

TRANSPORTATION ASSESSMENT
Everest Value School
240 N. Madison Avenue

NOVEMBER 2019

Prepared For:

Value Schools

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Rev. 1

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1. INTRODUCTION

The proposed Project is a Charter School that will serve TK to 8th grade students at 240 N Madison Avenue, within the City of Los Angeles. KOA Corporation has been retained to analyze the potential traffic impacts associated with the proposed Project. The scope and methodologies used for this traffic study were developed in consultation with City of Los Angeles staff.

1.1 PROJECT DESCRIPTION

The proposed Project will convert the existing moving and storage facilities on Cosmopolitan Street between Madison Avenue and Westmoreland Avenue into a 24,360 square-foot charter school for up to 480 students, grades TK-8. The project would relocate an existing elementary charter school operating in the Koreatown neighborhood to the site described earlier.

As shown in Figure 1, the proposed Project site's plan includes a driveway for inbound vehicles on Cosmopolitan Street and another driveway for outbound vehicles on Madison Avenue (Figure 1).

The Project is anticipated to be completed and occupied by the end of the year 2021.

1.2 PROJECT STUDY AREA

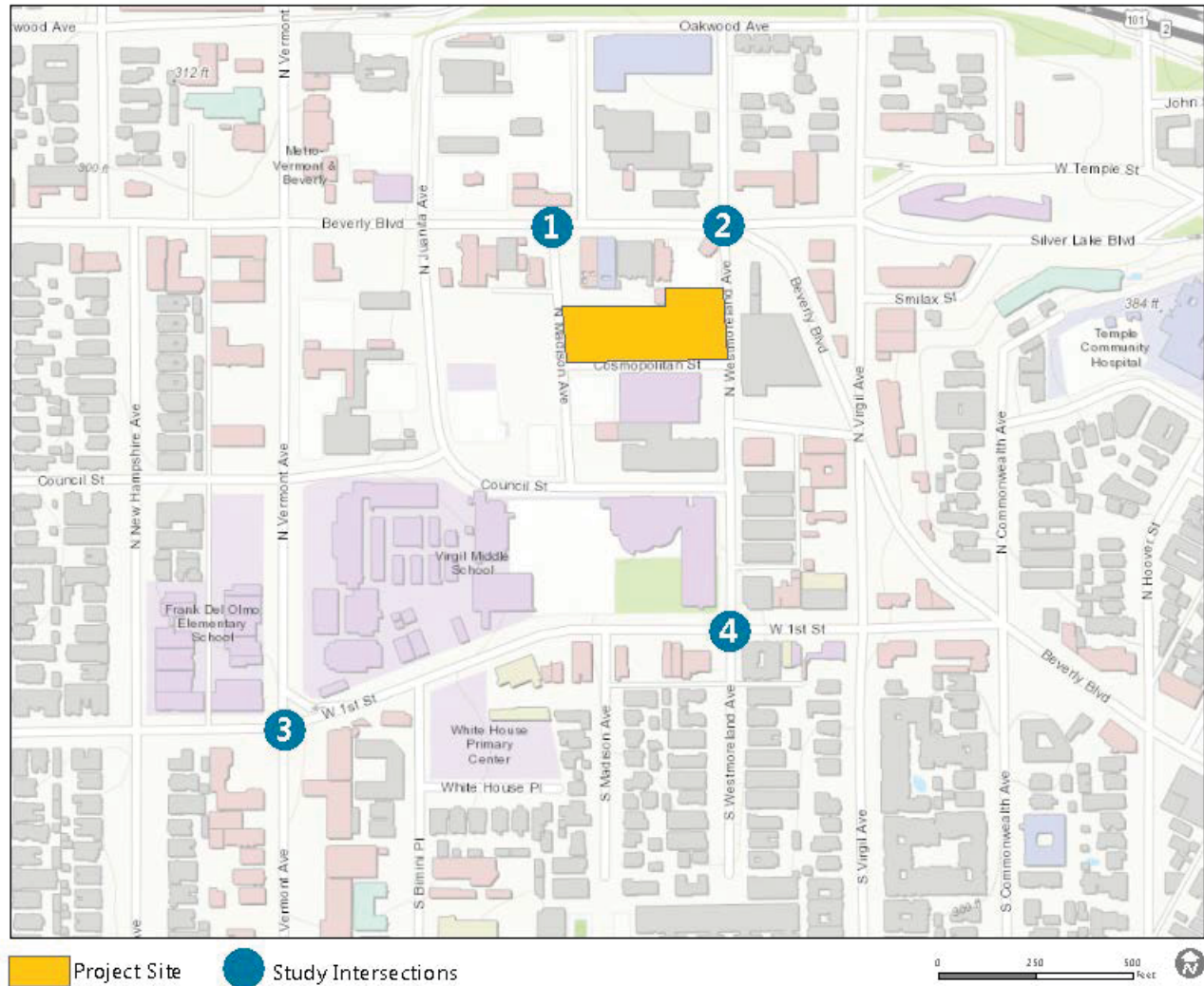
The project study area, as defined through consultation with City staff, includes the following five study intersections:

1. Beverly Boulevard/Madison Avenue*
2. Beverly Boulevard/Westmoreland Avenue
3. N Vermont Avenue/W 1st Street
4. Westmoreland Avenue/W 1st Street

** Two-way-stop controlled intersection*

Figure 2 illustrates the study area and the locations of the study intersections.

Figure 2- Study Intersection Locations



1.3 ANALYZED SCENARIOS

Traffic conditions associated with the proposed Project were analyzed at the study intersections for the weekday a.m. and weekday p.m. peak-hour periods. The study included the analysis of the following traffic scenarios:

- Existing
- Existing with-Project
- Future without-Project
- Future with-Project

1.4 ANALYSIS METHODOLOGY

The proposed Project site is located within the City of Los Angeles. KOA coordinated with LADOT at the start of this study to achieve consensus on assumptions such as study intersections, trip generation and trip distribution.

The general methodology and assumptions contained in this report are based on the LADOT Transportation Assessment Guidelines document of July 2019. A Memorandum of Understanding (MOU) that included all major traffic study assumptions was submitted to LADOT. An approved MOU dated August 30, 2019 was received from LADOT. A copy of the approved MOU is provided in Appendix A.

The list of study intersections is finalized through this process, as are the trip generation and trip distribution assumptions. The following text describes the methodology for this report as defined in the MOU document.

Existing Conditions

New traffic counts were conducted on a Thursday from 7:00 am to 10:00 am and 3:00 pm to 6:00 pm at the study intersections on September 5, 2019.

The traffic counts were used to determine existing traffic conditions. Fieldwork within the study area was undertaken to identify the condition of key study area roadways including traffic control and approach lane configurations at each study intersection, and on-street parking restrictions.

The existing level of service (LOS) at each of the study intersections is discussed in Section 2 of this report.

Project Trip Generation and Distribution

Project trip generation was based on land use intensities and trip rates defined by *Trip Generation, 10th Edition*, published by the Institute of Transportation Engineers (ITE). The trip generation and distribution calculations are discussed in Section 3 of this report.

Existing with-Project Conditions

Based on the projected Project traffic and the traffic count totals, an Existing plus-Proposed Project conditions scenario was analyzed per the *Sunnyvale* and *Smart Rail* California Environmental Quality Act (CEQA) court case decisions that determined that project impacts should be analyzed against existing conditions.

The level of service for existing with-Project conditions at the study intersections is discussed in Section 4 of this report.

Future without-Project Conditions

In order to account for traffic growth in the study area, an ambient/background traffic growth rate was applied to the existing traffic counts. In addition, traffic from related/area projects (approved and pending developments) was also added to the study area. The levels of service at the study intersections for future without-Project conditions are discussed in Section 5 of this report.

Future with-Project Conditions

Based on the future without-Project volumes plus traffic from the proposed Project, the future with-Project traffic volume conditions were determined and analyzed. The levels of service for this scenario are discussed in Section 6 of this report.

Level of Service Methodology

For analysis of Level of Service (LOS) at signalized and unsignalized intersections, LADOT has designated the Highway Capacity Manual (HCM) methodology as the desired tool. The LOS is defined by the weighted average control delay (seconds) for the intersection.

A facility with LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS E is typically defined as the operating "capacity" of a roadway. Table 1 and Table 2 define the level of service criteria applied to the unsignalized and signalized study intersections.

For signalized intersections, intersection delay includes how much increased time a vehicle experiences as a result of the traffic signal control. The signalized intersection LOS is the average number of seconds each vehicle is delayed during a specific time period (e.g. AM peak period, PM peak period). Table 1 summarizes the LOS criteria for signalized intersections as described in the Highway Capacity Manual 6th Edition.

Table 1 - Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)	General Description
A	≤ 10	Free flow
B	$\geq 10-20$	Stable flow (slight delays)
C	$> 20-35$	Stable flow (acceptable delays)
D	$> 35-55$	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	$> 55-80$	Unstable flow (intolerable delay)
F ¹	> 80	Forced flow (congested and queues fail to clear)

Source: Highway Capacity Manual 2010, Transportation Research Board, 2010.

1. If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0 LOS F is assigned to the individual lane group. LOS for overall approach or intersection is determined solely by the control delay.

For unsignalized intersections, there are LOS criteria for three intersection types: all-way stop, two-way stop, and roundabout control. All-way stop and roundabout control intersection LOS is expressed in terms of the weighted average control delay of the overall intersection or by approach. Two-way stop-controlled intersection LOS is defined in terms of the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns.

Table 2 shows LOS criteria for unsignalized intersections.

Table 2 - Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)
A	0-10
B	> 10-15
C	> 15-25
D	> 25-35
E	> 35-50
F ¹	> 50

Source: Highway Capacity Manual 2010, Transportation Research Board, 2010.

1. If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned an individual lane group for all unsignalized intersections, or minor street approach at two-way stop-controlled intersections. Overall intersection LOS is determined solely by control delay.

Significant VMT Impacts

Impacts are identified if a proposed development will result in a significant change in vehicles miles traveled (VMT). A significant impact is identified if the proposed project's household VMT per capita and daily work VMT per employee is higher than the thresholds identified by LADOT. The threshold applied is dependent upon which Area Planning Commission area the project is located within. The City of Los Angeles' thresholds are displayed in Table 3.

Table 3 - VMT Impact Criteria (15% Below APC Average)

Area Planning Commission	Daily Household VMT per Capita	Daily Work VMT per Employee
Central	6.0	7.6
East LA	7.2	12.7
Harbor	9.2	12.3
North Valley	9.2	15.0
South LA	6.0	11.6
South Valley	9.4	11.6
West LA	7.4	11.1

Source: City of Los Angeles Transportation Assessment Guidelines

All VMT estimates are calculated by LADOT's VMT Calculator Version 1.0 tool. The tool generates the daily vehicle trips, daily VMT, daily household VMT per capita, and daily work VMT per employee a proposed project may have. The tool also incorporates any mitigation strategies into its outputs.

2. EXISTING CONDITIONS

This section describes the existing conditions within the study area in terms of roadway facilities, transit service and traffic operating conditions.

2.1 EXISTING ROADWAY SYSTEM

The key roadways within the study area are described here. The discussion is limited to specific roadways that traverse the study intersections and serve the Project site. Table 4 provides a list of the roadway characteristics as well. Figure 3 illustrates the existing traffic controls and approach lane geometries at the study intersections.

[1st Street](#) is classified as a north-south Collector arterial in the City of Los Angeles' Mobility Plan 2035. The roadway generally has one travel lane in each direction. On-street parking is generally permitted on both sides of the roadway. The posted speed limit is 25 miles per hour.

[Beverly Boulevard](#) is classified as a west-south Avenue II and Boulevard II arterial in the City of Los Angeles' Mobility Plan 2035. The roadway generally has three travel lanes in each direction. On-street parking is generally permitted on both sides of the street with varying levels of restriction (e.g. 2 HRS, no parking during AM and PM peak periods). The posted speed limit is 35 miles per hour.

[Cosmopolitan Street](#) is classified as a west-east Local arterial in the City of Los Angeles' Mobility Plan 2035. The roadway generally has one travel lane in each direction. On-street parking is generally permitted on both sides of the roadway. This arterial did not have a posted speed limit.

[Madison Avenue](#) is classified as a north-south Local arterial in the City of Los Angeles' Mobility Plan 2035. The roadway generally has one travel lane in each direction. On-street parking is generally permitted on both sides of the roadway. This arterial did not have a posted speed limit.

[Vermont Avenue](#) is classified as a north-south Avenue I arterial in the City of Los Angeles' Mobility Plan 2035. The roadway generally has three travel lanes in each direction. On-street parking is limited to certain areas on both sides of the roadway (e.g. both sides of roadway north of 3rd Street/Vermont Avenue). The posted speed limit is 35 miles per hour.

[Westmoreland Street](#) is classified as a north-south Local arterial in the City of Los Angeles' Mobility Plan 2035. The roadway generally has one travel lane in each direction. On-street parking is generally permitted on both sides of the roadway. This arterial did not have a posted speed limit.

Table 4 - Existing Roadway Network

Roadway	Classification	# Lanes		Median Type	Posted Speed Limit (mph)	General Land Use
		NB/EB	SB/WB			
1st Street	Collector	1	1	DLTL	25	Residential
Beverly Boulevard	Avenue II/ Boulevard II	3	3	DY	35	Commercial
Cosmopolitan Street	Local	1	1	-	NP	Commercial
Madison Avenue	Local	1	1	-	NP	Commercial
Vermont Avenue	Avenue I	3	3	DLTL	30	Commercial
Westmoreland Street	Local	1	1	-	NP	Residential

Source: Navigate LA & Zimas. City of Los Angeles

DY - Double Yellow Striped Median

NSAT - No Stopping Any Time

NS - No Stopping

NP - Not Posted

DLTN - Double Left-Turn Lane

2.2 EXISTING TRANSIT SERVICE

The Project study area is served by bus transit lines operated by the Metro and the City of Los Angeles. Table 5 summarizes the Project Study transit services.

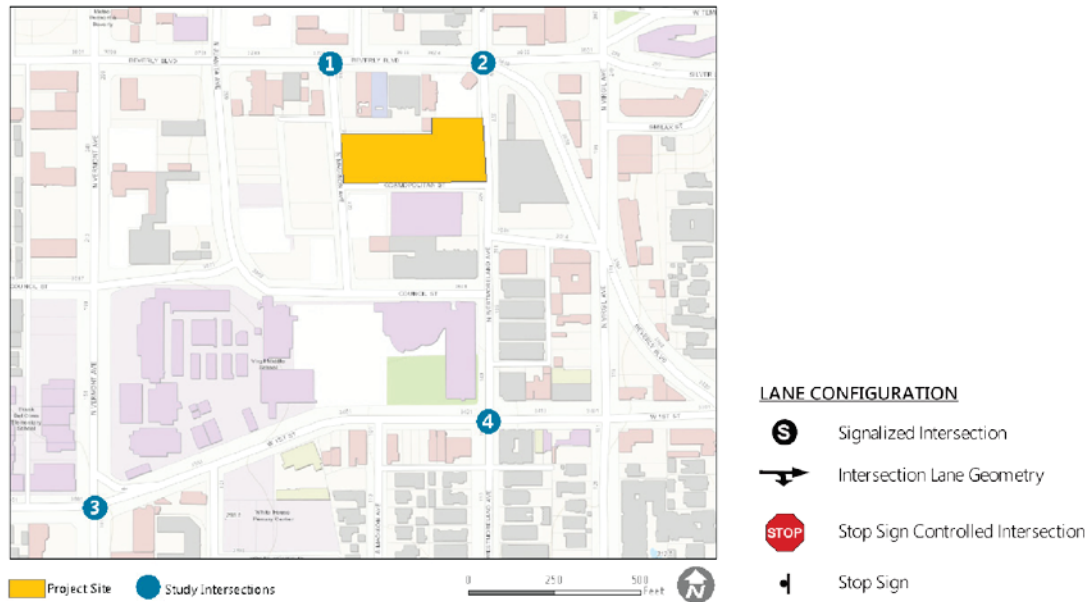
Table 5 - Existing Transit Service Summary

Agency	Line	From	To	Via	Peak Frequency (minutes)
Metro	14	Beverly Hills	Downtown LA	Beverly Blvd	5-8
	201	Los Angeles	Glendale	Vermont Ave/Silver Lake Blvd/Brunswick Ave/Pacific Ave/Broadway/Chevy Chase Dr/Glenoaks Blvd	50
	204	Athens	Hollywood	Vermont Ave	6-10
LADOT DASH	Wilshire Center/Koreatown	Koreatown Plaza	Koreatown Plaza	Western Ave/3rd St/Vermont Ave/James M Wood Blvd/1st St	20

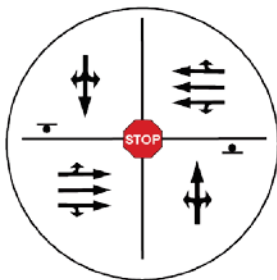
Source: Metro, City of Los Angeles

The routes of these transit services are illustrated on Figure 4.

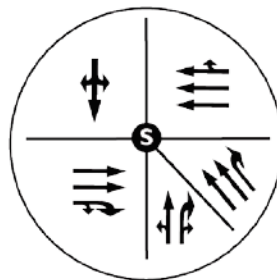
Figure 3 - Existing Lane Configuration



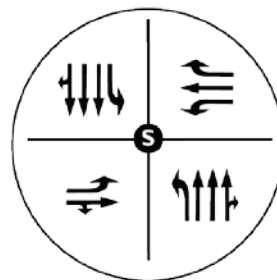
#1 Madison Ave & Beverly Blvd



#2 Westmoreland Ave & Beverly Blvd



#3 Vermont Ave & 1st St



#4 Westmoreland Ave & 1st St

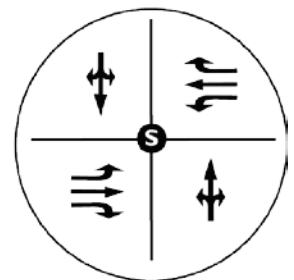
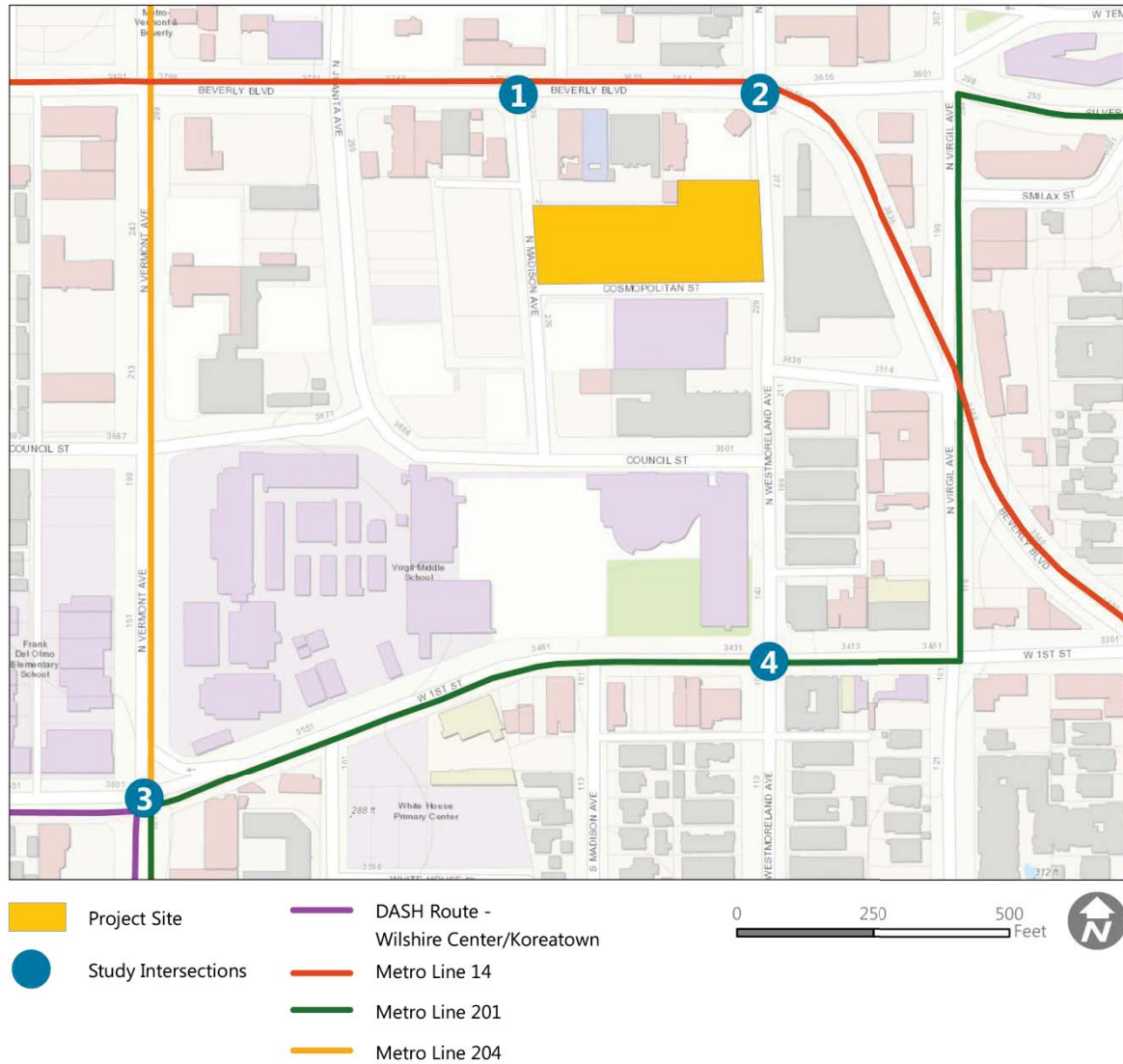


Figure 4 - Existing Transit Services



2.3 EXISTING TRAFFIC VOLUMES

Vehicle turning movement counts were collected at the study intersections on Thursday, September 5, 2019. Traffic counts were conducted from 7:00 a.m. to 10:00 a.m. and from 3:00 p.m. to 6:00 p.m. The traffic count data sheets are provided in Appendix B.

2.4 EXISTING INTERSECTION LEVEL OF SERVICE

Based on the intersection lane configurations and the existing traffic volumes, delay, and corresponding levels of service (LOS) were determined for each of the study intersections during the weekday a.m. and p.m. peak hours.

Table 6 summarizes the volume-to-capacity ratios and LOS values for existing traffic conditions.

Table 6- Intersection Performance – Existing Conditions

Study Intersections		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	Madison Avenue & Beverly Boulevard*	256.9	F	197.6	F
2	N Westmoreland Avenue & Beverly Boulevard	18.4	B	19.8	B
3	N Vermont Avenue & W 1st Street	23.0	C	29.4	C
4	N Westmoreland Avenue & W 1st Street	19.3	B	15.0	B

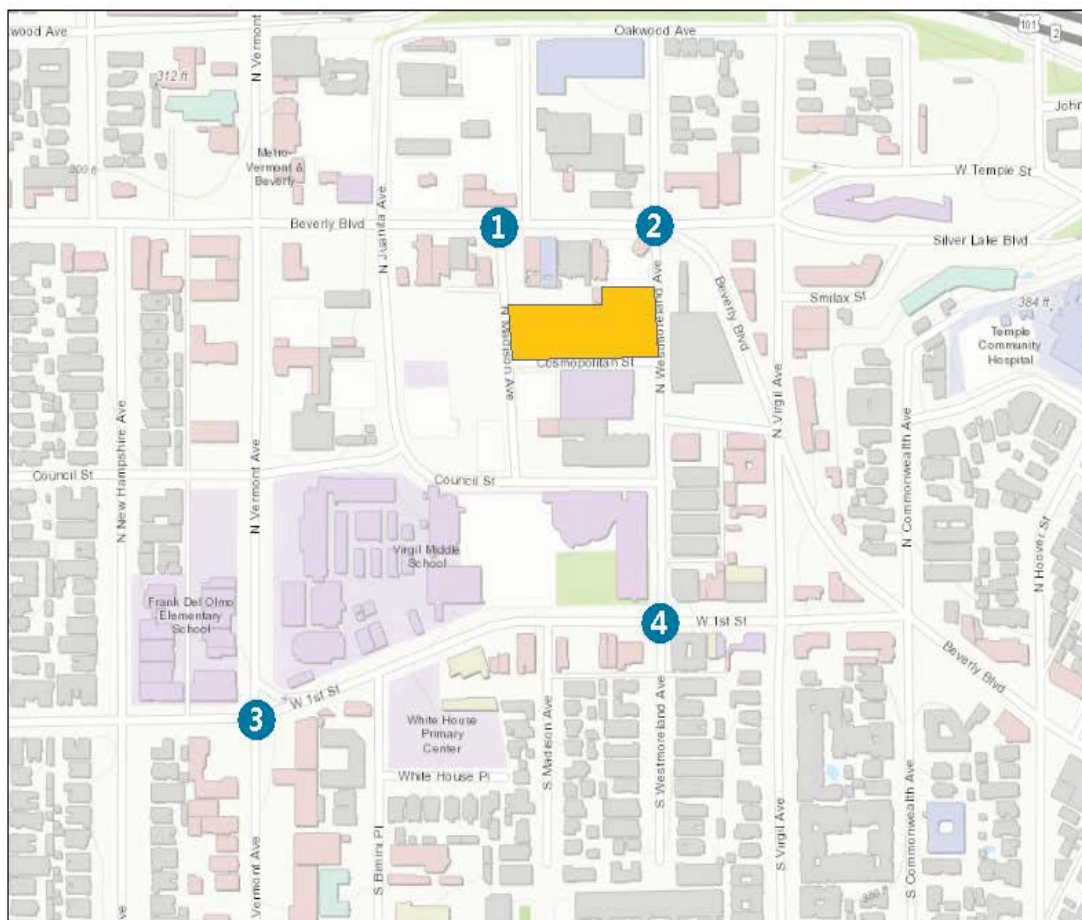
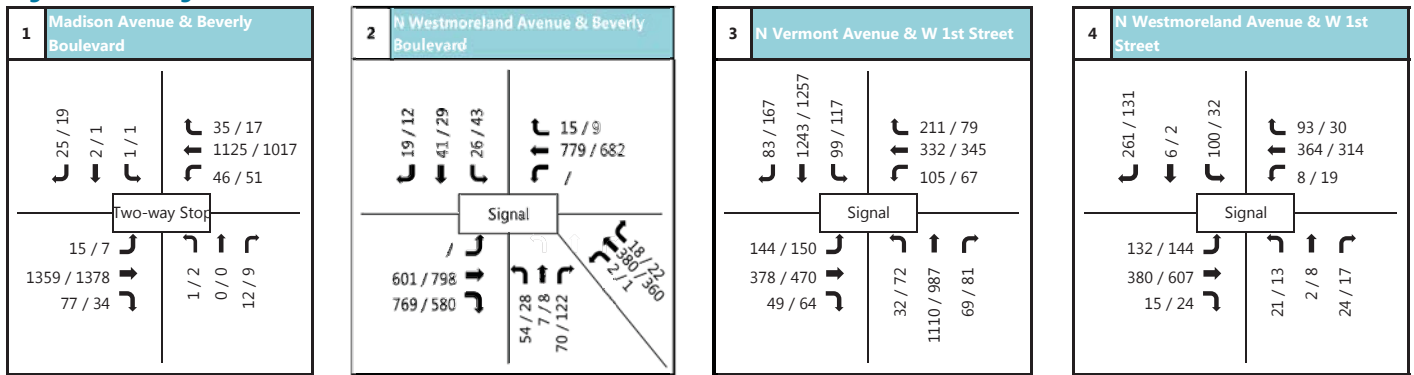
LOS = Level of Service; Delay (seconds)

*Unsignalized intersection

As shown in Table 6, three of the four study intersections are operating at LOS C or better during the weekday a.m. and p.m. peak hours. The Madison Avenue/Beverly Boulevard intersection currently operates at LOS F.

The existing weekday a.m. peak-hour and p.m. peak-hour traffic turn movement volumes are illustrated on Figure 5 of this report. The existing traffic analysis scenario worksheets are provided in Appendix C.

Figure 5 - Existing AM/PM Peak Hour Traffic Volumes



Project Site
 Study Intersections



XX/XX AM /PM Peak Hour Traffic Volumes

3. PROJECT TRAFFIC

This section defines the traffic that would be generated by the proposed Project in a three-step process including trip generation, trip distribution and trip assignment.

3.1 PROJECT TRIP GENERATION

The trip generation of the project was calculated using nationally-accepted rates defined by *Trip Generation (10th edition)*, published by the Institute of Transportation Engineers (ITE).

The trip generation analysis is provided in Table 7. The project would generate 921 daily trips, including 317 vehicle trips during the a.m. peak-hour (172 inbound trips and 145 outbound trips) and 161 vehicle trips during the p.m. peak hour (74 inbound trips and 87 outbound trips).

Table 7 - Project Trip Generation

Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak			PM Peak		
					Total	In	Out	Total	In	Out
Proposed Project Trip Generation Estimates										
Elementary School	520	294	Students	556	191	103	88	100	45	55
Middle School	522	186	Students	396	130	72	58	65	30	35
Proposed Project Subtotal				952	321	175	146	165	75	90
Former Use Trip Credit										
Warehousing	150	18	KSF	-31	-4	-3	-1	-4	-1	-3
Former Use Trip Credit				-31	-4	-3	-1	-4	-1	-3
Total				921	317	172	145	161	74	87

Trip generation rates based on ITE Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017, unless otherwise noted.

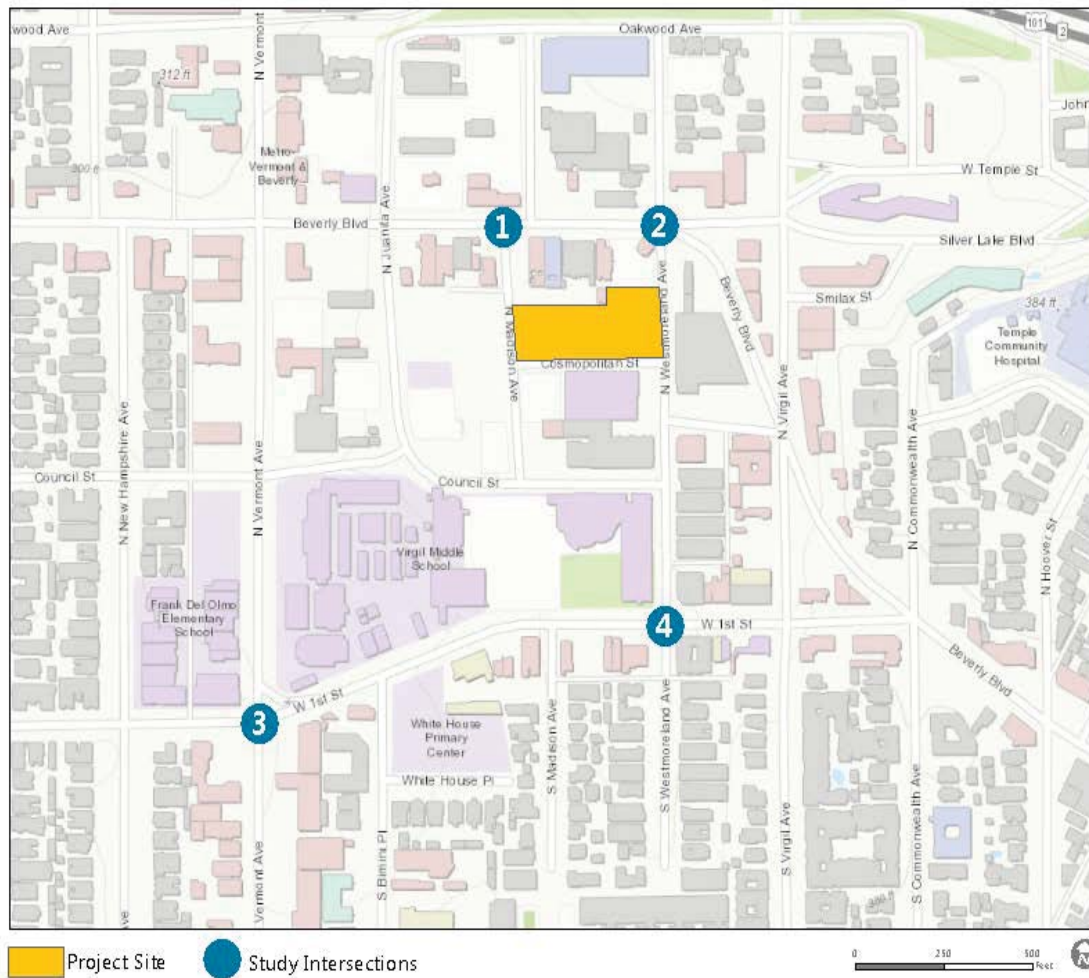
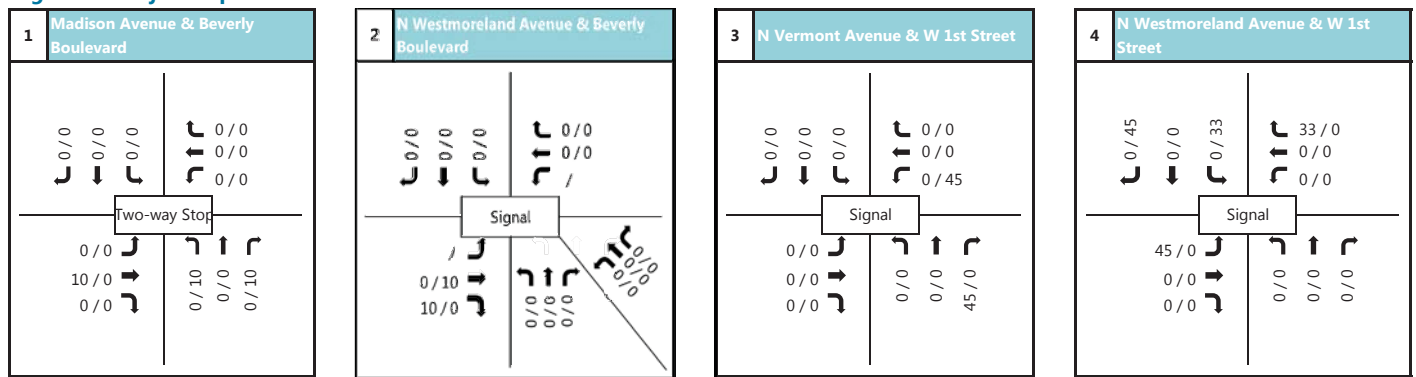
3.2 PROJECT TRIP DISTRIBUTION

Trip distribution is the process of assigning the directions from which traffic will access the Project site. Trip distribution is dependent upon the land use characteristics of the Project, the local roadway network, and the general locations of other land uses to which Project trips would originate or terminate. Figure 6 illustrates the trip distribution percentages at the study intersections. Figure 6 illustrates the trip distribution percentages that were utilized for the Project traffic.

3.3 PROJECT TRIP ASSIGNMENT

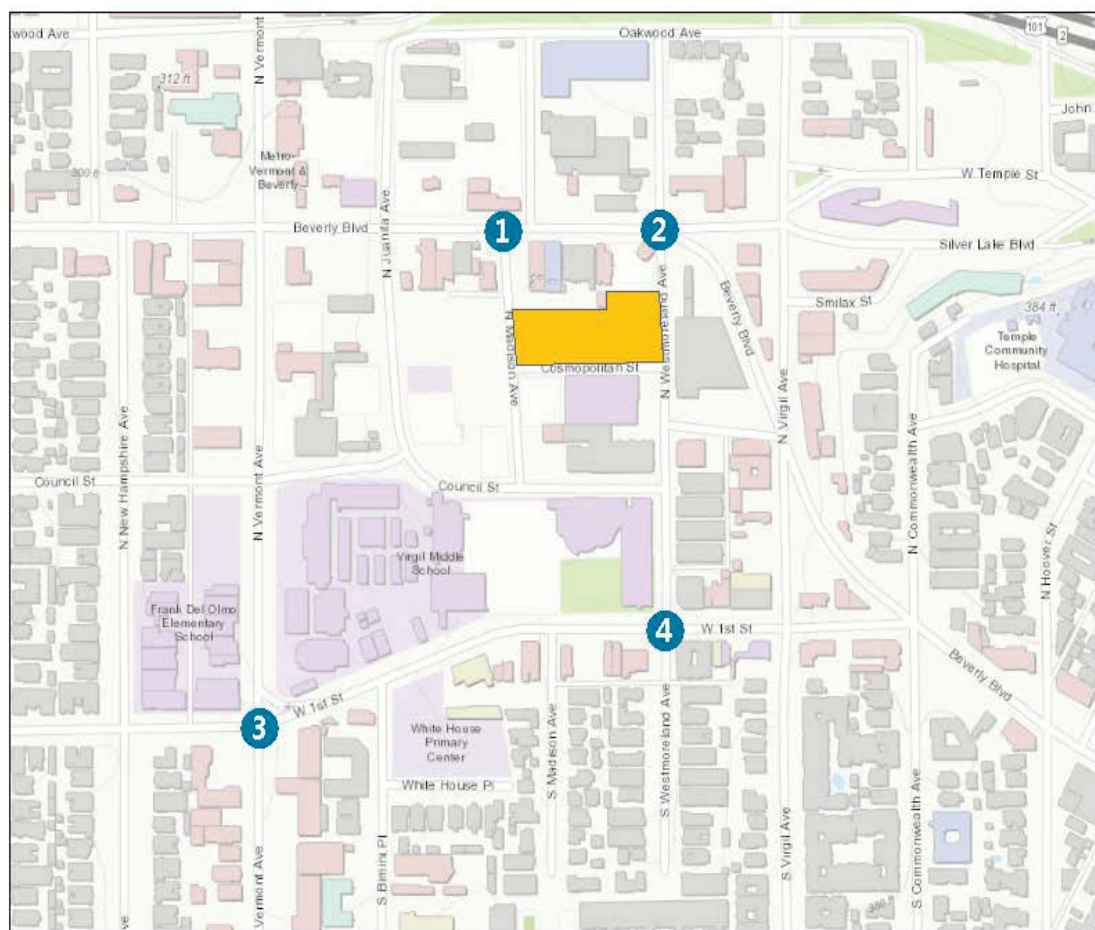
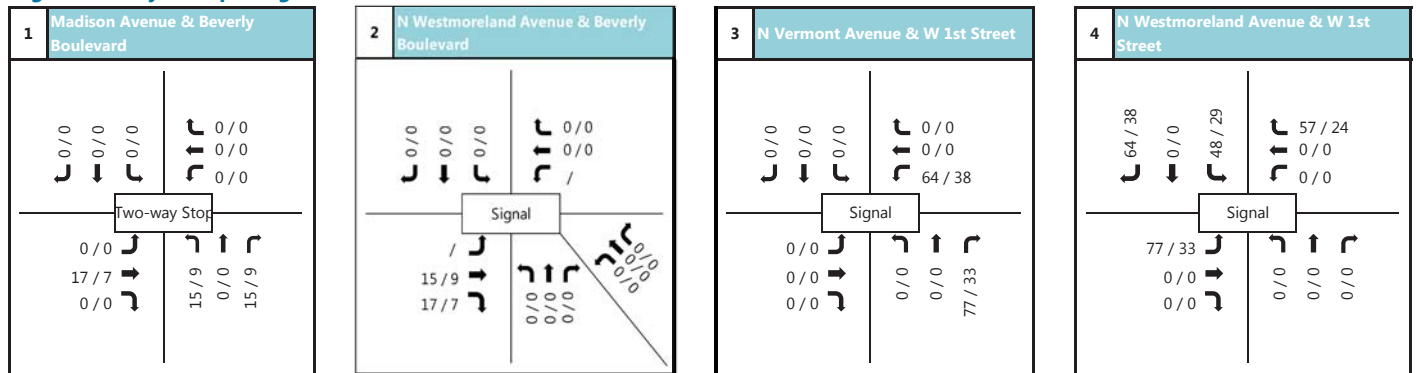
Based on the trip generation and distribution assumptions described above, Project traffic was assigned to the roadway system. The peak hour Project trip assignment is illustrated on Figure 7.

Figure 6 - Project Trip Distribution



XX/XX Inbound/Outbound Project Distribution Percentage

Figure 7 - Project Trip Assignment - AM/PM Peak Hour Traffic Volumes



Project Site Study Intersections

XX/XX AM /PM Peak Hour Traffic Volumes

4. EXISTING WITH PROJECT CONDITIONS

This section documents existing traffic conditions at the study intersections with the addition of Project-generated traffic. Traffic volumes for these conditions were derived by adding Project trips to the existing traffic volumes.

Table 8 summarizes the resulting V/C and LOS values at the study intersections for the existing with-Project conditions. The existing with-Project traffic analysis worksheets for this scenario are provided in Appendix D of this report.

**Table 8- Intersection Performance –
Existing With-Project**

Study Intersections		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	Madison Avenue & Beverly Boulevard*	265.4	F	200.2	F
2	N Westmoreland Avenue & Beverly Boulevard	20.3	C	19.8	B
3	N Vermont Avenue & W 1st Street	36.1	D	45.3	D
4	N Westmoreland Avenue & W 1st Street	29.1	C	16.0	B

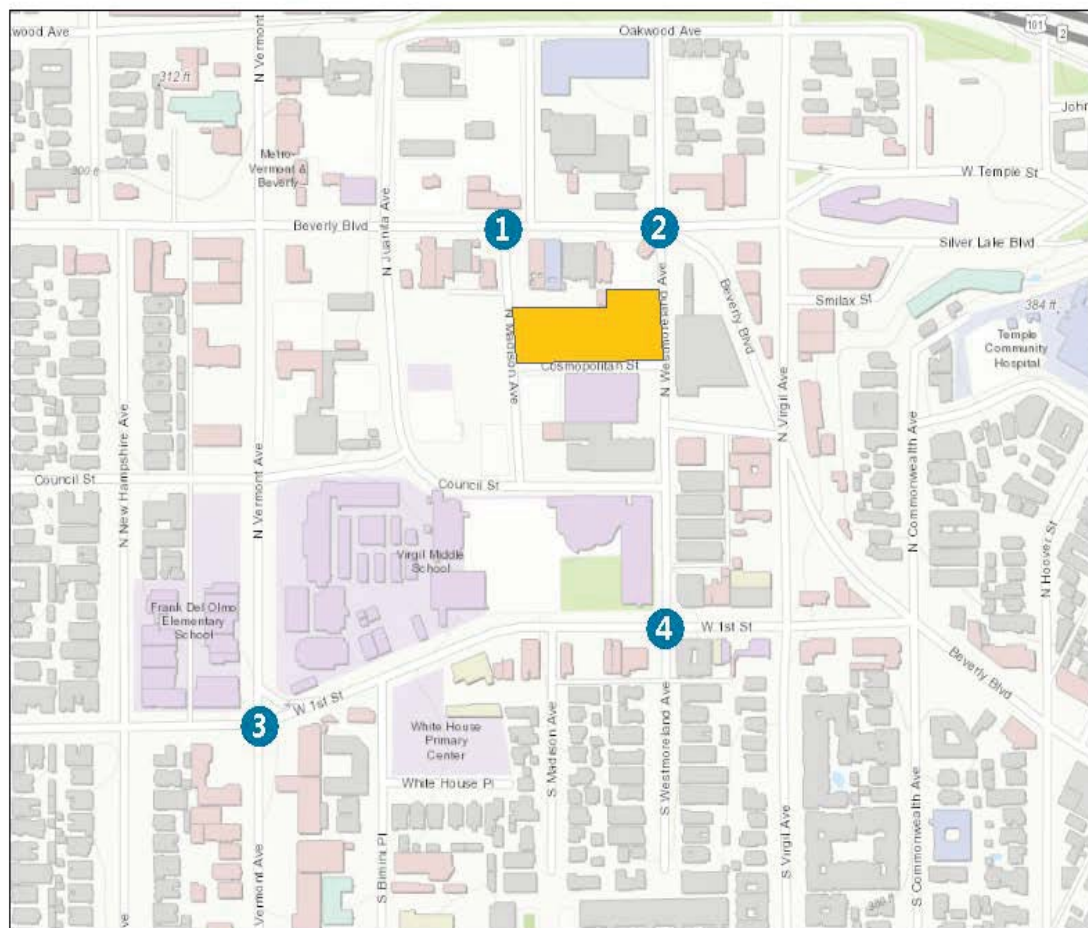
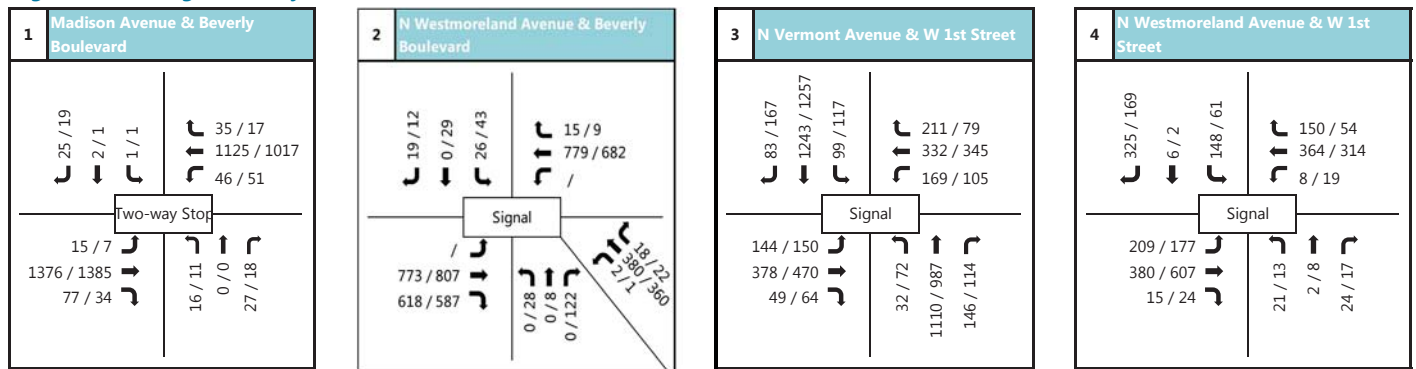
LOS = Level of Service; Delay (seconds)

*Unsignalized intersection

As shown in Table 5, three out of the four study intersections would operate at acceptable LOS D or better during the weekday a.m. and p.m. peak hours. Madison Avenue and Beverly Boulevard intersection would operate at LOS F.

The existing with-Project traffic volumes for the weekday a.m. and p.m. peak hour are illustrated on Figure 8 of this report.

Figure 8 - Existing With-Project - AM/PM Peak Hour Traffic Volumes



Project Site Study Intersections

XX/XX AM/PM Peak Hour Traffic Volumes

5. FUTURE WITHOUT PROJECT CONDITIONS

This section provides an analysis of future traffic conditions in the study area with area/related project trips and background growth added, but without Project traffic. The proposed Project is anticipated to be completed by 2019, and therefore the future analysis year is 2021.

5.1 AMBIENT GROWTH

In order to acknowledge regional population and employment growth outside of the study area, an ambient/background traffic growth rate was applied to the existing traffic counts. To be conservative, the annual growth rate was rounded to one percent for the future scenarios.

5.2 AREA PROJECTS

In addition to the application of the ambient traffic growth rate, traffic from related/area projects (approved and pending developments) was also included as part of the year-2021 analysis. Four related projects in the City of Los Angeles were identified for inclusion in the traffic impact analysis.

Table 9 provides the trip generation estimates for the related/area projects that were identified during coordination with the City of Los Angeles, and the project locations are illustrated on Figure 9.

Table 9 – Area Projects Trip Generation Estimate

Map ID	Location	Land Use	Intensity	Units ¹	Daily Total	AM Peak Hour			PM Peak Hour		
						Total	In	Out	Total	In	Out
1	3200 W Beverly Blvd	Apartments	32	d.u.	632	20	4	16	71	39	32
		Retail	5.867	k.s.f.							
2	235 S Hoover St	Apartments	214	d.u.	1,423	109	22	87	133	86	47
3	600 N Vermont Ave	Apartments	120	d.u.	320	54	8	46	30	12	18
		Retail	14.6	k.s.f.							
4	200 N Vermont Ave	Apartments	490	d.u.	2,645	196	47	149	159	113	46
		Restaurant	10	k.s.f.							
		Retail	25	k.s.f.							
Grand Total					5,652	399	85	314	464	289	175

Trip Generation AM/PM Peak "Total" Rates Source: Los Angeles Department of Transportation (LADOT) Case Logging and Tracking

¹ Mid-Day rates calculated using "PM Peak Hour Generator" estimates. ITE Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2012, unless otherwise noted.

7/30/2019, unless otherwise noted.

¹ d.u. = dwelling units, k.s.f. = 1,000 square feet of floor area

The area project trip assignment volumes for the a.m. and p.m. peak hours are provided on Figure 10.

Figure 9 - Location of Area Projects

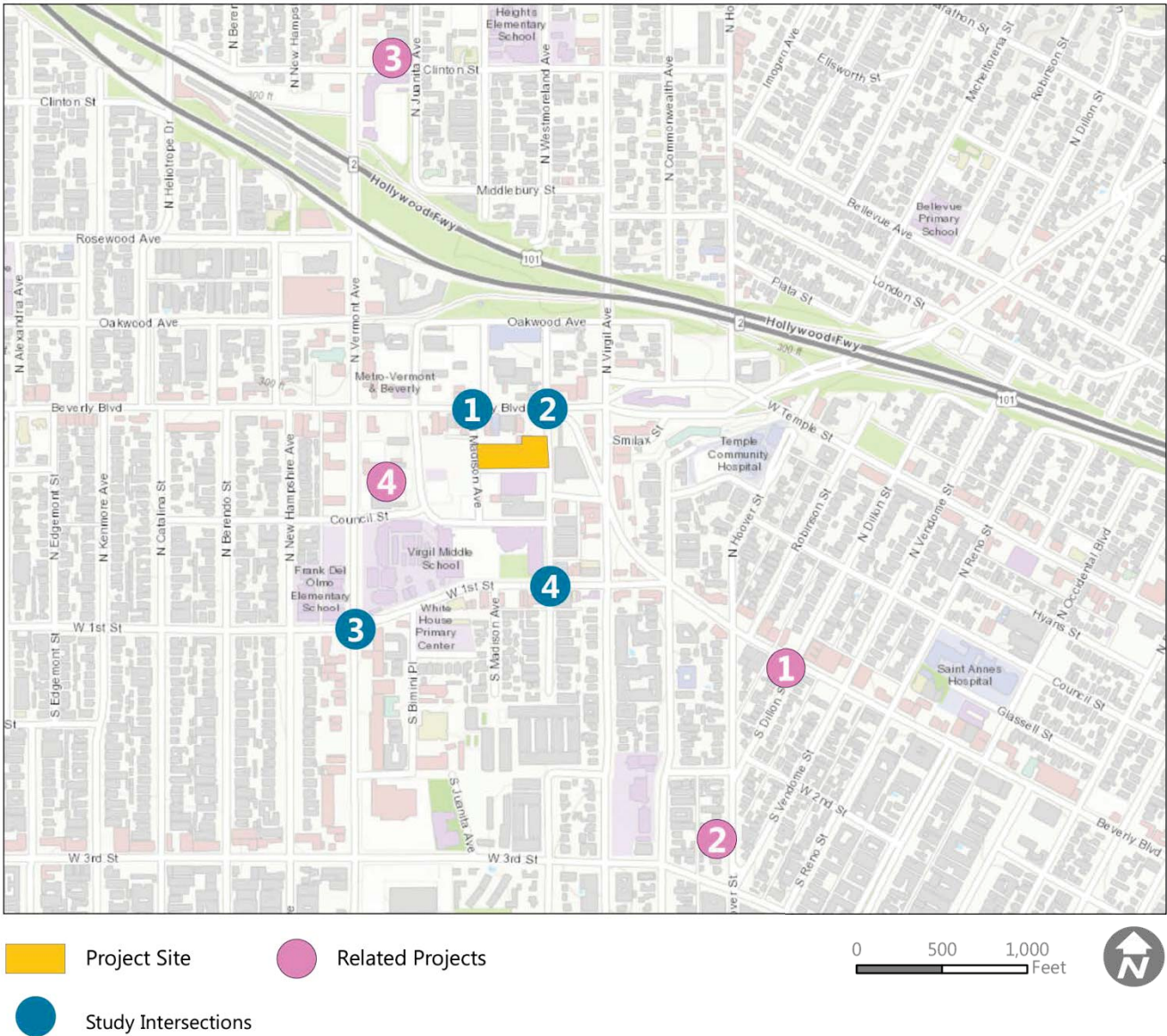
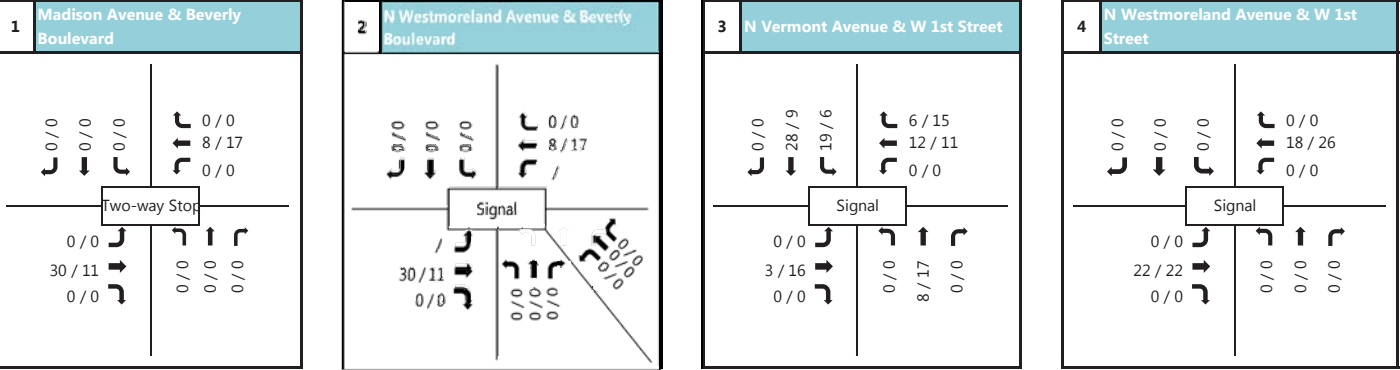


Figure 10 - Area Project Trip Assignment - AM/PM Peak Hour



5.3 FUTURE WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE

Table 10 summarizes the delay and LOS values at the study intersections under this scenario. The future without-Project traffic analysis worksheets are provided in Appendix E of this report.

**Table 10 – Intersection Performance –
Future without-Project**

Study Intersections		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	Madison Avenue & Beverly Boulevard*	307.0	F	228.1	F
2	N Westmoreland Avenue & Beverly Boulevard	18.6	B	19.9	B
3	N Vermont Avenue & W 1st Street	24.4	C	35.4	D
4	N Westmoreland Avenue & W 1st Street	19.4	B	15.3	B

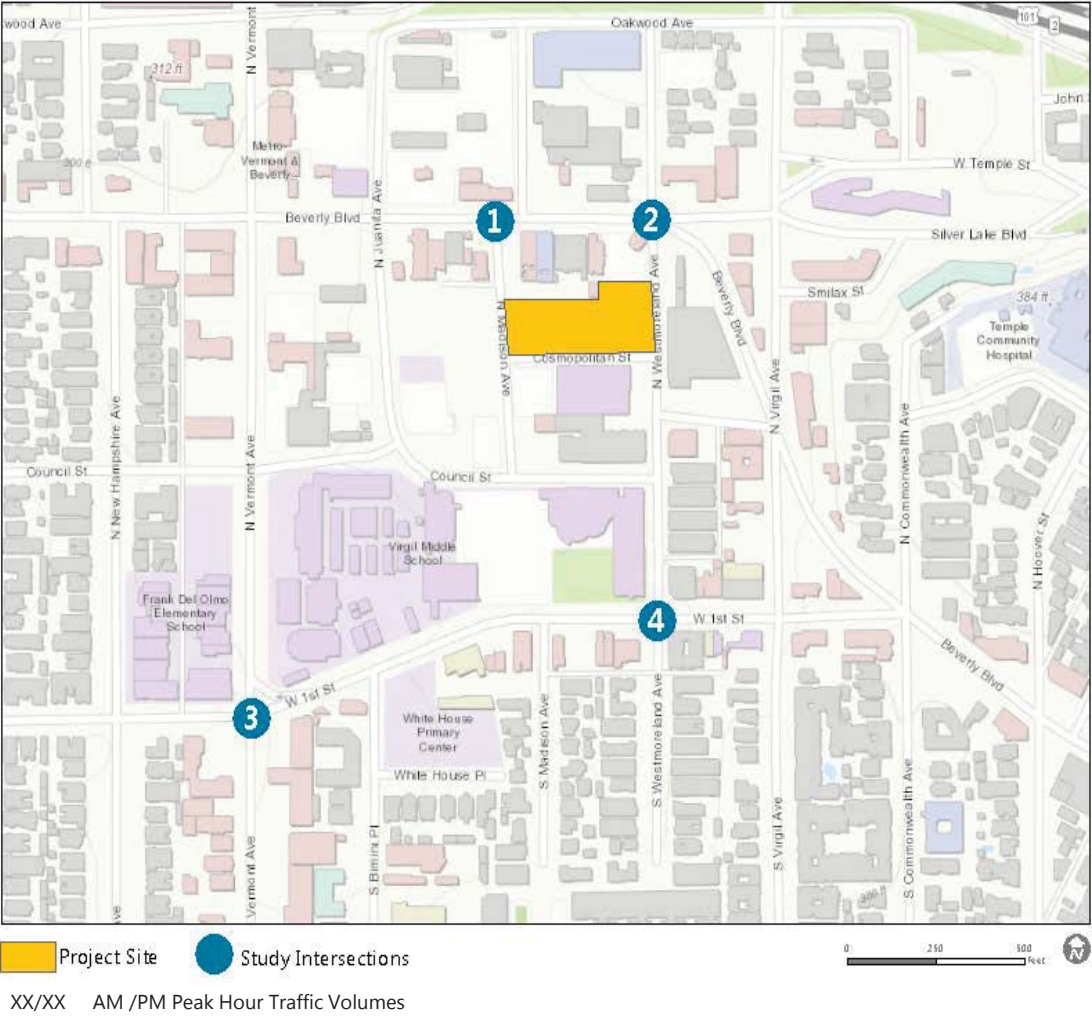
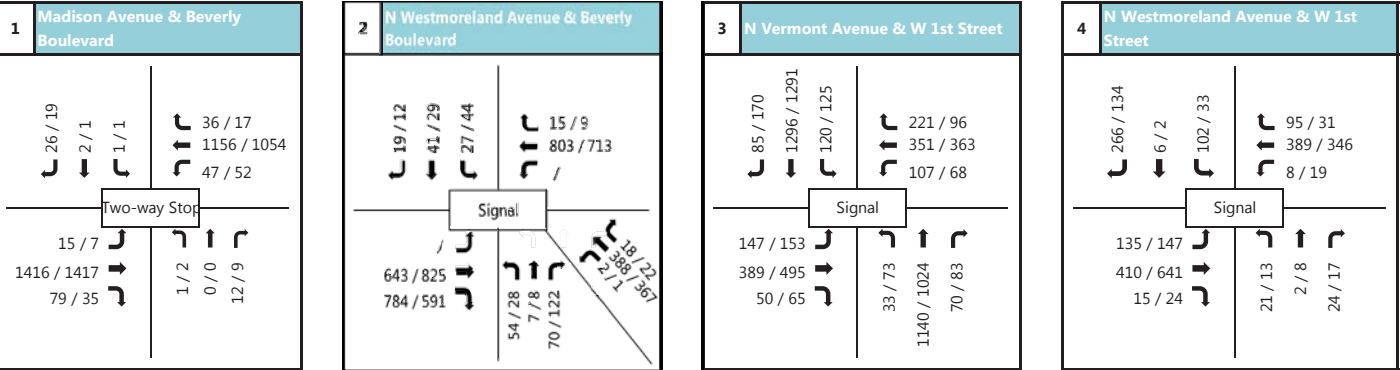
LOS = Level of Service; Delay (seconds)

*Unsignalized intersection

As shown in Table 7, three out of the four study intersections would operate at LOS D or better during the weekday a.m. and p.m. peak hours. Madison Avenue/Beverly Boulevard intersection would continue operate at LOS F.

