

Appendix A Traffic Impact Analysis

Appendices

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TECHNICAL MEMORANDUM

SAN BERNARDINO POLICE DEPARTMENT & RESOURCE CENTER TIA

TRAFFIC IMPACT STUDY



Prepared for the San Bernardino City Unified School District
by Arcadis

Updated February 7, 2024

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1 INTRODUCTION

1.1 STUDY PURPOSE

This traffic analysis report has been prepared for the San Bernardino City Unified School District (SBCUSD) regarding a Centralized Services and Resource Center and School District Police Headquarters (the Project) proposed at 701 North E Street in San Bernardino, California.

1.2 REPORT ORGANIZATION

This report is organized into the following sections:

1. Introduction
2. Project Description
3. Analysis Methodology
4. Existing Year (2023) No Project
5. Opening Year (2024) No Project
6. Build Out Year (2040) No Project
7. Project Traffic
8. Existing Year (2023) With Project
9. Opening Year (2024) With Project
10. Build Out Year (2040) With Project
11. Mitigation Measures
12. Fair Share Contribution
13. Conclusions
14. Appendices

Section 1 provides a brief introduction to the study purpose and report organization. Section 2 provides a description of the proposed project. Section 3 includes the methodology utilized in the analysis and the referenced standards. The No Project Existing (2023), Opening (Year 2024), and Build Out Year (2040) scenarios for the study area roadways, intersection geometry, turning movement volumes, and level of service are presented in Sections 4, 5, and 6. Section 7 describes the project trip generation, distribution, and assignment. The With Project Existing Year (2023), Opening Year (2024), and Build Out Year (2040) scenarios for the study area roadways, intersection geometry, turning movement volumes, and level of service are presented in Sections 8, 9, and 10. Section 11 presents the mitigation measures to address facilities operating at an unacceptable level of service. Section 12 provides mitigation fair share cost calculations. Findings and conclusions from this study are presented in Section 13. Lastly, the appendices are provided in Section 14.

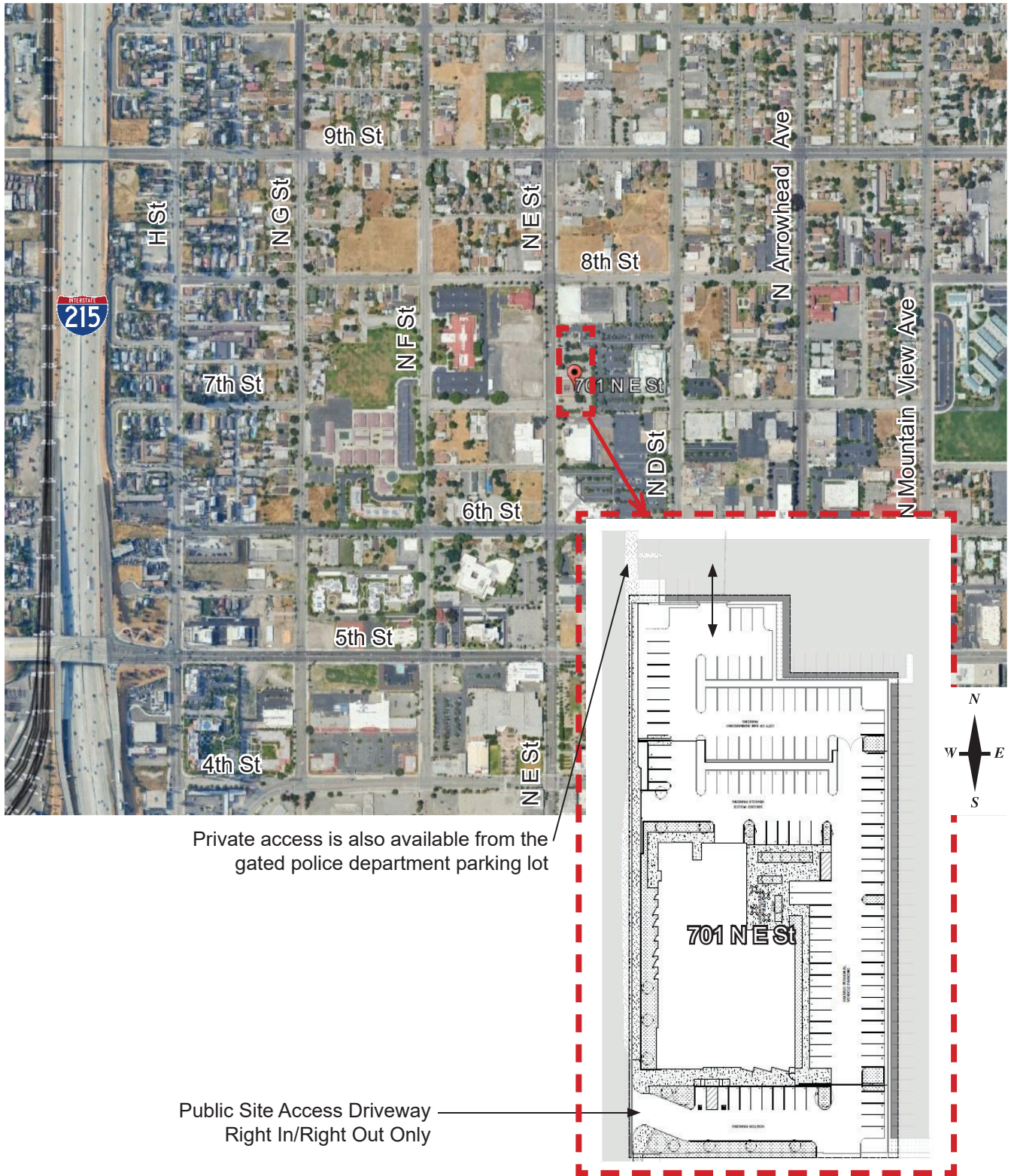
2 PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND

The City of San Bernardino plans to operate a new Centralized Services and Resource Center and School District Police Headquarters at 701 North E Street in San Bernardino, California. The Centralized Services and Resource Center is proposed to be 16,800 square feet and house a variety of existing and new school district departments, including the existing school district police operations located at 536 West Base Line Street (approximately a half mile north of the project site). The project location is illustrated in Figure 2.1.

Public access to the project site will be available from a driveway on North E Street. Access to the off-street parking spaces for the site is also available through the gated police department parking lot adjacent to the site.

FIGURE 2.1 - PROJECT LOCATION MAP



3 ANALYSIS METHODOLOGY

The traffic analysis for the San Bernardino Police Department and Resource Center project will follow the City of San Bernardino traffic impact analysis guidelines. The intersection analysis methodology and performance criteria used in this analysis conform to the City of San Bernardino's requirements for traffic impact studies prepared consistent with the California Environmental Quality (CEQA) guidelines. These guidelines comply with the latest version of the Highway Capacity Manual (HCM) and the methodologies and rates outlined in the Institute of Transportation Engineers (ITE) handbook. The traffic analysis conducted includes an assessment of traffic conditions for eight existing intersections and three roadway segments located within the project location. Analysis scenarios and horizon years are summarized for the following time scenarios:

- Existing Year (2023) No Project
- Opening Year (2024) No Project
- Build Out Year (2040) No Project
- Existing Year (2023) With Project
- Opening Year (2024) With Project
- Build Out Year (2040) With Project

3.1 STUDY AREA INTERSECTIONS/ROADWAY SEGMENTS

Based on the project trip generation and distribution and consultation with City staff, the following eight study area intersections were analyzed in this report:

1. E Street and 9th Street
2. E Street and 8th Street
3. E Street and 6th Street
4. E Street and 5th Street
5. F Street and 9th Street
6. F Street and 8th Street
7. F Street and 6th Street
8. F Street and 5th Street

Additionally, the following three roadway segments were included:

1. 9th Street between H Street and E Street
2. E Street between 9th Street and 5th Street
3. 5th Street between H Street and E Street

3.2 TRAFFIC COUNT DATA

The turning movement counts were taken on Wednesday, January 11, 2023 at the eight (8) study intersections during the morning peak period (7:00 AM to 9:00 AM) and the afternoon peak period (4:00 PM to 6:00 PM). The AM and PM peak analyses are based on the hour of highest total intersection volume during the morning and afternoon periods. Twenty-four hour counts were collected on Wednesday, January 11, 2023 at the three (3) roadway segments. The daily segment and peak hour intersection count data sheets are included in Appendix B of this report.

An annual growth rate of 3% was applied to the 2023 count data to calculate the Opening Year (2024) volumes. The ambient traffic growth factor is intended to account for unknown and future cumulative projects in the study area, and cumulative traffic generated by projects outside the study area. For Build Out Year (2040), volumes were developed based on the San Bernardino Transportation Analysis Model (SBTAM) to account for future traffic volumes and growth.

3.3 AVERAGE DAILY TRAFFIC LEVEL OF SERVICE ANALYSIS

The capacity thresholds used to determine the delay and LOS of roadway segments are referenced in the County of San Bernardino General Plan Program. Table 3.1 outlines the roadway daily volume thresholds. LOS D is established as the standard in the Valley and Mountain Regions. This study uses the Valley thresholds for analysis.

TABLE 3.1: ROADWAY DAILY VOLUME THRESHOLDS

# OF LANES	VALLEY ¹	MOUNTAIN ²	DESERT ³
2	14,600	13,600	7,000
4	31,100	29,300	16,400
6	46,800	44,100	25,700

Source: County of San Bernardino, 2006 General Plan Program

The average daily traffic level of service analysis was conducted by calculating the traffic volume in each direction for a specified link segment. A volume-to-capacity (V/C) ratio was taken and respective letter grade assigned at each location using the range of V/C values shown in Table 3.2. LOS D is taken to be the minimum. Link volumes and the associated LOS are presented for informational purposes only.

TABLE 3.2: LINK LEVEL OF SERVICE DEFINITION

LEVEL OF SERVICE	RANGE OF V/C RATIOS	DEFINITION
A	0.00 – 0.60	Free Flow: Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
B	0.61 – 0.70	Stable Flow: The ability to maneuver within the traffic stream is only slightly restricted and control delay at intersections is not significant. The travel speed is between 67% and 85% of base free-flow speed.
C	0.71 – 0.80	Stable Flow: The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
D	0.81 – 0.90	Approaching Unstable Flow: Small increases in flow may cause substantial increases in delay and decreases in travel speed. The travel speed is between 40% and 50% of the base free-flow speed.
E	0.91 – 1.00	Unstable Flow: Significant delay is commonly experienced. The travel speed is between 30% and 40% of the base free-flow speed.
F	> 1.00	Forced Flow: Congestion is likely occurring at intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed.

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, Transportation Research Board, 1980.

¹ Major City/County Roadway, Urbanized Area, LOS D

² Major City/County Roadway, Transitioning and Non-Urbanized Area, LOS D

³ Major City/County Roadway, Areas over 5,000 not in Urbanized Area, LOS C

3.4 INTERSECTION LEVEL OF SERVICE ANALYSIS

Traffic conditions at signalized and unsignalized intersections were evaluated using the Highway Capacity Manual 2010 (HCM 2010) operations methodology consistent with the City of San Bernardino traffic analysis procedures. This study used a maximum saturation volume of 1,600 vehicles per hour per lane (VPHPL) for turn and through lanes for the study intersection analysis. The HCM analysis reports referenced in this document can be found in Appendix D.

3.4.1 SIGNALIZED INTERSECTIONS

The HCM 2010 methodology defines Level of Service (LOS) as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of factors such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS conditions vary based on the type of street and whether the traffic flow is considered interrupted or uninterrupted. The six qualitative categories of LOS and corresponding average delay that have been defined are presented below in Table 3.3 where LOS D is taken to be the minimum. Table 3.4 outlines the significant impact thresholds used in the traffic analysis.

TABLE 3.3: LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

LOS	DESCRIPTION	DELAY (SEC)
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.	0.0 -10.0
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.	10.1 – 20.0
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.	20.1 – 35.0
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.	35.1 – 55.0
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.	55.1 – 80.0
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.	80.1 or more

Source: Highway Capacity Manual (Transportation Research Board, 2010)

TABLE 3.4: SIGNIFICANT IMPACT THRESHOLD FOR SIGNALIZED INTERSECTIONS

LOS NO PROJECT	V/C DIFFERENCE
C	>0.0400
D	>0.0200
E, F	>0.0100

Source: City of San Bernardino Development Services Department, Traffic Impact Study Guidelines

3.4.2 UNSIGNALIZED INTERSECTIONS

The two types of unsignalized intersections include side-street stop controlled (SSSC) and all-way stop controlled (AWSC). The level of service for a side-street stop controlled intersection is determined by the computed or measured control delay at each minor-street movement. LOS F would occur when the volume-to-capacity ratio exceeds 1.0, regardless of the control delay. The delay range for unsignalized intersections is different from those of signalized intersections primarily due to driver expectation. The expectation is that signalized intersections are designed to carry higher volumes of traffic and therefore higher levels of delay are acceptable. The HCM 2010 methodology estimates the delay based on the worse approach at unsignalized intersections. The table below includes the LOS ranges for both unsignalized intersection types. LOS D is taken to be the minimum.

TABLE 3.5: LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	DESCRIPTION	CONTROL DELAY (SEC/VEH)
A	Little or no delays	0.0 – 10.0
B	Short traffic delays	10.1 – 15.0
C	Average traffic delays	15.1 – 25.0
D	Long traffic delays	25.1 – 35.0
E	Very long traffic delays	35.1 – 50.0
F	Extreme traffic delays with intersection capacity exceeded	50.1 or more

Source: Highway Capacity Manual (Transportation Research Board, 2010)

4 EXISTING YEAR (2023) NO PROJECT

This section presents the Existing Year (2023) No Project scenario conditions of the project study area; this scenario will serve as the base for which all upcoming scenarios are assessed. The study area encompasses arterial roadways and signalized intersections within the project area. Descriptions of the existing roadway network and intersection level of service analysis results for the Existing Year (2023) No Project scenario are included in this section.

4.1 EXISTING ROADWAY NETWORK

Selected arterials that are located in the vicinity of the project corridor are described in this section. Items of note include existing geometry, pedestrian and bicycle facilities, speed limit, and adjacent land uses. The selected arterials are as follows:

E STREET

E Street is a two-lane roadway that runs north and south. Exclusive bus lanes run in each direction in the middle of the corridor within the boundaries of the study area. The posted speed limit is 30 miles per hour. The land use adjacent to the corridor is comprised primarily of businesses. There are no dedicated bicycle lanes on either side of the roadway and on-street parking is not permitted.

F STREET

F Street is a four-lane undivided roadway south of the corridor and turns into a one-lane undivided roadway north of the corridor within the study area. F Street runs north and south in the study area. The posted speed limit is 25 miles per hour. The land use around the corridor is made up of residential housing and an educational facility. There are no exclusive bicycle lanes and on-street parking is permitted along both sides of the roadway.

9TH STREET

9th Street is a four-lane undivided roadway that runs east and west within the boundaries of the study location. The posted speed limit is 40 miles per hour. The land use surrounding the corridor is comprised of residential housing and businesses. Bicycle lanes are not present and on-street parking is permitted on both sides of the roadway.

8TH STREET

8th Street is a two-lane undivided roadway that runs east and west within the study area location. The posted speed limit is 25 miles per hour. The land use adjacent to the corridor is made up of predominantly residential housing. Dedicated bicycle lanes are not present and on-street parking is permitted on both sides of the corridor.

6TH STREET

6th Street is a four-lane undivided roadway that runs east and west within the boundaries of the study location. The posted speed limit is 35 miles per hour. The land use around the corridor is comprised of businesses and an educational facility. There are no bicycle lanes on either side of the corridor and on-street parking is permitted.

5TH STREET

5th Street is a four-lane undivided roadway that runs east and west within the study area. The posted speed limit is 40 miles per hour. The land use adjacent to the roadway includes mainly businesses. Bicycle lanes are not present and on-street parking is allowed on both sides of the roadway.

4.2 AVERAGE DAILY TRAFFIC

The average traffic volumes for the roadway segments for the Existing Year (2023) No Project scenario are summarized in Table 4.1. Road segment volumes have been included for noise and air quality purposes. Existing road segment volumes are extracted from 24-hour counts which can be found in Appendix B.

TABLE 4.1: EXISTING YEAR (2023) NO PROJECT ROADWAY SEGMENT DATA COLLECTION SUMMARY

ID	ROADWAY	SOURCE	EXISTING (2023)	CAPACITY	V/C	LOS
1	9 th Street between H Street and E Street	Counts Unlimited, Jan 2023	11,157	31,100	0.36	A
2	E Street between 9 th Street and 5 th Street	Counts Unlimited, Jan 2023	5,586	14,600	0.38	A
3	5 th Street between H Street and E Street	Counts Unlimited, Jan 2023	21,855	31,100	0.70	C

4.3 INTERSECTION LEVEL OF SERVICE

Study intersection lane geometry is shown in Figure 4.1. Existing Year (2023) No Project peak hour turning movement volumes are shown in Figure 4.2. Table 4.2 summarizes the existing levels of service at the study area intersections. All eight study intersections currently operate at an acceptable level of service during both peak hours.

TABLE 4.2: EXISTING YEAR (2023) NO PROJECT INTERSECTION LOS

INTERSECTION	Intersection Control	AM		PM	
		Delay (S)	LOS	Delay (S)	LOS
1 E St and 9th St	Signalized	26.7	C	27.4	C
2 E St and 8th St	Signalized	5.6	A	8.0	A
3 E St and 6th St	Signalized	15.6	B	14.9	B
4 E St and 5th St	Signalized	19.4	B	22.4	C
5 F St and 9th St	Signalized	9.8	A	10.0	B
6 F St and 8th St	TWSC	10.4	B	10.0	B
7 F St and 6th St	Signalized	9.3	A	9.2	A
8 F St and 5th St	Signalized	21.3	C	20.1	C

FIGURE 4.1. STUDY INTERSECTION LANE GEOMETRY

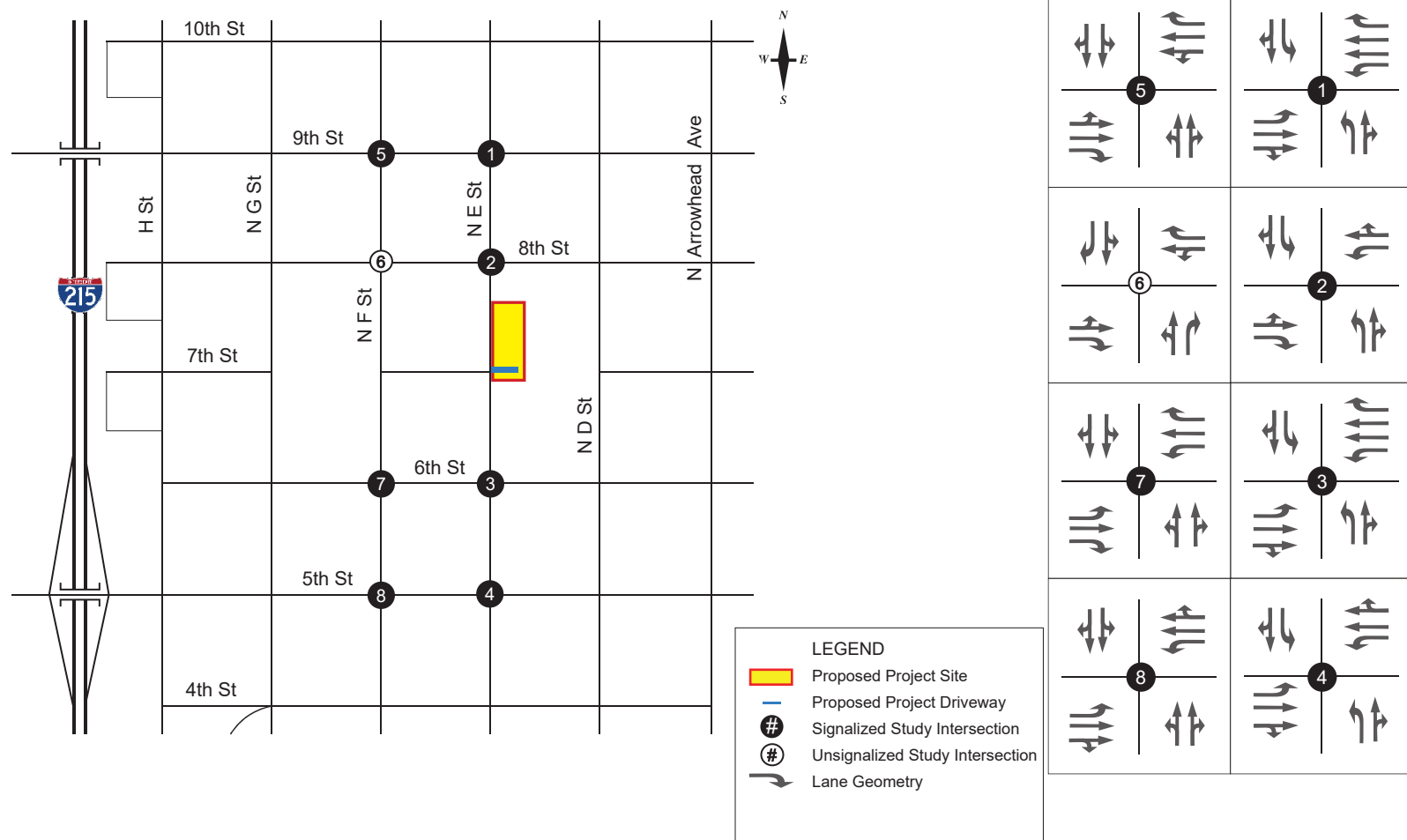
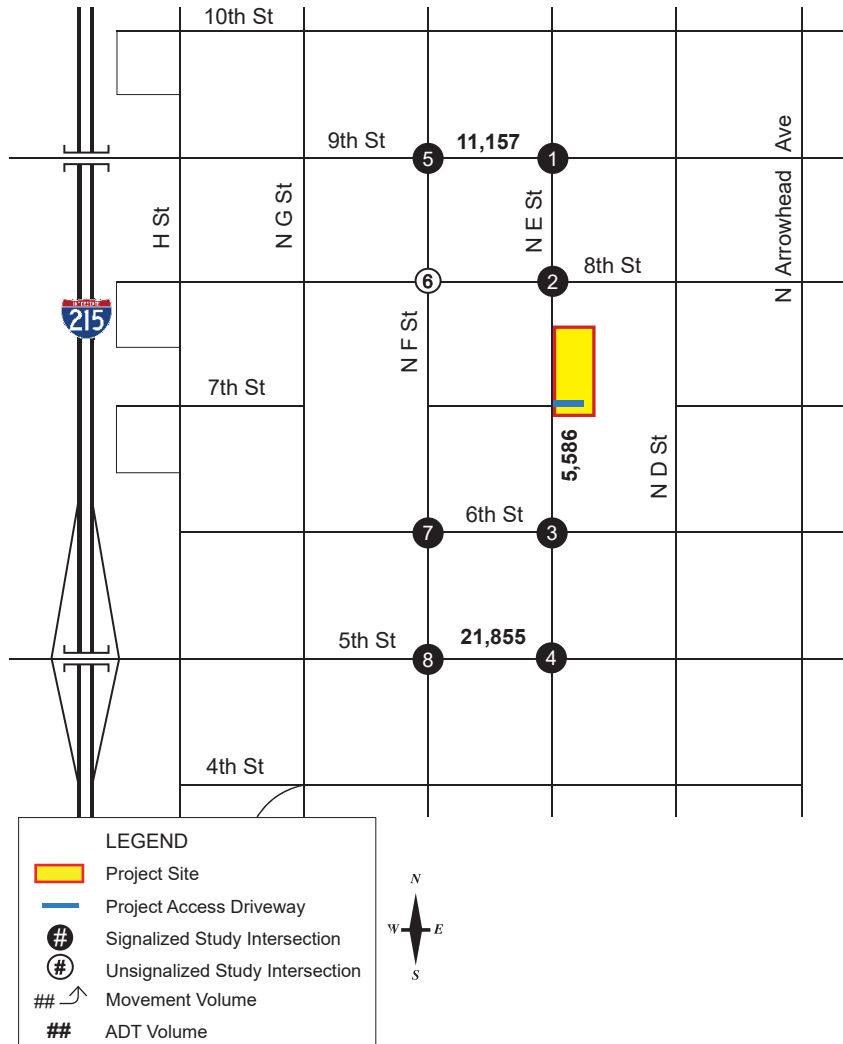
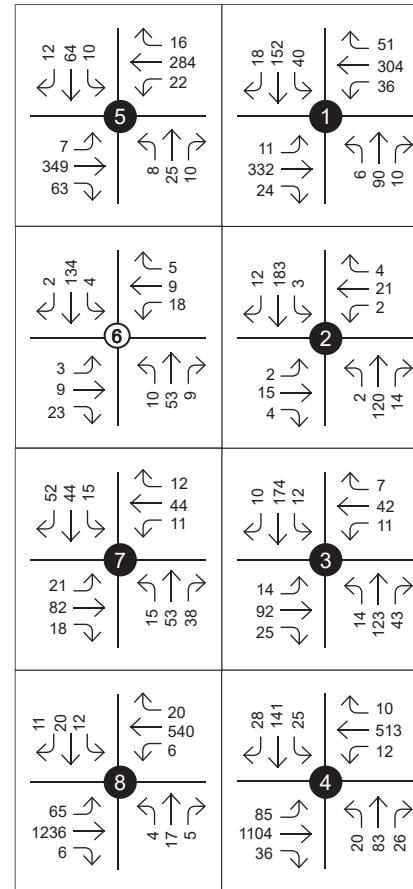


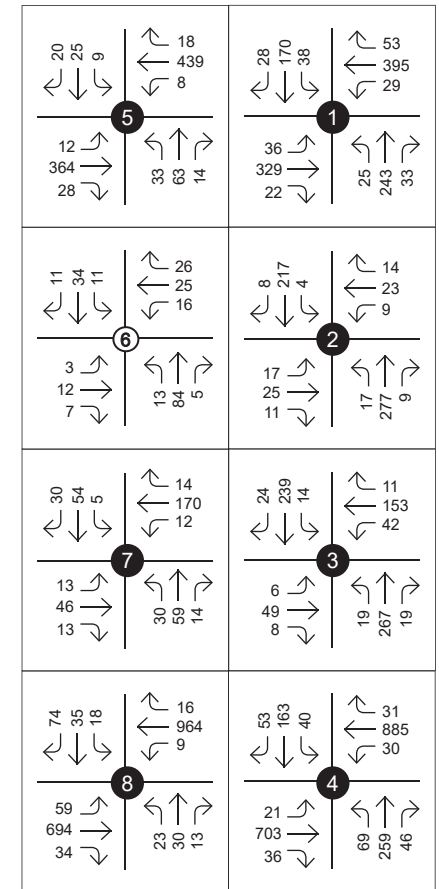
FIGURE 4.2 EXISTING YEAR (2023) NO PROJECT VOLUMES



AM Peak Hour



PM Peak Hour



5 OPENING YEAR (2024) NO PROJECT

This section presents the ADT, peak hour link analysis, and intersection LOS analysis for the Opening Year (2024) No Project scenario. Associated lane geometries and controls are consistent with the Existing Year (2023) No Project intersection geometries and controls as described in Section 4.

5.1 AVERAGE DAILY TRAFFIC

The average daily traffic for study segments in the Opening Year (2024) No Project scenario are presented in Table 5.1. Road segment volumes have been included for noise and air quality purposes.

TABLE 5.1: OPENING YEAR (2024) NO PROJECT ROADWAY SEGMENT SUMMARY

ID	ROADWAY	SOURCE	OPENING (2024)	CAPACITY	V/C	LOS
1	9 th Street between H Street and E Street	Counts Unlimited, Jan 2023	11,826	31,100	0.38	A
2	E Street between 9 th Street and 5 th Street	Counts Unlimited, Jan 2023	5,921	14,600	0.41	A
3	5 th Street between H Street and E Street	Counts Unlimited, Jan 2023	23,166	31,100	0.75	C

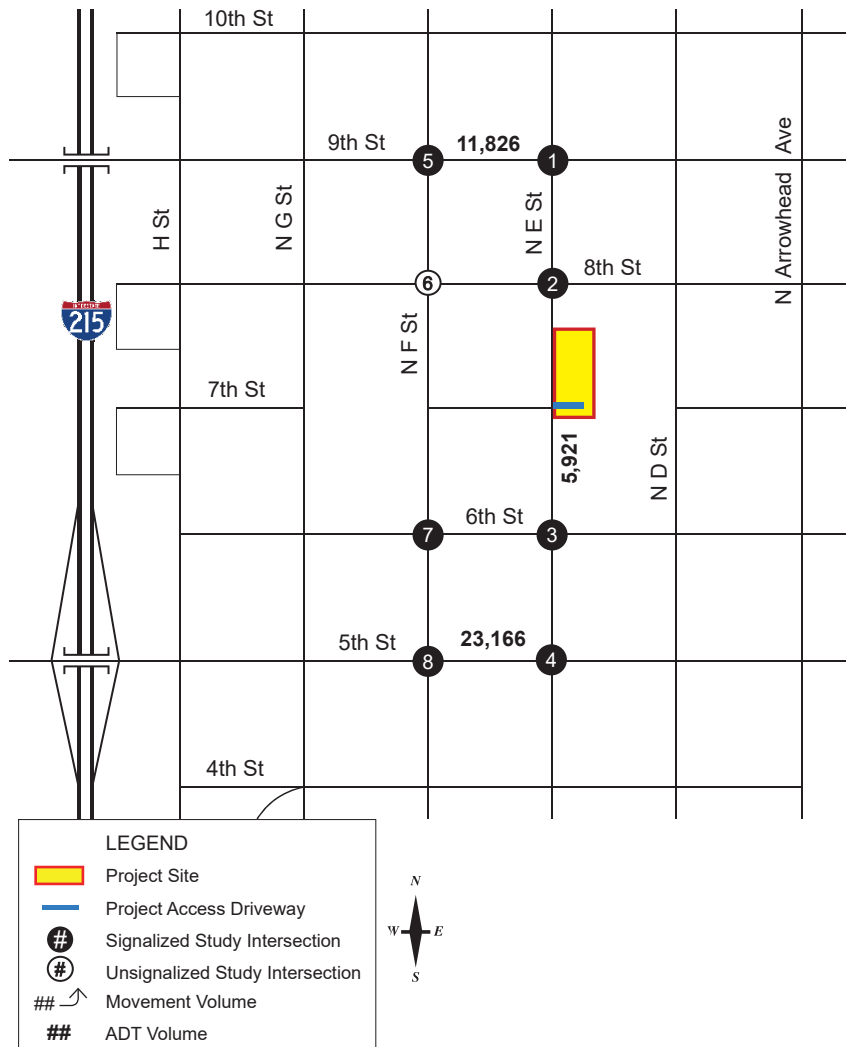
5.2 INTERSECTION LEVEL OF SERVICE

The Opening Year (2024) peak hour turning movement volumes are shown in Figure 5.1. A summary of the AM and PM peak hour intersection level of service analysis is presented in Table 5.2. All eight study intersections operate at acceptable level of service in this scenario.

