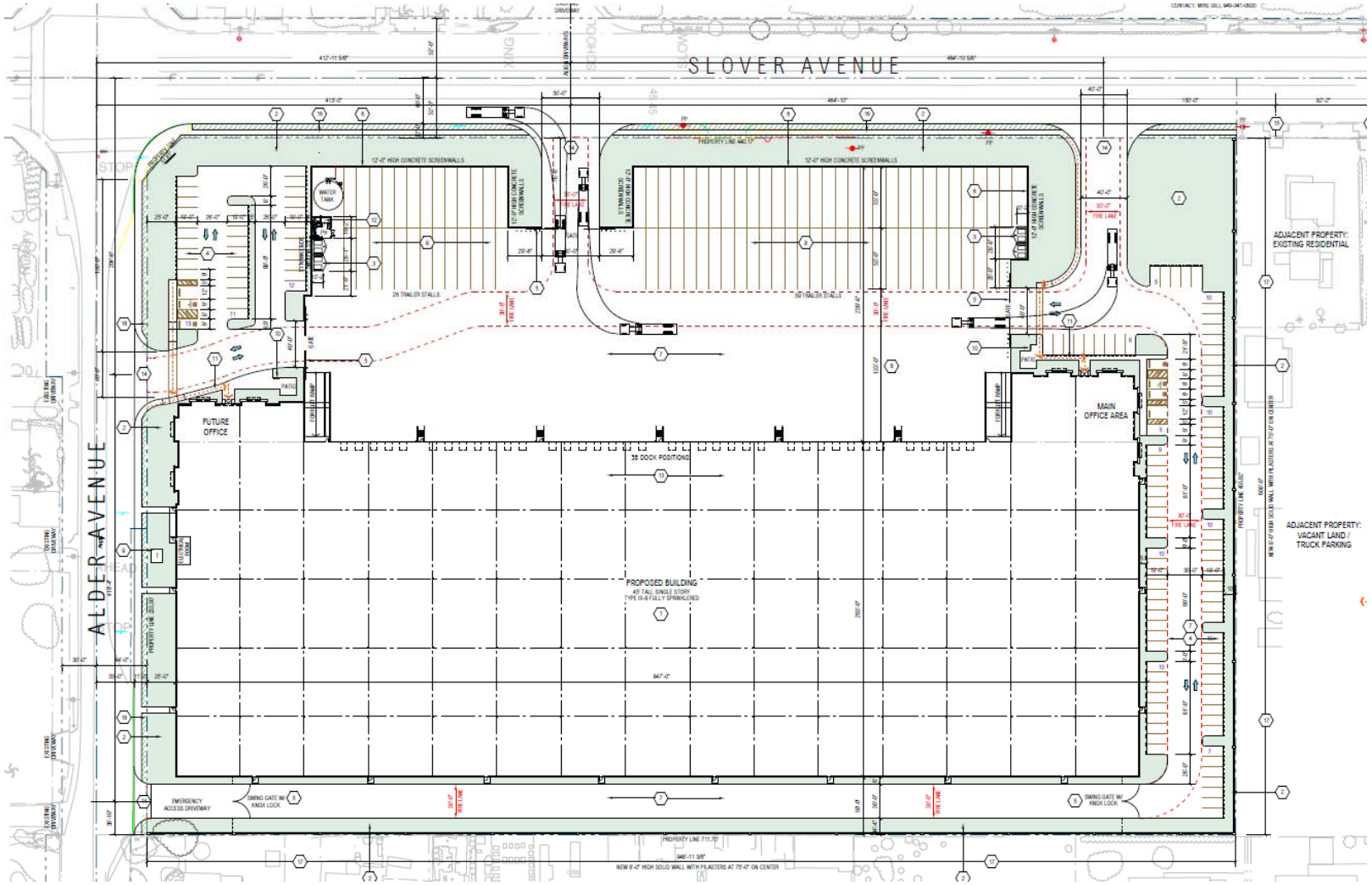


Figure 3: Project Study Area

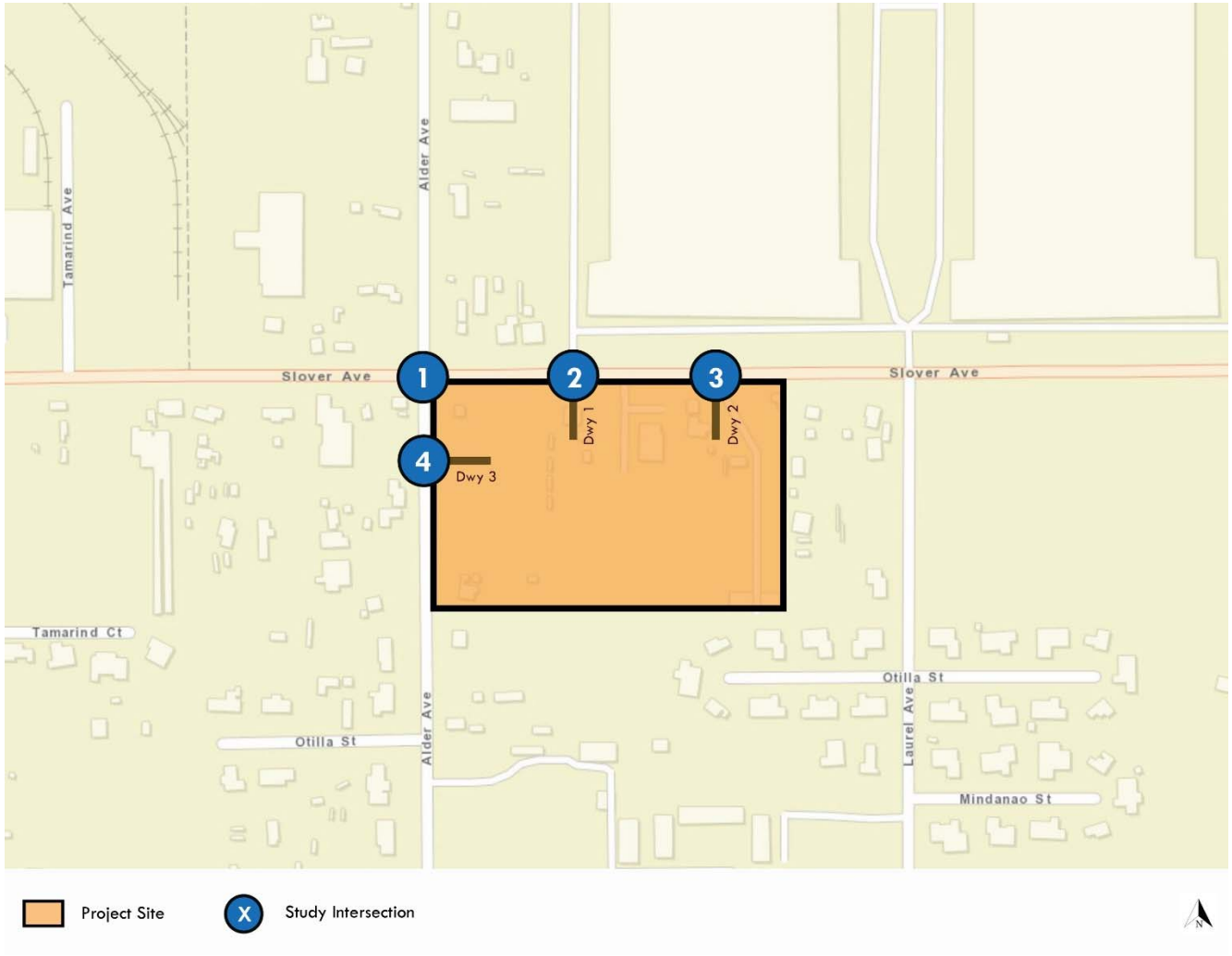


Figure 4: Automobile Trip Distribution

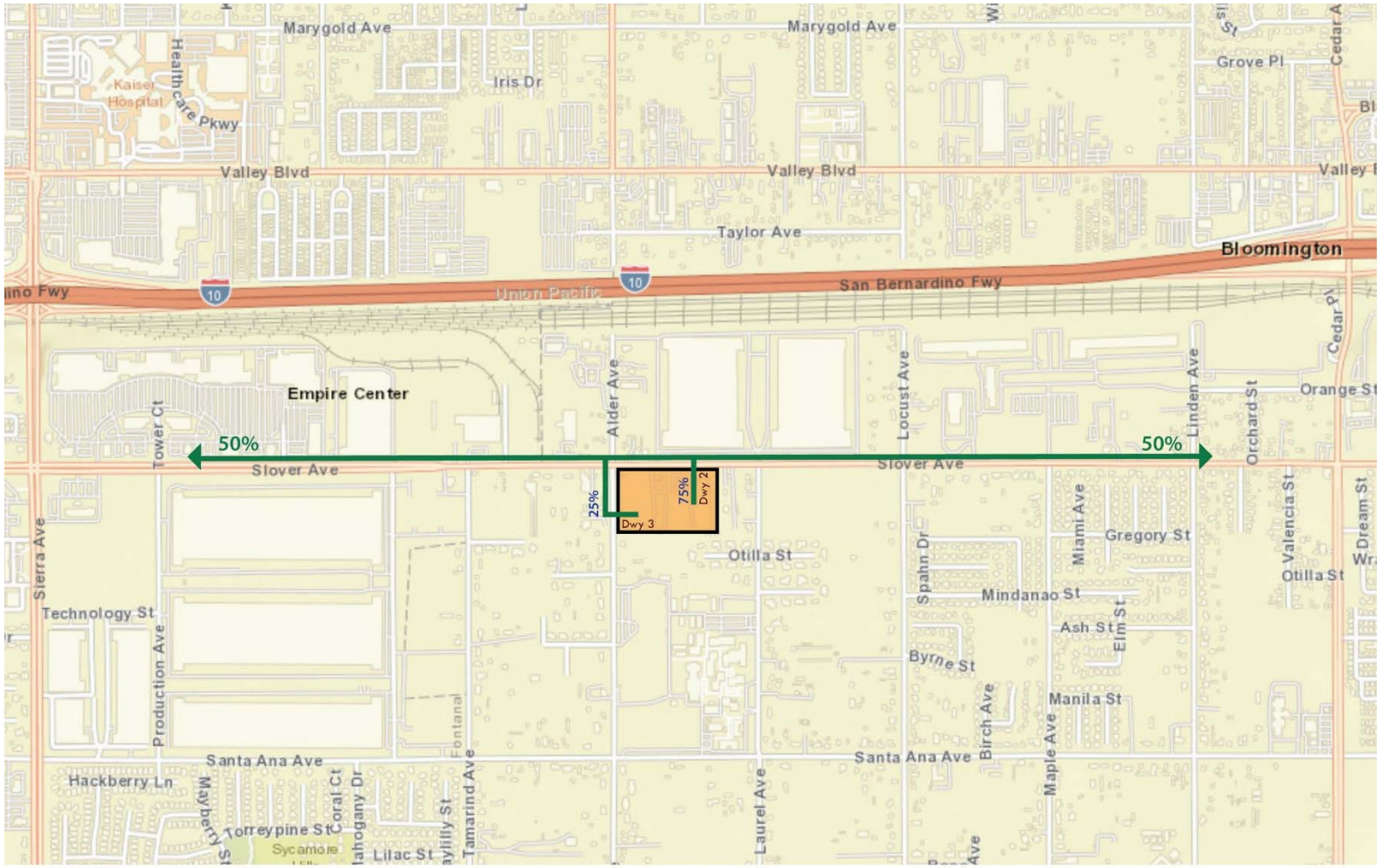
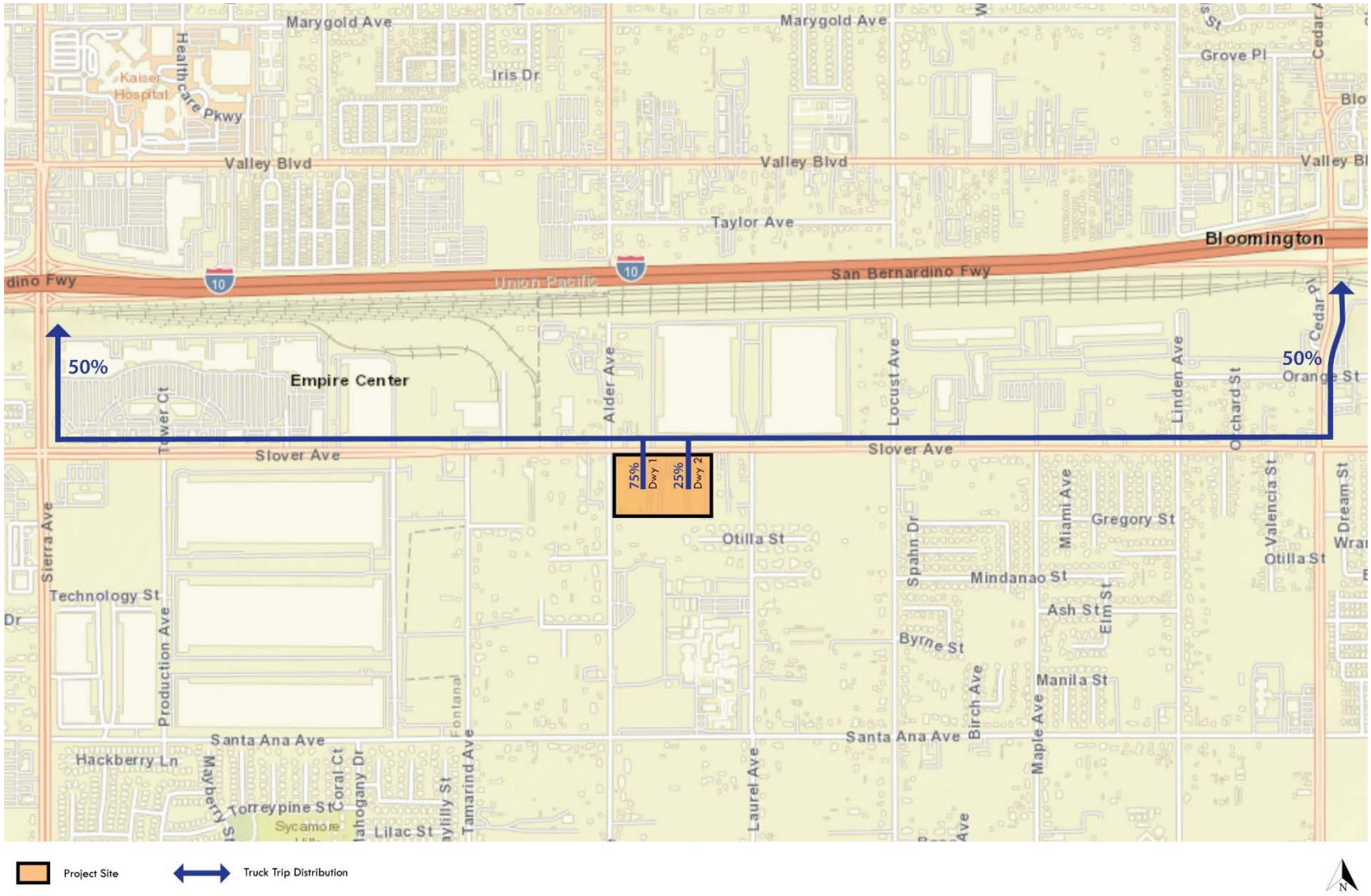


Figure 5: Truck Trip Distribution



Date:	November 18, 2021
Prepared by:	Meghan Macias, TE
To:	Norah Jaffan
Site:	Alder Avenue/Slover Avenue Industrial Project
Subject:	Trip Generation and Vehicle Miles Traveled (VMT) Screening Analysis

This technical memorandum evaluates the trip generation and need to prepare a traffic impact analysis (TIA) or vehicle miles traveled (VMT) analysis for the Alder Avenue/Slover Avenue Industrial project. The project is located on the southeast corner of Alder Avenue and Slover Avenue in unincorporated San Bernardino County. The project proposes to construct a 259,481 square foot speculative high-cube warehouse with 38 dock doors. Access will be provided via two driveways on Slover Avenue and one driveway on Alder Avenue. The project site is currently occupied by several small industrial businesses and at least two single family homes. The existing land use is not evaluated as part of this analysis. The project site plan is shown in Figure 1.