The future without-Project traffic volumes for the weekday a.m. and p.m. peak hour are illustrated on Figure 11 of this report.

Figure 11 - Future Without Project - AM/PM Peak Hour Traffic Volumes



6. FUTURE WITH PROJECT CONDITIONS

This section documents future traffic conditions at the study intersections with the addition of Project-generated traffic. Traffic volumes for these conditions were derived by adding Project trips to the future without-Project scenario volumes.

Table 11 summarizes the resulting delay and LOS values at the study intersections for future with-Project traffic conditions. The future with-Project traffic analysis worksheets are provided in Appendix F of this report.

Table 11 - Intersection Performance – Future with-Project

Study Intersections		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	Madison Avenue & Beverly Boulevard*	317.6	F	231.2	F
2	N Westmoreland Avenue & Beverly Boulevard	18.6	B	19.9	B
3	N Vermont Avenue & W 1st Street	42.2	D	51.2	D
4	N Westmoreland Avenue & W 1st Street	30.4	C	16.3	B

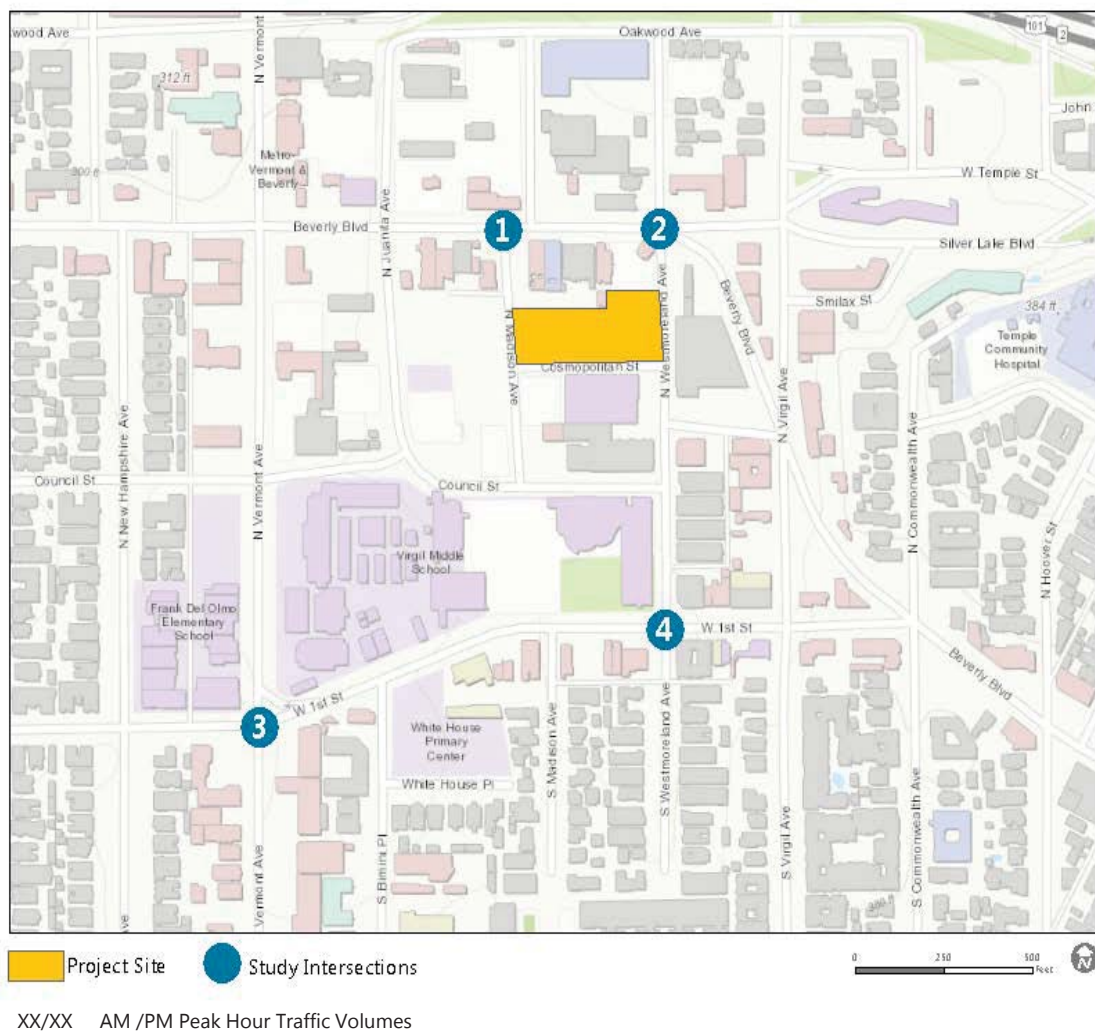
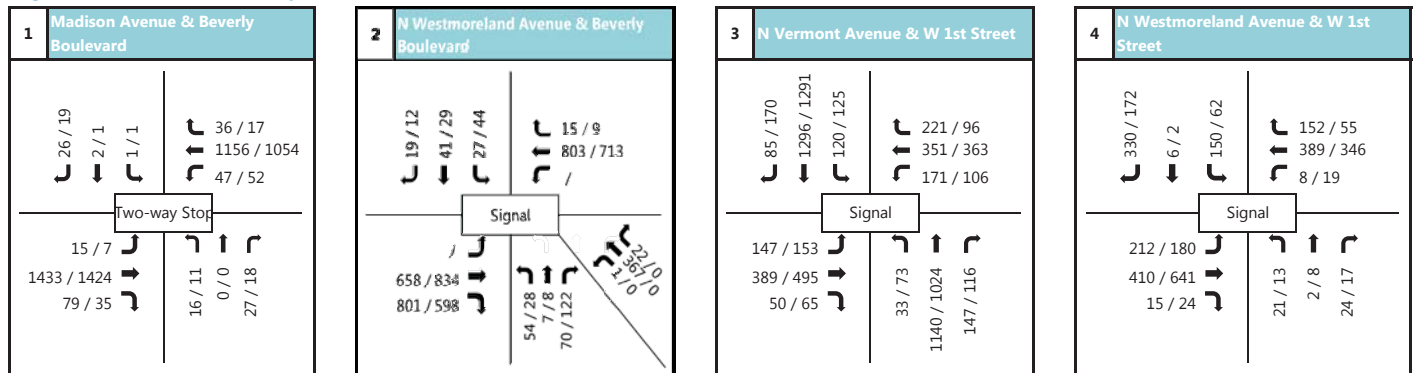
LOS = Level of Service; Delay (seconds)

*Unsignalized intersection

As shown in Table 11, three out of the four study intersections would operate at LOS D or better during the weekday a.m. and p.m. peak hours. Madison Avenue/Beverly Boulevard intersection would continue operate at LOS F.

The future with-Project traffic volumes for the weekday a.m. and p.m. peak hour are illustrated on Figure 12 of this report.

Figure 12 – Future With Project - AM/PM Peak Hour Traffic Volumes



7. PROJECT TRAFFIC IMPACTS

7.1 DETERMINATION OF VMT IMPACT

Impacts are identified if a proposed development will result in a significant change in vehicles miles traveled (VMT). A significant impact is identified if the proposed project's household VMT per capita and daily work VMT per employee is higher than the thresholds identified by LADOT. The threshold applied is dependent upon which Area Planning Commission area the project is located within.

Based on its location within the City of Los Angeles, the VMT thresholds used to measure the proposed project's impact is shown below in Table 12.

Table 12 - VMT Impact Criteria (15% Below APC Average) Applied

Area Planning Commission	Daily Household VMT per Capita	Daily Work VMT per Employee
Central	6.0	7.6

Source: City of Los Angeles Transportation Assessment Guidelines

All VMT estimates are calculated by the LADOT's VMT Calculator Version 1.0 tool. The tool generates the daily vehicle trips, daily VMT, daily household VMT per capita, and daily work VMT per employee a proposed project may have with or without mitigation.

The following sections will describe the applied mitigation strategies and the results generated via the LADOT VMT Calculator tool.

7.2 TDM STRATEGIES APPLIED

The proposed project does not include any TDM strategy. Thus, proposed project and mitigation credits were not applied to the project impact analysis.

7.3 VMT IMPACT ANALYSIS RESULTS

The proposed project's address and land uses were inputted into the LADOT VMT Calculator Version 1.0 tool. A summary of those results are provided in Table 13 and Table 14.

Table 13 - VMT Calculator Results

Scenario	Daily Vehicle Trips	Daily VMT	Household VMT per Capita	Work VMT Per Employee
Proposed	386	2015	0.0	7.1
With Mitigation ¹	386	2015	0.0	7.1

1. No credits applied.

Table 14 - VMT Impact

Scenario	Household VMT per Capita	Work VMT Per Employee	Significant VMT Impact - Household?	Significant VMT Impact - Work?
Proposed	0.0	7.1	NO	NO
With Mitigation ¹	0.0	7.1	NO	NO

1. No credits applied.

As demonstrated in Table 14, the proposed project does not trigger an impact. The VMT calculator worksheets are provided in Appendix G.

7.4 FACILITY QUEUING

The following text provides a summary of site access issues related to queuing at the planned on-site pick-up/drop-off area. This analysis examined the a.m. peak hour of operations, as this is the higher calculated peak hour for inbound Project traffic. As discussed in Section 3, the Project trip generation analysis assumed that half of the students would arrive at the school site and depart at least one-hour apart.

The proposed Project site plan provides for pick-up/drop-off inbound vehicle access on-site. Vehicles picking up and dropping off will enter on Cosmopolitan Street using the school's south driveway and exit on Madison Avenue using the school's west driveway.

The following was concluded from a queuing analysis conducted for the proposed Project site plan:

- The net project a.m. inbound vehicle trips totals 172,
- As school traffic can have a peak period of 15 minutes or so within the peak hour of overall area traffic, the analyzed inbound vehicle volume for a 15-minute period was assumed to be half of the hourly volume at 86 vehicles.
- The arrival rate would be 5.73 vehicles per minute (86 vehicles divided by the 15 minutes of the peak period).
- The proposed on-site pick-up/drop-off area will contain four active loading/unloading spaces

where the vehicles stop and let the student out of or into the vehicle.

- Assuming a 30-second average unloading time per vehicle, the service rate of the pick-up/drop-off area would be 2.0 vehicles per active loading space $[(60 \text{ minutes} \times 60 \text{ seconds or } 3600)/30 \text{ seconds} = 120 \text{ vehicle/hour per active loading space}]$, $120 \text{ vehicles} / 60 = 2.0 \text{ vehicles}$. The service rate for a 15-minute period would be 8 vehicles and or 2.0 vehicles per minute.
- The queuing analysis indicates that the traffic intensity is calculated to be 0.72 (5.73 arrival rate / 8.0 service rate). The probable queue would be 5 vehicles after the active loading spaces.
- The on-site pick-up/drop-off area can accommodate this queue. Approximately 11 vehicles can be accommodated on-site behind the active loading spaces.

The school operator plans to provide assistance for students entering and exiting vehicles at the pick-up/drop-off area, in order to shorten the dwell time for each vehicle. The school would use staff monitors or student valets for this purpose. The queuing analysis figure and diagram are provided in Appendix H of this report.

8. SIGNAL WARRANTS

8.1 ANALYSIS

A full traffic signal warrant was analyzed for the potentially controlled intersection of Westmoreland Avenue/Cosmopolitan Street. This study evaluated the need for a traffic signal at the study intersection based on existing volumes.

The warrant study included a review of daily/hourly vehicular volumes and peak-period pedestrian traffic volumes, and field observations of traffic gaps for safe pedestrian crossing. Westmoreland Avenue is classified as a local street, and has one lane of travel in each direction.

The signal warrant analysis follows the methodologies prescribed in the 2014 California Manual on Uniform Traffic Control Devices (MUTCD), published by Caltrans.

Analysis worksheets and surveys are provided in Appendix I.

8.2 WARRANT 1 – EIGHT HOUR VEHICULAR VOLUME

This is intended for application where the volume of intersecting traffic is the principal reason for consideration of a signal installation. This warrant also applies to operating conditions where traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or hazard in entering or crossing the major street. Warrant 1 would be met if any of the three conditions are met.

Major street approach volumes along Westmoreland Avenue and minor street approach volumes along Cosmopolitan Street were evaluated based on the 24-hour traffic counts. As shown in the attached traffic counts, neither the minimum vehicle volume nor the interruption of continuous traffic warrant will be met at the study intersection. All of the eight hour traffic volumes at the intersection would not meet the minimum requirement of 150 (at 100%) or 120 (at 80%) vehicles per hour for minimum vehicle volume condition at the minor approach. The interruption of continuous traffic condition would also not be met for all eight hours based on the minimum of 900 (at 100%) or 720 (at 80%) vehicles at the major street.

8.3 WARRANT 2 – FOUR HOUR VEHICULAR VOLUME

This is intended to determine if, during the fourth highest hour of the day, minor street traffic suffers undue delay in entering or crossing the major street. Warrant 2 requires that all the plotted points fall above the curve in Figure 4C-1.

As shown in the figure below, all of the four hours would not meet the minimum conditions, as none of the plotted points fall above the curve in Figure 4C-1 under existing and all “with-Project” conditions. Therefore, the intersection does not meet the four-hour volume warrant.

8.4 WARRANT 3 – PEAK HOUR

This warrant is to determine if, for one hour of the day, minor street traffic suffers undue delay in entering or crossing the major street. Warrant 3 requires that either Part A or Part B be satisfied.

Based on the total delay experienced by the vehicles on the minor street approach, Part A would not be satisfied for existing conditions. In addition, the peak hour volumes plotted on the chart (Part B) would

not be satisfied. During both a.m. and p.m. peak hours, none of the volumes fall above the curve, and therefore, the peak hour volume would not be satisfied for both Part A and Part B of the warrant for existing conditions.

8.5 WARRANT 4 – PEDESTRIAN VOLUME

The MUTCD Warrant for Pedestrian Volume (Warrant 4) is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street. It requires that all parts (1 and 2) be satisfied. Part 1 requires either option A or option B to satisfy Part 1 that all the plotted points must fall above the curve.

The analyzed pedestrian crossings per peak hour for Part 1 are as follows:

- 3:00 p.m. hour – 14 pedestrians
- 1:00 p.m. hour – 6 pedestrians
- 9:00 a.m. hour – 5 pedestrians
- 2:00 p.m. hour – 4 pedestrians

Part 1 requires that each of any four hours meets a minimum of 107 pedestrians or the peak hour (any four consecutive 15-minute periods) meets a minimum of 133 pedestrians.

All plotted points fall below the curves in both Figure 4C-5 and Figure 4C-7, as shown in the Appendix H. Therefore, the intersection would not satisfy the pedestrian volume warrant.

8.6 WARRANT 5 – SCHOOL CROSSING

The School Crossing signal warrant is intended for application where a high number of school children crossing the major street are the principal reason to consider installing a traffic control signal.

The MUTCD Warrant for School Crossing (Warrant 5) at the analyzed location would not be satisfied for a new controlled (with active traffic signal) pedestrian crossing with existing pedestrian volumes. Warrant 5 requires that Parts A and B be satisfied to install a new traffic signal.

Part A requires a minimum of 20 school-aged pedestrian to cross the intersection during the peak hour. The minimum is not met in Part A. Part B requires a minimum distance of 300 feet to the nearest traffic signal along the major street. The distance to the nearest signal was approximately 353 feet, and Part B is met. The warrant requires both Part A and Part B be satisfied, and only Part B is satisfied. Therefore, the school crossing warrant is not met.

8.6 WARRANT 6-COORDINATED SIGNAL SYSTEM

Progressive movement in a coordinated signal system sometimes necessitates installing traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles.

Warrant 6 requires the nearest signal to be at least 1,000 feet from the study intersection. The nearest signal is located within 353 feet north and 674 south of the intersection. Thus, Warrant 6 was not met.

8.7 WARRANT 7- CRASH EXPERIENCE

The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal. This warrant requires that five or more accidents occur in a one-year period.

KOA reviewed collision data from the California Statewide Traffic Records System (SWITRS) database for this location. The accident data indicated that within the past five years, no accidents have occurred, which is less than the five or more during a one-year period threshold. Therefore, Warrant 7 would not be satisfied.

8.8 WARRANT 8- ROADWAY NETWORK

Installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network.

The roadway network standard would not be met at the intersection of Westmoreland Avenue and Cosmopolitan Street, due to the both roadways being local streets.

8.9 WARRANT 9- INTERSECTION NEAR A GRADE CROSSING

This warrant would not apply to the intersection of Westmoreland Avenue and Cosmopolitan Street. A railroad grade crossing is not located in the proximity of the intersection.

8.10 CONCLUSIONS

Results of the warrant analysis indicate that signal warrants for a new traffic signal at the intersection of Westmoreland Avenue and Cosmopolitan Street are not satisfied under existing conditions.

The installation of the traffic signal, however, would provide for the safe and orderly movement of vehicular and pedestrian traffic, and will need to be considered by the City Engineer.

9. ANALYSIS SUMMARY AND CONCLUSION

The following summarizes the traffic study results, conclusions and recommendations:

- The proposed Project will convert the existing moving and storage facilities on the north side of Cosmopolitan Street between Madison Avenue and Westmoreland Avenue into a 24,360 square-foot Charter school that will serve 480 students, from TK to the 8th grade.
- The proposed Project is anticipated to be completed and occupied by the end of the year 2021.
- The project would generate 921 daily trips with a net total of 317 vehicle trips during the a.m. peak-hour (172 inbound trips and 145 outbound trips) and 161 vehicle trips during the p.m. peak hour (74 inbound trips and 87 outbound trips).
- Based on existing conditions, three of the four study intersections are operating at LOS C or better during the weekday a.m. and p.m. peak hours.
- In the Existing with Project scenario, three out of the four study intersections would operate at acceptable LOS D or better during the weekday a.m. and p.m. peak hours.
- Three out of the four study intersections would also operate at acceptable LOS D or better during the weekday a.m. and p.m. peak hours in the Future without Project (2021) and Future with Project (2021) scenarios.
- The proposed Project is not anticipated to cause a significant VMT impact based on the City of LA's VMT criteria.
- The queuing analysis demonstrated the proposed Project site can accommodate the queue. Thus, the proposed Project would not create significant vehicle queuing impacts to the adjacent public roadways.
- The Westmoreland Avenue/Cosmopolitan Street intersection does not trigger any of the signal warrants under existing conditions.

**APPENDIX A –
Transportation Assessment Memorandum of Understanding (MOU)**

Transportation Assessment Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Assessment for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Assessment Guidelines:

I. PROJECT INFORMATION

Project Name: Everest Value School; TK-8

Project Address: 3619-23 Cosmopolitan Street, 232-40 N. Madison Avenue, Los Angeles, CA 90004

Project Description: The proposed project would convert a former moving and storage facility into a charter school for up to 480 students, grades TK-8. The project would relocate an existing elementary charter school operating in the Koreatown neighborhood to the address listed above.

LADOT Project Case Number: CEN19-48666 Project Site Plan attached? (Required) ☒ Yes ☐ No

II. TRIP GENERATION

Geographic Distribution: N 0 % S 88 % E 2 % W 10 %

Illustration of Project trip distribution percentages at Study intersections attached? (Required) ☒ Yes ☐ No

Trip Generation Rate(s): ☒ ITE 10th Edition / ☐ Other: _____

Trip Generation Adjustment (Exact amount of credit subject to approval by LADOT)	Yes	No
Transit Usage	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Transportation Demand Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Existing Active Land Use	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Previous Land Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Internal Trip	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pass-By Trip	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Trip generation table including a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? (Required) ☐ Yes ☐ No

	IN	OUT	TOTAL
AM Trips	<u>172</u>	<u>145</u>	<u>317</u>
PM Trips	<u>74</u>	<u>87</u>	<u>161</u>

III. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2021 Ambient Growth Rate: 1 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? (Required) ☒ Yes ☐ No

Map of Study Intersections/Segments attached? ☒ Yes ☐ No

STUDY INTERSECTIONS (May be subject to LADOT revision after access, safety and circulation analysis)

- | | |
|---|--|
| 1 <u>Madison Avenue & Beverly Boulevard</u> | 3 <u>N Westmoreland Avenue & Beverly Boulevard</u> |
| 2 <u>N Vermont Avenue & W 1st Street</u> | 4 <u>N Westmoreland Avenue & W 1st Street</u> |

Is this Project located on a street within the High Injury Network? ☐ Yes ☒ No

Note: Signal warrant analysis will be conducted at N Westmoreland Avenue & Cosmopolitan Street

IV. ACCESS ASSESSMENT

Is the project on a lot that is 0.5-acre or more in total gross area? ☒ Yes ☐ No

Is the project's frontage 250 linear feet or more along an Avenue or Boulevard as classified by the City's General Plan? ☐ Yes ☒ No

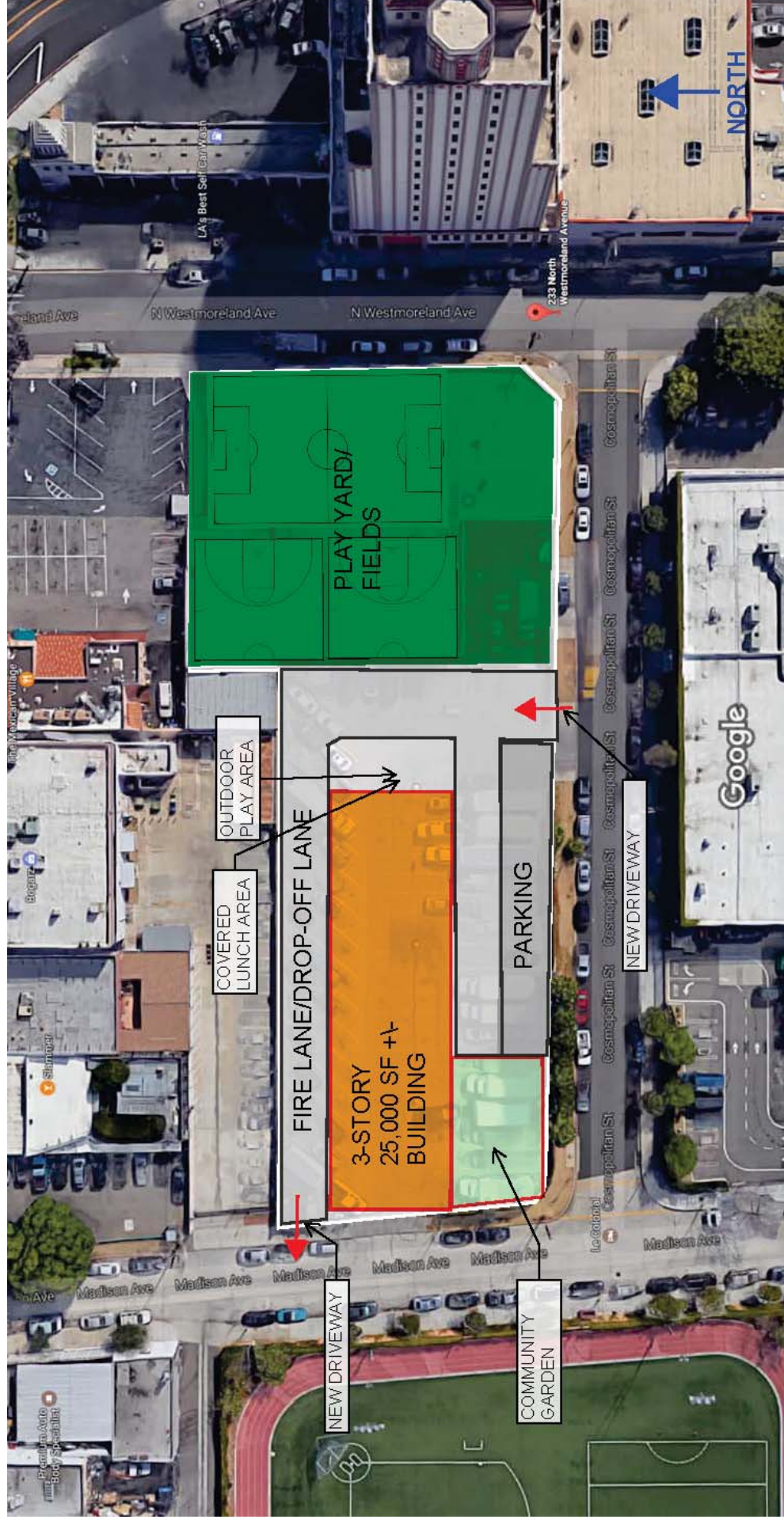
Is the project's building frontage encompassing an entire block along an Avenue or Boulevard as classified by the City's General Plan? ☐ Yes ☒ No

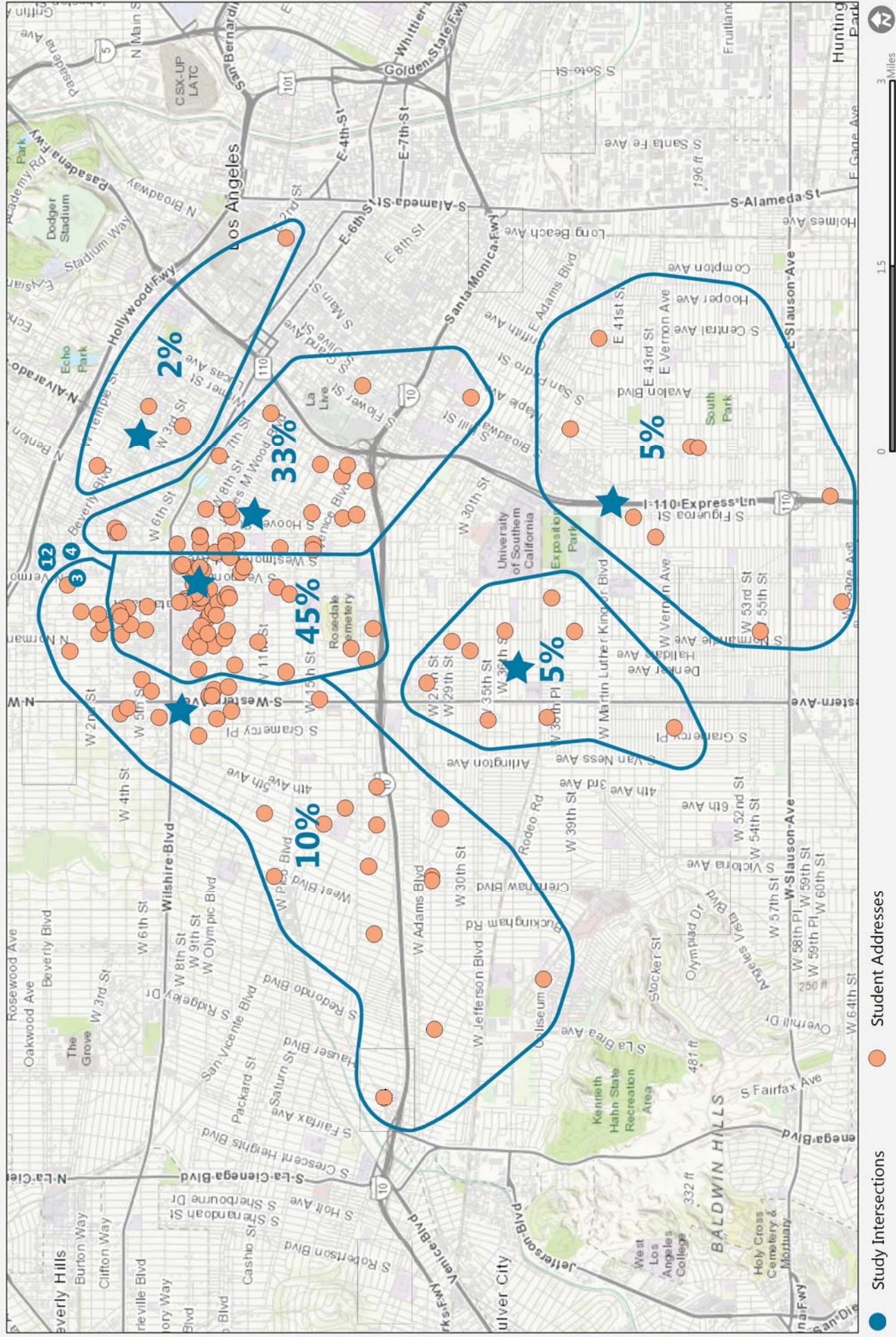
V. CONTACT INFORMATION

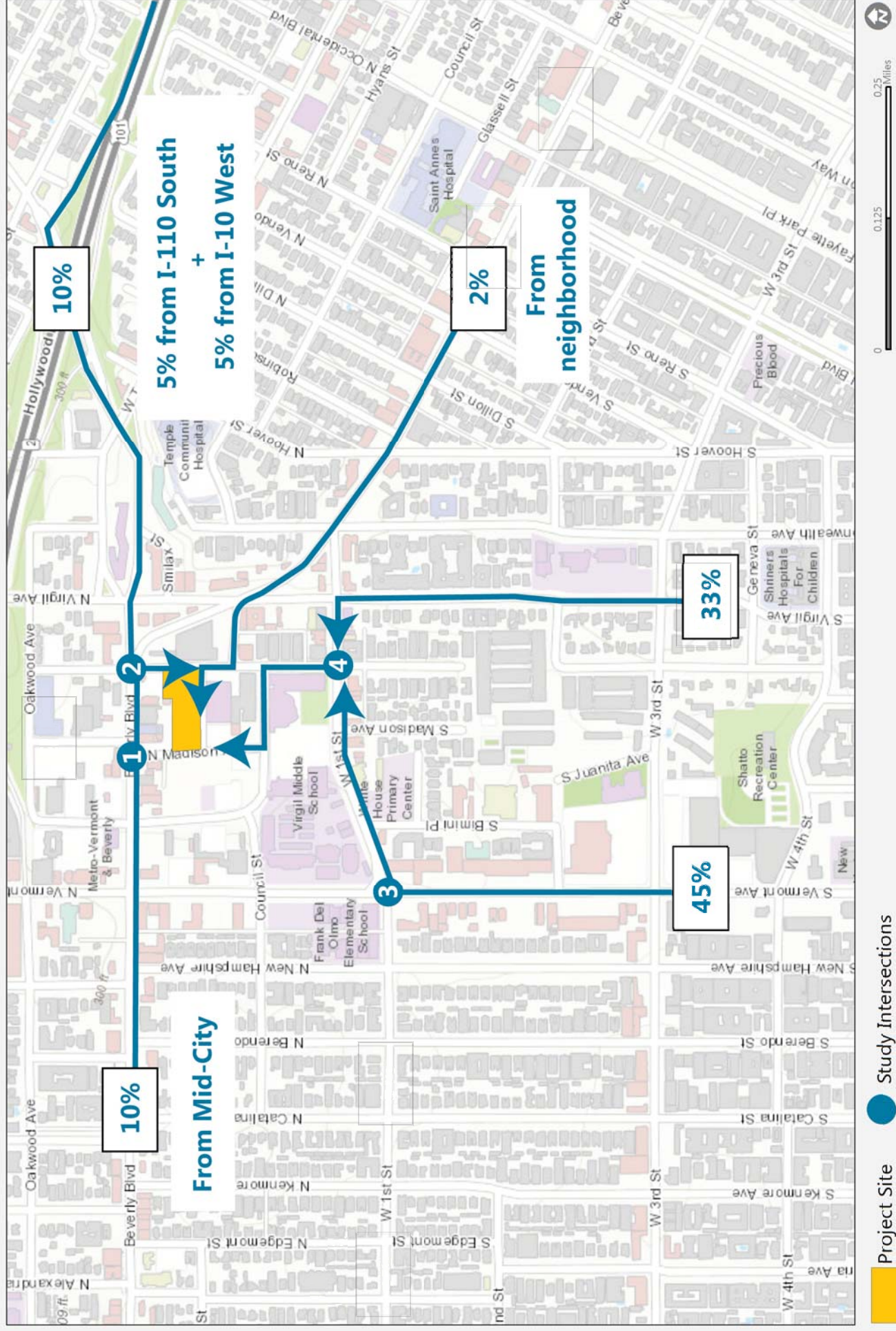
	<u>CONSULTANT</u>	<u>DEVELOPER</u>
Name:	<u>Carlos Velasquez, KOA Corporation</u>	<u>David Doyle, Value Schools</u>
Address:	<u>1100 Corporate Center Dr, Ste 201, Monterey Park, CA 91754</u>	<u>680 Wilshire Place, Ste 315, Los Angeles, CA 90005</u>
Phone Number:	<u>323-260-4703</u>	<u></u>
E-Mail:	<u>cvelasquez@koacorp.com</u>	<u></u>

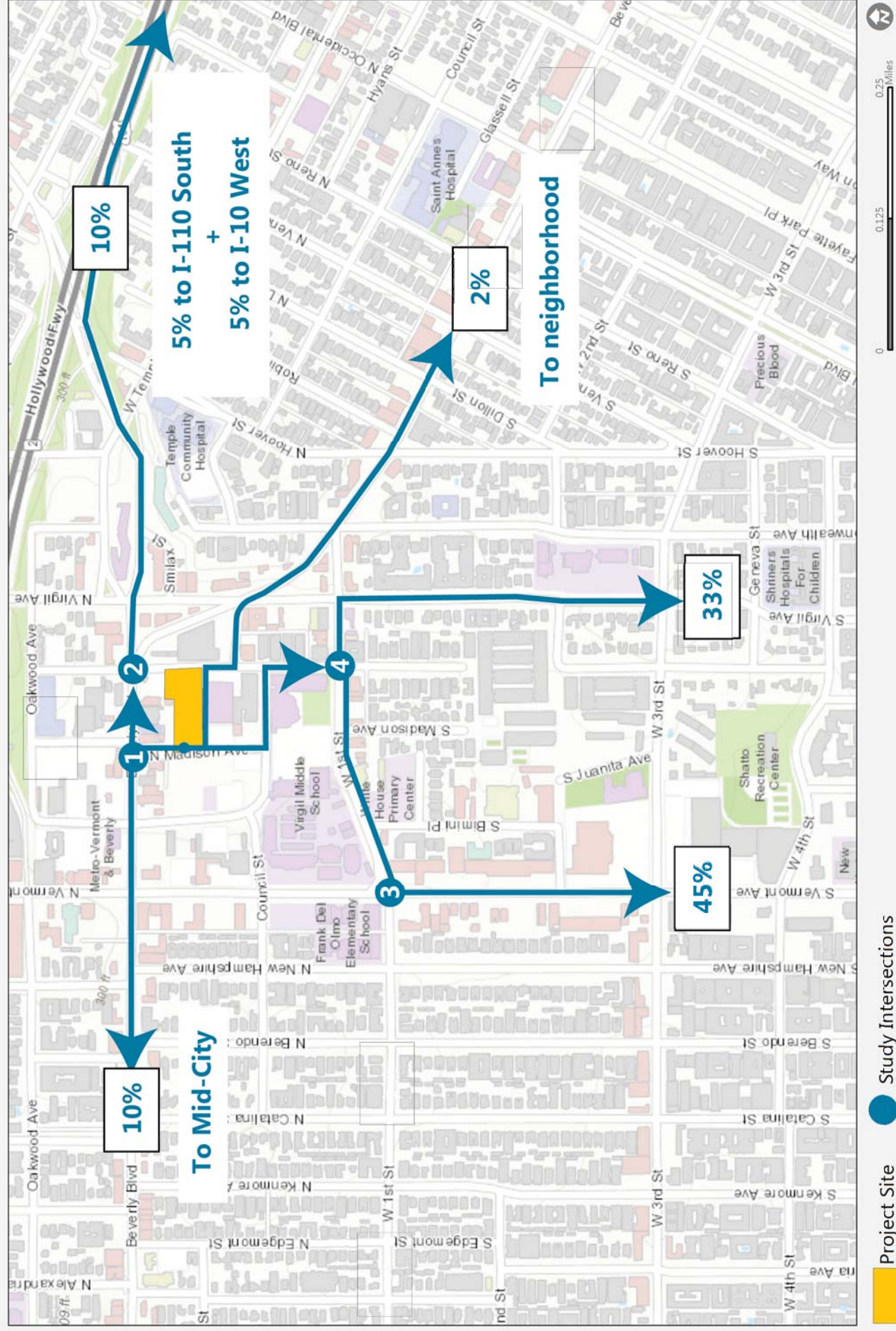
Approved by:	x	<u><i>Carlos Velasquez</i></u>	<u>8/29/19</u>	x	<u></u>	<u></u>
		Consultant's Representative	Date		LADOT Representative	*Date

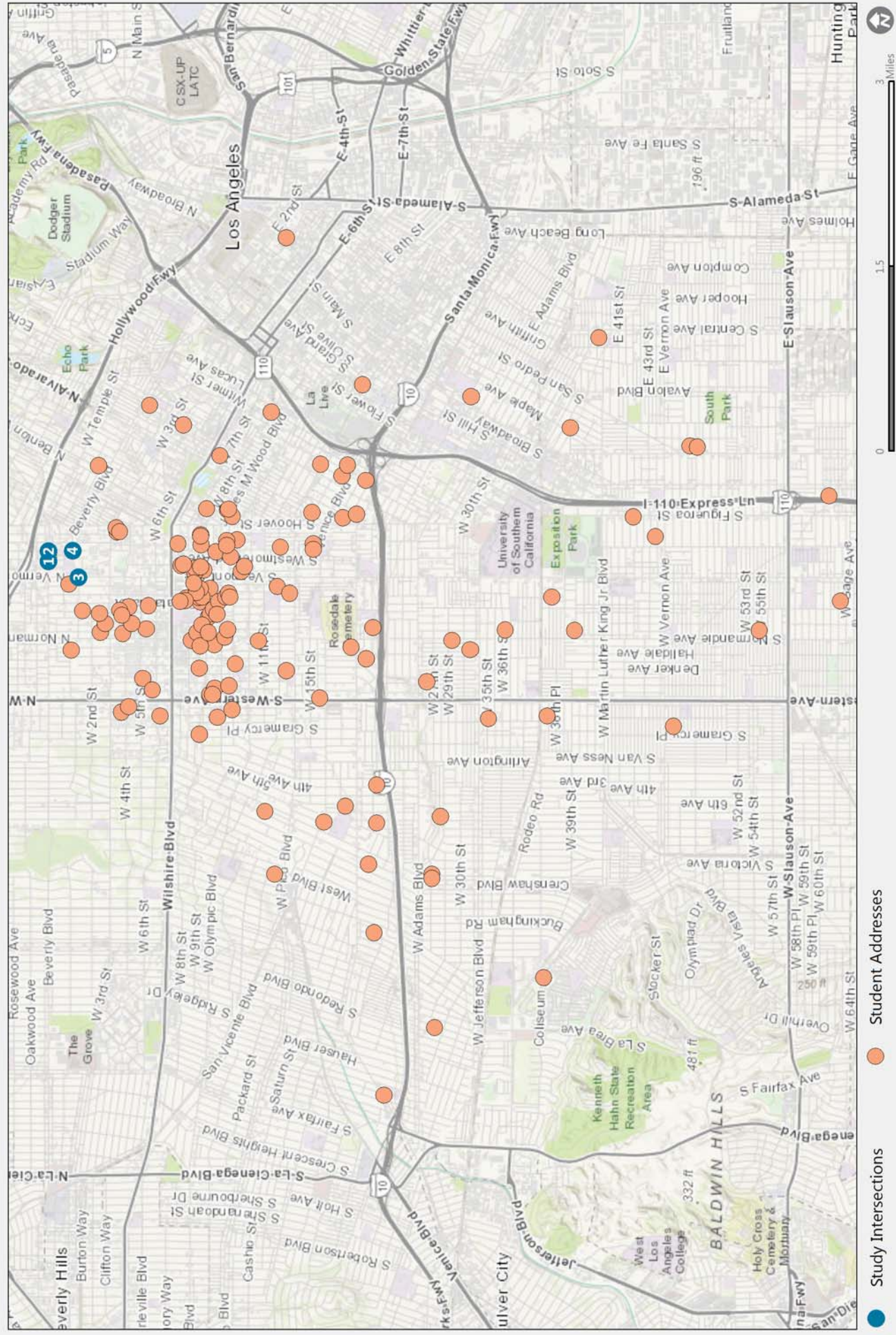
*MOUs are generally valid for two years after signing. If after two years a transportation assessment has not been submitted to LADOT, the developer's representative shall check with the appropriate LADOT office to determine if the terms of this MOU are still valid or if a new MOU is needed.













Everest Value School; TK-8 - Traffic Impact Study

Attachment D - Project Trip Generation

Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak			PM Peak		
					Total	In	Out	Total	In	Out
Proposed Project Trip Generation Estimates										
Elementary School	520	294	Students	556	191	103	88	100	45	55
Middle School	522	186	Students	396	130	72	58	65	30	35
Proposed Project Subtotal				556	321	175	146	165	75	90
Former Use Trip Credit										
Warehousing	150	18	KSF	-31	-4	-3	-1	-4	-1	-3
Former Use Trip Credit				-31	-4	-3	-1	-4	-1	-3
Total				525	317	172	145	161	74	87

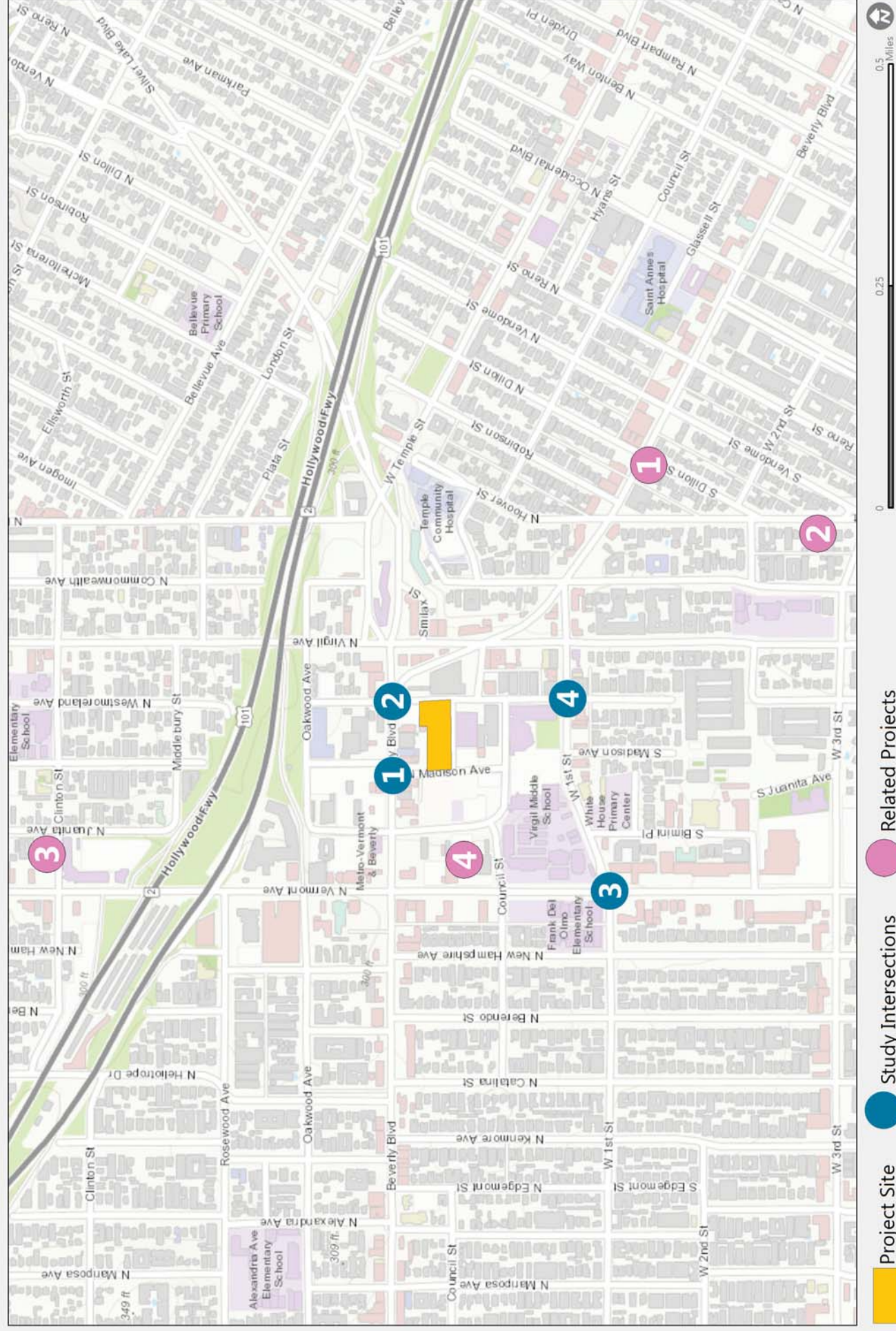
Trip generation rates based on ITE Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017, unless otherwise noted.

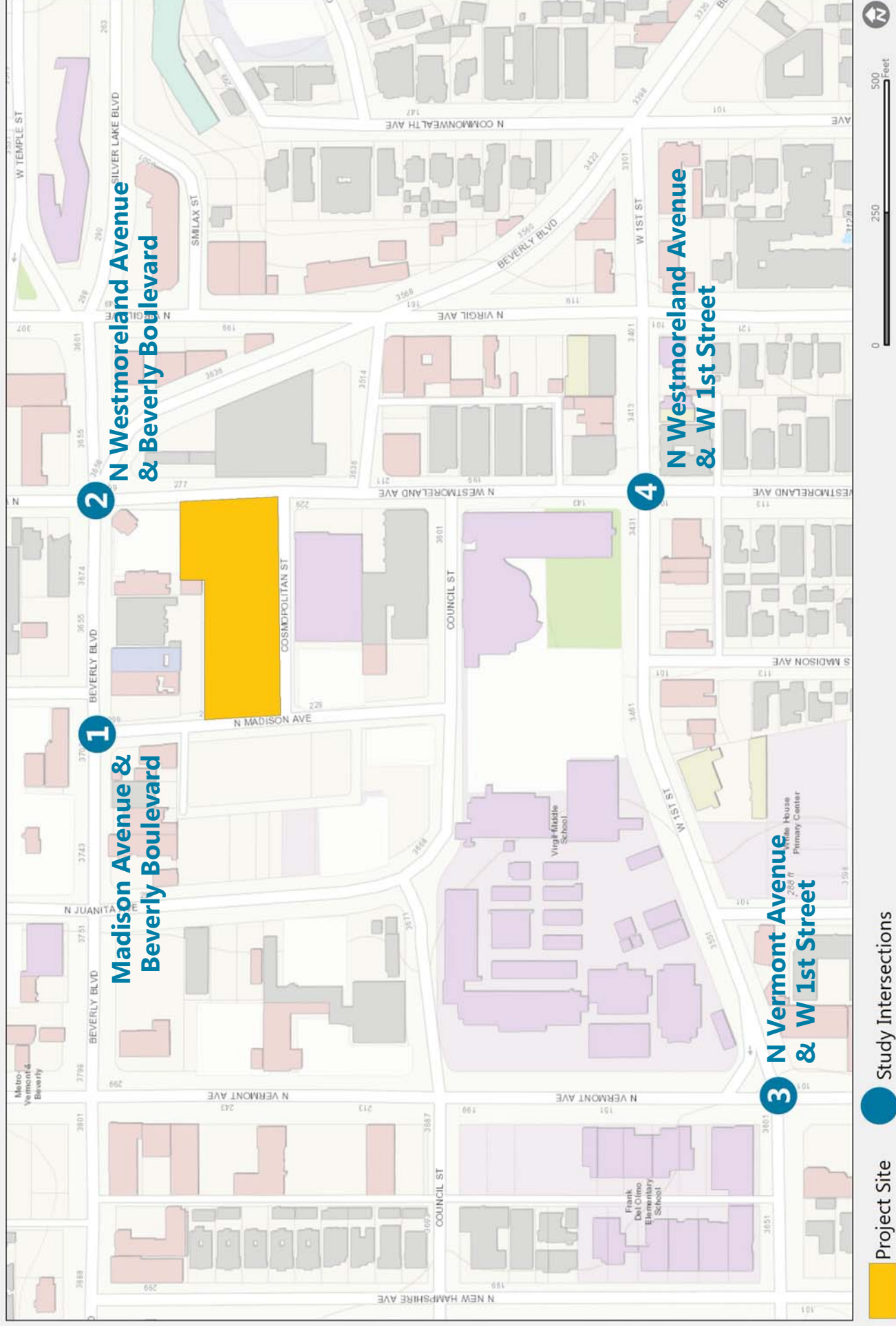


Map ID	Location	Land Use	Intensity	Units ¹	Daily Total	AM Peak Hour			PM Peak Hour		
						Total	In	Out	Total	In	Out
1	3200 W Beverly Blvd	Apartments	32	d.u.	632	20	4	16	71	39	32
		Retail	5.867	k.s.f.	632	20	4	16	71	39	32
2	235 S Hoover St	Apartments	214	d.u.	1,423	109	22	87	133	86	47
3	600 N Vermont Ave	Apartments	120	d.u.	320	54	8	46	30	12	18
		Retail	14.6	k.s.f.							
4	200 N Vermont Ave	Apartments	490	d.u.	2,645	196	47	149	159	113	46
		Restaurant	10	k.s.f.							
		Retail	25	k.s.f.							
Grand Total					5,652	399	85	314	464	289	175

Trip Generation AM/PM Peak "Total" Rates Source: Los Angeles Department of Transportation (LADOT) Case Logging and Tracking System (CLATS), 7/30/2019, unless otherwise noted.