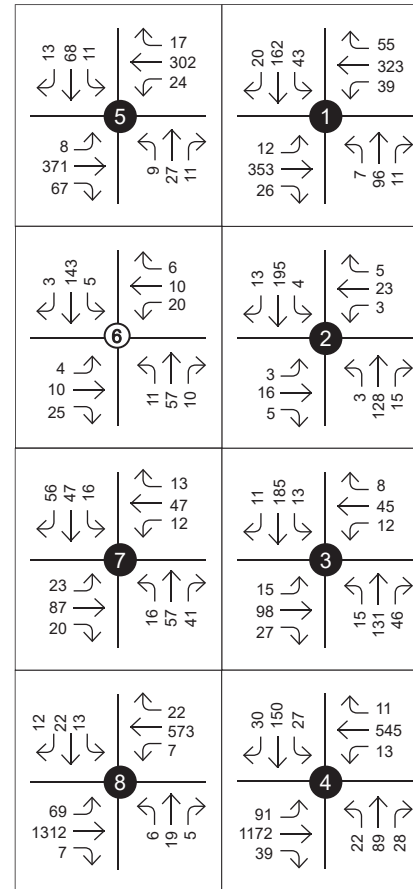
TABLE 5.2: OPENING YEAR (2024) NO PROJECT INTERSECTION LEVEL OF SERVICE

INTERSECTION	Intersection Control	AM		PM	
		Delay (S)	LOS	Delay (S)	LOS
1 E St and 9th St	Signalized	27.2	C	28.3	C
2 E St and 8th St	Signalized	6.0	A	8.3	A
3 E St and 6th St	Signalized	15.8	B	14.9	B
4 E St and 5th St	Signalized	20.2	C	22.6	C
5 F St and 9th St	Signalized	9.8	A	10.1	B
6 F St and 8th St	TWSC	10.6	B	10.2	B
7 F St and 6th St	Signalized	9.3	A	9.3	A
8 F St and 5th St	Signalized	20.7	C	19.0	B

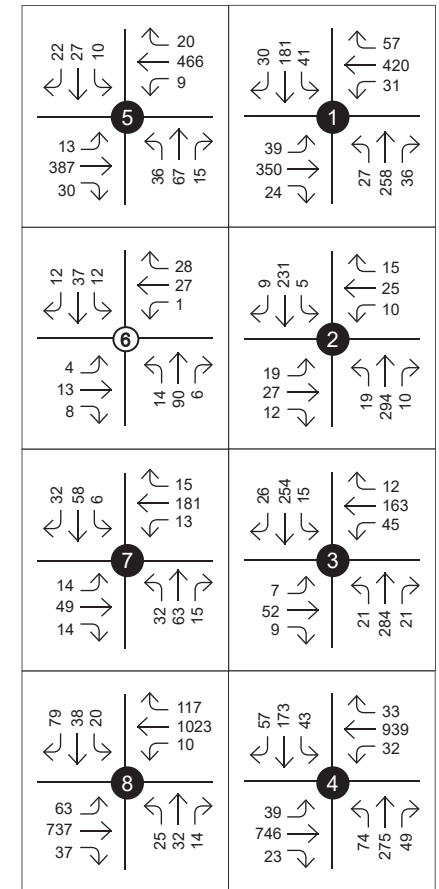
FIGURE 5.1 OPENING YEAR (2024) NO PROJECT VOLUMES



AM Peak Hour



PM Peak Hour



6 BUILD OUT YEAR (2040) NO PROJECT

This section presents the ADT, peak hour link analysis, and intersection LOS analysis for the Build Out Year (2040) No Project scenario. Associated lane geometries and controls are consistent with the Existing Year (2023) No Project intersection geometries and controls as described in Section 4.

6.1 AVERAGE DAILY TRAFFIC

The average daily traffic for study segments in the Build Out (2040) No Project scenario are presented in Table 6.1. Road segment volumes have been included for noise and air quality purposes.

TABLE 6.1: BUILD OUT YEAR (2040) NO PROJECT ROADWAY SEGMENT SUMMARY

ID	ROADWAY	SOURCE	BUILDOUT (2040)	V/C	LOS
1	9 th Street between H Street and E Street	Counts Unlimited, Jan 2023	12,219	0.39	A
2	E Street between 9 th Street and 5 th Street	Counts Unlimited, Jan 2023	6,119	0.42	A
3	5 th Street between H Street and E Street	Counts Unlimited, Jan 2023	23,934	0.77	C

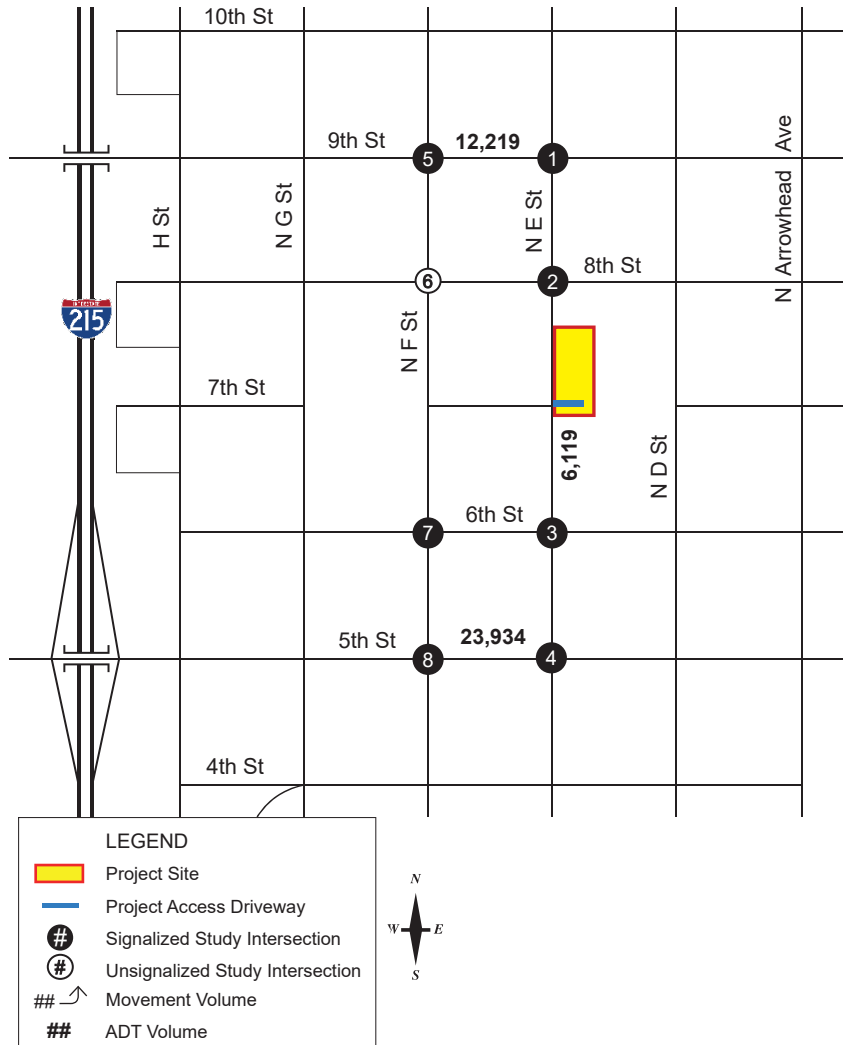
6.2 INTERSECTION LEVEL OF SERVICE

The peak hour turning movement volumes presented in Figure 6.1 and 6.2 were utilized to assess intersection performance. Intersection performance was determined using the methods outlined in Section 3. A summary of the AM and PM peak hour intersection level of service analysis results for the Build Out (2040) No Project scenario is presented in Table 6.2. All intersections are operating at acceptable level of service except for the intersection at E Street and 5th Street in the AM peak hour.

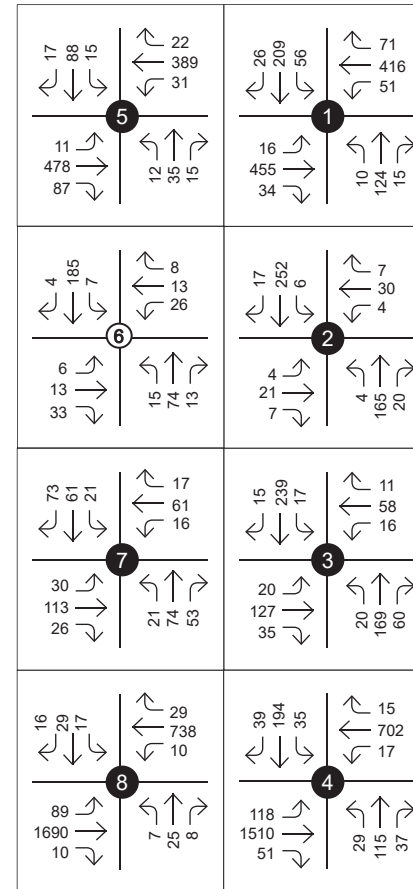
TABLE 6.2: BUILD OUT (2040) NO PROJECT INTERSECTION LEVEL OF SERVICE

INTERSECTION	Intersection Control	AM		PM	
		Delay (S)	LOS	Delay (S)	LOS
1 E St and 9th St	Signalized	30.1	C	38.1	D
2 E St and 8th St	Signalized	6.9	A	9.1	A
3 E St and 6th St	Signalized	15.9	B	14.7	B
4 E St and 5th St	Signalized	59.8	E	31.5	C
5 F St and 9th St	Signalized	10.3	B	10.7	B
6 F St and 8th St	TWSC	11.9	B	11.3	B
7 F St and 6th St	Signalized	9.6	A	9.6	A
8 F St and 5th St	Signalized	19.3	B	13.9	B

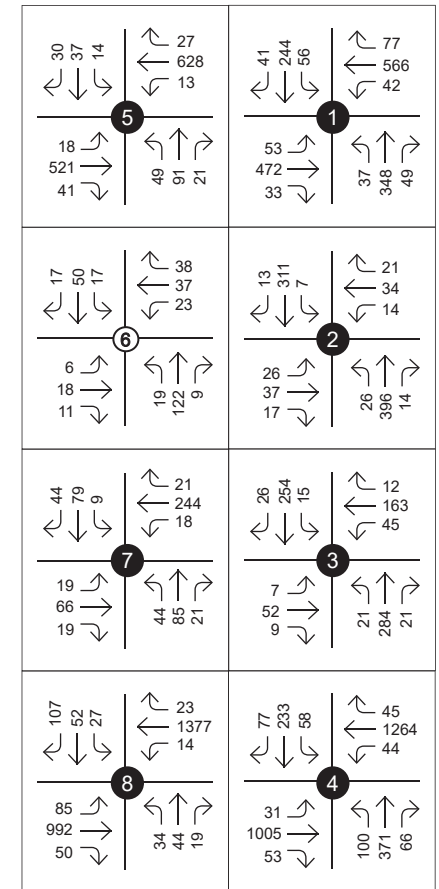
FIGURE 6.1 BUILD OUT YEAR (2040) NO PROJECT VOLUMES



AM Peak Hour



PM Peak Hour



7 PROJECT TRAFFIC

A description of the methods utilized to generate, distribute, and assign project-generated traffic to intersections within the study area are presented in this section.

7.1 TRIP GENERATION

The resource center is proposed to include 16,800 square feet of office space. The various departments and office functions of the proposed parent center include departments currently located adjacent to the proposed site at the Juanita Blakely Jones Elementary School and Board of Education. Due to the close proximity, the trip generation for these departments are not included as new project trips. Instead, the new project trips for the resource center include departments being relocated from areas within San Bernardino that are not within close proximity (outside half-mile radius) of the proposed site and new proposed departments (23 relocated employees and 10 new employees). Trip generation was developed using the *ITE Trip Generation Manual (11th Edition)* School District Office land use and based on the number of new employees commuting to the area (33 employees). The project is expected to generate 168 net daily trips, with 28 trips (21 inbound and 7 outbound) during the AM peak hour and 24 trips (4 inbound and 20 outbound) during the PM peak hour.

The proposed police station will house the existing police station located at 536 West Baseline Street. As such, trip generation for the proposed site was based on existing trips generated at the current police station location. Driveway counts were taken for 24 hours on Wednesday, May 9, 2018. The morning peak period (7:00 AM to 9:00 AM) and the afternoon peak period (4:00 PM to 6:00 PM) were used to estimate the peak hour trip generation for the proposed police station. The driveway counts referenced can be found in Appendix C. Table 7.1 presents the resultant AM and PM peak hour trip generation for the proposed project.

TABLE 7.1: PROJECT TRIP GENERATION RATES

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Rates								
School District Office (528)	Employees	5.08	0.63	0.20	0.83	0.12	0.60	0.72
Trips								
School District Office (528)	33	168	21	7	28	4	20	24
Driveway Counts	Trips	149	21	23	44	17	13	30
Total Trip Generation		317	42	30	72	21	33	54

Source: ITE Trip Generation Manual (11th Edition); Observed Driveway Counts

7.2 TRIP DISTRIBUTION

The proposed project site would utilize access driveways located on the east side of North E Street. North E Street is a north-south roadway with center bus lanes (one lane in each direction divided by flexible bollards) and one general travel lane in each direction. The bus lanes and bollards preclude all movements except for northbound right turns into the driveway and right turns out of the driveway onto northbound North E Street. Figure 7.1 illustrates the local trip distribution. Figure 7.2 presents the AM peak hour and PM peak hour turning movement volumes.

FIGURE 7.1. PROJECT TRIP DISTRIBUTION

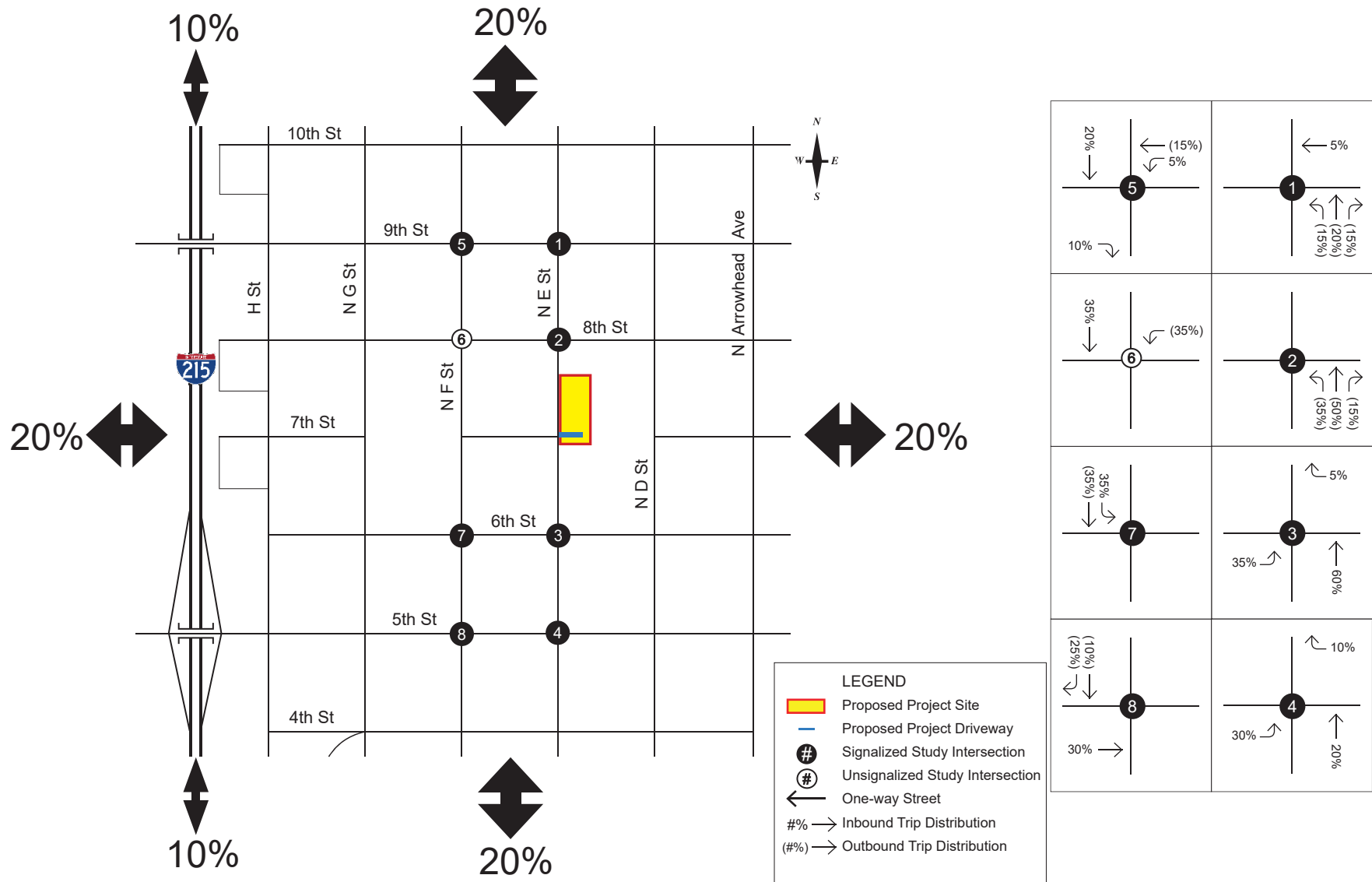
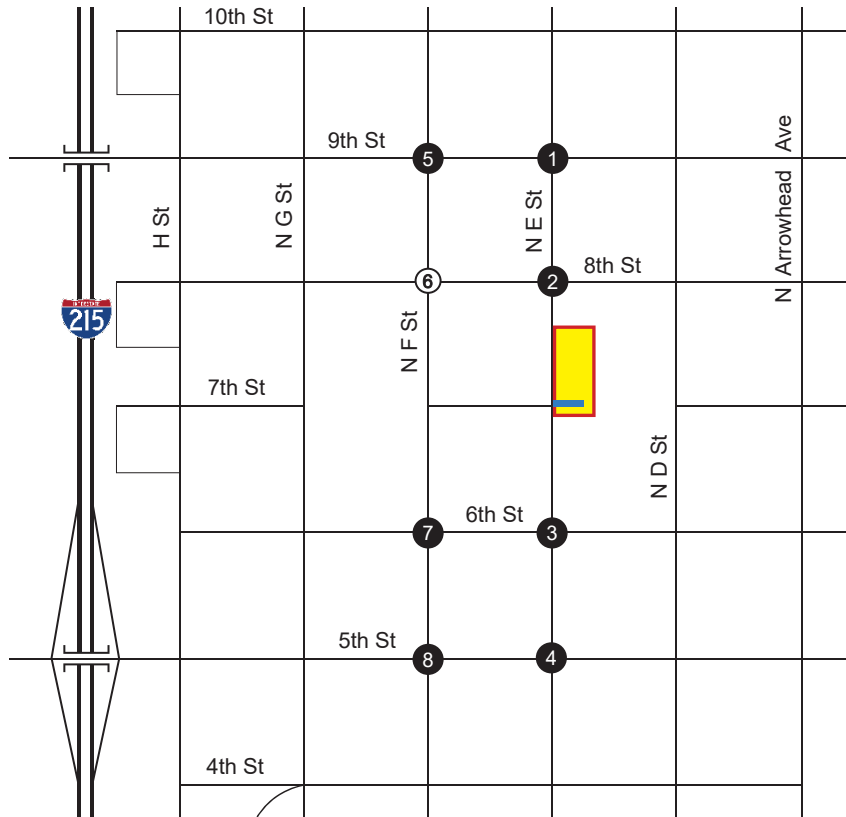


FIGURE 7.2 PROJECT TRIPS

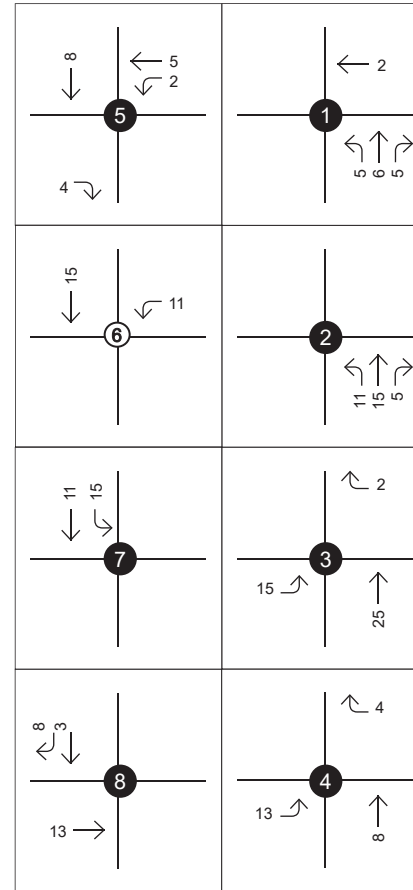


LEGEND

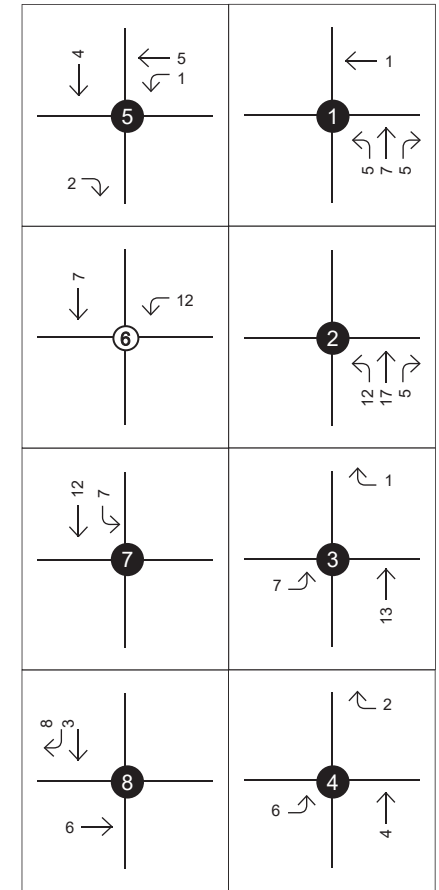
- Project Site
- Project Access Driveway
- # Signalized Study Intersection
- # Unsignalized Study Intersection
- ## ↗ Movement Volume
- ## ADT Volume



AM Peak Hour



PM Peak Hour



8 EXISTING YEAR (2023) WITH PROJECT

This section includes an analysis of the Existing Year (2023) With Project scenario. Results for the average daily traffic and intersection level of service for the Existing Year (2023) With Project scenario are presented in this section.

8.1 AVERAGE DAILY TRAFFIC

The average daily traffic for selected links generated by the project as well as in the Existing Year (2023) No Project and Existing Year (2023) With Project scenarios are presented in Table 8.1 below. Road segment volumes have been included for noise and air quality purposes. All study roadway segments operate at an acceptable level of service with the proposed project.

TABLE 8.1: EXISTING YEAR (2023) WITH PROJECT ROADWAY SEGMENT SUMMARY

ID	ROADWAY	SOURCE	EXISTING NP ADT	V/C	LOS	EXISTING WP ADT	V/C	LOS
1	9 th Street between H Street and E Street	Counts Unlimited, Jan 2023	11,157	0.36	A	11,189	0.36	A
2	E Street between 9 th Street and 5 th Street	Counts Unlimited, Jan 2023	5,586	0.38	A	5,744	0.39	A
3	5 th Street between H Street and E Street	Counts Unlimited, Jan 2023	21,855	0.70	C	21,903	0.70	C

8.2 INTERSECTION LEVEL OF SERVICE

The peak hour turning movement volumes presented in Figure 8.1 were utilized in order to assess intersection performance. A summary of the AM and PM peak hour intersection level of service analysis results for the Existing Year (2023) With Project scenario is presented in Table 8.2 for the AM peak hour and Table 8.3 for PM peak hour. All eight intersections operate at an acceptable level of service in both the No Project and With Project scenarios.

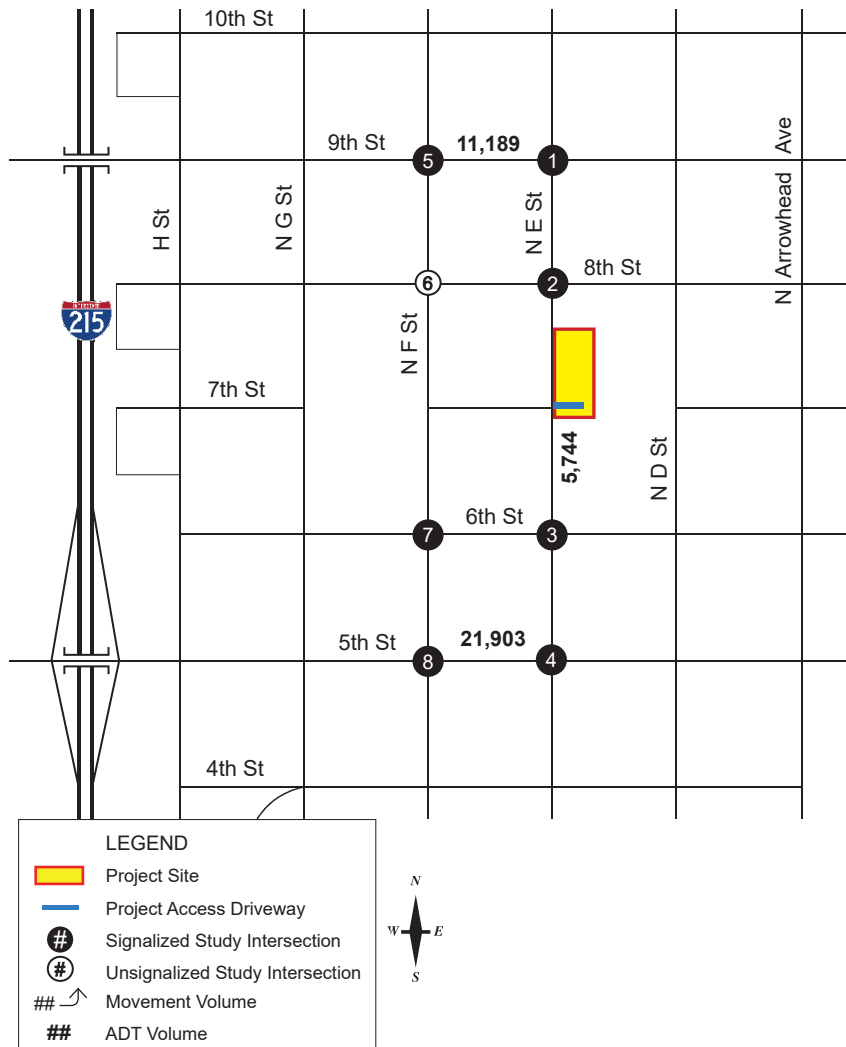
TABLE 8.2: EXISTING YEAR (2023) AM PEAK HOUR WITH PROJECT INTERSECTION LOS

INTERSECTION	Intersection Control	EXISTING		W/ PROJECT		Change in Delay	
		Delay (S)	LOS	Delay (S)	LOS		
1	E St and 9th St	Signalized	26.7	C	26.7	C	0.000
2	E St and 8th St	Signalized	5.6	A	6.1	A	0.500
3	E St and 6th St	Signalized	15.6	B	15.8	B	0.200
4	E St and 5th St	Signalized	19.4	B	19.3	B	-0.100
5	F St and 9th St	Signalized	9.8	A	9.8	A	0.000
6	F St and 8th St	TWSC	10.4	B	10.7	B	0.300
7	F St and 6th St	Signalized	9.3	A	9.4	A	0.100
8	F St and 5th St	Signalized	21.3	C	21.2	C	-0.100

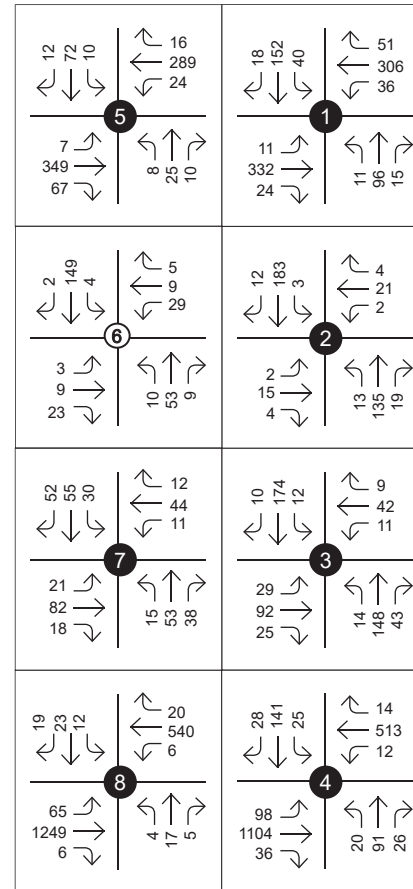
TABLE 8.3: EXISTING YEAR (2023) PM PEAK HOUR WITH PROJECT INTERSECTION LOS

INTERSECTION		Intersection Control	EXISTING		W/ PROJECT		Change in Delay
			Delay (S)	LOS	Delay (S)	LOS	
1	E St and 9th St	Signalized	27.4	C	27.5	C	0.100
2	E St and 8th St	Signalized	8.0	A	8.3	A	0.300
3	E St and 6th St	Signalized	14.9	B	14.9	B	0.000
4	E St and 5th St	Signalized	22.4	C	22.0	C	-0.400
5	F St and 9th St	Signalized	10.0	B	10.0	B	0.000
6	F St and 8th St	TWSC	10.0	B	10.2	B	0.200
7	F St and 6th St	Signalized	9.2	A	9.3	A	0.100
8	F St and 5th St	Signalized	20.1	C	20.0	C	-0.100

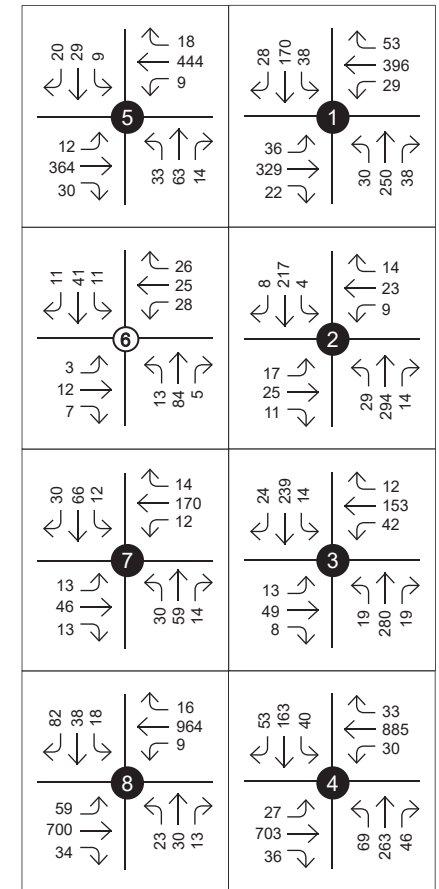
FIGURE 8.1 EXISTING YEAR (2023) WITH PROJECT VOLUMES



AM Peak Hour



PM Peak Hour



9 OPENING YEAR (2024) WITH PROJECT

This section presents the ADT and intersection LOS analysis for the Opening Year (2024) With Project scenario. Associated lane geometries and controls are consistent with the Existing Condition.