Project Trip Generation and TIA Screening

The project trip generation was prepared using trip rates for High Cube Transload and Short-Term Storage Warehouse from the Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Edition (2021). The truck percentages were determined using data from the SCAQMD Warehouse Truck Trip Study, July 17, 2017. A Passenger Car Equivalent (PCE) factor was added to the truck trips to account for the larger vehicle size and increased roadway capacity utilized by large trucks. Table 1 presents the trip generation estimate for the proposed project.

As shown in Table 1, the project is forecast to generate 531 daily PCE trips including 30 PCE trips during the AM peak hour and 38 PCE trips during the PM peak hour. The County of San Bernardino Transportation Impact Study Guidelines indicates projects that generate 100 or more trips during any peak hour have the potential to create a traffic impact and would be required to prepare a Traffic Impact Assessment (TIA) using level of service (LOS). Based on the peak hour trip generation of 30 PCE trips during the AM peak hour and 38 PCE trips during the PM peak hour, the project should not be required to prepare a LOS TIA.

VMT Screening 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. Section 15064.3(c) states that the provisions of the section shall apply statewide beginning on July 1, 2020.

The San Bernardino County Transportation Impact Study Guidelines (July 19, 2019) provide VMT analysis methodology, impact thresholds and screening thresholds to determine if projects would require a vehicle miles traveled (VMT) analysis. The TIS Guidelines provide criteria for projects that would be considered to have a less-than significant impact on VMT and therefore could be screened out from further analysis. If a project meets one of the following criteria, then the VMT impact of the project is considered less-than significant and no further analysis of VMT would be required:

- The project serves the local community and thereby has the potential to reduce VMT.
- The project generates less than 110 daily vehicle trips.
- The project is located within a Transit Priority area.
- The project is located in a low VMT generating area.

The project would not be considered a local-serving use, as defined in the guidelines. Per the project trip generation shown in Table 1, the project would generate more than 110 daily trips. The project is also not located in a Transit Priority Area. Therefore, based on bullets 1-3, the project would not screen out of a VMT analysis.

To determine if the project is located in a low VMT generating area, the SBCTA VMT Screening Tool was utilized. The County's guidelines specify that a low-VMT generating area is an area where the VMT/employee is not greater than 4% below the existing VMT per employee for the unincorporated County. Using the VMT Screening Tool, the VMT/employee in the project zone is 16.3 which is 13.64% less than the unincorporated County VMT/employee of 18.9. The results from the screening tool are shown in Figure 2.

Because the project is located in a low VMT generating area, the project is presumed to have a less than significant impact on VMT and would not require further VMT analysis.

If you have any questions about this information, please contact me at (949) 794-1186 or meghan@epdsolutions.com.

Figure 1: Project Site Plan

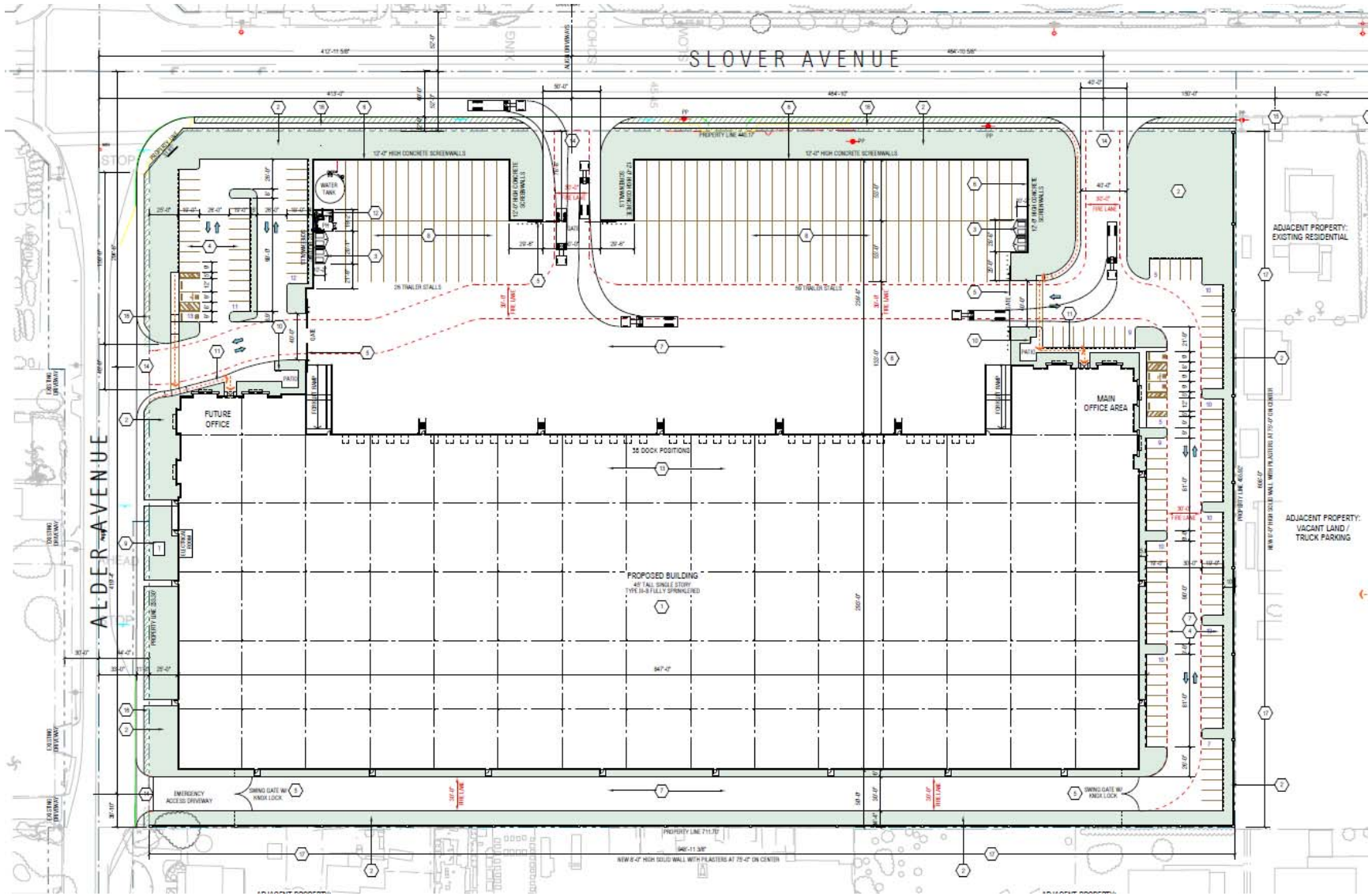


Table 1: Project Trip Generation

				AM Peak Hour			PM Peak Hour		
Land Use		**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates									
High Cube Transload and Short-Term Storage Warehouse[1]		TSF	1.40	0.06	0.02	0.08	0.03	0.07	0.10
Total Vehicle Trip Generation									
Harvill Avenue Warehouse	259.481	TSF	363	16	5	21	7	19	26
Vehicle Mix[2]		***Percent***							
Passenger Vehicles		69.00%	251	11	3	14	5	13	18
2-Axle Trucks		6.80%	25	1	0	1	0	1	2
3-Axle Trucks		5.50%	20	1	0	1	0	1	1
4+-Axle Trucks		18.70%	68	3	1	4	1	3	5
		100%	363	16	5	21	7	19	26
PCE Trip Generation[3]		***PCE Factor***							
Passenger Vehicles		1.0	251	11	3	14	5	13	18
2-Axle Trucks		1.5	37	2	0	2	1	2	3
3-Axle Trucks		2.0	40	2	1	2	1	2	3
4+-Axle Trucks		3.0	204	9	3	12	4	10	15
Total PCE Trip Generation			531	23	7	30	11	27	38