¹d.u. = dwelling units, k.s.f. = 1,000 square feet of floor area





APPENDIX B – Traffic Count Data

National Data & Surveying Services

Intersection Turning Movement Count

Location: Madison Ave & Beverly Blvd
City: Los Angeles
Control: 1-Way Stop (NB/SB)

Project ID: 19-05540-001
Date: 9/5/2019

Total

NS/EW Streets:	Madison Ave				Madison Ave				Beverly Blvd				Beverly Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
7:00 AM	1	0	1	0	2	0	5	0	4	175	6	1	11	302	7	0	515
7:15 AM	1	1	8	0	0	0	5	0	2	263	37	0	17	276	7	0	617
7:30 AM	1	0	4	0	1	2	3	0	5	320	21	0	10	292	5	1	665
7:45 AM	0	0	0	0	0	0	12	0	5	330	31	0	18	268	8	0	672
8:00 AM	0	0	5	0	0	0	6	0	2	348	20	0	12	288	15	1	697
8:15 AM	0	0	3	0	0	0	4	0	3	361	5	0	6	277	7	0	666
8:30 AM	2	0	1	0	0	0	1	0	4	341	3	0	9	276	2	0	639
8:45 AM	2	0	2	0	0	0	7	0	9	288	9	1	11	280	4	3	616
9:00 AM	0	0	5	0	0	0	6	0	8	337	1	0	15	234	4	0	610
9:15 AM	2	0	1	0	0	0	4	0	10	298	4	0	2	255	2	0	578
9:30 AM	0	0	1	0	1	1	7	0	7	276	2	0	1	272	5	1	574
9:45 AM	1	0	0	0	0	0	4	0	7	266	3	0	10	288	1	1	581
TOTAL VOLUMES :	NL 10	NT 1	NR 31	NU 0	SL 5	ST 3	SR 64	SU 0	EL 66	ET 3603	ER 142	EU 2	WL 122	WT 3308	WR 67	WU 7	TOTAL 7430
APPROACH %'s :	23.81%	2.38%	73.81%	0.00%	5.63%	4.23%	90.14%	0.00%	1.73%	94.49%	3.72%	0.05%	3.48%	94.41%	1.91%	0.20%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	0	12	0	1	2	25	0	15	1359	77	0	46	1125	35	2	2700
PEAK HR FACTOR :	0.250	0.000	0.600	0.000	0.250	0.250	0.521	0.000	0.750	0.941	0.621	0.000	0.639	0.963	0.583	0.500	0.968
	0.650				0.583				0.980				0.956				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
3:00 PM	2	0	2	0	1	0	6	0	4	308	11	0	6	199	2	1	542
3:15 PM	2	0	1	0	0	0	5	0	2	347	11	0	5	239	3	0	615
3:30 PM	1	0	1	0	2	0	3	0	6	329	16	0	4	237	3	0	602
3:45 PM	0	0	3	0	0	0	3	0	4	315	4	1	2	219	1	0	552
4:00 PM	0	0	3	0	3	1	7	0	2	345	3	0	7	254	1	1	627
4:15 PM	1	0	3	0	3	0	6	0	3	344	8	0	9	272	2	0	651
4:30 PM	0	0	3	0	0	0	3	0	4	333	6	0	4	250	9	0	612
4:45 PM	0	0	2	0	0	0	7	0	4	355	6	0	8	257	4	0	643
5:00 PM	1	0	2	0	0	0	5	0	3	332	3	1	17	210	2	0	576
5:15 PM	0	0	4	0	0	0	4	0	2	346	11	0	9	235	4	0	615
5:30 PM	1	0	3	0	1	1	4	0	1	324	13	0	12	275	6	0	641
5:45 PM	0	0	0	0	0	0	6	0	1	376	7	0	13	297	5	1	706
TOTAL VOLUMES :	NL 8	NT 0	NR 27	NU 0	SL 10	ST 2	SR 59	SU 0	EL 36	ET 4054	ER 99	EU 2	WL 96	WT 2944	WR 42	WU 3	TOTAL 7382
APPROACH %'s :	22.86%	0.00%	77.14%	0.00%	14.08%	2.82%	83.10%	0.00%	0.86%	96.73%	2.36%	0.05%	3.11%	95.43%	1.36%	0.10%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	2	0	9	0	1	1	19	0	7	1378	34	1	51	1017	17	1	2538
PEAK HR FACTOR :	0.500	0.000	0.563	0.000	0.250	0.250	0.792	0.000	0.583	0.916	0.654	0.250	0.750	0.856	0.708	0.250	0.899
	0.688				0.875				0.924				0.859				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Madison Ave & Beverly Blvd
City: Los Angeles
Control: 1-Way Stop (NB/SB)

Project ID: 19-05540-001
Date: 9/5/2019

Cars

NS/EW Streets:	Madison Ave				Madison Ave				Beverly Blvd				Beverly Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
7:00 AM	1	0	1	0	2	0	5	0	4	172	5	1	11	298	7	0	507
7:15 AM	1	1	8	0	0	0	5	0	0	258	37	0	17	266	7	0	600
7:30 AM	1	0	4	0	0	2	3	0	4	313	21	0	10	285	4	1	648
7:45 AM	0	0	0	0	0	0	12	0	5	322	27	0	18	266	7	0	657
8:00 AM	0	0	5	0	0	0	6	0	2	343	19	0	12	281	14	1	683
8:15 AM	0	0	3	0	0	0	3	0	2	350	5	0	6	273	7	0	649
8:30 AM	1	0	0	0	0	0	1	0	4	337	3	0	9	271	2	0	628
8:45 AM	0	0	1	0	0	0	7	0	9	281	8	1	10	273	4	3	597
9:00 AM	0	0	5	0	0	0	6	0	7	333	1	0	15	227	4	0	598
9:15 AM	2	0	1	0	0	0	4	0	10	295	3	0	2	253	2	0	572
9:30 AM	0	0	1	0	1	0	7	0	7	270	2	0	1	267	2	1	559
9:45 AM	1	0	0	0	0	0	3	0	7	261	3	0	10	279	1	1	566
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	18.92%	2.70%	78.38%	0.00%	4.48%	2.99%	92.54%	0.00%	1.63%	94.72%	3.59%	0.05%	3.53%	94.49%	1.78%	0.20%	7264
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	0	12	0	0	2	24	0	13	1328	72	0	46	1105	32	2	2637
PEAK HR FACTOR :	0.25	0.000	0.600	0.000	0.000	0.250	0.500	0.000	0.650	0.949	0.667	0.000	0.639	0.969	0.571	0.500	0.965
	0.650				0.542				0.970				0.962				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
3:00 PM	2	0	2	0	1	0	5	0	4	296	9	0	6	194	2	1	522
3:15 PM	2	0	1	0	0	0	5	0	2	329	10	0	4	237	3	0	593
3:30 PM	1	0	1	0	1	0	3	0	6	320	14	0	4	233	3	0	586
3:45 PM	0	0	3	0	0	0	3	0	4	309	4	1	2	214	1	0	541
4:00 PM	0	0	3	0	3	1	7	0	2	341	1	0	7	250	1	1	617
4:15 PM	1	0	3	0	3	0	6	0	3	336	4	0	9	268	2	0	635
4:30 PM	0	0	3	0	0	0	3	0	4	328	6	0	4	247	8	0	603
4:45 PM	0	0	2	0	0	0	7	0	3	351	5	0	8	252	4	0	632
5:00 PM	1	0	1	0	0	0	5	0	3	330	3	1	17	208	2	0	571
5:15 PM	0	0	4	0	0	0	3	0	2	336	10	0	9	232	4	0	600
5:30 PM	1	0	3	0	1	0	4	0	1	319	13	0	11	274	6	0	633
5:45 PM	0	0	0	0	0	0	6	0	1	373	7	0	13	292	5	1	698
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	23.53%	0.00%	76.47%	0.00%	13.43%	1.49%	85.07%	0.00%	0.86%	96.99%	2.10%	0.05%	3.09%	95.46%	1.35%	0.10%	7231
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	2	0	8	0	1	0	18	0	7	1358	33	1	50	1006	17	1	2502
PEAK HR FACTOR :	0.50	0.000	0.500	0.000	0.250	0.000	0.750	0.000	0.583	0.910	0.635	0.250	0.735	0.861	0.708	0.250	0.896
	0.625				0.792				0.918				0.863				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Madison Ave & Beverly Blvd
City: Los Angeles
Control: 1-Way Stop (NB/SB)

Project ID: 19-05540-001
Date: 9/5/2019

HT

NS/EW Streets:	Madison Ave				Madison Ave				Beverly Blvd				Beverly Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	4	0	0	8
7:30 AM	0	0	0	0	1	0	0	0	1	2	0	0	0	4	1	0	9
7:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	4
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	4	1	0	7
8:15 AM	0	0	0	0	0	0	1	0	1	7	0	0	0	3	0	0	12
8:30 AM	1	0	1	0	0	0	0	0	0	2	0	0	0	2	0	0	6
8:45 AM	2	0	1	0	0	0	0	0	0	2	1	0	1	3	0	0	10
9:00 AM	0	0	0	0	0	0	0	0	1	2	0	0	0	5	0	0	8
9:15 AM	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	0	4
9:30 AM	0	0	0	0	0	1	0	0	0	5	0	0	0	3	3	0	12
9:45 AM	0	0	0	0	0	0	1	0	0	2	0	0	0	5	0	0	8
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	3	0	2	0	1	1	2	0	5	31	2	0	1	35	6	0	89
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	1	0	2	14	0	0	0	11	3	0	32
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.500	0.000	0.000	0.000	0.688	0.750	0.000	0.667
					0.500				0.500				0.700				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
3:00 PM	0	0	0	0	0	0	1	0	0	9	2	0	0	4	0	0	16
3:15 PM	0	0	0	0	0	0	0	0	0	8	0	0	1	1	0	0	10
3:30 PM	0	0	0	0	1	0	0	0	0	6	1	0	0	1	0	0	9
3:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
4:00 PM	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	4	3	0	0	1	0	0	8
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	3
4:45 PM	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	4
5:00 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	1	0	0	5	1	0	0	1	0	0	8
5:30 PM	0	0	0	0	0	1	0	0	0	4	0	0	1	0	0	0	6
5:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	1	0	1	1	2	0	1	47	9	0	2	14	1	0	79
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	1	0	0	1	1	0	0	13	1	0	1	4	0	0	22
PEAK HR FACTOR :	0.00	0.000	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.650	0.250	0.000	0.250	0.333	0.000	0.000	0.688
					0.250				0.583				0.417				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Madison Ave & Beverly Blvd
City: Los Angeles
Control: 1-Way Stop (NB/SB)

Project ID: 19-05540-001
Date: 9/5/2019

Buses

NS/EW Streets:	Madison Ave				Madison Ave				Beverly Blvd				Beverly Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	3	1	0	0	3	0	0	7
7:15 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	6	0	0	9
7:30 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	0	8
7:45 AM	0	0	0	0	0	0	0	0	0	5	4	0	0	2	0	0	11
8:00 AM	0	0	0	0	0	0	0	0	0	3	1	0	0	3	0	0	7
8:15 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	5
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5
8:45 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	4	0	0	9
9:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	4
9:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
9:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
9:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	0	7
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77
PEAK HR :	07:30 AM - 08:30 AM								0.00% 86.05% 13.95% 0.00%				0.00% 100.00% 0.00% 0.00%				TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	17	5	0	0	9	0	0	31
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.850	0.313	0.000	0.000	0.750	0.000	0.000	0.705
										0.611				0.750			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
3:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4
3:15 PM	0	0	0	0	0	0	0	0	0	10	1	0	0	1	0	0	12
3:30 PM	0	0	0	0	0	0	0	0	0	3	1	0	0	3	0	0	7
3:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	0	8
4:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	4	0	0	6
4:15 PM	0	0	0	0	0	0	0	0	0	4	1	0	0	3	0	0	8
4:30 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	0	6
4:45 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	0	7
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	2	0	0	7
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
PEAK HR :	05:00 PM - 06:00 PM								0.00% 90.70% 9.30% 0.00%				0.00% 100.00% 0.00% 0.00%				TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	14
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.350	0.000	0.000	0.000	0.875	0.000	0.000	0.500
										0.350				0.875			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Madison Ave & Beverly Blvd
City: Los Angeles
Control: 1-Way Stop (NB/SB)

Project ID: 19-05540-001
Date: 9/5/2019

Bikes

NS/EW Streets:	Madison Ave				Madison Ave				Beverly Blvd				Beverly Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	0	6
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6
8:00 AM	0	0	0	0	0	0	0	0	1	4	0	0	0	1	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0	7
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
9:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3
9:30 AM	0	0	0	0	0	0	0	0	0	3	1	0	0	1	0	0	5
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1	0	0	0	1	17	2	0	0	23	3	0	47
PEAK HR :	07:30 AM - 08:30 AM				100.00%	0.00%	0.00%	0.00%	5.00%	85.00%	10.00%	0.00%	0.00%	88.46%	11.54%	0.00%	
PEAK HR VOL :	0	0	0	0	0	0	0	0	1	10	0	0	0	13	1	0	25
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.625	0.000	0.000	0.000	0.650	0.250	0.000	0.893
										0.550				0.583			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	3 ET	0 ER	0 EU	0 WL	3 WT	0 WR	0 WU	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5
3:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
3:45 PM	0	0	0	0	0	0	0	0	1	3	0	0	0	1	0	0	5
4:00 PM	0	0	0	0	1	0	0	0	0	3	0	0	0	2	0	0	6
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	1	2	0	0	0	1	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	0	6
5:15 PM	0	0	0	0	0	0	1	0	1	2	0	0	0	3	0	0	7
5:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5
5:45 PM	0	1	0	0	0	0	0	0	1	1	0	0	1	2	0	0	6
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%	15.38%	84.62%	0.00%	0.00%	4.35%	95.65%	0.00%	0.00%	52
PEAK HR :	05:00 PM - 06:00 PM																
PEAK HR VOL :	0	1	0	0	0	0	1	0	2	9	0	0	1	10	0	0	24
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.563	0.000	0.000	0.250	0.833	0.000	0.000	0.857
			0.250				0.250			0.688				0.917			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Madison Ave & Beverly Blvd
City: Los Angeles

Project ID: 19-05540-001
Date: 9/5/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Madison Ave		Madison Ave		Beverly Blvd		Beverly Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	4	3	5	4	0	0	0	1	17
7:15 AM	12	2	7	8	0	0	0	0	29
7:30 AM	20	3	2	6	0	0	0	0	31
7:45 AM	33	10	6	7	1	0	0	0	57
8:00 AM	7	1	5	3	0	0	0	0	16
8:15 AM	5	7	2	5	0	0	0	0	19
8:30 AM	4	9	4	3	0	0	0	0	20
8:45 AM	3	3	2	10	1	0	0	0	19
9:00 AM	1	3	2	3	0	0	0	0	9
9:15 AM	5	3	2	3	0	0	0	0	13
9:30 AM	2	4	5	2	0	0	0	0	13
9:45 AM	4	3	0	3	3	0	0	0	13
TOTAL VOLUMES :	EB 100	WB 51	EB 42	WB 57	NB 5	SB 0	NB 0	SB 1	TOTAL 256
APPROACH %'s :	66.23%	33.77%	42.42%	57.58%	100.00%	0.00%	0.00%	100.00%	
PEAK HR :	07:30 AM - 08:30 AM								TOTAL
PEAK HR VOL :	65	21	15	21	1	0	0	0	123
PEAK HR FACTOR :	0.492	0.525	0.625	0.750	0.250				0.539
	0.500		0.692		0.250				

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
3:00 PM	6	2	6	15	0	0	0	0	29
3:15 PM	2	34	10	11	0	0	0	0	57
3:30 PM	2	21	12	2	2	0	0	0	39
3:45 PM	3	4	9	6	0	0	0	0	22
4:00 PM	9	12	5	2	1	0	0	0	29
4:15 PM	8	8	10	2	0	0	0	0	28
4:30 PM	6	8	10	7	0	0	0	0	31
4:45 PM	2	11	3	4	0	0	0	0	20
5:00 PM	3	10	4	0	0	0	0	1	18
5:15 PM	3	9	4	4	0	0	0	0	20
5:30 PM	6	5	10	13	0	0	0	1	35
5:45 PM	2	11	3	9	0	0	0	0	25
TOTAL VOLUMES :	EB 52	WB 135	EB 86	WB 75	NB 3	SB 0	NB 0	SB 2	TOTAL 353
APPROACH %'s :	27.81%	72.19%	53.42%	46.58%	100.00%	0.00%	0.00%	100.00%	
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	14	35	21	26	0	0	0	2	98
PEAK HR FACTOR :	0.583	0.795	0.525	0.500				0.500	0.700
	0.942		0.511				0.500		

PEAK HOURS

07:30 AM - 08:30 AM

NONE

05:00 PM - 06:00 PM

COUNT PERIODS

07:00 AM - 10:00 AM

NONE

03:00 PM - 06:00 PM

Beverly Blvd

EASTBOUND

AM NOON PM

1151 0 1039

0 0 1

15 0 7

1359 0 1378

77 0 34

AM NOON PM

CONTROL

1-Way Stop (NB/SB)

TEV 2700 0 2538

AM NOON PM

PHF 0.97 0.90

WESTBOUND

PM NOON AM

17 0 35

1017 0 1125

51 0 46

1 0 2

1389 0 1374

PM NOON AM

NORTHBOUND

Madison Ave

PM 86 0 2 0 9 PM

NOON 0 0 0 0 0 NOON

AM 125 0 1 0 12 AM

Cars (AM)

13 24 32

1328 72 1105 46

1 0 12

Cars (NOON)

N/A N/A N/A

N/A N/A N/A

N/A N/A N/A

Cars (PM)

81 17

7 1

1358 1006

33 50

2 8

Pedestrians (Crosswalks)

PM NOON AM

0 0 0

14 65 21 0 35

2 0 0 0 0

AM NOON PM

21 15 21 0 26

0 0 0 0 0

HT (AM)

2 1 3

14 11

0 0 0

HT (NOON)

N/A N/A N/A

N/A N/A N/A

N/A N/A N/A

HT (PM)

1 0 4

13 1

0 0 1



City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Madison Ave

East/West Beverly Blvd

Day: Thursday **Date:** 09/05/2019 **Weather:** SUNNY

Hours: 7-10 & 3-6 **Chekr:** NDS

School Day: Yes **I/S CODE**

	N/B	S/B	E/B	W/B
DUAL-WHEELED	6	8	95	59
BIKES	1	3	46	49
BUSES	0	0	86	63

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	10	7.15	12	7.45	370	8.00	320	7.00
PM PK 15 MIN	4	15.00	11	16.00	384	17.45	316	17.45
AM PK HOUR	20	7.15	30	7.00	1453	7.45	1222	7.00
PM PK HOUR	13	15.45	30	16.00	1420	17.00	1086	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	3	1	13	17
8-9	4	0	11	15
9-10	3	0	7	10
15-16	5	0	7	12
16-17	1	0	11	12
17-18	2	0	9	11
TOTAL	18	1	58	77

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	3	2	25	30
8-9	0	0	18	18
9-10	1	1	21	23
15-16	3	0	17	20
16-17	6	1	23	30
17-18	1	1	19	21
TOTAL	14	5	123	142

TOTAL

XING S/L

XING N/L

N-S	Ped	Sch	Ped	Sch
47	0	0	0	0
33	0	0	0	0
33	0	0	0	0
32	0	0	0	0
42	0	0	0	0
32	0	0	0	0
219	0	0	0	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	17	1088	95	1200
8-9	19	1338	37	1394
9-10	32	1177	10	1219
15-16	17	1299	42	1358
16-17	13	1377	23	1413
17-18	8	1378	34	1420
TOTAL	106	7657	241	8004

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	57	1138	27	1222
8-9	42	1121	28	1191
9-10	30	1049	12	1091
15-16	18	894	9	921
16-17	29	1033	16	1078
17-18	52	1017	17	1086
TOTAL	228	6252	109	6589

TOTAL

XING W/L

XING E/L

E-W	Ped	Sch	Ped	Sch
2422	0	0	0	0
2585	0	0	0	0
2310	0	0	0	0
2279	0	0	0	0
2491	0	0	0	0
2506	0	0	0	0
14593	0	0	0	0

Project ID: 19-05540-003
Date: 9/5/2019

National Data & Surveying Services

Intersection Turning Movement Count

Location: Westmoreland Ave & Beverly Blvd/ W Temple St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-003
Date: 9/5/2019

Cars																											
NS/EW Streets:		Westmoreland Ave					Westmoreland Ave					Beverly Blvd/ W Temple St					Beverly Blvd/ W Temple St										
AM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					WESTBOUND2					TOTAL	
	0.5	0.5	1	0	0	0	1	0	0	0	2	1	0	0	0	1.5	0.5	0	1	0	0	0	0	0			
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L2	W2T2	W2R2	W2U2			
	7:00 AM	10	0	0	0	12	0	1	4	0	1	0	65	3	0	115	0	110	5	0	0	0	192	3	0		
	7:15 AM	19	1	0	0	17	0	7	3	0	2	0	93	2	0	147	0	78	0	0	4	0	194	5	0		
	7:30 AM	14	0	1	0	18	1	9	4	0	2	0	132	1	0	199	1	95	1	0	1	0	185	5	0		
	7:45 AM	12	0	1	0	16	3	15	3	0	4	0	126	6	0	196	0	93	2	0	6	0	185	9	0		
	8:00 AM	17	2	1	0	19	6	11	7	0	2	0	149	1	0	178	0	90	1	0	5	0	203	3	0		
	8:15 AM	11	5	3	0	10	3	6	4	0	5	0	174	1	0	176	0	91	1	0	4	1	195	1	0		
	8:30 AM	5	0	1	0	11	1	4	0	0	4	0	150	1	0	182	0	69	0	0	2	0	203	0	0		
	8:45 AM	6	1	1	0	7	2	2	5	0	2	0	102	1	0	198	0	91	0	0	2	0	180	1	1		
	9:00 AM	2	0	0	0	3	2	2	1	0	0	0	147	3	0	178	0	69	0	0	3	0	171	69	0		
	9:15 AM	6	0	0	0	5	1	2	2	0	1	0	125	1	0	179	0	78	0	0	4	0	169	0	0		
	9:30 AM	4	1	0	0	2	1	3	2	0	2	0	108	2	0	150	0	70	1	0	3	0	195	0	0		
	9:45 AM	4	2	0	0	4	0	2	1	0	0	0	104	0	0	165	1	97	5	0	6	0	191	5	0		
	TOTAL VOLUMES -		NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	W2T1	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L2	W2T2	W2R2		W2U2
APPROACH %'s:		110	12	8	0	124	20	64	36	0	25	0	1475	22	0	2063	2	1031	16	0	42	1	2263	32	1	7347	
PEAK HR		07:30 AM - 08:30 AM																									TOTAL
PEAK HR VOL		54	7	6	0	63	13	41	18	0	13	0	581	9	0	749	1	369	5	0	16	1	768	15	0	2729	
PEAK HR FACTOR:		0.79	0.350	0.500	0.000	0.829	0.542	0.683	0.643	0.000	0.650	0.000	0.835	0.375	0.000	0.941	0.250	0.971	0.625	0.000	0.667	0.250	0.946	0.417	0.000	0.982	
		0.833					0.817					0.954					0.968					0.951					
PM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					WESTBOUND2					TOTAL	
	0.5	0.5	1	0	0	0	1	0	0	0	0	2	1	0	0	0	1.5	0.5	0	1	0	0	0	0			
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L2	W2T2	W2R2	W2U2			
	3:00 PM	15	4	5	0	22	0	8	4	0	14	0	125	6	0	172	0	82	3	0	5	0	110	5	0		
	3:15 PM	13	0	3	0	24	6	4	3	0	3	0	128	14	0	180	0	97	1	0	3	0	137	3	0		
	3:30 PM	14	2	2	0	21	1	9	2	0	5	0	148	5	0	177	0	87	3	0	6	0	144	5	0		
	3:45 PM	8	1	2	0	33	3	3	4	0	4	0	124	5	0	184	0	85	0	0	4	0	114	0	0		
	4:00 PM	8	0	5	0	16	6	3	3	0	3	0	149	6	0	196	0	98	0	0	5	0	151	3	0		
	4:15 PM	8	7	5	0	26	5	6	5	0	5	0	127	3	0	203	1	94	2	0	6	0	172	3	0		
	4:30 PM	8	0	5	0	33	2	13	3	0	6	1	142	2	0	184	0	77	3	0	10	0	189	1	0		
	4:45 PM	3	1	1	0	31	3	6	1	0	11	0	134	2	0	209	0	78	0	0	1	2	167	1	0		
	5:00 PM	3	2	5	0	17	4	9	0	0	7	1	124	0	0	203	0	80	3	0	2	0	130	8	0		
	5:15 PM	6	2	2	0	33	2	9	1	0	1	0	151	2	0	182	0	100	1	0	1	0	135	5	0		
	5:30 PM	4	4	6	0	16	5	11	4	0	5	0	144	2	0	171	0	97	0	0	7	0	185	7	0		
	5:45 PM	5	1	2	0	28	1	5	2	0	0	0	160	2	0	209	0	90	4	0	6	1	208	4	1		
	TOTAL VOLUMES -		NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L2	W2T2	W2R2		W2U2
APPROACH %'s:		20.56%	5.19%	9.31%	0.00%	64.94%	17.27%	39.09%	14.55%	0.00%	29.09%	0.05%	41.64%	1.23%	0.00%	57.08%	0.09%	93.26%	1.75%	0.00%	4.90%	0.16%	97.51%	2.28%	0.05%		
PEAK HR		04:00 PM - 05:00 PM																									TOTAL
PEAK HR VOL		27	8	16	0	106	16	28	12	0	25	1	552	13	0	792	1	347	5	0	22	2	679	8	0	2660	
PEAK HR FACTOR:		0.84	0.286	0.800	0.000	0.803	0.667	0.538	0.600	0.000	0.568	0.250	0.926	0.542	0.000	0.947	0.250	0.885	0.417	0.000	0.550	0.250	0.898	0.667	0.000	0.979	
		0.853					0.844					0.967					0.910					0.907					

Project ID: 19-05540-003
Date: 9/5/2019

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NS/EW Streets																Bikes															
Westmoreland Ave					Westmoreland Ave					Beverly Blvd/ W Temple St					Beverly Blvd/ W Temple St					Beverly Blvd/ W Temple St											
AM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					WESTBOUND2										
	0.5	0.5	1	0	0	0	1	0	0	0	0	2	1	0	0	0	1.5	0.5	0	0	0	0	0	0	0						
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L2	W2T2	W2R2	W2U2	TOTAL						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	0	3						
7:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	3						
7:30 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	2	0	0	7						
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	1	4	0	0	9						
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	0	1	1	0	0	6						
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	4	0	0	6						
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	0	0	0	0	0	2	0	0	6						
8:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3						
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2						
9:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0	0	4						
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	3						
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1						
TOTAL VOLUMES					NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L2	W2T2	W2R2	W2U2	TOTAL		
APPROACH %					1	1	0	0	0	0	0	3	1	0	0	1	5	3	0	10	0	0	0	0	1	19	1	1	54		
PEAK HR					50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	75.00%	25.00%	0.00%	0.00%	0.00%	5.26%	26.32%	15.79%	0.00%	52.63%	0.00%	100.00%	0.00%	0.00%	0.00%	4.55%	86.36%	4.55%	0.00%	28	
PEAK HR VOL.					0	0	0	0	0	0	1	0	0	0	1	3	1	0	6	0	3	0	0	0	1	11	0	0	28		
PEAK HR FACTOR					0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.750	0.250	0.000	0.500	0.000	0.375	0.000	0.000	0.000	0.250	0.688	0.000	0.000	0.778		
					0.250					0.250										0.375					0.600						
PM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					WESTBOUND2										
	0.5	0.5	1	0	0	0	1	0	0	0	0	2	1	0	0	0	1.5	0.5	0	0	0	0	0	0	0						
	NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L2	W2T2	W2R2	W2U2	TOTAL						
	3:00 PM	1	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2					
	3:15 PM	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	2	0	0	5					
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2						
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	0	1	0	4					
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	2	2	0	0	0	0	2	1	1	0	8					
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3				
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	3					
	4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3					
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	0	0	2	0	6					
	5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	4					
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	4				
	5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	6				
	TOTAL VOLUMES					NL	NT	NR	NU	NR2	SL	ST	SR	SU	SL2	EL	ET	ER	EU	ET2	WL	WT	WR	WU	WU2	W2L2	W2T2	W2R2	W2U2	TOTAL	
APPROACH %					33.33%	0	0	0	0	2	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	66.67%	0.00%	100.00%	0.00%	0.00%	0.00%	6.25%	87.50%	6.25%	0.00%	47	
PEAK HR					0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	1	14	1	0	14		
PEAK HR VOL.					0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.250	0.000	0.438		
PEAK HR FACTOR					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.350	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.250	0.000	0.438		
					0.000					0.250										0.350					0.500						

National Data & Surveying Services

Intersection Turning Movement Count

Location: Westmoreland Ave & Beverly Blvd/ W Temple St
City: Los Angeles

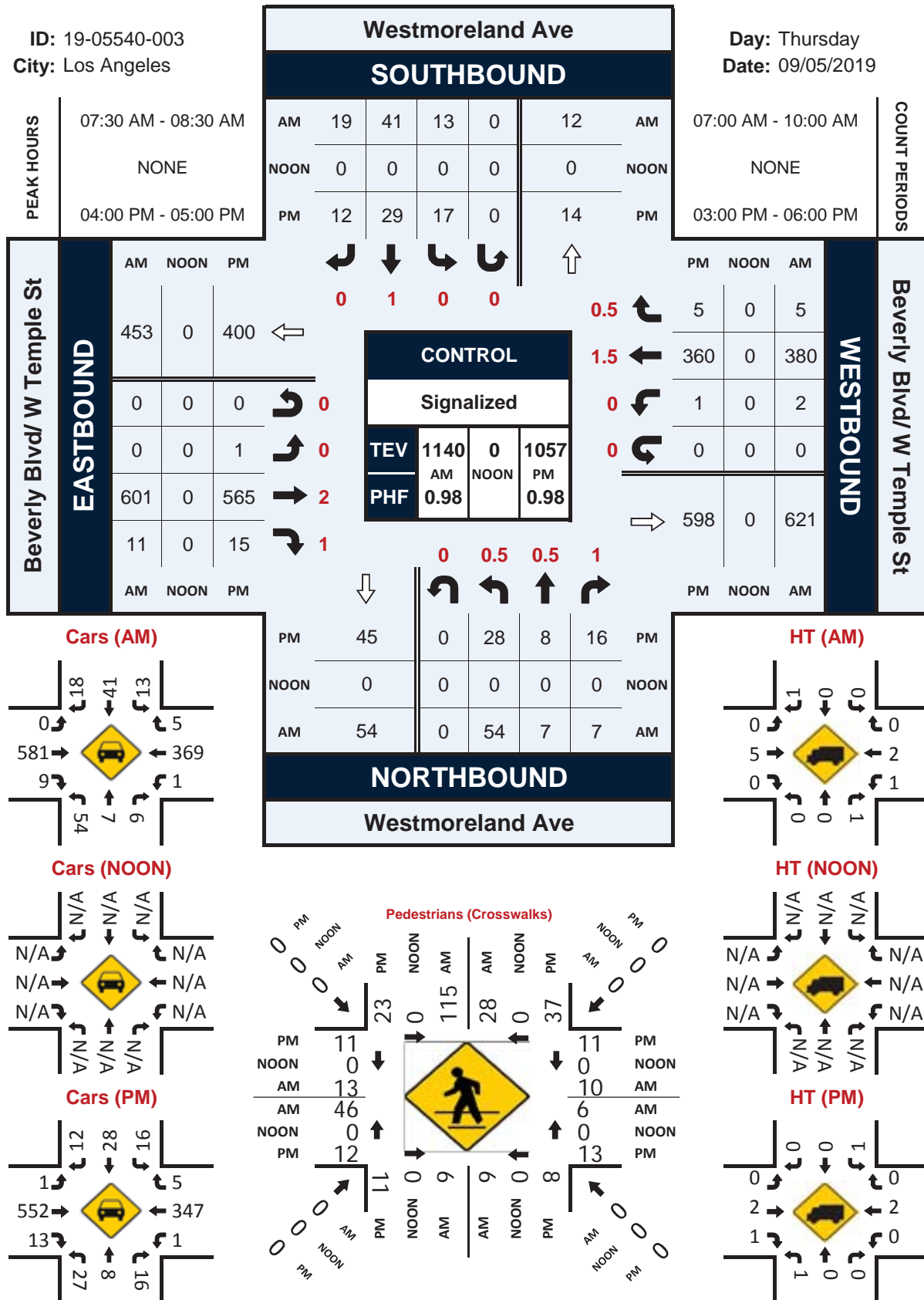
Project ID: 19-05540-003
Date: 9/5/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Westmoreland Ave		Westmoreland Ave		Beverly Blvd/ W Temple St		Beverly Blvd/ W Temple St				
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		EAST LEG 2		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	NB	SB	
7:00 AM	6	4	2	2	2	3	2	8	0	0	29
7:15 AM	12	10	0	5	0	2	4	12	0	0	45
7:30 AM	16	7	1	1	0	1	1	6	0	0	33
7:45 AM	85	11	0	0	0	1	42	4	1	0	144
8:00 AM	6	5	4	1	4	5	1	3	1	0	30
8:15 AM	8	5	1	4	2	3	2	0	0	0	25
8:30 AM	3	58	0	0	2	4	3	50	0	0	120
8:45 AM	4	1	1	4	3	4	2	1	1	0	21
9:00 AM	1	4	3	1	1	0	0	3	1	0	14
9:15 AM	3	2	2	1	3	2	1	4	0	0	18
9:30 AM	1	4	2	1	1	0	0	0	0	0	9
9:45 AM	3	2	1	4	2	2	0	2	0	0	16
TOTAL VOLUMES :	EB 148	WB 113	EB 17	WB 24	NB 20	SB 27	NB 58	SB 93	NB 4	SB 0	TOTAL 504
APPROACH %'s :	56.70%	43.30%	41.46%	58.54%	42.55%	57.45%	38.41%	61.59%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM										TOTAL 232
PEAK HR VOL :	115	28	6	6	6	10	46	13	2	0	
PEAK HR FACTOR :	0.338	0.636	0.375	0.375	0.375	0.500	0.274	0.542	0.500	0.500	0.403
	0.372		0.600		0.444		0.321		0.500		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		EAST LEG 2		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	NB	SB	
3:00 PM	14	5	11	2	14	3	24	3	0	0	76
3:15 PM	7	27	6	9	4	18	7	2	0	0	80
3:30 PM	3	19	8	2	3	4	0	1	0	0	40
3:45 PM	3	4	4	5	10	5	2	0	1	0	34
4:00 PM	5	14	3	1	4	3	0	7	0	0	37
4:15 PM	7	8	0	1	4	3	7	2	0	0	32
4:30 PM	5	5	8	4	4	2	3	2	0	0	33
4:45 PM	6	10	0	2	1	3	2	0	0	0	24
5:00 PM	5	10	0	2	2	4	0	1	0	0	24
5:15 PM	4	13	3	3	4	5	3	6	0	0	41
5:30 PM	5	11	4	6	6	7	2	3	0	0	44
5:45 PM	4	6	4	1	3	4	4	1	0	0	27
TOTAL VOLUMES :	EB 68	WB 132	EB 51	WB 38	NB 59	SB 61	NB 54	SB 28	NB 1	SB 0	TOTAL 492
APPROACH %'s :	34.00%	66.00%	57.30%	42.70%	49.17%	50.83%	65.85%	34.15%	100.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM										TOTAL 126
PEAK HR VOL :	23	37	11	8	13	11	12	11	0	0	
PEAK HR FACTOR :	0.821	0.661	0.344	0.500	0.813	0.917	0.429	0.393			0.851
	0.789		0.396		0.857		0.639				

Day: Thursday
Date: 09/05/2019





City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Westmoreland Ave

East/West Beverly Blvd/ W Temple St

Day: Thursday **Date:** 09/05/2019 **Weather:** SUNNY

Hours: 7-10 & 3-6 **Chekr:** NDS

School Day: Yes **I/S CODE**

	N/B	S/B	E/B	W/B
DUAL-WHEELED	3	4	35	20
BIKES	3	6	16	12
BUSES	1	1	68	56

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	21	7.15	24	8.00	183	8.15	118	7.00
PM PK 15 MIN	24	15.00	20	17.30	165	17.45	104	17.15
AM PK HOUR	69	7.15	73	7.30	627	7.45	399	7.00
PM PK HOUR	69	15.00	59	16.15	603	15.15	385	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	56	1	2	59
8-9	39	8	7	54
9-10	17	3	0	20
15-16	50	7	12	69
16-17	28	8	16	52
17-18	18	9	15	42
TOTAL	208	36	52	296

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	4	32	15	51
8-9	12	23	16	51
9-10	4	9	7	20
15-16	11	24	13	48
16-17	17	29	12	58
17-18	12	34	7	53
TOTAL	60	151	70	281

TOTAL

XING S/L

XING N/L

N-S	Ped	Sch	Ped	Sch
110	0	0	0	0
105	0	0	0	0
40	0	0	0	0
117	0	0	0	0
110	0	0	0	0
95	0	0	0	0
577	0	0	0	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	434	12	446
8-9	0	590	6	596
9-10	0	493	6	499
15-16	0	551	33	584
16-17	1	565	15	581
17-18	1	594	6	601
TOTAL	2	3227	78	3307

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	2	389	8	399
8-9	0	355	2	357
9-10	1	327	6	334
15-16	0	363	7	370
16-17	1	360	5	366
17-18	0	377	8	385
TOTAL	4	2171	36	2211

TOTAL

XING W/L

XING E/L

E-W	Ped	Sch	Ped	Sch
845	0	0	0	0
953	0	0	0	0
833	0	0	0	0
954	0	0	0	0
947	0	0	0	0
986	0	0	0	0
5518	0	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Vermont Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-002
Date: 9/5/2019

Total

NS/EW Streets:	Vermont Ave				Vermont Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	6	276	10	0	15	216	16	0	46	46	6	0	13	46	12	0	708
7:15 AM	9	270	26	0	21	266	17	0	50	90	8	0	21	69	33	0	880
7:30 AM	5	313	20	0	26	313	18	0	39	77	7	0	29	73	79	0	999
7:45 AM	11	290	16	0	20	305	19	0	38	108	14	0	27	93	60	0	1001
8:00 AM	9	268	21	0	26	298	21	0	32	114	14	0	27	90	52	0	972
8:15 AM	7	239	12	0	27	327	25	0	35	79	14	0	22	76	20	0	883
8:30 AM	8	264	7	0	38	345	19	0	34	86	14	0	12	73	6	0	906
8:45 AM	7	253	14	0	42	332	32	0	36	63	7	0	16	77	14	0	893
9:00 AM	7	243	9	0	43	293	24	0	29	48	19	0	11	59	10	0	795
9:15 AM	8	277	16	0	27	310	29	0	29	50	13	0	9	55	11	0	834
9:30 AM	9	257	7	0	23	260	29	0	29	45	16	0	17	56	16	0	764
9:45 AM	14	253	3	0	26	250	22	0	31	44	18	0	14	62	12	0	749
TOTAL VOLUMES :	NL 100	NT 3203	NR 161	NU 0	SL 334	ST 3515	SR 271	SU 0	EL 428	ET 850	ER 150	EU 0	WL 218	WT 829	WR 325	WU 0	TOTAL 10384
APPROACH %'s :	2.89%	92.47%	4.65%	0.00%	8.11%	85.32%	6.58%	0.00%	29.97%	59.52%	10.50%	0.00%	15.89%	60.42%	23.69%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	32	1110	69	0	99	1243	83	0	144	378	49	0	105	332	211	0	3855
PEAK HR FACTOR :	0.727	0.887	0.821	0.000	0.917	0.950	0.830	0.000	0.923	0.829	0.875	0.000	0.905	0.892	0.668	0.000	0.963
	0.89%				0.94%				0.89%				0.89%				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
3:00 PM	8	231	55	0	23	240	16	0	47	115	16	0	8	39	30	0	828
3:15 PM	3	253	20	1	26	278	29	0	34	94	22	0	19	59	23	0	861
3:30 PM	8	247	30	1	33	264	33	0	39	83	18	0	21	66	52	0	895
3:45 PM	20	258	19	1	35	294	44	1	43	96	12	0	14	64	16	0	917
4:00 PM	20	225	24	0	45	276	34	0	44	118	8	0	12	44	7	0	857
4:15 PM	9	219	15	0	32	270	35	0	65	100	13	0	11	47	19	0	835
4:30 PM	6	246	14	0	24	280	35	0	60	112	19	0	11	60	23	0	890
4:45 PM	11	228	30	0	32	327	41	0	42	90	20	0	14	65	17	0	917
5:00 PM	18	245	20	0	25	300	52	0	45	120	15	0	10	78	18	0	946
5:15 PM	16	261	19	0	30	331	36	0	38	124	14	0	16	88	25	0	998
5:30 PM	18	260	22	1	32	338	22	0	33	119	16	0	22	90	21	0	994
5:45 PM	20	221	20	0	30	288	57	0	34	107	19	0	19	89	15	0	919
TOTAL VOLUMES :	NL 157	NT 2894	NR 288	NU 4	SL 367	ST 3486	SR 434	SU 1	EL 524	ET 1278	ER 192	EU 0	WL 177	WT 789	WR 266	WU 0	TOTAL 10857
APPROACH %'s :	4.70%	86.57%	8.62%	0.12%	8.56%	81.30%	10.12%	0.02%	26.28%	64.09%	9.63%	0.00%	14.37%	64.04%	21.59%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	72	987	81	1	117	1257	167	0	150	470	64	0	67	345	79	0	3857
PEAK HR FACTOR :	0.900	0.945	0.920	0.250	0.914	0.930	0.732	0.000	0.833	0.948	0.842	0.000	0.761	0.958	0.790	0.000	0.966
	0.94%				0.97%				0.95%				0.92%				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Vermont Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-002
Date: 9/5/2019

Cars

NS/EW Streets:	Vermont Ave				Vermont Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	6	263	9	0	15	204	15	0	46	45	6	0	12	45	12	0	678
7:15 AM	9	256	26	0	21	259	17	0	50	89	6	0	21	68	32	0	854
7:30 AM	5	307	19	0	26	301	18	0	39	77	7	0	28	72	78	0	977
7:45 AM	11	278	15	0	20	300	19	0	38	105	13	0	27	93	60	0	979
8:00 AM	9	260	21	0	26	291	20	0	32	113	14	0	25	90	52	0	953
8:15 AM	7	230	12	0	25	319	25	0	35	78	13	0	19	74	20	0	857
8:30 AM	8	251	6	0	37	344	19	0	33	86	14	0	12	73	5	0	888
8:45 AM	7	246	14	0	42	321	32	0	36	63	7	0	15	77	13	0	873
9:00 AM	7	236	9	0	43	287	24	0	29	48	18	0	10	59	10	0	780
9:15 AM	8	269	16	0	27	299	29	0	29	50	13	0	9	54	10	0	813
9:30 AM	9	253	6	0	23	252	29	0	29	44	15	0	14	55	16	0	745
9:45 AM	14	245	3	0	26	243	22	0	31	44	18	0	13	62	11	0	732
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	100	3094	156	0	331	3420	269	0	427	842	144	0	205	822	319	0	10129
PEAK HR :	2.99%	92.36%	4.66%	0.00%	8.23%	85.07%	6.69%	0.00%	30.22%	59.59%	10.19%	0.00%	15.23%	61.07%	23.70%	0.00%	
PEAK HR VOL :	32	1075	67	0	97	1211	82	0	144	373	47	0	99	329	210	0	3766
PEAK HR FACTOR :	0.73	0.875	0.798	0.000	0.933	0.949	0.820	0.000	0.923	0.825	0.839	0.000	0.884	0.884	0.673	0.000	0.962
	0.887				0.942				0.887				0.886				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
3:00 PM	6	220	55	0	23	234	16	0	46	112	16	0	8	39	26	0	801
3:15 PM	3	249	20	1	26	271	29	0	34	94	21	0	19	58	23	0	848
3:30 PM	7	236	29	1	33	255	32	0	39	83	17	0	20	66	52	0	870
3:45 PM	19	253	19	1	35	282	43	1	42	96	11	0	12	64	14	0	892
4:00 PM	20	221	23	0	45	266	34	0	43	116	8	0	10	43	7	0	836
4:15 PM	9	210	13	0	32	264	35	0	65	100	13	0	9	47	18	0	815
4:30 PM	6	240	14	0	24	271	35	0	60	112	17	0	11	60	23	0	873
4:45 PM	11	219	30	0	32	318	41	0	42	90	20	0	13	65	17	0	898
5:00 PM	18	243	20	0	25	294	52	0	45	119	15	0	9	77	17	0	934
5:15 PM	16	253	19	0	30	325	36	0	37	124	13	0	16	88	25	0	982
5:30 PM	18	258	21	1	32	333	22	0	33	118	15	0	22	90	21	0	984
5:45 PM	20	217	20	0	30	278	57	0	34	106	19	0	18	89	15	0	903
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	153	2819	283	4	367	3391	432	1	520	1270	185	0	167	786	258	0	10636
PEAK HR :	4.69%	86.50%	8.68%	0.12%	8.76%	80.91%	10.31%	0.02%	26.33%	64.30%	9.37%	0.00%	13.79%	64.91%	21.30%	0.00%	
PEAK HR VOL :	72	971	80	1	117	1230	167	0	149	467	62	0	65	344	78	0	3803
PEAK HR FACTOR :	0.90	0.941	0.952	0.250	0.914	0.923	0.732	0.000	0.828	0.942	0.816	0.000	0.739	0.956	0.780	0.000	0.966
	0.943				0.968				0.947				0.915				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Vermont Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-002
Date: 9/5/2019

HT

NS/EW Streets:	Vermont Ave				Vermont Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	12
7:15 AM	0	6	0	0	0	3	0	0	0	0	1	0	0	0	0	0	10
7:30 AM	0	3	0	0	0	3	0	0	0	0	0	0	1	1	0	0	8
7:45 AM	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8
8:00 AM	0	4	0	0	0	5	1	0	0	0	0	0	0	0	0	0	10
8:15 AM	0	5	0	0	2	3	0	0	0	1	0	0	0	1	0	0	12
8:30 AM	0	7	0	0	1	0	0	0	1	0	0	0	0	0	1	0	10
8:45 AM	0	4	0	0	0	5	0	0	0	0	0	0	1	0	1	0	11
9:00 AM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
9:15 AM	0	5	0	0	0	4	0	0	0	0	0	0	0	1	1	0	11
9:30 AM	0	4	0	0	0	3	0	0	0	1	0	0	2	1	0	0	11
9:45 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	1	0	9
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	54	0	0	3	42	1	0	1	2	1	0	4	4	4	0	116
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	17	0	0	2	14	1	0	0	1	0	0	1	2	0	0	38
PEAK HR FACTOR :	0.000	0.850	0.000	0.000	0.250	0.700	0.250	0.000	0.000	0.250	0.000	0.000	0.250	0.500	0.000	0.000	0.792
	0.850				0.708				0.250				0.375				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
3:00 PM	2	8	0	0	0	0	0	0	1	1	0	0	0	0	0	0	12
3:15 PM	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	6
3:30 PM	0	3	0	0	0	4	1	0	0	0	0	0	0	0	0	0	8
3:45 PM	0	2	0	0	0	6	1	0	1	0	0	0	0	0	2	0	12
4:00 PM	0	0	0	0	0	1	0	0	1	2	0	0	1	1	0	0	6
4:15 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	4
4:30 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
4:45 PM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	0	0	0	0	0	2	0	0	0	1	0	0	1	1	1	0	6
5:15 PM	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
5:30 PM	0	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	4	0	0	0	1	0	0	1	0	0	0	6
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	23	0	0	0	32	2	0	4	6	0	0	3	2	4	0	78
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	3	0	0	0	8	0	0	1	3	0	0	2	1	1	0	19
PEAK HR FACTOR :	0.00	0.375	0.000	0.000	0.000	0.500	0.000	0.000	0.250	0.750	0.000	0.000	0.500	0.250	0.250	0.000	0.792
	0.375				0.500				1.000				0.333				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Vermont Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-002
Date: 9/5/2019

Buses

NS/EW Streets:	Vermont Ave				Vermont Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	0	7	1	0	0	6	1	0	0	1	0	0	1	1	0	0	18
7:15 AM	0	8	0	0	0	4	0	0	0	1	1	0	0	1	1	0	16
7:30 AM	0	3	1	0	0	9	0	0	0	0	0	0	0	0	1	0	14
7:45 AM	0	7	1	0	0	2	0	0	0	3	1	0	0	0	0	0	14
8:00 AM	0	4	0	0	0	2	0	0	0	1	0	0	2	0	0	0	9
8:15 AM	0	4	0	0	0	5	0	0	0	0	1	0	3	1	0	0	14
8:30 AM	0	6	1	0	0	1	0	0	0	0	0	0	0	0	0	0	8
8:45 AM	0	3	0	0	0	6	0	0	0	0	0	0	0	0	0	0	9
9:00 AM	0	6	0	0	0	3	0	0	0	0	1	0	1	0	0	0	11
9:15 AM	0	3	0	0	0	7	0	0	0	0	0	0	0	0	0	0	10
9:30 AM	0	0	1	0	0	5	0	0	0	0	1	0	1	0	0	0	8
9:45 AM	0	4	0	0	0	3	0	0	0	0	0	0	1	0	0	0	8
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	55	5	0	0	53	1	0	0	6	5	0	9	3	2	0	139
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	18	2	0	0	18	0	0	0	4	2	0	5	1	1	0	51
PEAK HR FACTOR :	0.000	0.643	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.333	0.500	0.000	0.417	0.250	0.250	0.000	0.911
	0.625				0.500				0.375				0.438				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
3:00 PM	0	3	0	0	0	6	0	0	0	2	0	0	0	0	4	0	15
3:15 PM	0	3	0	0	0	2	0	0	0	0	1	0	0	1	0	0	7
3:30 PM	1	8	1	0	0	5	0	0	0	0	1	0	1	0	0	0	17
3:45 PM	1	3	0	0	0	6	0	0	0	0	1	0	2	0	0	0	13
4:00 PM	0	4	1	0	0	9	0	0	0	0	0	0	1	0	0	0	15
4:15 PM	0	8	2	0	0	4	0	0	0	0	0	0	2	0	0	0	16
4:30 PM	0	3	0	0	0	7	0	0	0	0	2	0	0	0	0	0	12
4:45 PM	0	7	0	0	0	5	0	0	0	0	0	0	1	0	0	0	13
5:00 PM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6
5:15 PM	0	7	0	0	0	5	0	0	0	0	1	0	0	0	0	0	13
5:30 PM	0	0	1	0	0	4	0	0	0	0	1	0	0	0	0	0	6
5:45 PM	0	4	0	0	0	6	0	0	0	0	0	0	0	0	0	0	10
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	52	5	0	0	63	0	0	0	2	7	0	7	1	4	0	143
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	13	1	0	0	19	0	0	0	0	2	0	0	0	0	0	35
PEAK HR FACTOR :	0.00	0.464	0.250	0.000	0.000	0.792	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.673
	0.500				0.792				0.500								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Vermont Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-002
Date: 9/5/2019

Bikes

NS/EW Streets:	Vermont Ave				Vermont Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:00 AM	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3
8:15 AM	0	0	0	0	1	4	0	0	0	0	1	0	0	0	2	0	8
8:30 AM	0	1	0	0	0	4	0	0	0	0	1	0	0	1	0	0	7
8:45 AM	0	4	0	0	0	0	0	0	0	1	0	0	1	2	0	0	8
9:00 AM	1	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	6
9:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
9:30 AM	0	4	0	0	2	0	0	0	2	0	0	0	0	0	1	0	9
9:45 AM	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	4
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	1	13	0	0	4	15	0	0	2	4	2	0	1	7	3	0	52
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	1	0	0	1	5	0	0	0	1	1	0	0	1	2	0	12
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.250	0.313	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.250	0.250	0.000	0.375
	0.250				0.300				0.500				0.375				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	3 NT	0 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
3:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	2	1	0	0	4
3:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
3:30 PM	1	3	0	0	0	6	0	0	0	0	0	0	0	3	0	0	13
3:45 PM	1	4	0	0	0	3	1	0	0	0	0	0	0	2	0	0	11
4:00 PM	0	3	0	0	0	1	0	0	0	1	0	0	0	1	1	0	7
4:15 PM	0	4	0	0	0	2	0	0	0	0	0	0	0	5	0	0	11
4:30 PM	0	0	0	0	0	3	0	0	0	2	0	0	0	3	1	0	9
4:45 PM	0	0	1	0	0	2	0	0	0	1	0	0	0	0	0	0	4
5:00 PM	0	3	0	0	1	2	0	0	2	0	0	0	0	0	0	0	8
5:15 PM	0	0	0	0	0	4	0	0	0	1	0	0	0	0	1	0	6
5:30 PM	0	2	0	0	0	4	0	0	0	1	0	0	0	0	1	0	8
5:45 PM	1	2	0	0	0	0	0	0	1	0	0	0	0	2	0	0	6
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	3	21	1	0	1	29	1	0	3	6	0	0	2	19	4	0	90
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	7	0	0	1	10	0	0	3	2	0	0	0	2	2	0	28
PEAK HR FACTOR :	0.25	0.583	0.000	0.000	0.250	0.625	0.000	0.000	0.375	0.500	0.000	0.000	0.000	0.250	0.500	0.000	0.875
	0.667				0.688				0.625				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Vermont Ave & 1st St
City: Los Angeles

Project ID: 19-05540-002
Date: 9/5/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Vermont Ave		Vermont Ave		1st St		1st St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	17	1	18	1	13	3	1	1	55
7:15 AM	25	1	25	9	41	14	11	3	129
7:30 AM	82	4	18	9	84	34	15	3	249
7:45 AM	101	35	49	9	115	46	9	2	366
8:00 AM	33	14	20	12	27	19	10	7	142
8:15 AM	3	22	16	9	12	11	5	5	83
8:30 AM	1	2	7	3	7	2	0	6	28
8:45 AM	5	5	17	8	8	5	1	2	51
9:00 AM	0	5	12	8	4	5	2	1	37
9:15 AM	4	0	10	14	0	6	6	1	41
9:30 AM	1	2	15	5	5	6	6	6	46
9:45 AM	1	3	7	5	3	5	2	3	29
TOTAL VOLUMES :	EB 273	WB 94	EB 214	WB 92	NB 319	SB 156	NB 68	SB 40	TOTAL 1256
APPROACH %'s :	74.39%	25.61%	69.93%	30.07%	67.16%	32.84%	62.96%	37.04%	
PEAK HR :	07:30 AM - 08:30 AM								TOTAL 840
PEAK HR VOL :	219	75	103	39	238	110	39	17	
PEAK HR FACTOR :	0.542	0.536	0.526	0.813	0.517	0.598	0.650	0.607	0.574
	0.540		0.612		0.540		0.778		

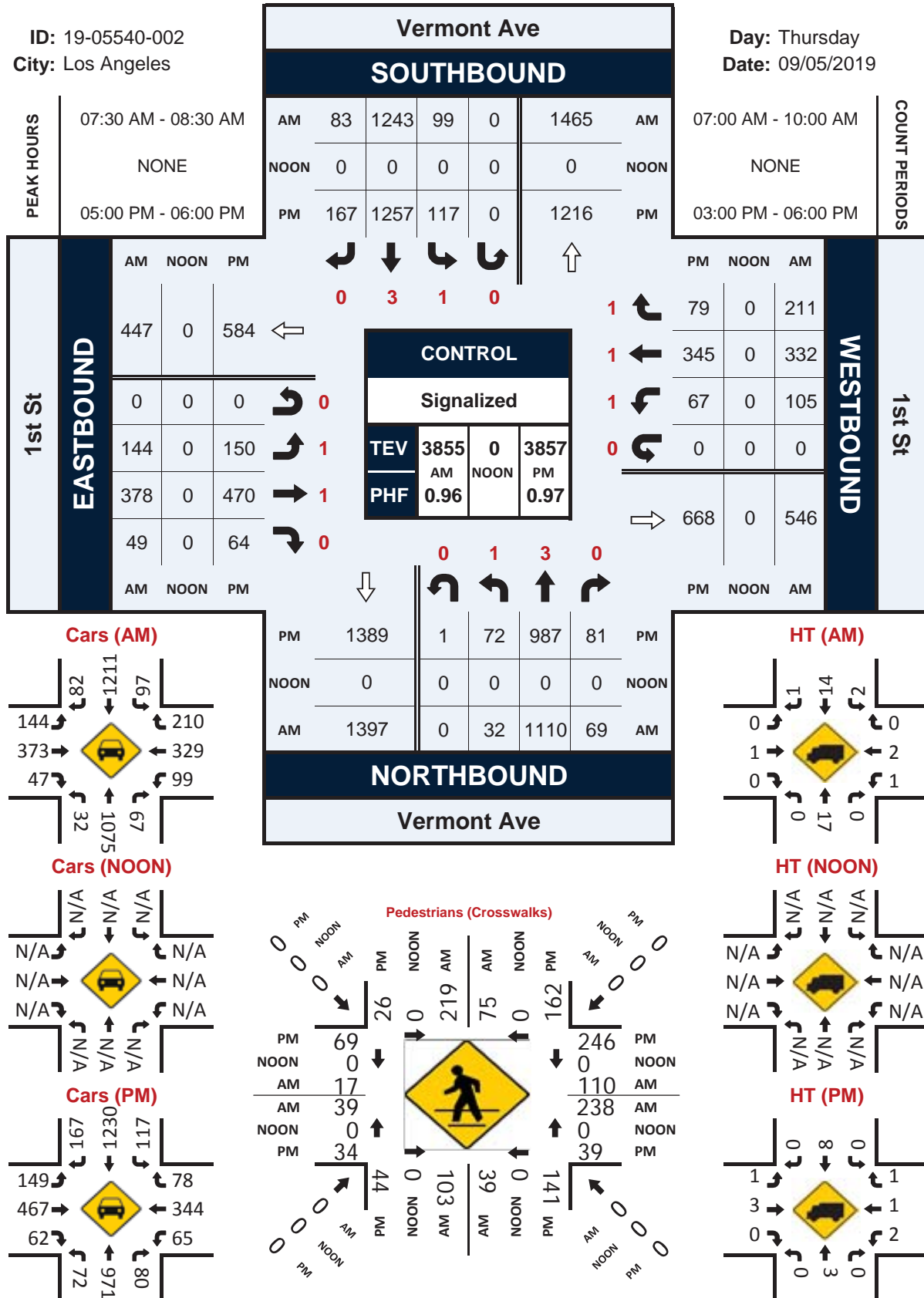
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
3:00 PM	38	45	18	30	38	52	15	21	257
3:15 PM	26	97	15	77	51	222	9	22	519
3:30 PM	34	15	12	32	33	62	15	15	218
3:45 PM	23	17	16	12	31	13	8	11	131
4:00 PM	14	6	6	9	15	16	0	4	70
4:15 PM	2	7	7	12	14	25	4	13	84
4:30 PM	4	10	12	17	7	20	5	15	90
4:45 PM	2	12	17	12	10	25	7	10	95
5:00 PM	2	34	8	20	8	54	5	16	147
5:15 PM	7	57	10	69	11	149	10	16	329
5:30 PM	8	53	10	26	12	31	13	24	177
5:45 PM	9	18	16	26	8	12	6	13	108
TOTAL VOLUMES :	EB 169	WB 371	EB 147	WB 342	NB 238	SB 681	NB 97	SB 180	TOTAL 2225
APPROACH %'s :	31.30%	68.70%	30.06%	69.94%	25.90%	74.10%	35.02%	64.98%	
PEAK HR :	05:00 PM - 06:00 PM								TOTAL 761
PEAK HR VOL :	26	162	44	141	39	246	34	69	
PEAK HR FACTOR :	0.722	0.711	0.688	0.511	0.813	0.413	0.654	0.719	0.578
	0.734		0.585		0.445		0.696		

Vermont Ave & 1st St

Peak Hour Turning Movement Count

ID: 19-05540-002
City: Los Angeles

Day: Thursday
Date: 09/05/2019





City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Vermont Ave

East/West 1st St

Day: Thursday **Date:** 09/05/2019 **Weather:** SUNNY

Hours: 7-10 & 3-6 **Chekr:** NDS

School Day: Yes **I/S CODE**

	N/B	S/B	E/B	W/B
DUAL-WHEELED	79	80	14	21
BIKES	39	50	17	36
BUSES	119	117	20	26

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
<i>AM PK 15 MIN</i>	338	7.30	406	8.45	160	7.45	181	7.30
<i>PM PK 15 MIN</i>	301	17.30	400	16.45	191	16.30	139	15.30
<i>AM PK HOUR</i>	1258	7.15	1547	8.15	591	7.15	653	7.15
<i>PM PK HOUR</i>	1155	15.00	1566	16.45	701	16.15	491	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	31	1149	72	1252
8-9	31	1024	54	1109
9-10	38	1030	35	1103
15-16	42	989	124	1155
16-17	46	918	83	1047
17-18	73	987	81	1141
TOTAL	261	6097	449	6807

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	82	1100	70	1252
8-9	133	1302	97	1532
9-10	119	1113	104	1336
15-16	118	1076	122	1316
16-17	133	1153	145	1431
17-18	117	1257	167	1541
TOTAL	702	7001	705	8408

TOTAL

XING S/L

XING N/L

N-S	Ped	Sch	Ped	Sch
2504	0	0	0	0
2641	0	0	0	0
2439	0	0	0	0
2471	0	0	0	0
2478	0	0	0	0
2682	0	0	0	0
15215	0	0	0	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	173	321	35	529
8-9	137	342	49	528
9-10	118	187	66	371
15-16	163	388	68	619
16-17	211	420	60	691
17-18	150	470	64	684
TOTAL	952	2128	342	3422

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	90	281	184	555
8-9	77	316	92	485
9-10	51	232	49	332
15-16	62	228	121	411
16-17	48	216	66	330
17-18	67	345	79	491
TOTAL	395	1618	591	2604

TOTAL

XING W/L

XING E/L

E-W	Ped	Sch	Ped	Sch
1084	0	0	0	0
1013	0	0	0	0
703	0	0	0	0
1030	0	0	0	0
1021	0	0	0	0
1175	0	0	0	0
6026	0	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Westmoreland Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-004
Date: 9/5/2019