9.1 AVERAGE DAILY TRAFFIC

The average daily traffic for selected links generated by the project as well as in the Opening Year (2024) No Project and Opening Year (2024) With Project scenarios are presented in Table 9.1. Road segment volumes have been included for noise and air quality purposes. All study segments are forecast to operate at an acceptable level of service with the proposed project in the Opening Year.

TABLE 9.1: OPENING YEAR (2024) WITH PROJECT ROADWAY SEGMENT SUMMARY

ID	ROADWAY	SOURCE	OPENING NP ADT	V/C	LOS	OPENING WP ADT	V/C	LOS
1	9 th Street between H Street and E Street	Counts Unlimited, Jan 2023	11,837	0.38	A	11,858	0.38	A
2	E Street between 9 th Street and 5 th Street	Counts Unlimited, Jan 2023	5,927	0.41	A	6,079	0.42	A
3	5 th Street between H Street and E Street	Counts Unlimited, Jan 2023	23,186	0.75	C	23,214	0.75	C

9.2 INTERSECTION LEVEL OF SERVICE

The peak hour turning movement volumes presented in Figure 9.1 and 9.2 were utilized to assess intersection performance. A summary of the AM and PM peak hour intersection level of service analysis results for the Opening Year (2024) With Project condition is presented in Table 9.2 for the AM peak hour and Table 9.3 for the PM peak hour. All eight intersections operate at an acceptable level of service in both the No Project and With Project scenarios.

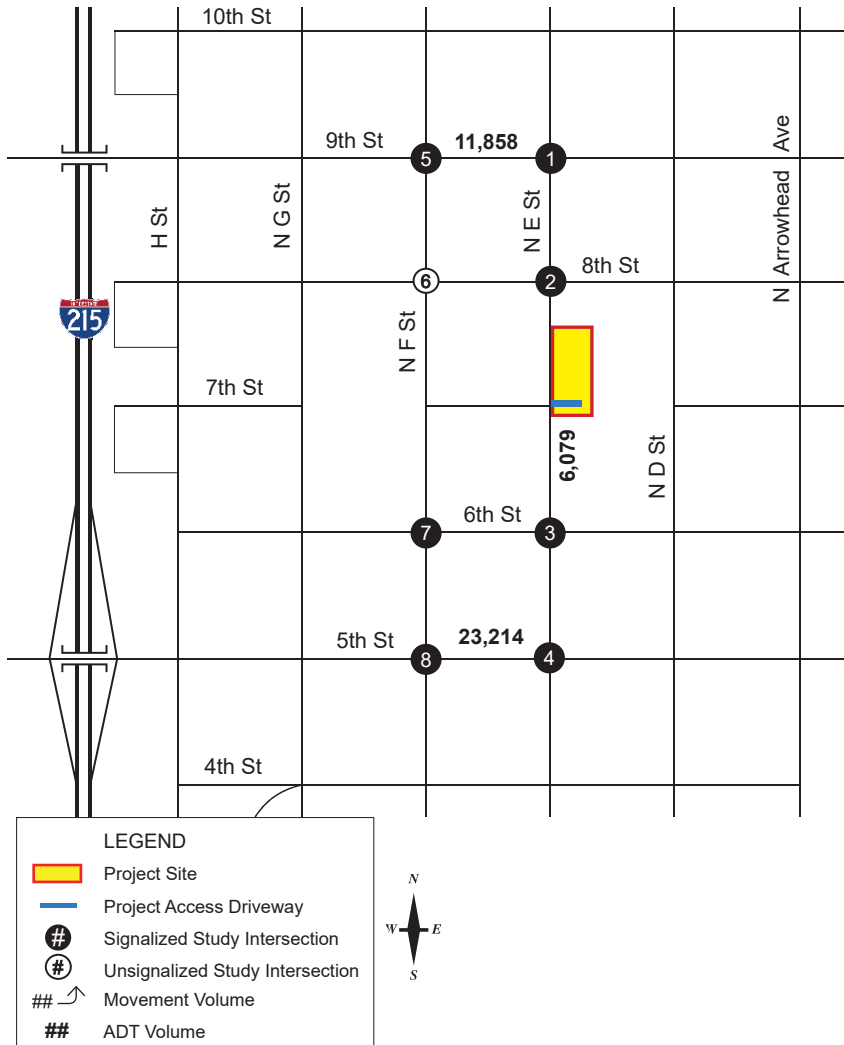
TABLE 9.2: OPENING YEAR (2024) AM PEAK HOUR WITH PROJECT INTERSECTION LOS

INTERSECTION	Intersection Control	NO PROJECT		W/ PROJECT		Change in Delay	
		Delay (S)	LOS	Delay (S)	LOS		
1	E St and 9th St	Signalized	27.2	C	27.2	C	0.000
2	E St and 8th St	Signalized	6.0	A	6.5	A	0.500
3	E St and 6th St	Signalized	15.8	B	15.9	B	0.100
4	E St and 5th St	Signalized	20.2	C	20.1	C	-0.100
5	F St and 9th St	Signalized	9.8	A	9.9	A	0.100
6	F St and 8th St	TWSC	10.6	B	10.9	B	0.300
7	F St and 6th St	Signalized	9.3	A	9.4	A	0.100
8	F St and 5th St	Signalized	20.7	C	20.6	C	-0.100

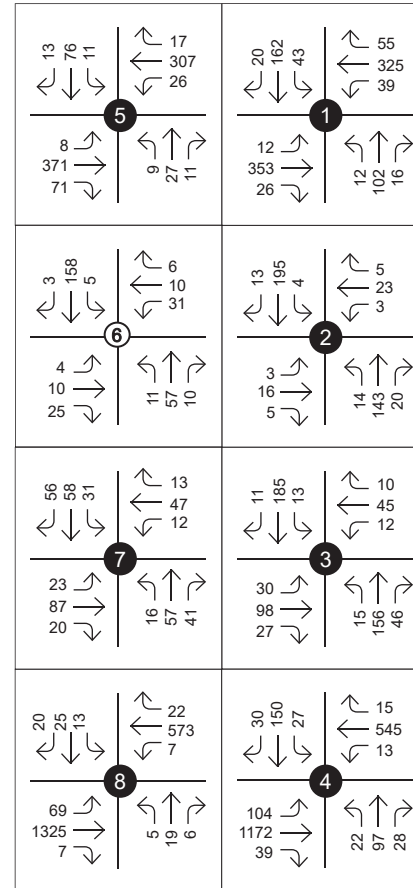
TABLE 9.3: OPENING YEAR (2024) PM PEAK HOUR WITH PROJECT INTERSECTION LOS

INTERSECTION		Intersection Control	NO PROJECT		W/ PROJECT		Change in Delay
			Delay (S)	LOS	Delay (S)	LOS	
1	E St and 9th St	Signalized	28.3	C	28.4	C	0.100
2	E St and 8th St	Signalized	8.3	A	8.6	A	0.300
3	E St and 6th St	Signalized	14.9	B	14.9	B	0.000
4	E St and 5th St	Signalized	22.6	C	22.2	C	-0.400
5	F St and 9th St	Signalized	10.1	B	10.1	B	0.000
6	F St and 8th St	TWSC	10.2	B	10.4	B	0.200
7	F St and 6th St	Signalized	9.3	A	9.3	A	0.000
8	F St and 5th St	Signalized	19	B	19.0	B	0.000

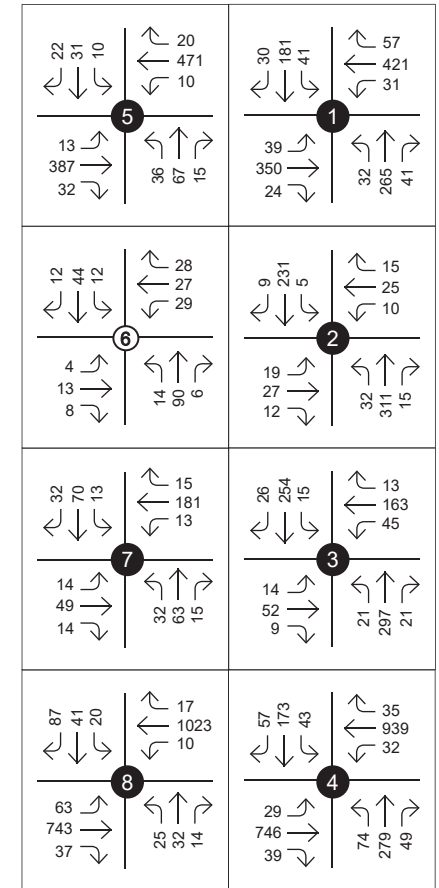
FIGURE 9.1 OPENING YEAR (2024) WITH PROJECT VOLUMES



AM Peak Hour



PM Peak Hour



10 BUILD OUT YEAR (2040) WITH PROJECT

This section presents the ADT and intersection LOS analysis for the Build Out Year (2040) With Project scenario. Associated lane geometries and controls are consistent with those used in the Build Out Year (2040) No Project scenario.

10.1 AVERAGE DAILY TRAFFIC

The average daily traffic for selected links generated by the project as well as in the Build Out Year (2040) No Project and Build Out Year (2040) With Project scenarios are presented in Table 10.1. Road segment volumes have been included for noise and air quality purposes. All study roadway segments are forecast to operate at an acceptable level of service with the proposed project.

TABLE 10.1: OPENING YEAR (2024) WITH PROJECT ROADWAY SEGMENT SUMMARY

ID	ROADWAY	SOURCE	BUILD OUT NP ADT	V/C	LOS	BUILD OUT WP ADT	V/C	LOS
1	9 th Street between H Street and E Street	Counts Unlimited, Jan 2023	12,219	0.39	A	12,251	0.39	A
2	E Street between 9 th Street and 5 th Street	Counts Unlimited, Jan 2023	6,119	0.42	A	6,277	0.43	A
3	5 th Street between H Street and E Street	Counts Unlimited, Jan 2023	23,934	0.77	C	23,982	0.77	C

10.2 INTERSECTION LEVEL OF SERVICE

The peak hour turning movement volumes presented in Figure 10.1 and 10.2 were utilized to assess intersection performance. A summary of the AM and PM peak hour intersection level of service analysis results for the Build Out Year (2040) With Project condition is presented in Table 10.2 for the AM peak hour and Table 10.3 for the PM peak hour. All intersections except the intersection at E Street and 5th street operate at an acceptable level of service in the No Project Scenario. In the With Project Scenario, all eight intersections operate at an acceptable level of service.

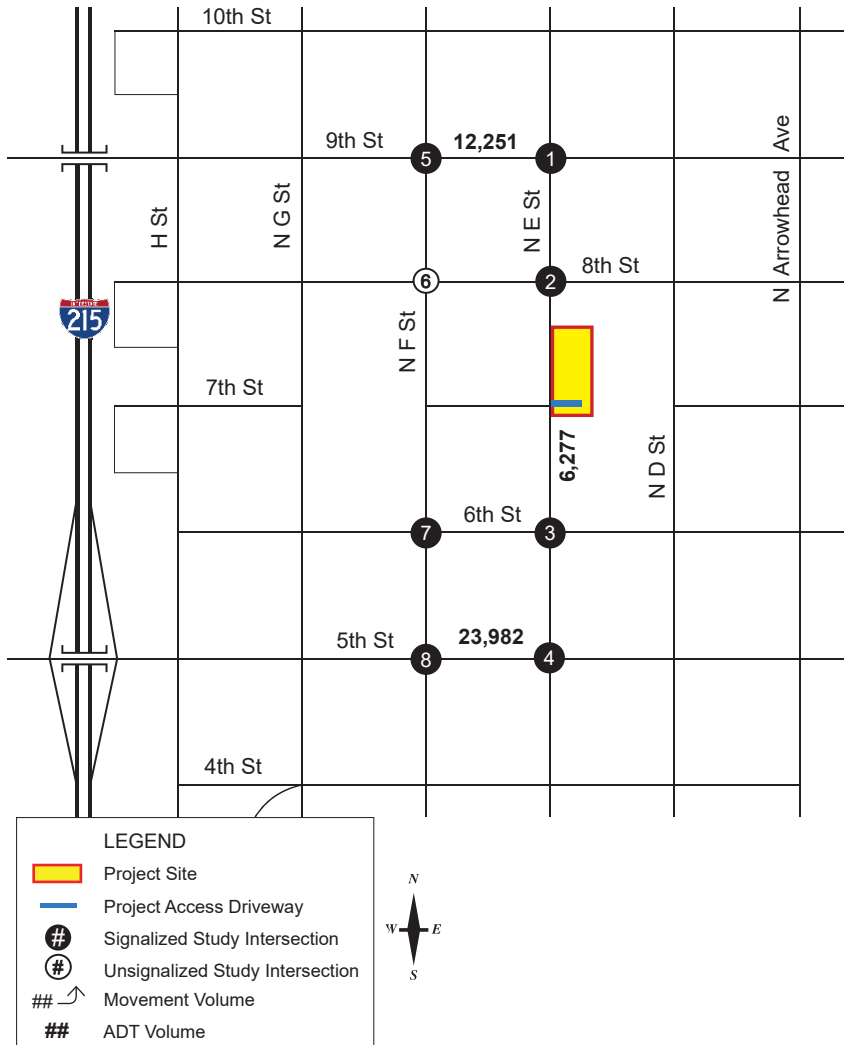
TABLE 10.2: BUILD OUT YEAR (2040) AM PEAK HOUR WITH PROJECT INTERSECTION LOS

INTERSECTION		Intersection Control	NO PROJECT		W/ PROJECT		Change in Delay
			Delay (S)	LOS	Delay (S)	LOS	
1	E St and 9th St	Signalized	30.1	C	30.1	C	0.000
2	E St and 8th St	Signalized	6.6	A	6.9	A	0.300
3	E St and 6th St	Signalized	15.8	B	15.9	B	0.100
4	E St and 5th St	Signalized	60.2	E	59.8	E	-0.400
5	F St and 9th St	Signalized	10.3	B	10.3	B	0.000
6	F St and 8th St	TWSC	11.5	B	11.9	B	0.400
7	F St and 6th St	Signalized	9.5	A	9.6	A	0.100
8	F St and 5th St	Signalized	19.2	B	19.3	B	0.100

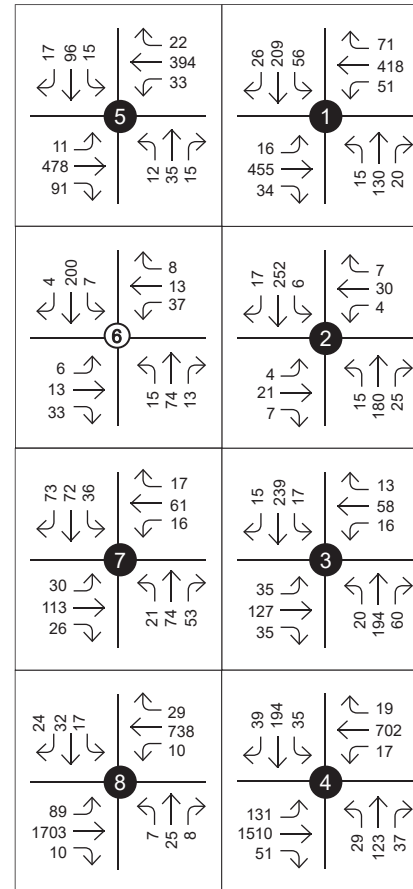
TABLE 10.3: BUILD OUT YEAR (2040) PM PEAK HOUR WITH PROJECT INTERSECTION LOS

INTERSECTION		Intersection Control	NO PROJECT		W/ PROJECT		Change in Delay
			Delay (S)	LOS	Delay (S)	LOS	
1	E St and 9th St	Signalized	37.2	D	38.1	D	0.900
2	E St and 8th St	Signalized	8.9	A	9.1	A	0.200
3	E St and 6th St	Signalized	14.7	B	14.7	B	0.000
4	E St and 5th St	Signalized	31.3	C	31.5	C	0.200
5	F St and 9th St	Signalized	10.7	B	10.7	B	0.000
6	F St and 8th St	TWSC	11	B	11.3	B	0.300
7	F St and 6th St	Signalized	9.6	A	9.6	A	0.000
8	F St and 5th St	Signalized	13.9	B	13.9	B	0.000

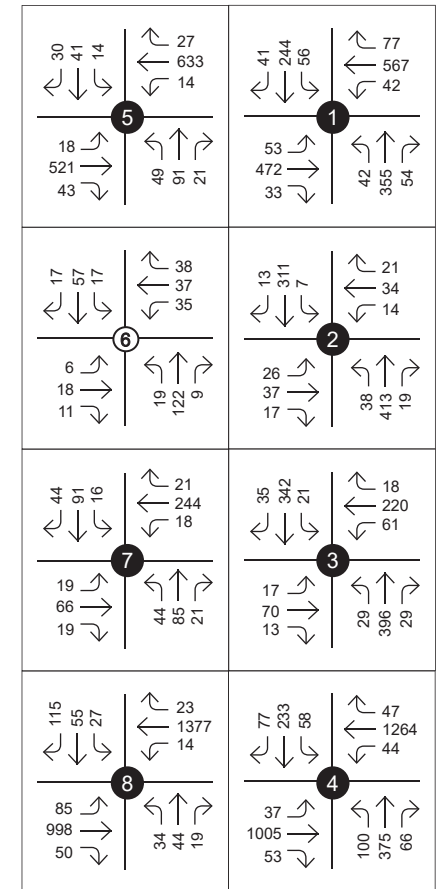
FIGURE 10.1 BUILD OUT YEAR (2040) WITH PROJECT VOLUMES



AM Peak Hour



PM Peak Hour



11 MITIGATION MEASURES

This section provides a summary of the mitigation process utilized for this project. The project is not expected to create any significant impacts, and no mitigation measures are required.

11.1 SIGNIFICANT IMPACT IDENTIFICATION

The City of San Bernardino Traffic Impact Study Guidelines identifies the significant impact threshold for signalized intersections using V/C ratios. Intersection Capacity Utilization (ICU) analysis was used to determine V/C ratios for each intersection. Table 11.1 shows the ICU results for Existing Year 2023, Table 11.2 shows the ICU results for Opening Year 2024, and Table 11.3 shows the ICU results for Build Out Year 2040. No significant impacts were identified because of the proposed project.

TABLE 11.1: Existing Year (2023) Intersection Capacity Utilization (ICU) Results Summary

Intersection	Control	AM Peak						PM					Sig Impact
		No Project		With Project		Change in V/C	No Project		With Project		Change in V/C		
		V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS			
1	E St & 9th St	Signal	0.410	A	0.411	A	0.001	0.610	B	0.618	B	0.008	No
2	E St & 8th St	Signal	0.261	A	0.267	A	0.006	0.318	A	0.425	A	0.107	No
3	E St & 6th St	Signal	0.274	A	0.282	A	0.008	0.331	A	0.350	A	0.019	No
4	E St & 5th St	Signal	0.691	B	0.691	B	0.000	0.619	B	0.621	B	0.002	No
5	F St & 9th St	Signal	0.477	A	0.494	A	0.017	0.422	A	0.423	A	0.001	No
6	F St & 8th St	2-Way Stop	0.250	A	0.270	A	0.020	0.248	A	0.278	A	0.030	No
7	F St & 6th St	Signal	0.637	B	0.637	B	0.000	0.637	B	0.637	B	0.000	No
8	F St & 5th St	Signal	0.697	B	0.697	B	0.000	0.653	B	0.653	B	0.000	No

TABLE 11.2: Opening Year (2024) Intersection Capacity Utilization (ICU) Results Summary

Intersection	Control	AM Peak						PM					Sig Impact
		No Project		With Project		Change in V/C	No Project		With Project		Change in V/C		
		V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS			
1	E St & 9th St	Signal	0.426	A	0.428	A	0.002	0.631	B	0.639	B	0.008	No
2	E St & 8th St	Signal	0.270	A	0.276	A	0.006	0.334	A	0.449	A	0.115	No
3	E St & 6th St	Signal	0.308	A	0.308	A	0.000	0.349	A	0.374	A	0.025	No
4	E St & 5th St	Signal	0.728	C	0.750	C	0.022	0.645	B	0.647	B	0.002	No
5	F St & 9th St	Signal	0.498	A	0.515	A	0.017	0.437	A	0.437	A	0.000	No
6	F St & 8th St	2-Way Stop	0.261	A	0.283	A	0.022	0.252	A	0.279	A	0.027	No
7	F St & 6th St	Signal	0.637	B	0.637	B	0.000	0.637	B	0.637	B	0.000	No
8	F St & 5th St	Signal	0.731	C	0.731	C	0.000	0.687	B	0.765	C	0.078	No

TABLE 11.3: Build Out Year (2040) Intersection Capacity Utilization (ICU) Results Summary

Intersection	Control	AM Peak						PM					Sig Impact
		No Project		With Project		Change in V/C	No Project		With Project		Change in V/C		
		V/C	LOS	V/C	LOS		V/C	LOS	V/C	LOS			
1	E St & 9th St	Signal	0.596	A	0.596	A	0.000	0.752	C	0.760	C	0.008	No
2	E St & 8th St	Signal	0.308	A	0.308	A	0.000	0.423	A	0.541	A	0.118	No
3	E St & 6th St	Signal	0.383	A	0.383	A	0.000	0.425	A	0.466	A	0.041	No
4	E St & 5th St	Signal	0.876	D	0.876	D	0.000	0.801	D	0.803	D	0.002	No
5	F St & 9th St	Signal	0.577	A	0.595	A	0.018	0.514	A	0.514	A	0.000	No
6	F St & 8th St	2-Way Stop	0.319	A	0.333	A	0.014	0.294	A	0.323	A	0.029	No
7	F St & 6th St	Signal	0.637	B	0.637	B	0.000	0.637	B	0.637	B	0.000	No
8	F St & 5th St	Signal	0.871	D	0.875	D	0.004	0.871	D	0.873	D	0.002	No

12 CONCLUSIONS

This traffic impact analysis has been prepared to document the existing and forecast traffic conditions within the study area with the development proposed. The purpose of this study was to identify potential impacts to the study area intersections and to formulate measures to mitigate those impacts. Based on the results of the level of service analysis and the intersection capacity utilization, there are no anticipated traffic impacts associated with this project.

13 APPENDICES

APPENDIX A – SITE PLAN & SCOPE OF STUDY

APPENDIX B – TRAFFIC COUNTS (INTERSECTION AND LINK VOLUMES)

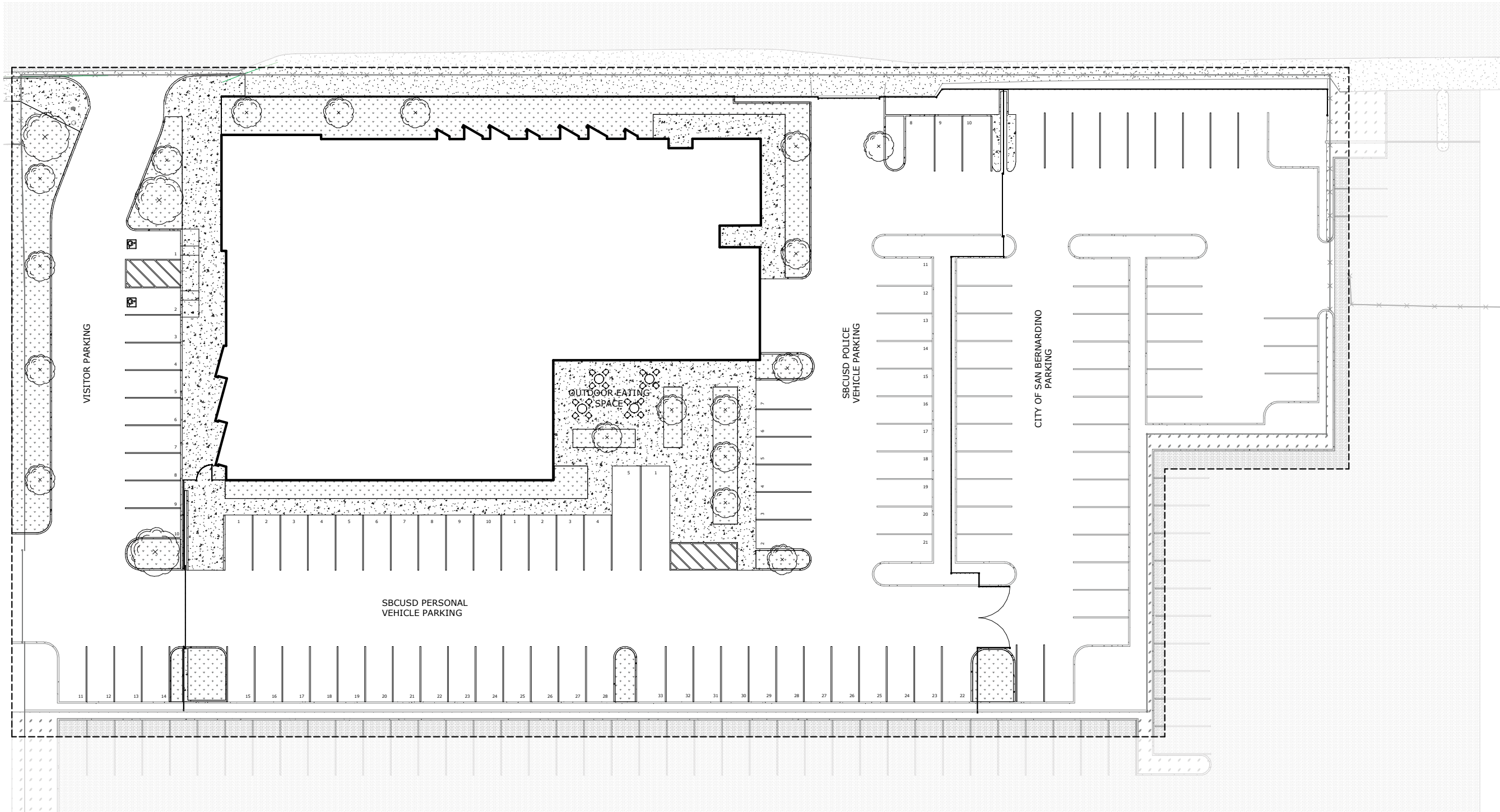
APPENDIX C – POLICE STATION EXISTING COUNTS

APPENDIX D – HCM 2010 METHODOLOGY REPORTS

APPENDIX E – INTERSECTION CAPACITY UTILIZATION REPORTS

APPENDIX A

Site Plan & Scope of Study



APPENDIX B

Traffic Counts (Intersection and Link Volumes)

City of San Bernardino
 N/S: E Street
 E/W: 9th Street
 Weather: Clear

File Name : 01_SBC_E St_9th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

Start Time	E Street Southbound				9th Street Westbound				E Street Northbound				9th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	5	19	2	26	1	54	6	61	2	13	1	16	2	50	1	53	156
07:15 AM	8	30	4	42	5	83	8	96	1	15	2	18	7	59	1	67	223
07:30 AM	7	39	2	48	4	91	6	101	1	18	5	24	4	72	6	82	255
07:45 AM	15	48	3	66	7	81	16	104	2	16	4	22	2	102	9	113	305
Total	35	136	11	182	17	309	36	362	6	62	12	80	15	283	17	315	939
08:00 AM	8	37	7	52	8	57	15	80	2	22	1	25	4	79	4	87	244
08:15 AM	8	35	3	46	10	78	9	97	1	28	3	32	2	86	4	92	267
08:30 AM	9	32	5	46	11	88	11	110	1	24	2	27	3	65	7	75	258
08:45 AM	12	40	2	54	10	72	16	98	1	30	6	37	10	54	1	65	254
Total	37	144	17	198	39	295	51	385	5	104	12	121	19	284	16	319	1023
Grand Total	72	280	28	380	56	604	87	747	11	166	24	201	34	567	33	634	1962
Apprch %	18.9	73.7	7.4		7.5	80.9	11.6		5.5	82.6	11.9		5.4	89.4	5.2		
Total %	3.7	14.3	1.4	19.4	2.9	30.8	4.4	38.1	0.6	8.5	1.2	10.2	1.7	28.9	1.7	32.3	

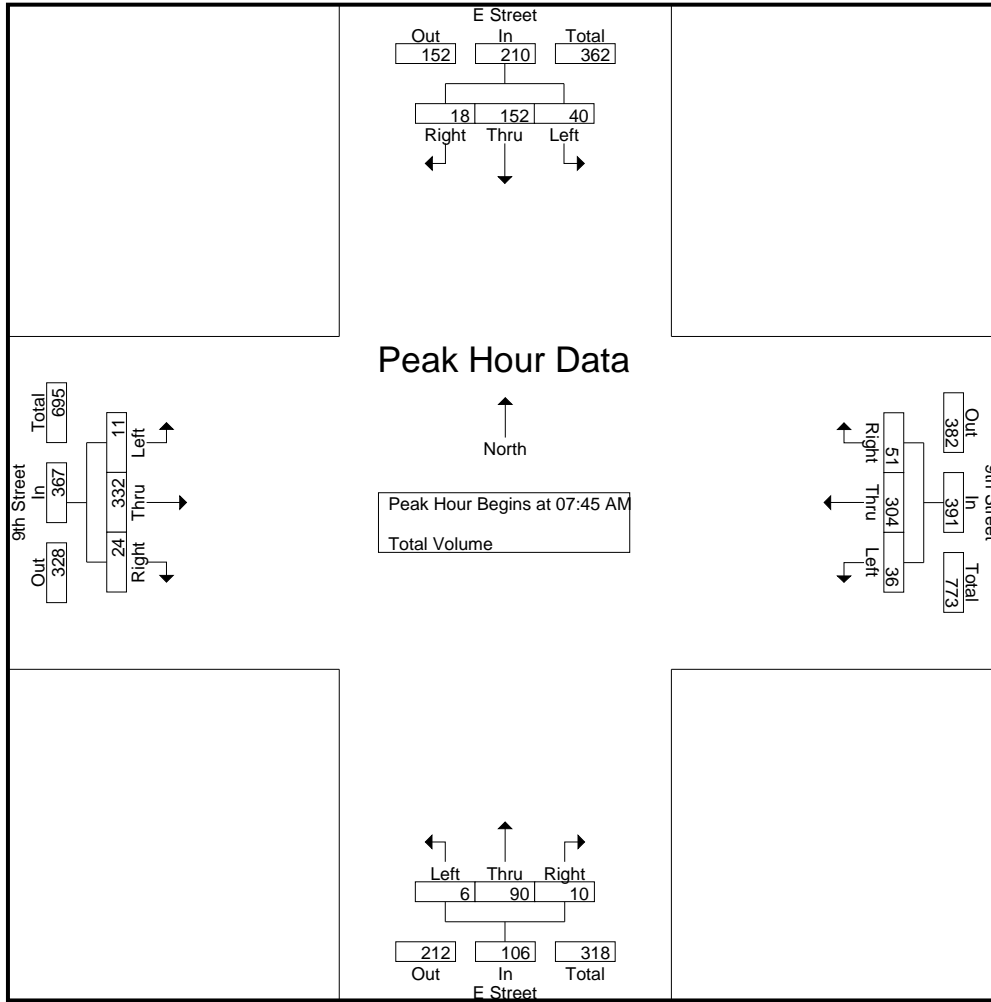
Start Time	E Street Southbound				9th Street Westbound				E Street Northbound				9th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	15	48	3	66	7	81	16	104	2	16	4	22	2	102	9	113	305
08:00 AM	8	37	7	52	8	57	15	80	2	22	1	25	4	79	4	87	244
08:15 AM	8	35	3	46	10	78	9	97	1	28	3	32	2	86	4	92	267
08:30 AM	9	32	5	46	11	88	11	110	1	24	2	27	3	65	7	75	258
Total Volume	40	152	18	210	36	304	51	391	6	90	10	106	11	332	24	367	1074
% App. Total	19	72.4	8.6		9.2	77.7	13		5.7	84.9	9.4		3	90.5	6.5		
PHF	.667	.792	.643	.795	.818	.864	.797	.889	.750	.804	.625	.828	.688	.814	.667	.812	.880