TSF = Thousand Square Feet

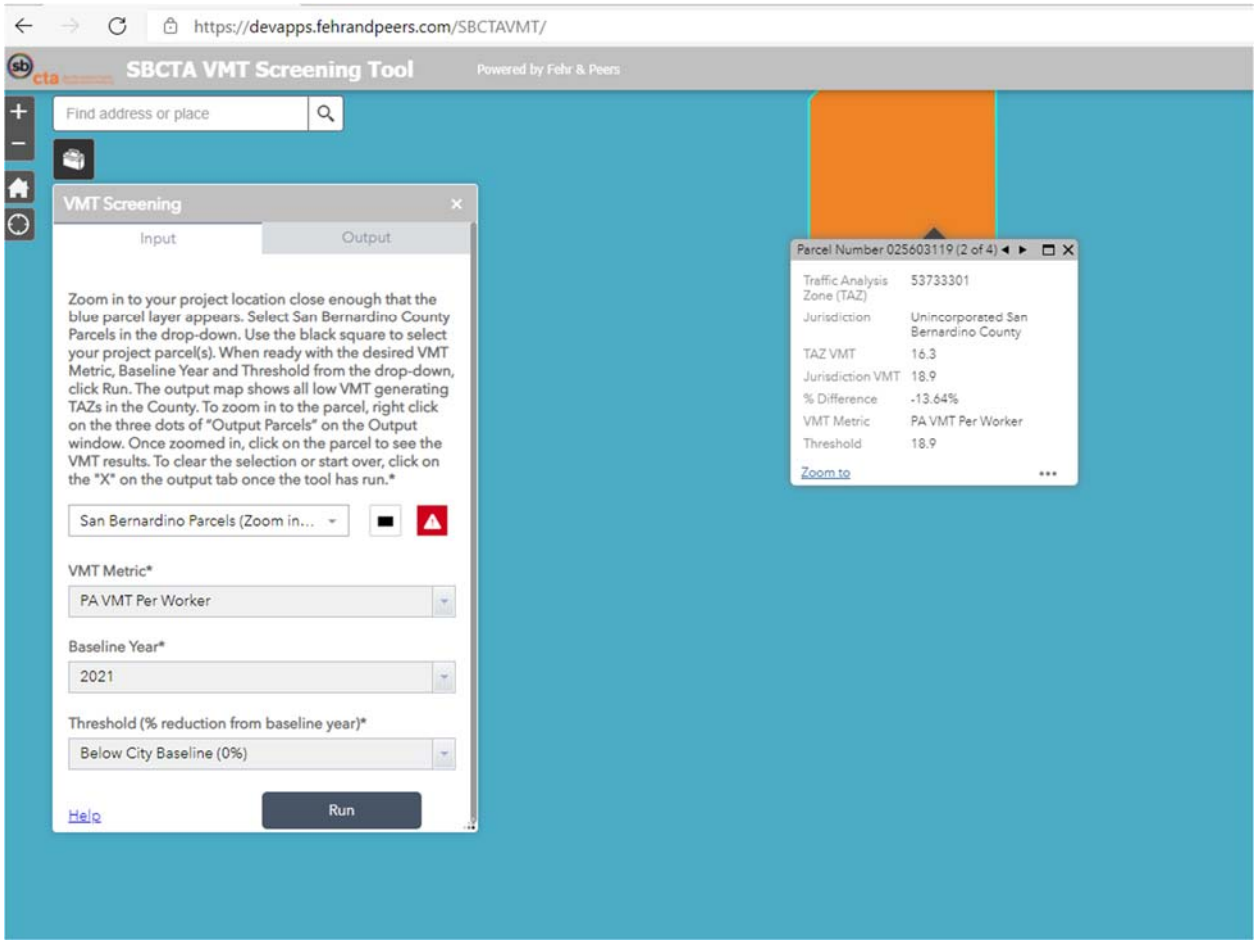
PCE = Passenger Car Equivalent

[1] Trip rates from the Institute of Transportation Engineers, *Trip Generation,11th Edition, 2021*. Land Use Code 154 - High-Cube Transload and Short-Term Storage Warehouse.

[2] Vehicle Mix from the *SCAQMD Warehouse Truck Trip Study*. July 17, 2017.

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

Figure 2: Project VMT Screening



APPENDIX B – COUNT SHEETS

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Bloomington	PROJECT #:	SC
10/7/21	NORTH & SOUTH:	Alder	LOCATION #:	1
THURSDAY	EAST & WEST:	Slover	CONTROL:	STOP N/S

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

	NORTHBOUND Alder			SOUTHBOUND Alder			EASTBOUND Slover			WESTBOUND Slover			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM 7:00 AM	11	1	31	1	1	1	3	76	13	53	150	1	342
7:15 AM	10	0	93	3	0	4	1	132	26	113	162	1	543
7:30 AM	28	0	33	0	0	0	1	88	4	25	164	2	345
7:45 AM	4	0	15	0	0	7	4	55	5	23	161	2	276
8:00 AM	10	0	8	2	0	6	1	66	4	23	131	10	259
8:15 AM	5	0	10	0	0	3	1	80	4	7	142	3	255
8:30 AM	3	0	4	2	0	2	4	82	1	10	98	4	209
8:45 AM	0	0	2	1	0	3	2	70	2	5	85	5	175
VOLUMES	71	1	196	9	1	26	17	647	58	259	1,091	28	2,401
APPROACH %	26%	0%	73%	25%	3%	72%	2%	90%	8%	19%	79%	2%	
APP/DEPART	267	/	45	36	/	318	722	/	852	1,377	/	1,187	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	53	1	172	4	1	12	9	351	47	214	636	6	1,505
APPROACH %	23%	0%	76%	24%	6%	71%	2%	86%	12%	25%	74%	1%	
PEAK HR FACTOR		0.549			0.607			0.642			0.778		0.693
APP/DEPART	226	/	16	17	/	262	406	/	527	856	/	701	0
PM 4:00 PM	4	0	7	3	0	7	3	223	7	16	173	3	443
4:15 PM	7	0	15	0	0	2	2	214	6	1	178	0	424
4:30 PM	5	0	12	5	2	1	5	231	6	5	170	3	444
4:45 PM	6	0	15	4	0	7	1	205	4	3	161	3	409
5:00 PM	4	0	7	3	0	0	0	244	2	7	159	2	428
5:15 PM	4	1	12	6	0	1	2	233	6	4	204	5	477
5:30 PM	4	0	11	2	0	1	6	194	3	7	148	6	381
5:45 PM	5	0	7	6	0	5	2	175	7	9	152	5	371
VOLUMES	39	1	84	28	2	23	20	1,717	41	52	1,344	26	3,375
APPROACH %	31%	1%	68%	53%	3%	44%	1%	97%	2%	4%	95%	2%	
APP/DEPART	124	/	47	53	/	94	1,778	/	1,829	1,421	/	1,406	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	19	1	45	18	2	9	8	913	18	19	694	13	1,757
APPROACH %	29%	2%	69%	64%	5%	30%	1%	97%	2%	3%	96%	2%	
PEAK HR FACTOR		0.774			0.667			0.954			0.853		0.921
APP/DEPART	65	/	22	28	/	38	939	/	976	725	/	722	0