Total

NS/EW Streets:	Westmoreland Ave				Westmoreland Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	3	0	7	0	8	2	17	0	7	53	5	0	0	59	22	0	183
7:15 AM	3	0	5	1	30	0	47	0	33	92	2	0	1	79	36	0	329
7:30 AM	7	0	6	0	21	2	63	0	24	83	1	0	1	106	14	0	328
7:45 AM	5	1	6	0	23	2	86	0	26	99	5	0	3	111	14	0	381
8:00 AM	6	1	7	0	26	2	65	0	49	106	7	0	3	68	29	0	369
8:15 AM	5	0	6	0	17	0	41	0	22	134	3	0	6	79	9	0	322
8:30 AM	5	1	5	0	6	0	20	0	15	122	4	0	1	62	8	0	249
8:45 AM	3	1	6	0	5	1	19	0	7	104	3	0	2	83	10	0	244
9:00 AM	4	0	5	0	8	2	18	0	8	108	2	0	4	67	4	0	230
9:15 AM	1	0	2	0	1	0	13	0	9	86	1	0	2	68	4	0	187
9:30 AM	4	0	9	0	3	1	10	0	7	67	5	0	2	75	10	0	193
9:45 AM	0	1	5	0	4	1	13	0	7	79	3	0	1	77	4	1	196
TOTAL VOLUMES :	NL 46	NT 5	NR 69	NU 1	SL 152	ST 13	SR 412	SU 0	EL 214	ET 1133	ER 41	EU 0	WL 26	WT 934	WR 164	WU 1	TOTAL 3211
APPROACH %'s :	38.02%	4.13%	57.02%	0.83%	26.34%	2.25%	71.40%	0.00%	15.42%	81.63%	2.95%	0.00%	2.31%	83.02%	14.58%	0.09%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	21	2	24	1	100	6	261	0	132	380	15	0	8	364	93	0	1407
PEAK HR FACTOR :	0.750	0.500	0.857	0.250	0.833	0.750	0.759	0.000	0.673	0.896	0.536	0.000	0.667	0.820	0.646	0.000	0.923
	0.857				0.827				0.813				0.908				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
3:00 PM	4	1	2	0	16	4	34	0	25	127	3	1	4	62	20	0	303
3:15 PM	5	2	2	0	18	1	52	0	29	127	4	0	4	78	11	0	333
3:30 PM	3	2	3	1	8	0	37	0	30	143	9	0	3	74	9	0	322
3:45 PM	6	0	5	0	6	1	17	0	29	133	6	0	2	58	8	0	271
4:00 PM	2	2	4	0	4	1	17	0	15	141	4	0	1	64	9	0	264
4:15 PM	5	1	2	0	12	0	18	0	34	104	2	0	3	56	7	0	244
4:30 PM	6	3	1	0	8	1	22	1	41	103	3	0	6	65	6	0	266
4:45 PM	4	0	7	0	8	0	18	0	35	137	6	0	4	71	2	0	292
5:00 PM	6	3	5	0	10	0	32	0	33	142	5	0	5	67	8	0	316
5:15 PM	1	0	5	0	5	1	31	0	34	163	8	0	2	74	8	0	332
5:30 PM	2	0	2	0	13	1	36	0	30	162	3	0	6	86	6	0	347
5:45 PM	4	5	5	0	4	0	32	0	47	140	8	1	6	87	8	0	347
TOTAL VOLUMES :	NL 48	NT 19	NR 43	NU 1	SL 112	ST 10	SR 346	SU 1	EL 382	ET 1622	ER 61	EU 2	WL 46	WT 842	WR 102	WU 0	TOTAL 3637
APPROACH %'s :	43.24%	17.12%	38.74%	0.90%	23.88%	2.13%	73.77%	0.21%	18.48%	78.47%	2.95%	0.10%	4.65%	85.05%	10.30%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	13	8	17	0	32	2	131	0	144	607	24	1	19	314	30	0	1342
PEAK HR FACTOR :	0.542	0.400	0.850	0.000	0.615	0.500	0.910	0.000	0.766	0.931	0.750	0.250	0.792	0.902	0.938	0.000	0.967
	0.679				0.825				0.946				0.899				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Westmoreland Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-004
Date: 9/5/2019

Cars

NS/EW Streets:	Westmoreland Ave				Westmoreland Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	2	0	7	0	8	2	17	0	7	52	4	0	0	58	22	0	179
7:15 AM	3	0	5	1	30	0	47	0	33	90	2	0	1	77	35	0	324
7:30 AM	7	0	6	0	21	2	62	0	24	82	1	0	1	104	14	0	324
7:45 AM	5	1	6	0	23	2	86	0	26	97	5	0	2	111	14	0	378
8:00 AM	5	1	7	0	24	1	64	0	49	105	7	0	3	67	29	0	362
8:15 AM	5	0	6	0	17	0	37	0	21	133	3	0	6	78	9	0	315
8:30 AM	5	1	5	0	5	0	20	0	15	120	4	0	1	62	8	0	246
8:45 AM	3	1	6	0	4	1	19	0	7	104	3	0	2	82	9	0	241
9:00 AM	4	0	5	0	7	2	17	0	8	108	2	0	4	66	4	0	227
9:15 AM	1	0	2	0	1	0	13	0	9	86	1	0	2	66	4	0	185
9:30 AM	3	0	9	0	3	1	10	0	7	66	5	0	1	72	10	0	187
9:45 AM	0	1	5	0	4	1	13	0	7	79	3	0	1	75	4	1	194
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	43	5	69	1	147	12	405	0	213	1122	40	0	24	918	162	1	3162
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	20	2	24	1	98	5	259	0	132	374	15	0	7	359	92	0	1388
PEAK HR FACTOR :	0.71	0.500	0.857	0.250	0.817	0.625	0.753	0.000	0.673	0.890	0.536	0.000	0.583	0.809	0.657	0.000	0.918
	0.904				0.815				0.809				0.902				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
3:00 PM	4	1	2	0	16	4	32	0	25	125	3	1	4	62	20	0	299
3:15 PM	5	2	2	0	17	1	49	0	29	127	4	0	4	77	11	0	328
3:30 PM	3	2	3	1	8	0	36	0	28	142	9	0	3	74	8	0	317
3:45 PM	6	0	5	0	5	1	16	0	29	133	5	0	2	55	7	0	264
4:00 PM	2	1	4	0	4	1	15	0	15	139	4	0	1	63	9	0	258
4:15 PM	5	1	2	0	11	0	16	0	34	102	2	0	3	55	7	0	238
4:30 PM	6	3	0	0	8	1	22	1	41	102	2	0	6	64	6	0	262
4:45 PM	4	0	7	0	7	0	18	0	35	137	6	0	4	69	2	0	289
5:00 PM	6	3	5	0	10	0	31	0	32	142	5	0	5	67	8	0	314
5:15 PM	1	0	5	0	5	1	31	0	34	162	8	0	2	74	8	0	331
5:30 PM	2	0	2	0	13	1	36	0	30	160	3	0	6	86	6	0	345
5:45 PM	4	5	5	0	4	0	32	0	47	140	8	1	6	85	8	0	345
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	48	18	42	1	108	10	334	1	379	1611	59	2	46	831	100	0	3590
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	13	8	17	0	32	2	130	0	143	604	24	1	19	312	30	0	1335
PEAK HR FACTOR :	0.54	0.400	0.850	0.000	0.615	0.500	0.903	0.000	0.761	0.932	0.750	0.250	0.792	0.907	0.938	0.000	0.967
	0.679				0.820				0.946				0.912				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Westmoreland Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-004
Date: 9/5/2019

HT

NS/EW Streets:	Westmoreland Ave				Westmoreland Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
8:00 AM	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	3
8:30 AM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	3
9:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	1	0	0	0	4	0	2	0	1	4	0	0	1	9	2	0	24
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	0	0	0	1	0	1	0	0	2	0	0	1	1	1	0	8
PEAK HR FACTOR :	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.250	0.250	0.250	0.000	0.667
	0.250				0.500				0.500				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
3:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	3
3:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	0	2	1	0	5
4:00 PM	0	1	0	0	0	0	1	0	0	2	0	0	0	1	0	0	5
4:15 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
5:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	1	0	0	4	0	2	0	3	5	1	0	0	8	2	0	26
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	1	2	0	0	0	1	0	0	5
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.500	0.000	0.000	0.000	0.250	0.000	0.000	0.625
					0.250				0.750				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Westmoreland Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-004
Date: 9/5/2019

Buses

NS/EW Streets:	Westmoreland Ave				Westmoreland Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	4
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	4
8:15 AM	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	3
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	0	0	0	1	1	5	0	0	7	1	0	1	7	0	0	25
PEAK HR :	07:15 AM - 08:15 AM				14.29% 14.29% 71.43% 0.00%				0.00% 87.50% 12.50% 0.00%				12.50% 87.50% 0.00% 0.00%				TOTAL
PEAK HR VOL :	0	0	0	0	1	1	1	0	0	4	0	0	0	4	0	0	11
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.688
							0.250			0.500				0.500			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
3:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4
3:15 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
3:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
3:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	3
4:30 PM	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	1	0	0	0	10	0	0	6	1	0	0	3	0	0	21
PEAK HR :	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	85.71%	14.29%	0.00%	0.00%	100.00%	0.00%	0.00%	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.500
										0.250				0.250			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Westmoreland Ave & 1st St
City: Los Angeles
Control: Signalized

Project ID: 19-05540-004
Date: 9/5/2019

Bikes

NS/EW Streets:	Westmoreland Ave				Westmoreland Ave				1st St				1st St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	3
7:15 AM	0	0	0	0	0	0	3	0	5	0	0	0	0	0	1	0	9
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	3
7:45 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
9:00 AM	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
9:45 AM	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	4
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	3	1	0	0	1	1	6	0	11	2	2	0	0	4	4	0	35
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	5	0	6	1	1	0	0	1	2	0	16
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.000	0.300	0.250	0.250	0.000	0.000	0.250	0.500	0.000	0.444
					0.417				0.400				0.375				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
3:00 PM	0	0	0	0	1	0	5	0	1	0	0	0	0	0	0	0	7
3:15 PM	0	0	0	0	0	0	1	0	1	2	0	0	0	4	0	0	8
3:30 PM	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	3
3:45 PM	0	0	0	0	0	0	1	0	1	1	2	0	0	1	1	0	7
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3
4:15 PM	0	0	0	0	0	0	5	0	3	0	1	0	0	1	0	0	10
4:30 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	3	0	0	5
4:45 PM	0	0	0	0	0	0	1	0	1	2	0	0	0	1	0	0	5
5:00 PM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
5:15 PM	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
5:45 PM	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0	5
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	0	0	0	1	0	18	0	10	9	7	0	0	12	1	0	60
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	2	0	0	0	0	0	2	0	2	2	3	0	0	1	0	0	12
PEAK HR FACTOR :	0.50	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.500	0.250	0.000	0.000	0.250	0.000	0.000	0.600
					0.250				0.583				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Westmoreland Ave & 1st St
City: Los Angeles

Project ID: 19-05540-004
Date: 9/5/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Westmoreland Ave		Westmoreland Ave		1st St		1st St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	3	0	4	2	2	3	0	14
7:15 AM	0	12	1	9	7	4	21	1	55
7:30 AM	2	12	4	15	4	2	8	1	48
7:45 AM	9	10	6	18	10	0	22	0	75
8:00 AM	11	30	7	25	14	5	56	7	155
8:15 AM	6	1	12	2	1	8	5	18	53
8:30 AM	1	2	4	0	1	2	0	2	12
8:45 AM	1	2	2	2	5	0	3	1	16
9:00 AM	1	3	3	5	3	2	3	0	20
9:15 AM	0	2	3	0	2	0	0	1	8
9:30 AM	2	2	4	4	2	3	3	0	20
9:45 AM	0	2	1	1	0	2	0	3	9
TOTAL VOLUMES :	EB 33	WB 81	EB 47	WB 85	NB 51	SB 30	NB 124	SB 34	TOTAL 485
APPROACH %'s :	28.95%	71.05%	35.61%	64.39%	62.96%	37.04%	78.48%	21.52%	
PEAK HR :	07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :	22	64	18	67	35	11	107	9	333
PEAK HR FACTOR :	0.500	0.533	0.643	0.670	0.625	0.550	0.478	0.321	0.537
	0.524		0.664		0.605		0.460		

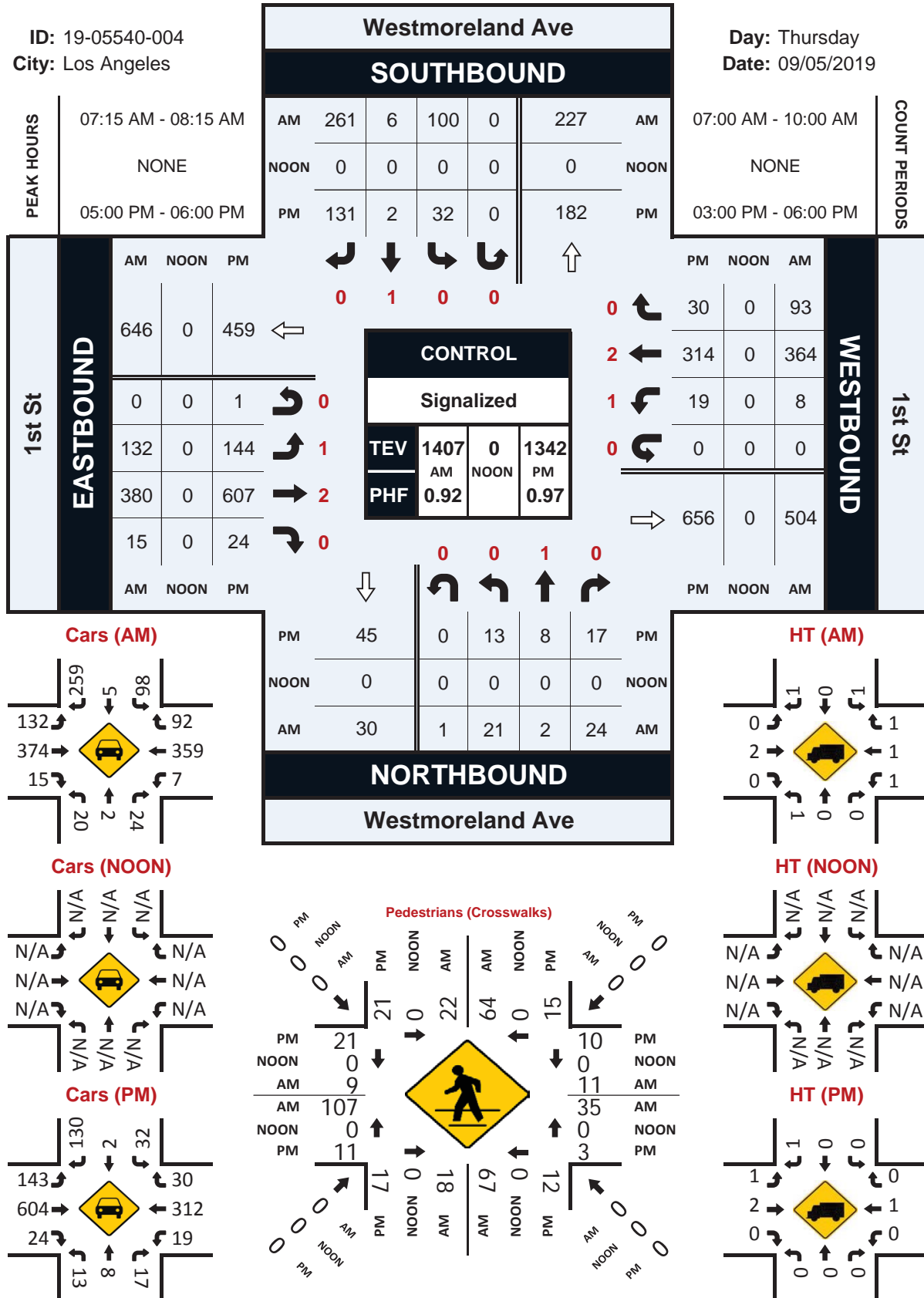
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
3:00 PM	28	1	3	5	2	19	3	14	75
3:15 PM	20	5	24	1	1	4	3	16	74
3:30 PM	5	3	6	7	0	5	4	9	39
3:45 PM	5	2	4	10	3	7	0	4	35
4:00 PM	3	3	4	1	0	0	0	1	12
4:15 PM	0	1	2	12	0	1	0	10	26
4:30 PM	2	2	0	3	0	2	1	1	11
4:45 PM	2	1	1	0	0	3	0	6	13
5:00 PM	1	3	0	3	2	0	2	3	14
5:15 PM	8	3	7	4	1	3	3	8	37
5:30 PM	4	2	5	1	0	1	2	8	23
5:45 PM	8	7	5	4	0	6	4	2	36
TOTAL VOLUMES :	EB 86	WB 33	EB 61	WB 51	NB 9	SB 51	NB 22	SB 82	TOTAL 395
APPROACH %'s :	72.27%	27.73%	54.46%	45.54%	15.00%	85.00%	21.15%	78.85%	
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	21	15	17	12	3	10	11	21	110
PEAK HR FACTOR :	0.656	0.536	0.607	0.750	0.375	0.417	0.688	0.656	0.743
	0.600		0.659		0.542		0.727		

Westmoreland Ave & 1st St

Peak Hour Turning Movement Count

ID: 19-05540-004
City: Los Angeles

Day: Thursday
Date: 09/05/2019





Westmoreland Ave

1st St

SUNNY

NDS

I/S CODE

DUAL-WHEELED BIKES BUSES

AM PK 15 MIN

NORTHBOUND Approach

Hours

SOUTHBOUND Approach

Hours**TOTAL**N-S

EASTBOUND Approach

Hours

WESTBOUND Approach

Hours**TOTAL**E-W

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Westmoreland Ave & Cosmopolitan St
City: Los Angeles
Control: 1-Way Stop (EB)

Project ID: 19-05541-001
Date: 9/5/2019

Total

NS/EW Streets:	N Westmoreland Ave				N Westmoreland Ave				Cosmopolitan St				Cosmopolitan St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	6	14	0	3	0	4	0	0	4	0	12	0	0	0	0	0	43
7:15 AM	21	35	0	4	0	16	1	0	25	0	34	0	0	0	0	0	136
7:30 AM	10	36	0	3	0	19	2	0	5	0	23	0	0	0	0	0	98
7:45 AM	24	29	0	2	0	30	0	0	2	0	19	0	0	0	0	0	106
8:00 AM	27	45	0	2	0	15	4	0	6	0	22	0	0	0	0	0	121
8:15 AM	6	22	0	1	0	16	0	0	0	0	7	0	0	0	0	0	52
8:30 AM	0	22	0	0	0	9	0	0	2	0	6	0	0	0	0	0	39
8:45 AM	3	10	0	0	0	7	0	0	2	0	6	0	0	0	0	0	28
9:00 AM	5	9	0	1	0	7	0	0	1	0	1	0	0	0	0	0	24
9:15 AM	5	12	0	0	0	4	0	0	1	0	4	0	0	0	0	0	26
9:30 AM	1	11	0	0	0	7	0	0	0	0	6	0	0	0	0	0	25
9:45 AM	3	13	0	0	0	6	1	0	2	0	3	0	0	0	0	0	28
TOTAL VOLUMES :	NL 111	NT 258	NR 0	NU 16	SL 0	ST 140	SR 8	SU 0	EL 50	ET 0	ER 143	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 726
APPROACH %'s :	28.83%	67.01%	0.00%	4.16%	0.00%	94.59%	5.41%	0.00%	25.91%	0.00%	74.09%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	82	145	0	11	0	80	7	0	38	0	98	0	0	0	0	0	461
PEAK HR FACTOR :	0.759	0.806	0.000	0.688	0.000	0.667	0.438	0.000	0.380	0.000	0.721	0.000	0.000	0.000	0.000	0.000	0.847
			0.804				0.725				0.576						
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
1:00 PM	3	10	0	0	0	9	0	0	4	0	2	0	0	0	0	0	28
1:15 PM	5	13	0	0	0	14	0	0	2	0	3	1	0	0	0	0	38
1:30 PM	1	11	0	1	0	3	1	0	2	0	5	0	0	0	0	0	24
1:45 PM	0	11	0	0	0	3	0	0	2	0	2	0	0	0	0	0	18
2:00 PM	2	17	0	1	0	6	2	0	3	0	2	0	0	0	0	0	33
2:15 PM	7	20	0	0	0	15	1	0	0	0	6	1	0	0	0	0	50
2:30 PM	29	20	0	3	0	7	5	0	2	0	18	0	0	0	0	0	84
2:45 PM	6	30	0	0	0	24	0	1	9	0	20	0	0	0	0	0	90
3:00 PM	5	25	0	4	0	9	2	0	5	0	9	0	0	0	0	0	59
3:15 PM	4	34	0	1	0	27	1	0	6	0	10	0	0	0	0	0	83
3:30 PM	1	36	0	0	0	13	0	0	7	0	5	0	0	0	0	0	62
3:45 PM	3	34	0	1	0	8	0	1	5	0	5	0	0	0	0	0	57
4:00 PM	1	19	0	4	0	9	1	0	13	0	8	0	0	0	0	0	55
4:15 PM	0	41	0	0	0	10	0	0	4	0	3	0	0	0	0	0	58
4:30 PM	2	39	0	0	0	12	1	0	5	0	4	0	0	0	0	0	63
4:45 PM	0	29	0	0	0	8	0	0	1	0	2	0	0	0	0	0	40
5:00 PM	2	37	0	2	0	11	1	0	3	0	6	0	0	0	0	0	62
5:15 PM	7	47	0	0	0	13	3	0	3	0	10	0	0	0	0	0	83
5:30 PM	1	30	0	1	0	12	1	0	2	0	7	0	0	0	0	0	54
5:45 PM	2	49	0	2	0	10	0	1	3	0	1	0	0	0	0	0	68
TOTAL VOLUMES :	NL 81	NT 552	NR 0	NU 20	SL 0	ST 223	SR 19	SU 3	EL 81	ET 0	ER 128	EU 2	WL 0	WT 0	WR 0	WU 0	TOTAL 1109
APPROACH %'s :	12.40%	84.53%	0.00%	3.06%	0.00%	91.02%	7.76%	1.22%	38.39%	0.00%	60.66%	0.95%					
PEAK HR :	02:30 PM - 03:30 PM																TOTAL
PEAK HR VOL :	44	109	0	8	0	67	8	1	22	0	57	0	0	0	0	0	316
PEAK HR FACTOR :	0.379	0.801	0.000	0.500	0.000	0.620	0.400	0.250	0.611	0.000	0.713	0.000	0.000	0.000	0.000	0.000	0.878
			0.774				0.679				0.681						

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Westmoreland Ave & Cosmopolitan St
City: Los Angeles
Control: 1-Way Stop (EB)

Project ID: 19-05541-001
Date: 9/5/2019

Cars

NS/EW Streets:	N Westmoreland Ave				N Westmoreland Ave				Cosmopolitan St				Cosmopolitan St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	6	12	0	3	0	4	0	0	4	0	12	0	0	0	0	0	41
7:15 AM	21	35	0	4	0	16	1	0	25	0	34	0	0	0	0	0	136
7:30 AM	10	36	0	3	0	18	2	0	5	0	23	0	0	0	0	0	97
7:45 AM	24	29	0	2	0	30	0	0	2	0	19	0	0	0	0	0	106
8:00 AM	27	45	0	2	0	15	4	0	6	0	22	0	0	0	0	0	121
8:15 AM	5	22	0	1	0	14	0	0	0	0	7	0	0	0	0	0	49
8:30 AM	0	22	0	0	0	9	0	0	2	0	5	0	0	0	0	0	38
8:45 AM	2	9	0	0	0	7	0	0	2	0	6	0	0	0	0	0	26
9:00 AM	5	9	0	1	0	7	0	0	1	0	1	0	0	0	0	0	24
9:15 AM	5	12	0	0	0	4	0	0	1	0	4	0	0	0	0	0	26
9:30 AM	1	11	0	0	0	7	0	0	0	0	5	0	0	0	0	0	24
9:45 AM	3	12	0	0	0	6	1	0	2	0	3	0	0	0	0	0	27
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	109	254	0	16	0	137	8	0	50	0	141	0	0	0	0	0	715
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	82	145	0	11	0	79	7	0	38	0	98	0	0	0	0	0	460
PEAK HR FACTOR :	0.76	0.806	0.000	0.688	0.000	0.658	0.438	0.000	0.380	0.000	0.721	0.000	0.000	0.000	0.000	0.000	0.846
	0.804				0.717				0.576								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
1:00 PM	3	10	0	0	0	9	0	0	4	0	2	0	0	0	0	0	28
1:15 PM	5	13	0	0	0	12	0	0	2	0	3	1	0	0	0	0	36
1:30 PM	1	11	0	1	0	3	1	0	2	0	5	0	0	0	0	0	24
1:45 PM	0	11	0	0	0	3	0	0	2	0	2	0	0	0	0	0	18
2:00 PM	2	16	0	1	0	6	2	0	3	0	2	0	0	0	0	0	32
2:15 PM	6	20	0	0	0	14	1	0	0	0	6	1	0	0	0	0	48
2:30 PM	29	20	0	3	0	7	5	0	2	0	18	0	0	0	0	0	84
2:45 PM	6	30	0	0	0	24	0	1	9	0	20	0	0	0	0	0	90
3:00 PM	5	25	0	4	0	9	2	0	5	0	8	0	0	0	0	0	58
3:15 PM	4	33	0	1	0	25	1	0	6	0	10	0	0	0	0	0	80
3:30 PM	0	35	0	0	0	13	0	0	7	0	5	0	0	0	0	0	60
3:45 PM	3	34	0	1	0	7	0	1	5	0	4	0	0	0	0	0	55
4:00 PM	1	19	0	4	0	9	1	0	13	0	6	0	0	0	0	0	53
4:15 PM	0	41	0	0	0	10	0	0	4	0	2	0	0	0	0	0	57
4:30 PM	2	39	0	0	0	12	0	0	4	0	4	0	0	0	0	0	61
4:45 PM	0	29	0	0	0	7	0	0	1	0	2	0	0	0	0	0	39
5:00 PM	2	37	0	2	0	11	1	0	3	0	6	0	0	0	0	0	62
5:15 PM	7	46	0	0	0	13	3	0	3	0	10	0	0	0	0	0	82
5:30 PM	1	30	0	1	0	12	1	0	2	0	7	0	0	0	0	0	54
5:45 PM	2	49	0	2	0	10	0	1	3	0	1	0	0	0	0	0	68
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	79	548	0	20	0	216	18	3	80	0	123	2	0	0	0	0	1089
PEAK HR :	02:30 PM - 03:30 PM																TOTAL
PEAK HR VOL :	44	108	0	8	0	65	8	1	22	0	56	0	0	0	0	0	312
PEAK HR FACTOR :	0.38	0.818	0.000	0.500	0.000	0.650	0.400	0.250	0.611	0.000	0.700	0.000	0.000	0.000	0.000	0.000	0.867
	0.769				0.712				0.672								

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Westmoreland Ave & Cosmopolitan St
City: Los Angeles
Control: 1-Way Stop (EB)

Project ID: 19-05541-001
Date: 9/5/2019

HT

NS/EW Streets:	N Westmoreland Ave				N Westmoreland Ave				Cosmopolitan St				Cosmopolitan St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:45 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
9:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	33.33%	66.67%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0	0	0	0	11
PEAK HR :	07:15 AM - 08:15 AM				0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR VOL :	0	0	0	0	0	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
3:15 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
3:30 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:45 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	33.33%	66.67%	0.00%	0.00%	0.00%	87.50%	12.50%	0.00%	16.67%	0.00%	83.33%	0.00%	0	0	0	0	20
PEAK HR :	02:30 PM - 03:30 PM				0	2	0	0	0	0	1	0	0	0	0	0	4
PEAK HR VOL :	0	1	0	0	0	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.333
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.333

National Data & Surveying Services

City: Los Angeles
Control: 1-Way Stop (EB)

Project ID: 19-05541-001

Buses

NS/EW Streets:	N Westmoreland Ave				N Westmoreland Ave				Cosmopolitan St				Cosmopolitan St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 0
PEAK HR :	07:15 AM - 08:15 AM																TOTAL 0
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 0
PEAK HR :	02:30 PM - 03:30 PM																TOTAL 0
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Westmoreland Ave & Cosmopolitan St
City: Los Angeles
Control: 1-Way Stop (EB)

Project ID: 19-05541-001
Date: 9/5/2019

Bikes

NS/EW Streets:	N Westmoreland Ave				N Westmoreland Ave				Cosmopolitan St				Cosmopolitan St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	33.33%	66.67%	0.00%	0.00%	0.00%	85.71%	14.29%	0.00%	0	0	0	0	0	0	0	0	13
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	2	0	0	0	3	1	0	0	0	0	0	0	0	0	0	7
PEAK HR FACTOR :	0.250	0.500	0.000	0.000	0.000	0.375	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583
	0.375				0.500												
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
1:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
3:00 PM	0	1	0	0	0	0	0	0	1	0	5	0	0	0	0	0	7
3:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	2	0	0	0	6	1	0	2	0	7	0	0	0	0	0	18
PEAK HR :	02:30 PM - 03:30 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	1	0	0	1	0	7	0	0	0	0	0	10
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.350	0.000	0.000	0.000	0.000	0.000	0.357
	0.250				0.250				0.333								

National Data & Surveying Services

Intersection Turning Movement Count

Project ID: 19-05541-001
Date: 9/5/2019

Date: 9/5/2019

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
1:00 PM	0	1	1	2	0	0	1	2	7
1:15 PM	0	0	0	0	0	0	0	2	2
1:30 PM	1	0	1	0	0	0	4	0	6
1:45 PM	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	2	2
2:15 PM	0	0	0	0	0	0	0	1	1
2:30 PM	0	0	0	1	0	0	2	1	4
2:45 PM	0	0	1	2	0	0	2	4	9
3:00 PM	1	3	3	1	0	0	0	1	9
3:15 PM	0	0	0	0	0	0	1	4	5
3:30 PM	1	1	0	2	0	0	2	7	13
3:45 PM	1	0	0	1	0	0	4	1	7
4:00 PM	0	0	0	0	0	0	0	1	1
4:15 PM	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	1	2	3
4:45 PM	1	1	1	0	0	0	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	1	0	0	0	1	2	4
5:45 PM	0	0	0	0	0	0	2	1	3
TOTAL VOLUMES :	EB 5	WB 6	EB 8	WB 9	NB 0	SB 0	NB 22	SB 32	TOTAL 82
APPROACH %'s :	45.45%	54.55%	47.06%	52.94%			40.74%	59.26%	
PEAK HR :	02:30 PM - 03:30 PM								TOTAL
PEAK HR VOL :	1	3	4	4	0	0	5	10	27
PEAK HR FACTOR :	0.250	0.250	0.333	0.500			0.625	0.625	0.750
	0.250		0.500				0.625		

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Westmoreland Ave & Cosmopolitan St **Project ID:** 19-05541-001
City: Los Angeles **Date:** 9/5/2019

Project ID: 19-05541-001
Date: 9/5/2019

Date: 9/5/2019

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
1:00 PM	0	0	1	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	1	1	2
1:30 PM	1	0	0	0	0	0	1	0	2
1:45 PM	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	2	0	2
2:30 PM	0	0	0	2	0	0	3	0	5
2:45 PM	4	0	5	1	0	0	51	1	62
3:00 PM	0	0	0	0	0	0	25	0	25
3:15 PM	0	0	0	0	0	0	1	0	1
3:30 PM	0	0	0	0	0	0	1	0	1
3:45 PM	0	0	1	0	0	0	0	2	3
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	1	0	0	0	0	1	2
5:15 PM	0	0	0	0	0	0	5	5	10
5:30 PM	0	0	1	0	0	0	2	0	3
5:45 PM	0	0	0	0	0	0	4	0	4
TOTAL VOLUMES :	EB 5	WB 0	EB 9	WB 3	NB 0	SB 0	NB 96	SB 10	TOTAL 123
APPROACH %'s :	100.00%	0.00%	75.00%	25.00%			90.57%	9.43%	
PEAK HR :	02:30 PM - 03:30 PM								TOTAL
PEAK HR VOL :	4	0	5	3	0	0	80	1	93
PEAK HR FACTOR :	0.250		0.250	0.375			0.392	0.250	0.375
	0.250		0.333				0.389		

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Westmoreland Ave & Cosmopolitan St **Project ID:** 19-05541-001
City: Los Angeles **Date:** 9/5/2019

Project ID: 19-05541-001
Date: 9/5/2019

NS/EW Streets:

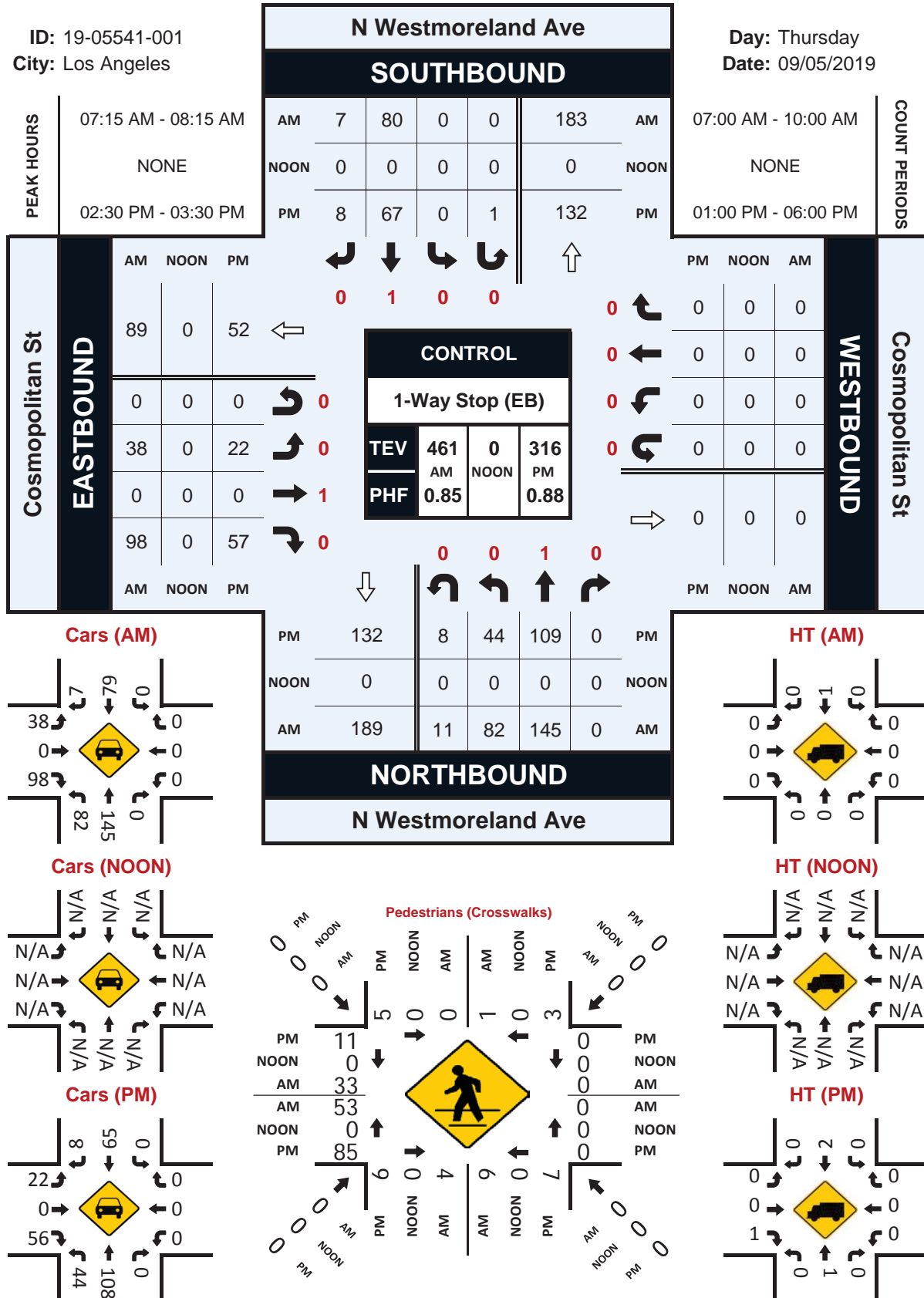
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
1:00 PM	0	1	2	2	0	0	1	2	8
1:15 PM	0	0	0	0	0	0	1	3	4
1:30 PM	2	0	1	0	0	0	5	0	8
1:45 PM	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	2	2
2:15 PM	0	0	0	0	0	0	2	1	3
2:30 PM	0	0	0	3	0	0	5	1	9
2:45 PM	4	0	6	3	0	0	53	5	71
3:00 PM	1	3	3	1	0	0	25	1	34
3:15 PM	0	0	0	0	0	0	2	4	6
3:30 PM	1	1	0	2	0	0	3	7	14
3:45 PM	1	0	1	1	0	0	4	3	10
4:00 PM	0	0	0	0	0	0	0	1	1
4:15 PM	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	1	2	3
4:45 PM	1	1	1	0	0	0	0	1	4
5:00 PM	0	0	1	0	0	0	0	1	2
5:15 PM	0	0	0	0	0	0	6	5	11
5:30 PM	0	0	2	0	0	0	3	2	7
5:45 PM	0	0	0	0	0	0	6	1	7
TOTAL VOLUMES :	EB 10	WB 6	EB 17	WB 12	NB 0	SB 0	NB 118	SB 42	TOTAL 205
APPROACH %'s :	62.50%	37.50%	58.62%	41.38%			73.75%	26.25%	
PEAK HR :	02:30 PM - 03:30 PM								TOTAL
PEAK HR VOL :	5	3	9	7	0	0	85	11	120
PEAK HR FACTOR :	0.313	0.250	0.375	0.583			0.401	0.550	0.423
	0.500		0.444				0.414		

N Westmoreland Ave & Cosmopolitan St

Peak Hour Turning Movement Count

ID: 19-05541-001
City: Los Angeles

Day: Thursday
Date: 09/05/2019





School Day: Yes I/S CODE

	N/B TIME		S/B TIME		E/B TIME		W/B TIME	
AM PK 15 MIN	74	8.00	30	7.45	59	7.15	0	0.00
PM PK 15 MIN	54	17.15	28	15.15	29	14.45	0	0.00
AM PK HOUR	238	7.15	87	7.15	136	7.15	0	0.00
PM PK HOUR	180	17.00	77	14.45	79	14.30	0	0.00

XING N/L

N-S	Ped	Sch	Ped	Sch
259	2	10	1	4
189	1	0	0	1
85	3	0	2	0
85	4	1	2	1
196	4	8	0	4
209	7	1	7	0
176	1	0	2	0
232	1	2	0	0

1431	23	22	14	10
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XING E/L

E-W	Ped	Sch	Ped	Sch
124	11	80	0	0
51	10	51	0	0
18	8	0	0	0
23	9	3	0	0
61	12	57	0	0
52	20	29	0	0
40	6	0	0	0
35	7	17	0	0

404

83	237
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0	0
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**APPENDIX C –
Existing LOS Worksheets**

Vistro File: J:\...\JB71259 241 Westmoreland_Vistro.vistro
Report File: J:\...\EX AM_2.pdf

Scenario 1 EXISTING AM
10/1/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave/Beverly Blvd	Two-way stop	HCM 6th Edition	SB Thru	0.136	256.9	F
2	Westmoreland Ave/Beverly Blvd	Signalized	HCM 6th Edition	SB Thru	0.355	18.4	B
3	Vermont Ave/1st St	Signalized	HCM 6th Edition	WB Left	0.856	23.0	C
4	Westmoreland Ave/1st St	Signalized	HCM 6th Edition	SB Right	0.469	19.3	B

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





Intersection Level Of Service Report

Intersection 1: Madison Ave/Beverly Blvd

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 256.9
 Level Of Service: F
 Volume to Capacity (v/c): 0.136

Intersection Setup

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Base Volume Input [veh/h]	1	0	12	1	2	25	15	1359	77	46	1125	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	12	1	2	25	15	1359	77	46	1125	35
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	3	0	1	6	4	340	19	12	281	9
Total Analysis Volume [veh/h]	1	0	12	1	2	25	15	1359	77	46	1125	35
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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report

Intersection 2: Westmoreland Ave/Beverly Blvd

Control Type:	Signalized	Delay (sec / veh):	18.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.355

Intersection Setup

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
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 Pocket	0	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00				30.00				30.00			
Grade [%]	0.00				0.00				0.00			
Curb Present	No				No				No			
Crosswalk	Yes				Yes				Yes			

Volumes

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Base Volume Input [veh/h]	54	7	63	7	26	0	41	19	0	601	758	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	7	63	7	26	0	41	19	0	601	758	11
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	2	16	2	7	0	10	5	0	150	190	3
Total Analysis Volume [veh/h]	54	7	63	7	26	0	41	19	0	601	758	11
Presence of On-Street Parking	No			No	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0				0			
v_di, Inbound Pedestrian Volume crossing th	0				0				0			
v_co, Outbound Pedestrian Volume along th	0				0				0			
v_ci, Inbound Pedestrian Volume along the e	0				0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0				0			
Bicycle Volume [bicycles/h]	0				0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss
Signal Group	0	4	0	0	0	0	4	0	0	2	6	6
Auxiliary Signal Groups										2	2,3,6	2
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	0	0	8	0	0	11	9	9
Maximum Green [s]	0	20	0	0	0	0	20	0	0	30	30	30
Amber [s]	0.0	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.9	3.9	3.9
All red [s]	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.8	1.8	1.8
Split [s]	0	24	0	0	0	0	24	0	0	41	41	41
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	0	0	7	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	0	0	10	0	0	0	0	0
Rest In Walk												
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	3.7	3.7	3.7
Minimum Recall		No					No			No	No	
Maximum Recall		No					No			Yes	Yes	
Pedestrian Recall		No					No			Yes	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.80	5.70	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.80	3.70	0.00
g_i, Effective Green Time [s]	12	12	12	44	94
g / C, Green / Cycle	0.12	0.12	0.12	0.44	0.94
(v / s)_i Volume / Saturation Flow Rate	0.07	0.04	0.08	0.17	0.48
s, saturation flow rate [veh/h]	928	1589	1053	3560	1589
c, Capacity [veh/h]	175	183	168	1566	1499
d1, Uniform Delay [s]	41.73	40.94	41.89	18.88	0.31
k, delay calibration	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.19	1.31	2.41	0.72	1.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.38	0.51	0.38	0.51
d, Delay for Lane Group [s/veh]	42.92	42.25	44.30	19.60	1.58
Lane Group LOS	D	D	D	B	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.47	1.65	2.18	4.74	0.53
50th-Percentile Queue Length [ft/ln]	36.79	41.36	54.61	118.59	13.15
95th-Percentile Queue Length [veh/ln]	2.65	2.98	3.93	8.32	0.95
95th-Percentile Queue Length [ft/ln]	66.21	74.44	98.31	207.89	23.67



Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.92	42.92	42.25	42.25	44.30	0.00	44.30	44.30	0.00	19.60	1.58	1.58
Movement LOS	D	D	D	D	D		D	D		B	A	A
d_A, Approach Delay [s/veh]	42.56				44.30				9.48			
Approach LOS	D				D				A			
d_I, Intersection Delay [s/veh]	18.39											
Intersection LOS	B											
Intersection V/C	0.355											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0				11.0				11.0			
M_corner, Corner Circulation Area [ft ² /ped]	0.00				0.00				0.00			
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00				0.00				0.00			
d_p, Pedestrian Delay [s]	39.61				39.61				39.61			
I_p,int, Pedestrian LOS Score for Intersection	2.549				1.772				3.501			
Crosswalk LOS	B				A				D			
s_b, Saturation Flow Rate of the bicycle lane	2000				2000				2000			
c_b, Capacity of the bicycle lane [bicycles/h]	384				384				706			
d_b, Bicycle Delay [s]	32.64				32.64				20.93			
I_b,int, Bicycle LOS Score for Intersection	1.764				1.702				2.681			
Bicycle LOS	A				A				B			

Intersection Setup

Name	Temple St				Beverly Blvd			
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			
Grade [%]	0.00				0.00			
Curb Present	No				No			
Crosswalk	No				Yes			

Volumes

Name	Temple St				Beverly Blvd			
Base Volume Input [veh/h]	0	0	779	15	2	380	0	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	779	15	2	380	0	18
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	195	4	1	95	0	5
Total Analysis Volume [veh/h]	0	0	779	15	2	380	0	18
Presence of On-Street Parking	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing the intersection	0				0			
v_di, Inbound Pedestrian Volume crossing the intersection	0				0			
v_co, Outbound Pedestrian Volume along the corridor	0				0			
v_ci, Inbound Pedestrian Volume along the corridor	0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0			
Bicycle Volume [bicycles/h]	0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split	Split	Split
Signal Group	0	0	2	0	0	3	0	0
Auxiliary Signal Groups								
Lead / Lag	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	11	0	0	13	0	0
Maximum Green [s]	0	0	30	0	0	30	0	0
Amber [s]	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0
All red [s]	0.0	0.0	1.8	0.0	0.0	2.4	0.0	0.0
Split [s]	0	0	41	0	0	34	0	0
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	10	0	0
Rest In Walk								
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	3.7	0.0	0.0	4.3	0.0	0.0
Minimum Recall			No			No		
Maximum Recall			Yes			Yes		
Pedestrian Recall			Yes			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	5.70	5.70	6.30	6.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.70	3.70	4.30	4.30
g_i, Effective Green Time [s]	44	44	28	28
g / C, Green / Cycle	0.44	0.44	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.15	0.14	0.14	0.01
s, saturation flow rate [veh/h]	3560	1851	2752	1589
c, Capacity [veh/h]	1566	814	779	440
d1, Uniform Delay [s]	18.44	18.31	32.05	26.44
k, delay calibration	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	1.06	2.22	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.33	0.49	0.04
d, Delay for Lane Group [s/veh]	19.02	19.38	34.27	26.61
Lane Group LOS	B	B	C	C
Critical Lane Group	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.07	4.16	4.18	0.33
50th-Percentile Queue Length [ft/ln]	101.82	103.99	104.44	8.36
95th-Percentile Queue Length [veh/ln]	7.33	7.49	7.52	0.60
95th-Percentile Queue Length [ft/ln]	183.28	187.18	187.99	15.05

Movement, Approach, & Intersection Results

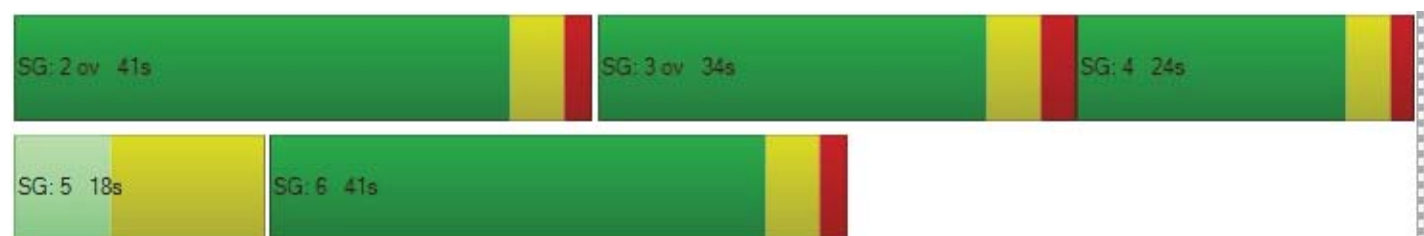
d_M, Delay for Movement [s/veh]	0.00	0.00	19.14	19.38	34.27	34.27	0.00	26.61
Movement LOS			B	B	C	C		C
d_A, Approach Delay [s/veh]	19.14				33.92			
Approach LOS	B				C			
d_I, Intersection Delay [s/veh]	18.39							
Intersection LOS	B							
Intersection V/C	0.355							

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.420
Crosswalk LOS	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	554
d_b, Bicycle Delay [s]	50.00	26.14
I_b,int, Bicycle LOS Score for Intersection	4.569	1.560
Bicycle LOS	E	A

Sequence

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







Intersection Level Of Service Report

Intersection 3: Vermont Ave/1st St

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 23.0
 Level Of Service: C
 Volume to Capacity (v/c): 0.856

Intersection Setup

Name	Vermont Ave						1st St					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
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
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Vermont Ave						1st St					
Base Volume Input [veh/h]	32	1110	69	99	1243	83	144	378	49	105	332	211
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	1110	69	99	1243	83	144	378	49	105	332	211
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	278	17	25	311	21	36	95	12	26	83	53
Total Analysis Volume [veh/h]	32	1110	69	99	1243	83	144	378	49	105	332	211
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	65.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0
Split [s]	0	56	0	0	56	0	0	33	0	0	33	0
Vehicle Extension [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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.10	6.10	6.10	6.10	6.10	6.10	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.10	4.10	4.10	4.10	4.10	4.10	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	50	50	50	50	50	50	28	28	28	28	28
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.08	0.32	0.32	0.21	0.25	0.25	0.14	0.23	0.46	0.20	0.13
s, saturation flow rate [veh/h]	413	1870	1832	475	3560	1811	1048	1833	228	1702	1589
c, Capacity [veh/h]	240	1037	1016	234	1974	1004	201	560	150	520	486
d1, Uniform Delay [s]	18.38	13.10	13.11	25.99	11.86	11.86	40.67	28.29	42.84	26.96	25.02
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.16	2.33	2.39	5.61	0.73	1.44	21.93	10.08	27.01	6.06	2.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.57	0.57	0.42	0.45	0.45	0.72	0.76	0.70	0.64	0.43
d, Delay for Lane Group [s/veh]	19.54	15.44	15.50	31.60	12.59	13.30	62.60	38.37	69.86	33.02	27.86
Lane Group LOS	B	B	B	C	B	B	E	D	E	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.50	7.68	7.55	2.09	4.89	5.17	4.44	9.75	3.47	6.94	3.96
50th-Percentile Queue Length [ft/ln]	12.53	192.04	188.82	52.24	122.14	129.15	110.96	243.82	86.70	173.49	99.00
95th-Percentile Queue Length [veh/ln]	0.90	12.23	12.06	3.76	8.51	8.89	7.89	14.87	6.24	11.26	7.13
95th-Percentile Queue Length [ft/ln]	22.56	305.68	301.50	94.03	212.76	222.33	197.34	371.86	156.06	281.50	178.21

Movement, Approach, & Intersection Results

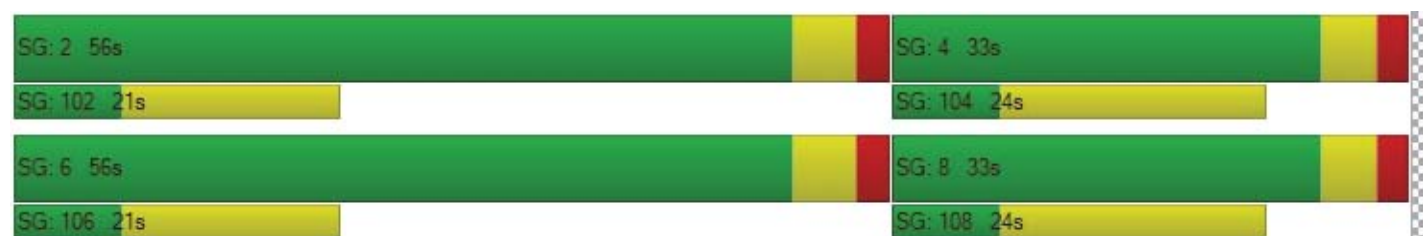
d_M, Delay for Movement [s/veh]	19.54	15.47	15.50	31.60	12.80	13.30	62.60	38.37	38.37	69.86	33.02	27.86
Movement LOS	B	B	B	C	B	B	E	D	D	E	C	C
d_A, Approach Delay [s/veh]	15.58			14.14			44.48			37.31		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.98											
Intersection LOS	C											
Intersection V/C	0.856											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	3.096			3.268			2.383			2.634		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1109			1109			611			611		
d_b, Bicycle Delay [s]	8.93			8.93			21.70			21.70		
I_b,int, Bicycle LOS Score for Intersection	2.559			2.343			2.502			2.094		
Bicycle LOS	B			B			B			B		

Sequence

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



Intersection Level Of Service Report

Intersection 4: Westmoreland Ave/1st St

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.469

Intersection Setup

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Base Volume Input [veh/h]	21	2	24	100	6	261	132	380	15	8	364	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	2	24	100	6	261	132	380	15	8	364	93
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	1	6	25	2	65	33	95	4	2	91	23
Total Analysis Volume [veh/h]	21	2	24	100	6	261	132	380	15	8	364	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	25	0	0	25	0	0	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	1.6	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Split [s]	0	35	0	0	35	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	2.8	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.70	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.70	2.70	2.70	2.70	2.70	2.70
g_i, Effective Green Time [s]	30	30	60	60	60	60	60	60
g / C, Green / Cycle	0.30	0.30	0.60	0.60	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.04	0.24	0.13	0.20	0.01	0.01	0.19	0.06
s, saturation flow rate [veh/h]	1109	1549	1018	1870	1589	1003	1870	1589
c, Capacity [veh/h]	387	514	568	1128	958	555	1128	958
d1, Uniform Delay [s]	25.05	31.75	15.12	9.89	7.96	13.54	9.79	8.37
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.64	8.63	0.96	0.81	0.03	0.05	0.76	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.71	0.23	0.34	0.02	0.01	0.32	0.10
d, Delay for Lane Group [s/veh]	25.69	40.38	16.08	10.70	7.99	13.58	10.55	8.57
Lane Group LOS	C	D	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.87	9.15	1.88	4.14	0.13	0.10	3.92	0.86
50th-Percentile Queue Length [ft/ln]	21.67	228.77	46.88	103.44	3.28	2.50	97.97	21.45
95th-Percentile Queue Length [veh/ln]	1.56	14.11	3.38	7.45	0.24	0.18	7.05	1.54
95th-Percentile Queue Length [ft/ln]	39.00	352.80	84.38	186.20	5.91	4.51	176.35	38.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.69	25.69	25.69	40.38	40.38	40.38	16.08	10.70	7.99	13.58	10.55	8.57
Movement LOS	C	C	C	D	D	D	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	25.69			40.38			11.97			10.20		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	19.26											
Intersection LOS	B											
Intersection V/C	0.469											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.61			39.61			39.61			39.61		
I_p,int, Pedestrian LOS Score for Intersection	1.768			2.197			2.563			2.636		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	604			604			1206			1206		
d_b, Bicycle Delay [s]	24.36			24.36			7.88			7.88		
I_b,int, Bicycle LOS Score for Intersection	1.637			2.165			2.429			2.327		
Bicycle LOS	A			B			B			B		

Sequence

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



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Scenario 1 EXISTING AM

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10/1/2019

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	Madison Ave/Beverly Blvd	1	0	12	1	2	25	15	1359	77	46	1125	35	2698

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	54	7	63	7	26	41	19	601	758	11	779	15

Northwestbound			Total Volume
2	Left	Right	
2	380	18	2781

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	32	1110	69	99	1243	83	144	378	49	105	332	211	3855

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	21	2	24	100	6	261	132	380	15	8	364	93	1406

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10/1/2019

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Madison Ave/Beverly Blvd	Final Base	1	0	12	1	2	25	15	1359	77	46	1125	35	2698
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	1	0	12	1	2	25	15	1359	77	46	1125	35	2698

ID	Intersection Name	Volume Type	Northbound				Southbound			Eastbound			Westbound	
			Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	Final Base	54	7	63	7	26	41	19	601	758	11	779	15
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		In Process	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	54	7	63	7	26	41	19	601	758	11	779	15

Northwestbound			Total Volume
2	Left	Right	
2	380	18	2781
1.00	1.00	1.00	-
0	0	0	0
0	0	0	0
0	0	0	0
2	380	18	2781

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	Final Base	32	1110	69	99	1243	83	144	378	49	105	332	211	3855
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	32	1110	69	99	1243	83	144	378	49	105	332	211	3855

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	Final Base	21	2	24	100	6	261	132	380	15	8	364	93	1406
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	21	2	24	100	6	261	132	380	15	8	364	93	1406

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Fair Share Volumes

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	0	0	0	0	0	
Future Total Volume	1	0	12	1	2	25	15	1359	77	46	1125	35	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Future Total Volume	54	7	63	7	26	41	19	601	758	11	779	15	2	380	18	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	0	0	0	0	0	
Future Total Volume	32	1110	69	99	1243	83	144	378	49	105	332	211	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	0	0	0	0	0	
Future Total Volume	21	2	24	100	6	261	132	380	15	8	364	93	

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Scenario 1 EXISTING AM

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Fair Share % of Net New Site

[illegible][illegible][illegible][illegible]

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Scenario 1 EXISTING AM

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10/1/2019

Fair Share % of Future Total

[illegible][illegible][illegible][illegible]

Signal Warrants Report For Intersection 1: Madison Ave/Beverly Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	1206	1451	13	28
2	1158	1393	12	27
3	1134	1364	12	26
4	965	1161	10	22
5	917	1103	10	21
6	820	987	9	19
7	760	914	8	18
8	724	871	8	17
9	579	696	6	13
10	543	653	6	13
11	543	653	6	13
12	519	624	6	12
13	470	566	5	11
14	434	522	5	10
15	434	522	5	10
16	422	508	5	10
17	241	290	3	6
18	133	160	1	3
19	121	145	1	3
20	48	58	1	1
21	36	44	0	1
22	36	44	0	1
23	24	29	0	1
24	24	29	0	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2657	2	41	No	No	No	No	No	No	No	No	No	No
2	6	2551	2	39	No	No	No	No	No	No	No	No	No	No
3	6	2498	2	38	No	No	No	No	No	No	No	No	No	No
4	6	2126	2	32	No	No	No	No	No	No	No	No	No	No
5	6	2020	2	31	No	No	No	No	No	No	No	No	No	No
6	6	1807	2	28	No	No	No	No	No	No	No	No	No	No
7	6	1674	2	26	No	No	No	No	No	No	No	No	No	No
8	6	1595	2	25	No	No	No	No	No	No	No	No	No	No
9	6	1275	2	19	No	No	No	No	No	No	No	No	No	No
10	6	1196	2	19	No	No	No	No	No	No	No	No	No	No
11	6	1196	2	19	No	No	No	No	No	No	No	No	No	No
12	6	1143	2	18	No	No	No	No	No	No	No	No	No	No
13	6	1036	2	16	No	No	No	No	No	No	No	No	No	No
14	6	956	2	15	No	No	No	No	No	No	No	No	No	No
15	6	956	2	15	No	No	No	No	No	No	No	No	No	No
16	6	930	2	15	No	No	No	No	No	No	No	No	No	No
17	6	531	2	9	No	No	No	No	No	No	No	No	No	No
18	6	293	2	4	No	No	No	No	No	No	No	No	No	No
19	6	266	2	4	No	No	No	No	No	No	No	No	No	No
20	6	106	2	2	No	No	No	No	No	No	No	No	No	No
21	6	80	2	1	No	No	No	No	No	No	No	No	No	No
22	6	80	2	1	No	No	No	No	No	No	No	No	No	No
23	6	53	2	1	No	No	No	No	No	No	No	No	No	No
24	6	53	2	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	23	40.3
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04	0:18
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	13	28
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2698	2698
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