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

City of San Bernardino
 N/S: E Street
 E/W: 9th Street
 Weather: Clear

File Name : 01_SBC_E St_9th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				08:00 AM				07:30 AM			
+0 mins.	7	39	2	48	7	81	16	104	2	22	1	25	4	72	6	82
+15 mins.	15	48	3	66	8	57	15	80	1	28	3	32	2	102	9	113
+30 mins.	8	37	7	52	10	78	9	97	1	24	2	27	4	79	4	87
+45 mins.	8	35	3	46	11	88	11	110	1	30	6	37	2	86	4	92
Total Volume	38	159	15	212	36	304	51	391	5	104	12	121	12	339	23	374
% App. Total	17.9	75	7.1		9.2	77.7	13		4.1	86	9.9		3.2	90.6	6.1	
PHF	.633	.828	.536	.803	.818	.864	.797	.889	.625	.867	.500	.818	.750	.831	.639	.827

City of San Bernardino
 N/S: E Street
 E/W: 9th Street
 Weather: Clear

File Name : 01_SBC_E St_9th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

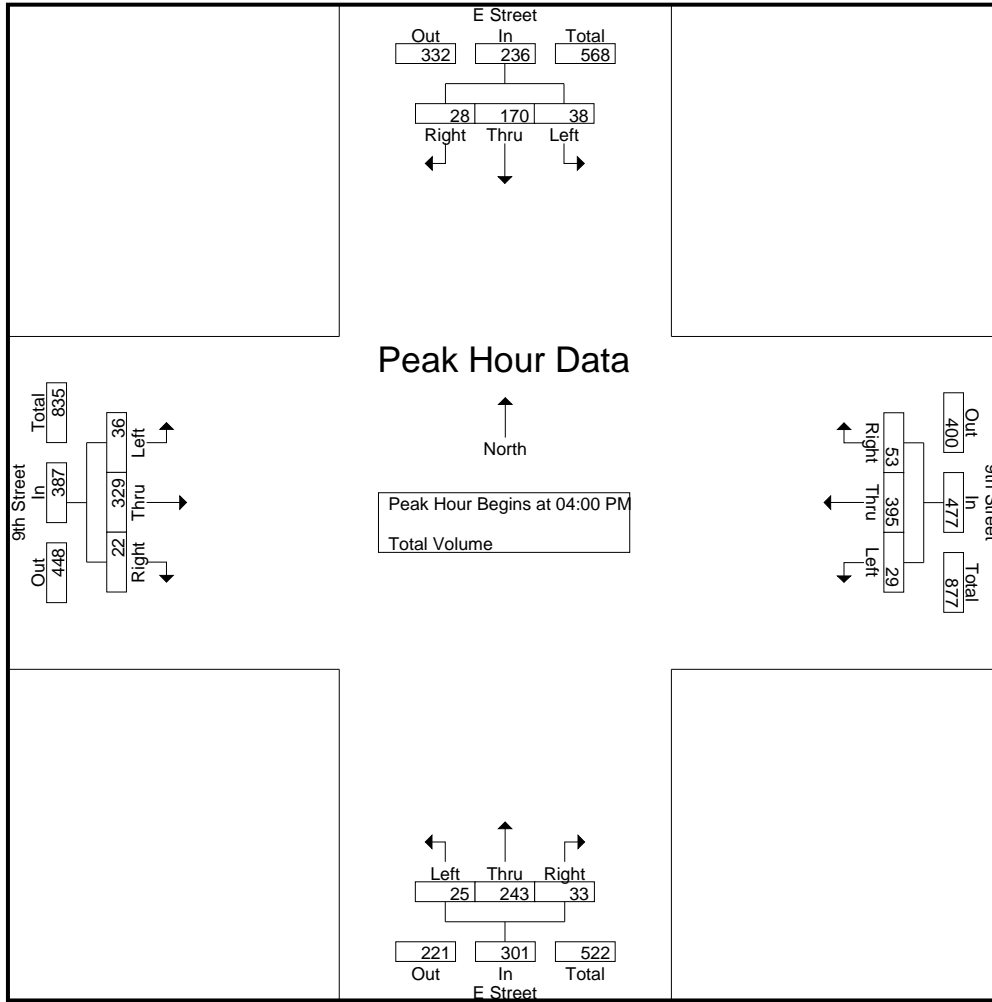
Start Time	E Street Southbound				9th Street Westbound				E Street Northbound				9th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	9	57	3	69	8	100	13	121	3	59	7	69	8	68	10	86	345
04:15 PM	13	30	7	50	6	106	11	123	8	53	8	69	9	94	3	106	348
04:30 PM	8	40	11	59	8	98	13	119	7	63	11	81	6	87	3	96	355
04:45 PM	8	43	7	58	7	91	16	114	7	68	7	82	13	80	6	99	353
Total	38	170	28	236	29	395	53	477	25	243	33	301	36	329	22	387	1401
05:00 PM	4	41	5	50	8	117	7	132	5	65	10	80	2	76	4	82	344
05:15 PM	8	35	3	46	4	104	11	119	10	58	4	72	9	85	3	97	334
05:30 PM	8	25	7	40	7	89	16	112	10	66	6	82	5	75	1	81	315
05:45 PM	2	29	5	36	11	78	5	94	1	63	7	71	3	68	5	76	277
Total	22	130	20	172	30	388	39	457	26	252	27	305	19	304	13	336	1270
Grand Total	60	300	48	408	59	783	92	934	51	495	60	606	55	633	35	723	2671
Apprch %	14.7	73.5	11.8		6.3	83.8	9.9		8.4	81.7	9.9		7.6	87.6	4.8		
Total %	2.2	11.2	1.8	15.3	2.2	29.3	3.4	35	1.9	18.5	2.2	22.7	2.1	23.7	1.3	27.1	

Start Time	E Street Southbound				9th Street Westbound				E Street Northbound				9th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	9	57	3	69	8	100	13	121	3	59	7	69	8	68	10	86	345
04:15 PM	13	30	7	50	6	106	11	123	8	53	8	69	9	94	3	106	348
04:30 PM	8	40	11	59	8	98	13	119	7	63	11	81	6	87	3	96	355
04:45 PM	8	43	7	58	7	91	16	114	7	68	7	82	13	80	6	99	353
Total Volume	38	170	28	236	29	395	53	477	25	243	33	301	36	329	22	387	1401
% App. Total	16.1	72	11.9		6.1	82.8	11.1		8.3	80.7	11		9.3	85	5.7		
PHF	.731	.746	.636	.855	.906	.932	.828	.970	.781	.893	.750	.918	.692	.875	.550	.913	.987

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of San Bernardino
 N/S: E Street
 E/W: 9th Street
 Weather: Clear

File Name : 01_SBC_E St_9th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:45 PM				04:00 PM			
+0 mins.	9	57	3	69	6	106	11	123	7	68	7	82	8	68	10	86
+15 mins.	13	30	7	50	8	98	13	119	5	65	10	80	9	94	3	106
+30 mins.	8	40	11	59	7	91	16	114	10	58	4	72	6	87	3	96
+45 mins.	8	43	7	58	8	117	7	132	10	66	6	82	13	80	6	99
Total Volume	38	170	28	236	29	412	47	488	32	257	27	316	36	329	22	387
% App. Total	16.1	72	11.9		5.9	84.4	9.6		10.1	81.3	8.5		9.3	85	5.7	
PHF	.731	.746	.636	.855	.906	.880	.734	.924	.800	.945	.675	.963	.692	.875	.550	.913

City of San Bernardino
 N/S: E Street
 E/W: 8th Street
 Weather: Clear

File Name : 02_SBC_E St_8th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

Start Time	E Street Southbound				8th Street Westbound				E Street Northbound				8th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	19	1	20	1	1	1	3	0	17	1	18	0	4	0	4	45
07:15 AM	1	33	2	36	0	4	1	5	0	17	7	24	0	2	1	3	68
07:30 AM	1	41	5	47	1	5	1	7	2	22	3	27	0	1	0	1	82
07:45 AM	3	59	5	67	0	5	1	6	2	23	7	32	0	3	0	3	108
Total	5	152	13	170	2	15	4	21	4	79	18	101	0	10	1	11	303
08:00 AM	2	46	1	49	1	7	0	8	0	23	6	29	1	3	0	4	90
08:15 AM	0	45	2	47	0	6	1	7	1	32	1	34	0	3	0	3	91
08:30 AM	1	41	8	50	1	2	2	5	0	28	3	31	1	4	1	6	92
08:45 AM	0	51	1	52	0	6	1	7	1	37	4	42	0	5	3	8	109
Total	3	183	12	198	2	21	4	27	2	120	14	136	2	15	4	21	382
Grand Total	8	335	25	368	4	36	8	48	6	199	32	237	2	25	5	32	685
Apprch %	2.2	91	6.8		8.3	75	16.7		2.5	84	13.5		6.2	78.1	15.6		
Total %	1.2	48.9	3.6	53.7	0.6	5.3	1.2	7	0.9	29.1	4.7	34.6	0.3	3.6	0.7	4.7	

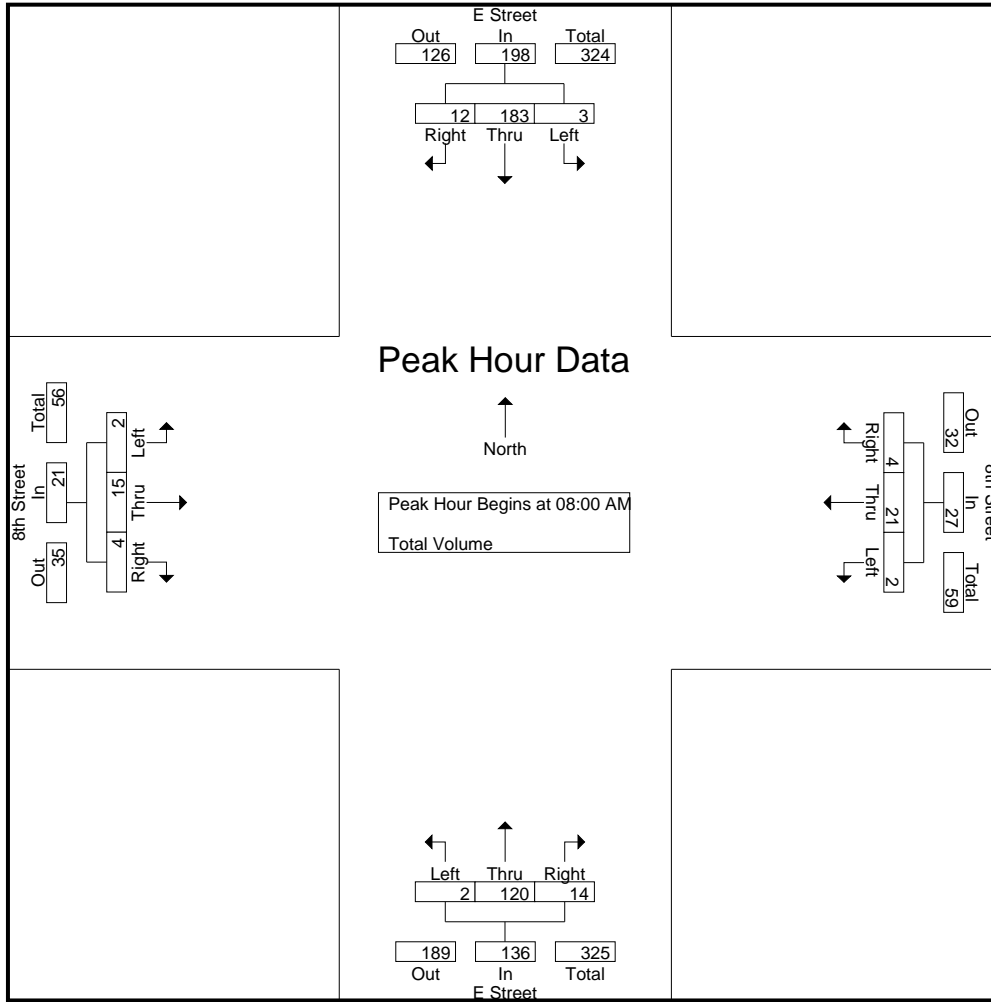
Start Time	E Street Southbound				8th Street Westbound				E Street Northbound				8th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	2	46	1	49	1	7	0	8	0	23	6	29	1	3	0	4	90
08:15 AM	0	45	2	47	0	6	1	7	1	32	1	34	0	3	0	3	91
08:30 AM	1	41	8	50	1	2	2	5	0	28	3	31	1	4	1	6	92
08:45 AM	0	51	1	52	0	6	1	7	1	37	4	42	0	5	3	8	109
Total Volume	3	183	12	198	2	21	4	27	2	120	14	136	2	15	4	21	382
% App. Total	1.5	92.4	6.1		7.4	77.8	14.8		1.5	88.2	10.3		9.5	71.4	19		
PHF	.375	.897	.375	.952	.500	.750	.500	.844	.500	.811	.583	.810	.500	.750	.333	.656	.876

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

City of San Bernardino
 N/S: E Street
 E/W: 8th Street
 Weather: Clear

File Name : 02_SBC_E St_8th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				08:00 AM				08:00 AM			
+0 mins.	3	59	5	67	1	5	1	7	0	23	6	29	1	3	0	4
+15 mins.	2	46	1	49	0	5	1	6	1	32	1	34	0	3	0	3
+30 mins.	0	45	2	47	1	7	0	8	0	28	3	31	1	4	1	6
+45 mins.	1	41	8	50	0	6	1	7	1	37	4	42	0	5	3	8
Total Volume	6	191	16	213	2	23	3	28	2	120	14	136	2	15	4	21
% App. Total	2.8	89.7	7.5		7.1	82.1	10.7		1.5	88.2	10.3		9.5	71.4	19	
PHF	.500	.809	.500	.795	.500	.821	.750	.875	.500	.811	.583	.810	.500	.750	.333	.656

City of San Bernardino
 N/S: E Street
 E/W: 8th Street
 Weather: Clear

File Name : 02_SBC_E St_8th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

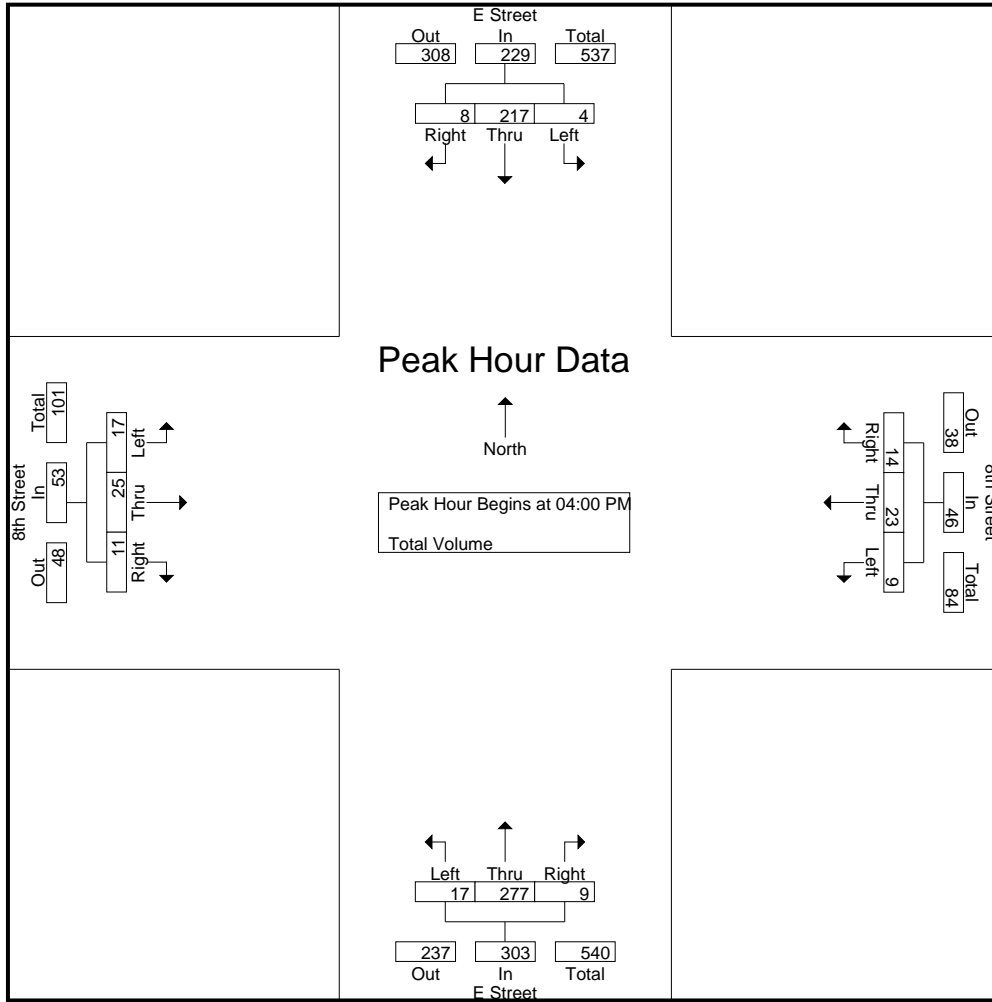
Start Time	E Street Southbound				8th Street Westbound				E Street Northbound				8th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	2	75	4	81	1	9	1	11	1	67	1	69	4	5	1	10	171
04:15 PM	0	41	1	42	3	0	2	5	2	65	3	70	2	3	3	8	125
04:30 PM	1	47	2	50	5	9	10	24	8	69	2	79	9	13	4	26	179
04:45 PM	1	54	1	56	0	5	1	6	6	76	3	85	2	4	3	9	156
Total	4	217	8	229	9	23	14	46	17	277	9	303	17	25	11	53	631
05:00 PM	1	48	5	54	1	5	1	7	6	71	2	79	4	1	1	6	146
05:15 PM	0	38	5	43	2	2	3	7	5	80	1	86	1	4	2	7	143
05:30 PM	0	33	1	34	1	2	2	5	2	72	0	74	1	3	1	5	118
05:45 PM	1	41	3	45	0	2	1	3	1	69	4	74	1	0	2	3	125
Total	2	160	14	176	4	11	7	22	14	292	7	313	7	8	6	21	532
Grand Total	6	377	22	405	13	34	21	68	31	569	16	616	24	33	17	74	1163
Apprch %	1.5	93.1	5.4		19.1	50	30.9		5	92.4	2.6		32.4	44.6	23		
Total %	0.5	32.4	1.9	34.8	1.1	2.9	1.8	5.8	2.7	48.9	1.4	53	2.1	2.8	1.5	6.4	

Start Time	E Street Southbound				8th Street Westbound				E Street Northbound				8th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	2	75	4	81	1	9	1	11	1	67	1	69	4	5	1	10	171
04:15 PM	0	41	1	42	3	0	2	5	2	65	3	70	2	3	3	8	125
04:30 PM	1	47	2	50	5	9	10	24	8	69	2	79	9	13	4	26	179
04:45 PM	1	54	1	56	0	5	1	6	6	76	3	85	2	4	3	9	156
Total Volume	4	217	8	229	9	23	14	46	17	277	9	303	17	25	11	53	631
% App. Total	1.7	94.8	3.5		19.6	50	30.4		5.6	91.4	3		32.1	47.2	20.8		
PHF	.500	.723	.500	.707	.450	.639	.350	.479	.531	.911	.750	.891	.472	.481	.688	.510	.881

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of San Bernardino
 N/S: E Street
 E/W: 8th Street
 Weather: Clear

File Name : 02_SBC_E St_8th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	2	75	4	81	1	9	1	11	8	69	2	79	4	5	1	10
+15 mins.	0	41	1	42	3	0	2	5	6	76	3	85	2	3	3	8
+30 mins.	1	47	2	50	5	9	10	24	6	71	2	79	9	13	4	26
+45 mins.	1	54	1	56	0	5	1	6	5	80	1	86	2	4	3	9
Total Volume	4	217	8	229	9	23	14	46	25	296	8	329	17	25	11	53
% App. Total	1.7	94.8	3.5		19.6	50	30.4		7.6	90	2.4		32.1	47.2	20.8	
PHF	.500	.723	.500	.707	.450	.639	.350	.479	.781	.925	.667	.956	.472	.481	.688	.510

City of San Bernardino
 N/S: E Street
 E/W: 6th Street
 Weather: Clear

File Name : 03_SBC_E St_6th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

Start Time	E Street Southbound				6th Street Westbound				E Street Northbound				6th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	17	2	19	1	7	1	9	1	18	8	27	2	5	0	7	62
07:15 AM	1	30	2	33	3	7	1	11	0	24	13	37	2	16	2	20	101
07:30 AM	2	42	1	45	3	7	1	11	0	22	30	52	1	13	1	15	123
07:45 AM	3	49	0	52	1	6	1	8	0	28	9	37	4	24	2	30	127
Total	6	138	5	149	8	27	4	39	1	92	60	153	9	58	5	72	413
08:00 AM	4	40	1	45	1	11	0	12	2	28	15	45	3	25	7	35	137
08:15 AM	4	44	2	50	0	9	4	13	3	33	10	46	6	26	5	37	146
08:30 AM	2	42	2	46	6	11	0	17	4	26	9	39	1	18	5	24	126
08:45 AM	2	48	5	55	4	11	3	18	5	36	9	50	4	23	8	35	158
Total	12	174	10	196	11	42	7	60	14	123	43	180	14	92	25	131	567
Grand Total	18	312	15	345	19	69	11	99	15	215	103	333	23	150	30	203	980
Apprch %	5.2	90.4	4.3		19.2	69.7	11.1		4.5	64.6	30.9		11.3	73.9	14.8		
Total %	1.8	31.8	1.5	35.2	1.9	7	1.1	10.1	1.5	21.9	10.5	34	2.3	15.3	3.1	20.7	

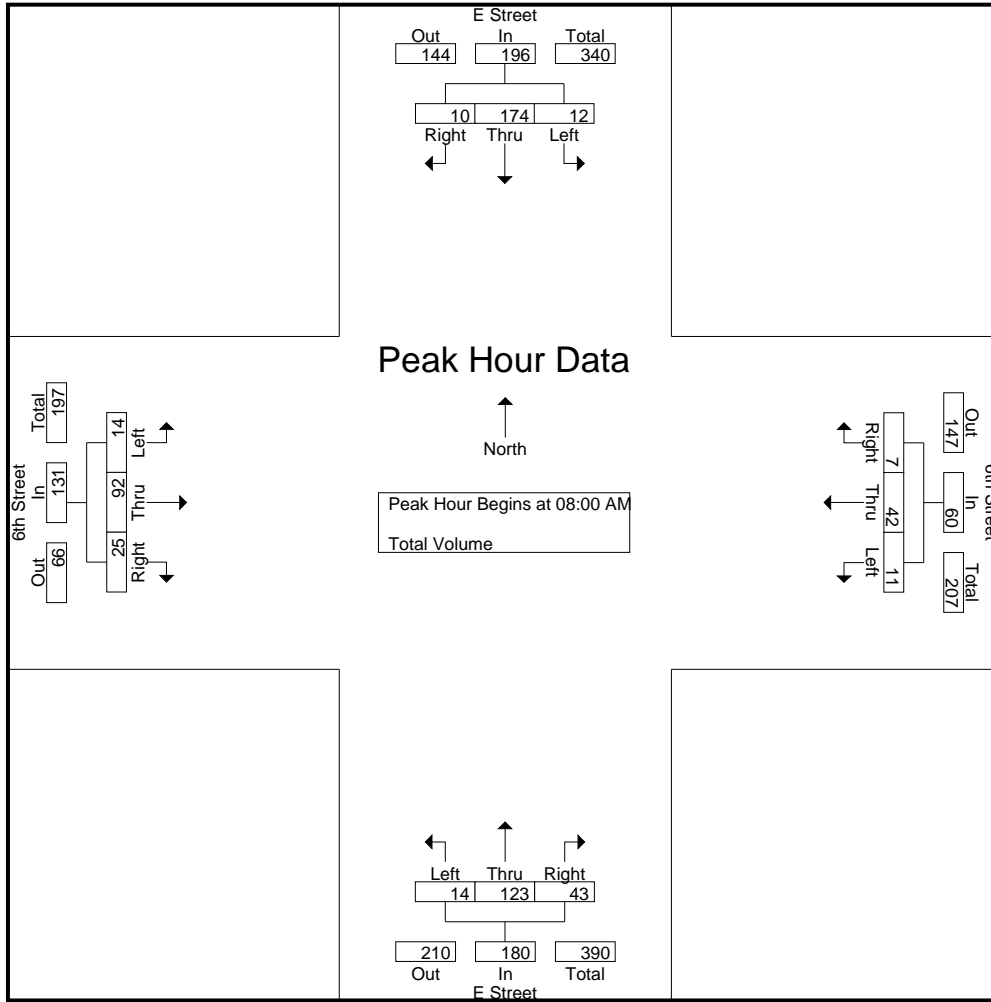
Start Time	E Street Southbound				6th Street Westbound				E Street Northbound				6th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	4	40	1	45	1	11	0	12	2	28	15	45	3	25	7	35	137
08:15 AM	4	44	2	50	0	9	4	13	3	33	10	46	6	26	5	37	146
08:30 AM	2	42	2	46	6	11	0	17	4	26	9	39	1	18	5	24	126
08:45 AM	2	48	5	55	4	11	3	18	5	36	9	50	4	23	8	35	158
Total Volume	12	174	10	196	11	42	7	60	14	123	43	180	14	92	25	131	567
% App. Total	6.1	88.8	5.1		18.3	70	11.7		7.8	68.3	23.9		10.7	70.2	19.1		
PHF	.750	.906	.500	.891	.458	.955	.438	.833	.700	.854	.717	.900	.583	.885	.781	.885	.897

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

City of San Bernardino
 N/S: E Street
 E/W: 6th Street
 Weather: Clear

File Name : 03_SBC_E St_6th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:30 AM				08:00 AM			
+0 mins.	4	40	1	45	1	11	0	12	0	22	30	52	3	25	7	35
+15 mins.	4	44	2	50	0	9	4	13	0	28	9	37	6	26	5	37
+30 mins.	2	42	2	46	6	11	0	17	2	28	15	45	1	18	5	24
+45 mins.	2	48	5	55	4	11	3	18	3	33	10	46	4	23	8	35
Total Volume	12	174	10	196	11	42	7	60	5	111	64	180	14	92	25	131
% App. Total	6.1	88.8	5.1		18.3	70	11.7		2.8	61.7	35.6		10.7	70.2	19.1	
PHF	.750	.906	.500	.891	.458	.955	.438	.833	.417	.841	.533	.865	.583	.885	.781	.885

City of San Bernardino
 N/S: E Street
 E/W: 6th Street
 Weather: Clear

File Name : 03_SBC_E St_6th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

Start Time	E Street Southbound				6th Street Westbound				E Street Northbound				6th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	4	67	10	81	7	41	6	54	3	58	7	68	2	13	4	19	222
04:15 PM	2	42	6	50	7	33	0	40	5	69	5	79	1	12	1	14	183
04:30 PM	4	65	3	72	21	57	2	80	7	70	3	80	3	16	1	20	252
04:45 PM	4	65	5	74	7	22	3	32	4	70	4	78	0	8	2	10	194
Total	14	239	24	277	42	153	11	206	19	267	19	305	6	49	8	63	851
05:00 PM	3	37	8	48	2	41	2	45	0	70	4	74	1	4	4	9	176
05:15 PM	0	52	4	56	0	27	4	31	3	72	1	76	3	11	2	16	179
05:30 PM	0	35	3	38	3	20	3	26	4	67	1	72	2	11	6	19	155
05:45 PM	2	41	4	47	3	18	1	22	2	64	1	67	3	11	2	16	152
Total	5	165	19	189	8	106	10	124	9	273	7	289	9	37	14	60	662
Grand Total	19	404	43	466	50	259	21	330	28	540	26	594	15	86	22	123	1513
Apprch %	4.1	86.7	9.2		15.2	78.5	6.4		4.7	90.9	4.4		12.2	69.9	17.9		
Total %	1.3	26.7	2.8	30.8	3.3	17.1	1.4	21.8	1.9	35.7	1.7	39.3	1	5.7	1.5	8.1	