APPENDIX C – LEVEL OF SERVICE CALCULATIONS

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Existing AM.pdf

Scenario 1 Existing AM
3/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.044	513.5	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	WB Thru	0.004	0.0	A
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	WB Thru	0.004	0.0	A
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	SB Thru	0.003	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	513.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.044

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Total Hourly Volume [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
Peak Hour Factor	0.5490	0.5490	0.5490	0.6070	0.6070	0.6070	0.6420	0.6420	0.6420	0.7780	0.7780	0.7780
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	0	33	2	0	5	4	137	18	69	204	2
Total Analysis Volume [veh/h]	97	2	131	7	2	20	14	547	73	275	817	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.67	0.04	0.18	0.18	0.05	0.03	0.02	0.01	0.00	0.28	0.01	0.00
d_M, Delay for Movement [s/veh]	496.82	513.50	11.01	121.11	115.78	11.23	9.50	0.00	0.00	10.17	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	9.18	9.18	0.65	0.73	0.73	0.10	0.05	0.00	0.00	1.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	229.44	229.44	16.26	18.37	18.37	2.59	1.31	0.00	0.00	29.27	0.00	0.00
d_A, Approach Delay [s/veh]	220.26			44.96			0.21			2.54		
Approach LOS	F			E			A			A		
d_I, Intersection Delay [s/veh]	27.54											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	427	0	0	427	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	0	0	0	0	0	0	427	0	0	427	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	0	0	0	0	0	0	0	112	0	0	112	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	449	0	0	449	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.15	0.00	9.59	12.15	0.00	9.59	8.21	0.00	0.00	8.21	0.00	0.00
Movement LOS	B		A	B		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.87			10.87			0.00			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.00											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	427	0	0	427
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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	427	0	0	427
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	112	0	0	112
Total Analysis Volume [veh/h]	0	0	449	0	0	449
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	Yes		
Number of Storage Spaces in Median	2	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]	11.55	9.59	0.00	0.00	8.21	0.00
Movement LOS	B	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]	10.57		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	262	0	0	262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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]	262	0	0	262	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	69	0	0	69	0	0
Total Analysis Volume [veh/h]	276	0	0	276	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	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.77	0.00	12.23	9.69
Movement LOS	A	A	A	A	B	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]	0.00		0.00		10.96	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Existing AM.pdf

Scenario 1 Existing AM
3/21/2022

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	Alder Ave/Slover Ave	53	1	72	4	1	12	9	351	47	214	636	6	1406

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	0	0	0	0	0	427	0	0	427	0	854

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	0	0	427	0	0	427	854

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	262	0	0	262	0	0	524

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Existing PM.pdf

Scenario 2 Existing PM
3/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	SB Thru	0.042	73.0	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	WB Thru	0.010	0.0	A
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	WB Thru	0.010	0.0	A
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	SB Left	0.026	7.3	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	73.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.042

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Total Hourly Volume [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
Peak Hour Factor	0.7740	0.7740	0.7740	0.6670	0.6670	0.6670	0.9540	0.9540	0.9540	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]	6	0	15	7	1	3	2	239	5	6	203	4
Total Analysis Volume [veh/h]	25	1	58	27	3	13	8	957	19	22	814	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.28	0.01	0.11	0.29	0.04	0.02	0.01	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	61.19	70.62	12.49	61.17	72.96	11.14	9.48	0.00	0.00	10.20	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.09	1.09	0.36	1.26	1.26	0.07	0.03	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	27.27	27.27	9.00	31.40	31.40	1.66	0.75	0.00	0.00	2.38	0.00	0.00
d_A, Approach Delay [s/veh]	27.67			46.87			0.08			0.26		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	2.37											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	976	0	0	976	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	0	0	0	0	0	0	976	0	0	976	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	0	0	0	0	0	0	0	257	0	0	257	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	1027	0	0	1027	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	21.02	0.00	12.04	21.02	0.00	12.04	10.26	0.00	0.00	10.26	0.00	0.00
Movement LOS	C		B	C		B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.53			16.53			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.00											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	976	0	0	976
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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	976	0	0	976
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	257	0	0	257
Total Analysis Volume [veh/h]	0	0	1027	0	0	1027
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	18.22	12.04	0.00	0.00	10.26	0.00
Movement LOS	C	B	A	A	B	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]	15.13		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	7.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	39	0	39	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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]	39	0	39	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	10	0	0	0
Total Analysis Volume [veh/h]	41	0	41	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	0.00	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.21	8.48
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.08	0.08	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.00	2.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		7.34		8.85	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.67					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Existing PM.pdf

Scenario 2 Existing PM
3/21/2022

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	Alder Ave/Slover Ave	19	1	45	18	2	9	8	913	18	19	694	13	1759

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	0	0	0	0	0	976	0	0	976	0	1952

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	0	0	976	0	0	976	1952

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	39	0	39	0	0	0	78

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Opening AM.pdf

Scenario 5 Opening AM
3/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.050	663.4	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	WB Thru	0.005	0.0	A
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	WB Thru	0.005	0.0	A
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	SB Thru	0.003	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	663.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.050

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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]	55	1	75	4	1	12	9	365	49	223	661	6
Peak Hour Factor	0.5490	0.5490	0.5490	0.6070	0.6070	0.6070	0.6420	0.6420	0.6420	0.7780	0.7780	0.7780
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]	25	0	34	2	0	5	4	142	19	72	212	2
Total Analysis Volume [veh/h]	100	2	137	7	2	20	14	569	76	287	850	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.96	0.05	0.19	0.21	0.06	0.03	0.02	0.01	0.00	0.30	0.01	0.00
d_M, Delay for Movement [s/veh]	643.61	663.36	11.19	145.99	138.78	11.39	9.63	0.00	0.00	10.42	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	10.17	10.17	0.70	0.84	0.84	0.11	0.05	0.00	0.00	1.28	0.00	0.00
95th-Percentile Queue Length [ft/ln]	254.27	254.27	17.50	21.12	21.12	2.66	1.35	0.00	0.00	31.98	0.00	0.00
d_A, Approach Delay [s/veh]	281.26			52.67			0.20			2.61		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	34.69											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	427	0	0	427	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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]	0	0	0	0	0	0	0	444	0	0	444	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	0	0	0	0	0	0	0	117	0	0	117	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	467	0	0	467	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.33	0.00	9.65	12.33	0.00	9.65	8.26	0.00	0.00	8.26	0.00	0.00
Movement LOS	B		A	B		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.99			10.99			0.00			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.00											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	427	0	0	427
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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	444	0	0	444
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	117	0	0	117
Total Analysis Volume [veh/h]	0	0	467	0	0	467
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	Yes		
Number of Storage Spaces in Median	2	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]	11.70	9.65	0.00	0.00	8.26	0.00
Movement LOS	B	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]	10.67		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	262	0	0	262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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]	272	0	0	272	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	0	0	72	0	0
Total Analysis Volume [veh/h]	286	0	0	286	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	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.80	0.00	12.42	9.75
Movement LOS	A	A	A	A	B	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]	0.00		0.00		11.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Opening AM.pdf

Scenario 5 Opening AM
3/21/2022

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	Alder Ave/Slover Ave	55	1	75	4	1	12	9	365	49	223	661	6	1461

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	0	0	0	0	0	444	0	0	444	0	888