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Scenario 1 EXISTING AM

Report File: J:\...\EX AM_2.pdf

10/1/2019

Trip Generation summary**Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
2: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
3: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
4: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
Added Trips Total								0	0	0	0.00

Vistro File: J:\...\JB71259 241 Westmoreland_Vistro.vistro

Scenario 1 EXISTING AM

Report File: J:\...\EX AM_2.pdf

10/1/2019

Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	0	10.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	0	10.00	0
9: Gate	2.00	0	2.00	0
10: Gate	33.00	0	33.00	0
11: Gate	0.00	0	0.00	0
12: Gate	45.00	0	45.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 2: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	0	25.00	0
6: Gate	25.00	0	25.00	0
7: Gate	0.00	0	0.00	0
8: Gate	25.00	0	25.00	0
9: Gate	0.00	0	0.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	25.00	0	25.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 3: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	0	25.00	0
6: Gate	25.00	0	25.00	0
7: Gate	0.00	0	0.00	0
8: Gate	12.00	0	12.00	0
9: Gate	13.00	0	13.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	12.00	0	12.00	0
13: Gate	13.00	0	13.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 4: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
5: Gate	0.00	0	0.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	0.00	0	0.00	0
9: Gate	80.00	0	80.00	0
10: Gate	10.00	0	10.00	0
11: Gate	0.00	0	0.00	0
12: Gate	0.00	0	0.00	0
13: Gate	10.00	0	10.00	0
Total	100.00	0	100.00	0

Vistro File: J:\...\JB71259 241 Westmoreland_Vistro.vistro
Report File: J:\...\EX AM_Westmoreland&Cosmoplitan.pdf

Scenario 1 EXISTING AM
9/24/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	Westmoreland Ave/Cosmoplitan St	Two-way stop	HCM 6th Edition	EB Left	0.069	12.4	B




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

Intersection Level Of Service Report

Intersection 5: Westmoreland Ave/Cosmopolitan St

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.069

Intersection Setup

Name	Westmoreland Ave		Westmoreland Ave		Cosmopolitan St	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Westmoreland Ave		Westmoreland Ave		Cosmopolitan St	
Base Volume Input [veh/h]	93	145	80	7	38	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	145	80	7	38	98
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	36	20	2	10	25
Total Analysis Volume [veh/h]	93	145	80	7	38	98
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	0.06	0.00	0.00	0.00	0.07	0.10
d_M, Delay for Movement [s/veh]	7.54	0.00	0.00	0.00	12.40	9.60
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.20	0.20	0.00	0.00	0.61	0.61
95th-Percentile Queue Length [ft/ln]	4.92	4.92	0.00	0.00	15.22	15.22
d_A, Approach Delay [s/veh]	2.95		0.00		10.38	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.58					
Intersection LOS	B					

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Scenario 1 EXISTING AM

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9/24/2019

Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Westmoreland Ave/Cosmoplitan St	93	145	80	7	38	98	461

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Scenario 1 EXISTING AM

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9/24/2019

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
5	Westmoreland Ave/Cosmoplitan St	Final Base	93	145	80	7	38	98	461
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	93	145	80	7	38	98	461

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Scenario 1 EXISTING AM
9/24/2019

Fair Share Volumes

Intersection 5: Westmoreland Ave/Cosmoplitan St							
Zone ID: Name	Northbound		Southbound		Eastbound		Total
	Left	Thru	Thru	Right	Left	Right	
1: Zone	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	
Future Total Volume	93	145	80	7	38	98	

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Scenario 1 EXISTING AM
9/24/2019

Fair Share % of Net New Site

Intersection 5: Westmoreland Ave/Cosmoplitan St							
Zone ID: Name	Northbound		Southbound		Eastbound		Total
	Left	Thru	Thru	Right	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	-%
2: Zone	0%	0%	0%	0%	0%	0%	-%
3: Zone	0%	0%	0%	0%	0%	0%	-%
4: Zone	0%	0%	0%	0%	0%	0%	-%
Total	0%	0%	0%	0%	0%	0%	

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Scenario 1 EXISTING AM
9/24/2019

Fair Share % of Future Total

Intersection 5: Westmoreland Ave/Cosmoplitan St							
Zone ID: Name	Northbound		Southbound		Eastbound		Total
	Left	Thru	Thru	Right	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%
4: Zone	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	

Signal Warrants Report For Intersection 5: Westmoreland Ave/Cosmopolitan St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	238	87	136
2	228	84	131
3	224	82	128
4	190	70	109
5	181	66	103
6	162	59	92
7	150	55	86
8	143	52	82
9	114	42	65
10	107	39	61
11	107	39	61
12	102	37	58
13	93	34	53
14	86	31	49
15	86	31	49
16	83	30	48
17	48	17	27
18	26	10	15
19	24	9	14
20	10	3	5
21	7	3	4
22	7	3	4
23	5	2	3
24	5	2	3

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	325	1	136	No	No	No	No	No	No	No	No	No	No
2	2	312	1	131	No	No	No	No	No	No	No	No	No	No
3	2	306	1	128	No	No	No	No	No	No	No	No	No	No
4	2	260	1	109	No	No	No	No	No	No	No	No	No	No
5	2	247	1	103	No	No	No	No	No	No	No	No	No	No
6	2	221	1	92	No	No	No	No	No	No	No	No	No	No
7	2	205	1	86	No	No	No	No	No	No	No	No	No	No
8	2	195	1	82	No	No	No	No	No	No	No	No	No	No
9	2	156	1	65	No	No	No	No	No	No	No	No	No	No
10	2	146	1	61	No	No	No	No	No	No	No	No	No	No
11	2	146	1	61	No	No	No	No	No	No	No	No	No	No
12	2	139	1	58	No	No	No	No	No	No	No	No	No	No
13	2	127	1	53	No	No	No	No	No	No	No	No	No	No
14	2	117	1	49	No	No	No	No	No	No	No	No	No	No
15	2	117	1	49	No	No	No	No	No	No	No	No	No	No
16	2	113	1	48	No	No	No	No	No	No	No	No	No	No
17	2	65	1	27	No	No	No	No	No	No	No	No	No	No
18	2	36	1	15	No	No	No	No	No	No	No	No	No	No
19	2	33	1	14	No	No	No	No	No	No	No	No	No	No
20	2	13	1	5	No	No	No	No	No	No	No	No	No	No
21	2	10	1	4	No	No	No	No	No	No	No	No	No	No
22	2	10	1	4	No	No	No	No	No	No	No	No	No	No
23	2	7	1	3	No	No	No	No	No	No	No	No	No	No
24	2	7	1	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.4
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:23
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	136
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	461
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

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Scenario 1 EXISTING AM
9/24/2019

Trip Generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
2: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
3: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
4: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
Added Trips Total								0	0	0	0.00

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 Report File: J:\...\EX AM_Westmoreland&Cosmoplitan.pdf

Scenario 1 EXISTING AM
 9/24/2019

Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	0	10.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	0	10.00	0
9: Gate	2.00	0	2.00	0
10: Gate	33.00	0	33.00	0
11: Gate	0.00	0	0.00	0
12: Gate	45.00	0	45.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 2: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	0	25.00	0
6: Gate	25.00	0	25.00	0
7: Gate	0.00	0	0.00	0
8: Gate	25.00	0	25.00	0
9: Gate	0.00	0	0.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	25.00	0	25.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 3: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	0	25.00	0
6: Gate	25.00	0	25.00	0
7: Gate	0.00	0	0.00	0
8: Gate	12.00	0	12.00	0
9: Gate	13.00	0	13.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	12.00	0	12.00	0
13: Gate	13.00	0	13.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 4: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
5: Gate	0.00	0	0.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	0.00	0	0.00	0
9: Gate	80.00	0	80.00	0
10: Gate	10.00	0	10.00	0
11: Gate	0.00	0	0.00	0
12: Gate	0.00	0	0.00	0
13: Gate	10.00	0	10.00	0
Total	100.00	0	100.00	0

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Scenario 2 EXISTING PM

Report File: J:\...\EX PM_2.pdf

10/1/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave/Beverly Blvd	Two-way stop	HCM 6th Edition	SB Thru	0.053	197.6	F
2	Westmoreland Ave/Beverly Blvd	Signalized	HCM 6th Edition	NB Right	0.491	19.8	B
3	Vermont Ave/1st St	Signalized	HCM 6th Edition	WB Left	10,975.927	29.4	C
4	Westmoreland Ave/1st St	Signalized	HCM 6th Edition	SB Right	0.380	15.0	B





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

Intersection Level Of Service Report

Intersection 1: Madison Ave/Beverly Blvd

Control Type:	Two-way stop	Delay (sec / veh):	197.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.053

Intersection Setup

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Base Volume Input [veh/h]	2	0	9	1	1	19	7	1378	34	51	1017	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	9	1	1	19	7	1378	34	51	1017	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	0	0	5	2	345	9	13	254	4
Total Analysis Volume [veh/h]	2	0	9	1	1	19	7	1378	34	51	1017	17
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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report

Intersection 2: Westmoreland Ave/Beverly Blvd

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.491

Intersection Setup

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
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 Pocket	0	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00				30.00				30.00			
Grade [%]	0.00				0.00				0.00			
Curb Present	No				No				No			
Crosswalk	Yes				Yes				Yes			

Volumes

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Base Volume Input [veh/h]	28	8	106	16	43	0	29	12	0	798	565	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	8	106	16	43	0	29	12	0	798	565	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	27	4	11	0	7	3	0	200	141	4
Total Analysis Volume [veh/h]	28	8	106	16	43	0	29	12	0	798	565	15
Presence of On-Street Parking	No			No	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0				0			
v_di, Inbound Pedestrian Volume crossing th	0				0				0			
v_co, Outbound Pedestrian Volume along th	0				0				0			
v_ci, Inbound Pedestrian Volume along the e	0				0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0				0			
Bicycle Volume [bicycles/h]	0				0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss
Signal Group	0	4	0	0	0	0	4	0	0	2	6	6
Auxiliary Signal Groups										2	2,3,6	2
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	0	0	8	0	0	11	9	9
Maximum Green [s]	0	20	0	0	0	0	20	0	0	30	30	30
Amber [s]	0.0	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.9	3.9	3.9
All red [s]	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.8	1.8	1.8
Split [s]	0	24	0	0	0	0	24	0	0	41	41	41
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	0	0	7	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	0	0	10	0	0	0	0	0
Rest In Walk												
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	3.7	3.7	3.7
Minimum Recall		No					No			No	No	
Maximum Recall		No					No			Yes	Yes	
Pedestrian Recall		No					No			Yes	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.80	5.70	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.80	3.70	0.00
g_i, Effective Green Time [s]	10	10	10	46	94
g / C, Green / Cycle	0.10	0.10	0.10	0.46	0.94
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.07	0.22	0.36
s, saturation flow rate [veh/h]	1359	1589	1250	3560	1589
c, Capacity [veh/h]	199	157	178	1623	1499
d1, Uniform Delay [s]	41.55	43.96	43.98	19.08	0.26
k, delay calibration	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	8.34	1.94	1.07	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.78	0.47	0.49	0.39
d, Delay for Lane Group [s/veh]	41.98	52.30	45.92	20.15	1.01
Lane Group LOS	D	D	D	C	A
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.84	3.29	2.11	6.53	0.32
50th-Percentile Queue Length [ft/ln]	21.03	82.27	52.77	163.24	7.89
95th-Percentile Queue Length [veh/ln]	1.51	5.92	3.80	10.72	0.57
95th-Percentile Queue Length [ft/ln]	37.85	148.09	94.99	268.01	14.19



Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.98	41.98	52.30	52.30	45.92	0.00	45.92	45.92	0.00	20.15	1.01	1.01
Movement LOS	D	D	D	D	D		D	D		C	A	A
d_A, Approach Delay [s/veh]	49.95				45.92				12.10			
Approach LOS	D				D				B			
d_I, Intersection Delay [s/veh]	19.79											
Intersection LOS	B											
Intersection V/C	0.491											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0				11.0				11.0			
M_corner, Corner Circulation Area [ft ² /ped]	0.00				0.00				0.00			
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00				0.00				0.00			
d_p, Pedestrian Delay [s]	39.61				39.61				39.61			
I_p,int, Pedestrian LOS Score for Intersection	2.525				1.769				3.411			
Crosswalk LOS	B				A				C			
s_b, Saturation Flow Rate of the bicycle lane	2000				2000				2000			
c_b, Capacity of the bicycle lane [bicycles/h]	384				384				706			
d_b, Bicycle Delay [s]	32.64				32.64				20.93			
I_b,int, Bicycle LOS Score for Intersection	1.794				1.698				2.684			
Bicycle LOS	A				A				B			

Intersection Setup

Name	Temple St				Beverly Blvd			
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			
Grade [%]	0.00				0.00			
Curb Present	No				No			
Crosswalk	No				Yes			

Volumes

Name	Temple St				Beverly Blvd			
Base Volume Input [veh/h]	0	0	682	9	1	360	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	682	9	1	360	0	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	171	2	0	90	0	6
Total Analysis Volume [veh/h]	0	0	682	9	1	360	0	22
Presence of On-Street Parking	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing the intersection	0				0			
v_di, Inbound Pedestrian Volume crossing the intersection	0				0			
v_co, Outbound Pedestrian Volume along the corridor	0				0			
v_ci, Inbound Pedestrian Volume along the corridor	0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0			
Bicycle Volume [bicycles/h]	0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split	Split	Split
Signal Group	0	0	2	0	0	3	0	0
Auxiliary Signal Groups								
Lead / Lag	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	11	0	0	13	0	0
Maximum Green [s]	0	0	30	0	0	30	0	0
Amber [s]	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0
All red [s]	0.0	0.0	1.8	0.0	0.0	2.4	0.0	0.0
Split [s]	0	0	41	0	0	34	0	0
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	10	0	0
Rest In Walk								
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	3.7	0.0	0.0	4.3	0.0	0.0
Minimum Recall			No			No		
Maximum Recall			Yes			Yes		
Pedestrian Recall			Yes			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	5.70	5.70	6.30	6.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.70	3.70	4.30	4.30
g_i, Effective Green Time [s]	46	46	28	28
g / C, Green / Cycle	0.46	0.46	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.13	0.12	0.13	0.01
s, saturation flow rate [veh/h]	3560	1857	2752	1589
c, Capacity [veh/h]	1623	847	779	440
d1, Uniform Delay [s]	17.00	16.90	31.77	26.50
k, delay calibration	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	0.79	1.99	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.27	0.46	0.05
d, Delay for Lane Group [s/veh]	17.44	17.69	33.76	26.72
Lane Group LOS	B	B	C	C
Critical Lane Group	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.33	3.40	3.90	0.41
50th-Percentile Queue Length [ft/ln]	83.35	85.05	97.60	10.25
95th-Percentile Queue Length [veh/ln]	6.00	6.12	7.03	0.74
95th-Percentile Queue Length [ft/ln]	150.03	153.09	175.68	18.45

Movement, Approach, & Intersection Results

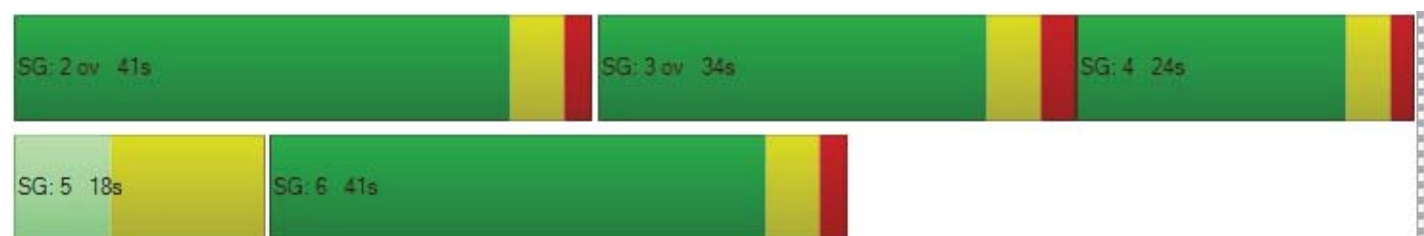
d_M, Delay for Movement [s/veh]	0.00	0.00	17.52	17.69	33.76	33.76	0.00	26.72
Movement LOS			B	B	C	C		C
d_A, Approach Delay [s/veh]	17.53				33.35			
Approach LOS	B				C			
d_I, Intersection Delay [s/veh]	19.79							
Intersection LOS	B							
Intersection V/C	0.491							

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.371
Crosswalk LOS	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	554
d_b, Bicycle Delay [s]	50.00	26.14
I_b,int, Bicycle LOS Score for Intersection	4.512	1.560
Bicycle LOS	E	A

Sequence

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







Intersection Level Of Service Report

Intersection 3: Vermont Ave/1st St

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 29.4
 Level Of Service: C
 Volume to Capacity (v/c): 10,975.927

Intersection Setup

Name	Vermont Ave						1st St					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
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
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Vermont Ave						1st St					
Base Volume Input [veh/h]	72	987	81	117	1257	167	150	470	64	67	345	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	987	81	117	1257	167	150	470	64	67	345	79
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	247	20	29	314	42	38	118	16	17	86	20
Total Analysis Volume [veh/h]	72	987	81	117	1257	167	150	470	64	67	345	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	65.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0
Split [s]	0	56	0	0	56	0	0	33	0	0	33	0
Vehicle Extension [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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.10	6.10	6.10	6.10	6.10	6.10	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.10	4.10	4.10	4.10	4.10	4.10	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	50	50	50	50	50	50	28	28	28	28	28
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.19	0.29	0.29	0.22	0.27	0.27	0.14	0.29	10000.0	0.20	0.05
s, saturation flow rate [veh/h]	376	1870	1821	528	3560	1760	1035	1831	0	1702	1589
c, Capacity [veh/h]	219	1037	1009	265	1974	976	191	560	80	520	486
d1, Uniform Delay [s]	22.13	12.57	12.57	24.37	12.20	12.20	41.46	30.63	45.00	27.22	22.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.01	1.89	1.94	5.33	0.85	1.72	32.25	43.85	88.93	6.75	0.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.52	0.52	0.44	0.48	0.48	0.79	0.95	0.84	0.66	0.16
d, Delay for Lane Group [s/veh]	26.14	14.46	14.52	29.70	13.05	13.92	73.71	74.48	133.93	33.97	23.56
Lane Group LOS	C	B	B	C	B	B	E	E	F	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.37	6.65	6.50	2.36	5.46	5.63	5.06	17.90	3.47	7.34	1.32
50th-Percentile Queue Length [ft/ln]	34.27	166.36	162.51	59.12	136.40	140.76	126.45	447.46	86.83	183.44	32.98
95th-Percentile Queue Length [veh/ln]	2.47	10.89	10.68	4.26	9.29	9.52	8.75	24.84	6.25	11.78	2.37
95th-Percentile Queue Length [ft/ln]	61.69	272.13	267.05	106.41	232.17	238.05	218.66	620.91	156.29	294.50	59.37

Movement, Approach, & Intersection Results

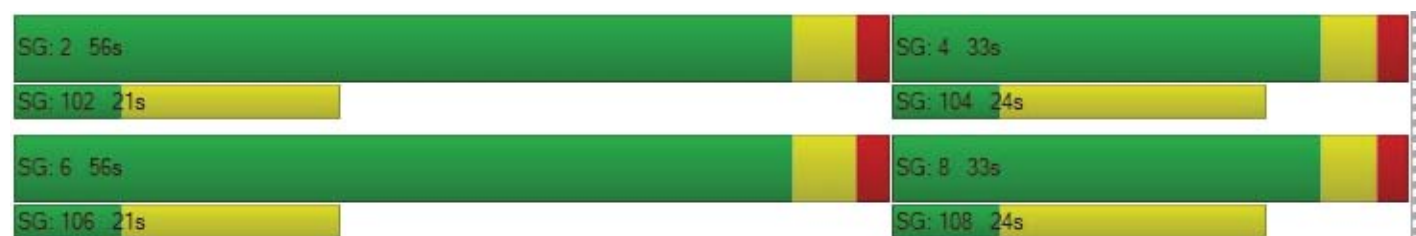
d_M, Delay for Movement [s/veh]	26.14	14.49	14.52	29.70	13.26	13.92	73.71	74.48	74.48	133.93	33.97	23.56
Movement LOS	C	B	B	C	B	B	E	E	E	F	C	C
d_A, Approach Delay [s/veh]	15.22			14.58			74.31			45.93		
Approach LOS	B			B			E			D		
d_I, Intersection Delay [s/veh]	29.36											
Intersection LOS	C											
Intersection V/C	10975.927											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	3.027			3.255			2.491			2.654		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1109			1109			611			611		
d_b, Bicycle Delay [s]	8.93			8.93			21.70			21.70		
I_b,int, Bicycle LOS Score for Intersection	2.500			2.407			2.688			1.965		
Bicycle LOS	B			B			B			A		

Sequence

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





Intersection Level Of Service Report

Intersection 4: Westmoreland Ave/1st St

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.380

Intersection Setup

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Base Volume Input [veh/h]	13	8	17	32	2	131	144	607	24	19	314	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	8	17	32	2	131	144	607	24	19	314	30
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	4	8	1	33	36	152	6	5	79	8
Total Analysis Volume [veh/h]	13	8	17	32	2	131	144	607	24	19	314	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	25	0	0	25	0	0	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	1.6	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Split [s]	0	35	0	0	35	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	2.8	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.70	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.70	2.70	2.70	2.70	2.70	2.70
g_i, Effective Green Time [s]	30	30	60	60	60	60	60	60
g / C, Green / Cycle	0.30	0.30	0.60	0.60	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.02	0.10	0.14	0.32	0.02	0.02	0.17	0.02
s, saturation flow rate [veh/h]	1545	1572	1065	1870	1589	813	1870	1589
c, Capacity [veh/h]	515	518	608	1128	958	391	1128	958
d1, Uniform Delay [s]	24.91	27.08	14.29	11.67	8.00	18.91	9.47	8.03
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	1.62	0.92	1.86	0.05	0.24	0.62	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.32	0.24	0.54	0.03	0.05	0.28	0.03
d, Delay for Lane Group [s/veh]	25.18	28.71	15.21	13.52	8.05	19.15	10.09	8.09
Lane Group LOS	C	C	B	B	A	B	B	A
Critical Lane Group	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.68	3.26	1.97	7.90	0.21	0.30	3.27	0.27
50th-Percentile Queue Length [ft/ln]	17.03	81.53	49.35	197.51	5.28	7.45	81.65	6.63
95th-Percentile Queue Length [veh/ln]	1.23	5.87	3.55	12.51	0.38	0.54	5.88	0.48
95th-Percentile Queue Length [ft/ln]	30.65	146.76	88.84	312.76	9.51	13.40	146.97	11.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.18	25.18	25.18	28.71	28.71	28.71	15.21	13.52	8.05	19.15	10.09	8.09
Movement LOS	C	C	C	C	C	C	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	25.18			28.71			13.67			10.40		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.96											
Intersection LOS	B											
Intersection V/C	0.380											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.61			39.61			39.61			39.61		
I_p,int, Pedestrian LOS Score for Intersection	1.787			2.094			2.564			2.549		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	604			604			1206			1206		
d_b, Bicycle Delay [s]	24.36			24.36			7.88			7.88		
I_b,int, Bicycle LOS Score for Intersection	1.622			1.832			2.838			2.159		
Bicycle LOS	A			A			C			B		

Sequence

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



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Scenario 2 EXISTING PM

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10/1/2019

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	Madison Ave/Beverly Blvd	2	0	9	1	1	19	7	1378	34	51	1017	17	2536

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	28	8	106	16	43	29	12	798	565	15	682	9

Northwestbound			Total Volume
2	Left	Right	
1	360	22	2694

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	72	987	81	117	1257	167	150	470	64	67	345	79	3856

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	13	8	17	32	2	131	144	607	24	19	314	30	1341

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Scenario 2 EXISTING PM

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10/1/2019

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Madison Ave/Beverly Blvd	Final Base	2	0	9	1	1	19	7	1378	34	51	1017	17	2536
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	2	0	9	1	1	19	7	1378	34	51	1017	17	2536

ID	Intersection Name	Volume Type	Northbound				Southbound			Eastbound			Westbound	
			Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	Final Base	28	8	106	16	43	29	12	798	565	15	682	9
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		In Process	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	28	8	106	16	43	29	12	798	565	15	682	9

Northwestbound			Total Volume
2	Left	Right	
1	360	22	2694
1.00	1.00	1.00	-
0	0	0	0
0	0	0	0
0	0	0	0
1	360	22	2694

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	Final Base	72	987	81	117	1257	167	150	470	64	67	345	79	3856
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	72	987	81	117	1257	167	150	470	64	67	345	79	3856

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	Final Base	13	8	17	32	2	131	144	607	24	19	314	30	1341
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	13	8	17	32	2	131	144	607	24	19	314	30	1341

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Fair Share Volumes

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	0	0	0	0	0	
Future Total Volume	2	0	9	1	1	19	7	1378	34	51	1017	17	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Future Total Volume	28	8	106	16	43	29	12	798	565	15	682	9	1	360	22	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	0	0	0	0	0	
Future Total Volume	72	987	81	117	1257	167	150	470	64	67	345	79	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	0	0	0	0	0	
Future Total Volume	13	8	17	32	2	131	144	607	24	19	314	30	

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Fair Share % of Net New Site

[illegible]

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-%
3: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-%
Total	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

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Fair Share % of Future Total

[illegible][illegible][illegible][illegible]

Signal Warrants Report For Intersection 1: Madison Ave/Beverly Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	1085	1419	11	21
2	1042	1362	11	20
3	1020	1334	10	20
4	868	1135	9	17
5	825	1078	8	16
6	738	965	7	14
7	684	894	7	13
8	651	851	7	13
9	521	681	5	10
10	488	639	5	9
11	488	639	5	9
12	467	610	5	9
13	423	553	4	8
14	391	511	4	8
15	391	511	4	8
16	380	497	4	7
17	217	284	2	4
18	119	156	1	2
19	109	142	1	2
20	43	57	0	1
21	33	43	0	1
22	33	43	0	1
23	22	28	0	0
24	22	28	0	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2504	2	32	No	No	No	No	No	No	No	No	No	No
2	6	2404	2	31	No	No	No	No	No	No	No	No	No	No
3	6	2354	2	30	No	No	No	No	No	No	No	No	No	No
4	6	2003	2	26	No	No	No	No	No	No	No	No	No	No
5	6	1903	2	24	No	No	No	No	No	No	No	No	No	No
6	6	1703	2	21	No	No	No	No	No	No	No	No	No	No
7	6	1578	2	20	No	No	No	No	No	No	No	No	No	No
8	6	1502	2	20	No	No	No	No	No	No	No	No	No	No
9	6	1202	2	15	No	No	No	No	No	No	No	No	No	No
10	6	1127	2	14	No	No	No	No	No	No	No	No	No	No
11	6	1127	2	14	No	No	No	No	No	No	No	No	No	No
12	6	1077	2	14	No	No	No	No	No	No	No	No	No	No
13	6	976	2	12	No	No	No	No	No	No	No	No	No	No
14	6	902	2	12	No	No	No	No	No	No	No	No	No	No
15	6	902	2	12	No	No	No	No	No	No	No	No	No	No
16	6	877	2	11	No	No	No	No	No	No	No	No	No	No
17	6	501	2	6	No	No	No	No	No	No	No	No	No	No
18	6	275	2	3	No	No	No	No	No	No	No	No	No	No
19	6	251	2	3	No	No	No	No	No	No	No	No	No	No
20	6	100	2	1	No	No	No	No	No	No	No	No	No	No
21	6	76	2	1	No	No	No	No	No	No	No	No	No	No
22	6	76	2	1	No	No	No	No	No	No	No	No	No	No
23	6	50	2	0	No	No	No	No	No	No	No	No	No	No
24	6	50	2	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	28.3	26.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	0:09
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	11	21
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2536	2536
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

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Trip Generation summary**Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
2: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
3: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
4: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
Added Trips Total								0	0	0	0.00

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Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	0	10.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	0	10.00	0
9: Gate	2.00	0	2.00	0
10: Gate	33.00	0	33.00	0
11: Gate	0.00	0	0.00	0
12: Gate	45.00	0	45.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 2: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	0	25.00	0
6: Gate	25.00	0	25.00	0
7: Gate	0.00	0	0.00	0
8: Gate	25.00	0	25.00	0
9: Gate	0.00	0	0.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	25.00	0	25.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 3: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	0	25.00	0
6: Gate	25.00	0	25.00	0
7: Gate	0.00	0	0.00	0
8: Gate	12.00	0	12.00	0
9: Gate	13.00	0	13.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	12.00	0	12.00	0
13: Gate	13.00	0	13.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 4: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
5: Gate	0.00	0	0.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	0.00	0	0.00	0
9: Gate	80.00	0	80.00	0
10: Gate	10.00	0	10.00	0
11: Gate	0.00	0	0.00	0
12: Gate	0.00	0	0.00	0
13: Gate	10.00	0	10.00	0
Total	100.00	0	100.00	0

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Scenario 2 EXISTING PM
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Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	Westmoreland Ave/Cosmoplitan St	Two-way stop	HCM 6th Edition	EB Left	0.032	10.7	B

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

Intersection Level Of Service Report

Intersection 5: Westmoreland Ave/Cosmopolitan St

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.032

Intersection Setup

Name	Westmoreland Ave		Westmoreland Ave		Cosmopolitan St	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Westmoreland Ave		Westmoreland Ave		Cosmopolitan St	
Base Volume Input [veh/h]	52	109	68	8	22	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	109	68	8	22	57
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	27	17	2	6	14
Total Analysis Volume [veh/h]	52	109	68	8	22	57
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	0.03	0.00	0.00	0.00	0.03	0.06
d_M, Delay for Movement [s/veh]	7.45	0.00	0.00	0.00	10.70	9.04
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.00	0.00	0.30	0.30
95th-Percentile Queue Length [ft/ln]	2.65	2.65	0.00	0.00	7.41	7.41
d_A, Approach Delay [s/veh]	2.41		0.00		9.50	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.60					
Intersection LOS	B					

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Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
5	Westmoreland Ave/Cosmoplitan St	52	109	68	8	22	57	316

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Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
5	Westmoreland Ave/Cosmoplitan St	Final Base	52	109	68	8	22	57	316
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	52	109	68	8	22	57	316

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Fair Share Volumes

Intersection 5: Westmoreland Ave/Cosmoplitan St							
Zone ID: Name	Northbound		Southbound		Eastbound		Total
	Left	Thru	Thru	Right	Left	Right	
1: Zone	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0
4: Zone	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	
Future Total Volume	52	109	68	8	22	57	

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Fair Share % of Net New Site

Intersection 5: Westmoreland Ave/Cosmoplitan St							
Zone ID: Name	Northbound		Southbound		Eastbound		Total
	Left	Thru	Thru	Right	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	-%
2: Zone	0%	0%	0%	0%	0%	0%	-%
3: Zone	0%	0%	0%	0%	0%	0%	-%
4: Zone	0%	0%	0%	0%	0%	0%	-%
Total	0%	0%	0%	0%	0%	0%	

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Scenario 2 EXISTING PM
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Fair Share % of Future Total

Intersection 5: Westmoreland Ave/Cosmoplitan St							
Zone ID: Name	Northbound		Southbound		Eastbound		Total
	Left	Thru	Thru	Right	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%
4: Zone	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	

Signal Warrants Report For Intersection 5: Westmoreland Ave/Cosmoplitan St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	161	76	79
2	155	73	76
3	151	71	74
4	129	61	63
5	122	58	60
6	109	52	54
7	101	48	50
8	97	46	47
9	77	36	38
10	72	34	36
11	72	34	36
12	69	33	34
13	63	30	31
14	58	27	28
15	58	27	28
16	56	27	28
17	32	15	16
18	18	8	9
19	16	8	8
20	6	3	3
21	5	2	2
22	5	2	2
23	3	2	2
24	3	2	2

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	237	1	79	No	No	No	No	No	No	No	No	No	No
2	2	228	1	76	No	No	No	No	No	No	No	No	No	No
3	2	222	1	74	No	No	No	No	No	No	No	No	No	No
4	2	190	1	63	No	No	No	No	No	No	No	No	No	No
5	2	180	1	60	No	No	No	No	No	No	No	No	No	No
6	2	161	1	54	No	No	No	No	No	No	No	No	No	No
7	2	149	1	50	No	No	No	No	No	No	No	No	No	No
8	2	143	1	47	No	No	No	No	No	No	No	No	No	No
9	2	113	1	38	No	No	No	No	No	No	No	No	No	No
10	2	106	1	36	No	No	No	No	No	No	No	No	No	No
11	2	106	1	36	No	No	No	No	No	No	No	No	No	No
12	2	102	1	34	No	No	No	No	No	No	No	No	No	No
13	2	93	1	31	No	No	No	No	No	No	No	No	No	No
14	2	85	1	28	No	No	No	No	No	No	No	No	No	No
15	2	85	1	28	No	No	No	No	No	No	No	No	No	No
16	2	83	1	28	No	No	No	No	No	No	No	No	No	No
17	2	47	1	16	No	No	No	No	No	No	No	No	No	No
18	2	26	1	9	No	No	No	No	No	No	No	No	No	No
19	2	24	1	8	No	No	No	No	No	No	No	No	No	No
20	2	9	1	3	No	No	No	No	No	No	No	No	No	No
21	2	7	1	2	No	No	No	No	No	No	No	No	No	No
22	2	7	1	2	No	No	No	No	No	No	No	No	No	No
23	2	5	1	2	No	No	No	No	No	No	No	No	No	No
24	2	5	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:12
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	79
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	316
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	No

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Report File: J:\...\EX PM_Westmoreland&Cosmoplitan.pdf

Scenario 2 EXISTING PM
9/24/2019

Trip Generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
2: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
3: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
4: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
Added Trips Total								0	0	0	0.00

Vistro File: J:\...\JB71259 241 Westmoreland_Vistro.vistro
 Report File: J:\...\EX PM_Westmoreland&Cosmoplitan.pdf

Scenario 2 EXISTING PM
 9/24/2019

Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	0	10.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	0	10.00	0
9: Gate	2.00	0	2.00	0
10: Gate	33.00	0	33.00	0
11: Gate	0.00	0	0.00	0
12: Gate	45.00	0	45.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 2: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	0	25.00	0
6: Gate	25.00	0	25.00	0
7: Gate	0.00	0	0.00	0
8: Gate	25.00	0	25.00	0
9: Gate	0.00	0	0.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	25.00	0	25.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 3: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	0	25.00	0
6: Gate	25.00	0	25.00	0
7: Gate	0.00	0	0.00	0
8: Gate	12.00	0	12.00	0
9: Gate	13.00	0	13.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	12.00	0	12.00	0
13: Gate	13.00	0	13.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 4: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
5: Gate	0.00	0	0.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	0.00	0	0.00	0
9: Gate	80.00	0	80.00	0
10: Gate	10.00	0	10.00	0
11: Gate	0.00	0	0.00	0
12: Gate	0.00	0	0.00	0
13: Gate	10.00	0	10.00	0
Total	100.00	0	100.00	0

APPENDIX D – Existing With-Project LOS Worksheets

Vistro File: J:\...\JB71259 241 Westmoreland_Vistro.vistro
Report File: J:\...\E+P AM_2.pdf

Scenario 3 E+P AM
10/1/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave/Beverly Blvd	Two-way stop	HCM 6th Edition	SB Thru	0.140	265.4	F
2	Westmoreland Ave/Beverly Blvd	Signalized	HCM 6th Edition	SB Thru	0.360	18.3	B
3	Vermont Ave/1st St	Signalized	HCM 6th Edition	WB Left	1.192	36.1	D
4	Westmoreland Ave/1st St	Signalized	HCM 6th Edition	SB Right	0.546	29.1	C





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: Madison Ave/Beverly Blvd

Control Type:	Two-way stop	Delay (sec / veh):	265.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.140

Intersection Setup

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Base Volume Input [veh/h]	1	0	12	1	2	25	15	1359	77	46	1125	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	15	0	0	0	0	17	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]	16	0	27	1	2	25	15	1376	77	46	1125	35
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	7	0	1	6	4	344	19	12	281	9
Total Analysis Volume [veh/h]	16	0	27	1	2	25	15	1376	77	46	1125	35
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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results




[illegible]

Intersection Level Of Service Report

Intersection 2: Westmoreland Ave/Beverly Blvd

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.360

Intersection Setup

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
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 Pocket	0	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00				30.00				30.00			
Grade [%]	0.00				0.00				0.00			
Curb Present	No				No				No			
Crosswalk	Yes				Yes				Yes			

Volumes

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Base Volume Input [veh/h]	54	7	63	7	26	0	41	19	0	601	758	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	15	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	7	63	7	26	0	41	19	0	616	758	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	2	16	2	7	0	10	5	0	154	190	7
Total Analysis Volume [veh/h]	54	7	63	7	26	0	41	19	0	616	758	28
Presence of On-Street Parking	No			No	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0				0			
v_di, Inbound Pedestrian Volume crossing th	0				0				0			
v_co, Outbound Pedestrian Volume along th	0				0				0			
v_ci, Inbound Pedestrian Volume along the e	0				0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0				0			
Bicycle Volume [bicycles/h]	0				0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss
Signal Group	0	4	0	0	0	0	4	0	0	2	6	6
Auxiliary Signal Groups										2	2,3,6	2
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	0	0	8	0	0	11	9	9
Maximum Green [s]	0	20	0	0	0	0	20	0	0	30	30	30
Amber [s]	0.0	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.9	3.9	3.9
All red [s]	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.8	1.8	1.8
Split [s]	0	24	0	0	0	0	24	0	0	41	41	41
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	0	0	7	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	0	0	10	0	0	0	0	0
Rest In Walk												
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	3.7	3.7	3.7
Minimum Recall		No					No			No	No	
Maximum Recall		No					No			Yes	Yes	
Pedestrian Recall		No					No			Yes	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.80	5.70	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.80	3.70	0.00
g_i, Effective Green Time [s]	12	12	12	44	94
g / C, Green / Cycle	0.12	0.12	0.12	0.44	0.94
(v / s)_i Volume / Saturation Flow Rate	0.07	0.04	0.08	0.17	0.49
s, saturation flow rate [veh/h]	928	1589	1053	3560	1589
c, Capacity [veh/h]	175	183	168	1566	1499
d1, Uniform Delay [s]	41.73	40.94	41.89	18.98	0.32
k, delay calibration	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.19	1.31	2.41	0.75	1.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.38	0.51	0.39	0.52
d, Delay for Lane Group [s/veh]	42.92	42.25	44.30	19.73	1.64
Lane Group LOS	D	D	D	B	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.47	1.65	2.18	4.89	0.55
50th-Percentile Queue Length [ft/ln]	36.79	41.36	54.61	122.21	13.76
95th-Percentile Queue Length [veh/ln]	2.65	2.98	3.93	8.51	0.99
95th-Percentile Queue Length [ft/ln]	66.21	74.44	98.31	212.86	24.77



Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.92	42.92	42.25	42.25	44.30	0.00	44.30	44.30	0.00	19.73	1.64	1.64
Movement LOS	D	D	D	D	D		D	D		B	A	A
d_A, Approach Delay [s/veh]	42.56				44.30				9.59			
Approach LOS	D				D				A			
d_I, Intersection Delay [s/veh]	18.34											
Intersection LOS	B											
Intersection V/C	0.360											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0				11.0				11.0			
M_corner, Corner Circulation Area [ft ² /ped]	0.00				0.00				0.00			
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00				0.00				0.00			
d_p, Pedestrian Delay [s]	39.61				39.61				39.61			
I_p,int, Pedestrian LOS Score for Intersection	2.554				1.772				3.506			
Crosswalk LOS	B				A				D			
s_b, Saturation Flow Rate of the bicycle lane	2000				2000				2000			
c_b, Capacity of the bicycle lane [bicycles/h]	384				384				706			
d_b, Bicycle Delay [s]	32.64				32.64				20.93			
I_b,int, Bicycle LOS Score for Intersection	1.764				1.702				2.693			
Bicycle LOS	A				A				B			

Intersection Setup

Name	Temple St				Beverly Blvd			
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			
Grade [%]	0.00				0.00			
Curb Present	No				No			
Crosswalk	No				Yes			

Volumes

Name	Temple St				Beverly Blvd			
Base Volume Input [veh/h]	0	0	779	15	2	380	0	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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
Site-Generated Trips [veh/h]	17	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	0	779	15	2	380	0	18
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	195	4	1	95	0	5
Total Analysis Volume [veh/h]	17	0	779	15	2	380	0	18
Presence of On-Street Parking	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing the intersection	0				0			
v_di, Inbound Pedestrian Volume crossing the intersection	0				0			
v_co, Outbound Pedestrian Volume along the corridor	0				0			
v_ci, Inbound Pedestrian Volume along the corridor	0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0			
Bicycle Volume [bicycles/h]	0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split	Split	Split
Signal Group	0	0	2	0	0	3	0	0
Auxiliary Signal Groups								
Lead / Lag	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	11	0	0	13	0	0
Maximum Green [s]	0	0	30	0	0	30	0	0
Amber [s]	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0
All red [s]	0.0	0.0	1.8	0.0	0.0	2.4	0.0	0.0
Split [s]	0	0	41	0	0	34	0	0
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	10	0	0
Rest In Walk								
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	3.7	0.0	0.0	4.3	0.0	0.0
Minimum Recall			No			No		
Maximum Recall			Yes			Yes		
Pedestrian Recall			Yes			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	5.70	5.70	6.30	6.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.70	3.70	4.30	4.30
g_i, Effective Green Time [s]	44	44	28	28
g / C, Green / Cycle	0.44	0.44	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.15	0.14	0.14	0.01
s, saturation flow rate [veh/h]	3560	1851	2752	1589
c, Capacity [veh/h]	1566	814	779	440
d1, Uniform Delay [s]	18.44	18.31	32.05	26.44
k, delay calibration	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	1.06	2.22	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.33	0.49	0.04
d, Delay for Lane Group [s/veh]	19.02	19.38	34.27	26.61
Lane Group LOS	B	B	C	C
Critical Lane Group	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.07	4.16	4.18	0.33
50th-Percentile Queue Length [ft/ln]	101.82	103.99	104.44	8.36
95th-Percentile Queue Length [veh/ln]	7.33	7.49	7.52	0.60
95th-Percentile Queue Length [ft/ln]	183.28	187.18	187.99	15.05

Movement, Approach, & Intersection Results

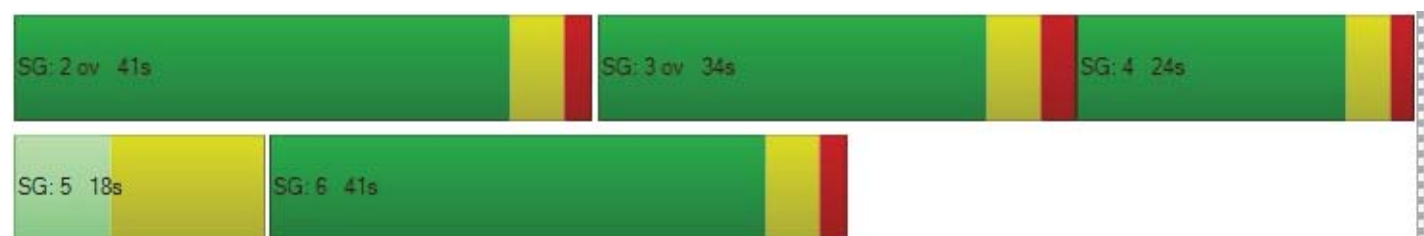
d_M, Delay for Movement [s/veh]	0.00	0.00	19.14	19.38	34.27	34.27	0.00	26.61
Movement LOS			B	B	C	C		C
d_A, Approach Delay [s/veh]	19.14				33.92			
Approach LOS	B				C			
d_I, Intersection Delay [s/veh]	18.34							
Intersection LOS	B							
Intersection V/C	0.360							

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.420
Crosswalk LOS	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	554
d_b, Bicycle Delay [s]	50.00	26.14
I_b,int, Bicycle LOS Score for Intersection	4.569	1.560
Bicycle LOS	E	A

Sequence

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







Intersection Level Of Service Report

Intersection 3: Vermont Ave/1st St

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 36.1
 Level Of Service: D
 Volume to Capacity (v/c): 1.192

Intersection Setup

Name	Vermont Ave						1st St					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
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
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Vermont Ave						1st St					
Base Volume Input [veh/h]	32	1110	69	99	1243	83	144	378	49	105	332	211
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	77	0	0	0	0	0	0	64	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	1110	146	99	1243	83	144	378	49	169	332	211
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	278	37	25	311	21	36	95	12	42	83	53
Total Analysis Volume [veh/h]	32	1110	146	99	1243	83	144	378	49	169	332	211
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	65.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0
Split [s]	0	56	0	0	56	0	0	33	0	0	33	0
Vehicle Extension [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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.10	6.10	6.10	6.10	6.10	6.10	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.10	4.10	4.10	4.10	4.10	4.10	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	50	50	50	50	50	50	28	28	28	28	28
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.08	0.34	0.34	0.22	0.25	0.25	0.14	0.23	0.74	0.20	0.13
s, saturation flow rate [veh/h]	413	1870	1795	442	3560	1811	1048	1833	228	1702	1589
c, Capacity [veh/h]	240	1037	995	212	1974	1004	201	560	150	520	486
d1, Uniform Delay [s]	18.38	13.58	13.61	28.48	11.86	11.86	40.67	28.29	43.48	26.96	25.02
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.16	2.78	2.93	7.36	0.73	1.44	21.93	10.08	312.55	6.06	2.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.62	0.62	0.47	0.45	0.45	0.72	0.76	1.13	0.64	0.43
d, Delay for Lane Group [s/veh]	19.54	16.36	16.54	35.85	12.59	13.30	62.60	38.37	356.04	33.02	27.86
Lane Group LOS	B	B	B	D	B	B	E	D	F	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.50	8.60	8.35	2.27	4.89	5.17	4.44	9.75	16.32	6.94	3.96
50th-Percentile Queue Length [ft/ln]	12.53	215.11	208.71	56.81	122.14	129.15	110.96	243.82	408.11	173.49	99.00
95th-Percentile Queue Length [veh/ln]	0.90	13.42	13.09	4.09	8.51	8.89	7.89	14.87	24.66	11.26	7.13
95th-Percentile Queue Length [ft/ln]	22.56	335.38	327.17	102.26	212.76	222.33	197.34	371.86	616.48	281.50	178.21

Movement, Approach, & Intersection Results

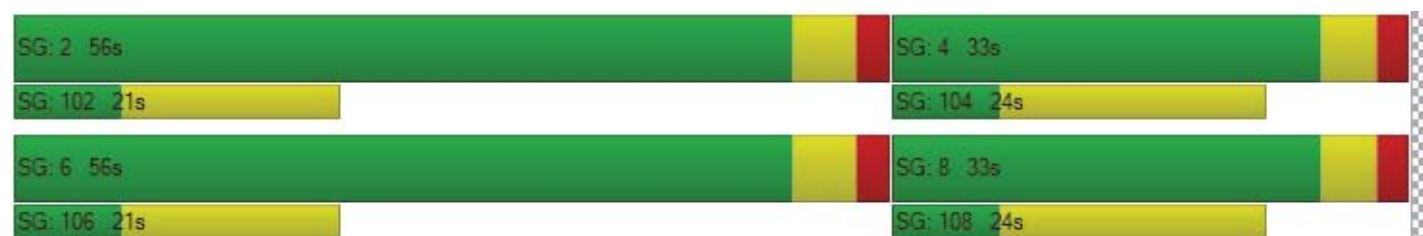
d_M, Delay for Movement [s/veh]	19.54	16.44	16.54	35.85	12.80	13.30	62.60	38.37	38.37	356.04	33.02	27.86
Movement LOS	B	B	B	D	B	B	E	D	D	F	C	C
d_A, Approach Delay [s/veh]	16.52			14.43			44.48			108.16		
Approach LOS	B			B			D			F		
d_I, Intersection Delay [s/veh]	36.10											
Intersection LOS	D											
Intersection V/C	1.192											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	3.214			3.268			2.383			2.657		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1109			1109			611			611		
d_b, Bicycle Delay [s]	8.93			8.93			21.70			21.70		
I_b,int, Bicycle LOS Score for Intersection	2.622			2.343			2.502			2.147		
Bicycle LOS	B			B			B			B		

Sequence

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




Intersection Level Of Service Report

Intersection 4: Westmoreland Ave/1st St

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.546

Intersection Setup

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Base Volume Input [veh/h]	21	2	24	100	6	261	132	380	15	8	364	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	48	0	64	77	0	0	0	0	57
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	2	24	148	6	325	209	380	15	8	364	150
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	1	6	37	2	81	52	95	4	2	91	38
Total Analysis Volume [veh/h]	21	2	24	148	6	325	209	380	15	8	364	150
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	25	0	0	25	0	0	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	1.6	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Split [s]	0	35	0	0	35	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	2.8	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.70	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.70	2.70	2.70	2.70	2.70	2.70
g_i, Effective Green Time [s]	30	30	60	60	60	60	60	60
g / C, Green / Cycle	0.30	0.30	0.60	0.60	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.05	0.31	0.21	0.20	0.01	0.01	0.19	0.09
s, saturation flow rate [veh/h]	1037	1555	1018	1870	1589	1003	1870	1589
c, Capacity [veh/h]	365	517	568	1128	958	555	1128	958
d1, Uniform Delay [s]	25.05	34.94	16.56	9.89	7.96	13.54	9.79	8.70
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	34.99	1.85	0.81	0.03	0.05	0.76	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.93	0.37	0.34	0.02	0.01	0.32	0.16
d, Delay for Lane Group [s/veh]	25.77	69.93	18.40	10.70	7.99	13.58	10.55	9.05
Lane Group LOS	C	E	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.87	16.43	3.28	4.14	0.13	0.10	3.92	1.44
50th-Percentile Queue Length [ft/ln]	21.78	410.82	82.00	103.44	3.28	2.50	97.97	36.04
95th-Percentile Queue Length [veh/ln]	1.57	23.08	5.90	7.45	0.24	0.18	7.05	2.59
95th-Percentile Queue Length [ft/ln]	39.21	577.02	147.60	186.20	5.91	4.51	176.35	64.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.77	25.77	25.77	69.93	69.93	69.93	18.40	10.70	7.99	13.58	10.55	9.05
Movement LOS	C	C	C	E	E	E	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	25.77			69.93			13.30			10.16		
Approach LOS	C			E			B			B		
d_I, Intersection Delay [s/veh]	29.08											
Intersection LOS	C											
Intersection V/C	0.546											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.61			39.61			39.61			39.61		
I_p,int, Pedestrian LOS Score for Intersection	1.768			2.426			2.591			2.725		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	604			604			1206			1206		
d_b, Bicycle Delay [s]	24.36			24.36			7.88			7.88		
I_b,int, Bicycle LOS Score for Intersection	1.637			2.350			2.556			2.421		
Bicycle LOS	A			B			B			B		

Sequence

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



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Scenario 3 E+P AM

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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	Madison Ave/Beverly Blvd	16	0	27	1	2	25	15	1376	77	46	1125	35	2745

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	54	7	63	7	26	41	19	616	758	28	779	15

Northwestbound			Total Volume
2	Left	Right	
2	380	18	2813

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	32	1110	146	99	1243	83	144	378	49	169	332	211	3996

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	21	2	24	148	6	325	209	380	15	8	364	150	1652

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Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Madison Ave/Beverly Blvd	Final Base	1	0	12	1	2	25	15	1359	77	46	1125	35	2698
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	15	0	15	0	0	0	0	17	0	0	0	0	47
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	16	0	27	1	2	25	15	1376	77	46	1125	35	2745

ID	Intersection Name	Volume Type	Northbound				Southbound			Eastbound			Westbound	
			Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	Final Base	54	7	63	7	26	41	19	601	758	11	779	15
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		In Process	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	15	0	17	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	54	7	63	7	26	41	19	616	758	28	779	15

Northwestbound			Total Volume
2	Left	Right	
2	380	18	2781
1.00	1.00	1.00	-
0	0	0	0
0	0	0	32
0	0	0	0
2	380	18	2813

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	Final Base	32	1110	69	99	1243	83	144	378	49	105	332	211	3855
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	77	0	0	0	0	0	0	64	0	0	141
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	32	1110	146	99	1243	83	144	378	49	169	332	211	3996

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	Final Base	21	2	24	100	6	261	132	380	15	8	364	93	1406
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	48	0	64	77	0	0	0	0	57	246
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	21	2	24	148	6	325	209	380	15	8	364	150	1652

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Fair Share Volumes

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	15	0	15	0	0	0	0	17	0	0	0	0	47
Site-Generated Trips	15	0	15	0	0	0	0	17	0	0	0	0	
Future Total Volume	16	0	27	1	2	25	15	1376	77	46	1125	35	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0	0	0	0	0	0	0	15	0	17	0	0	0	0	0	32
Site-Generated Trips	0	0	0	0	0	0	0	15	0	17	0	0	0	0	0	
Future Total Volume	54	7	63	7	26	41	19	616	758	28	779	15	2	380	18	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	77	0	0	0	0	0	0	64	0	0	141
Site-Generated Trips	0	0	77	0	0	0	0	0	0	64	0	0	
Future Total Volume	32	1110	146	99	1243	83	144	378	49	169	332	211	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	48	0	64	77	0	0	0	0	57	246
Site-Generated Trips	0	0	0	48	0	64	77	0	0	0	0	57	
Future Total Volume	21	2	24	148	6	325	209	380	15	8	364	150	

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Fair Share % of Net New Site

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%
Total	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	100%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%
Total	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	100%	0%	100%	100%	0%	0%	0%	0%	100%	100%
Total	0%	0%	0%	100%	0%	100%	100%	0%	0%	0%	0%	100%	

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Fair Share % of Future Total

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	93.75%	0%	55.56%	0%	0%	0%	0%	1.24%	0%	0%	0%	0%	1.71%
Total	93.75%	0%	55.56%	0%	0%	0%	0%	1.24%	0%	0%	0%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound	Northwestbound			Total	
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	2.44%	0%	60.71%	0%	0%	0%	0%	0%	1.14%
Total	0%	0%	0%	0%	0%	0%	0%	2.44%	0%	60.71%	0%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	52.74%	0%	0%	0%	0%	0%	0%	37.87%	0%	0%	3.53%
Total	0%	0%	52.74%	0%	0%	0%	0%	0%	0%	37.87%	0%	0%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	32.43%	0%	19.69%	36.84%	0%	0%	0%	0%	38%	14.89%
Total	0%	0%	0%	32.43%	0%	19.69%	36.84%	0%	0%	0%	0%	38%	

Signal Warrants Report For Intersection 1: Madison Ave/Beverly Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	1206	1468	43	28
2	1158	1409	41	27
3	1134	1380	40	26
4	965	1174	34	22
5	917	1116	33	21
6	820	998	29	19
7	760	925	27	18
8	724	881	26	17
9	579	705	21	13
10	543	661	19	13
11	543	661	19	13
12	519	631	18	12
13	470	573	17	11
14	434	528	15	10
15	434	528	15	10
16	422	514	15	10
17	241	294	9	6
18	133	161	5	3
19	121	147	4	3
20	48	59	2	1
21	36	44	1	1
22	36	44	1	1
23	24	29	1	1
24	24	29	1	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2674	2	71	No	No	No	No	No	No	No	Yes	No	No
2	6	2567	2	68	No	No	No	No	No	No	No	No	No	No
3	6	2514	2	66	No	No	No	No	No	No	No	No	No	No
4	6	2139	2	56	No	No	No	No	No	No	No	No	No	No
5	6	2033	2	54	No	No	No	No	No	No	No	No	No	No
6	6	1818	2	48	No	No	No	No	No	No	No	No	No	No
7	6	1685	2	45	No	No	No	No	No	No	No	No	No	No
8	6	1605	2	43	No	No	No	No	No	No	No	No	No	No
9	6	1284	2	34	No	No	No	No	No	No	No	No	No	No
10	6	1204	2	32	No	No	No	No	No	No	No	No	No	No
11	6	1204	2	32	No	No	No	No	No	No	No	No	No	No
12	6	1150	2	30	No	No	No	No	No	No	No	No	No	No
13	6	1043	2	28	No	No	No	No	No	No	No	No	No	No
14	6	962	2	25	No	No	No	No	No	No	No	No	No	No
15	6	962	2	25	No	No	No	No	No	No	No	No	No	No
16	6	936	2	25	No	No	No	No	No	No	No	No	No	No
17	6	535	2	15	No	No	No	No	No	No	No	No	No	No
18	6	294	2	8	No	No	No	No	No	No	No	No	No	No
19	6	268	2	7	No	No	No	No	No	No	No	No	No	No
20	6	107	2	3	No	No	No	No	No	No	No	No	No	No
21	6	80	2	2	No	No	No	No	No	No	No	No	No	No
22	6	80	2	2	No	No	No	No	No	No	No	No	No	No
23	6	53	2	2	No	No	No	No	No	No	No	No	No	No
24	6	53	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	1	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	78.3	41.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:56	0:19
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	43	28
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2745	2745
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

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Scenario 3 E+P AM

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Trip Generation summary**Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	172	145	317	100.00
Added Trips Total								172	145	317	100.00