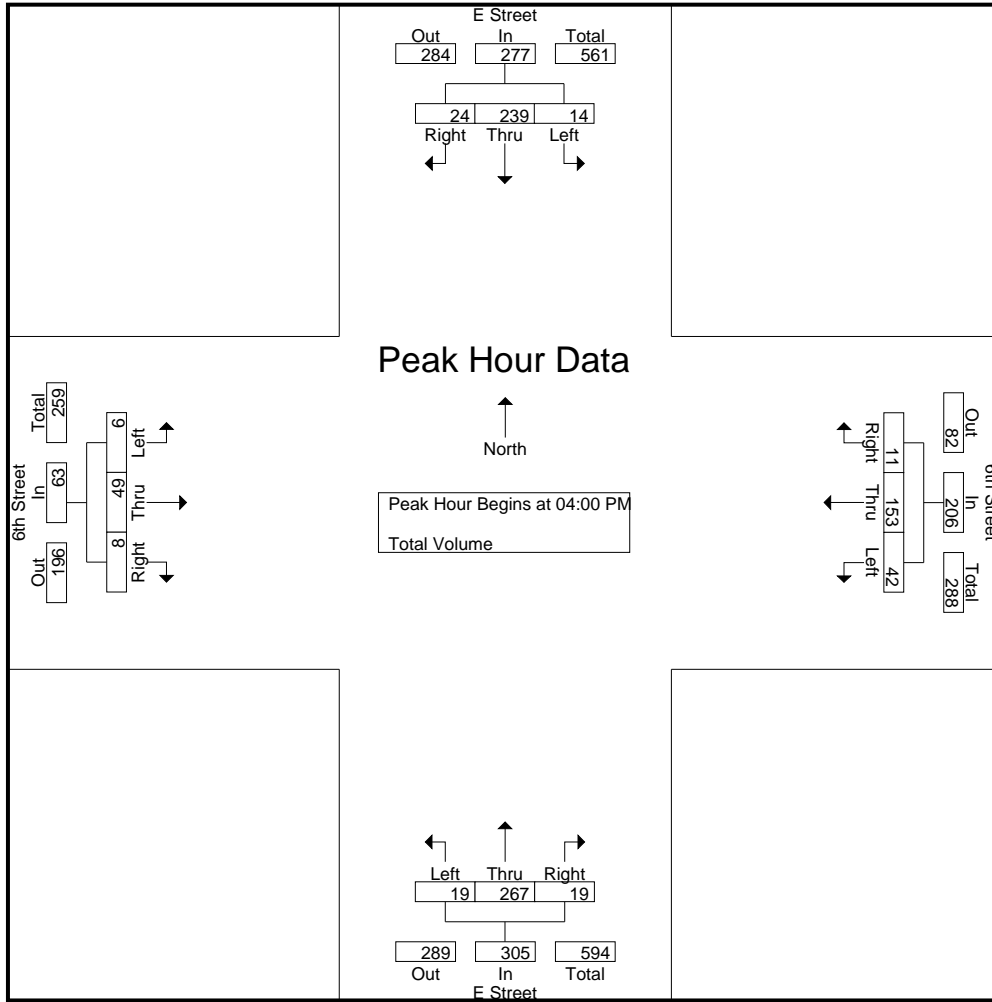
Start Time	E Street Southbound				6th Street Westbound				E Street Northbound				6th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	4	67	10	81	7	41	6	54	3	58	7	68	2	13	4	19	222
04:15 PM	2	42	6	50	7	33	0	40	5	69	5	79	1	12	1	14	183
04:30 PM	4	65	3	72	21	57	2	80	7	70	3	80	3	16	1	20	252
04:45 PM	4	65	5	74	7	22	3	32	4	70	4	78	0	8	2	10	194
Total Volume	14	239	24	277	42	153	11	206	19	267	19	305	6	49	8	63	851
% App. Total	5.1	86.3	8.7		20.4	74.3	5.3		6.2	87.5	6.2		9.5	77.8	12.7		
PHF	.875	.892	.600	.855	.500	.671	.458	.644	.679	.954	.679	.953	.500	.766	.500	.788	.844

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

City of San Bernardino
 N/S: E Street
 E/W: 6th Street
 Weather: Clear

File Name : 03_SBC_E St_6th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:15 PM				04:00 PM			
+0 mins.	4	67	10	81	7	41	6	54	5	69	5	79	2	13	4	19
+15 mins.	2	42	6	50	7	33	0	40	7	70	3	80	1	12	1	14
+30 mins.	4	65	3	72	21	57	2	80	4	70	4	78	3	16	1	20
+45 mins.	4	65	5	74	7	22	3	32	0	70	4	74	0	8	2	10
Total Volume	14	239	24	277	42	153	11	206	16	279	16	311	6	49	8	63
% App. Total	5.1	86.3	8.7		20.4	74.3	5.3		5.1	89.7	5.1		9.5	77.8	12.7	
PHF	.875	.892	.600	.855	.500	.671	.458	.644	.571	.996	.800	.972	.500	.766	.500	.788

City of San Bernardino
 N/S: E Street
 E/W: 5th Street
 Weather: Clear

File Name : 04_SBC_E St_5th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

Start Time	E Street Southbound				5th Street Westbound				E Street Northbound				5th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	2	11	4	17	2	122	1	125	4	9	2	15	17	227	5	249	406
07:15 AM	3	24	4	31	5	140	2	147	2	14	3	19	24	267	4	295	492
07:30 AM	2	41	4	47	2	137	1	140	3	21	5	29	29	252	9	290	506
07:45 AM	13	35	2	50	2	131	3	136	2	17	11	30	15	311	15	341	557
Total	20	111	14	145	11	530	7	548	11	61	21	93	85	1057	33	1175	1961
08:00 AM	6	30	10	46	2	123	4	129	9	19	5	33	21	291	6	318	526
08:15 AM	4	35	12	51	6	122	2	130	6	26	5	37	20	250	6	276	494
08:30 AM	6	29	18	53	4	137	4	145	16	25	9	50	11	214	11	236	484
08:45 AM	7	37	15	59	4	150	6	160	15	23	9	47	23	198	3	224	490
Total	23	131	55	209	16	532	16	564	46	93	28	167	75	953	26	1054	1994
Grand Total	43	242	69	354	27	1062	23	1112	57	154	49	260	160	2010	59	2229	3955
Apprch %	12.1	68.4	19.5		2.4	95.5	2.1		21.9	59.2	18.8		7.2	90.2	2.6		
Total %	1.1	6.1	1.7	9	0.7	26.9	0.6	28.1	1.4	3.9	1.2	6.6	4	50.8	1.5	56.4	

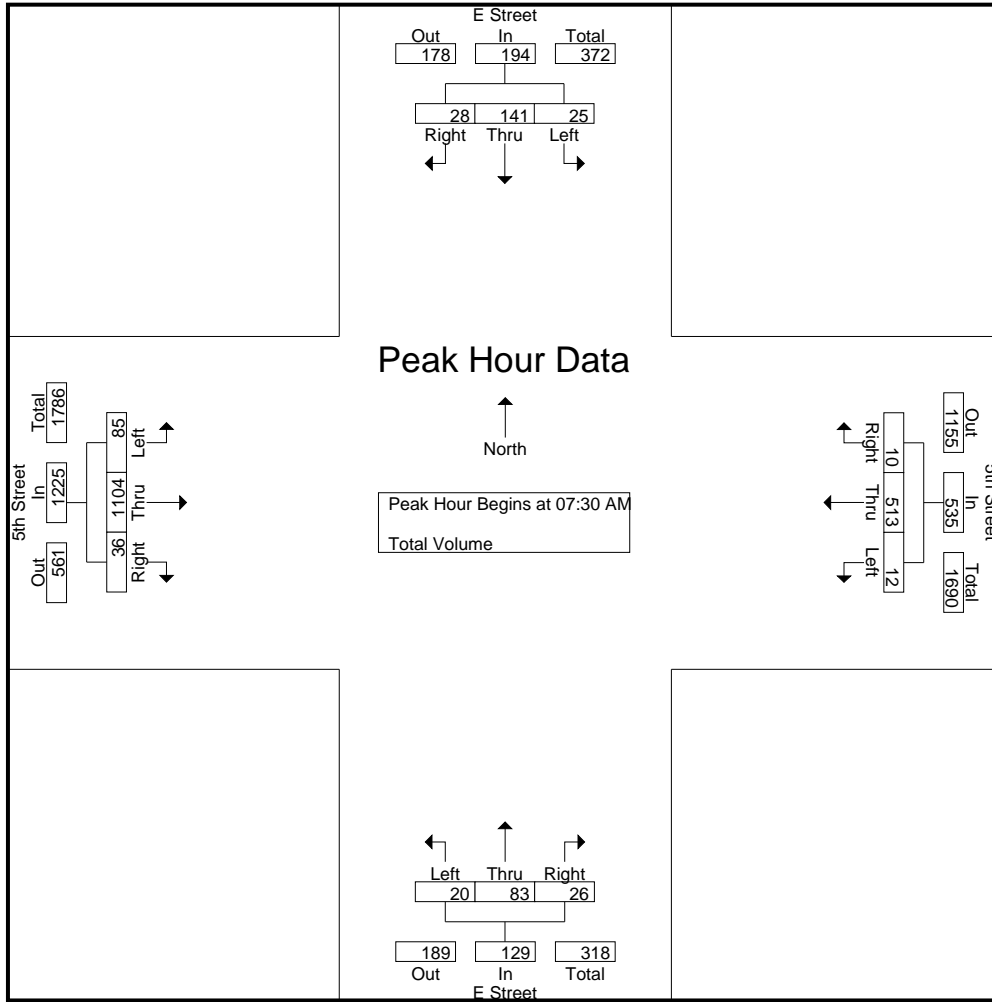
Start Time	E Street Southbound				5th Street Westbound				E Street Northbound				5th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	2	41	4	47	2	137	1	140	3	21	5	29	29	252	9	290	506
07:45 AM	13	35	2	50	2	131	3	136	2	17	11	30	15	311	15	341	557
08:00 AM	6	30	10	46	2	123	4	129	9	19	5	33	21	291	6	318	526
08:15 AM	4	35	12	51	6	122	2	130	6	26	5	37	20	250	6	276	494
Total Volume	25	141	28	194	12	513	10	535	20	83	26	129	85	1104	36	1225	2083
% App. Total	12.9	72.7	14.4		2.2	95.9	1.9		15.5	64.3	20.2		6.9	90.1	2.9		
PHF	.481	.860	.583	.951	.500	.936	.625	.955	.556	.798	.591	.872	.733	.887	.600	.898	.935

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of San Bernardino
 N/S: E Street
 E/W: 5th Street
 Weather: Clear

File Name : 04_SBC_E St_5th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				07:15 AM			
+0 mins.	6	30	10	46	2	123	4	129	9	19	5	33	24	267	4	295
+15 mins.	4	35	12	51	6	122	2	130	6	26	5	37	29	252	9	290
+30 mins.	6	29	18	53	4	137	4	145	16	25	9	50	15	311	15	341
+45 mins.	7	37	15	59	4	150	6	160	15	23	9	47	21	291	6	318
Total Volume	23	131	55	209	16	532	16	564	46	93	28	167	89	1121	34	1244
% App. Total	11	62.7	26.3		2.8	94.3	2.8		27.5	55.7	16.8		7.2	90.1	2.7	
PHF	.821	.885	.764	.886	.667	.887	.667	.881	.719	.894	.778	.835	.767	.901	.567	.912

City of San Bernardino
 N/S: E Street
 E/W: 5th Street
 Weather: Clear

File Name : 04_SBC_E St_5th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

Start Time	E Street Southbound				5th Street Westbound				E Street Northbound				5th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	12	57	12	81	16	235	5	256	9	54	5	68	4	178	12	194	599
04:15 PM	7	35	9	51	5	212	9	226	19	62	9	90	7	161	14	182	549
04:30 PM	16	54	21	91	6	225	8	239	11	67	14	92	8	189	5	202	624
04:45 PM	9	47	12	68	13	176	8	197	16	61	8	85	5	171	7	183	533
Total	44	193	54	291	40	848	30	918	55	244	36	335	24	699	38	761	2305
05:00 PM	8	27	11	46	6	272	6	284	23	69	15	107	1	182	10	193	630
05:15 PM	3	42	4	49	4	222	8	234	13	67	9	89	3	165	8	176	548
05:30 PM	6	33	9	48	4	221	3	228	22	63	6	91	5	130	9	144	511
05:45 PM	4	41	11	56	2	179	4	185	15	61	7	83	2	152	4	158	482
Total	21	143	35	199	16	894	21	931	73	260	37	370	11	629	31	671	2171
Grand Total	65	336	89	490	56	1742	51	1849	128	504	73	705	35	1328	69	1432	4476
Apprch %	13.3	68.6	18.2		3	94.2	2.8		18.2	71.5	10.4		2.4	92.7	4.8		
Total %	1.5	7.5	2	10.9	1.3	38.9	1.1	41.3	2.9	11.3	1.6	15.8	0.8	29.7	1.5	32	

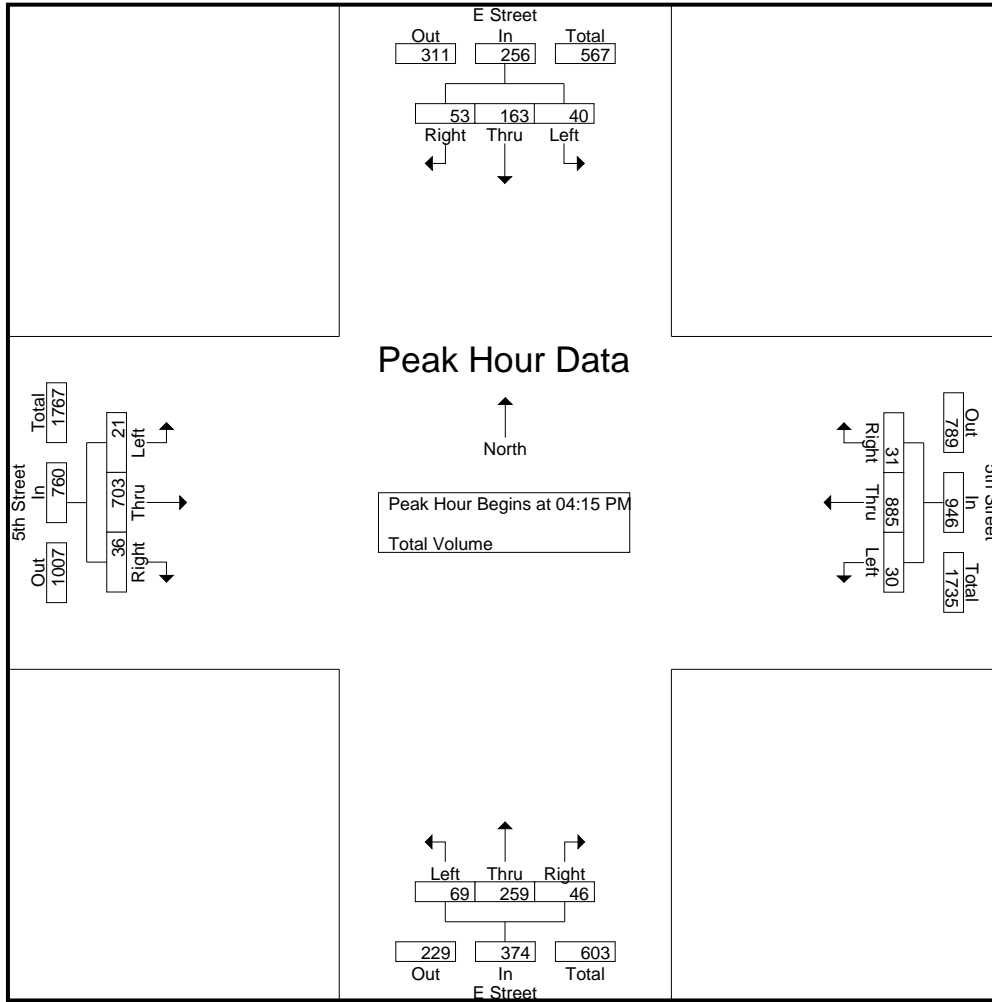
Start Time	E Street Southbound				5th Street Westbound				E Street Northbound				5th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	7	35	9	51	5	212	9	226	19	62	9	90	7	161	14	182	549
04:30 PM	16	54	21	91	6	225	8	239	11	67	14	92	8	189	5	202	624
04:45 PM	9	47	12	68	13	176	8	197	16	61	8	85	5	171	7	183	533
05:00 PM	8	27	11	46	6	272	6	284	23	69	15	107	1	182	10	193	630
Total Volume	40	163	53	256	30	885	31	946	69	259	46	374	21	703	36	760	2336
% App. Total	15.6	63.7	20.7		3.2	93.6	3.3		18.4	69.3	12.3		2.8	92.5	4.7		
PHF	.625	.755	.631	.703	.577	.813	.861	.833	.750	.938	.767	.874	.656	.930	.643	.941	.927

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of San Bernardino
 N/S: E Street
 E/W: 5th Street
 Weather: Clear

File Name : 04_SBC_E St_5th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	12	57	12	81	6	225	8	239	19	62	9	90	4	178	12	194
+15 mins.	7	35	9	51	13	176	8	197	11	67	14	92	7	161	14	182
+30 mins.	16	54	21	91	6	272	6	284	16	61	8	85	8	189	5	202
+45 mins.	9	47	12	68	4	222	8	234	23	69	15	107	5	171	7	183
Total Volume	44	193	54	291	29	895	30	954	69	259	46	374	24	699	38	761
% App. Total	15.1	66.3	18.6		3	93.8	3.1		18.4	69.3	12.3		3.2	91.9	5	
PHF	.688	.846	.643	.799	.558	.823	.938	.840	.750	.938	.767	.874	.750	.925	.679	.942

City of San Bernardino
 N/S: F Street
 E/W: 9th Street
 Weather: Clear

File Name : 05_SBC_F St_9th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

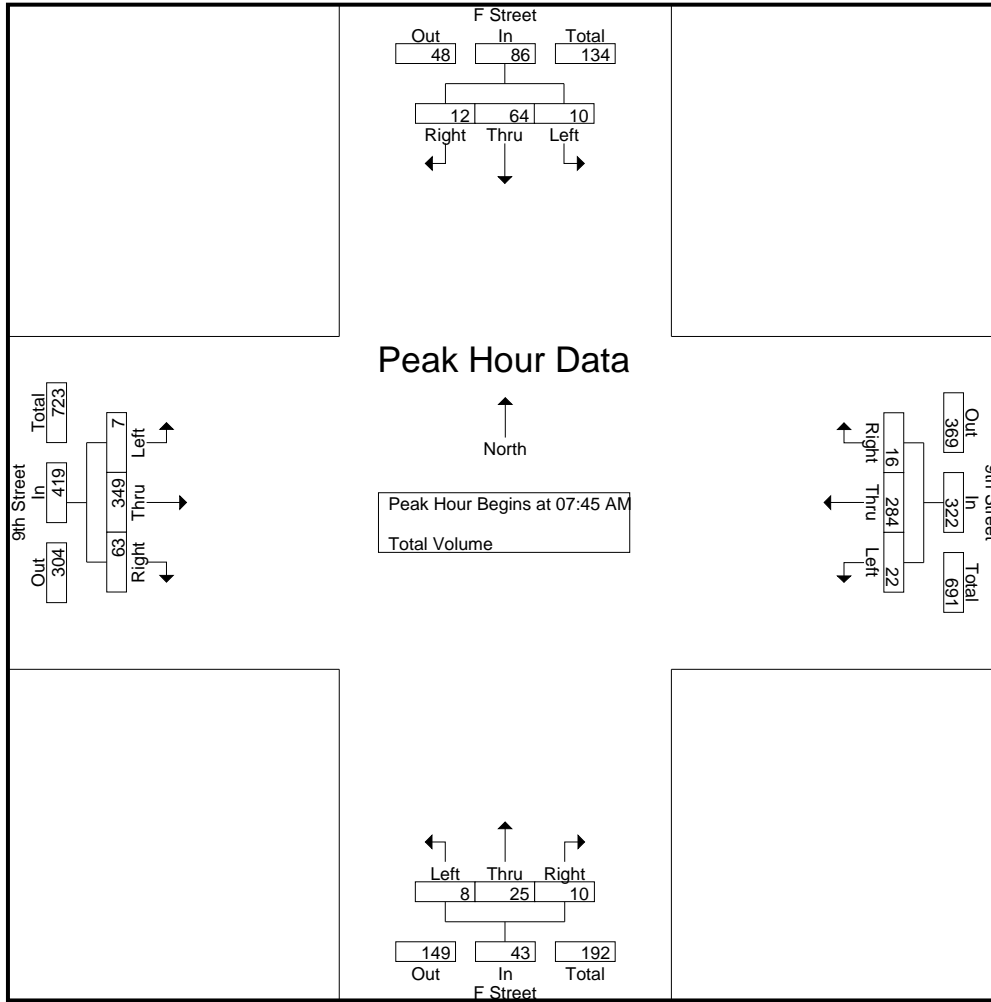
Start Time	F Street Southbound				9th Street Westbound				F Street Northbound				9th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	3	5	2	10	0	59	1	60	1	4	3	8	3	49	5	57	135
07:15 AM	2	1	6	9	1	83	2	86	2	2	2	6	6	62	10	78	179
07:30 AM	1	14	4	19	1	88	3	92	0	2	3	5	4	83	8	95	211
07:45 AM	3	15	2	20	2	78	6	86	0	4	1	5	1	113	15	129	240
Total	9	35	14	58	4	308	12	324	3	12	9	24	14	307	38	359	765
08:00 AM	3	15	1	19	2	63	4	69	0	3	0	3	1	84	19	104	195
08:15 AM	2	16	3	21	11	61	3	75	4	8	4	16	4	81	17	102	214
08:30 AM	2	18	6	26	7	82	3	92	4	10	5	19	1	71	12	84	221
08:45 AM	2	11	1	14	6	71	4	81	2	16	7	25	2	59	6	67	187
Total	9	60	11	80	26	277	14	317	10	37	16	63	8	295	54	357	817
Grand Total	18	95	25	138	30	585	26	641	13	49	25	87	22	602	92	716	1582
Apprch %	13	68.8	18.1		4.7	91.3	4.1		14.9	56.3	28.7		3.1	84.1	12.8		
Total %	1.1	6	1.6	8.7	1.9	37	1.6	40.5	0.8	3.1	1.6	5.5	1.4	38.1	5.8	45.3	

Start Time	F Street Southbound				9th Street Westbound				F Street Northbound				9th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	3	15	2	20	2	78	6	86	0	4	1	5	1	113	15	129	240
08:00 AM	3	15	1	19	2	63	4	69	0	3	0	3	1	84	19	104	195
08:15 AM	2	16	3	21	11	61	3	75	4	8	4	16	4	81	17	102	214
08:30 AM	2	18	6	26	7	82	3	92	4	10	5	19	1	71	12	84	221
Total Volume	10	64	12	86	22	284	16	322	8	25	10	43	7	349	63	419	870
% App. Total	11.6	74.4	14		6.8	88.2	5		18.6	58.1	23.3		1.7	83.3	15		
PHF	.833	.889	.500	.827	.500	.866	.667	.875	.500	.625	.500	.566	.438	.772	.829	.812	.906

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:45 AM

City of San Bernardino
 N/S: F Street
 E/W: 9th Street
 Weather: Clear

File Name : 05_SBC_F St_9th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				08:00 AM				07:30 AM			
+0 mins.	3	15	2	20	1	83	2	86	0	3	0	3	4	83	8	95
+15 mins.	3	15	1	19	1	88	3	92	4	8	4	16	1	113	15	129
+30 mins.	2	16	3	21	2	78	6	86	4	10	5	19	1	84	19	104
+45 mins.	2	18	6	26	2	63	4	69	2	16	7	25	4	81	17	102
Total Volume	10	64	12	86	6	312	15	333	10	37	16	63	10	361	59	430
% App. Total	11.6	74.4	14		1.8	93.7	4.5		15.9	58.7	25.4		2.3	84	13.7	
PHF	.833	.889	.500	.827	.750	.886	.625	.905	.625	.578	.571	.630	.625	.799	.776	.833

City of San Bernardino
 N/S: F Street
 E/W: 9th Street
 Weather: Clear

File Name : 05_SBC_F St_9th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

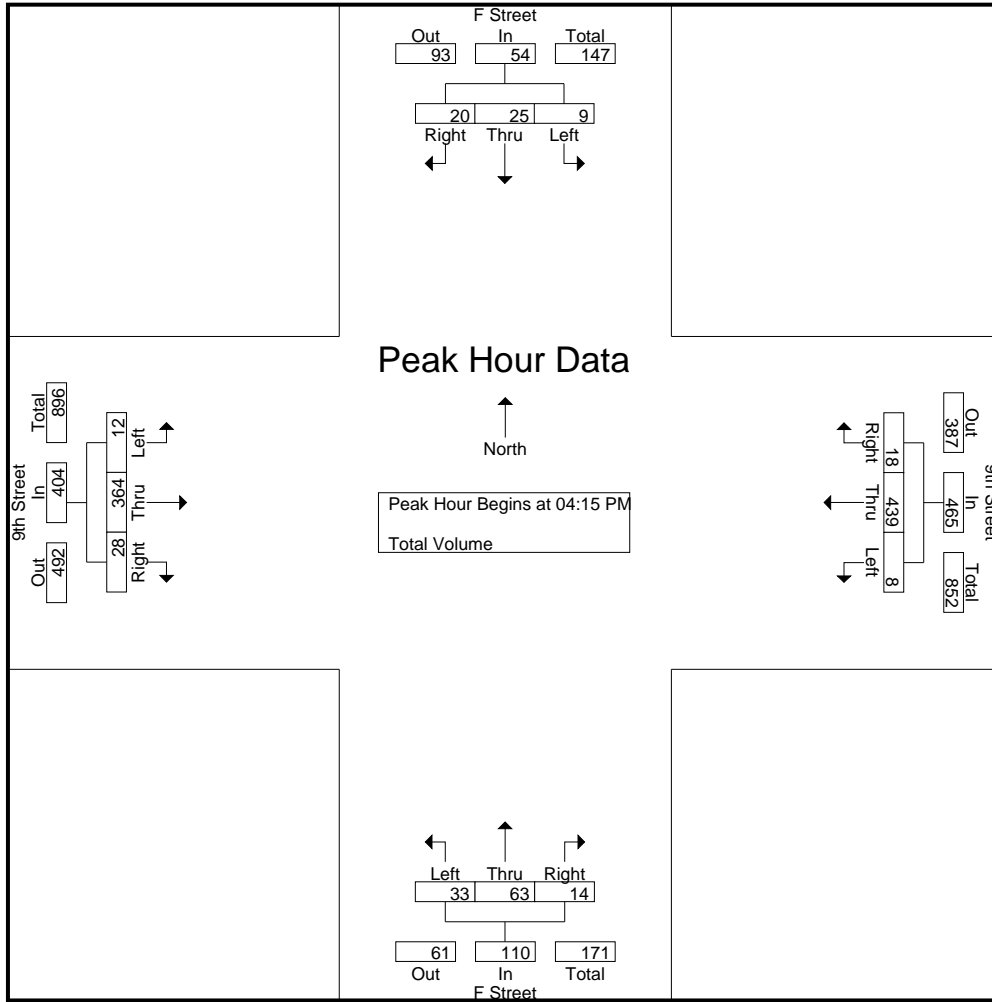
Start Time	F Street Southbound				9th Street Westbound				F Street Northbound				9th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	2	9	4	15	3	100	5	108	5	20	6	31	3	87	4	94	248
04:15 PM	4	7	10	21	2	115	4	121	6	5	3	14	3	97	7	107	263
04:30 PM	1	8	4	13	2	100	5	107	14	23	5	42	3	85	5	93	255
04:45 PM	2	6	2	10	2	99	3	104	8	18	1	27	3	95	7	105	246
Total	9	30	20	59	9	414	17	440	33	66	15	114	12	364	23	399	1012
05:00 PM	2	4	4	10	2	125	6	133	5	17	5	27	3	87	9	99	269
05:15 PM	1	6	5	12	1	103	6	110	3	11	2	16	3	87	7	97	235
05:30 PM	2	9	3	14	1	101	8	110	4	9	2	15	7	77	3	87	226
05:45 PM	4	3	2	9	3	73	6	82	3	6	3	12	2	70	9	81	184
Total	9	22	14	45	7	402	26	435	15	43	12	70	15	321	28	364	914
Grand Total	18	52	34	104	16	816	43	875	48	109	27	184	27	685	51	763	1926
Apprch %	17.3	50	32.7		1.8	93.3	4.9		26.1	59.2	14.7		3.5	89.8	6.7		
Total %	0.9	2.7	1.8	5.4	0.8	42.4	2.2	45.4	2.5	5.7	1.4	9.6	1.4	35.6	2.6	39.6	

Start Time	F Street Southbound				9th Street Westbound				F Street Northbound				9th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	4	7	10	21	2	115	4	121	6	5	3	14	3	97	7	107	263
04:30 PM	1	8	4	13	2	100	5	107	14	23	5	42	3	85	5	93	255
04:45 PM	2	6	2	10	2	99	3	104	8	18	1	27	3	95	7	105	246
05:00 PM	2	4	4	10	2	125	6	133	5	17	5	27	3	87	9	99	269
Total Volume	9	25	20	54	8	439	18	465	33	63	14	110	12	364	28	404	1033
% App. Total	16.7	46.3	37		1.7	94.4	3.9		30	57.3	12.7		3	90.1	6.9		
PHF	.563	.781	.500	.643	1.00	.878	.750	.874	.589	.685	.700	.655	1.00	.938	.778	.944	.960

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

City of San Bernardino
 N/S: F Street
 E/W: 9th Street
 Weather: Clear

File Name : 05_SBC_F St_9th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:15 PM			
+0 mins.	2	9	4	15	2	115	4	121	5	20	6	31	3	97	7	107
+15 mins.	4	7	10	21	2	100	5	107	6	5	3	14	3	85	5	93
+30 mins.	1	8	4	13	2	99	3	104	14	23	5	42	3	95	7	105
+45 mins.	2	6	2	10	2	125	6	133	8	18	1	27	3	87	9	99
Total Volume	9	30	20	59	8	439	18	465	33	66	15	114	12	364	28	404
% App. Total	15.3	50.8	33.9		1.7	94.4	3.9		28.9	57.9	13.2		3	90.1	6.9	
PHF	.563	.833	.500	.702	1.000	.878	.750	.874	.589	.717	.625	.679	1.000	.938	.778	.944

City of San Bernardino
 N/S: F Street
 E/W: 8th Street
 Weather: Clear

File Name : 06_SBC_F St_8th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

Start Time	F Street Southbound				8th Street Westbound				F Street Northbound				8th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	3	8	0	11	2	2	0	4	0	4	0	4	1	3	1	5	24
07:15 AM	2	8	0	10	3	4	1	8	0	2	0	2	0	1	2	3	23
07:30 AM	1	20	1	22	0	6	2	8	0	2	2	4	1	2	4	7	41
07:45 AM	4	25	3	32	3	3	0	6	2	6	0	8	0	2	3	5	51
Total	10	61	4	75	8	15	3	26	2	14	2	18	2	8	10	20	139
08:00 AM	2	32	1	35	1	5	0	6	1	3	1	5	0	1	3	4	50
08:15 AM	0	44	1	45	7	2	0	9	4	15	1	20	0	2	8	10	84
08:30 AM	1	36	0	37	6	2	1	9	4	17	2	23	2	4	7	13	82
08:45 AM	1	22	0	23	4	0	4	8	1	18	5	24	1	2	5	8	63
Total	4	134	2	140	18	9	5	32	10	53	9	72	3	9	23	35	279
Grand Total	14	195	6	215	26	24	8	58	12	67	11	90	5	17	33	55	418
Apprch %	6.5	90.7	2.8		44.8	41.4	13.8		13.3	74.4	12.2		9.1	30.9	60		
Total %	3.3	46.7	1.4	51.4	6.2	5.7	1.9	13.9	2.9	16	2.6	21.5	1.2	4.1	7.9	13.2	