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	0	0	444	0	0	444	888

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	272	0	0	272	0	0	544

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Opening PM.pdf

Scenario 6 Opening PM
3/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	SB Thru	0.046	84.8	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	WB Thru	0.011	0.0	A
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	WB Thru	0.011	0.0	A
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	SB Left	0.027	7.3	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	84.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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]	20	1	47	19	2	9	8	950	19	20	722	14
Peak Hour Factor	0.7740	0.7740	0.7740	0.6670	0.6670	0.6670	0.9540	0.9540	0.9540	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]	6	0	15	7	1	3	2	249	5	6	212	4
Total Analysis Volume [veh/h]	26	1	61	28	3	13	8	996	20	23	846	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.32	0.02	0.12	0.33	0.05	0.02	0.01	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	70.97	81.70	12.79	71.46	84.79	11.29	9.61	0.00	0.00	10.39	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.28	1.28	0.39	1.47	1.47	0.07	0.03	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	32.01	32.01	9.83	36.72	36.72	1.70	0.77	0.00	0.00	2.58	0.00	0.00
d_A, Approach Delay [s/veh]	30.76			54.59			0.08			0.27		
Approach LOS	D			F			A			A		
d_I, Intersection Delay [s/veh]	2.66											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	976	0	0	976	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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]	0	0	0	0	0	0	0	1015	0	0	1015	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	0	0	0	0	0	0	0	267	0	0	267	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	1068	0	0	1068	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	21.95	0.00	12.26	21.95	0.00	12.26	10.45	0.00	0.00	10.45	0.00	0.00
Movement LOS	C		B	C		B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.11			17.11			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.00											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	976	0	0	976
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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	1015	0	0	1015
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	267	0	0	267
Total Analysis Volume [veh/h]	0	0	1068	0	0	1068
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	18.88	12.26	0.00	0.00	10.45	0.00
Movement LOS	C	B	A	A	B	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]	15.57		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	7.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	39	0	39	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
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]	41	0	41	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	0	11	0	0	0
Total Analysis Volume [veh/h]	43	0	43	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	0.00	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.25	8.48
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.08	0.08	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.10	2.10	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		7.34		8.87	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.67					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Opening PM.pdf

Scenario 6 Opening PM
3/21/2022

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	Alder Ave/Slover Ave	20	1	47	19	2	9	8	950	19	20	722	14	1831

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	0	0	0	0	0	1015	0	0	1015	0	2030

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	0	0	1015	0	0	1015	2030

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	41	0	41	0	0	0	82

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Existing AM plus Project.pdf

Scenario 3 Existing AM Plus Project
3/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.045	550.4	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.002	12.2	B
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.004	11.7	B
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.001	9.7	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	550.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.045

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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]	1	0	0	0	0	0	0	9	3	0	3	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]	54	1	72	4	1	12	9	360	50	214	639	6
Peak Hour Factor	0.5490	0.5490	0.5490	0.6070	0.6070	0.6070	0.6420	0.6420	0.6420	0.7780	0.7780	0.7780
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]	25	0	33	2	0	5	4	140	19	69	205	2
Total Analysis Volume [veh/h]	98	2	131	7	2	20	14	561	78	275	821	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.74	0.05	0.18	0.18	0.05	0.03	0.02	0.01	0.00	0.29	0.01	0.00
d_M, Delay for Movement [s/veh]	533.27	550.42	11.08	125.22	120.88	11.25	9.51	0.00	0.00	10.29	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	9.46	9.46	0.66	0.76	0.76	0.10	0.05	0.00	0.00	1.20	0.00	0.00
95th-Percentile Queue Length [ft/ln]	236.52	236.52	16.46	18.89	18.89	2.60	1.32	0.00	0.00	29.92	0.00	0.00
d_A, Approach Delay [s/veh]	237.28			46.32			0.20			2.56		
Approach LOS	F			E			A			A		
d_I, Intersection Delay [s/veh]	29.31											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	427	0	0	427	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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]	1	0	0	0	0	0	0	6	3	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]	1	0	0	0	0	0	0	433	3	0	429	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	0	0	0	0	0	0	0	114	1	0	113	0
Total Analysis Volume [veh/h]	1	0	0	0	0	0	0	456	3	0	452	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.24	0.00	9.63	12.19	0.00	9.60	8.22	0.00	0.00	8.24	0.00	0.00
Movement LOS	B		A	B		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.15	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.24			10.89			0.00			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.01											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	11.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	427	0	0	427
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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	3	0	6	12	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]	2	3	427	6	12	427
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	112	2	3	112
Total Analysis Volume [veh/h]	2	3	449	6	13	449
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.72	9.65	0.00	0.00	8.26	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	0.57	0.57	0.00	0.00	0.88	0.00
d_A, Approach Delay [s/veh]	10.48		0.00		0.23	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	262	0	0	262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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	3	0	0	1
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]	262	0	3	262	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	69	0	1	69	0	0
Total Analysis Volume [veh/h]	276	0	3	276	0	1
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	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.78	0.00	12.31	9.70
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.17	0.17	0.10	0.10
d_A, Approach Delay [s/veh]	0.00		0.08		9.70	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Existing AM plus Project.pdf

Scenario 3 Existing AM Plus Project
3/21/2022

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	Alder Ave/Slover Ave	54	1	72	4	1	12	9	360	50	214	639	6	1422

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	1	0	0	0	0	433	3	0	429	0	866

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	2	3	427	6	12	427	877

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	262	0	3	262	0	1	528

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Existing PM plus Project.pdf

Scenario 4 Existing PM Plus Project
3/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.014	77.1	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.018	21.4	C
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.026	18.8	C
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.004	8.5	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	77.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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]	4	0	0	0	0	0	0	5	2	0	11	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]	23	1	45	18	2	9	8	918	20	19	705	13
Peak Hour Factor	0.7740	0.7740	0.7740	0.6670	0.6670	0.6670	0.9540	0.9540	0.9540	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]	7	0	15	7	1	3	2	241	5	6	207	4
Total Analysis Volume [veh/h]	30	1	58	27	3	13	8	962	21	22	826	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.01	0.11	0.29	0.04	0.02	0.01	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	67.28	77.13	12.52	63.28	75.47	11.20	9.53	0.00	0.00	10.23	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.38	1.38	0.36	1.29	1.29	0.07	0.03	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	34.61	34.61	9.03	32.32	32.32	1.68	0.75	0.00	0.00	2.39	0.00	0.00
d_A, Approach Delay [s/veh]	31.70			48.39			0.08			0.26		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	2.62											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	21.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	976	0	0	976	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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]	4	0	0	0	0	0	0	3	2	0	7	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]	4	0	0	0	0	0	0	979	2	0	983	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	1	0	0	0	0	0	0	258	1	0	259	0
Total Analysis Volume [veh/h]	4	0	0	0	0	0	0	1031	2	0	1035	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	21.43	0.00	12.37	21.19	0.00	12.08	10.30	0.00	0.00	10.29	0.00	0.00
Movement LOS	C		B	C		B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.37	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	21.43			16.64			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.04											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	976	0	0	976
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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	13	0	3	6	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	13	976	3	6	976
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	257	1	2	257
Total Analysis Volume [veh/h]	7	14	1027	3	6	1027
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.03	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	18.83	12.57	0.00	0.00	10.32	0.00
Movement LOS	C	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	4.21	4.21	0.00	0.00	0.67	0.00
d_A, Approach Delay [s/veh]	14.66		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	39	0	39	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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	2	0	0	4
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]	39	0	41	0	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	11	0	0	1
Total Analysis Volume [veh/h]	41	0	43	0	0	4
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	0.00	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.26	8.49
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.08	0.08	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.10	2.10	0.29	0.29
d_A, Approach Delay [s/veh]	0.00		7.34		8.49	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.97					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Existing PM plus Project.pdf