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Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	17	10.00	15
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	17	10.00	15
9: Gate	2.00	3	2.00	3
10: Gate	33.00	57	33.00	48
11: Gate	0.00	0	0.00	0
12: Gate	45.00	77	45.00	64
13: Gate	0.00	0	0.00	0
Total	100.00	171	100.00	145

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Scenario 4 4 E+P PM

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Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave/Beverly Blvd	Two-way stop	HCM 6th Edition	SB Thru	0.054	200.2	F
2	Westmoreland Ave/Beverly Blvd	Signalized	HCM 6th Edition	NB Right	0.494	19.8	B
3	Vermont Ave/1st St	Signalized	HCM 6th Edition	WB Left	10,975.939	45.3	D
4	Westmoreland Ave/1st St	Signalized	HCM 6th Edition	SB Right	0.381	16.0	B





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

Intersection Level Of Service Report

Intersection 1: Madison Ave/Beverly Blvd

Control Type:	Two-way stop	Delay (sec / veh):	200.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.054

Intersection Setup

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Base Volume Input [veh/h]	2	0	9	1	1	19	7	1378	34	51	1017	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	0	9	0	0	0	0	7	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]	11	0	18	1	1	19	7	1385	34	51	1017	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	5	0	0	5	2	346	9	13	254	4
Total Analysis Volume [veh/h]	11	0	18	1	1	19	7	1385	34	51	1017	17
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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report

Intersection 2: Westmoreland Ave/Beverly Blvd

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.494

Intersection Setup

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
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 Pocket	0	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00				30.00				30.00			
Grade [%]	0.00				0.00				0.00			
Curb Present	No				No				No			
Crosswalk	Yes				Yes				Yes			

Volumes

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Base Volume Input [veh/h]	28	8	106	16	43	0	29	12	0	798	565	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	9	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	8	106	16	43	0	29	12	0	807	565	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	27	4	11	0	7	3	0	202	141	6
Total Analysis Volume [veh/h]	28	8	106	16	43	0	29	12	0	807	565	22
Presence of On-Street Parking	No			No	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0				0			
v_di, Inbound Pedestrian Volume crossing th	0				0				0			
v_co, Outbound Pedestrian Volume along th	0				0				0			
v_ci, Inbound Pedestrian Volume along the e	0				0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0				0			
Bicycle Volume [bicycles/h]	0				0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss
Signal Group	0	4	0	0	0	0	4	0	0	2	6	6
Auxiliary Signal Groups										2	2,3,6	2
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	0	0	8	0	0	11	9	9
Maximum Green [s]	0	20	0	0	0	0	20	0	0	30	30	30
Amber [s]	0.0	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.9	3.9	3.9
All red [s]	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.8	1.8	1.8
Split [s]	0	24	0	0	0	0	24	0	0	41	41	41
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	0	0	7	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	0	0	10	0	0	0	0	0
Rest In Walk												
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	3.7	3.7	3.7
Minimum Recall		No					No			No	No	
Maximum Recall		No					No			Yes	Yes	
Pedestrian Recall		No					No			Yes	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.80	5.70	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.80	3.70	0.00
g_i, Effective Green Time [s]	10	10	10	46	94
g / C, Green / Cycle	0.10	0.10	0.10	0.46	0.94
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.07	0.23	0.37
s, saturation flow rate [veh/h]	1359	1589	1250	3560	1589
c, Capacity [veh/h]	199	157	178	1623	1499
d1, Uniform Delay [s]	41.55	43.96	43.98	19.14	0.26
k, delay calibration	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	8.34	1.94	1.10	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.78	0.47	0.50	0.39
d, Delay for Lane Group [s/veh]	41.98	52.30	45.92	20.24	1.03
Lane Group LOS	D	D	D	C	A
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.84	3.29	2.11	6.63	0.32
50th-Percentile Queue Length [ft/ln]	21.03	82.27	52.77	165.67	8.04
95th-Percentile Queue Length [veh/ln]	1.51	5.92	3.80	10.85	0.58
95th-Percentile Queue Length [ft/ln]	37.85	148.09	94.99	271.21	14.48



Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.98	41.98	52.30	52.30	45.92	0.00	45.92	45.92	0.00	20.24	1.03	1.03
Movement LOS	D	D	D	D	D		D	D		C	A	A
d_A, Approach Delay [s/veh]	49.95				45.92				12.15			
Approach LOS	D				D				B			
d_I, Intersection Delay [s/veh]	19.77											
Intersection LOS	B											
Intersection V/C	0.494											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0				11.0				11.0			
M_corner, Corner Circulation Area [ft ² /ped]	0.00				0.00				0.00			
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00				0.00				0.00			
d_p, Pedestrian Delay [s]	39.61				39.61				39.61			
I_p,int, Pedestrian LOS Score for Intersection	2.527				1.769				3.413			
Crosswalk LOS	B				A				C			
s_b, Saturation Flow Rate of the bicycle lane	2000				2000				2000			
c_b, Capacity of the bicycle lane [bicycles/h]	384				384				706			
d_b, Bicycle Delay [s]	32.64				32.64				20.93			
I_b,int, Bicycle LOS Score for Intersection	1.794				1.698				2.692			
Bicycle LOS	A				A				B			

Intersection Setup

Name	Temple St				Beverly Blvd			
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			
Grade [%]	0.00				0.00			
Curb Present	No				No			
Crosswalk	No				Yes			

Volumes

Name	Temple St				Beverly Blvd			
Base Volume Input [veh/h]	0	0	682	9	1	360	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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
Site-Generated Trips [veh/h]	7	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	0	682	9	1	360	0	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	171	2	0	90	0	6
Total Analysis Volume [veh/h]	7	0	682	9	1	360	0	22
Presence of On-Street Parking	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing the intersection	0				0			
v_di, Inbound Pedestrian Volume crossing the intersection	0				0			
v_co, Outbound Pedestrian Volume along the corridor	0				0			
v_ci, Inbound Pedestrian Volume along the corridor	0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0			
Bicycle Volume [bicycles/h]	0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split	Split	Split
Signal Group	0	0	2	0	0	3	0	0
Auxiliary Signal Groups								
Lead / Lag	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	11	0	0	13	0	0
Maximum Green [s]	0	0	30	0	0	30	0	0
Amber [s]	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0
All red [s]	0.0	0.0	1.8	0.0	0.0	2.4	0.0	0.0
Split [s]	0	0	41	0	0	34	0	0
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	10	0	0
Rest In Walk								
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	3.7	0.0	0.0	4.3	0.0	0.0
Minimum Recall			No			No		
Maximum Recall			Yes			Yes		
Pedestrian Recall			Yes			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	5.70	5.70	6.30	6.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.70	3.70	4.30	4.30
g_i, Effective Green Time [s]	46	46	28	28
g / C, Green / Cycle	0.46	0.46	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.13	0.12	0.13	0.01
s, saturation flow rate [veh/h]	3560	1857	2752	1589
c, Capacity [veh/h]	1623	847	779	440
d1, Uniform Delay [s]	17.00	16.90	31.77	26.50
k, delay calibration	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	0.79	1.99	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.27	0.46	0.05
d, Delay for Lane Group [s/veh]	17.44	17.69	33.76	26.72
Lane Group LOS	B	B	C	C
Critical Lane Group	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.33	3.40	3.90	0.41
50th-Percentile Queue Length [ft/ln]	83.35	85.05	97.60	10.25
95th-Percentile Queue Length [veh/ln]	6.00	6.12	7.03	0.74
95th-Percentile Queue Length [ft/ln]	150.03	153.09	175.68	18.45

Movement, Approach, & Intersection Results

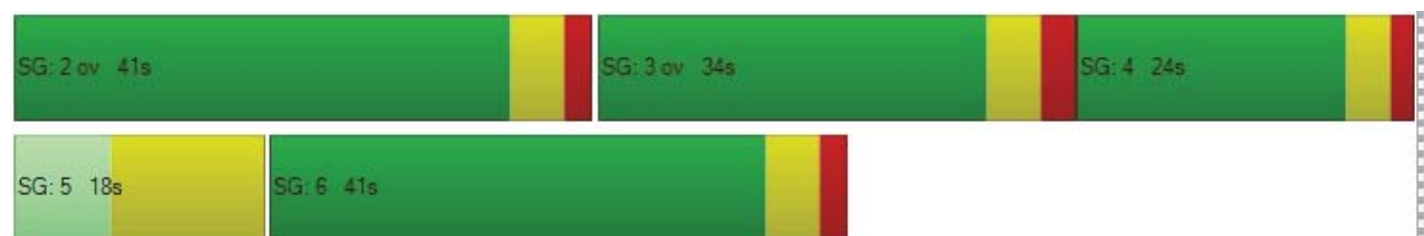
d_M, Delay for Movement [s/veh]	0.00	0.00	17.52	17.69	33.76	33.76	0.00	26.72
Movement LOS			B	B	C	C		C
d_A, Approach Delay [s/veh]	17.53				33.35			
Approach LOS	B				C			
d_I, Intersection Delay [s/veh]	19.77							
Intersection LOS	B							
Intersection V/C	0.494							

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.371
Crosswalk LOS	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	554
d_b, Bicycle Delay [s]	50.00	26.14
I_b,int, Bicycle LOS Score for Intersection	4.512	1.560
Bicycle LOS	E	A

Sequence

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







Intersection Level Of Service Report

Intersection 3: Vermont Ave/1st St

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 45.3
 Level Of Service: D
 Volume to Capacity (v/c): 10,975.939

Intersection Setup

Name	Vermont Ave						1st St					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
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
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Vermont Ave						1st St					
Base Volume Input [veh/h]	72	987	81	117	1257	167	150	470	64	67	345	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	33	0	0	0	0	0	0	38	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	987	114	117	1257	167	150	470	64	105	345	79
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	247	29	29	314	42	38	118	16	26	86	20
Total Analysis Volume [veh/h]	72	987	114	117	1257	167	150	470	64	105	345	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	65.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0
Split [s]	0	56	0	0	56	0	0	33	0	0	33	0
Vehicle Extension [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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.10	6.10	6.10	6.10	6.10	6.10	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.10	4.10	4.10	4.10	4.10	4.10	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	50	50	50	50	50	50	28	28	28	28	28
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.19	0.30	0.30	0.23	0.27	0.27	0.14	0.29	10000.0	0.20	0.05
s, saturation flow rate [veh/h]	376	1870	1803	512	3560	1760	1035	1831	0	1702	1589
c, Capacity [veh/h]	219	1037	1000	255	1974	976	191	560	80	520	486
d1, Uniform Delay [s]	22.13	12.75	12.76	25.31	12.20	12.20	41.46	30.63	45.00	27.22	22.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.01	2.04	2.12	5.97	0.85	1.72	32.25	43.85	644.92	6.75	0.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.54	0.54	0.46	0.48	0.48	0.79	0.95	1.31	0.66	0.16
d, Delay for Lane Group [s/veh]	26.14	14.79	14.88	31.28	13.05	13.92	73.71	74.48	689.92	33.97	23.56
Lane Group LOS	C	B	B	C	B	B	E	E	F	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.37	7.01	6.79	2.45	5.46	5.63	5.06	17.90	16.12	7.34	1.32
50th-Percentile Queue Length [ft/ln]	34.27	175.15	169.78	61.20	136.40	140.76	126.45	447.46	402.97	183.44	32.98
95th-Percentile Queue Length [veh/ln]	2.47	11.35	11.06	4.41	9.29	9.52	8.75	24.84	26.13	11.78	2.37
95th-Percentile Queue Length [ft/ln]	61.69	283.67	276.62	110.16	232.17	238.05	218.66	620.91	653.14	294.50	59.37

Movement, Approach, & Intersection Results

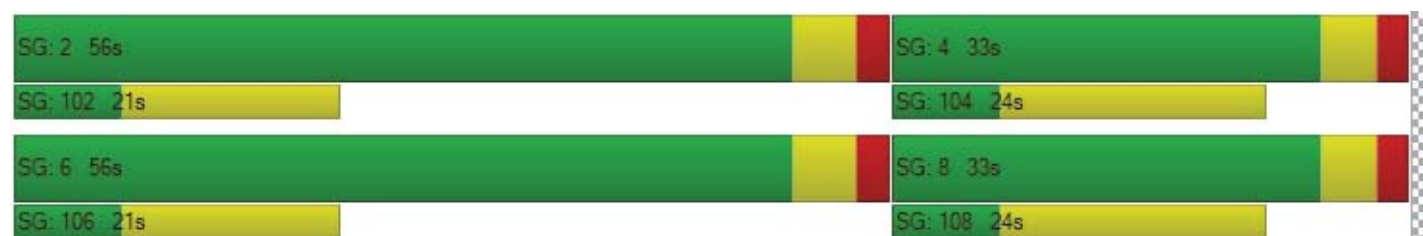
d_M, Delay for Movement [s/veh]	26.14	14.83	14.88	31.28	13.26	13.92	73.71	74.48	74.48	689.92	33.97	23.56
Movement LOS	C	B	B	C	B	B	E	E	E	F	C	C
d_A, Approach Delay [s/veh]	15.53			14.70			74.31			162.61		
Approach LOS	B			B			E			F		
d_I, Intersection Delay [s/veh]	45.25											
Intersection LOS	D											
Intersection V/C	10975.939											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	3.094			3.255			2.491			2.666		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1109			1109			611			611		
d_b, Bicycle Delay [s]	8.93			8.93			21.70			21.70		
I_b,int, Bicycle LOS Score for Intersection	2.527			2.407			2.688			1.996		
Bicycle LOS	B			B			B			A		

Sequence

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






Intersection Level Of Service Report

Intersection 4: Westmoreland Ave/1st St

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.381

Intersection Setup

Name	Westmoreland Ave			Westmoreland Ave						1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Westmoreland Ave			Westmoreland Ave						1st St		
Base Volume Input [veh/h]	13	8	17	32	2	131	144	607	24	19	314	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	29	0	38	33	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	8	17	61	2	169	177	607	24	19	314	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	4	15	1	42	44	152	6	5	79	14
Total Analysis Volume [veh/h]	13	8	17	61	2	169	177	607	24	19	314	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	25	0	0	25	0	0	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	1.6	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Split [s]	0	35	0	0	35	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	2.8	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.70	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.70	2.70	2.70	2.70	2.70	2.70
g_i, Effective Green Time [s]	30	30	60	60	60	60	60	60
g / C, Green / Cycle	0.30	0.30	0.60	0.60	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.17	0.32	0.02	0.02	0.17	0.03
s, saturation flow rate [veh/h]	1462	1555	1065	1870	1589	813	1870	1589
c, Capacity [veh/h]	490	515	608	1128	958	391	1128	958
d1, Uniform Delay [s]	24.91	28.43	14.82	11.67	8.00	18.91	9.47	8.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	2.86	1.22	1.86	0.05	0.24	0.62	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.45	0.29	0.54	0.03	0.05	0.28	0.06
d, Delay for Lane Group [s/veh]	25.22	31.28	16.03	13.52	8.05	19.15	10.09	8.27
Lane Group LOS	C	C	B	B	A	B	B	A
Critical Lane Group	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.68	4.89	2.52	7.90	0.21	0.30	3.27	0.49
50th-Percentile Queue Length [ft/ln]	17.08	122.16	63.11	197.51	5.28	7.45	81.65	12.13
95th-Percentile Queue Length [veh/ln]	1.23	8.51	4.54	12.51	0.38	0.54	5.88	0.87
95th-Percentile Queue Length [ft/ln]	30.75	212.80	113.59	312.76	9.51	13.40	146.97	21.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.22	25.22	25.22	31.28	31.28	31.28	16.03	13.52	8.05	19.15	10.09	8.27
Movement LOS	C	C	C	C	C	C	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	25.22			31.28			13.91			10.28		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.00											
Intersection LOS	B											
Intersection V/C	0.381											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.61			39.61			39.61			39.61		
I_p,int, Pedestrian LOS Score for Intersection	1.787			2.201			2.577			2.601		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	604			604			1206			1206		
d_b, Bicycle Delay [s]	24.36			24.36			7.88			7.88		
I_b,int, Bicycle LOS Score for Intersection	1.622			1.942			2.893			2.198		
Bicycle LOS	A			A			C			B		

Sequence

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



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Scenario 4 4 E+P PM

Report File: J:\...\E+P PM_2.pdf

10/1/2019

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	Madison Ave/Beverly Blvd	11	0	18	1	1	19	7	1385	34	51	1017	17	2561

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	28	8	106	16	43	29	12	807	565	22	682	9

Northwestbound			Total Volume
2	Left	Right	
1	360	22	2710

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	72	987	114	117	1257	167	150	470	64	105	345	79	3927

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	13	8	17	61	2	169	177	607	24	19	314	54	1465

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Scenario 4 4 E+P PM

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10/1/2019

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Madison Ave/Beverly Blvd	Final Base	2	0	9	1	1	19	7	1378	34	51	1017	17	2536
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	9	0	9	0	0	0	0	7	0	0	0	0	25
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	11	0	18	1	1	19	7	1385	34	51	1017	17	2561

ID	Intersection Name	Volume Type	Northbound				Southbound			Eastbound			Westbound	
			Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	Final Base	28	8	106	16	43	29	12	798	565	15	682	9
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		In Process	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	9	0	7	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	28	8	106	16	43	29	12	807	565	22	682	9

Northwestbound			Total Volume
2	Left	Right	
1	360	22	2694
1.00	1.00	1.00	-
0	0	0	0
0	0	0	16
0	0	0	0
1	360	22	2710

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	Final Base	72	987	81	117	1257	167	150	470	64	67	345	79	3856
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	33	0	0	0	0	0	0	38	0	0	71
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	72	987	114	117	1257	167	150	470	64	105	345	79	3927

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	Final Base	13	8	17	32	2	131	144	607	24	19	314	30	1341
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	29	0	38	33	0	0	0	0	24	124
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	13	8	17	61	2	169	177	607	24	19	314	54	1465

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Scenario 4 4 E+P PM

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Fair Share Volumes

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	9	0	9	0	0	0	0	7	0	0	0	0	25
Site-Generated Trips	9	0	9	0	0	0	0	7	0	0	0	0	
Future Total Volume	11	0	18	1	1	19	7	1385	34	51	1017	17	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0	0	0	0	0	0	0	9	0	7	0	0	0	0	0	16
Site-Generated Trips	0	0	0	0	0	0	0	9	0	7	0	0	0	0	0	
Future Total Volume	28	8	106	16	43	29	12	807	565	22	682	9	1	360	22	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	33	0	0	0	0	0	0	38	0	0	71
Site-Generated Trips	0	0	33	0	0	0	0	0	0	38	0	0	
Future Total Volume	72	987	114	117	1257	167	150	470	64	105	345	79	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	29	0	38	33	0	0	0	0	24	124
Site-Generated Trips	0	0	0	29	0	38	33	0	0	0	0	24	
Future Total Volume	13	8	17	61	2	169	177	607	24	19	314	54	

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Fair Share % of Net New Site

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%
Total	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	100%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%
Total	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	100%	0%	100%	100%	0%	0%	0%	0%	100%	100%
Total	0%	0%	0%	100%	0%	100%	100%	0%	0%	0%	0%	100%	

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Fair Share % of Future Total

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	81.82%	0%	50%	0%	0%	0%	0%	0.51%	0%	0%	0%	0%	0.98%
Total	81.82%	0%	50%	0%	0%	0%	0%	0.51%	0%	0%	0%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound	Northwestbound			Total	
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	1.12%	0%	31.82%	0%	0%	0%	0%	0%	0.59%
Total	0%	0%	0%	0%	0%	0%	0%	1.12%	0%	31.82%	0%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	28.95%	0%	0%	0%	0%	0%	0%	36.19%	0%	0%	1.81%
Total	0%	0%	28.95%	0%	0%	0%	0%	0%	0%	36.19%	0%	0%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	47.54%	0%	22.49%	18.64%	0%	0%	0%	0%	44.44%	8.46%
Total	0%	0%	0%	47.54%	0%	22.49%	18.64%	0%	0%	0%	0%	44.44%	

Signal Warrants Report For Intersection 1: Madison Ave/Beverly Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	1085	1426	29	21
2	1042	1369	28	20
3	1020	1340	27	20
4	868	1141	23	17
5	825	1084	22	16
6	738	970	20	14
7	684	898	18	13
8	651	856	17	13
9	521	684	14	10
10	488	642	13	9
11	488	642	13	9
12	467	613	12	9
13	423	556	11	8
14	391	513	10	8
15	391	513	10	8
16	380	499	10	7
17	217	285	6	4
18	119	157	3	2
19	109	143	3	2
20	43	57	1	1
21	33	43	1	1
22	33	43	1	1
23	22	29	1	0
24	22	29	1	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2511	2	50	No	No	No	No	No	No	No	No	No	No
2	6	2411	2	48	No	No	No	No	No	No	No	No	No	No
3	6	2360	2	47	No	No	No	No	No	No	No	No	No	No
4	6	2009	2	40	No	No	No	No	No	No	No	No	No	No
5	6	1909	2	38	No	No	No	No	No	No	No	No	No	No
6	6	1708	2	34	No	No	No	No	No	No	No	No	No	No
7	6	1582	2	31	No	No	No	No	No	No	No	No	No	No
8	6	1507	2	30	No	No	No	No	No	No	No	No	No	No
9	6	1205	2	24	No	No	No	No	No	No	No	No	No	No
10	6	1130	2	22	No	No	No	No	No	No	No	No	No	No
11	6	1130	2	22	No	No	No	No	No	No	No	No	No	No
12	6	1080	2	21	No	No	No	No	No	No	No	No	No	No
13	6	979	2	19	No	No	No	No	No	No	No	No	No	No
14	6	904	2	18	No	No	No	No	No	No	No	No	No	No
15	6	904	2	18	No	No	No	No	No	No	No	No	No	No
16	6	879	2	17	No	No	No	No	No	No	No	No	No	No
17	6	502	2	10	No	No	No	No	No	No	No	No	No	No
18	6	276	2	5	No	No	No	No	No	No	No	No	No	No
19	6	252	2	5	No	No	No	No	No	No	No	No	No	No
20	6	100	2	2	No	No	No	No	No	No	No	No	No	No
21	6	76	2	2	No	No	No	No	No	No	No	No	No	No
22	6	76	2	2	No	No	No	No	No	No	No	No	No	No
23	6	51	2	1	No	No	No	No	No	No	No	No	No	No
24	6	51	2	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	51.3	26.5
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:24	0:09
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	29	21
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2561	2561
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

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Scenario 4 4 E+P PM

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Trip Generation summary**Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	74	87	161	100.00
Added Trips Total								74	87	161	100.00

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Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	7	10.00	9
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	7	10.00	9
9: Gate	2.00	1	2.00	2
10: Gate	33.00	24	33.00	29
11: Gate	0.00	0	0.00	0
12: Gate	45.00	33	45.00	38
13: Gate	0.00	0	0.00	0
Total	100.00	72	100.00	87

APPENDIX E – Future Without-Project LOS Worksheets

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Report File: J:\...\FWOP AM_2.pdf

Scenario 6 FWOP AM
10/1/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave/Beverly Blvd	Two-way stop	HCM 6th Edition	SB Thru	0.162	307.0	F
2	Westmoreland Ave/Beverly Blvd	Signalized	HCM 6th Edition	SB Thru	0.360	18.6	B
3	Vermont Ave/1st St	Signalized	HCM 6th Edition	WB Left	0.943	24.4	C
4	Westmoreland Ave/1st St	Signalized	HCM 6th Edition	SB Right	0.488	19.4	B





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

Intersection Level Of Service Report

Intersection 1: Madison Ave/Beverly Blvd

Control Type:	Two-way stop	Delay (sec / veh):	307.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.162

Intersection Setup

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Base Volume Input [veh/h]	1	0	12	1	2	25	15	1359	77	46	1125	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0000	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	30	0	0	8	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	12	1	2	26	15	1416	79	47	1156	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	3	0	1	7	4	354	20	12	289	9
Total Analysis Volume [veh/h]	1	0	12	1	2	26	15	1416	79	47	1156	36
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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results


[illegible]

Intersection Level Of Service Report

Intersection 2: Westmoreland Ave/Beverly Blvd

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.360

Intersection Setup

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
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 Pocket	0	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00				30.00				30.00			
Grade [%]	0.00				0.00				0.00			
Curb Present	No				No				No			
Crosswalk	Yes				Yes				Yes			

Volumes

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Base Volume Input [veh/h]	54	7	63	7	26	0	41	19	0	601	758	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0200	1.0000	1.0000	1.0200	1.0000	1.0200	1.0200	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	30	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	7	63	7	27	0	41	19	0	643	773	11
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	2	16	2	7	0	10	5	0	161	193	3
Total Analysis Volume [veh/h]	54	7	63	7	27	0	41	19	0	643	773	11
Presence of On-Street Parking	No			No	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0				0			
v_di, Inbound Pedestrian Volume crossing th	0				0				0			
v_co, Outbound Pedestrian Volume along th	0				0				0			
v_ci, Inbound Pedestrian Volume along the e	0				0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0				0			
Bicycle Volume [bicycles/h]	0				0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss
Signal Group	0	4	0	0	0	0	4	0	0	2	6	6
Auxiliary Signal Groups										2	2,3,6	2
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	0	0	8	0	0	11	9	9
Maximum Green [s]	0	20	0	0	0	0	20	0	0	30	30	30
Amber [s]	0.0	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.9	3.9	3.9
All red [s]	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.8	1.8	1.8
Split [s]	0	24	0	0	0	0	24	0	0	41	41	41
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	0	0	7	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	0	0	10	0	0	0	0	0
Rest In Walk												
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	3.7	3.7	3.7
Minimum Recall		No					No			No	No	
Maximum Recall		No					No			Yes	Yes	
Pedestrian Recall		No					No			Yes	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.80	5.70	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.80	3.70	0.00
g_i, Effective Green Time [s]	12	12	12	44	94
g / C, Green / Cycle	0.12	0.12	0.12	0.44	0.94
(v / s)_i Volume / Saturation Flow Rate	0.07	0.04	0.08	0.18	0.49
s, saturation flow rate [veh/h]	932	1589	1054	3560	1589
c, Capacity [veh/h]	176	185	170	1562	1499
d1, Uniform Delay [s]	41.62	40.85	41.91	19.22	0.32
k, delay calibration	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.17	1.28	2.40	0.81	1.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.38	0.51	0.41	0.52
d, Delay for Lane Group [s/veh]	42.79	42.13	44.31	20.03	1.64
Lane Group LOS	D	D	D	C	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.47	1.65	2.21	5.16	0.55
50th-Percentile Queue Length [ft/ln]	36.72	41.29	55.22	129.09	13.69
95th-Percentile Queue Length [veh/ln]	2.64	2.97	3.98	8.89	0.99
95th-Percentile Queue Length [ft/ln]	66.09	74.32	99.40	222.26	24.64



Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.79	42.79	42.13	42.13	44.31	0.00	44.31	44.31	0.00	20.03	1.64	1.64
Movement LOS	D	D	D	D	D		D	D		C	A	A
d_A, Approach Delay [s/veh]	42.44				44.31				9.92			
Approach LOS	D				D				A			
d_I, Intersection Delay [s/veh]	18.57											
Intersection LOS	B											
Intersection V/C	0.360											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0				11.0				11.0			
M_corner, Corner Circulation Area [ft ² /ped]	0.00				0.00				0.00			
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00				0.00				0.00			
d_p, Pedestrian Delay [s]	39.61				39.61				39.61			
I_p,int, Pedestrian LOS Score for Intersection	2.560				1.773				3.527			
Crosswalk LOS	B				A				D			
s_b, Saturation Flow Rate of the bicycle lane	2000				2000				2000			
c_b, Capacity of the bicycle lane [bicycles/h]	384				384				706			
d_b, Bicycle Delay [s]	32.64				32.64				20.93			
I_b,int, Bicycle LOS Score for Intersection	1.764				1.703				2.728			
Bicycle LOS	A				A				B			

Intersection Setup

Name	Temple St				Beverly Blvd			
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			
Grade [%]	0.00				0.00			
Curb Present	No				No			
Crosswalk	No				Yes			

Volumes

Name	Temple St				Beverly Blvd			
Base Volume Input [veh/h]	0	0	779	15	2	380	0	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0200	1.0200	1.0000	1.0200	1.0000	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	8	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	803	15	2	388	0	18
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	201	4	1	97	0	5
Total Analysis Volume [veh/h]	0	0	803	15	2	388	0	18
Presence of On-Street Parking	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing the intersection	0				0			
v_di, Inbound Pedestrian Volume crossing the intersection	0				0			
v_co, Outbound Pedestrian Volume along the corridor	0				0			
v_ci, Inbound Pedestrian Volume along the corridor	0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0			
Bicycle Volume [bicycles/h]	0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split	Split	Split
Signal Group	0	0	2	0	0	3	0	0
Auxiliary Signal Groups								
Lead / Lag	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	11	0	0	13	0	0
Maximum Green [s]	0	0	30	0	0	30	0	0
Amber [s]	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0
All red [s]	0.0	0.0	1.8	0.0	0.0	2.4	0.0	0.0
Split [s]	0	0	41	0	0	34	0	0
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	10	0	0
Rest In Walk								
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	3.7	0.0	0.0	4.3	0.0	0.0
Minimum Recall			No			No		
Maximum Recall			Yes			Yes		
Pedestrian Recall			Yes			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	5.70	5.70	6.30	6.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.70	3.70	4.30	4.30
g_i, Effective Green Time [s]	44	44	28	28
g / C, Green / Cycle	0.44	0.44	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.15	0.15	0.14	0.01
s, saturation flow rate [veh/h]	3560	1852	2752	1589
c, Capacity [veh/h]	1562	812	779	440
d1, Uniform Delay [s]	18.60	18.47	32.16	26.44
k, delay calibration	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	1.12	2.31	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.34	0.50	0.04
d, Delay for Lane Group [s/veh]	19.22	19.59	34.47	26.61
Lane Group LOS	B	B	C	C
Critical Lane Group	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.23	4.32	4.28	0.33
50th-Percentile Queue Length [ft/ln]	105.70	107.95	107.09	8.36
95th-Percentile Queue Length [veh/ln]	7.60	7.73	7.68	0.60
95th-Percentile Queue Length [ft/ln]	190.01	193.15	191.95	15.05

Movement, Approach, & Intersection Results

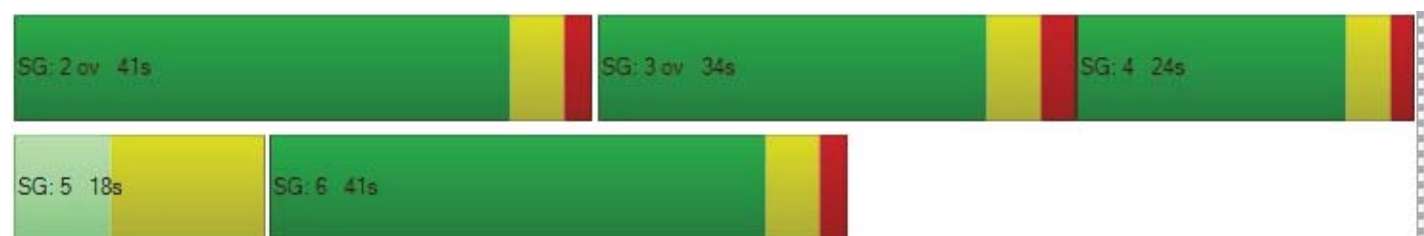
d_M, Delay for Movement [s/veh]	0.00	0.00	19.34	19.59	34.47	34.47	0.00	26.61
Movement LOS			B	B	C	C		C
d_A, Approach Delay [s/veh]	19.34				34.12			
Approach LOS	B				C			
d_I, Intersection Delay [s/veh]	18.57							
Intersection LOS	B							
Intersection V/C	0.360							

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.425
Crosswalk LOS	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	554
d_b, Bicycle Delay [s]	50.00	26.14
I_b,int, Bicycle LOS Score for Intersection	4.582	1.560
Bicycle LOS	E	A

Sequence

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







Intersection Level Of Service Report

Intersection 3: Vermont Ave/1st St

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 24.4
 Level Of Service: C
 Volume to Capacity (v/c): 0.943

Intersection Setup

Name	Vermont Ave						1st St					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
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
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Vermont Ave						1st St					
Base Volume Input [veh/h]	32	1110	69	99	1243	83	144	378	49	105	332	211
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	8	0	19	28	0	0	3	0	0	12	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	1140	70	120	1296	85	147	389	50	107	351	221
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	285	18	30	324	21	37	97	13	27	88	55
Total Analysis Volume [veh/h]	33	1140	70	120	1296	85	147	389	50	107	351	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	65.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0
Split [s]	0	56	0	0	56	0	0	33	0	0	33	0
Vehicle Extension [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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.10	6.10	6.10	6.10	6.10	6.10	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.10	4.10	4.10	4.10	4.10	4.10	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	50	50	50	50	50	50	28	28	28	28	28
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.08	0.33	0.33	0.26	0.26	0.26	0.14	0.24	0.53	0.21	0.14
s, saturation flow rate [veh/h]	392	1870	1832	462	3560	1812	1030	1833	201	1702	1589
c, Capacity [veh/h]	228	1037	1016	226	1974	1004	186	560	141	520	486
d1, Uniform Delay [s]	19.01	13.27	13.28	28.48	12.02	12.02	41.66	28.53	43.33	27.34	25.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.33	2.48	2.54	8.96	0.79	1.55	33.56	11.32	36.53	7.11	3.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.59	0.59	0.53	0.46	0.46	0.79	0.78	0.76	0.68	0.46
d, Delay for Lane Group [s/veh]	20.34	15.75	15.82	37.43	12.81	13.57	75.23	39.85	79.86	34.45	28.29
Lane Group LOS	C	B	B	D	B	B	E	D	E	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.53	7.99	7.87	2.83	5.16	5.46	5.02	10.25	3.83	7.53	4.19
50th-Percentile Queue Length [ft/ln]	13.31	199.87	196.67	70.78	129.03	136.61	125.44	256.20	95.64	188.20	104.76
95th-Percentile Queue Length [veh/ln]	0.96	12.63	12.47	5.10	8.89	9.30	8.69	15.50	6.89	12.03	7.54
95th-Percentile Queue Length [ft/ln]	23.97	315.79	311.67	127.41	222.17	232.45	217.28	387.45	172.15	300.70	188.56

Movement, Approach, & Intersection Results

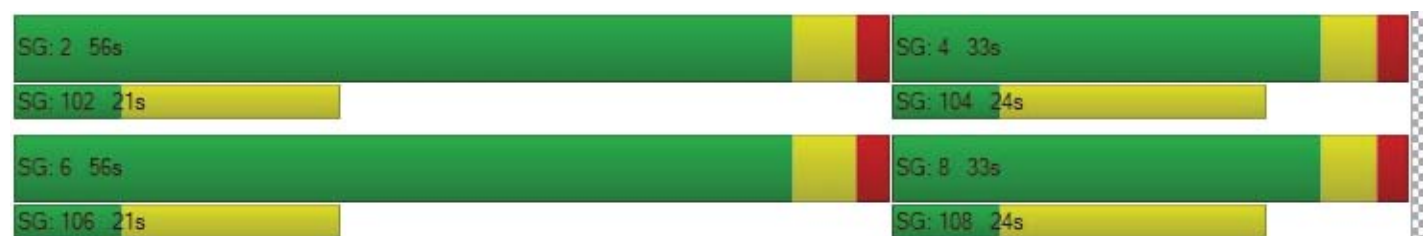
d_M, Delay for Movement [s/veh]	20.34	15.78	15.82	37.43	13.04	13.57	75.23	39.85	39.85	79.86	34.45	28.29
Movement LOS	C	B	B	D	B	B	E	D	D	E	C	C
d_A, Approach Delay [s/veh]	15.90			15.02			48.73			39.60		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	24.38											
Intersection LOS	C											
Intersection V/C	0.943											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	3.116			3.291			2.392			2.674		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1109			1109			611			611		
d_b, Bicycle Delay [s]	8.93			8.93			21.70			21.70		
I_b,int, Bicycle LOS Score for Intersection	2.585			2.385			2.527			2.120		
Bicycle LOS	B			B			B			B		

Sequence

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



Intersection Level Of Service Report

Intersection 4: Westmoreland Ave/1st St

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.488

Intersection Setup

Name	Westmoreland Ave			Westmoreland Ave						1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Westmoreland Ave			Westmoreland Ave						1st St		
Base Volume Input [veh/h]	21	2	24	100	6	261	132	380	15	8	364	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	22	0	0	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	2	24	102	6	266	135	410	15	8	389	95
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	1	6	26	2	67	34	103	4	2	97	24
Total Analysis Volume [veh/h]	21	2	24	102	6	266	135	410	15	8	389	95
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	25	0	0	25	0	0	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	1.6	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Split [s]	0	35	0	0	35	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	2.8	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.70	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.70	2.70	2.70	2.70	2.70	2.70
g_i, Effective Green Time [s]	30	30	60	60	60	60	60	60
g / C, Green / Cycle	0.30	0.30	0.60	0.60	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.04	0.24	0.14	0.22	0.01	0.01	0.21	0.06
s, saturation flow rate [veh/h]	1098	1550	995	1870	1589	976	1870	1589
c, Capacity [veh/h]	384	514	548	1128	958	532	1128	958
d1, Uniform Delay [s]	25.05	31.93	15.72	10.09	7.96	14.08	9.95	8.38
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	9.20	1.07	0.91	0.03	0.05	0.84	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.73	0.25	0.36	0.02	0.02	0.34	0.10
d, Delay for Lane Group [s/veh]	25.70	41.13	16.79	11.00	7.99	14.13	10.79	8.59
Lane Group LOS	C	D	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.87	9.43	1.97	4.56	0.13	0.10	4.26	0.88
50th-Percentile Queue Length [ft/ln]	21.68	235.77	49.36	114.05	3.28	2.57	106.58	21.95
95th-Percentile Queue Length [veh/ln]	1.56	14.47	3.55	8.06	0.24	0.19	7.65	1.58
95th-Percentile Queue Length [ft/ln]	39.03	361.69	88.86	201.62	5.91	4.63	191.23	39.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.70	25.70	25.70	41.13	41.13	41.13	16.79	11.00	7.99	14.13	10.79	8.59
Movement LOS	C	C	C	D	D	D	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	25.70			41.13			12.32			10.42		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	19.43											
Intersection LOS	B											
Intersection V/C	0.488											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.61			39.61			39.61			39.61		
I_p,int, Pedestrian LOS Score for Intersection	1.768			2.207			2.576			2.650		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	604			604			1206			1206		
d_b, Bicycle Delay [s]	24.36			24.36			7.88			7.88		
I_b,int, Bicycle LOS Score for Intersection	1.637			2.177			2.484			2.371		
Bicycle LOS	A			B			B			B		

Sequence

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



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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	Madison Ave/Beverly Blvd	1	0	12	1	2	26	15	1416	79	47	1156	36	2791

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	54	7	63	7	27	41	19	643	773	11	803	15

Northwestbound			Total Volume
2	Left	Right	
2	388	18	2871

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	33	1140	70	120	1296	85	147	389	50	107	351	221	4009

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	21	2	24	102	6	266	135	410	15	8	389	95	1473

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Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Madison Ave/Beverly Blvd	Final Base	1	0	12	1	2	25	15	1359	77	46	1125	35	2698
		Growth Factor	1.02	1.00	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	30	0	0	8	0	38
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	1	0	12	1	2	26	15	1416	79	47	1156	36	2791

ID	Intersection Name	Volume Type	Northbound				Southbound			Eastbound			Westbound	
			Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	Final Base	54	7	63	7	26	41	19	601	758	11	779	15
		Growth Factor	1.00	1.00	1.00	1.00	1.02	1.00	1.02	1.02	1.02	1.00	1.02	1.02
		In Process	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	30	0	0	8	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	54	7	63	7	27	41	19	643	773	11	803	15

Northwestbound			Total Volume
2	Left	Right	
2	380	18	2781
1.00	1.02	1.02	-
0	0	0	0
0	0	0	38
0	0	0	0
2	388	18	2871

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	Final Base	32	1110	69	99	1243	83	144	378	49	105	332	211	3855
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	8	0	19	28	0	0	3	0	0	12	6	76
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	33	1140	70	120	1296	85	147	389	50	107	351	221	4009

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	Final Base	21	2	24	100	6	261	132	380	15	8	364	93	1406
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	22	0	0	18	0	40
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	21	2	24	102	6	266	135	410	15	8	389	95	1473

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Fair Share Volumes

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	12	0	0	2	0	14
3: Zone	0	0	0	0	0	0	0	18	0	0	6	0	24
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	30	0	0	8	0	
Future Total Volume	1	0	12	1	2	26	15	1416	79	47	1156	36	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	12	0	0	2	0	0	0	0	14
3: Zone	0	0	0	0	0	0	0	18	0	0	6	0	0	0	0	24
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	30	0	0	8	0	0	0	0	
Future Total Volume	54	7	63	7	27	41	19	643	773	11	803	15	2	388	18	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	2	0	0	10	0	0	0	0	0	0	0	12
3: Zone	0	6	0	19	18	0	0	0	0	0	0	6	49
4: Zone	0	0	0	0	0	0	0	3	0	0	12	0	15
Site-Generated Trips	0	8	0	19	28	0	0	3	0	0	12	6	
Future Total Volume	33	1140	70	120	1296	85	147	389	50	107	351	221	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	19	0	0	6	0	25
4: Zone	0	0	0	0	0	0	0	3	0	0	12	0	15
Site-Generated Trips	0	0	0	0	0	0	0	22	0	0	18	0	
Future Total Volume	21	2	24	102	6	266	135	410	15	8	389	95	

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Fair Share % of Net New Site

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%	25%	0%	36.84%
3: Zone	0%	0%	0%	0%	0%	0%	0%	60%	0%	0%	75%	0%	63.16%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%	25%	0%	0%	0%	0%	36.84%
3: Zone	0%	0%	0%	0%	0%	0%	0%	60%	0%	0%	75%	0%	0%	0%	0%	63.16%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	25%	0%	0%	35.71%	0%	0%	0%	0%	0%	0%	0%	15.79%
3: Zone	0%	75%	0%	100%	64.29%	0%	0%	0%	0%	0%	0%	100%	64.47%
4: Zone	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	19.74%
Total	0%	100%	0%	100%	100%	0%	0%	100%	0%	0%	100%	100%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%	86.36%	0%	0%	33.33%	0%	62.5%
4: Zone	0%	0%	0%	0%	0%	0%	0%	13.64%	0%	0%	66.67%	0%	37.5%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	

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Scenario 6 FWOP AM

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Fair Share % of Future Total

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0.85%	0%	0%	0.17%	0%	0.5%
3: Zone	0%	0%	0%	0%	0%	0%	0%	1.27%	0%	0%	0.52%	0%	0.86%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	2.12%	0%	0%	0.69%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	1.87%	0%	0%	0.25%	0%	0%	0%	0%	0.49%
3: Zone	0%	0%	0%	0%	0%	0%	0%	2.8%	0%	0%	0.75%	0%	0%	0%	0%	0.84%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	4.67%	0%	0%	1%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0.18%	0%	0%	0.77%	0%	0%	0%	0%	0%	0%	0%	0.3%
3: Zone	0%	0.53%	0%	15.83%	1.39%	0%	0%	0%	0%	0%	0%	2.71%	1.22%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0.77%	0%	0%	3.42%	0%	0.37%
Total	0%	0.7%	0%	15.83%	2.16%	0%	0%	0.77%	0%	0%	3.42%	2.71%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%	4.63%	0%	0%	1.54%	0%	1.7%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0.73%	0%	0%	3.08%	0%	1.02%
Total	0%	0%	0%	0%	0%	0%	0%	5.37%	0%	0%	4.63%	0%	

Signal Warrants Report For Intersection 1: Madison Ave/Beverly Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	1239	1510	13	29
2	1189	1450	12	28
3	1165	1419	12	27
4	991	1208	10	23
5	942	1148	10	22
6	843	1027	9	20
7	781	951	8	18
8	743	906	8	17
9	595	725	6	14
10	558	680	6	13
11	558	680	6	13
12	533	649	6	12
13	483	589	5	11
14	446	544	5	10
15	446	544	5	10
16	434	529	5	10
17	248	302	3	6
18	136	166	1	3
19	124	151	1	3
20	50	60	1	1
21	37	45	0	1
22	37	45	0	1
23	25	30	0	1
24	25	30	0	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2749	2	42	No	No	No	No	No	No	No	No	No	No
2	6	2639	2	40	No	No	No	No	No	No	No	No	No	No
3	6	2584	2	39	No	No	No	No	No	No	No	No	No	No
4	6	2199	2	33	No	No	No	No	No	No	No	No	No	No
5	6	2090	2	32	No	No	No	No	No	No	No	No	No	No
6	6	1870	2	29	No	No	No	No	No	No	No	No	No	No
7	6	1732	2	26	No	No	No	No	No	No	No	No	No	No
8	6	1649	2	25	No	No	No	No	No	No	No	No	No	No
9	6	1320	2	20	No	No	No	No	No	No	No	No	No	No
10	6	1238	2	19	No	No	No	No	No	No	No	No	No	No
11	6	1238	2	19	No	No	No	No	No	No	No	No	No	No
12	6	1182	2	18	No	No	No	No	No	No	No	No	No	No
13	6	1072	2	16	No	No	No	No	No	No	No	No	No	No
14	6	990	2	15	No	No	No	No	No	No	No	No	No	No
15	6	990	2	15	No	No	No	No	No	No	No	No	No	No
16	6	963	2	15	No	No	No	No	No	No	No	No	No	No
17	6	550	2	9	No	No	No	No	No	No	No	No	No	No
18	6	302	2	4	No	No	No	No	No	No	No	No	No	No
19	6	275	2	4	No	No	No	No	No	No	No	No	No	No
20	6	110	2	2	No	No	No	No	No	No	No	No	No	No
21	6	82	2	1	No	No	No	No	No	No	No	No	No	No
22	6	82	2	1	No	No	No	No	No	No	No	No	No	No
23	6	55	2	1	No	No	No	No	No	No	No	No	No	No
24	6	55	2	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	24.8	45.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	0:22
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	13	29
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2791	2791
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

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Scenario 6 FWOP AM

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Trip Generation summary**Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
2: Zone				1.000	0.000	50.00	50.00	8	46	54	13.53
3: Zone				1.000	0.000	50.00	50.00	47	149	196	49.12
4: Zone				1.000	0.000	50.00	50.00	30	119	149	37.34
Added Trips Total								85	314	399	100.00

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Scenario 6 FWOP AM

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Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	0	10.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	0	10.00	0
9: Gate	2.00	0	2.00	0
10: Gate	33.00	0	33.00	0
11: Gate	0.00	0	0.00	0
12: Gate	45.00	0	45.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 2: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	2	25.00	12
6: Gate	25.00	2	25.00	12
7: Gate	0.00	0	0.00	0
8: Gate	25.00	2	25.00	12
9: Gate	0.00	0	0.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	25.00	2	25.00	10
13: Gate	0.00	0	0.00	0
Total	100.00	8	100.00	46

Zone / Gate	Zone 3: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	12	25.00	37
6: Gate	25.00	12	25.00	38
7: Gate	0.00	0	0.00	0
8: Gate	12.00	6	12.00	18
9: Gate	13.00	6	13.00	19
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	12.00	6	12.00	18
13: Gate	13.00	6	13.00	19
Total	100.00	48	100.00	149

Zone / Gate	Zone 4: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
5: Gate	0.00	0	0.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	0.00	0	0.00	0
9: Gate	80.00	24	80.00	95
10: Gate	10.00	3	10.00	12
11: Gate	0.00	0	0.00	0
12: Gate	0.00	0	0.00	0
13: Gate	10.00	3	10.00	12
Total	100.00	30	100.00	119

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Scenario 8 FWOP PM

Report File: J:\...\FWOP PM_2.pdf

10/1/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave/Beverly Blvd	Two-way stop	HCM 6th Edition	SB Thru	0.061	228.1	F
2	Westmoreland Ave/Beverly Blvd	Signalized	HCM 6th Edition	NB Right	0.502	19.9	B
3	Vermont Ave/1st St	Signalized	HCM 6th Edition	WB Left	10,975.939	35.4	D
4	Westmoreland Ave/1st St	Signalized	HCM 6th Edition	SB Right	0.399	15.3	B

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




Intersection Level Of Service Report

Intersection 1: Madison Ave/Beverly Blvd

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 228.1
 Level Of Service: F
 Volume to Capacity (v/c): 0.061

Intersection Setup

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Base Volume Input [veh/h]	2	0	9	1	1	19	7	1378	34	51	1017	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0000	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	11	0	0	17	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]	2	0	9	1	1	19	7	1417	35	52	1054	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	0	0	5	2	354	9	13	264	4
Total Analysis Volume [veh/h]	2	0	9	1	1	19	7	1417	35	52	1054	17
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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report

Intersection 2: Westmoreland Ave/Beverly Blvd

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.502

Intersection Setup

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
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 Pocket	0	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00				30.00				30.00			
Grade [%]	0.00				0.00				0.00			
Curb Present	No				No				No			
Crosswalk	Yes				Yes				Yes			

Volumes

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Base Volume Input [veh/h]	28	8	106	16	43	0	29	12	0	798	565	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0200	1.0000	1.0000	1.0200	1.0000	1.0200	1.0200	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	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	8	106	16	44	0	29	12	0	825	576	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	27	4	11	0	7	3	0	206	144	4
Total Analysis Volume [veh/h]	28	8	106	16	44	0	29	12	0	825	576	15
Presence of On-Street Parking	No			No	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0				0			
v_di, Inbound Pedestrian Volume crossing th	0				0				0			
v_co, Outbound Pedestrian Volume along th	0				0				0			
v_ci, Inbound Pedestrian Volume along the e	0				0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0				0			
Bicycle Volume [bicycles/h]	0				0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss
Signal Group	0	4	0	0	0	0	4	0	0	2	6	6
Auxiliary Signal Groups										2	2,3,6	2
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	0	0	8	0	0	11	9	9
Maximum Green [s]	0	20	0	0	0	0	20	0	0	30	30	30
Amber [s]	0.0	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.9	3.9	3.9
All red [s]	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.8	1.8	1.8
Split [s]	0	24	0	0	0	0	24	0	0	41	41	41
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	0	0	7	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	0	0	10	0	0	0	0	0
Rest In Walk												
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	3.7	3.7	3.7
Minimum Recall		No					No			No	No	
Maximum Recall		No					No			Yes	Yes	
Pedestrian Recall		No					No			Yes	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.80	5.70	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.80	3.70	0.00
g_i, Effective Green Time [s]	10	10	10	46	94
g / C, Green / Cycle	0.10	0.10	0.10	0.46	0.94
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.07	0.23	0.37
s, saturation flow rate [veh/h]	1355	1589	1239	3560	1589
c, Capacity [veh/h]	198	157	177	1623	1499
d1, Uniform Delay [s]	41.54	43.96	44.08	19.27	0.26
k, delay calibration	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	8.33	2.01	1.14	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.77	0.48	0.51	0.39
d, Delay for Lane Group [s/veh]	41.98	52.28	46.10	20.41	1.04
Lane Group LOS	D	D	D	C	A
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.84	3.29	2.14	6.82	0.33
50th-Percentile Queue Length [ft/ln]	21.03	82.25	53.53	170.59	8.13
95th-Percentile Queue Length [veh/ln]	1.51	5.92	3.85	11.11	0.59
95th-Percentile Queue Length [ft/ln]	37.85	148.06	96.35	277.70	14.64



Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.98	41.98	52.28	52.28	46.10	0.00	46.10	46.10	0.00	20.41	1.04	1.04
Movement LOS	D	D	D	D	D		D	D		C	A	A
d_A, Approach Delay [s/veh]	49.94				46.10				12.33			
Approach LOS	D				D				B			
d_I, Intersection Delay [s/veh]	19.88											
Intersection LOS	B											
Intersection V/C	0.502											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0				11.0				11.0			
M_corner, Corner Circulation Area [ft ² /ped]	0.00				0.00				0.00			
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00				0.00				0.00			
d_p, Pedestrian Delay [s]	39.61				39.61				39.61			
I_p,int, Pedestrian LOS Score for Intersection	2.534				1.769				3.433			
Crosswalk LOS	B				A				C			
s_b, Saturation Flow Rate of the bicycle lane	2000				2000				2000			
c_b, Capacity of the bicycle lane [bicycles/h]	384				384				706			
d_b, Bicycle Delay [s]	32.64				32.64				20.93			
I_b,int, Bicycle LOS Score for Intersection	1.794				1.700				2.715			
Bicycle LOS	A				A				B			

Intersection Setup

Name	Temple St				Beverly Blvd			
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			
Grade [%]	0.00				0.00			
Curb Present	No				No			
Crosswalk	No				Yes			

Volumes

Name	Temple St				Beverly Blvd			
Base Volume Input [veh/h]	0	0	682	9	1	360	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0200	1.0200	1.0000	1.0200	1.0000	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	17	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	713	9	1	367	0	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	178	2	0	92	0	6
Total Analysis Volume [veh/h]	0	0	713	9	1	367	0	22
Presence of On-Street Parking	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing the intersection	0				0			
v_di, Inbound Pedestrian Volume crossing the intersection	0				0			
v_co, Outbound Pedestrian Volume along the corridor	0				0			
v_ci, Inbound Pedestrian Volume along the corridor	0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0			
Bicycle Volume [bicycles/h]	0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split	Split	Split
Signal Group	0	0	2	0	0	3	0	0
Auxiliary Signal Groups								
Lead / Lag	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	11	0	0	13	0	0
Maximum Green [s]	0	0	30	0	0	30	0	0
Amber [s]	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0
All red [s]	0.0	0.0	1.8	0.0	0.0	2.4	0.0	0.0
Split [s]	0	0	41	0	0	34	0	0
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	10	0	0
Rest In Walk								
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	3.7	0.0	0.0	4.3	0.0	0.0
Minimum Recall			No			No		
Maximum Recall			Yes			Yes		
Pedestrian Recall			Yes			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	5.70	5.70	6.30	6.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.70	3.70	4.30	4.30
g_i, Effective Green Time [s]	46	46	28	28
g / C, Green / Cycle	0.46	0.46	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.14	0.13	0.13	0.01
s, saturation flow rate [veh/h]	3560	1858	2752	1589
c, Capacity [veh/h]	1623	847	779	440
d1, Uniform Delay [s]	17.12	17.01	31.86	26.50
k, delay calibration	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	0.84	2.06	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.28	0.47	0.05
d, Delay for Lane Group [s/veh]	17.59	17.85	33.93	26.72
Lane Group LOS	B	B	C	C
Critical Lane Group	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.51	3.58	3.99	0.41
50th-Percentile Queue Length [ft/ln]	87.71	89.49	99.86	10.25
95th-Percentile Queue Length [veh/ln]	6.32	6.44	7.19	0.74
95th-Percentile Queue Length [ft/ln]	157.88	161.07	179.75	18.45

Movement, Approach, & Intersection Results

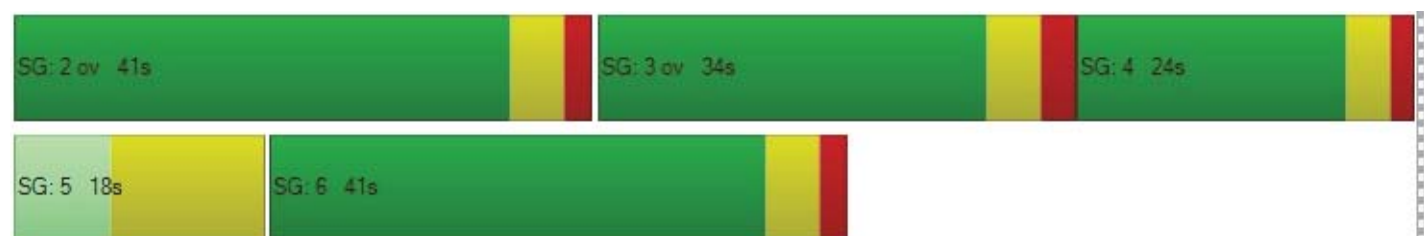
d_M, Delay for Movement [s/veh]	0.00	0.00	17.67	17.85	33.93	33.93	0.00	26.72
Movement LOS			B	B	C	C		C
d_A, Approach Delay [s/veh]	17.67				33.52			
Approach LOS	B				C			
d_I, Intersection Delay [s/veh]	19.88							
Intersection LOS	B							
Intersection V/C	0.502							

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.375
Crosswalk LOS	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	554
d_b, Bicycle Delay [s]	50.00	26.14
I_b,int, Bicycle LOS Score for Intersection	4.530	1.560
Bicycle LOS	E	A

Sequence

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







Intersection Level Of Service Report

Intersection 3: Vermont Ave/1st St

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 35.4
 Level Of Service: D
 Volume to Capacity (v/c): 10,975.939