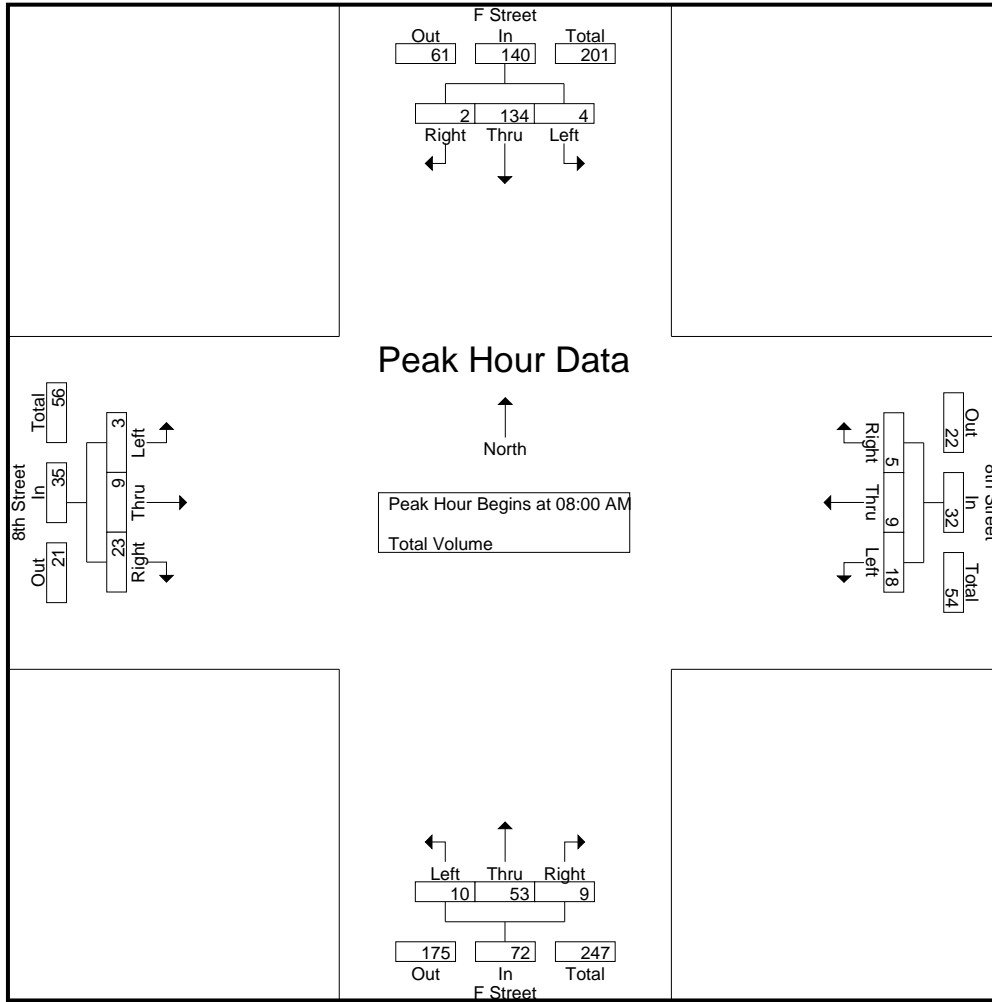
Start Time	F Street Southbound				8th Street Westbound				F Street Northbound				8th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	2	32	1	35	1	5	0	6	1	3	1	5	0	1	3	4	50
08:15 AM	0	44	1	45	7	2	0	9	4	15	1	20	0	2	8	10	84
08:30 AM	1	36	0	37	6	2	1	9	4	17	2	23	2	4	7	13	82
08:45 AM	1	22	0	23	4	0	4	8	1	18	5	24	1	2	5	8	63
Total Volume	4	134	2	140	18	9	5	32	10	53	9	72	3	9	23	35	279
% App. Total	2.9	95.7	1.4		56.2	28.1	15.6		13.9	73.6	12.5		8.6	25.7	65.7		
PHF	.500	.761	.500	.778	.643	.450	.313	.889	.625	.736	.450	.750	.375	.563	.719	.673	.830

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

City of San Bernardino
 N/S: F Street
 E/W: 8th Street
 Weather: Clear

File Name : 06_SBC_F St_8th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	4	25	3	32	1	5	0	6	1	3	1	5	0	1	3	4
+15 mins.	2	32	1	35	7	2	0	9	4	15	1	20	0	2	8	10
+30 mins.	0	44	1	45	6	2	1	9	4	17	2	23	2	4	7	13
+45 mins.	1	36	0	37	4	0	4	8	1	18	5	24	1	2	5	8
Total Volume	7	137	5	149	18	9	5	32	10	53	9	72	3	9	23	35
% App. Total	4.7	91.9	3.4		56.2	28.1	15.6		13.9	73.6	12.5		8.6	25.7	65.7	
PHF	.438	.778	.417	.828	.643	.450	.313	.889	.625	.736	.450	.750	.375	.563	.719	.673

City of San Bernardino
 N/S: F Street
 E/W: 8th Street
 Weather: Clear

File Name : 06_SBC_F St_8th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

Start Time	F Street Southbound				8th Street Westbound				F Street Northbound				8th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	4	11	2	17	5	7	0	12	5	24	0	29	0	2	1	3	61
04:15 PM	1	6	5	12	1	3	1	5	2	16	2	20	0	4	5	9	46
04:30 PM	1	9	3	13	9	6	13	28	4	30	2	36	3	4	0	7	84
04:45 PM	5	8	1	14	1	9	12	22	2	14	1	17	0	2	1	3	56
Total	11	34	11	56	16	25	26	67	13	84	5	102	3	12	7	22	247
05:00 PM	5	7	1	13	2	5	6	13	1	19	0	20	2	1	0	3	49
05:15 PM	1	9	2	12	0	4	3	7	1	11	1	13	0	1	4	5	37
05:30 PM	0	8	5	13	0	4	1	5	0	14	1	15	2	2	1	5	38
05:45 PM	1	7	4	12	1	4	3	8	3	10	0	13	1	2	0	3	36
Total	7	31	12	50	3	17	13	33	5	54	2	61	5	6	5	16	160
Grand Total	18	65	23	106	19	42	39	100	18	138	7	163	8	18	12	38	407
Apprch %	17	61.3	21.7		19	42	39		11	84.7	4.3		21.1	47.4	31.6		
Total %	4.4	16	5.7	26	4.7	10.3	9.6	24.6	4.4	33.9	1.7	40	2	4.4	2.9	9.3	

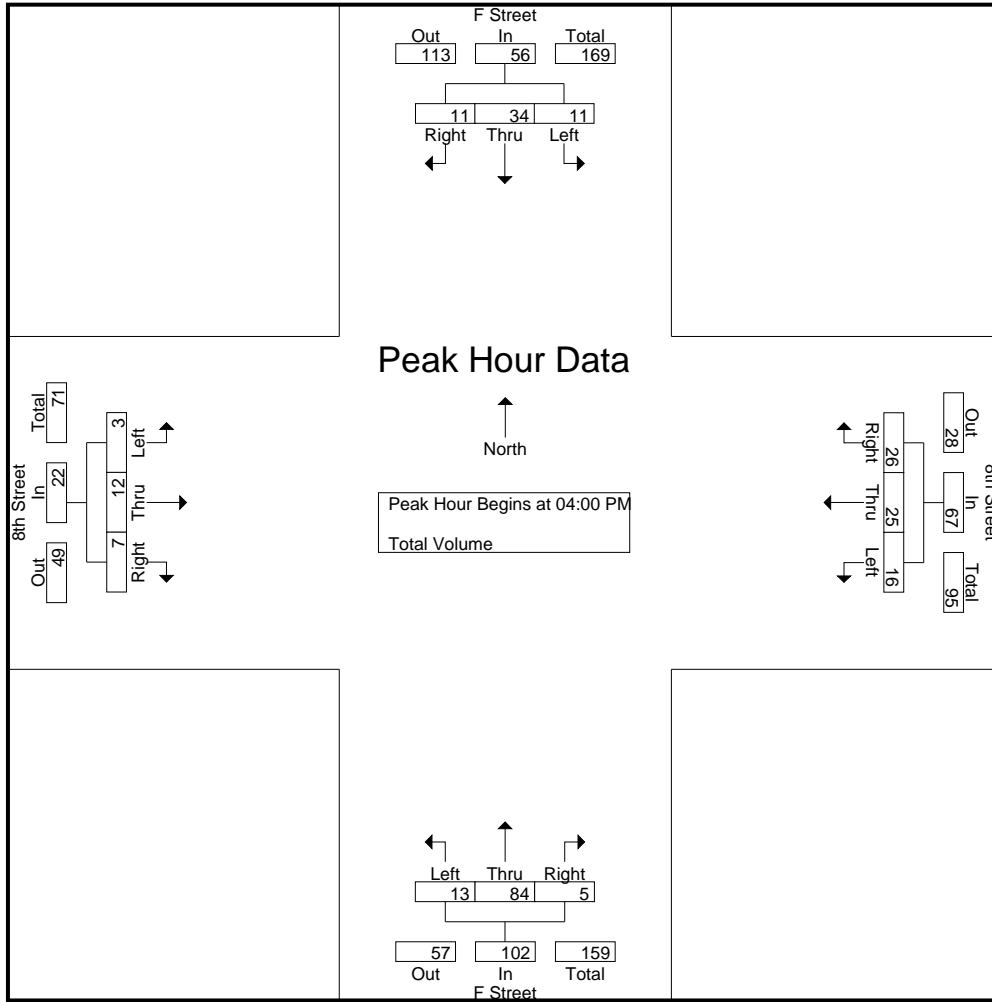
Start Time	F Street Southbound				8th Street Westbound				F Street Northbound				8th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	4	11	2	17	5	7	0	12	5	24	0	29	0	2	1	3	61
04:15 PM	1	6	5	12	1	3	1	5	2	16	2	20	0	4	5	9	46
04:30 PM	1	9	3	13	9	6	13	28	4	30	2	36	3	4	0	7	84
04:45 PM	5	8	1	14	1	9	12	22	2	14	1	17	0	2	1	3	56
Total Volume	11	34	11	56	16	25	26	67	13	84	5	102	3	12	7	22	247
% App. Total	19.6	60.7	19.6		23.9	37.3	38.8		12.7	82.4	4.9		13.6	54.5	31.8		
PHF	.550	.773	.550	.824	.444	.694	.500	.598	.650	.700	.625	.708	.250	.750	.350	.611	.735

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

City of San Bernardino
 N/S: F Street
 E/W: 8th Street
 Weather: Clear

File Name : 06_SBC_F St_8th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:00 PM				04:00 PM			
+0 mins.	4	11	2	17	9	6	13	28	5	24	0	29	0	2	1	3
+15 mins.	1	6	5	12	1	9	12	22	2	16	2	20	0	4	5	9
+30 mins.	1	9	3	13	2	5	6	13	4	30	2	36	3	4	0	7
+45 mins.	5	8	1	14	0	4	3	7	2	14	1	17	0	2	1	3
Total Volume	11	34	11	56	12	24	34	70	13	84	5	102	3	12	7	22
% App. Total	19.6	60.7	19.6		17.1	34.3	48.6		12.7	82.4	4.9		13.6	54.5	31.8	
PHF	.550	.773	.550	.824	.333	.667	.654	.625	.650	.700	.625	.708	.250	.750	.350	.611

City of San Bernardino
 N/S: F Street
 E/W: 6th Street
 Weather: Clear

File Name : 07_SBC_F St_6th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

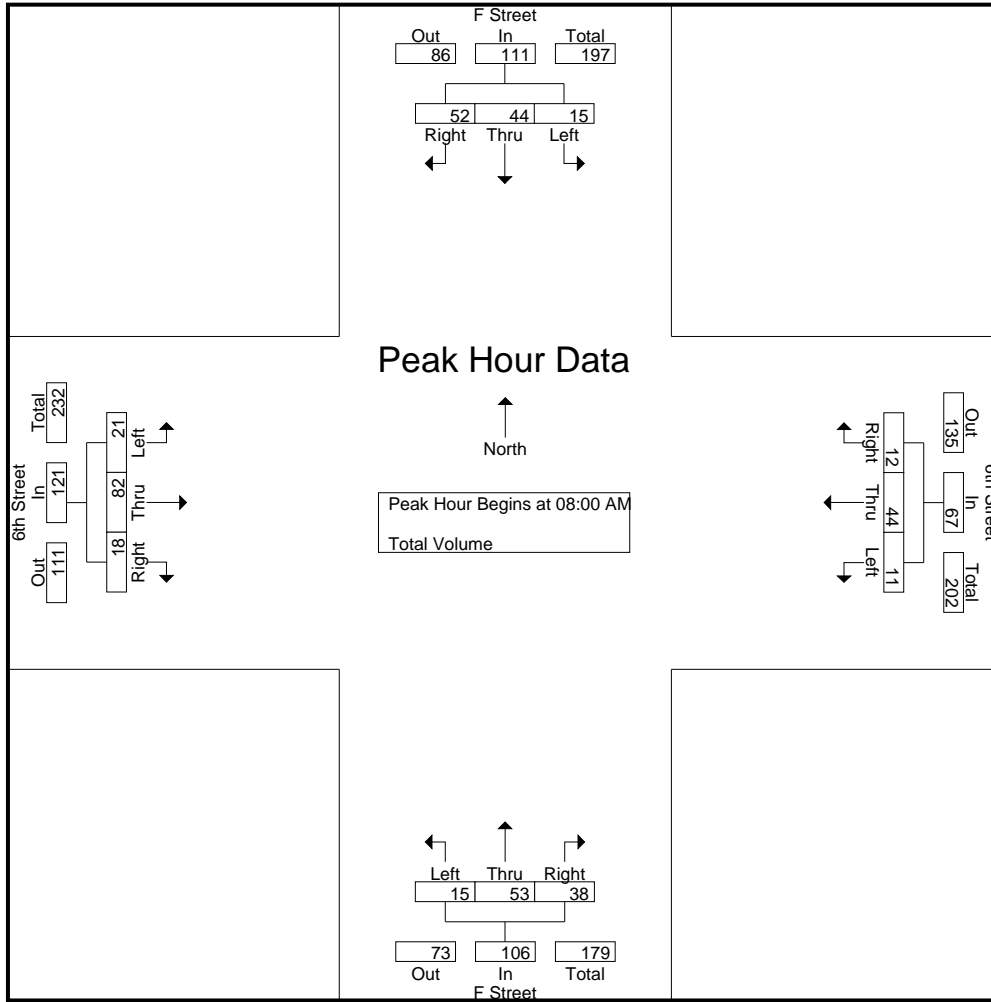
Start Time	F Street Southbound				6th Street Westbound				F Street Northbound				6th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	3	1	5	0	8	1	9	1	10	1	12	3	7	3	13	39
07:15 AM	1	7	2	10	1	8	1	10	1	11	3	15	2	19	4	25	60
07:30 AM	0	11	2	13	1	7	1	9	2	14	2	18	2	11	1	14	54
07:45 AM	2	11	4	17	1	5	1	7	1	24	2	27	11	28	3	42	93
Total	4	32	9	45	3	28	4	35	5	59	8	72	18	65	11	94	246
08:00 AM	3	6	6	15	1	9	3	13	4	17	11	32	4	27	4	35	95
08:15 AM	5	11	17	33	1	9	4	14	2	14	9	25	7	20	7	34	106
08:30 AM	5	17	18	40	6	11	3	20	3	11	8	22	5	11	5	21	103
08:45 AM	2	10	11	23	3	15	2	20	6	11	10	27	5	24	2	31	101
Total	15	44	52	111	11	44	12	67	15	53	38	106	21	82	18	121	405
Grand Total	19	76	61	156	14	72	16	102	20	112	46	178	39	147	29	215	651
Apprch %	12.2	48.7	39.1		13.7	70.6	15.7		11.2	62.9	25.8		18.1	68.4	13.5		
Total %	2.9	11.7	9.4	24	2.2	11.1	2.5	15.7	3.1	17.2	7.1	27.3	6	22.6	4.5	33	

Start Time	F Street Southbound				6th Street Westbound				F Street Northbound				6th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	3	6	6	15	1	9	3	13	4	17	11	32	4	27	4	35	95
08:15 AM	5	11	17	33	1	9	4	14	2	14	9	25	7	20	7	34	106
08:30 AM	5	17	18	40	6	11	3	20	3	11	8	22	5	11	5	21	103
08:45 AM	2	10	11	23	3	15	2	20	6	11	10	27	5	24	2	31	101
Total Volume	15	44	52	111	11	44	12	67	15	53	38	106	21	82	18	121	405
% App. Total	13.5	39.6	46.8		16.4	65.7	17.9		14.2	50	35.8		17.4	67.8	14.9		
PHF	.750	.647	.722	.694	.458	.733	.750	.838	.625	.779	.864	.828	.750	.759	.643	.864	.955

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of San Bernardino
 N/S: F Street
 E/W: 6th Street
 Weather: Clear

File Name : 07_SBC_F St_6th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:45 AM				07:45 AM			
+0 mins.	3	6	6	15	1	9	3	13	1	24	2	27	11	28	3	42
+15 mins.	5	11	17	33	1	9	4	14	4	17	11	32	4	27	4	35
+30 mins.	5	17	18	40	6	11	3	20	2	14	9	25	7	20	7	34
+45 mins.	2	10	11	23	3	15	2	20	3	11	8	22	5	11	5	21
Total Volume	15	44	52	111	11	44	12	67	10	66	30	106	27	86	19	132
% App. Total	13.5	39.6	46.8		16.4	65.7	17.9		9.4	62.3	28.3		20.5	65.2	14.4	
PHF	.750	.647	.722	.694	.458	.733	.750	.838	.625	.688	.682	.828	.614	.768	.679	.786

City of San Bernardino
 N/S: F Street
 E/W: 6th Street
 Weather: Clear

File Name : 07_SBC_F St_6th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

Start Time	F Street Southbound				6th Street Westbound				F Street Northbound				6th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	11	9	20	4	45	4	53	6	16	6	28	2	15	3	20	121
04:15 PM	2	8	3	13	2	42	0	44	9	17	4	30	7	10	5	22	109
04:30 PM	3	22	16	41	2	57	8	67	4	14	3	21	0	12	2	14	143
04:45 PM	0	13	2	15	4	26	2	32	11	12	1	24	4	9	3	16	87
Total	5	54	30	89	12	170	14	196	30	59	14	103	13	46	13	72	460
05:00 PM	3	8	10	21	5	40	2	47	3	11	3	17	5	5	0	10	95
05:15 PM	1	6	10	17	4	32	1	37	14	13	5	32	4	10	9	23	109
05:30 PM	0	6	7	13	6	28	1	35	7	12	5	24	6	13	3	22	94
05:45 PM	0	4	7	11	0	20	2	22	13	9	4	26	4	10	7	21	80
Total	4	24	34	62	15	120	6	141	37	45	17	99	19	38	19	76	378
Grand Total	9	78	64	151	27	290	20	337	67	104	31	202	32	84	32	148	838
Apprch %	6	51.7	42.4		8	86.1	5.9		33.2	51.5	15.3		21.6	56.8	21.6		
Total %	1.1	9.3	7.6	18	3.2	34.6	2.4	40.2	8	12.4	3.7	24.1	3.8	10	3.8	17.7	

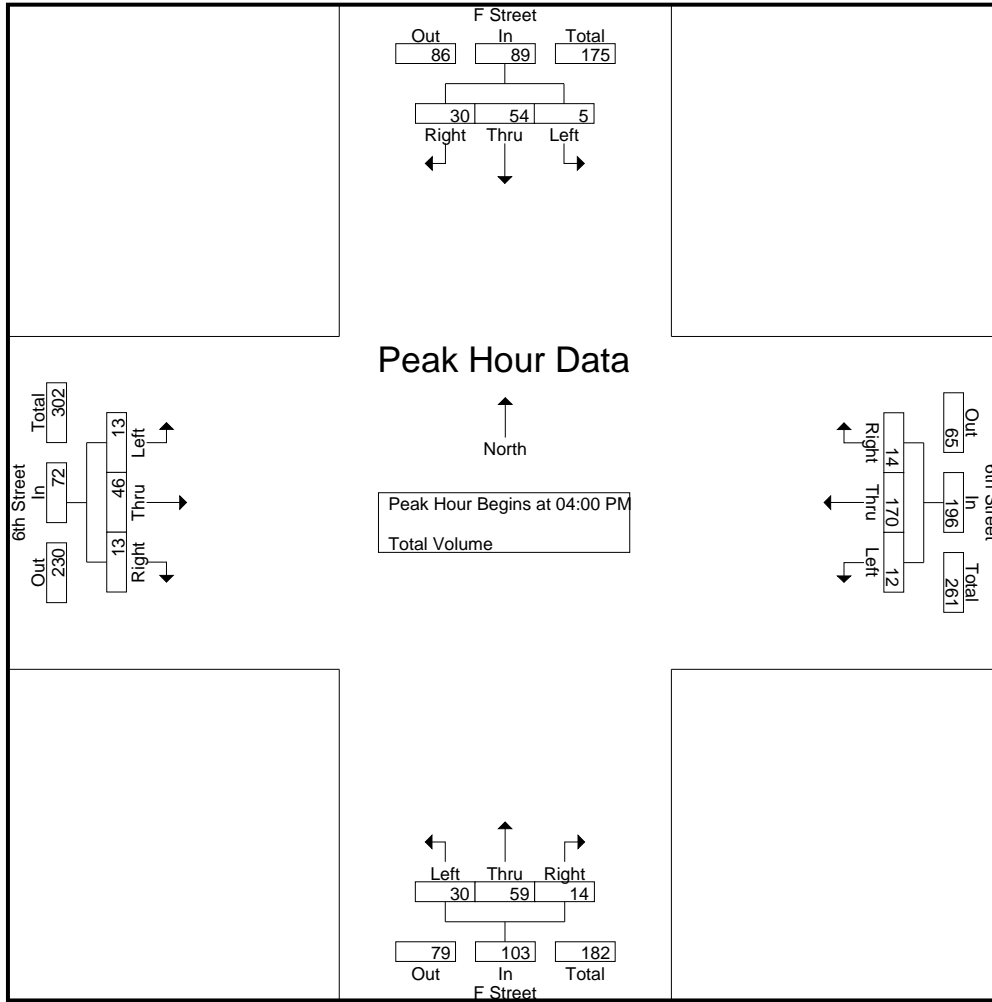
Start Time	F Street Southbound				6th Street Westbound				F Street Northbound				6th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	11	9	20	4	45	4	53	6	16	6	28	2	15	3	20	121
04:15 PM	2	8	3	13	2	42	0	44	9	17	4	30	7	10	5	22	109
04:30 PM	3	22	16	41	2	57	8	67	4	14	3	21	0	12	2	14	143
04:45 PM	0	13	2	15	4	26	2	32	11	12	1	24	4	9	3	16	87
Total Volume	5	54	30	89	12	170	14	196	30	59	14	103	13	46	13	72	460
% App. Total	5.6	60.7	33.7		6.1	86.7	7.1		29.1	57.3	13.6		18.1	63.9	18.1		
PHF	.417	.614	.469	.543	.750	.746	.438	.731	.682	.868	.583	.858	.464	.767	.650	.818	.804

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

City of San Bernardino
 N/S: F Street
 E/W: 6th Street
 Weather: Clear

File Name : 07_SBC_F St_6th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	3	22	16	41	4	45	4	53	6	16	6	28	5	5	0	10
+15 mins.	0	13	2	15	2	42	0	44	9	17	4	30	4	10	9	23
+30 mins.	3	8	10	21	2	57	8	67	4	14	3	21	6	13	3	22
+45 mins.	1	6	10	17	4	26	2	32	11	12	1	24	4	10	7	21
Total Volume	7	49	38	94	12	170	14	196	30	59	14	103	19	38	19	76
% App. Total	7.4	52.1	40.4		6.1	86.7	7.1		29.1	57.3	13.6		25	50	25	
PHF	.583	.557	.594	.573	.750	.746	.438	.731	.682	.868	.583	.858	.792	.731	.528	.826

City of San Bernardino
 N/S: F Street
 E/W: 5th Street
 Weather: Clear

File Name : 08_SBC_F St_5th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

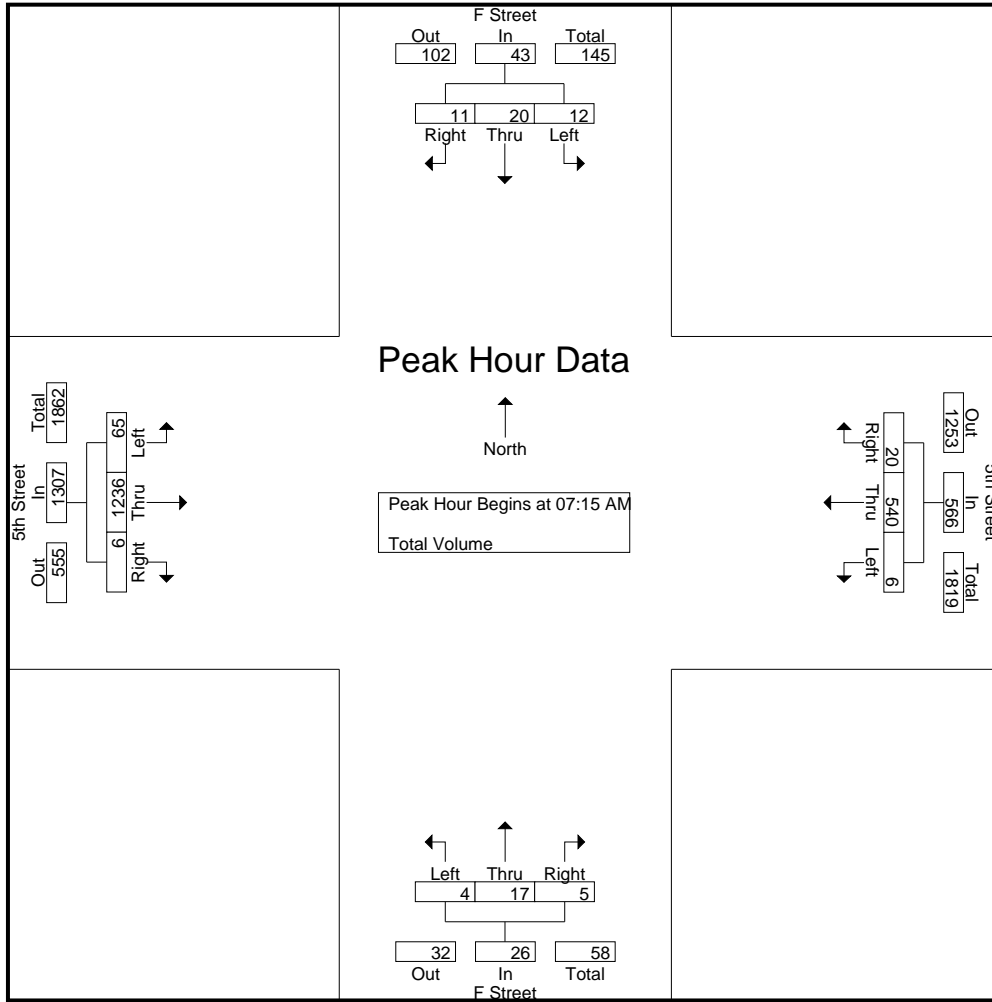
Start Time	F Street Southbound				5th Street Westbound				F Street Northbound				5th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	2	3	6	1	128	2	131	1	2	2	5	8	249	4	261	403
07:15 AM	5	4	3	12	2	137	5	144	1	4	1	6	6	291	0	297	459
07:30 AM	3	6	3	12	0	143	3	146	0	4	2	6	12	288	1	301	465
07:45 AM	3	7	3	13	1	130	7	138	1	3	0	4	21	324	2	347	502
Total	12	19	12	43	4	538	17	559	3	13	5	21	47	1152	7	1206	1829
08:00 AM	1	3	2	6	3	130	5	138	2	6	2	10	26	333	3	362	516
08:15 AM	7	4	9	20	4	125	4	133	2	5	3	10	18	275	2	295	458
08:30 AM	5	6	13	24	2	157	4	163	1	7	2	10	21	231	2	254	451
08:45 AM	2	9	6	17	2	158	11	171	1	2	1	4	33	234	3	270	462
Total	15	22	30	67	11	570	24	605	6	20	8	34	98	1073	10	1181	1887
Grand Total	27	41	42	110	15	1108	41	1164	9	33	13	55	145	2225	17	2387	3716
Apprch %	24.5	37.3	38.2		1.3	95.2	3.5		16.4	60	23.6		6.1	93.2	0.7		
Total %	0.7	1.1	1.1	3	0.4	29.8	1.1	31.3	0.2	0.9	0.3	1.5	3.9	59.9	0.5	64.2	

Start Time	F Street Southbound				5th Street Westbound				F Street Northbound				5th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	5	4	3	12	2	137	5	144	1	4	1	6	6	291	0	297	459
07:30 AM	3	6	3	12	0	143	3	146	0	4	2	6	12	288	1	301	465
07:45 AM	3	7	3	13	1	130	7	138	1	3	0	4	21	324	2	347	502
08:00 AM	1	3	2	6	3	130	5	138	2	6	2	10	26	333	3	362	516
Total Volume	12	20	11	43	6	540	20	566	4	17	5	26	65	1236	6	1307	1942
% App. Total	27.9	46.5	25.6		1.1	95.4	3.5		15.4	65.4	19.2		5	94.6	0.5		
PHF	.600	.714	.917	.827	.500	.944	.714	.969	.500	.708	.625	.650	.625	.928	.500	.903	.941

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

City of San Bernardino
 N/S: F Street
 E/W: 5th Street
 Weather: Clear

File Name : 08_SBC_F St_5th St AM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:45 AM				07:15 AM			
+0 mins.	1	3	2	6	3	130	5	138	1	3	0	4	6	291	0	297
+15 mins.	7	4	9	20	4	125	4	133	2	6	2	10	12	288	1	301
+30 mins.	5	6	13	24	2	157	4	163	2	5	3	10	21	324	2	347
+45 mins.	2	9	6	17	2	158	11	171	1	7	2	10	26	333	3	362
Total Volume	15	22	30	67	11	570	24	605	6	21	7	34	65	1236	6	1307
% App. Total	22.4	32.8	44.8		1.8	94.2	4		17.6	61.8	20.6		5	94.6	0.5	
PHF	.536	.611	.577	.698	.688	.902	.545	.885	.750	.750	.583	.850	.625	.928	.500	.903

City of San Bernardino
 N/S: F Street
 E/W: 5th Street
 Weather: Clear

File Name : 08_SBC_F St_5th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 1