Scenario 4 Existing PM Plus Project
3/21/2022

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	Alder Ave/Slover Ave	23	1	45	18	2	9	8	918	20	19	705	13	1781

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	4	0	0	0	0	979	2	0	983	0	1968

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	7	13	976	3	6	976	1981

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	39	0	41	0	0	4	84

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Opening AM plus Project.pdf

Scenario 7 Opening AM Plus Project
3/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.052	715.6	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.002	12.4	B
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.004	11.9	B
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.001	9.8	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	715.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	9	3	0	3	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]	56	1	75	4	1	12	9	374	52	223	664	6
Peak Hour Factor	0.5490	0.5490	0.5490	0.6070	0.6070	0.6070	0.6420	0.6420	0.6420	0.7780	0.7780	0.7780
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]	26	0	34	2	0	5	4	146	20	72	213	2
Total Analysis Volume [veh/h]	102	2	137	7	2	20	14	583	81	287	853	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.07	0.05	0.19	0.21	0.06	0.03	0.02	0.01	0.00	0.31	0.01	0.00
d_M, Delay for Movement [s/veh]	695.33	715.59	11.27	150.96	144.90	11.41	9.64	0.00	0.00	10.55	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	10.56	10.56	0.71	0.87	0.87	0.11	0.05	0.00	0.00	1.31	0.00	0.00
95th-Percentile Queue Length [ft/ln]	264.01	264.01	17.73	21.67	21.67	2.67	1.35	0.00	0.00	32.71	0.00	0.00
d_A, Approach Delay [s/veh]	306.63			54.30			0.20			2.64		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	37.52											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	427	0	0	427	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	6	3	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]	1	0	0	0	0	0	0	450	3	0	446	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	0	0	0	0	0	0	0	118	1	0	117	0
Total Analysis Volume [veh/h]	1	0	0	0	0	0	0	474	3	0	469	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.43	0.00	9.70	12.36	0.00	9.65	8.26	0.00	0.00	8.29	0.00	0.00
Movement LOS	B		A	B		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.15	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.43			11.01			0.00			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.01											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	427	0	0	427
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	0	6	12	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]	2	3	444	6	12	444
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	117	2	3	117
Total Analysis Volume [veh/h]	2	3	467	6	13	467
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.87	9.71	0.00	0.00	8.31	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	0.58	0.58	0.00	0.00	0.90	0.00
d_A, Approach Delay [s/veh]	10.58		0.00		0.23	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	262	0	0	262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	1
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]	272	0	3	272	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	0	1	72	0	0
Total Analysis Volume [veh/h]	286	0	3	286	0	1
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	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.80	0.00	12.51	9.76
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.18	0.18	0.10	0.10
d_A, Approach Delay [s/veh]	0.00		0.08		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Opening AM plus Project.pdf

Scenario 7 Opening AM Plus Project
3/21/2022

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	Alder Ave/Slover Ave	56	1	75	4	1	12	9	374	52	223	664	6	1477

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	1	0	0	0	0	450	3	0	446	0	900

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	2	3	444	6	12	444	911

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	272	0	3	272	0	1	548

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Opening PM plus Project.pdf

Scenario 8 Opening PM Plus Project
3/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.016	90.4	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.019	22.4	C
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.027	19.5	C
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.004	8.5	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	90.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	5	2	0	11	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]	24	1	47	19	2	9	8	955	21	20	733	14
Peak Hour Factor	0.7740	0.7740	0.7740	0.6670	0.6670	0.6670	0.9540	0.9540	0.9540	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]	8	0	15	7	1	3	2	250	6	6	215	4
Total Analysis Volume [veh/h]	31	1	61	28	3	13	8	1001	22	23	859	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.39	0.02	0.12	0.34	0.05	0.02	0.01	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	79.11	90.36	12.82	74.28	88.07	11.36	9.66	0.00	0.00	10.43	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.62	1.62	0.39	1.51	1.51	0.07	0.03	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	40.42	40.42	9.87	37.86	37.86	1.72	0.78	0.00	0.00	2.60	0.00	0.00
d_A, Approach Delay [s/veh]	35.75			56.63			0.07			0.27		
Approach LOS	E			F			A			A		
d_I, Intersection Delay [s/veh]	2.97											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	976	0	0	976	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	3	2	0	7	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]	4	0	0	0	0	0	0	1018	2	0	1022	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	1	0	0	0	0	0	0	268	1	0	269	0
Total Analysis Volume [veh/h]	4	0	0	0	0	0	0	1072	2	0	1076	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	22.41	0.00	12.62	22.13	0.00	12.31	10.49	0.00	0.00	10.48	0.00	0.00
Movement LOS	C		B	C		B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.45	0.00	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.41			17.22			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.04											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	19.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	976	0	0	976
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	13	0	3	6	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	13	1015	3	6	1015
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	267	1	2	267
Total Analysis Volume [veh/h]	7	14	1068	3	6	1068
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.03	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	19.54	12.84	0.00	0.00	10.52	0.00
Movement LOS	C	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.18	0.18	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	4.39	4.39	0.00	0.00	0.69	0.00
d_A, Approach Delay [s/veh]	15.07		0.00		0.06	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	39	0	39	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	2	0	0	4
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]	41	0	43	0	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	0	11	0	0	1
Total Analysis Volume [veh/h]	43	0	45	0	0	4
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	0.00	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.35	0.00	9.29	8.50
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.09	0.09	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.20	2.20	0.29	0.29
d_A, Approach Delay [s/veh]	0.00		7.35		8.50	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.96					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\Opening PM plus Project.pdf

Scenario 8 Opening PM Plus Project
3/21/2022

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	Alder Ave/Slover Ave	24	1	47	19	2	9	8	955	21	20	733	14	1853

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	4	0	0	0	0	1018	2	0	1022	0	2046

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	7	13	1015	3	6	1015	2059

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	41	0	43	0	0	4	88

Option 1: Signal

Number	1											
Intersection	Alder Ave/Slover Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
Total Analysis Volume [veh/h]	98	2	131	7	2	20	14	561	78	275	821	8

Intersection Settings

Cycle Length [s]	80											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	0	5	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	19	0	0	19	0	0	19	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.11	0.11	0.04	0.04	0.19	0.19	0.19	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.08	0.00	0.01	0.01	0.16	0.05	0.15	0.23	0.00
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3			3		
s, saturation flow rate [veh/h]	1811	1615	1829	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	201	179	80	71	345	690	308	487	973	434
X, volume / capacity	0.50	0.73	0.11	0.28	0.04	0.81	0.25	0.57	0.84	0.02
d, Delay for Lane Group [s/veh]	35.38	40.09	37.36	39.18	26.44	33.37	27.94	26.24	29.75	21.50
Lane Group LOS	D	D	D	D	C	C	C	C	C	C
Critical Lane Group	N	Y	N	Y	N	Y	N	N	Y	N

Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.92	2.72	0.18	0.42	0.21	5.01	1.22	4.25	7.01	0.10
50th-Percentile Queue Length [ft/ln]	47.95	68.05	4.55	10.48	5.20	125.34	30.45	106.24	175.34	2.60
95th-Percentile Queue Length [veh/ln]	3.45	4.90	0.33	0.75	0.37	8.69	2.19	7.63	11.36	0.19
95th-Percentile Queue Length [ft/ln]	86.31	122.49	8.19	18.86	9.36	217.14	54.81	190.76	283.92	4.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.38	35.38	40.09	37.36	37.36	39.18	26.44	33.37	27.94	26.24	29.75	21.50
Movement LOS	D	D	D	D	D	D	C	C	C	C	C	C
Critical Movement	No	No	Yes	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	38.05			38.61			32.57			28.82		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	31.23											
Intersection LOS	C											
Intersection V/C	0.476											