Intersection Setup

Name	Vermont Ave						1st St					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
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
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Vermont Ave						1st St					
Base Volume Input [veh/h]	72	987	81	117	1257	167	150	470	64	67	345	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	6	9	0	0	16	0	0	11	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	1024	83	125	1291	170	153	495	65	68	363	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	256	21	31	323	43	38	124	16	17	91	24
Total Analysis Volume [veh/h]	73	1024	83	125	1291	170	153	495	65	68	363	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	65.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0
Split [s]	0	56	0	0	56	0	0	33	0	0	33	0
Vehicle Extension [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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.10	6.10	6.10	6.10	6.10	6.10	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.10	4.10	4.10	4.10	4.10	4.10	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	50	50	50	50	50	50	28	28	28	28	28
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.20	0.30	0.30	0.25	0.27	0.27	0.15	0.31	10000.0	0.21	0.06
s, saturation flow rate [veh/h]	363	1870	1821	509	3560	1761	1019	1832	0	1702	1589
c, Capacity [veh/h]	212	1037	1010	254	1974	976	177	560	80	520	486
d1, Uniform Delay [s]	22.82	12.76	12.76	25.89	12.31	12.32	42.29	31.25	45.00	27.59	23.10
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.44	2.04	2.10	6.84	0.89	1.81	53.62	76.21	94.46	7.89	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.54	0.54	0.49	0.50	0.50	0.87	1.00	0.85	0.70	0.20
d, Delay for Lane Group [s/veh]	27.26	14.80	14.86	32.73	13.21	14.12	95.91	107.46	139.46	35.48	24.01
Lane Group LOS	C	B	B	C	B	B	F	F	F	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.43	7.01	6.86	2.70	5.65	5.84	6.05	23.71	3.62	7.92	1.63
50th-Percentile Queue Length [ft/ln]	35.78	175.32	171.42	67.39	141.33	146.05	151.28	592.71	90.46	198.10	40.63
95th-Percentile Queue Length [veh/ln]	2.58	11.36	11.15	4.85	9.55	9.81	10.09	31.70	6.51	12.54	2.93
95th-Percentile Queue Length [ft/ln]	64.40	283.89	278.79	121.30	238.81	245.15	252.14	792.42	162.82	313.52	73.14

Movement, Approach, & Intersection Results

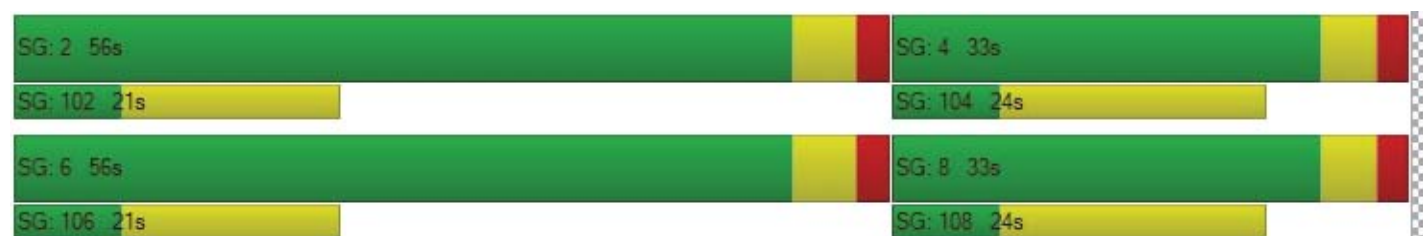
d_M, Delay for Movement [s/veh]	27.26	14.83	14.86	32.73	13.43	14.12	95.91	107.46	107.46	139.46	35.48	24.01
Movement LOS	C	B	B	C	B	B	F	F	F	F	D	C
d_A, Approach Delay [s/veh]	15.60			15.02			104.99			46.80		
Approach LOS	B			B			F			D		
d_I, Intersection Delay [s/veh]	35.39											
Intersection LOS	D											
Intersection V/C	10975.939											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	3.043			3.276			2.502			2.677		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1109			1109			611			611		
d_b, Bicycle Delay [s]	8.93			8.93			21.70			21.70		
I_b,int, Bicycle LOS Score for Intersection	2.533			2.432			2.736			1.994		
Bicycle LOS	B			B			B			A		

Sequence

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



Intersection Level Of Service Report

Intersection 4: Westmoreland Ave/1st St

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.399

Intersection Setup

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Base Volume Input [veh/h]	13	8	17	32	2	131	144	607	24	19	314	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	22	0	0	26	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	8	17	33	2	134	147	641	24	19	346	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	4	8	1	34	37	160	6	5	87	8
Total Analysis Volume [veh/h]	13	8	17	33	2	134	147	641	24	19	346	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	25	0	0	25	0	0	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	1.6	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Split [s]	0	35	0	0	35	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	2.8	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.70	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.70	2.70	2.70	2.70	2.70	2.70
g_i, Effective Green Time [s]	30	30	60	60	60	60	60	60
g / C, Green / Cycle	0.30	0.30	0.60	0.60	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.14	0.34	0.02	0.02	0.19	0.02
s, saturation flow rate [veh/h]	1540	1572	1035	1870	1589	788	1870	1589
c, Capacity [veh/h]	513	518	582	1128	958	368	1128	958
d1, Uniform Delay [s]	24.91	27.16	14.99	11.99	8.00	19.95	9.67	8.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	1.68	1.04	2.10	0.05	0.27	0.71	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.33	0.25	0.57	0.03	0.05	0.31	0.03
d, Delay for Lane Group [s/veh]	25.19	28.84	16.03	14.09	8.05	20.22	10.38	8.10
Lane Group LOS	C	C	B	B	A	C	B	A
Critical Lane Group	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.68	3.35	2.09	8.60	0.21	0.31	3.68	0.27
50th-Percentile Queue Length [ft/ln]	17.03	83.79	52.21	214.99	5.28	7.71	91.97	6.85
95th-Percentile Queue Length [veh/ln]	1.23	6.03	3.76	13.41	0.38	0.56	6.62	0.49
95th-Percentile Queue Length [ft/ln]	30.65	150.82	93.98	335.22	9.51	13.88	165.54	12.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.19	25.19	25.19	28.84	28.84	28.84	16.03	14.09	8.05	20.22	10.38	8.10
Movement LOS	C	C	C	C	C	C	B	B	A	C	B	A
d_A, Approach Delay [s/veh]	25.19			28.84			14.26			10.67		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.29											
Intersection LOS	B											
Intersection V/C	0.399											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.61			39.61			39.61			39.61		
I_p,int, Pedestrian LOS Score for Intersection	1.787			2.102			2.578			2.564		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	604			604			1206			1206		
d_b, Bicycle Delay [s]	24.36			24.36			7.88			7.88		
I_b,int, Bicycle LOS Score for Intersection	1.622			1.838			2.899			2.213		
Bicycle LOS	A			A			C			B		

Sequence

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



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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	Madison Ave/Beverly Blvd	2	0	9	1	1	19	7	1417	35	52	1054	17	2614

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	28	8	106	16	44	29	12	825	576	15	713	9

Northwestbound			Total Volume
2	Left	Right	
1	367	22	2771

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	73	1024	83	125	1291	170	153	495	65	68	363	96	4006

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	13	8	17	33	2	134	147	641	24	19	346	31	1415

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Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Madison Ave/Beverly Blvd	Final Base	2	0	9	1	1	19	7	1378	34	51	1017	17	2536
		Growth Factor	1.02	1.00	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	11	0	0	17	0	28
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	2	0	9	1	1	19	7	1417	35	52	1054	17	2614

ID	Intersection Name	Volume Type	Northbound				Southbound			Eastbound			Westbound	
			Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	Final Base	28	8	106	16	43	29	12	798	565	15	682	9
		Growth Factor	1.00	1.00	1.00	1.00	1.02	1.00	1.02	1.02	1.02	1.00	1.02	1.02
		In Process	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	11	0	0	17	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	28	8	106	16	44	29	12	825	576	15	713	9

Northwestbound			Total Volume
2	Left	Right	
1	360	22	2694
1.00	1.02	1.02	-
0	0	0	0
0	0	0	28
0	0	0	0
1	367	22	2771

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	Final Base	72	987	81	117	1257	167	150	470	64	67	345	79	3856
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	17	0	6	9	0	0	16	0	0	11	15	74
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	73	1024	83	125	1291	170	153	495	65	68	363	96	4006

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	Final Base	13	8	17	32	2	131	144	607	24	19	314	30	1341
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	22	0	0	26	0	48
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	13	8	17	33	2	134	147	641	24	19	346	31	1415

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Fair Share Volumes

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	5	0	0	3	0	8
3: Zone	0	0	0	0	0	0	0	6	0	0	14	0	20
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	11	0	0	17	0	
Future Total Volume	2	0	9	1	1	19	7	1417	35	52	1054	17	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	5	0	0	3	0	0	0	0	8
3: Zone	0	0	0	0	0	0	0	6	0	0	14	0	0	0	0	20
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	11	0	0	17	0	0	0	0	
Future Total Volume	28	8	106	16	44	29	12	825	576	15	713	9	1	367	22	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	3	0	0	3	0	0	0	0	0	0	0	6
3: Zone	0	14	0	6	6	0	0	0	0	0	0	15	41
4: Zone	0	0	0	0	0	0	0	16	0	0	11	0	27
Site-Generated Trips	0	17	0	6	9	0	0	16	0	0	11	15	
Future Total Volume	73	1024	83	125	1291	170	153	495	65	68	363	96	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	6	0	0	15	0	21
4: Zone	0	0	0	0	0	0	0	16	0	0	11	0	27
Site-Generated Trips	0	0	0	0	0	0	0	22	0	0	26	0	
Future Total Volume	13	8	17	33	2	134	147	641	24	19	346	31	

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Fair Share % of Net New Site

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	45.45%	0%	0%	17.65%	0%	28.57%
3: Zone	0%	0%	0%	0%	0%	0%	0%	54.55%	0%	0%	82.35%	0%	71.43%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	45.45%	0%	0%	17.65%	0%	0%	0%	0%	28.57%
3: Zone	0%	0%	0%	0%	0%	0%	0%	54.55%	0%	0%	82.35%	0%	0%	0%	0%	71.43%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	17.65%	0%	0%	33.33%	0%	0%	0%	0%	0%	0%	0%	8.11%
3: Zone	0%	82.35%	0%	100%	66.67%	0%	0%	0%	0%	0%	0%	100%	55.41%
4: Zone	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	36.49%
Total	0%	100%	0%	100%	100%	0%	0%	100%	0%	0%	100%	100%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%	27.27%	0%	0%	57.69%	0%	43.75%
4: Zone	0%	0%	0%	0%	0%	0%	0%	72.73%	0%	0%	42.31%	0%	56.25%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	

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Scenario 8 FWOP PM

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Fair Share % of Future Total

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0.35%	0%	0%	0.28%	0%	0.31%
3: Zone	0%	0%	0%	0%	0%	0%	0%	0.42%	0%	0%	1.33%	0%	0.77%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	0.78%	0%	0%	1.61%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0.61%	0%	0%	0.42%	0%	0%	0%	0%	0.29%
3: Zone	0%	0%	0%	0%	0%	0%	0%	0.73%	0%	0%	1.96%	0%	0%	0%	0%	0.72%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	1.33%	0%	0%	2.38%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0.29%	0%	0%	0.23%	0%	0%	0%	0%	0%	0%	0%	0.15%
3: Zone	0%	1.37%	0%	4.8%	0.46%	0%	0%	0%	0%	0%	0%	15.63%	1.02%
4: Zone	0%	0%	0%	0%	0%	0%	0%	3.23%	0%	0%	3.03%	0%	0.67%
Total	0%	1.66%	0%	4.8%	0.7%	0%	0%	3.23%	0%	0%	3.03%	15.63%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%	0.94%	0%	0%	4.34%	0%	1.48%
4: Zone	0%	0%	0%	0%	0%	0%	0%	2.5%	0%	0%	3.18%	0%	1.91%
Total	0%	0%	0%	0%	0%	0%	0%	3.43%	0%	0%	7.51%	0%	

Signal Warrants Report For Intersection 1: Madison Ave/Beverly Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	1123	1459	11	21
2	1078	1401	11	20
3	1056	1371	10	20
4	898	1167	9	17
5	853	1109	8	16
6	764	992	7	14
7	707	919	7	13
8	674	875	7	13
9	539	700	5	10
10	505	657	5	9
11	505	657	5	9
12	483	627	5	9
13	438	569	4	8
14	404	525	4	8
15	404	525	4	8
16	393	511	4	7
17	225	292	2	4
18	124	160	1	2
19	112	146	1	2
20	45	58	0	1
21	34	44	0	1
22	34	44	0	1
23	22	29	0	0
24	22	29	0	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2582	2	32	No	No	No	No	No	No	No	No	No	No
2	6	2479	2	31	No	No	No	No	No	No	No	No	No	No
3	6	2427	2	30	No	No	No	No	No	No	No	No	No	No
4	6	2065	2	26	No	No	No	No	No	No	No	No	No	No
5	6	1962	2	24	No	No	No	No	No	No	No	No	No	No
6	6	1756	2	21	No	No	No	No	No	No	No	No	No	No
7	6	1626	2	20	No	No	No	No	No	No	No	No	No	No
8	6	1549	2	20	No	No	No	No	No	No	No	No	No	No
9	6	1239	2	15	No	No	No	No	No	No	No	No	No	No
10	6	1162	2	14	No	No	No	No	No	No	No	No	No	No
11	6	1162	2	14	No	No	No	No	No	No	No	No	No	No
12	6	1110	2	14	No	No	No	No	No	No	No	No	No	No
13	6	1007	2	12	No	No	No	No	No	No	No	No	No	No
14	6	929	2	12	No	No	No	No	No	No	No	No	No	No
15	6	929	2	12	No	No	No	No	No	No	No	No	No	No
16	6	904	2	11	No	No	No	No	No	No	No	No	No	No
17	6	517	2	6	No	No	No	No	No	No	No	No	No	No
18	6	284	2	3	No	No	No	No	No	No	No	No	No	No
19	6	258	2	3	No	No	No	No	No	No	No	No	No	No
20	6	103	2	1	No	No	No	No	No	No	No	No	No	No
21	6	78	2	1	No	No	No	No	No	No	No	No	No	No
22	6	78	2	1	No	No	No	No	No	No	No	No	No	No
23	6	51	2	0	No	No	No	No	No	No	No	No	No	No
24	6	51	2	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	30.3	28.6
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	0:10
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	11	21
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2614	2614
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

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Scenario 8 FWOP PM

Report File: J:\...\FWOP PM_2.pdf

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Trip Generation summary**Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	0	0	0	0.00
2: Zone				1.000	0.000	50.00	50.00	12	18	30	6.47
3: Zone				1.000	0.000	50.00	50.00	113	46	159	34.27
4: Zone				1.000	0.000	50.00	50.00	164	111	275	59.27
Added Trips Total								289	175	464	100.00

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Scenario 8 FWOP PM

Report File: J:\...\FWOP PM_2.pdf

10/1/2019

Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	0	10.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	0	10.00	0
9: Gate	2.00	0	2.00	0
10: Gate	33.00	0	33.00	0
11: Gate	0.00	0	0.00	0
12: Gate	45.00	0	45.00	0
13: Gate	0.00	0	0.00	0
Total	100.00	0	100.00	0

Zone / Gate	Zone 2: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	3	25.00	5
6: Gate	25.00	3	25.00	5
7: Gate	0.00	0	0.00	0
8: Gate	25.00	3	25.00	5
9: Gate	0.00	0	0.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	25.00	3	25.00	3
13: Gate	0.00	0	0.00	0
Total	100.00	12	100.00	18

Zone / Gate	Zone 3: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	28	25.00	12
6: Gate	25.00	28	25.00	10
7: Gate	0.00	0	0.00	0
8: Gate	12.00	14	12.00	6
9: Gate	13.00	15	13.00	6
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	12.00	14	12.00	6
13: Gate	13.00	15	13.00	6
Total	100.00	114	100.00	46

Zone / Gate	Zone 4: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
5: Gate	0.00	0	0.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	0.00	0	0.00	0
9: Gate	80.00	131	80.00	89
10: Gate	10.00	16	10.00	11
11: Gate	0.00	0	0.00	0
12: Gate	0.00	0	0.00	0
13: Gate	10.00	16	10.00	11
Total	100.00	163	100.00	111

**APPENDIX F –
Future With-Project LOS Worksheets**

Vistro File: J:\...\JB71259 241 Westmoreland_Vistro.vistro
Report File: J:\...\FWP AM_2.pdf

Scenario 5 FWP AM
10/1/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave/Beverly Blvd	Two-way stop	HCM 6th Edition	SB Thru	0.168	317.6	F
2	Westmoreland Ave/Beverly Blvd	Signalized	HCM 6th Edition	SB Thru	0.366	18.5	B
3	Vermont Ave/1st St	Signalized	HCM 6th Edition	WB Left	1.320	42.2	D
4	Westmoreland Ave/1st St	Signalized	HCM 6th Edition	SB Right	0.566	30.4	C





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: Madison Ave/Beverly Blvd

Control Type:	Two-way stop	Delay (sec / veh):	317.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.168

Intersection Setup

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Base Volume Input [veh/h]	1	0	12	1	2	25	15	1359	77	46	1125	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0000	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	15	0	0	0	0	47	0	0	8	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]	16	0	27	1	2	26	15	1433	79	47	1156	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	7	0	1	7	4	358	20	12	289	9
Total Analysis Volume [veh/h]	16	0	27	1	2	26	15	1433	79	47	1156	36
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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report

Intersection 2: Westmoreland Ave/Beverly Blvd

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.366

Intersection Setup

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
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 Pocket	0	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00				30.00				30.00			
Grade [%]	0.00				0.00				0.00			
Curb Present	No				No				No			
Crosswalk	Yes				Yes				Yes			

Volumes

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Base Volume Input [veh/h]	54	7	63	7	26	0	41	19	0	601	758	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0200	1.0000	1.0000	1.0200	1.0000	1.0200	1.0200	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	45	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	7	63	7	27	0	41	19	0	658	773	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	2	16	2	7	0	10	5	0	165	193	7
Total Analysis Volume [veh/h]	54	7	63	7	27	0	41	19	0	658	773	28
Presence of On-Street Parking	No			No	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0				0			
v_di, Inbound Pedestrian Volume crossing th	0				0				0			
v_co, Outbound Pedestrian Volume along th	0				0				0			
v_ci, Inbound Pedestrian Volume along the e	0				0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0				0			
Bicycle Volume [bicycles/h]	0				0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss
Signal Group	0	4	0	0	0	0	4	0	0	2	6	6
Auxiliary Signal Groups										2	2,3,6	2
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	0	0	8	0	0	11	9	9
Maximum Green [s]	0	20	0	0	0	0	20	0	0	30	30	30
Amber [s]	0.0	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.9	3.9	3.9
All red [s]	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.8	1.8	1.8
Split [s]	0	24	0	0	0	0	24	0	0	41	41	41
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	0	0	7	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	0	0	10	0	0	0	0	0
Rest In Walk												
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	3.7	3.7	3.7
Minimum Recall		No					No			No	No	
Maximum Recall		No					No			Yes	Yes	
Pedestrian Recall		No					No			Yes	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.80	5.70	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.80	3.70	0.00
g_i, Effective Green Time [s]	12	12	12	44	94
g / C, Green / Cycle	0.12	0.12	0.12	0.44	0.94
(v / s)_i Volume / Saturation Flow Rate	0.07	0.04	0.08	0.18	0.50
s, saturation flow rate [veh/h]	932	1589	1054	3560	1589
c, Capacity [veh/h]	176	185	170	1562	1499
d1, Uniform Delay [s]	41.62	40.85	41.91	19.32	0.33
k, delay calibration	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.17	1.28	2.40	0.84	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.38	0.51	0.42	0.53
d, Delay for Lane Group [s/veh]	42.79	42.13	44.31	20.16	1.70
Lane Group LOS	D	D	D	C	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.47	1.65	2.21	5.31	0.57
50th-Percentile Queue Length [ft/ln]	36.72	41.29	55.22	132.84	14.32
95th-Percentile Queue Length [veh/ln]	2.64	2.97	3.98	9.09	1.03
95th-Percentile Queue Length [ft/ln]	66.09	74.32	99.40	227.35	25.78



Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.79	42.79	42.13	42.13	44.31	0.00	44.31	44.31	0.00	20.16	1.70	1.70
Movement LOS	D	D	D	D	D		D	D		C	A	A
d_A, Approach Delay [s/veh]	42.44				44.31				10.03			
Approach LOS	D				D				B			
d_I, Intersection Delay [s/veh]	18.53											
Intersection LOS	B											
Intersection V/C	0.366											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0				11.0				11.0			
M_corner, Corner Circulation Area [ft ² /ped]	0.00				0.00				0.00			
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00				0.00				0.00			
d_p, Pedestrian Delay [s]	39.61				39.61				39.61			
I_p,int, Pedestrian LOS Score for Intersection	2.565				1.773				3.532			
Crosswalk LOS	B				A				D			
s_b, Saturation Flow Rate of the bicycle lane	2000				2000				2000			
c_b, Capacity of the bicycle lane [bicycles/h]	384				384				706			
d_b, Bicycle Delay [s]	32.64				32.64				20.93			
I_b,int, Bicycle LOS Score for Intersection	1.764				1.703				2.740			
Bicycle LOS	A				A				B			

Intersection Setup

Name	Temple St				Beverly Blvd			
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			
Grade [%]	0.00				0.00			
Curb Present	No				No			
Crosswalk	No				Yes			

Volumes

Name	Temple St				Beverly Blvd			
Base Volume Input [veh/h]	0	0	779	15	2	380	0	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0200	1.0200	1.0000	1.0200	1.0000	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	0	8	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	0	803	15	2	388	0	18
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	201	4	1	97	0	5
Total Analysis Volume [veh/h]	17	0	803	15	2	388	0	18
Presence of On-Street Parking	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing the intersection	0				0			
v_di, Inbound Pedestrian Volume crossing the intersection	0				0			
v_co, Outbound Pedestrian Volume along the corridor	0				0			
v_ci, Inbound Pedestrian Volume along the corridor	0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0			
Bicycle Volume [bicycles/h]	0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split	Split	Split
Signal Group	0	0	2	0	0	3	0	0
Auxiliary Signal Groups								
Lead / Lag	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	11	0	0	13	0	0
Maximum Green [s]	0	0	30	0	0	30	0	0
Amber [s]	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0
All red [s]	0.0	0.0	1.8	0.0	0.0	2.4	0.0	0.0
Split [s]	0	0	41	0	0	34	0	0
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	10	0	0
Rest In Walk								
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	3.7	0.0	0.0	4.3	0.0	0.0
Minimum Recall			No			No		
Maximum Recall			Yes			Yes		
Pedestrian Recall			Yes			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	5.70	5.70	6.30	6.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.70	3.70	4.30	4.30
g_i, Effective Green Time [s]	44	44	28	28
g / C, Green / Cycle	0.44	0.44	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.15	0.15	0.14	0.01
s, saturation flow rate [veh/h]	3560	1852	2752	1589
c, Capacity [veh/h]	1562	812	779	440
d1, Uniform Delay [s]	18.60	18.47	32.16	26.44
k, delay calibration	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	1.12	2.31	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.34	0.50	0.04
d, Delay for Lane Group [s/veh]	19.22	19.59	34.47	26.61
Lane Group LOS	B	B	C	C
Critical Lane Group	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.23	4.32	4.28	0.33
50th-Percentile Queue Length [ft/ln]	105.70	107.95	107.09	8.36
95th-Percentile Queue Length [veh/ln]	7.60	7.73	7.68	0.60
95th-Percentile Queue Length [ft/ln]	190.01	193.15	191.95	15.05

Movement, Approach, & Intersection Results

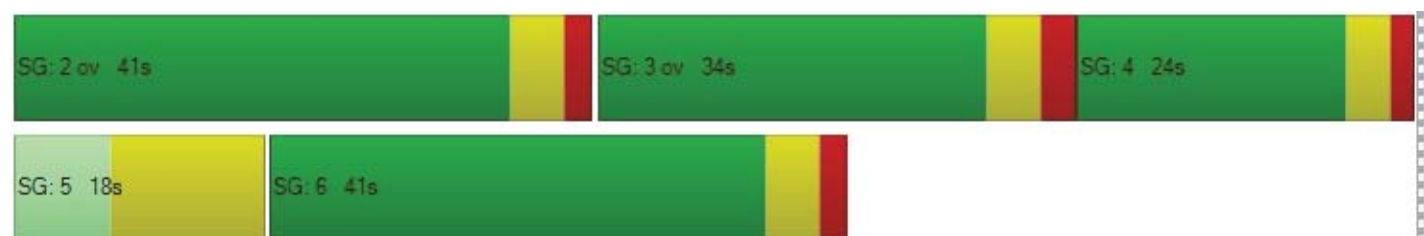
d_M, Delay for Movement [s/veh]	0.00	0.00	19.34	19.59	34.47	34.47	0.00	26.61
Movement LOS			B	B	C	C		C
d_A, Approach Delay [s/veh]	19.34				34.12			
Approach LOS	B				C			
d_I, Intersection Delay [s/veh]	18.53							
Intersection LOS	B							
Intersection V/C	0.366							

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.425
Crosswalk LOS	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	554
d_b, Bicycle Delay [s]	50.00	26.14
I_b,int, Bicycle LOS Score for Intersection	4.582	1.560
Bicycle LOS	E	A

Sequence

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







Intersection Level Of Service Report

Intersection 3: Vermont Ave/1st St

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 42.2
 Level Of Service: D
 Volume to Capacity (v/c): 1.320

Intersection Setup

Name	Vermont Ave						1st St					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
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
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Vermont Ave						1st St					
Base Volume Input [veh/h]	32	1110	69	99	1243	83	144	378	49	105	332	211
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	8	77	19	28	0	0	3	0	64	12	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	1140	147	120	1296	85	147	389	50	171	351	221
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	285	37	30	324	21	37	97	13	43	88	55
Total Analysis Volume [veh/h]	33	1140	147	120	1296	85	147	389	50	171	351	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	65.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0
Split [s]	0	56	0	0	56	0	0	33	0	0	33	0
Vehicle Extension [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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.10	6.10	6.10	6.10	6.10	6.10	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.10	4.10	4.10	4.10	4.10	4.10	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	50	50	50	50	50	50	28	28	28	28	28
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.08	0.35	0.35	0.28	0.26	0.26	0.14	0.24	0.85	0.21	0.14
s, saturation flow rate [veh/h]	392	1870	1796	429	3560	1812	1030	1833	201	1702	1589
c, Capacity [veh/h]	228	1037	996	205	1974	1004	186	560	141	520	486
d1, Uniform Delay [s]	19.01	13.75	13.78	31.47	12.02	12.02	41.66	28.53	43.74	27.34	25.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.33	2.96	3.13	12.29	0.79	1.55	33.56	11.32	439.59	7.11	3.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.63	0.63	0.59	0.46	0.46	0.79	0.78	1.21	0.68	0.46
d, Delay for Lane Group [s/veh]	20.34	16.71	16.91	43.76	12.81	13.57	75.23	39.85	483.33	34.45	28.29
Lane Group LOS	C	B	B	D	B	B	E	D	F	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.53	8.94	8.70	3.14	5.16	5.46	5.02	10.25	20.43	7.53	4.19
50th-Percentile Queue Length [ft/ln]	13.31	223.58	217.41	78.40	129.03	136.61	125.44	256.20	510.69	188.20	104.76
95th-Percentile Queue Length [veh/ln]	0.96	13.85	13.53	5.64	8.89	9.30	8.69	15.50	31.03	12.03	7.54
95th-Percentile Queue Length [ft/ln]	23.97	346.19	338.31	141.12	222.17	232.45	217.28	387.45	775.76	300.70	188.56

Movement, Approach, & Intersection Results

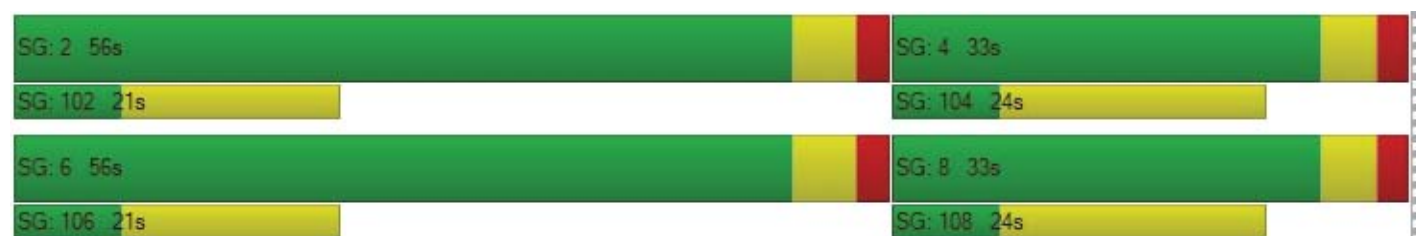
d_M, Delay for Movement [s/veh]	20.34	16.80	16.91	43.76	13.04	13.57	75.23	39.85	39.85	483.33	34.45	28.29
Movement LOS	C	B	B	D	B	B	E	D	D	F	C	C
d_A, Approach Delay [s/veh]	16.90			15.52			48.73			135.92		
Approach LOS	B			B			D			F		
d_I, Intersection Delay [s/veh]	42.20											
Intersection LOS	D											
Intersection V/C	1.320											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	3.233			3.291			2.392			2.697		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1109			1109			611			611		
d_b, Bicycle Delay [s]	8.93			8.93			21.70			21.70		
I_b,int, Bicycle LOS Score for Intersection	2.649			2.385			2.527			2.173		
Bicycle LOS	B			B			B			B		

Sequence

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



Intersection Level Of Service Report

Intersection 4: Westmoreland Ave/1st St

Control Type:	Signalized	Delay (sec / veh):	30.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.566

Intersection Setup

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Westmoreland Ave			Westmoreland Ave			Eastbound			1st St		
Base Volume Input [veh/h]	21	2	24	100	6	261	132	380	15	8	364	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	48	0	64	77	22	0	0	18	57
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	2	24	150	6	330	212	410	15	8	389	152
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	1	6	38	2	83	53	103	4	2	97	38
Total Analysis Volume [veh/h]	21	2	24	150	6	330	212	410	15	8	389	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	25	0	0	25	0	0	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	1.6	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Split [s]	0	35	0	0	35	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	2.8	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.70	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.70	2.70	2.70	2.70	2.70	2.70
g_i, Effective Green Time [s]	30	30	60	60	60	60	60	60
g / C, Green / Cycle	0.30	0.30	0.60	0.60	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.05	0.31	0.21	0.22	0.01	0.01	0.21	0.10
s, saturation flow rate [veh/h]	1036	1555	995	1870	1589	976	1870	1589
c, Capacity [veh/h]	365	517	548	1128	958	532	1128	958
d1, Uniform Delay [s]	25.05	35.15	17.27	10.09	7.96	14.08	9.95	8.71
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	40.06	2.07	0.91	0.03	0.05	0.84	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.94	0.39	0.36	0.02	0.02	0.34	0.16
d, Delay for Lane Group [s/veh]	25.77	75.21	19.34	11.00	7.99	14.13	10.79	9.07
Lane Group LOS	C	E	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.87	17.40	3.44	4.56	0.13	0.10	4.26	1.46
50th-Percentile Queue Length [ft/ln]	21.79	435.12	85.98	114.05	3.28	2.57	106.58	36.57
95th-Percentile Queue Length [veh/ln]	1.57	24.25	6.19	8.06	0.24	0.19	7.65	2.63
95th-Percentile Queue Length [ft/ln]	39.21	606.17	154.76	201.62	5.91	4.63	191.23	65.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.77	25.77	25.77	75.21	75.21	75.21	19.34	11.00	7.99	14.13	10.79	9.07
Movement LOS	C	C	C	E	E	E	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	25.77			75.21			13.71			10.36		
Approach LOS	C			E			B			B		
d_I, Intersection Delay [s/veh]	30.36											
Intersection LOS	C											
Intersection V/C	0.566											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.61			39.61			39.61			39.61		
I_p,int, Pedestrian LOS Score for Intersection	1.768			2.437			2.603			2.739		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	604			604			1206			1206		
d_b, Bicycle Delay [s]	24.36			24.36			7.88			7.88		
I_b,int, Bicycle LOS Score for Intersection	1.637			2.362			2.611			2.465		
Bicycle LOS	A			B			B			B		

Sequence

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



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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	Madison Ave/Beverly Blvd	16	0	27	1	2	26	15	1433	79	47	1156	36	2838

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	54	7	63	7	27	41	19	658	773	28	803	15

Northwestbound			Total Volume
2	Left	Right	
2	388	18	2903

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	33	1140	147	120	1296	85	147	389	50	171	351	221	4150

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	21	2	24	150	6	330	212	410	15	8	389	152	1719

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Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Madison Ave/Beverly Blvd	Final Base	1	0	12	1	2	25	15	1359	77	46	1125	35	2698
		Growth Factor	1.02	1.00	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	15	0	15	0	0	0	0	47	0	0	8	0	85
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	16	0	27	1	2	26	15	1433	79	47	1156	36	2838

ID	Intersection Name	Volume Type	Northbound				Southbound			Eastbound			Westbound	
			Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	Final Base	54	7	63	7	26	41	19	601	758	11	779	15
		Growth Factor	1.00	1.00	1.00	1.00	1.02	1.00	1.02	1.02	1.02	1.00	1.02	1.02
		In Process	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	45	0	17	8	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	54	7	63	7	27	41	19	658	773	28	803	15

Northwestbound			Total Volume
2	Left	Right	
2	380	18	2781
1.00	1.02	1.02	-
0	0	0	0
0	0	0	70
0	0	0	0
2	388	18	2903

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	Final Base	32	1110	69	99	1243	83	144	378	49	105	332	211	3855
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	8	77	19	28	0	0	3	0	64	12	6	217
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	33	1140	147	120	1296	85	147	389	50	171	351	221	4150

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	Final Base	21	2	24	100	6	261	132	380	15	8	364	93	1406
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	48	0	64	77	22	0	0	18	57	286
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	21	2	24	150	6	330	212	410	15	8	389	152	1719

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Fair Share Volumes

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	15	0	15	0	0	0	0	17	0	0	0	0	47
2: Zone	0	0	0	0	0	0	0	12	0	0	2	0	14
3: Zone	0	0	0	0	0	0	0	18	0	0	6	0	24
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	15	0	15	0	0	0	0	47	0	0	8	0	
Future Total Volume	16	0	27	1	2	26	15	1433	79	47	1156	36	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0	0	0	0	0	0	0	15	0	17	0	0	0	0	0	32
2: Zone	0	0	0	0	0	0	0	12	0	0	2	0	0	0	0	14
3: Zone	0	0	0	0	0	0	0	18	0	0	6	0	0	0	0	24
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	45	0	17	8	0	0	0	0	
Future Total Volume	54	7	63	7	27	41	19	658	773	28	803	15	2	388	18	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	77	0	0	0	0	0	0	64	0	0	141
2: Zone	0	2	0	0	10	0	0	0	0	0	0	0	12
3: Zone	0	6	0	19	18	0	0	0	0	0	0	6	49
4: Zone	0	0	0	0	0	0	0	3	0	0	12	0	15
Site-Generated Trips	0	8	77	19	28	0	0	3	0	64	12	6	
Future Total Volume	33	1140	147	120	1296	85	147	389	50	171	351	221	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	48	0	64	77	0	0	0	0	57	246
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	19	0	0	6	0	25
4: Zone	0	0	0	0	0	0	0	3	0	0	12	0	15
Site-Generated Trips	0	0	0	48	0	64	77	22	0	0	18	57	
Future Total Volume	21	2	24	150	6	330	212	410	15	8	389	152	

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Fair Share % of Net New Site

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	100%	0%	100%	0%	0%	0%	0%	36.17%	0%	0%	0%	0%	55.29%
2: Zone	0%	0%	0%	0%	0%	0%	0%	25.53%	0%	0%	25%	0%	16.47%
3: Zone	0%	0%	0%	0%	0%	0%	0%	38.3%	0%	0%	75%	0%	28.24%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	33.33%	0%	100%	0%	0%	0%	0%	0%	45.71%
2: Zone	0%	0%	0%	0%	0%	0%	0%	26.67%	0%	0%	25%	0%	0%	0%	0%	20%
3: Zone	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%	75%	0%	0%	0%	0%	34.29%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	100%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	64.98%
2: Zone	0%	25%	0%	0%	35.71%	0%	0%	0%	0%	0%	0%	0%	5.53%
3: Zone	0%	75%	0%	100%	64.29%	0%	0%	0%	0%	0%	0%	100%	22.58%
4: Zone	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	6.91%
Total	0%	100%	100%	100%	100%	0%	0%	100%	0%	100%	100%	100%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	100%	0%	100%	100%	0%	0%	0%	0%	100%	86.01%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%	86.36%	0%	0%	33.33%	0%	8.74%
4: Zone	0%	0%	0%	0%	0%	0%	0%	13.64%	0%	0%	66.67%	0%	5.24%
Total	0%	0%	0%	100%	0%	100%	100%	100%	0%	0%	100%	100%	

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Scenario 5 FWP AM

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Fair Share % of Future Total

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	93.75%	0%	55.56%	0%	0%	0%	0%	1.19%	0%	0%	0%	0%	1.66%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0.84%	0%	0%	0.17%	0%	0.49%
3: Zone	0%	0%	0%	0%	0%	0%	0%	1.26%	0%	0%	0.52%	0%	0.85%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	93.75%	0%	55.56%	0%	0%	0%	0%	3.28%	0%	0%	0.69%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	2.28%	0%	60.71%	0%	0%	0%	0%	0%	1.1%
2: Zone	0%	0%	0%	0%	0%	0%	0%	1.82%	0%	0%	0.25%	0%	0%	0%	0%	0.48%
3: Zone	0%	0%	0%	0%	0%	0%	0%	2.74%	0%	0%	0.75%	0%	0%	0%	0%	0.83%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	6.84%	0%	60.71%	1%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	52.38%	0%	0%	0%	0%	0%	0%	37.43%	0%	0%	3.4%
2: Zone	0%	0.18%	0%	0%	0.77%	0%	0%	0%	0%	0%	0%	0%	0.29%
3: Zone	0%	0.53%	0%	15.83%	1.39%	0%	0%	0%	0%	0%	0%	2.71%	1.18%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0.77%	0%	0%	3.42%	0%	0.36%
Total	0%	0.7%	52.38%	15.83%	2.16%	0%	0%	0.77%	0%	37.43%	3.42%	2.71%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	32%	0%	19.39%	36.32%	0%	0%	0%	0%	37.5%	14.31%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%	4.63%	0%	0%	1.54%	0%	1.45%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0.73%	0%	0%	3.08%	0%	0.87%
Total	0%	0%	0%	32%	0%	19.39%	36.32%	5.37%	0%	0%	4.63%	37.5%	

Signal Warrants Report For Intersection 1: Madison Ave/Beverly Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	1239	1527	43	29
2	1189	1466	41	28
3	1165	1435	40	27
4	991	1222	34	23
5	942	1161	33	22
6	843	1038	29	20
7	781	962	27	18
8	743	916	26	17
9	595	733	21	14
10	558	687	19	13
11	558	687	19	13
12	533	657	18	12
13	483	596	17	11
14	446	550	15	10
15	446	550	15	10
16	434	534	15	10
17	248	305	9	6
18	136	168	5	3
19	124	153	4	3
20	50	61	2	1
21	37	46	1	1
22	37	46	1	1
23	25	31	1	1
24	25	31	1	1

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2766	2	72	No	No	No	No	No	No	No	Yes	No	No
2	6	2655	2	69	No	No	No	No	No	No	No	No	No	No
3	6	2600	2	67	No	No	No	No	No	No	No	No	No	No
4	6	2213	2	57	No	No	No	No	No	No	No	No	No	No
5	6	2103	2	55	No	No	No	No	No	No	No	No	No	No
6	6	1881	2	49	No	No	No	No	No	No	No	No	No	No
7	6	1743	2	45	No	No	No	No	No	No	No	No	No	No
8	6	1659	2	43	No	No	No	No	No	No	No	No	No	No
9	6	1328	2	35	No	No	No	No	No	No	No	No	No	No
10	6	1245	2	32	No	No	No	No	No	No	No	No	No	No
11	6	1245	2	32	No	No	No	No	No	No	No	No	No	No
12	6	1190	2	30	No	No	No	No	No	No	No	No	No	No
13	6	1079	2	28	No	No	No	No	No	No	No	No	No	No
14	6	996	2	25	No	No	No	No	No	No	No	No	No	No
15	6	996	2	25	No	No	No	No	No	No	No	No	No	No
16	6	968	2	25	No	No	No	No	No	No	No	No	No	No
17	6	553	2	15	No	No	No	No	No	No	No	No	No	No
18	6	304	2	8	No	No	No	No	No	No	No	No	No	No
19	6	277	2	7	No	No	No	No	No	No	No	No	No	No
20	6	111	2	3	No	No	No	No	No	No	No	No	No	No
21	6	83	2	2	No	No	No	No	No	No	No	No	No	No
22	6	83	2	2	No	No	No	No	No	No	No	No	No	No
23	6	56	2	2	No	No	No	No	No	No	No	No	No	No
24	6	56	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	1	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	100.6	47.4
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:12	0:22
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	43	29
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2838	2838
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

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Scenario 5 FWP AM

Report File: J:\...\FWP AM_2.pdf

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Trip Generation summary**Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	172	145	317	44.27
2: Zone				1.000	0.000	50.00	50.00	8	46	54	7.54
3: Zone				1.000	0.000	50.00	50.00	47	149	196	27.37
4: Zone				1.000	0.000	50.00	50.00	30	119	149	20.81
Added Trips Total								257	459	716	100.00

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Scenario 5 FWP AM

Report File: J:\...\FWP AM_2.pdf

10/1/2019

Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	17	10.00	15
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	17	10.00	15
9: Gate	2.00	3	2.00	3
10: Gate	33.00	57	33.00	48
11: Gate	0.00	0	0.00	0
12: Gate	45.00	77	45.00	64
13: Gate	0.00	0	0.00	0
Total	100.00	171	100.00	145

Zone / Gate	Zone 2: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	2	25.00	12
6: Gate	25.00	2	25.00	12
7: Gate	0.00	0	0.00	0
8: Gate	25.00	2	25.00	12
9: Gate	0.00	0	0.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	25.00	2	25.00	10
13: Gate	0.00	0	0.00	0
Total	100.00	8	100.00	46

Zone / Gate	Zone 3: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	12	25.00	37
6: Gate	25.00	12	25.00	38
7: Gate	0.00	0	0.00	0
8: Gate	12.00	6	12.00	18
9: Gate	13.00	6	13.00	19
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	12.00	6	12.00	18
13: Gate	13.00	6	13.00	19
Total	100.00	48	100.00	149

Zone / Gate	Zone 4: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
5: Gate	0.00	0	0.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	0.00	0	0.00	0
9: Gate	80.00	24	80.00	95
10: Gate	10.00	3	10.00	12
11: Gate	0.00	0	0.00	0
12: Gate	0.00	0	0.00	0
13: Gate	10.00	3	10.00	12
Total	100.00	30	100.00	119

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Scenario 7 FWP PM

Report File: J:\...\FWP PM_2.pdf

10/1/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave/Beverly Blvd	Two-way stop	HCM 6th Edition	SB Thru	0.062	231.2	F
2	Westmoreland Ave/Beverly Blvd	Signalized	HCM 6th Edition	NB Right	0.505	19.9	B
3	Vermont Ave/1st St	Signalized	HCM 6th Edition	WB Left	10,975.951	51.2	D
4	Westmoreland Ave/1st St	Signalized	HCM 6th Edition	SB Right	0.401	16.3	B





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

Intersection Level Of Service Report

Intersection 1: Madison Ave/Beverly Blvd

Control Type:	Two-way stop	Delay (sec / veh):	231.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.062

Intersection Setup

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Madison Ave						Beverly Blvd			Beverly Blvd		
Base Volume Input [veh/h]	2	0	9	1	1	19	7	1378	34	51	1017	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0000	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	0	9	0	0	0	0	18	0	0	17	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]	11	0	18	1	1	19	7	1424	35	52	1054	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	5	0	0	5	2	356	9	13	264	4
Total Analysis Volume [veh/h]	11	0	18	1	1	19	7	1424	35	52	1054	17
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	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report

Intersection 2: Westmoreland Ave/Beverly Blvd

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.505

Intersection Setup

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
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 Pocket	0	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00				30.00				30.00			
Grade [%]	0.00				0.00				0.00			
Curb Present	No				No				No			
Crosswalk	Yes				Yes				Yes			

Volumes

Name	Westmoreland Ave				Westmoreland Ave				Beverly Blvd			
Base Volume Input [veh/h]	28	8	106	16	43	0	29	12	0	798	565	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0200	1.0000	1.0000	1.0200	1.0000	1.0200	1.0200	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	20	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	8	106	16	44	0	29	12	0	834	576	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	27	4	11	0	7	3	0	209	144	6
Total Analysis Volume [veh/h]	28	8	106	16	44	0	29	12	0	834	576	22
Presence of On-Street Parking	No			No	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0				0				0			
v_di, Inbound Pedestrian Volume crossing th	0				0				0			
v_co, Outbound Pedestrian Volume along th	0				0				0			
v_ci, Inbound Pedestrian Volume along the e	0				0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0				0			
Bicycle Volume [bicycles/h]	0				0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss
Signal Group	0	4	0	0	0	0	4	0	0	2	6	6
Auxiliary Signal Groups										2	2,3,6	2
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	0	0	8	0	0	11	9	9
Maximum Green [s]	0	20	0	0	0	0	20	0	0	30	30	30
Amber [s]	0.0	3.2	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.9	3.9	3.9
All red [s]	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.8	1.8	1.8
Split [s]	0	24	0	0	0	0	24	0	0	41	41	41
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	0	0	7	0	0	7	0	0
Pedestrian Clearance [s]	0	10	0	0	0	0	10	0	0	0	0	0
Rest In Walk												
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	3.7	3.7	3.7
Minimum Recall		No					No			No	No	
Maximum Recall		No					No			Yes	Yes	
Pedestrian Recall		No					No			Yes	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.80	5.70	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.80	3.70	0.00
g_i, Effective Green Time [s]	10	10	10	46	94
g / C, Green / Cycle	0.10	0.10	0.10	0.46	0.94
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.07	0.23	0.38
s, saturation flow rate [veh/h]	1355	1589	1239	3560	1589
c, Capacity [veh/h]	198	157	177	1623	1499
d1, Uniform Delay [s]	41.54	43.96	44.08	19.33	0.26
k, delay calibration	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	8.33	2.01	1.17	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.77	0.48	0.51	0.40
d, Delay for Lane Group [s/veh]	41.98	52.28	46.10	20.50	1.06
Lane Group LOS	D	D	D	C	A
Critical Lane Group	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.84	3.29	2.14	6.92	0.33
50th-Percentile Queue Length [ft/ln]	21.03	82.25	53.53	173.08	8.29
95th-Percentile Queue Length [veh/ln]	1.51	5.92	3.85	11.24	0.60
95th-Percentile Queue Length [ft/ln]	37.85	148.06	96.35	280.96	14.93



Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.98	41.98	52.28	52.28	46.10	0.00	46.10	46.10	0.00	20.50	1.06	1.06
Movement LOS	D	D	D	D	D		D	D		C	A	A
d_A, Approach Delay [s/veh]	49.94				46.10				12.38			
Approach LOS	D				D				B			
d_I, Intersection Delay [s/veh]	19.87											
Intersection LOS	B											
Intersection V/C	0.505											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0				11.0				11.0			
M_corner, Corner Circulation Area [ft ² /ped]	0.00				0.00				0.00			
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00				0.00				0.00			
d_p, Pedestrian Delay [s]	39.61				39.61				39.61			
I_p,int, Pedestrian LOS Score for Intersection	2.537				1.769				3.436			
Crosswalk LOS	B				A				C			
s_b, Saturation Flow Rate of the bicycle lane	2000				2000				2000			
c_b, Capacity of the bicycle lane [bicycles/h]	384				384				706			
d_b, Bicycle Delay [s]	32.64				32.64				20.93			
I_b,int, Bicycle LOS Score for Intersection	1.794				1.700				2.723			
Bicycle LOS	A				A				B			

Intersection Setup

Name	Temple St				Beverly Blvd			
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00				30.00			
Grade [%]	0.00				0.00			
Curb Present	No				No			
Crosswalk	No				Yes			

Volumes

Name	Temple St				Beverly Blvd			
Base Volume Input [veh/h]	0	0	682	9	1	360	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0200	1.0200	1.0000	1.0200	1.0000	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	0	17	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	0	713	9	1	367	0	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	178	2	0	92	0	6
Total Analysis Volume [veh/h]	7	0	713	9	1	367	0	22
Presence of On-Street Parking	No			No	No			No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing the intersection	0				0			
v_di, Inbound Pedestrian Volume crossing the intersection	0				0			
v_co, Outbound Pedestrian Volume along the corridor	0				0			
v_ci, Inbound Pedestrian Volume along the corridor	0				0			
v_ab, Corner Pedestrian Volume [ped/h]	0				0			
Bicycle Volume [bicycles/h]	0				0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Split	Split	Split	Split
Signal Group	0	0	2	0	0	3	0	0
Auxiliary Signal Groups								
Lead / Lag	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	11	0	0	13	0	0
Maximum Green [s]	0	0	30	0	0	30	0	0
Amber [s]	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0
All red [s]	0.0	0.0	1.8	0.0	0.0	2.4	0.0	0.0
Split [s]	0	0	41	0	0	34	0	0
Vehicle Extension [s]	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	0	7	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	10	0	0
Rest In Walk								
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	3.7	0.0	0.0	4.3	0.0	0.0
Minimum Recall			No			No		
Maximum Recall			Yes			Yes		
Pedestrian Recall			Yes			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	5
Pedestrian Walk [s]	7
Pedestrian Clearance [s]	11

Lane Group Calculations

Lane Group	C	C	L	R
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	5.70	5.70	6.30	6.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.70	3.70	4.30	4.30
g_i, Effective Green Time [s]	46	46	28	28
g / C, Green / Cycle	0.46	0.46	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.14	0.13	0.13	0.01
s, saturation flow rate [veh/h]	3560	1858	2752	1589
c, Capacity [veh/h]	1623	847	779	440
d1, Uniform Delay [s]	17.12	17.01	31.86	26.50
k, delay calibration	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	0.84	2.06	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.28	0.47	0.05
d, Delay for Lane Group [s/veh]	17.59	17.85	33.93	26.72
Lane Group LOS	B	B	C	C
Critical Lane Group	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.51	3.58	3.99	0.41
50th-Percentile Queue Length [ft/ln]	87.71	89.49	99.86	10.25
95th-Percentile Queue Length [veh/ln]	6.32	6.44	7.19	0.74
95th-Percentile Queue Length [ft/ln]	157.88	161.07	179.75	18.45

Movement, Approach, & Intersection Results

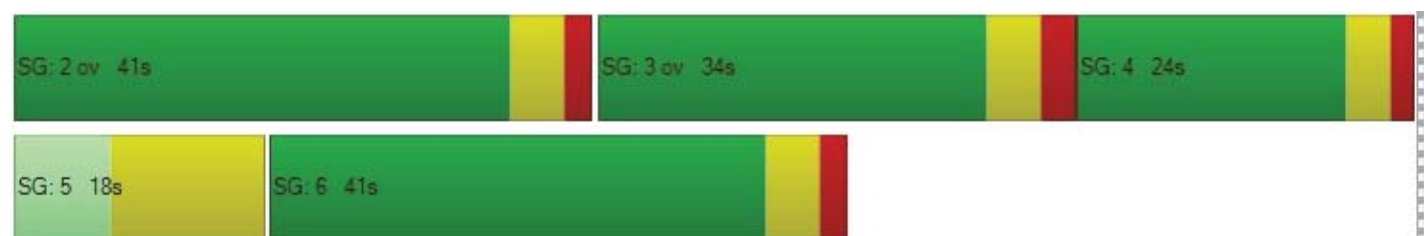
d_M, Delay for Movement [s/veh]	0.00	0.00	17.67	17.85	33.93	33.93	0.00	26.72
Movement LOS			B	B	C	C		C
d_A, Approach Delay [s/veh]	17.67				33.52			
Approach LOS	B				C			
d_I, Intersection Delay [s/veh]	19.87							
Intersection LOS	B							
Intersection V/C	0.505							

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.375
Crosswalk LOS	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	554
d_b, Bicycle Delay [s]	50.00	26.14
I_b,int, Bicycle LOS Score for Intersection	4.530	1.560
Bicycle LOS	E	A

Sequence

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







Intersection Level Of Service Report

Intersection 3: Vermont Ave/1st St

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 1 hour

Delay (sec / veh): 51.2
 Level Of Service: D
 Volume to Capacity (v/c): 10,975.951

Intersection Setup

Name	Vermont Ave						1st St					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
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
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Vermont Ave						1st St					
Base Volume Input [veh/h]	72	987	81	117	1257	167	150	470	64	67	345	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	33	6	9	0	0	16	0	38	11	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	1024	116	125	1291	170	153	495	65	106	363	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	256	29	31	323	43	38	124	16	27	91	24
Total Analysis Volume [veh/h]	73	1024	116	125	1291	170	153	495	65	106	363	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	65.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0
Split [s]	0	56	0	0	56	0	0	33	0	0	33	0
Vehicle Extension [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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	4.1	0.0	0.0	4.1	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	6.10	6.10	6.10	6.10	6.10	6.10	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.10	4.10	4.10	4.10	4.10	4.10	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	50	50	50	50	50	50	28	28	28	28	28
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.20	0.31	0.31	0.25	0.27	0.27	0.15	0.31	10000.0	0.21	0.06
s, saturation flow rate [veh/h]	363	1870	1804	493	3560	1761	1019	1832	0	1702	1589
c, Capacity [veh/h]	212	1037	1000	244	1974	976	177	560	80	520	486
d1, Uniform Delay [s]	22.82	12.95	12.96	26.94	12.31	12.32	42.29	31.25	45.00	27.59	23.10
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.44	2.19	2.29	7.73	0.89	1.81	53.62	76.21	665.62	7.89	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.56	0.56	0.51	0.50	0.50	0.87	1.00	1.32	0.70	0.20
d, Delay for Lane Group [s/veh]	27.26	15.14	15.24	34.66	13.21	14.12	95.91	107.46	710.62	35.48	24.01
Lane Group LOS	C	B	B	C	B	B	F	F	F	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.43	7.38	7.16	2.80	5.65	5.84	6.05	23.71	16.58	7.92	1.63
50th-Percentile Queue Length [ft/ln]	35.78	184.39	179.03	70.00	141.33	146.05	151.28	592.71	414.47	198.10	40.63
95th-Percentile Queue Length [veh/ln]	2.58	11.83	11.55	5.04	9.55	9.81	10.09	31.70	26.88	12.54	2.93
95th-Percentile Queue Length [ft/ln]	64.40	295.74	288.75	126.00	238.81	245.15	252.14	792.42	671.92	313.52	73.14

Movement, Approach, & Intersection Results

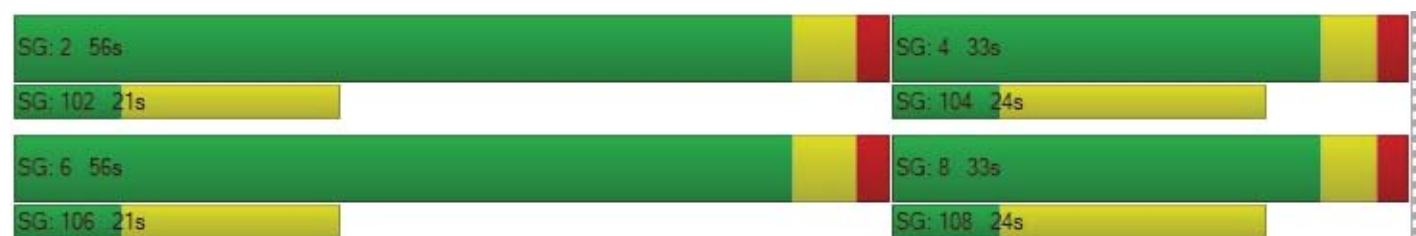
d_M, Delay for Movement [s/veh]	27.26	15.19	15.24	34.66	13.43	14.12	95.91	107.46	107.46	710.62	35.48	24.01
Movement LOS	C	B	B	C	B	B	F	F	F	F	D	C
d_A, Approach Delay [s/veh]	15.92			15.18			104.99			160.19		
Approach LOS	B			B			F			F		
d_I, Intersection Delay [s/veh]	51.20											
Intersection LOS	D											
Intersection V/C	10975.951											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	3.110			3.276			2.502			2.689		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1109			1109			611			611		
d_b, Bicycle Delay [s]	8.93			8.93			21.70			21.70		
I_b,int, Bicycle LOS Score for Intersection	2.560			2.432			2.736			2.026		
Bicycle LOS	B			B			B			B		

Sequence

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



Intersection Level Of Service Report

Intersection 4: Westmoreland Ave/1st St

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.401

Intersection Setup

Name	Westmoreland Ave			Westmoreland Ave						1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Westmoreland Ave			Westmoreland Ave						1st St		
Base Volume Input [veh/h]	13	8	17	32	2	131	144	607	24	19	314	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	29	0	38	33	22	0	0	26	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	8	17	62	2	172	180	641	24	19	346	55
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	4	16	1	43	45	160	6	5	87	14
Total Analysis Volume [veh/h]	13	8	17	62	2	172	180	641	24	19	346	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	67.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	8	0	0	8	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	25	0	0	25	0	0	30	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	1.6	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Split [s]	0	35	0	0	35	0	0	65	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, 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
I2, Clearance Lost Time [s]	0.0	2.8	0.0	0.0	2.8	0.0	0.0	2.7	0.0	0.0	2.7	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.80	4.80	4.70	4.70	4.70	4.70	4.70	4.70
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.80	2.80	2.70	2.70	2.70	2.70	2.70	2.70
g_i, Effective Green Time [s]	30	30	60	60	60	60	60	60
g / C, Green / Cycle	0.30	0.30	0.60	0.60	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.17	0.34	0.02	0.02	0.19	0.03
s, saturation flow rate [veh/h]	1456	1555	1035	1870	1589	788	1870	1589
c, Capacity [veh/h]	488	515	582	1128	958	368	1128	958
d1, Uniform Delay [s]	24.91	28.51	15.57	11.99	8.00	19.95	9.67	8.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	2.95	1.38	2.10	0.05	0.27	0.71	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.46	0.31	0.57	0.03	0.05	0.31	0.06
d, Delay for Lane Group [s/veh]	25.22	31.46	16.95	14.09	8.05	20.22	10.38	8.28
Lane Group LOS	C	C	B	B	A	C	B	A
Critical Lane Group	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.68	4.99	2.66	8.60	0.21	0.31	3.68	0.49
50th-Percentile Queue Length [ft/ln]	17.09	124.77	66.62	214.99	5.28	7.71	91.97	12.36
95th-Percentile Queue Length [veh/ln]	1.23	8.65	4.80	13.41	0.38	0.56	6.62	0.89
95th-Percentile Queue Length [ft/ln]	30.76	216.36	119.92	335.22	9.51	13.88	165.54	22.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.22	25.22	25.22	31.46	31.46	31.46	16.95	14.09	8.05	20.22	10.38	8.28
Movement LOS	C	C	C	C	C	C	B	B	A	C	B	A
d_A, Approach Delay [s/veh]	25.22			31.46			14.53			10.55		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.30											
Intersection LOS	B											
Intersection V/C	0.401											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.61			39.61			39.61			39.61		
I_p,int, Pedestrian LOS Score for Intersection	1.787			2.209			2.592			2.615		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	604			604			1206			1206		
d_b, Bicycle Delay [s]	24.36			24.36			7.88			7.88		
I_b,int, Bicycle LOS Score for Intersection	1.622			1.949			2.954			2.253		
Bicycle LOS	A			A			C			B		