Groups Printed- Total Volume

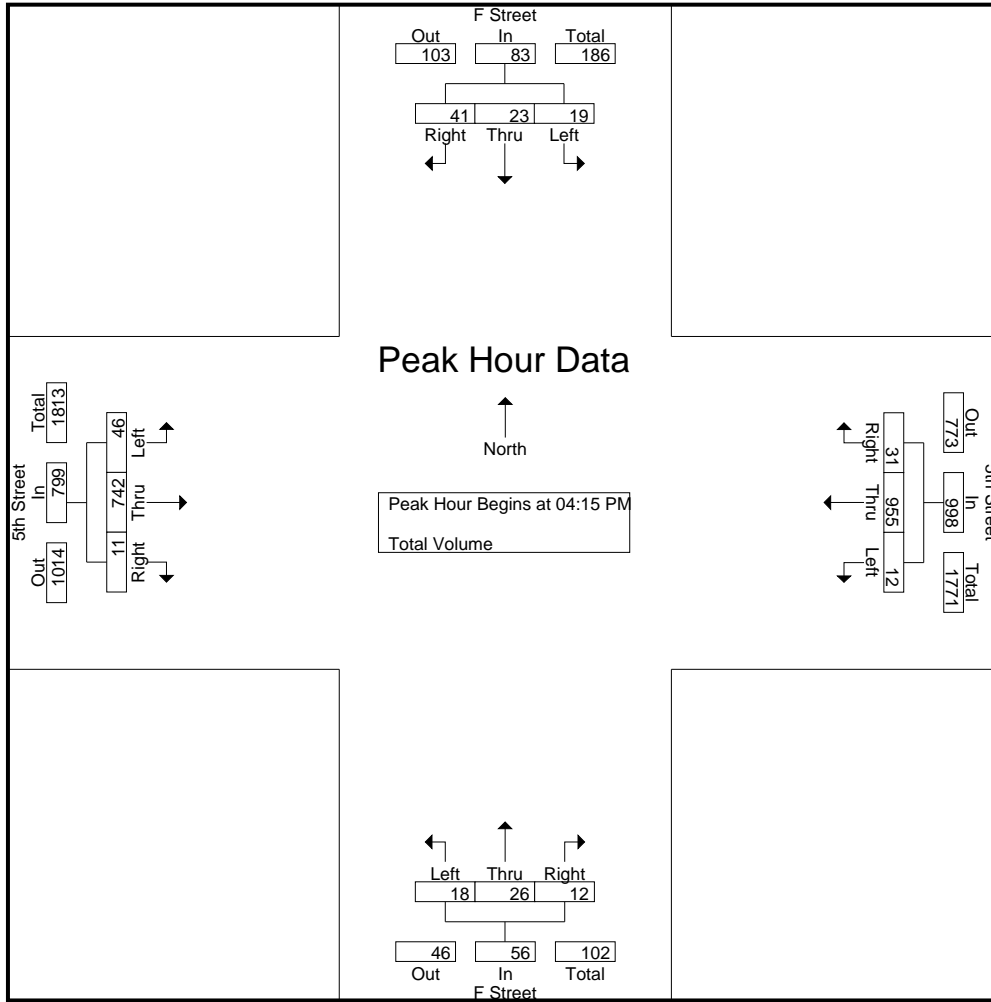
Start Time	F Street Southbound				5th Street Westbound				F Street Northbound				5th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	1	4	9	14	4	240	8	252	2	8	2	12	12	179	1	192	470
04:15 PM	4	9	6	19	3	225	9	237	6	9	2	17	9	186	5	200	473
04:30 PM	4	5	19	28	4	237	11	252	5	4	3	12	10	193	2	205	497
04:45 PM	7	8	11	26	1	208	4	213	4	7	3	14	14	179	0	193	446
Total	16	26	45	87	12	910	32	954	17	28	10	55	45	737	8	790	1886
05:00 PM	4	1	5	10	4	285	7	296	3	6	4	13	13	184	4	201	520
05:15 PM	2	3	8	13	7	227	11	245	1	9	0	10	14	169	3	186	454
05:30 PM	3	3	8	14	2	239	8	249	3	5	0	8	14	135	3	152	423
05:45 PM	0	2	9	11	1	195	4	200	2	11	2	15	10	173	2	185	411
Total	9	9	30	48	14	946	30	990	9	31	6	46	51	661	12	724	1808
Grand Total	25	35	75	135	26	1856	62	1944	26	59	16	101	96	1398	20	1514	3694
Apprch %	18.5	25.9	55.6		1.3	95.5	3.2		25.7	58.4	15.8		6.3	92.3	1.3		
Total %	0.7	0.9	2	3.7	0.7	50.2	1.7	52.6	0.7	1.6	0.4	2.7	2.6	37.8	0.5	41	

Start Time	F Street Southbound				5th Street Westbound				F Street Northbound				5th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	4	9	6	19	3	225	9	237	6	9	2	17	9	186	5	200	473
04:30 PM	4	5	19	28	4	237	11	252	5	4	3	12	10	193	2	205	497
04:45 PM	7	8	11	26	1	208	4	213	4	7	3	14	14	179	0	193	446
05:00 PM	4	1	5	10	4	285	7	296	3	6	4	13	13	184	4	201	520
Total Volume	19	23	41	83	12	955	31	998	18	26	12	56	46	742	11	799	1936
% App. Total	22.9	27.7	49.4		1.2	95.7	3.1		32.1	46.4	21.4		5.8	92.9	1.4		
PHF	.679	.639	.539	.741	.750	.838	.705	.843	.750	.722	.750	.824	.821	.961	.550	.974	.931

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

City of San Bernardino
 N/S: F Street
 E/W: 5th Street
 Weather: Clear

File Name : 08_SBC_F St_5th St PM
 Site Code : 20223031
 Start Date : 1/11/2023
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:15 PM				04:15 PM			
+0 mins.	1	4	9	14	4	237	11	252	6	9	2	17	9	186	5	200
+15 mins.	4	9	6	19	1	208	4	213	5	4	3	12	10	193	2	205
+30 mins.	4	5	19	28	4	285	7	296	4	7	3	14	14	179	0	193
+45 mins.	7	8	11	26	7	227	11	245	3	6	4	13	13	184	4	201
Total Volume	16	26	45	87	16	957	33	1006	18	26	12	56	46	742	11	799
% App. Total	18.4	29.9	51.7		1.6	95.1	3.3		32.1	46.4	21.4		5.8	92.9	1.4	
PHF	.571	.722	.592	.777	.571	.839	.750	.850	.750	.722	.750	.824	.821	.961	.550	.974

Counts Unlimited, Inc.

City of San Bernardino
 5th Street
 B/ H Street - E Street
 24 Hour Directional Volume Count

PO Box 1178
 Corona, CA 92878
 Phone: (951) 268-6268
 email: counts@countsunlimited.com

SBC003
 Site Code: 202-23031

Start Time	1/11/23 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		23	158			22	208				
12:15		20	196			19	214				
12:30		22	202			19	202				
12:45		19	209	84	765	23	204	83	828	167	1593
01:00		13	200			30	196				
01:15		17	190			20	180				
01:30		20	189			34	191				
01:45		17	201	67	780	24	235	108	802	175	1582
02:00		7	187			14	190				
02:15		11	226			18	199				
02:30		22	231			14	249				
02:45		25	198	65	842	19	234	65	872	130	1714
03:00		26	200			24	225				
03:15		23	198			28	209				
03:30		36	170			42	232				
03:45		41	188	126	756	34	232	128	898	254	1654
04:00		20	194			44	256				
04:15		32	182			48	240				
04:30		49	202			72	257				
04:45		48	183	149	761	38	204	202	957	351	1718
05:00		52	193			55	306				
05:15		67	176			73	239				
05:30		77	144			91	252				
05:45		114	158	310	671	82	205	301	1002	611	1673
06:00		77	165			64	187				
06:15		109	152			101	133				
06:30		139	128			105	137				
06:45		259	104	584	549	110	117	380	574	964	1123
07:00		249	101			130	122				
07:15		295	124			146	101				
07:30		290	95			144	112				
07:45		341	83	1175	403	135	92	555	427	1730	830
08:00		318	93			142	90				
08:15		276	82			140	82				
08:30		236	80			171	69				
08:45		224	72	1054	327	180	69	633	310	1687	637
09:00		213	61			145	63				
09:15		159	76			146	65				
09:30		138	59			138	60				
09:45		184	44	694	240	137	46	566	234	1260	474
10:00		169	60			153	49				
10:15		179	64			130	47				
10:30		165	49			171	44				
10:45		165	38	678	211	170	44	624	184	1302	395
11:00		184	47			183	42				
11:15		173	42			167	34				
11:30		177	41			204	36				
11:45		183	33	717	163	179	31	733	143	1450	306
Total		5703	6468	5703	6468	4378	7231	4378	7231	10081	13699
Combined Total		12171		12171		11609		11609		23780	
AM Peak	-	07:15	-	-	-	11:00	-	-	-	-	-
Vol.	-	1244	-	-	-	733	-	-	-	-	-
P.H.F.		0.912				0.898					
PM Peak	-	-	02:15	-	-	-	04:15	-	-	-	-
Vol.	-	-	855	-	-	-	1007	-	-	-	-
P.H.F.			0.925				0.823				
Percentage		46.9%	53.1%			37.7%	62.3%				
ADT/AADT		ADT 23,780		AADT 23,780							

Counts Unlimited, Inc.

City of San Bernardino
 E Street
 B/ 9th Street - 5th Street
 24 Hour Directional Volume Count

PO Box 1178
 Corona, CA 92878
 Phone: (951) 268-6268
 email: counts@countsunlimited.com

SBC002
 Site Code: 202-23031

Start Time	1/11/23 Wed	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		8	60			5	55				
12:15		5	53			1	54				
12:30		3	42			1	52				
12:45		2	56	18	211	7	66	14	227	32	438
01:00		3	56			4	48				
01:15		1	52			3	59				
01:30		5	57			8	54				
01:45		3	72	12	237	7	55	22	216	34	453
02:00		4	65			2	45				
02:15		3	66			2	51				
02:30		3	64			2	64				
02:45		6	51	16	246	7	64	13	224	29	470
03:00		2	58			1	69				
03:15		1	67			2	55				
03:30		1	68			2	61				
03:45		3	71	7	264	5	59	10	244	17	508
04:00		1	63			4	81				
04:15		1	78			4	51				
04:30		6	83			3	91				
04:45		4	74	12	298	8	68	19	291	31	589
05:00		7	76			10	46				
05:15		7	78			14	49				
05:30		6	71			5	48				
05:45		7	67	27	292	13	56	42	199	69	491
06:00		15	66			12	25				
06:15		7	44			9	33				
06:30		14	46			15	50				
06:45		22	37	58	193	21	29	57	137	115	330
07:00		27	27			17	33				
07:15		40	28			31	22				
07:30		51	27			47	21				
07:45		35	22	153	104	50	26	145	102	298	206
08:00		44	23			46	17				
08:15		48	21			51	21				
08:30		40	21			53	12				
08:45		52	18	184	83	59	17	209	67	393	150
09:00		40	23			43	9				
09:15		47	19			46	13				
09:30		45	9			36	14				
09:45		47	12	179	63	38	12	163	48	342	111
10:00		49	13			62	6				
10:15		46	13			35	11				
10:30		55	16			33	13				
10:45		50	17	200	59	49	9	179	39	379	98
11:00		61	7			42	14				
11:15		52	8			43	5				
11:30		41	7			58	0				
11:45		60	7	214	29	42	9	185	28	399	57
Total		1080	2079	1080	2079	1058	1822	1058	1822	2138	3901
Combined Total		3159		3159		2880		2880		6039	
AM Peak	-	10:30	-	-	-	08:00	-	-	-	-	-
Vol.	-	218	-	-	-	209	-	-	-	-	-
P.H.F.		0.893				0.886					
PM Peak	-	-	04:15	-	-	-	04:00	-	-	-	-
Vol.	-	-	311	-	-	-	291	-	-	-	-
P.H.F.			0.937				0.799				
Percentage		34.2%	65.8%			36.7%	63.3%				
ADT/AADT		ADT 6,039		AADT 6,039							

APPENDIX C

Police Station Existing Counts



City: San Bernardino
 Location: 536 West Baseline
 Date: 5/9/2018
 Count Type: 24 Hour Driveway Counts

	North Area		
	Entering	Exiting	Total
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	0	0	0
5:45	0	0	0
6:00	0	2	2
6:15	0	0	0
6:30	0	2	2
6:45	0	1	1
7:00	0	0	0
7:15	0	0	0
7:30	0	0	0
7:45	0	3	3
8:00	0	3	3
8:15	0	3	3
8:30	0	8	8
8:45	0	6	6
9:00	0	0	0
9:15	0	2	2
9:30	0	2	2
9:45	0	0	0
10:00	0	1	1
10:15	0	4	4
10:30	0	1	1
10:45	0	0	0
11:00	0	0	0
11:15	0	3	3
11:30	0	1	1
11:45	0	0	0

	South Area		
	Entering	Exiting	Total
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	2	0	2
5:30	0	0	0
5:45	0	0	0
6:00	0	1	1
6:15	0	0	0
6:30	1	0	1
6:45	1	0	1
7:00	1	0	1
7:15	2	0	2
7:30	5	0	5
7:45	3	0	3
8:00	4	0	4
8:15	2	0	2
8:30	1	0	1
8:45	3	0	3
9:00	1	0	1
9:15	4	0	4
9:30	1	0	1
9:45	2	0	2
10:00	2	0	2
10:15	3	0	3
10:30	3	0	3
10:45	2	0	2
11:00	0	0	0
11:15	1	0	1
11:30	0	0	0
11:45	0	0	0



City: San Bernardino
 Location: 536 West Baseline
 Date: 5/9/2018
 Count Type: 24 Hour Driveway Counts

	North Area		
	Entering	Exiting	Total
12:00	0	0	0
12:15	0	0	0
12:30	0	0	0
12:45	0	0	0
13:00	0	0	0
13:15	0	1	1
13:30	0	0	0
13:45	0	0	0
14:00	0	1	1
14:15	0	0	0
14:30	0	1	1
14:45	0	0	0
15:00	0	3	3
15:15	0	2	2
15:30	0	3	3
15:45	0	1	1
16:00	1	2	3
16:15	0	2	2
16:30	0	0	0
16:45	0	0	0
17:00	0	1	1
17:15	1	2	3
17:30	2	2	4
17:45	0	4	4
18:00	0	0	0
18:15	0	1	1
18:30	0	3	3
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
TOTAL	4	71	75

	South Area		
	Entering	Exiting	Total
12:00	0	0	0
12:15	0	0	0
12:30	2	0	2
12:45	2	0	2
13:00	0	0	0
13:15	1	0	1
13:30	0	0	0
13:45	1	0	1
14:00	0	0	0
14:15	1	0	1
14:30	0	0	0
14:45	0	0	0
15:00	0	0	0
15:15	1	0	1
15:30	1	0	1
15:45	3	1	4
16:00	0	0	0
16:15	0	0	0
16:30	2	0	2
16:45	1	0	1
17:00	1	0	1
17:15	2	0	2
17:30	1	0	1
17:45	6	0	6
18:00	1	0	1
18:15	0	0	0
18:30	0	0	0
18:45	0	1	1
19:00	0	0	0
19:15	0	0	0
19:30	1	0	1
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
TOTAL	71	3	74





















APPENDIX D

HCM 2010 Methodology Reports

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	332	24	36	304	51	6	90	10	40	152	18
Future Volume (veh/h)	11	332	24	36	304	51	6	90	10	40	152	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	12	361	26	39	330	55	7	98	11	43	165	20
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	360	815	58	367	768	127	133	445	50	149	456	55
Arrive On Green	0.08	0.29	0.29	0.09	0.30	0.30	0.18	0.64	0.64	0.10	0.33	0.33
Sat Flow, veh/h	1494	2821	202	1494	2562	423	1494	1386	156	1494	1373	166
Grp Volume(v), veh/h	12	190	197	39	191	194	7	0	109	43	0	185
Grp Sat Flow(s),veh/h/ln	1494	1490	1533	1494	1490	1494	1494	0	1541	1494	0	1539
Q Serve(g_s), s	0.5	9.4	9.4	1.5	9.2	9.4	0.4	0.0	2.7	2.4	0.0	8.2
Cycle Q Clear(g_c), s	0.5	9.4	9.4	1.5	9.2	9.4	0.4	0.0	2.7	2.4	0.0	8.2
Prop In Lane	1.00		0.13	1.00		0.28	1.00		0.10	1.00		0.11
Lane Grp Cap(c), veh/h	360	431	443	367	447	448	133	0	495	149	0	511
V/C Ratio(X)	0.03	0.44	0.44	0.11	0.43	0.43	0.05	0.00	0.22	0.29	0.00	0.36
Avail Cap(c_a), veh/h	360	431	443	367	447	448	133	0	495	149	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	26.1	26.1	18.4	25.3	25.3	33.9	0.0	11.4	37.5	0.0	22.8
Incr Delay (d2), s/veh	0.2	3.1	3.1	0.6	3.0	3.0	0.7	0.0	1.0	4.8	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.2	4.4	0.7	4.2	4.3	0.2	0.0	1.2	1.2	0.0	3.8
LnGrp Delay(d),s/veh	18.8	29.2	29.2	19.0	28.2	28.4	34.6	0.0	12.4	42.3	0.0	24.8
LnGrp LOS	B	C	C	B	C	C	C		B	D		C
Approach Vol, veh/h		399			424			116			228	
Approach Delay, s/veh		28.9			27.5			13.8			28.1	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	34.0	12.0	31.0	12.0	35.0	11.0	32.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	9.0	28.9	8.0	26.0	8.0	29.9	7.0	27.0				
Max Q Clear Time (g_c+I1), s	4.4	4.7	3.5	11.4	2.4	10.2	2.5	11.4				
Green Ext Time (p_c), s	0.0	0.5	0.0	1.9	0.0	0.9	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			26.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	2	15	4	2	21	4	2	120	14	3	183	12
Future Volume (veh/h)	2	15	4	2	21	4	2	120	14	3	183	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	2	16	4	2	23	4	2	130	15	3	199	13
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	91	21	46	98	16	133	927	107	149	994	65
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	55	1174	273	42	1266	209	1494	1381	159	1494	1457	95
Grp Volume(v), veh/h	22	0	0	29	0	0	2	0	145	3	0	212
Grp Sat Flow(s),veh/h/ln	501	0	0	1517	0	0	1494	0	1541	1494	0	1552
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	1.6	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Prop In Lane	0.09		0.18	0.07		0.14	1.00		0.10	1.00		0.06
Lane Grp Cap(c), veh/h	160	0	0	161	0	0	133	0	1034	149	0	1059
V/C Ratio(X)	0.14	0.00	0.00	0.18	0.00	0.00	0.02	0.00	0.14	0.02	0.00	0.20
Avail Cap(c_a), veh/h	495	0	0	500	0	0	183	0	1034	199	0	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.99	0.96	0.00	0.96
Uniform Delay (d), s/veh	38.8	0.0	0.0	39.0	0.0	0.0	33.8	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	39.2	0.0	0.0	39.5	0.0	0.0	33.8	0.0	0.3	32.5	0.0	0.4
LnGrp LOS	D			D			C		A	C		A
Approach Vol, veh/h		22			29			147			215	
Approach Delay, s/veh		39.2			39.5			0.7			0.9	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	37.0			27.4	11.0	38.0		27.4				
Max Q Clear Time (g_c+R), s	2.0			3.2	2.1	2.0		3.6				
Green Ext Time (p_c), s	0.0	0.8		0.1	0.0	1.3		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				5.6								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	14	92	25	11	42	7	14	123	43	12	174	10
Future Volume (veh/h)	14	92	25	11	42	7	14	123	43	12	174	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	15	100	27	12	46	8	15	134	47	13	189	11
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	216	56	133	236	40	158	879	308	177	1182	69
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1345	2779	725	1258	3028	513	1774	1319	463	1774	1743	101
Grp Volume(v), veh/h	15	62	65	12	26	28	15	0	181	13	0	200
Grp Sat Flow(s),veh/h/ln	1345	1770	1735	1258	1770	1772	1774	0	1781	1774	0	1845
Q Serve(g_s), s	1.0	3.0	3.2	0.8	1.3	1.3	0.6	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	2.3	3.0	3.2	4.0	1.3	1.3	0.6	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.29	1.00		0.26	1.00		0.05
Lane Grp Cap(c), veh/h	165	138	135	133	138	138	158	0	1187	177	0	1250
V/C Ratio(X)	0.09	0.45	0.48	0.09	0.19	0.20	0.10	0.00	0.15	0.07	0.00	0.16
Avail Cap(c_a), veh/h	494	570	559	441	570	571	217	0	1187	237	0	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	0.99	0.00	0.99
Uniform Delay (d), s/veh	39.9	39.7	39.8	41.7	38.9	38.9	34.0	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	0.2	2.3	2.6	0.3	0.7	0.7	0.3	0.0	0.3	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.6	1.6	0.3	0.6	0.7	0.3	0.0	0.1	0.3	0.0	0.1
LnGrp Delay(d),s/veh	40.2	42.0	42.4	42.0	39.5	39.6	34.2	0.0	0.3	32.8	0.0	0.3
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		142			66			196			213	
Approach Delay, s/veh		42.0			40.0			2.9			2.3	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.0		12.0	12.0	66.0		12.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	35.0			29.0	11.0	36.0		29.0				
Max Q Clear Time (g_c+Y),s	2.0			5.2	2.6	2.0		6.0				
Green Ext Time (p_c), s	0.0	1.1		0.7	0.0	1.2		0.2				

Intersection Summary

HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	85	1104	36	12	513	10	20	83	26	25	141	28
Future Volume (veh/h)	85	1104	36	12	513	10	20	83	26	25	141	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	92	1200	39	13	558	11	22	90	28	27	153	30
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	298	1318	43	128	1337	26	75	556	173	87	627	123
Arrive On Green	0.75	0.75	0.75	0.38	0.38	0.38	0.04	0.41	0.41	0.10	0.83	0.83
Sat Flow, veh/h	839	3499	114	447	3550	70	1774	1364	424	1774	1514	297
Grp Volume(v), veh/h	92	607	632	13	278	291	22	0	118	27	0	183
Grp Sat Flow(s),veh/h/ln	839	1770	1843	447	1770	1850	1774	0	1788	1774	0	1810
Q Serve(g_s), s	6.1	24.2	24.3	2.4	10.5	10.5	1.1	0.0	3.8	1.3	0.0	2.0
Cycle Q Clear(g_c), s	16.5	24.2	24.3	26.7	10.5	10.5	1.1	0.0	3.8	1.3	0.0	2.0
Prop In Lane	1.00		0.06	1.00		0.04	1.00		0.24	1.00		0.16
Lane Grp Cap(c), veh/h	298	666	694	128	666	697	75	0	729	87	0	750
V/C Ratio(X)	0.31	0.91	0.91	0.10	0.42	0.42	0.29	0.00	0.16	0.31	0.00	0.24
Avail Cap(c_a), veh/h	327	728	758	143	728	761	189	0	729	197	0	750
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	12.2	9.9	9.9	37.0	20.7	20.8	41.8	0.0	16.9	39.2	0.0	4.7
Incr Delay (d2), s/veh	0.5	10.4	10.1	0.5	0.6	0.6	2.1	0.0	0.5	2.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	13.0	13.5	0.3	5.2	5.4	0.6	0.0	2.0	0.7	0.0	1.1
LnGrp Delay(d),s/veh	12.7	20.3	20.0	37.5	21.3	21.3	43.9	0.0	17.4	41.1	0.0	5.4
LnGrp LOS	B	C	C	D	C	C	D		B	D		A
Approach Vol, veh/h		1331			582			140			210	
Approach Delay, s/veh		19.6			21.7			21.6			10.0	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.4	42.7		38.9	7.8	43.3		38.9				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0	28.0		37.0	9.6	28.4		37.0				
Max Q Clear Time (g_c+bl), s	3.0	5.8		26.3	3.1	4.0		28.7				
Green Ext Time (p_c), s	0.0	0.8		7.6	0.0	1.4		3.0				
Intersection Summary												
HCM 2010 Ctrl Delay					19.4							
HCM 2010 LOS					B							

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			WBT			NBT			SBT	
Traffic Volume (veh/h)	7	349	63	22	284	16	8	25	10	10	64	12
Future Volume (veh/h)	7	349	63	22	284	16	8	25	10	10	64	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	8	379	68	24	309	17	9	27	11	11	70	13
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	1229	216	128	1318	71	277	747	298	184	1009	180
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	16	2926	514	112	3138	169	472	1965	783	252	2655	474
Grp Volume(v), veh/h	243	0	212	182	0	168	25	0	22	50	0	44
Grp Sat Flow(s),veh/h/ln	851	0	1604	1753	0	1665	1664	0	1557	1771	0	1611
Q Serve(g_s), s	0.0	0.0	4.4	0.0	0.0	3.3	0.0	0.0	0.4	0.0	0.0	0.9
Cycle Q Clear(g_c), s	4.3	0.0	4.4	3.1	0.0	3.3	0.4	0.0	0.4	0.9	0.0	0.9
Prop In Lane	0.03		0.32	0.13		0.10	0.36		0.50	0.22		0.29
Lane Grp Cap(c), veh/h	852	0	674	818	0	699	730	0	592	761	0	612
V/C Ratio(X)	0.28	0.00	0.32	0.22	0.00	0.24	0.03	0.00	0.04	0.07	0.00	0.07
Avail Cap(c_a), veh/h	852	0	674	818	0	699	730	0	592	761	0	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.91	0.00	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	0.0	9.7	9.3	0.0	9.4	9.7	0.0	9.7	9.9	0.0	9.9
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.1	0.0	0.2	0.1	0.0	0.1	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	2.0	1.6	0.0	1.5	0.2	0.0	0.2	0.5	0.0	0.4
LnGrp Delay(d),s/veh	9.9	0.0	10.0	9.4	0.0	9.5	9.8	0.0	9.9	10.0	0.0	10.1
LnGrp LOS	A		A	A		A	A		A	B		B
Approach Vol, veh/h		455			350			47			94	
Approach Delay, s/veh		9.9			9.5			9.8			10.1	
Approach LOS		A			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		2.4		6.4		2.9		5.3				
Green Ext Time (p_c), s		0.1		2.4		0.3		1.8				





















Intersection Summary

HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	3	9	23	18	9	5	10	53	9	4	134	2
Future Vol, veh/h	3	9	23	18	9	5	10	53	9	4	134	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	10	25	20	10	5	11	58	10	4	146	2
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	247	244	146	253	236	58	148	0	0	68	0	0
Stage 1	154	154	-	80	80	-	-	-	-	-	-	-
Stage 2	93	90	-	173	156	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	707	658	901	700	665	1008	1434	-	-	1533	-	-
Stage 1	848	770	-	929	828	-	-	-	-	-	-	-
Stage 2	914	820	-	829	769	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	689	651	901	667	658	1008	1434	-	-	1533	-	-
Mov Cap-2 Maneuver	689	651	-	667	658	-	-	-	-	-	-	-
Stage 1	841	768	-	922	821	-	-	-	-	-	-	-
Stage 2	891	813	-	793	767	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.7		10.4			1			0.2			
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1434	-	-	801	701	1533	-	-				
HCM Lane V/C Ratio	0.008	-	-	0.047	0.05	0.003	-	-				
HCM Control Delay (s)	7.5	0	-	9.7	10.4	7.4	0	-				
HCM Lane LOS	A	A	-	A	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-				

HCM 2010 Signalized Intersection Summary
7: F Street & 6th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	82	18	11	44	12	15	53	38	15	44	52
Future Volume (veh/h)	21	82	18	11	44	12	15	53	38	15	44	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	23	89	20	12	48	13	16	58	41	16	48	57
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	712	820	697	671	820	697	209	669	435	202	546	548
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1336	1863	1583	1279	1863	1583	311	1760	1144	295	1436	1441
Grp Volume(v), veh/h	23	89	20	12	48	13	61	0	54	64	0	57
Grp Sat Flow(s),veh/h/ln	1336	1863	1583	1279	1863	1583	1722	0	1493	1732	0	1441
Q Serve(g_s), s	0.5	1.4	0.4	0.3	0.7	0.2	0.0	0.0	1.2	0.0	0.0	1.3
Cycle Q Clear(g_c), s	1.2	1.4	0.4	1.7	0.7	0.2	1.1	0.0	1.2	1.1	0.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	0.26		0.77	0.25		1.00
Lane Grp Cap(c), veh/h	712	820	697	671	820	697	745	0	567	748	0	548
V/C Ratio(X)	0.03	0.11	0.03	0.02	0.06	0.02	0.08	0.00	0.09	0.09	0.00	0.10
Avail Cap(c_a), veh/h	712	820	697	671	820	697	745	0	567	748	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	8.2	7.9	8.7	8.0	7.9	9.9	0.0	10.0	10.0	0.0	10.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.2	0.1	0.4	0.1	0.6	0.0	0.5	0.6	0.0	0.6
LnGrp Delay(d),s/veh	8.4	8.3	7.9	8.7	8.1	7.9	10.2	0.0	10.3	10.2	0.0	10.4
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		132			73			115			121	
Approach Delay, s/veh		8.2			8.1			10.2			10.3	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.2		3.4		3.3		3.7				
Green Ext Time (p_c), s		0.3		0.3		0.3		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				9.3								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