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Scenario 4 Existing PM Plus Project
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Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.014	77.1	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.018	21.4	C
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.026	18.8	C
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.004	8.5	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	77.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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]	4	0	0	0	0	0	0	5	2	0	11	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]	23	1	45	18	2	9	8	918	20	19	705	13
Peak Hour Factor	0.7740	0.7740	0.7740	0.6670	0.6670	0.6670	0.9540	0.9540	0.9540	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]	7	0	15	7	1	3	2	241	5	6	207	4
Total Analysis Volume [veh/h]	30	1	58	27	3	13	8	962	21	22	826	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.01	0.11	0.29	0.04	0.02	0.01	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	67.28	77.13	12.52	63.28	75.47	11.20	9.53	0.00	0.00	10.23	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.38	1.38	0.36	1.29	1.29	0.07	0.03	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	34.61	34.61	9.03	32.32	32.32	1.68	0.75	0.00	0.00	2.39	0.00	0.00
d_A, Approach Delay [s/veh]	31.70			48.39			0.08			0.26		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	2.62											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	21.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	976	0	0	976	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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]	4	0	0	0	0	0	0	3	2	0	7	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]	4	0	0	0	0	0	0	979	2	0	983	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	1	0	0	0	0	0	0	258	1	0	259	0
Total Analysis Volume [veh/h]	4	0	0	0	0	0	0	1031	2	0	1035	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	21.43	0.00	12.37	21.19	0.00	12.08	10.30	0.00	0.00	10.29	0.00	0.00
Movement LOS	C		B	C		B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.37	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	21.43			16.64			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.04											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	976	0	0	976
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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	13	0	3	6	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	13	976	3	6	976
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	257	1	2	257
Total Analysis Volume [veh/h]	7	14	1027	3	6	1027
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.03	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	18.83	12.57	0.00	0.00	10.32	0.00
Movement LOS	C	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	4.21	4.21	0.00	0.00	0.67	0.00
d_A, Approach Delay [s/veh]	14.66		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	39	0	39	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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	2	0	0	4
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]	39	0	41	0	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	11	0	0	1
Total Analysis Volume [veh/h]	41	0	43	0	0	4
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	0.00	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.26	8.49
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.08	0.08	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.10	2.10	0.29	0.29
d_A, Approach Delay [s/veh]	0.00		7.34		8.49	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.97					
Intersection LOS	A					

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Scenario 4 Existing PM Plus Project
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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	Alder Ave/Slover Ave	23	1	45	18	2	9	8	918	20	19	705	13	1781

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	4	0	0	0	0	979	2	0	983	0	1968

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	7	13	976	3	6	976	1981

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	39	0	41	0	0	4	84

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Report File: C:\...\MIT Opening AM plus proj.pdf

Scenario 7 Opening AM Plus Project
3/21/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.052	715.6	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.002	12.4	B
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.004	11.9	B
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.001	9.8	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: Alder Ave/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	715.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

Intersection Setup

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
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	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	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]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	9	3	0	3	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]	56	1	75	4	1	12	9	374	52	223	664	6
Peak Hour Factor	0.5490	0.5490	0.5490	0.6070	0.6070	0.6070	0.6420	0.6420	0.6420	0.7780	0.7780	0.7780
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]	26	0	34	2	0	5	4	146	20	72	213	2
Total Analysis Volume [veh/h]	102	2	137	7	2	20	14	583	81	287	853	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.07	0.05	0.19	0.21	0.06	0.03	0.02	0.01	0.00	0.31	0.01	0.00
d_M, Delay for Movement [s/veh]	695.33	715.59	11.27	150.96	144.90	11.41	9.64	0.00	0.00	10.55	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	10.56	10.56	0.71	0.87	0.87	0.11	0.05	0.00	0.00	1.31	0.00	0.00
95th-Percentile Queue Length [ft/ln]	264.01	264.01	17.73	21.67	21.67	2.67	1.35	0.00	0.00	32.71	0.00	0.00
d_A, Approach Delay [s/veh]	306.63			54.30			0.20			2.64		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	37.52											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: Proj Dwy 1/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name							Slover Ave			Slover Ave		
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	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	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]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name							Slover Ave			Slover Ave		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	427	0	0	427	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	6	3	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]	1	0	0	0	0	0	0	450	3	0	446	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
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]	0	0	0	0	0	0	0	118	1	0	117	0
Total Analysis Volume [veh/h]	1	0	0	0	0	0	0	474	3	0	469	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.43	0.00	9.70	12.36	0.00	9.65	8.26	0.00	0.00	8.29	0.00	0.00
Movement LOS	B		A	B		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.15	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.43			11.01			0.00			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.01											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Proj Dwy 2/Slover Ave

Control Type:	Two-way stop	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name			Slover Ave			
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
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]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name			Slover Ave			
Base Volume Input [veh/h]	0	0	427	0	0	427
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	0	6	12	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]	2	3	444	6	12	444
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	117	2	3	117
Total Analysis Volume [veh/h]	2	3	467	6	13	467
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	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.87	9.71	0.00	0.00	8.31	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	0.58	0.58	0.00	0.00	0.90	0.00
d_A, Approach Delay [s/veh]	10.58		0.00		0.23	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Alder Ave/Proj Dwy 3

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Alder Ave		Alder Ave			
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	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]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Alder Ave		Alder Ave			
Base Volume Input [veh/h]	262	0	0	262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	1
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]	272	0	3	272	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	0	1	72	0	0
Total Analysis Volume [veh/h]	286	0	3	286	0	1
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	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.80	0.00	12.51	9.76
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.18	0.18	0.10	0.10
d_A, Approach Delay [s/veh]	0.00		0.08		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover_Whyyyyy.vistro
Report File: C:\...\MIT Opening AM plus proj.pdf

Scenario 7 Opening AM Plus Project
3/21/2022

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	Alder Ave/Slover Ave	56	1	75	4	1	12	9	374	52	223	664	6	1477

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	1	0	0	0	0	450	3	0	446	0	900

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	2	3	444	6	12	444	911

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	272	0	3	272	0	1	548

Option 1: Signal

Number	1											
Intersection	Alder Ave/Slover Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
Total Analysis Volume [veh/h]	31	1	61	28	3	13	8	1001	22	23	859	16

Intersection Settings

Cycle Length [s]	80											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	0	5	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	19	0	0	19	0	0	19	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.08	0.08	0.06	0.06	0.31	0.31	0.31	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.02	0.04	0.02	0.01	0.00	0.28	0.01	0.01	0.24	0.01
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3			3		
s, saturation flow rate [veh/h]	1812	1615	1818	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	141	125	101	90	565	1130	505	497	994	444
X, volume / capacity	0.23	0.49	0.31	0.14	0.01	0.89	0.04	0.05	0.86	0.04
d, Delay for Lane Group [s/veh]	35.45	38.26	37.98	36.69	19.01	28.69	19.21	21.35	30.00	21.29
Lane Group LOS	D	D	D	D	B	C	B	C	C	C

Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.61	1.23	0.63	0.26	0.10	8.50	0.27	0.30	7.40	0.21
50th-Percentile Queue Length [ft/ln]	15.33	30.82	15.65	6.46	2.39	212.46	6.65	7.44	185.01	5.17
95th-Percentile Queue Length [veh/ln]	1.10	2.22	1.13	0.47	0.17	13.28	0.48	0.54	11.86	0.37
95th-Percentile Queue Length [ft/ln]	27.60	55.47	28.16	11.64	4.30	331.99	11.97	13.39	296.55	9.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.45	35.45	38.26	37.98	37.98	36.69	19.01	28.69	19.21	21.35	30.00	21.29
Movement LOS	D	D	D	D	D	D	B	C	B	C	C	C
Critical Movement	No	No	Yes	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	37.29			37.60			28.41			29.62		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	29.53											
Intersection LOS	C											
Intersection V/C	0.569											