Sequence

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



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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	Madison Ave/Beverly Blvd	11	0	18	1	1	19	7	1424	35	52	1054	17	2639

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	28	8	106	16	44	29	12	834	576	22	713	9

Northwestbound			Total Volume
2	Left	Right	
1	367	22	2787

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	73	1024	116	125	1291	170	153	495	65	106	363	96	4077

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	13	8	17	62	2	172	180	641	24	19	346	55	1539

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10/1/2019

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Madison Ave/Beverly Blvd	Final Base	2	0	9	1	1	19	7	1378	34	51	1017	17	2536
		Growth Factor	1.02	1.00	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	9	0	9	0	0	0	0	18	0	0	17	0	53
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	11	0	18	1	1	19	7	1424	35	52	1054	17	2639

ID	Intersection Name	Volume Type	Northbound				Southbound			Eastbound			Westbound	
			Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right
2	Westmoreland Ave/Beverly Blvd	Final Base	28	8	106	16	43	29	12	798	565	15	682	9
		Growth Factor	1.00	1.00	1.00	1.00	1.02	1.00	1.02	1.02	1.02	1.00	1.02	1.02
		In Process	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	20	0	7	17	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	28	8	106	16	44	29	12	834	576	22	713	9

Northwestbound			Total Volume
2	Left	Right	
1	360	22	2694
1.00	1.02	1.02	-
0	0	0	0
0	0	0	44
0	0	0	0
1	367	22	2787

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Vermont Ave/1st St	Final Base	72	987	81	117	1257	167	150	470	64	67	345	79	3856
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	17	33	6	9	0	0	16	0	38	11	15	145
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	73	1024	116	125	1291	170	153	495	65	106	363	96	4077

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Westmoreland Ave/1st St	Final Base	13	8	17	32	2	131	144	607	24	19	314	30	1341
		Growth Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	29	0	38	33	22	0	0	26	24	172
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	13	8	17	62	2	172	180	641	24	19	346	55	1539

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Fair Share Volumes

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	9	0	9	0	0	0	0	7	0	0	0	0	25
2: Zone	0	0	0	0	0	0	0	5	0	0	3	0	8
3: Zone	0	0	0	0	0	0	0	6	0	0	14	0	20
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	9	0	9	0	0	0	0	18	0	0	17	0	
Future Total Volume	11	0	18	1	1	19	7	1424	35	52	1054	17	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0	0	0	0	0	0	0	9	0	7	0	0	0	0	0	16
2: Zone	0	0	0	0	0	0	0	5	0	0	3	0	0	0	0	8
3: Zone	0	0	0	0	0	0	0	6	0	0	14	0	0	0	0	20
4: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips	0	0	0	0	0	0	0	20	0	7	17	0	0	0	0	
Future Total Volume	28	8	106	16	44	29	12	834	576	22	713	9	1	367	22	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	33	0	0	0	0	0	0	38	0	0	71
2: Zone	0	3	0	0	3	0	0	0	0	0	0	0	6
3: Zone	0	14	0	6	6	0	0	0	0	0	0	15	41
4: Zone	0	0	0	0	0	0	0	16	0	0	11	0	27
Site-Generated Trips	0	17	33	6	9	0	0	16	0	38	11	15	
Future Total Volume	73	1024	116	125	1291	170	153	495	65	106	363	96	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	29	0	38	33	0	0	0	0	24	124
2: Zone	0	0	0	0	0	0	0	0	0	0	0	0	0
3: Zone	0	0	0	0	0	0	0	6	0	0	15	0	21
4: Zone	0	0	0	0	0	0	0	16	0	0	11	0	27
Site-Generated Trips	0	0	0	29	0	38	33	22	0	0	26	24	
Future Total Volume	13	8	17	62	2	172	180	641	24	19	346	55	

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Fair Share % of Net New Site

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	100%	0%	100%	0%	0%	0%	0%	38.89%	0%	0%	0%	0%	47.17%
2: Zone	0%	0%	0%	0%	0%	0%	0%	27.78%	0%	0%	17.65%	0%	15.09%
3: Zone	0%	0%	0%	0%	0%	0%	0%	33.33%	0%	0%	82.35%	0%	37.74%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	100%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	45%	0%	100%	0%	0%	0%	0%	0%	36.36%
2: Zone	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	17.65%	0%	0%	0%	0%	18.18%
3: Zone	0%	0%	0%	0%	0%	0%	0%	30%	0%	0%	82.35%	0%	0%	0%	0%	45.45%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	100%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	48.97%
2: Zone	0%	17.65%	0%	0%	33.33%	0%	0%	0%	0%	0%	0%	0%	4.14%
3: Zone	0%	82.35%	0%	100%	66.67%	0%	0%	0%	0%	0%	0%	100%	28.28%
4: Zone	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	18.62%
Total	0%	100%	100%	100%	100%	0%	0%	100%	0%	100%	100%	100%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	100%	0%	100%	100%	0%	0%	0%	0%	100%	72.09%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%	27.27%	0%	0%	57.69%	0%	12.21%
4: Zone	0%	0%	0%	0%	0%	0%	0%	72.73%	0%	0%	42.31%	0%	15.7%
Total	0%	0%	0%	100%	0%	100%	100%	100%	0%	0%	100%	100%	

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Scenario 7 FWP PM

Report File: J:\...\FWP PM_2.pdf

10/1/2019

Fair Share % of Future Total

Intersection 1: Madison Ave/Beverly Blvd													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	81.82%	0%	50%	0%	0%	0%	0%	0.49%	0%	0%	0%	0%	0.95%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0.35%	0%	0%	0.28%	0%	0.3%
3: Zone	0%	0%	0%	0%	0%	0%	0%	0.42%	0%	0%	1.33%	0%	0.76%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	81.82%	0%	50%	0%	0%	0%	0%	1.26%	0%	0%	1.61%	0%	

Intersection 2: Westmoreland Ave/Beverly Blvd																
Zone ID: Name	Northbound				Southbound			Eastbound			Westbound		Northwestbound			Total
	Left	Thru	Right	2	Left	Thru	Right	Thru	Right	2	Thru	Right	2	Left	Right	
1: Zone	0%	0%	0%	0%	0%	0%	0%	1.08%	0%	31.82%	0%	0%	0%	0%	0%	0.57%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0.6%	0%	0%	0.42%	0%	0%	0%	0%	0.29%
3: Zone	0%	0%	0%	0%	0%	0%	0%	0.72%	0%	0%	1.96%	0%	0%	0%	0%	0.72%
4: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	2.4%	0%	31.82%	2.38%	0%	0%	0%	0%	

Intersection 3: Vermont Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	28.45%	0%	0%	0%	0%	0%	0%	35.85%	0%	0%	1.74%
2: Zone	0%	0.29%	0%	0%	0.23%	0%	0%	0%	0%	0%	0%	0%	0.15%
3: Zone	0%	1.37%	0%	4.8%	0.46%	0%	0%	0%	0%	0%	0%	15.63%	1.01%
4: Zone	0%	0%	0%	0%	0%	0%	0%	3.23%	0%	0%	3.03%	0%	0.66%
Total	0%	1.66%	28.45%	4.8%	0.7%	0%	0%	3.23%	0%	35.85%	3.03%	15.63%	

Intersection 4: Westmoreland Ave/1st St													
Zone ID: Name	Northbound			Southbound			Eastbound			Westbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1: Zone	0%	0%	0%	46.77%	0%	22.09%	18.33%	0%	0%	0%	0%	43.64%	8.06%
2: Zone	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3: Zone	0%	0%	0%	0%	0%	0%	0%	0.94%	0%	0%	4.34%	0%	1.36%
4: Zone	0%	0%	0%	0%	0%	0%	0%	2.5%	0%	0%	3.18%	0%	1.75%
Total	0%	0%	0%	46.77%	0%	22.09%	18.33%	3.43%	0%	0%	7.51%	43.64%	

Signal Warrants Report For Intersection 1: Madison Ave/Beverly Blvd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	1123	1466	29	21
2	1078	1407	28	20
3	1056	1378	27	20
4	898	1173	23	17
5	853	1114	22	16
6	764	997	20	14
7	707	924	18	13
8	674	880	17	13
9	539	704	14	10
10	505	660	13	9
11	505	660	13	9
12	483	630	12	9
13	438	572	11	8
14	404	528	10	8
15	404	528	10	8
16	393	513	10	7
17	225	293	6	4
18	124	161	3	2
19	112	147	3	2
20	45	59	1	1
21	34	44	1	1
22	34	44	1	1
23	22	29	1	0
24	22	29	1	0

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	6	2589	2	50	No	No	No	No	No	No	No	No	No	No
2	6	2485	2	48	No	No	No	No	No	No	No	No	No	No
3	6	2434	2	47	No	No	No	No	No	No	No	No	No	No
4	6	2071	2	40	No	No	No	No	No	No	No	No	No	No
5	6	1967	2	38	No	No	No	No	No	No	No	No	No	No
6	6	1761	2	34	No	No	No	No	No	No	No	No	No	No
7	6	1631	2	31	No	No	No	No	No	No	No	No	No	No
8	6	1554	2	30	No	No	No	No	No	No	No	No	No	No
9	6	1243	2	24	No	No	No	No	No	No	No	No	No	No
10	6	1165	2	22	No	No	No	No	No	No	No	No	No	No
11	6	1165	2	22	No	No	No	No	No	No	No	No	No	No
12	6	1113	2	21	No	No	No	No	No	No	No	No	No	No
13	6	1010	2	19	No	No	No	No	No	No	No	No	No	No
14	6	932	2	18	No	No	No	No	No	No	No	No	No	No
15	6	932	2	18	No	No	No	No	No	No	No	No	No	No
16	6	906	2	17	No	No	No	No	No	No	No	No	No	No
17	6	518	2	10	No	No	No	No	No	No	No	No	No	No
18	6	285	2	5	No	No	No	No	No	No	No	No	No	No
19	6	259	2	5	No	No	No	No	No	No	No	No	No	No
20	6	104	2	2	No	No	No	No	No	No	No	No	No	No
21	6	78	2	2	No	No	No	No	No	No	No	No	No	No
22	6	78	2	2	No	No	No	No	No	No	No	No	No	No
23	6	51	2	1	No	No	No	No	No	No	No	No	No	No
24	6	51	2	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	57.7	29
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:27	0:10
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	29	21
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2639	2639
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	No	

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Scenario 7 FWP PM

Report File: J:\...\FWP PM_2.pdf

10/1/2019

Trip Generation summary**Added Trips**

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: Zone				1.000	0.000	50.00	50.00	74	87	161	25.76
2: Zone				1.000	0.000	50.00	50.00	12	18	30	4.80
3: Zone				1.000	0.000	50.00	50.00	113	46	159	25.44
4: Zone				1.000	0.000	50.00	50.00	164	111	275	44.00
Added Trips Total								363	262	625	100.00

Vistro File: J:\...\JB71259 241 Westmoreland_Vistro.vistro

Scenario 7 FWP PM

Report File: J:\...\FWP PM_2.pdf

10/1/2019

Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	10.00	7	10.00	9
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	10.00	7	10.00	9
9: Gate	2.00	1	2.00	2
10: Gate	33.00	24	33.00	29
11: Gate	0.00	0	0.00	0
12: Gate	45.00	33	45.00	38
13: Gate	0.00	0	0.00	0
Total	100.00	72	100.00	87

Zone / Gate	Zone 2: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	3	25.00	5
6: Gate	25.00	3	25.00	5
7: Gate	0.00	0	0.00	0
8: Gate	25.00	3	25.00	5
9: Gate	0.00	0	0.00	0
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	25.00	3	25.00	3
13: Gate	0.00	0	0.00	0
Total	100.00	12	100.00	18

Zone / Gate	Zone 3: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
4: Zone	0.00	0	0.00	0
5: Gate	25.00	28	25.00	12
6: Gate	25.00	28	25.00	10
7: Gate	0.00	0	0.00	0
8: Gate	12.00	14	12.00	6
9: Gate	13.00	15	13.00	6
10: Gate	0.00	0	0.00	0
11: Gate	0.00	0	0.00	0
12: Gate	12.00	14	12.00	6
13: Gate	13.00	15	13.00	6
Total	100.00	114	100.00	46

Zone / Gate	Zone 4: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
5: Gate	0.00	0	0.00	0
6: Gate	0.00	0	0.00	0
7: Gate	0.00	0	0.00	0
8: Gate	0.00	0	0.00	0
9: Gate	80.00	131	80.00	89
10: Gate	10.00	16	10.00	11
11: Gate	0.00	0	0.00	0
12: Gate	0.00	0	0.00	0
13: Gate	10.00	16	10.00	11
Total	100.00	163	100.00	111

APPENDIX G – VMT Calculator Worksheets

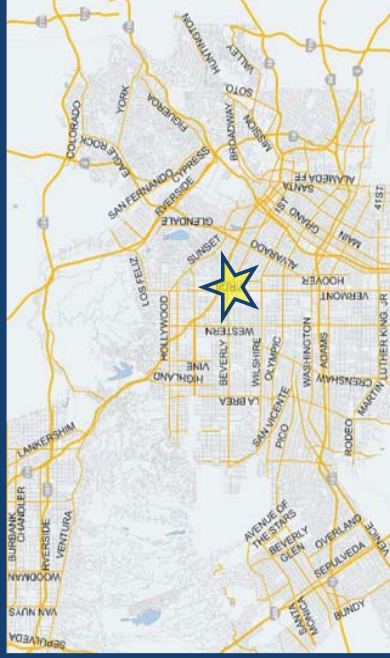
CITY OF LOS ANGELES VMT CALCULATOR Version 1.0



Project Information

Project: Everest Value School
Scenario: Existing
Address: 34.075638, -118.288872

WWW



TDM Strategies

Select each section to show individual strategies
Use ☒ to denote if the TDM strategy is proposed part of the project or is a mitigation strategy

A	
Reduce Parking Supply	Parking
<input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	city code parking provision for the project site
<input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	actual parking provision for the project site
Unbundle Parking	monthly parking cost (dollar) for the project site
<input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	225
Parking Cash-Out	percent of employees eligible
<input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	50
Price Workplace Parking	daily parking charge (dollar)
<input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	6.00
Residential Area Parking Permits	percent of employees subject to priced parking
<input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	50
Transit	cost (dollar) of annual permit
<input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	200

B	Transit
C	Education & Encouragement
D	Commute Trip Reductions
E	Shared Mobility
F	Bicycle Infrastructure
G	Neighborhood Enhancement

Land Use Type	Value	Unit
School Middle School	186	Students
School Middle School	294	Students
School Elementary		

☐ Click here to add a single custom land use type (will be included in the above list)

Analysis Results

Proposed Project	With Mitigation
386 Daily Vehicle Trips	386 Daily Vehicle Trips
2,015 Daily VMT	2,015 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
7.1 Work VMT per Employee	7.1 Work VMT per Employee

Significant VMT Impact?	
Household: No Threshold = 6.0 15% Below APC	Household: No Threshold = 6.0 15% Below APC
Work: No Threshold = 7.6 15% Below APC	Work: No Threshold = 7.6 15% Below APC



CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 19, 2019
Project Name: Everest Value School
Project Scenario: Existing
Project Address: 34.075638, -118.288872



Version 1.0

Project Information			
	Land Use Type	Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	0.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement Superstore	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
	General Office	0	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
Other		0	Trips

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: November 19, 2019
Project Name: Everest Value School
Project Scenario: Existing
Project Address: 34.075638, -118.288872



Version 1.0

Analysis Results				
Total Employees: 48				
Total Population: 0				
Proposed Project			With Mitigation	
386	Daily Vehicle Trips	386	Daily Vehicle Trips	
2,015	Daily VMT	2,015	Daily VMT	
0	Household VMT per Capita	0	Household VMT per Capita	
7.1	Work VMT per Employee	7.1	Work VMT per Employee	
Significant VMT Impact?				
APC: Central				
Impact Threshold: 15% Below APC Average				
Household = 6.0 ²				
Work = 7.6 ²				
Proposed Project			With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact	
Household > 6.0	No	Household > 6.0	No	No
Work > 7.6	No	Work > 7.6	No	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: November 19, 2019
Project Name: Everest Value School
Project Scenario: Existing
Project Address: 34.075638, -118.288872



Version 1.0

TDM Strategy Inputs			
Strategy Type	Description	Proposed Project	Mitigations
Parking	City code parking provision (spaces)	0	0
	Reduce parking supply		
	Actual parking provision (spaces)	0	0
	Unbundle parking		
	Monthly cost for parking (\$)	\$0	\$0
	Parking cash-out		
	Employees eligible (%)	0%	0%
	Daily parking charge (\$)	\$0.00	\$0.00
	Price workplace parking		
	Employees subject to priced parking (%)	0%	0%
	Residential area parking permits		
	Cost of annual permit (\$)	\$0	\$0
(cont. on following page)			

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: November 19, 2019
 Project Name: Everest Value School
 Project Scenario: Existing
 Project Address: 34.075638, -118.288872



Version 1.0

TDM Strategy Inputs, Cont.			
Strategy Type	Description	Proposed Project	Mitigations
Transit	Reduce transit headways	0%	0%
	Reduction in headways (increase in frequency) (%)	0%	0%
	Existing transit mode share (as a percent of total daily trips)	0%	0%
	Lines within project site improved (<50%, >=50%)	0	0
Transit	Implement neighborhood shuttle	0	0
	Degree of implementation (low, medium, high)	0	0
	Employees and residents eligible (%)	0%	0%
Transit subsidies	Employees and residents eligible (%)	0%	0%
	Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
	Employees and residents participating (%)	0%	0%
Education & Encouragement	Voluntary travel behavior change program	0%	0%
	Promotions and marketing	0%	0%
(cont. on following page)			

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: November 19, 2019
 Project Name: Everest Value School
 Project Scenario: Existing
 Project Address: 34.075638, -118.288872



Version 1.0

TDM Strategy Inputs, Cont.			
Strategy Type	Description	Proposed Project	Mitigations
Commuter Trip Reductions	Required commute trip reduction program	0%	0%
	Employees participating (%)		
	Degree of implementation (low, medium, high)	0	0
	Employer sponsored vanpool or shuttle	0%	0%
	Employees eligible (%)		
Shared Mobility	Employer size (small, medium, large)	0	0
	Ride-share program	0%	0%
	Employees eligible (%)		
Shared Mobility	Car share project setting (Urban, Suburban, All Other)	0	0
	Within 600 feet of existing bike share station - OR - implementing new bike share station (Yes/No)	0	0
	School carpool program	0	0
	Level of implementation (Low, Medium, High)		
(cont. on following page)			

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: November 19, 2019
Project Name: Everest Value School
Project Scenario: Existing
Project Address: 34.075638, -118.288872



Version 1.0

TDM Strategy Inputs, Cont.

Strategy Type	Description	Proposed Project	Mitigations
Bicycle Infrastructure	Implement/Improve on-street bicycle facility	0	0
	Provide bicycle facility along site (Yes/No)		
	Meets City Bike Parking Code (Yes/No)	0	0
Neighborhood Enhancement	Bike parking per LAMC	0	0
	Include secure bike parking and showers	0	0
	Includes indoor bike parking/lockers, showers, & repair station (Yes/No)		
Neighborhood Enhancement	Traffic calming improvements	0%	0%
	Streets with traffic calming improvements (%)		
	Intersections with traffic calming improvements (%)	0%	0%
Neighborhood Enhancement	Pedestrian network improvements	0	0
	Included (within project and connecting off-site/within project only)		

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: November 19, 2019
 Project Name: Everest Value School
 Project Scenario: Existing
 Project Address: 34.075638, -118.288872



Version 1.0

TDM Adjustments by Trip Purpose & Strategy															
Place type: Urban															
	Home Based Work			Home Based Other			Home Based Other			Non-Home Based Other			Non-Home Based Other		Source
	Production		Attraction	Production		Attraction	Production		Attraction	Production		Attraction			
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Appendix B, Parking sections 1 - 6
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Residential area parking permits	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Transit	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Appendix B, Transit sections 1 - 3
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education & Encouragement	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Appendix B, Education & Encouragement sections 1 - 2
	Promotions and marketing	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Appendix B, Commute Trip Reductions sections 1 - 4
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Ride-share program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Appendix B, Shared Mobility sections 1 - 3
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: November 19, 2019
 Project Name: Everest Value School
 Project Scenario: Existing
 Project Address: 34.075638, -118.288872



Version 1.0

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Urban

	Home Based Work Production		Home Based Work Attraction		Home Based Other Production		Home Based Other Attraction		Non-Home Based Other Production		Non-Home Based Other Attraction		Source
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/improve on-street bicycle facility	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Appendix B, Bicycle Infrastructure sections 1 - 3
	Bike parking per LAMC	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Include secure bike parking and showers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Neighborhood Enhancement	Traffic calming improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Appendix B, Neighborhood Enhancement sections 1 - 2
	Pedestrian network improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Final Combined & Maximum TDM Effect

	Home Based Work Production		Home Based Work Attraction		Home Based Other Production		Home Based Other Attraction		Non-Home Based Other Production		Non-Home Based Other Attraction	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
MAX. TDM EFFECT	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

$$= \text{Minimum}(X\%, 1 - (1 - [a]) * (1 - [b]))$$

where: X%=

PLACE	urban center	75%
TYPE	urban	75%
MAX:	compact infill	40%
	suburban center	20%
	suburban	15%

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: November 19, 2019
 Project Name: Everest Value School
 Project Scenario: Existing
 Project Address: 34.075638, -118.288872



Version 1.0

MXD Methodology - Existing Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	7.8	0	0
Home Based Other Production	0	0.0%	0	5.1	0	0
Non-Home Based Other Production	52	-14.2%	44	7.4	380	326
Home-Based Work Attraction	70	-26.7%	51	6.7	468	343
Home-Based Other Attraction	508	-51.4%	247	4.4	2,260	1,099
Non-Home Based Other Attraction	52	-14.2%	44	5.6	288	247

MXD Methodology with TDM Measures

	Proposed Project			Project with Mitigation Measures		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	0.0%	0	0	0.0%	0	0
Home Based Other Production	0.0%	0	0	0.0%	0	0
Non-Home Based Other Production	0.0%	44	326	0.0%	44	326
Home-Based Work Attraction	0.0%	51	343	0.0%	51	343
Home-Based Other Attraction	0.0%	247	1,099	0.0%	247	1,099
Non-Home Based Other Attraction	0.0%	44	247	0.0%	44	247

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0
 Total Employees: 48
 APC: Central

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	0	0
Total Home Based Work Attraction VMT	343	343
Total Home Based VMT Per Capita	0.0	0.0
Total Work Based VMT Per Employee	7.1	7.1

VMT Calculator User Agreement

The Los Angeles Department of Transportation (LADOT), in partnership with the Department of City Planning and Fehr & Peers, has developed the City of Los Angeles Vehicle Miles Traveled (VMT) Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for land use development projects. This application, the VMT Calculator, has been provided to You, the User, to assess vehicle miles traveled (VMT) outcomes of land use projects within the City of Los Angeles. The term “City” as used below shall refer to the City of Los Angeles. The terms “City” and “Fehr & Peers” as used below shall include their respective affiliates, subconsultants, employees, and representatives.

The City is pleased to be able to provide this information to the public. The City believes that the public is most effectively served when they are provided access to the technical tools that inform the public review process of private and public land use investments. However, in using the VMT Calculator, You agree to be bound by this VMT Calculator User Agreement (this Agreement).

VMT Calculator Application for the City of Los Angeles. The City’s consultant calibrated the VMT Calculator’s parameters in 2018 to estimate travel patterns of locations in the City, and validated those outcomes against empirical data. However, this calibration process is limited to locations within the City, and practitioners applying the VMT Calculator outside of the City boundaries should not apply these estimates without further calibration and validation of travel patterns to verify the VMT Calculator’s accuracy in estimating VMT in such other locations.

Limited License to Use. This Agreement gives You a limited, non-transferrable, non-assignable, and non-exclusive license to use and execute a copy of the VMT Calculator on a computer system owned, leased or otherwise controlled by You in Your own facilities, as set out below, provided You do not use the VMT Calculator in an unauthorized manner, and that You do not republish, copy, distribute, reverse-engineer, modify, decompile, disassemble, transfer, or sell any part of the VMT Calculator, and provided that You know and follow the terms of this Agreement. Your failure to follow the terms of this Agreement shall automatically terminate this license and Your right to use the VMT Calculator.

Ownership. You understand and acknowledge that the City owns the VMT Calculator, and shall continue to own it through Your use of it, and that no transfer of ownership of any kind is intended in allowing You to use the VMT Calculator.

Warranty Disclaimer. In spite of the efforts of the City and Fehr & Peers, some information on the VMT Calculator may not be accurate. The VMT Calculator, OUTPUTS AND ASSOCIATED DATA ARE PROVIDED “as is” WITHOUT WARRANTY OF ANY KIND, whether expressed, implied, statutory, or otherwise including but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Limitation of Liability. It is understood that the VMT Calculator is provided without charge. Neither the City nor Fehr & Peers can be responsible or liable for any information derived from its use, or for any delays, inaccuracies, incompleteness, errors or omissions arising out of your use of the VMT Calculator or with respect to the material contained in the VMT Calculator. You understand and agree that Your sole remedy against the City or Fehr & Peers for loss or damage caused by any defect or failure of the

VMT Calculator, regardless of the form of action, whether in contract, tort, including negligence, strict liability or otherwise, shall be the repair or replacement of the VMT Calculator to the extent feasible as determined solely by the City. In no event shall the City or Fehr & Peers be responsible to You or anyone else for, or have liability for any special, indirect, incidental or consequential damages (including, without limitation, damages for loss of business profits or changes to businesses costs) or lost data or downtime, however caused, and on any theory of liability from the use of, or the inability to use, the VMT Calculator, whether the data, and/or formulas contained in the VMT Calculator are provided by the City or Fehr & Peers, or another third party, even if the City or Fehr & Peers have been advised of the possibility of such damages.

This Agreement and License shall be governed by the laws of the State of California without regard to their conflicts of law provisions, and shall be effective as of the date set forth below and, unless terminated in accordance with the above or extended by written amendment to this Agreement, shall terminate on the earlier of the date that You are not making use of the VMT Calculator or one year after the beginning of Your use of the VMT Calculator.

By using the VMT Calculator, You hereby waive and release all claims, responsibilities, liabilities, actions, damages, costs, and losses, known and unknown, against the City and Fehr & Peers for Your use of the VMT Calculator.

Before making decisions using the information provided in this application, contact City LADOT staff to confirm the validity of the data provided.

Print and sign below, and submit to LADOT along with the transportation assessment Memorandum of Understanding (MOU).

You, the User	
By:	_____
Print Name:	_____
Title:	_____
Company:	_____
Address:	_____
Phone:	_____
Email Address:	_____
Date:	_____

APPENDIX H – QUEUING

JB71259 - 241 Westmoreland Charter School
QUEUING ANALYSIS

Trip Generation without Trip Reductions	
assumed	30 second average unloading time per vehicle
<div>86</div>	trips - AM Inbound
	15 length of peak period (mins)
5.73 <u>Arrival Rate per minute</u>	
120 vehicle/hour per active loading space (60 min x 60 sec or 3600) / 30 seconds	
2.0 Service Rate per minute (vehicles per minute)	
8.0 <u>Service Rate with</u>	4 <u>spaces</u>
<u>Arrival Rate</u>	0.72 intensity rate
<u>Service Rate</u>	
5 reservoir behind service position based on intensity rate - queue vehicle after active loading area	



**APPENDIX I –
Signal Warrant Worksheets, Gap Survey, and Counts**

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street:	Westmoreland Avenue
Minor Street:	Cosmpolitan Street
Scenario:	Existing Conditions

SUMMARY OF RESULTS		Warrant Satisfy?
Warrant 1	Eight-Hour Vehicle Volume	No
Warrant 2	Four-Hour Vehicle Volume	No
Warrant 3	Peak Hour	No
Warrant 4	Pedestrian Volume	No
Warrant 5	School Crossing	No
Warrant 6	Coordinated Signal System	N/A
Warrant 7	Crash Experience	No
Warrant 8	Roadway Network	No
Warrant 9	Intersection Near a Grade Crossing	N/A

INTERSECTION:**MAJOR:** Westmoreland Avenue**MINOR:** Cosmopolitan Street**SCENARIO** Existing Conditions**WARRANT 1 & 2 DATA INPUT**

COUNT DATE 9/5/2019

Urban or Rural ?

U

population?

	# Lanes
Both Approaches - Major Street	2
Higher Approach - Minor Street	1

ADT - 8 HOUR VOLUMES

** input highest to lowest **

Time Period	MAJOR Both Approaches	MINOR Highest Approach	80% MAJOR Both Approaches	80% MINOR Highest Approach
17:00-18:00	223	31	178	25
07:00-08:00	222	121	178	97
15:00-16:00	210	50	168	40
16:00-17:00	199	36	159	29
14:00-15:00	165	66	132	53
08:00-09:00	160	48	128	38
18:00-19:00	130	16	104	13
11:00-12:00	88	13	70	10

WARRANT 3 DATA INPUT

AM Total Vol. 461 PM Total Vol. 316

PEAK HOUR**TRAFFIC VOLUME DATA****AM****PM****AM DELAY**

TRAFFIC VOLUME DATA	AM PEAK	PM PEAK	AM DELAY
Major Street-Approach 1:	238	161	12.4
Major Street-Approach 2:	87	76	PM DELAY
Minor Street-Higher Volume App:	136	79	10.7

Minor Street w/Right-Turn Reduction:

=

WARRANTS 4 PEDESTRIAN VOLUME

** input highest to lowest **

PART 1 Time	Vehicle Vols	Pedestrian Vols	Distance to Nearest Traffic Signal
			353 Feet
15:00-16:00	209	14	
13:00-14:00	85	6	
09:00-10:00	85	5	
14:00-15:00	196	4	

School Age Ped Crossing
Children

PART 2 Time	Vehicle Vols	Pedestrian Volumes
15:00-16:00	209	14

Ped Crossing - < 4 ft / sec ? yes or no

WARRANTS 5 SCHOOL CROSSING**Part C****VEH / HR**

AM Peak

259

PM Peak

196

School Ages Ped Cross / Hr**School Ages Ped Cross / Day**

AM PEAK

10

AM PEAK

PM PEAK

12

PM PEAK

NEW INTERSECTION - Figure 4C-103**Daily Traffic Volume**

Major Approach 1

1441

Major Approach 2

629

TOTAL (Both) Approaches

2070

Minor Approach

542

(Higher Volume)

Conditon A

80%

Satisfy?

NO

NO

Conditon B

Satisfy?

NO

NO

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 1 of 5)

DIST _____	CO _____	RTE _____	PM _____	COUNT DATE <u>9/5/2019</u>
				CALC _____ DATE <u>9/24/2019</u>
				CHK _____ DATE _____
Major Street: <u>Westmoreland Avenue</u>				Critical Approach Speed <u>25</u> mph
Minor Street: <u>Cosmopolitan Street</u>				Critical Approach Speed <u>25</u> mph
Speed limit or critical speed on major street traffic > 64 km/h (40 mph)				<input type="checkbox"/> or <input type="checkbox"/> } RURAL - R
In built up area of isolated community of < 10,000 population				<input checked="" type="checkbox"/> } URBAN - U

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☒
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☒

APPROACH LANES		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)													
		U		R											
		I		2 or More											
						17:00-18:00	07:00-08:00	15:00-16:00	16:00-17:00	14:00-15:00	08:00-09:00	18:00-19:00	19:00-20:00	Hour	
Both Approaches		500	350	600	420	223	222	210	199	165	160	130	88		
Major Street		(400)	(280)	(480)	(336)	(178)	(178)	(168)	(159)	(132)	(128)	(104)	(70)		
Highest Approach		150	105	200	140	31	121	50	36	66	48	16	13		
Minor Street		(120)	(84)	(160)	(112)	(25)	(97)	(40)	(29)	(53)	(38)	(13)	(10)		

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☒

APPROACH LANES		MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)													
		U		R											
		I		2 or More											
						17:00-18:00	07:00-08:00	15:00-16:00	16:00-17:00	14:00-15:00	08:00-09:00	18:00-19:00	19:00-20:00	Hour	
Both Approaches		750	525	900	630	223	222	210	199	165	160	130	88		
Major Street		(600)	(420)	(720)	(504)	(178)	(178)	(168)	(159)	(132)	(128)	(104)	(70)		
Highest Approach		75	53	100	70	31	121	50	36	66	48	16	13		
Minor Street		(60)	(42)	(80)	(56)	(25)	(97)	(40)	(29)	(53)	(38)	(13)	(10)		

Combination of Conditions A & B SATISFIED YES ☐ NO ☒

REQUIREMENT	CONDITION	X	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME	<input type="checkbox"/>	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC	<input type="checkbox"/>	
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

INTERSECTION: Westmoreland Avenue & Cosmpolitan Street

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume

SATISFIED* YES ☐ NO ☒

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	17:00-18:00	07:00-08:00	15:00-16:00	16:00-17:00	Hour
Both Approaches - Major Street		x	223	222	210	199	
Higher Approach - Minor Street	x		31	121	50	36	

*All plotted points fall above the curves in Figure 4C-1. (Urban Areas)	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
<u>OR</u> , All plotted points fall above the curves in Figure 4C-2. (Rural Areas)	YES <input type="checkbox"/>	NO <input type="checkbox"/>

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied)

SATISFIED YES ☐ NO ☒

PART A

SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1 The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; <u>AND</u> <i>1.24 seconds in delay & 0 vehicle-hours of delay</i>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
2 The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
3 The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

PART B

SATISFIED YES ☐ NO ☒

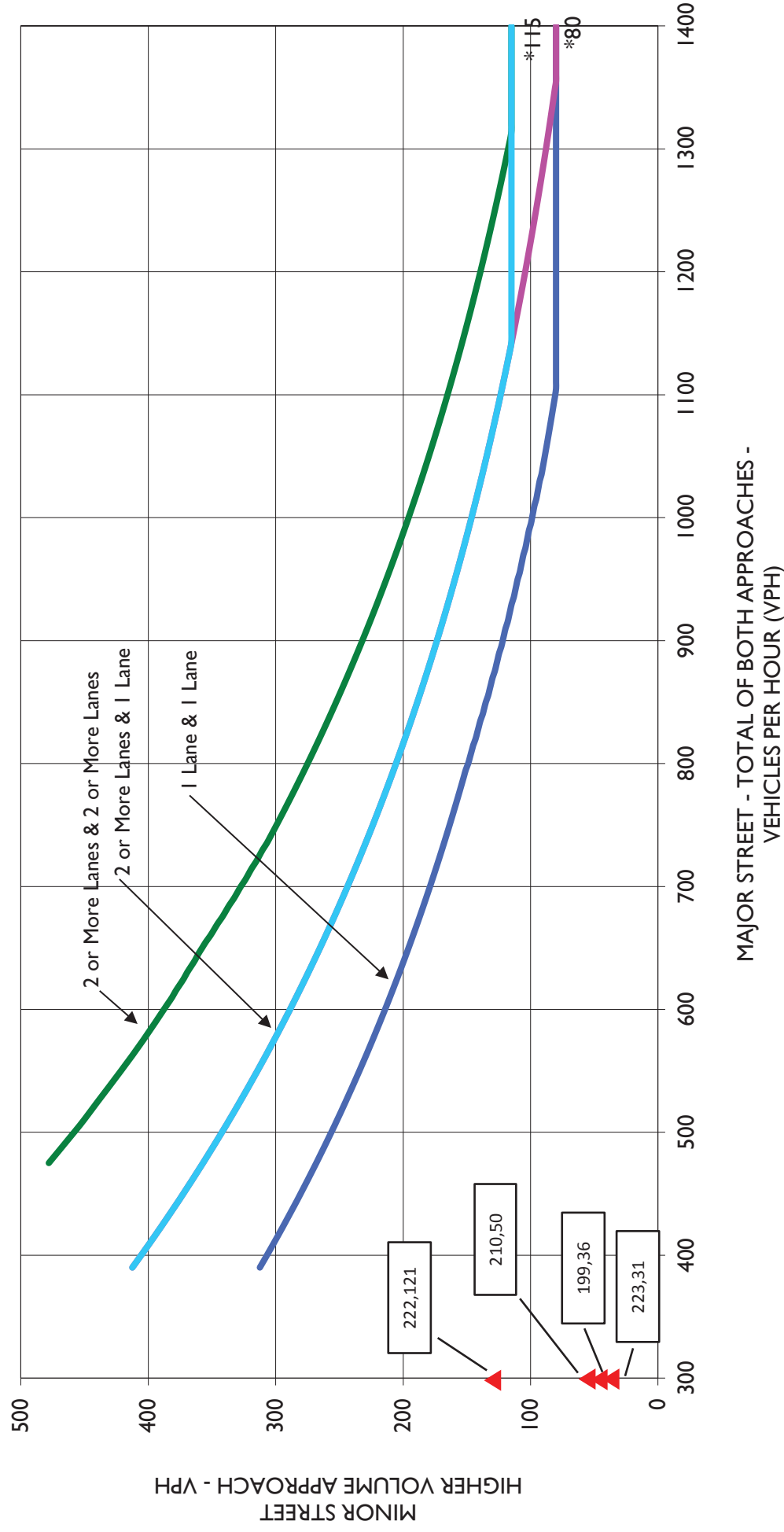
APPROACH LANES	One	2 or More	am peak	pm peak
Both Approaches - Major Street		x	325	237
Higher Approach - Minor Street	x		136	79

The plotted point falls above the curve in Figure 4C-3.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
<u>OR</u> , The plotted point falls above the curve in Figure 4C-4.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Figure 4C-1 Warrant 2
Westmoreland Avenue & Cosmopolitan Street
4 Hour Vehicular Volume Traffic Signal Warrant Based on
California Manual on Uniform Traffic Control Devices, 2014
Existing Conditions



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

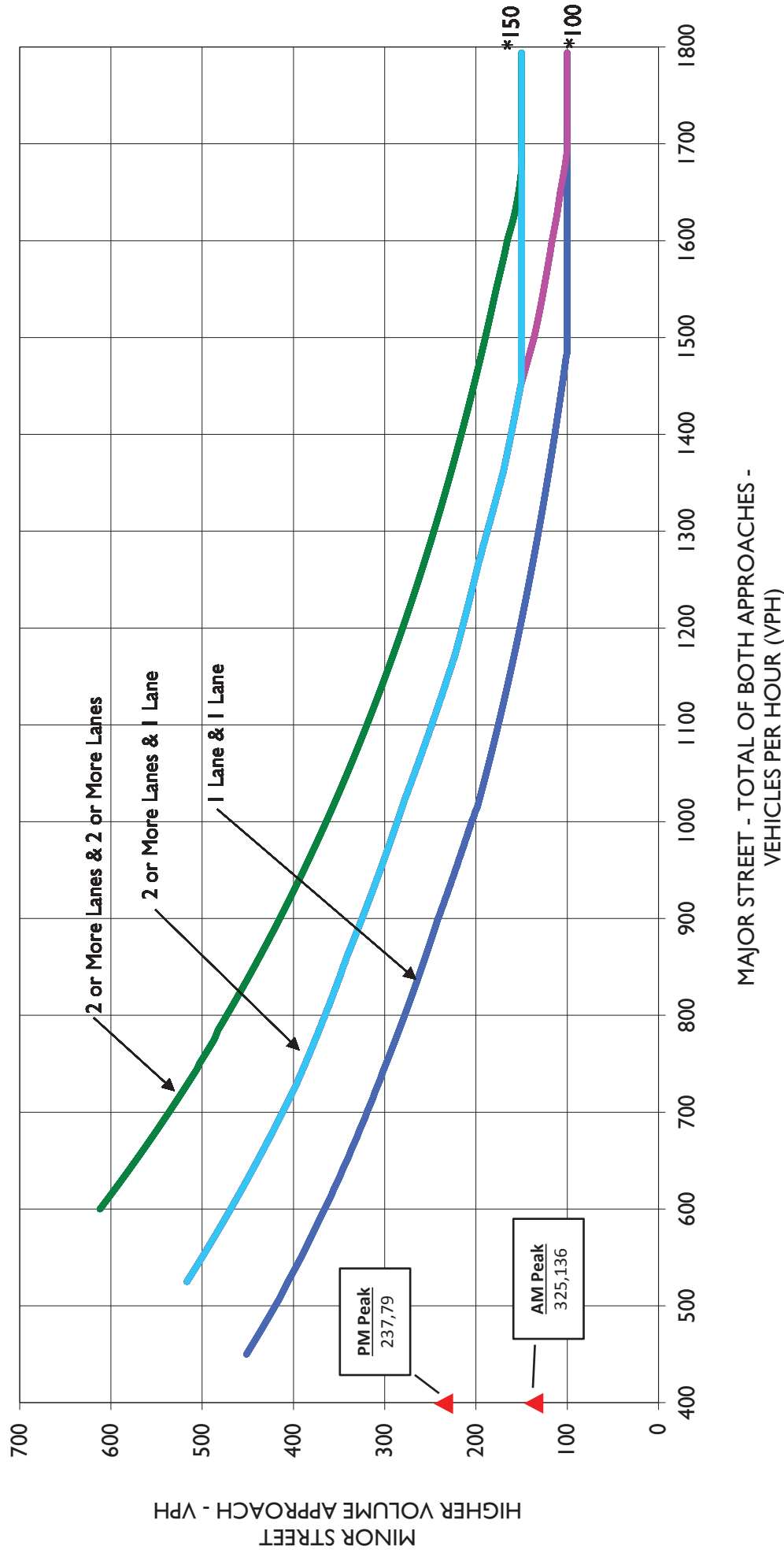
LEGEND

- Westmoreland Avenue (1 Lane Major Street) VPH
- ▲ Cosmopolitan Street (1 Lane Minor Street) VPH

Peak Hour Volumes Satisfy Warrants? NO



Figure 4C-3 Warrant 3
Westmoreland Avenue & Cosmopolitan Street
AM (PM) Peak hour Traffic Signal Warrant Based on
California Manual on Uniform Traffic Control Devices, 2014
Existing Conditions



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND

Westmoreland Avenue (1 Lane Major Street) : 325 (136) VPH
Cosmopolitan Street (1 Lane Minor Street): 237(79) VPH

Peak Hour Volumes Satisfy Warrants? NO

INTERSECTION: Westmoreland Avenue & Cosmopolitan Street

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 3 of 5)

WARRANT 4 - Pedestrian Volume
(Parts 1 and 2 Must be Satisfied)

SATISFIED YES ☐ NO ☒

PART 1 (Parts A or B must be satisfied)

Hours - - ->

A		1500-1600	1300-1400	0900-1000	1400-1500
	Vehicles per hour for any 4 hours	209	85	85	196
	Pedestrians per hour for any 4 hours	14	6	5	4

FIGURE 4C-5 OR FIGURE 4C-6

SATISFIED YES ☐ NO ☒

Hours - - ->

B		1500-1600			
	Vehicles per hour for any 1 hour	209			
	Pedestrians per hour for any 1 hour	14			

FIGURE 4C-7 OR FIGURE 4C-8

SATISFIED YES ☐ NO ☒

PART 2

SATISFIED YES ☒ NO ☐

<u>AND</u> , The distance to the nearest traffic signal along the major street is greater than 90m (300 ft).	Approx. 353 Feet	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
<u>OR</u> , The proposed traffic signal will not restrict progressive traffic flow along the major street.		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

WARRANT 5 - School Crossing
(Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☒

PART A

Gap/Minutes and # of Children

Gaps vs. Minutes	Minutes Children Using Crossing	46
	Number of Adequate Gaps	85
Schools Age Pedestrian Crossing Street / hr		1

Hour

Gaps < Minutes
AND Children > 20 / hr

SATISFIED YES ☐ NO ☒

Yes ☐ No ☒
Yes ☐ No ☒

AND, Consideration has been given to less restrictive remedial measures

Yes ☒ No ☐

PART B

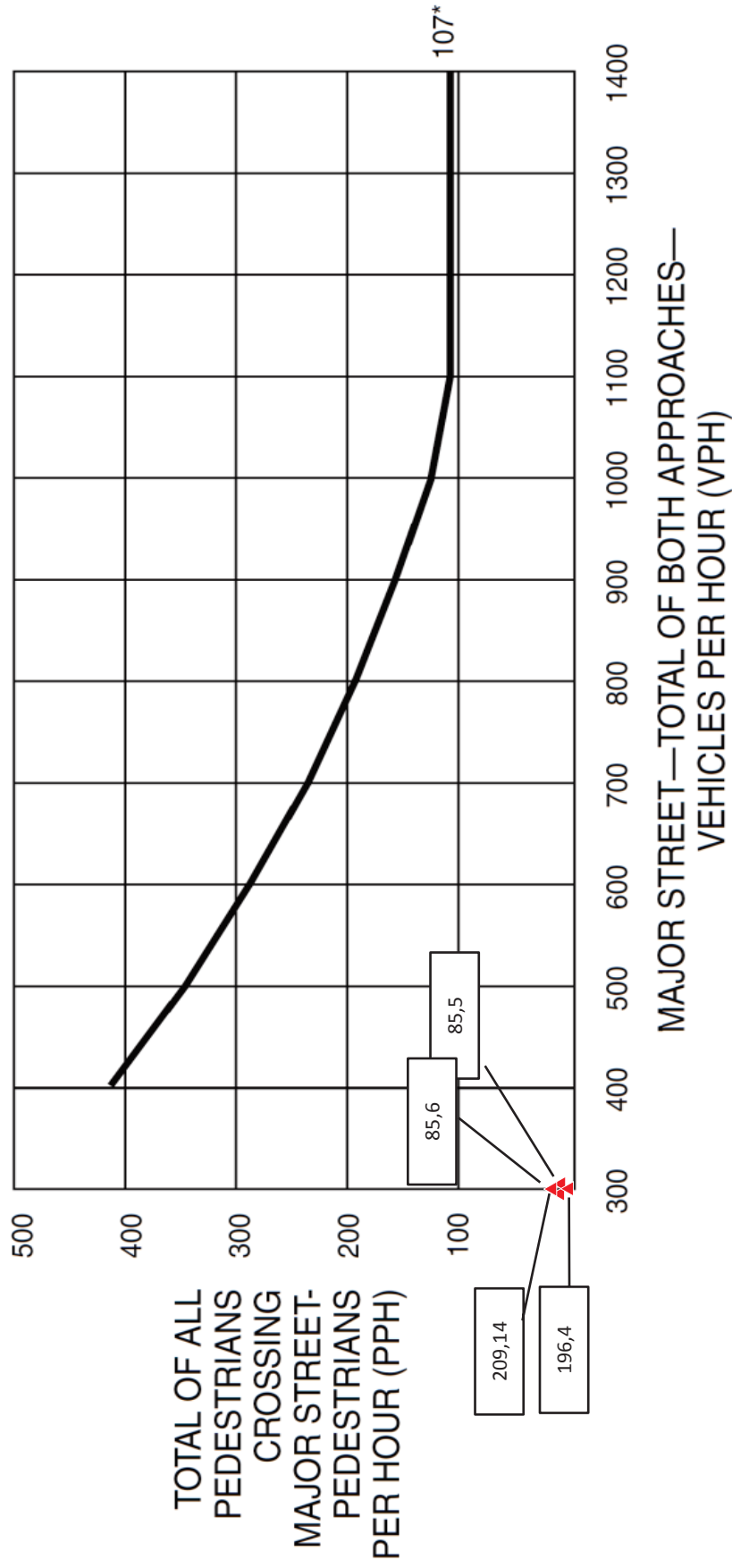
SATISFIED YES ☒ NO ☐

The distance to the nearest traffic signal along the major street is greater than 90 m (300ft).	Approx. 353 Feet	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
<u>OR</u> , The proposed signal will not restrict the progressive movement of traffic.		Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

Yes ☒ No ☐
Yes ☐ No ☒



Figure 4C-5 Warrant 4
Westmoreland Avenue & Cosmopolitan Street
Pedestrian Four Hour Traffic Signal Warrant Based on
California Manual on Uniform Traffic Control Devices, 2014
Existing Conditions



*Note: 107 pph applies as the lower threshold volume.

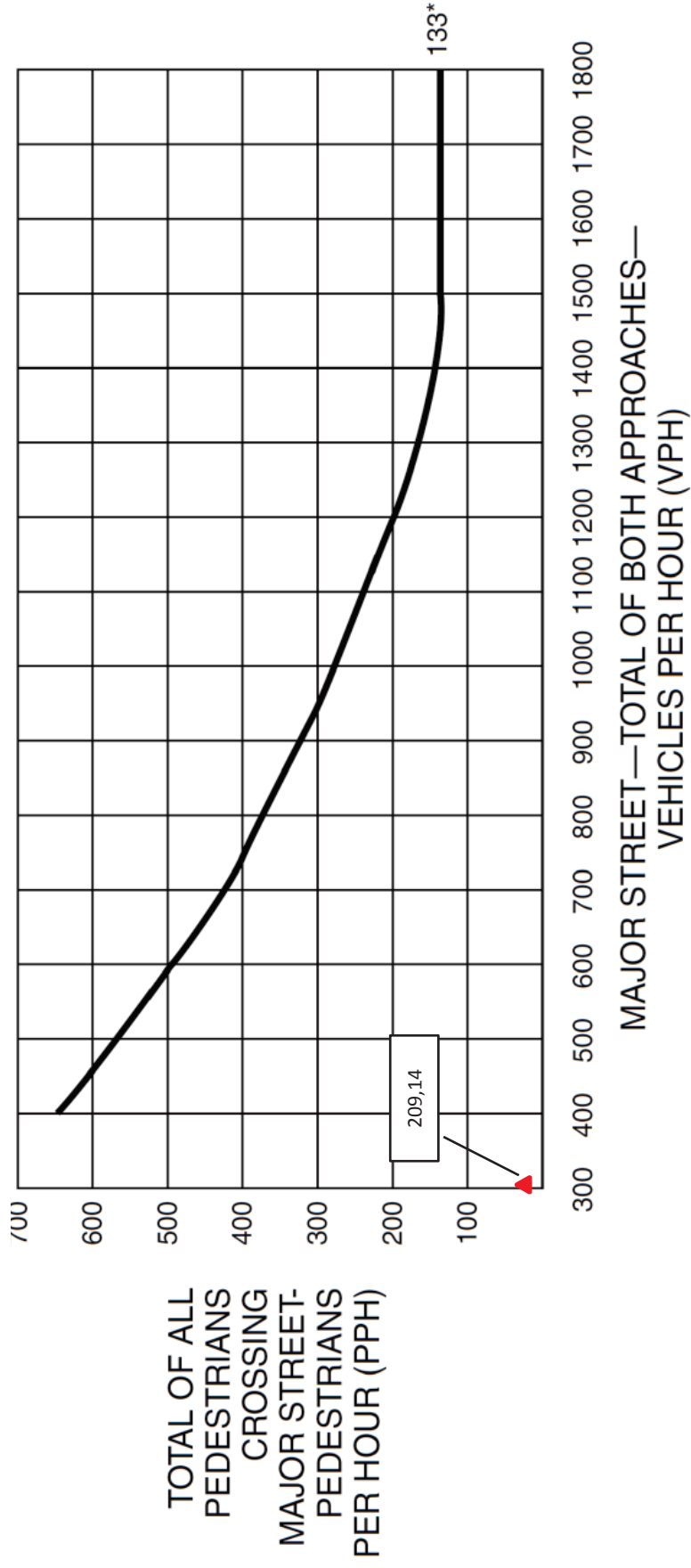
LEGEND

▲ Pedestrian volume (VPH, PPH)

Satisfy Peak Hour Pedestrian Warrants? NO



Figure 4C-7 Warrant 4
Westmoreland Avenue & Cosmopolitan Street
Pedestrian Peak Hour Traffic Signal Warrant Based on
California Manual on Uniform Traffic Control Devices, 2014
Existing Conditions



*Note: 133 pph applies as the lower threshold volume.

LEGEND

▲ Pedestrian volume (VPH, PPH)

Satisfy Peak Hour Pedestrian Warrants? NO

INTERSECTION: Westmoreland Avenue & Cosmopolitan Street

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 4 of 5)

**WARRANT 6 - Coordinated Signal System
(All Parts Must be Satisfied)**

SATISFIED YES ☐ NO ☒

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 300 M (1,000 FT)	N <u>353</u> FT, S <u>674</u> FT, E <u>N/A</u> FT, W <u>N/A</u> FT,	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

**WARRANT 7 - Crash Experience Warrant
(All Parts Must be Satisfied)**

SATISFIED YES ☐ NO ☒

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.		YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
REQUIREMENTS	Number of crashes within a 12 month period susceptible to correction by a and involving injury or damage exceeding the requirements for a reportable crash.	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
5 OR MORE		
REQUIREMENTS	CONDITIONS	<input checked="" type="checkbox"/>
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic	
	OR, Warrant 4, Pedestrian Volume Condition OR, Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8	

**WARRANT 8 - Roadway Network
(All Parts Must be Satisfied)**

SATISFIED YES ☐ NO ☒

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	<input checked="" type="checkbox"/>	FULFILLED
1,000 Vehicle / Hour	During Typical Weekday Peak Hour <u>461</u> Veh / Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	OR During Each of Any 5 Hours of a Saturday and/or Sunday <u>0</u> Veh / Hr		
CHARACTERISTICS OF MAJOR ROUTES		MAJOR ROUTE A	MAJOR ROUTE B
Highway System Serving as Principle Network for Through Traffic		NO	NO
Rural or Suburban Highway Outside Of, Entering, or Traversing a City		NO	NO
Appears as Major route on an Official Plan		NO	NO
Any Major Route Characteristics Met, Both Streets			YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

INTERSECTION: Westmoreland Avenue & Cosmpolitan Street

Figure 4C-101 (CA). Traffic Signal Warrants Worksheets (Sheet 5 of 5)

**WARRANT 9 - Intersection Near a Grade Crossing
(Both Parts A and B Must Be Satisfied)**

SATISFIED YES ☐ NO ☒

<p>PART A</p> <p>A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach.</p> <p>Track Center Line to Limit Line _____ feet</p>	<p>YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p>
<p>PART B</p> <p>There is one minor street approach lane at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9.</p> <p>Major Street - Total of both approaches: _____ VPH</p> <p>Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH</p> <hr/> <p>OR, There are two or more minor street approach lanes at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10.</p> <p>Major Street - Total of both approaches: _____ VPH</p> <p>Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH</p>	<p>YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p>

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C-10.

- 1 - Number of Rail Traffic per Day _____ Adjustment factor from table 4C-2 _____
 - 2 - Percentage of High-Occupancy Buses on Minor Street Approach _____ Adjustment factor from table 4C-3 _____
 - 3 - Percentage of Tractor-Trailer Trucks on Minor Street Approach _____ Adjustment factor from table 4C-4 _____
- NOTE: If no data is available or known, then use AF = 1 (no adjustment)

COUNT DATE 9/5/2019

(BASED ON ESTIMATED AVERAGE DAILY TRAFFIC - SEE NOTE)

NOTE: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

Chapter 4C - Traffic Control Signal Needs Studies

Part 4 - Highway Traffic Signals

Table 4C-I Warrant I - Eight-Hour Vehicular Volume

CONDITION A - MINIMUM VEHICULAR VOLUME									
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor street approach (one direction only)			
<u>Major Street</u>	<u>Minor Street</u>	<u>100%^a</u>	<u>80%^b</u>	<u>70%^c</u>	<u>56%^d</u>	<u>100%^a</u>	<u>80%^b</u>	<u>70%^c</u>	<u>56%^d</u>
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

CONDITION B - INTERRUPTION OF CONTINUOUS TRAFFIC									
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor street approach (one direction only)			
<u>Major Street</u>	<u>Minor Street</u>	<u>100%^a</u>	<u>80%^b</u>	<u>70%^c</u>	<u>56%^d</u>	<u>100%^a</u>	<u>80%^b</u>	<u>70%^c</u>	<u>56%^d</u>
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

a Basic minimum hourly volume.

b Used for combination of Conditions A & B after adequate trial of other remedial measures.

c May be used with the major-street speed exceeds 64km/h or exceeds 40mph or in an isolated community with a population of less than 10,000.

d May be used for combination of Conditions A & B after adequate trial of remedial measures when the major-street speed exceeds 64 km/h or exceeds 40 mph or in an isolated community with a population of less than 10,000.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.