8: 5th Street & F Street

12-13-2023























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↷			↷	
Traffic Volume (veh/h)	65	1236	6	6	540	20	4	17	5	12	20	11
Future Volume (veh/h)	65	1236	6	6	540	20	4	17	5	12	20	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	71	1343	7	7	587	22	4	18	5	13	22	12
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	366	1672	9	138	1611	60	226	965	265	393	644	359
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	809	3610	19	402	3479	130	411	2267	622	781	1514	843
Grp Volume(v), veh/h	71	658	692	7	298	311	14	0	13	25	0	22
Grp Sat Flow(s),veh/h/ln	809	1770	1859	402	1770	1840	1714	0	1585	1592	0	1546
Q Serve(g_s), s	5.6	28.6	28.6	1.4	9.8	9.8	0.0	0.0	0.4	0.0	0.0	0.7
Cycle Q Clear(g_c), s	15.4	28.6	28.6	30.0	9.8	9.8	0.4	0.0	0.4	0.7	0.0	0.7
Prop In Lane	1.00		0.01	1.00		0.07	0.28		0.39	0.52		0.55
Lane Grp Cap(c), veh/h	366	820	861	138	820	852	781	0	675	738	0	658
V/C Ratio(X)	0.19	0.80	0.80	0.05	0.36	0.36	0.02	0.00	0.02	0.03	0.00	0.03
Avail Cap(c_a), veh/h	477	1062	1116	193	1062	1104	781	0	675	738	0	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.6	20.6	20.7	33.5	15.6	15.6	15.0	0.0	15.0	15.0	0.0	15.1
Incr Delay (d2), s/veh	0.3	3.5	3.3	0.1	0.3	0.2	0.0	0.0	0.1	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3	14.7	15.4	0.2	4.9	5.1	0.2	0.0	0.2	0.4	0.0	0.3
LnGrp Delay(d),s/veh	20.8	24.1	24.0	33.6	15.9	15.9	15.0	0.0	15.0	15.1	0.0	15.2
LnGrp LOS	C	C	C	C	B	B	B		B	B		B
Approach Vol, veh/h		1421			616			27			47	
Approach Delay, s/veh		23.9			16.1			15.0			15.1	
Approach LOS		C			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.3		46.7		43.3		46.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		54.0		26.0		54.0				
Max Q Clear Time (g_c+I1), s		2.4		30.6		2.7		32.0				
Green Ext Time (p_c), s		0.1		11.1		0.2		3.9				
Intersection Summary												
HCM 2010 Ctrl Delay				21.3								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	329	22	29	395	53	25	243	33	38	170	28
Future Volume (veh/h)	36	329	22	29	395	53	25	243	33	38	170	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	39	358	24	32	429	58	27	264	36	41	185	30
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	788	53	358	763	103	133	449	61	149	452	73
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.18	0.66	0.66	0.10	0.34	0.34
Sat Flow, veh/h	1494	2836	189	1494	2641	355	1494	1352	184	1494	1317	214
Grp Volume(v), veh/h	39	187	195	32	241	246	27	0	300	41	0	215
Grp Sat Flow(s),veh/h/ln	1494	1490	1535	1494	1490	1506	1494	0	1536	1494	0	1531
Q Serve(g_s), s	1.6	9.4	9.4	1.2	12.3	12.5	1.4	0.0	9.7	2.3	0.0	9.7
Cycle Q Clear(g_c), s	1.6	9.4	9.4	1.2	12.3	12.5	1.4	0.0	9.7	2.3	0.0	9.7
Prop In Lane	1.00		0.12	1.00		0.24	1.00		0.12	1.00		0.14
Lane Grp Cap(c), veh/h	311	414	426	358	431	435	133	0	510	149	0	526
V/C Ratio(X)	0.13	0.45	0.46	0.09	0.56	0.57	0.20	0.00	0.59	0.27	0.00	0.41
Avail Cap(c_a), veh/h	311	414	426	358	431	435	133	0	510	149	0	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	0.96	0.96	0.96	1.00	1.00	1.00	0.96	0.00	0.96	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.0	26.8	26.9	19.0	27.1	27.2	34.3	0.0	11.7	37.5	0.0	22.6
Incr Delay (d2), s/veh	0.8	3.4	3.3	0.5	5.2	5.2	3.3	0.0	4.7	4.5	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.2	4.4	0.6	5.7	5.8	0.7	0.0	4.7	1.1	0.0	4.4
LnGrp Delay(d),s/veh	20.8	30.2	30.2	19.5	32.3	32.4	37.6	0.0	16.4	42.0	0.0	24.9
LnGrp LOS	C	C	C	B	C	C	D		B	D		C
Approach Vol, veh/h		421			519			327			256	
Approach Delay, s/veh		29.4			31.6			18.2			27.7	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	35.0	12.0	30.0	12.0	36.0	11.0	31.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	9.0	29.9	8.0	25.0	8.0	30.9	7.0	26.0				
Max Q Clear Time (g_c+I1), s	4.3	11.7	3.2	11.4	3.4	11.7	3.6	14.5				
Green Ext Time (p_c), s	0.0	1.6	0.0	1.8	0.0	1.1	0.0	2.2				
Intersection Summary												
HCM 2010 Ctrl Delay				27.4								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	17	25	11	9	23	14	17	277	9	4	217	8
Future Volume (veh/h)	17	25	11	9	23	14	17	277	9	4	217	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	18	27	12	10	25	15	18	301	10	4	236	9
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	64	23	61	66	34	133	1013	34	149	1024	39
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	303	823	300	166	844	433	1494	1510	50	1494	1501	57
Grp Volume(v), veh/h	57	0	0	50	0	0	18	0	311	4	0	245
Grp Sat Flow(s),veh/h/ln	426	0	0	1442	0	0	1494	0	1560	1494	0	1559
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	3.3	0.0	0.0	2.9	0.0	0.0	0.9	0.0	0.0	0.2	0.0	0.0
Prop In Lane	0.32		0.21	0.20		0.30	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	164	0	0	160	0	0	133	0	1047	149	0	1063
V/C Ratio(X)	0.35	0.00	0.00	0.31	0.00	0.00	0.14	0.00	0.30	0.03	0.00	0.23
Avail Cap(c_a), veh/h	472	0	0	476	0	0	166	0	1047	183	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.98	0.00	0.98	0.94	0.00	0.94
Uniform Delay (d), s/veh	39.8	0.0	0.0	39.6	0.0	0.0	34.1	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	1.1	0.0	0.0	0.4	0.0	0.7	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	0.0	0.0	1.2	0.0	0.0	0.4	0.0	0.2	0.1	0.0	0.1
LnGrp Delay(d),s/veh	41.0	0.0	0.0	40.7	0.0	0.0	34.5	0.0	0.7	32.5	0.0	0.5
LnGrp LOS	D			D			C		A	C		A
Approach Vol, veh/h		57			50			329			249	
Approach Delay, s/veh		41.0			40.7			2.6			1.0	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	38.0			27.4	10.0	39.0		27.4				
Max Q Clear Time (g_c+R),s	2.0			5.3	2.9	2.0		4.9				
Green Ext Time (p_c), s	0.0	2.0		0.2	0.0	1.5		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				8.0								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	6	49	8	42	153	11	19	267	19	14	239	24
Future Volume (veh/h)	6	49	8	42	153	11	19	267	19	14	239	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	7	53	9	46	166	12	21	290	21	15	260	26
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	255	42	170	281	20	158	1134	82	177	1119	112
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1201	3040	504	1335	3350	240	1774	1717	124	1774	1667	167
Grp Volume(v), veh/h	7	30	32	46	87	91	21	0	311	15	0	286
Grp Sat Flow(s),veh/h/ln	1770	1774	1335	1770	1820	1774	0	1841	1774	0	1833	
Q Serve(g_s), s	0.5	1.4	1.5	3.0	4.3	4.3	0.9	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	4.8	1.4	1.5	4.5	4.3	4.3	0.9	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.28	1.00		0.13	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	123	149	149	170	149	153	158	0	1216	177	0	1231
V/C Ratio(X)	0.06	0.20	0.21	0.27	0.59	0.59	0.13	0.00	0.26	0.08	0.00	0.23
Avail Cap(c_a), veh/h	409	570	572	488	570	587	217	0	1216	217	0	1231
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.00	0.91	0.98	0.00	0.98
Uniform Delay (d), s/veh	2.1	38.4	38.4	40.5	39.7	39.7	34.1	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.7	0.7	0.8	3.6	3.7	0.3	0.0	0.5	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.7	0.8	1.1	2.2	2.3	0.4	0.0	0.2	0.3	0.0	0.1
LnGrp Delay(d),s/veh	42.3	39.1	39.1	41.4	43.3	43.4	34.4	0.0	0.5	32.8	0.0	0.4
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		69			224			332			301	
Approach Delay, s/veh		39.4			43.0			2.6			2.0	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	64.4		12.6	12.0	65.4		12.6				
Change Period (Y+Rc),s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	36.0			29.0	11.0	36.0		29.0				
Max Q Clear Time (g_c+R),s	2.0			6.8	2.9	2.0		6.5				
Green Ext Time (p_c), s	0.0	2.0		0.3	0.0	1.8		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay	14.9											
HCM 2010 LOS	B											

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	21	703	36	30	885	31	69	259	46	40	163	53
Future Volume (veh/h)	21	703	36	30	885	31	69	259	46	40	163	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	23	764	39	33	962	34	75	282	50	43	177	58
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	1195	61	233	1217	43	150	645	114	117	538	176
Arrive On Green	0.70	0.70	0.70	0.35	0.35	0.35	0.08	0.42	0.42	0.13	0.80	0.80
Sat Flow, veh/h	563	3427	175	675	3487	123	1774	1541	273	1774	1344	441
Grp Volume(v), veh/h	23	394	409	33	488	508	75	0	332	43	0	235
Grp Sat Flow(s),veh/h/ln	563	1770	1832	675	1770	1841	1774	0	1815	1774	0	1785
Q Serve(g_s), s	3.2	10.9	11.0	3.6	22.3	22.3	3.6	0.0	11.7	2.0	0.0	3.2
Cycle Q Clear(g_c), s	25.5	10.9	11.0	14.5	22.3	22.3	3.6	0.0	11.7	2.0	0.0	3.2
Prop In Lane	1.00		0.10	1.00		0.07	1.00		0.15	1.00		0.25
Lane Grp Cap(c), veh/h	137	617	639	233	617	642	150	0	760	117	0	714
V/C Ratio(X)	0.17	0.64	0.64	0.14	0.79	0.79	0.50	0.00	0.44	0.37	0.00	0.33
Avail Cap(c_a), veh/h	159	688	712	260	688	716	189	0	760	197	0	714
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	22.4	10.5	10.5	28.3	26.3	26.3	39.4	0.0	18.6	37.4	0.0	5.7
Incr Delay (d2), s/veh	0.7	1.7	1.7	0.4	6.2	6.0	2.6	0.0	1.8	1.9	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.3	5.5	0.7	11.9	12.3	1.9	0.0	6.2	1.0	0.0	1.7
LnGrp Delay(d),s/veh	23.1	12.3	12.2	28.7	32.5	32.3	41.9	0.0	20.4	39.2	0.0	6.9
LnGrp LOS	C	B	B	C	C	C	D		C	D		A
Approach Vol, veh/h		826			1029			407			278	
Approach Delay, s/veh		12.5			32.3			24.4			11.9	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	43.7		36.4	11.6	42.0		36.4				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0			35.0	9.6	30.4		35.0				
Max Q Clear Time (g_c+Rc), s	13.7			27.5	5.6	5.2		24.3				
Green Ext Time (p_c), s	0.0	2.5		3.9	0.0	2.0		6.2				

Intersection Summary

HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			EBT			EBT			EBT	
Traffic Volume (veh/h)	12	364	28	8	439	18	33	63	14	9	25	20
Future Volume (veh/h)	12	364	28	8	439	18	33	63	14	9	25	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	13	396	30	9	477	20	36	68	15	10	27	22
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1349	100	82	1412	58	414	739	168	249	600	453
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	32	3211	238	17	3361	139	793	1945	441	405	1580	1191
Grp Volume(v), veh/h	231	0	208	266	0	240	64	0	55	32	0	27
Grp Sat Flow(s),veh/h/ln	828	0	1653	1847	0	1671	1562	0	1617	1692	0	1485
Q Serve(g_s), s	0.0	0.0	4.2	0.0	0.0	4.9	0.0	0.0	1.1	0.0	0.0	0.6
Cycle Q Clear(g_c), s	4.1	0.0	4.2	4.8	0.0	4.9	1.1	0.0	1.1	0.5	0.0	0.6
Prop In Lane	0.06		0.14	0.03		0.08	0.56		0.27	0.32		0.80
Lane Grp Cap(c), veh/h	844	0	694	850	0	702	706	0	615	738	0	564
V/C Ratio(X)	0.27	0.00	0.30	0.31	0.00	0.34	0.09	0.00	0.09	0.04	0.00	0.05
Avail Cap(c_a), veh/h	844	0	694	850	0	702	706	0	615	738	0	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.82	0.00	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.6	0.0	9.6	9.8	0.0	9.8	10.0	0.0	9.9	9.8	0.0	9.8
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.2	0.0	0.2	0.3	0.0	0.3	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1	0.0	2.0	2.5	0.0	2.2	0.6	0.0	0.5	0.3	0.0	0.3
LnGrp Delay(d),s/veh	9.8	0.0	9.9	10.0	0.0	10.1	10.2	0.0	10.2	9.9	0.0	10.0
LnGrp LOS	A		A	A		B	B		B	A		A
Approach Vol, veh/h		439			506			119			59	
Approach Delay, s/veh		9.8			10.0			10.2			9.9	
Approach LOS		A			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		3.1		6.2		2.6		6.9				
Green Ext Time (p_c), s		0.5		2.3		0.2		2.6				

Intersection Summary

HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	A

Intersection

Int Delay, s/veh 4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	3	12	7	16	25	26	13	84	5	11	34	11
Future Vol, veh/h	3	12	7	16	25	26	13	84	5	11	34	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	13	8	17	27	28	14	91	5	12	37	12






















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	210	185	37	197	192	91	49	0	0	96	0	0
Stage 1	61	61	-	119	119	-	-	-	-	-	-	-
Stage 2	149	124	-	78	73	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	747	709	1035	762	703	967	1558	-	-	1498	-	-
Stage 1	950	844	-	885	797	-	-	-	-	-	-	-
Stage 2	854	793	-	931	834	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	694	696	1035	735	690	967	1558	-	-	1498	-	-
Mov Cap-2 Maneuver	694	696	-	735	690	-	-	-	-	-	-	-
Stage 1	941	837	-	876	789	-	-	-	-	-	-	-
Stage 2	792	785	-	902	827	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	10	0.9	1.5
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1558	-	-	777	789	1498	-
HCM Lane V/C Ratio	0.009	-	-	0.031	0.092	0.008	-
HCM Control Delay (s)	7.3	0	-	9.8	10	7.4	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-

HCM 2010 Signalized Intersection Summary
7: F Street & 6th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	46	13	12	170	14	30	59	14	5	54	30
Future Volume (veh/h)	13	46	13	12	170	14	30	59	14	5	54	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	14	50	14	13	185	15	33	64	15	5	59	33
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	589	820	697	710	820	697	398	732	177	105	828	415
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1178	1863	1583	1332	1863	1583	755	1927	466	68	2178	1091
Grp Volume(v), veh/h	14	50	14	13	185	15	60	0	52	52	0	45
Grp Sat Flow(s),veh/h/ln	1178	1863	1583	1332	1863	1583	1535	0	1613	1834	0	1503
Q Serve(g_s), s	0.4	0.8	0.2	0.3	3.1	0.3	0.0	0.0	1.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	3.5	0.8	0.2	1.1	3.1	0.3	1.0	0.0	1.0	0.9	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	0.55		0.29	0.10		0.73
Lane Grp Cap(c), veh/h	589	820	697	710	820	697	695	0	613	776	0	571
V/C Ratio(X)	0.02	0.06	0.02	0.02	0.23	0.02	0.09	0.00	0.08	0.07	0.00	0.08
Avail Cap(c_a), veh/h	589	820	697	710	820	697	695	0	613	776	0	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.91	0.91	0.91	0.96	0.00	0.96	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	8.1	7.9	8.4	8.7	7.9	9.9	0.0	9.9	9.9	0.0	9.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	0.1	0.1	1.6	0.1	0.6	0.0	0.5	0.5	0.0	0.4
LnGrp Delay(d),s/veh	9.8	8.1	7.9	8.4	8.8	7.9	10.2	0.0	10.2	10.0	0.0	10.2
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		78			213			112				97
Approach Delay, s/veh		8.3			8.7			10.2				10.1
Approach LOS		A			A			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.0		5.5		3.0		5.1				
Green Ext Time (p_c), s		0.3		0.1		0.2		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				9.2								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

8: 5th Street & F Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↶			↷	
Traffic Volume (veh/h)	59	694	34	9	964	16	23	30	13	18	35	74
Future Volume (veh/h)	59	694	34	9	964	16	23	30	13	18	35	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	64	754	37	10	1048	17	25	33	14	20	38	80
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	1488	73	267	1544	25	469	649	292	289	525	657
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	528	3434	168	683	3564	58	882	1424	640	516	1153	1441
Grp Volume(v), veh/h	64	388	403	10	520	545	37	0	35	58	0	80
Grp Sat Flow(s),veh/h/ln	528	1770	1833	683	1770	1853	1364	0	1582	1668	0	1441
Q Serve(g_s), s	10.0	14.3	14.4	1.0	21.2	21.2	0.1	0.0	1.1	0.0	0.0	2.9
Cycle Q Clear(g_c), s	31.2	14.3	14.4	15.3	21.2	21.2	2.9	0.0	1.1	1.6	0.0	2.9
Prop In Lane	1.00		0.09	1.00		0.03	0.67		0.40	0.34		1.00
Lane Grp Cap(c), veh/h	184	767	794	267	767	802	688	0	721	814	0	657
V/C Ratio(X)	0.35	0.51	0.51	0.04	0.68	0.68	0.05	0.00	0.05	0.07	0.00	0.12
Avail Cap(c_a), veh/h	266	1042	1079	373	1042	1091	688	0	721	814	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.62	0.62	0.62	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	18.5	18.5	24.1	20.5	20.5	13.6	0.0	13.6	13.8	0.0	14.1
Incr Delay (d2), s/veh	1.1	0.5	0.5	0.0	0.7	0.6	0.2	0.0	0.1	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5	7.1	7.4	0.2	10.4	10.9	0.5	0.0	0.5	0.8	0.0	1.2
LnGrp Delay(d),s/veh	34.1	19.0	19.0	24.1	21.1	21.1	13.8	0.0	13.8	13.9	0.0	14.5
LnGrp LOS	C	B	B	C	C	C	B		B	B		B
Approach Vol, veh/h		855			1075			72			138	
Approach Delay, s/veh		20.2			21.2			13.8			14.3	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		46.0		44.0		46.0		44.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		27.0		53.0		27.0		53.0				
Max Q Clear Time (g_c+I1), s		4.9		33.2		4.9		23.2				
Green Ext Time (p_c), s		0.3		5.8		0.7		8.4				





















Intersection Summary

HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	353	26	39	323	55	7	96	11	43	162	20
Future Volume (veh/h)	12	353	26	39	323	55	7	96	11	43	162	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	13	384	28	42	351	60	8	104	12	47	176	22
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	349	814	59	357	765	130	133	444	51	149	454	57
Arrive On Green	0.08	0.29	0.29	0.09	0.30	0.30	0.18	0.64	0.64	0.10	0.33	0.33
Sat Flow, veh/h	1494	2818	205	1494	2551	432	1494	1381	159	1494	1368	171
Grp Volume(v), veh/h	13	202	210	42	204	207	8	0	116	47	0	198
Grp Sat Flow(s),veh/h/ln	1494	1490	1533	1494	1490	1492	1494	0	1541	1494	0	1538
Q Serve(g_s), s	0.5	10.1	10.1	1.6	10.0	10.2	0.4	0.0	2.9	2.6	0.0	8.9
Cycle Q Clear(g_c), s	0.5	10.1	10.1	1.6	10.0	10.2	0.4	0.0	2.9	2.6	0.0	8.9
Prop In Lane	1.00		0.13	1.00		0.29	1.00		0.10	1.00		0.11
Lane Grp Cap(c), veh/h	349	431	443	357	447	448	133	0	495	149	0	511
V/C Ratio(X)	0.04	0.47	0.47	0.12	0.46	0.46	0.06	0.00	0.23	0.31	0.00	0.39
Avail Cap(c_a), veh/h	349	431	443	357	447	448	133	0	495	149	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.7	26.3	26.4	18.5	25.5	25.6	33.9	0.0	11.4	37.6	0.0	23.0
Incr Delay (d2), s/veh	0.2	3.5	3.4	0.7	3.3	3.4	0.9	0.0	1.1	5.4	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.5	4.7	0.7	4.5	4.6	0.2	0.0	1.3	1.3	0.0	4.1
LnGrp Delay(d),s/veh	18.9	29.8	29.8	19.2	28.9	29.0	34.7	0.0	12.5	43.1	0.0	25.2
LnGrp LOS	B	C	C	B	C	C	C		B	D		C
Approach Vol, veh/h		425			453			124			245	
Approach Delay, s/veh		29.5			28.0			14.0			28.7	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	34.0	12.0	31.0	12.0	35.0	11.0	32.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	9.0	28.9	8.0	26.0	8.0	29.9	7.0	27.0				
Max Q Clear Time (g_c+I1), s	4.6	4.9	3.6	12.1	2.4	10.9	2.5	12.2				
Green Ext Time (p_c), s	0.0	0.6	0.0	2.0	0.0	1.0	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			27.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	3	16	5	3	23	5	3	128	15	4	195	13
Future Volume (veh/h)	3	16	5	3	23	5	3	128	15	4	195	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	3	17	5	3	25	5	3	139	16	4	212	14
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	87	23	48	95	18	133	927	107	149	993	66
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	77	1114	298	59	1220	228	1494	1382	159	1494	1456	96
Grp Volume(v), veh/h	25	0	0	33	0	0	3	0	155	4	0	226
Grp Sat Flow(s),veh/h/ln	489	0	0	1508	0	0	1494	0	1541	1494	0	1552
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	1.8	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0
Prop In Lane	0.12		0.20	0.09		0.15	1.00		0.10	1.00		0.06
Lane Grp Cap(c), veh/h	161	0	0	161	0	0	133	0	1034	149	0	1059
V/C Ratio(X)	0.16	0.00	0.00	0.21	0.00	0.00	0.02	0.00	0.15	0.03	0.00	0.21
Avail Cap(c_a), veh/h	490	0	0	497	0	0	183	0	1034	199	0	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.99	0.80	0.00	0.80
Uniform Delay (d), s/veh	38.9	0.0	0.0	39.1	0.0	0.0	33.8	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.6	0.0	0.0	0.1	0.0	0.3	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.8	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	39.4	0.0	0.0	39.7	0.0	0.0	33.8	0.0	0.3	32.5	0.0	0.4
LnGrp LOS	D			D			C		A	C		A
Approach Vol, veh/h		25			33			158			230	
Approach Delay, s/veh		39.4			39.7			0.9			0.9	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc),s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	37.0			27.4	11.0	38.0		27.4				
Max Q Clear Time (g_c+R),s	2.0	2.0		3.4	2.1	2.0		3.8				
Green Ext Time (p_c), s	0.0	0.9		0.1	0.0	1.4		0.1				

Intersection Summary

HCM 2010 Ctrl Delay	6.0
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	15	98	27	12	45	8	15	131	46	13	185	11
Future Volume (veh/h)	15	98	27	12	45	8	15	131	46	13	185	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	16	107	29	13	49	9	16	142	50	14	201	12
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	216	57	129	233	42	158	878	309	177	1180	70
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1340	2776	728	1248	3001	537	1774	1317	464	1774	1740	104
Grp Volume(v), veh/h	16	67	69	13	28	30	16	0	192	14	0	213
Grp Sat Flow(s),veh/h/ln	1340	1770	1734	1248	1770	1768	1774	0	1781	1774	0	1844
Q Serve(g_s), s	1.0	3.3	3.4	0.9	1.4	1.4	0.7	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	2.4	3.3	3.4	4.4	1.4	1.4	0.7	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.30	1.00		0.26	1.00		0.06
Lane Grp Cap(c), veh/h	163	138	135	129	138	138	158	0	1187	177	0	1250
V/C Ratio(X)	0.10	0.49	0.51	0.10	0.21	0.22	0.10	0.00	0.16	0.08	0.00	0.17
Avail Cap(c_a), veh/h	491	570	559	434	570	570	217	0	1187	217	0	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.1	39.8	39.9	42.0	38.9	38.9	34.0	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	0.3	2.6	3.0	0.3	0.7	0.8	0.3	0.0	0.3	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	1.7	1.8	0.3	0.7	0.7	0.3	0.0	0.1	0.3	0.0	0.1
LnGrp Delay(d),s/veh	40.3	42.4	42.8	42.3	39.6	39.7	34.3	0.0	0.3	32.8	0.0	0.3
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		152			71			208			227	
Approach Delay, s/veh		42.4			40.1			2.9			2.3	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.0		12.0	12.0	66.0		12.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	36.0			29.0	11.0	36.0		29.0				
Max Q Clear Time (g_c+R),s	2.0			5.4	2.7	2.0		6.4				
Green Ext Time (p_c), s	0.0	1.2		0.7	0.0	1.3		0.3				

Intersection Summary

HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	91	1172	39	13	545	11	22	89	28	27	150	30
Future Volume (veh/h)	91	1172	39	13	545	11	22	89	28	27	150	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	99	1274	42	14	592	12	24	97	30	29	163	33
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	298	1364	45	119	1384	28	80	535	165	91	599	121
Arrive On Green	0.78	0.78	0.78	0.39	0.39	0.39	0.05	0.39	0.39	0.10	0.80	0.80
Sat Flow, veh/h	812	3497	115	416	3548	72	1774	1366	422	1774	1504	305
Grp Volume(v), veh/h	99	644	672	14	295	309	24	0	127	29	0	196
Grp Sat Flow(s),veh/h/ln	812	1770	1842	416	1770	1850	1774	0	1788	1774	0	1809
Q Serve(g_s), s	6.7	26.5	26.7	2.8	11.0	11.0	1.2	0.0	4.2	1.4	0.0	2.5
Cycle Q Clear(g_c), s	17.7	26.5	26.7	29.5	11.0	11.0	1.2	0.0	4.2	1.4	0.0	2.5
Prop In Lane	1.00		0.06	1.00		0.04	1.00		0.24	1.00		0.17
Lane Grp Cap(c), veh/h	298	690	719	119	690	722	80	0	701	91	0	720
V/C Ratio(X)	0.33	0.93	0.93	0.12	0.43	0.43	0.30	0.00	0.18	0.32	0.00	0.27
Avail Cap(c_a), veh/h	315	728	757	128	728	761	189	0	701	197	0	720
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.59	0.59	0.59	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	11.4	9.0	9.0	38.2	20.1	20.1	41.6	0.0	17.9	38.9	0.0	5.8
Incr Delay (d2), s/veh	0.5	12.8	12.6	0.6	0.6	0.6	2.1	0.0	0.6	1.9	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5	14.2	15.2	0.3	5.4	5.7	0.6	0.0	2.2	0.7	0.0	1.4
LnGrp Delay(d),s/veh	11.9	21.8	21.5	38.9	20.7	20.7	43.7	0.0	18.5	40.8	0.0	6.7
LnGrp LOS	B	C	C	D	C	C	D		B	D		A
Approach Vol, veh/h		1415			618			151			225	
Approach Delay, s/veh		21.0			21.1			22.5			11.1	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	41.3		40.1	8.1	41.8		40.1				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0	28.0		37.0	9.6	28.4		37.0				
Max Q Clear Time (g_c+bl), s	6.2	6.2		28.7	3.2	4.5		31.5				
Green Ext Time (p_c), s	0.0	0.9		6.4	0.0	1.5		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay					20.2							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			WBT			NBT			SBT	
Traffic Volume (veh/h)	8	371	67	24	302	17	9	27	11	11	68	13
Future Volume (veh/h)	8	371	67	24	302	17	9	27	11	11	68	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	9	403	73	26	328	18	10	29	12	12	74	14
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1226	217	130	1313	70	282	737	299	188	1001	182
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	17	2918	517	115	3127	168	484	1940	788	261	2635	480
Grp Volume(v), veh/h	259	0	226	193	0	179	27	0	24	53	0	47
Grp Sat Flow(s),veh/h/ln	849	0	1604	1744	0	1666	1655	0	1556	1766	0	1610
Q Serve(g_s), s	0.0	0.0	4.8	0.0	0.0	3.5	0.0	0.0	0.5	0.0	0.0	0.9
Cycle Q Clear(g_c), s	4.7	0.0	4.8	3.4	0.0	3.5	0.5	0.0	0.5	0.9	0.0	0.9
Prop In Lane	0.03		0.32	0.13		0.10	0.37		0.51	0.23		0.30
Lane Grp Cap(c), veh/h	851	0	674	814	0	700	727	0	591	759	0	612
V/C Ratio(X)	0.30	0.00	0.34	0.24	0.00	0.26	0.04	0.00	0.04	0.07	0.00	0.08
Avail Cap(c_a), veh/h	851	0	674	814	0	700	727	0	591	759	0	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.89	0.00	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	0.0	9.8	9.4	0.0	9.4	9.8	0.0	9.8	9.9	0.0	9.9
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.1	0.0	0.2	0.1	0.0	0.1	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	0.0	2.1	1.7	0.0	1.6	0.3	0.0	0.2	0.5	0.0	0.4
LnGrp Delay(d),s/veh	10.0	0.0	10.1	9.5	0.0	9.6	9.8	0.0	9.9	10.1	0.0	10.1
LnGrp LOS	A		B	A		A	A		A	B		B
Approach Vol, veh/h		485			372			51			100	
Approach Delay, s/veh		10.0			9.6			9.9			10.1	
Approach LOS		B			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		2.5		6.8		2.9		5.5				
Green Ext Time (p_c), s		0.2		2.5		0.4		1.9				

Intersection Summary

HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Intersection

Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	4	10	25	20	10	6	11	57	10	5	143	3
Future Vol, veh/h	4	10	25	20	10	6	11	57	10	5	143	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	11	27	22	11	7	12	62	11	5	155	3






















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	266	262	155	272	254	62	158	0	0	73	0	0
Stage 1	165	165	-	86	86	-	-	-	-	-	-	-
Stage 2	101	97	-	186	168	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	687	643	891	680	650	1003	1422	-	-	1527	-	-
Stage 1	837	762	-	922	824	-	-	-	-	-	-	-
Stage 2	905	815	-	816	759	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	667	635	891	644	642	1003	1422	-	-	1527	-	-
Mov Cap-2 Maneuver	667	635	-	644	642	-	-	-	-	-	-	-
Stage 1	829	759	-	914	817	-	-	-	-	-	-	-
Stage 2	879	808	-	777	756	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	10.6	1.1	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	783	684	1527	-
HCM Lane V/C Ratio	0.008	-	-	0.054	0.057	0.004	-
HCM Control Delay (s)	7.6	0	-	9.9	10.6	7.4	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-

HCM 2010 Signalized Intersection Summary
7: F Street & 6th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	87	20	12	47	13	16	57	41	16	47	56
Future Volume (veh/h)	23	87	20	12	47	13	16	57	41	16	47	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	25	95	22	13	51	14	17	62	45	17	51	61
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	709	820	697	665	820	697	206	663	442	202	545	548
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1331	1863	1583	1270	1863	1583	304	1746	1163	295	1434	1441
Grp Volume(v), veh/h	25	95	22	13	51	14	66	0	58	68	0	61
Grp Sat Flow(s),veh/h/ln	1331	1863	1583	1270	1863	1583	1723	0	1490	1729	0	1441
Q Serve(g_s), s	0.6	1.5	0.4	0.3	0.8	0.2	0.0	0.0	1.2	0.0	0.0	1.4
Cycle Q Clear(g_c), s	1.3	1.5	0.4	1.8	0.8	0.2	1.1	0.0	1.2	1.2	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	0.26		0.78	0.25		1.00
Lane Grp Cap(c), veh/h	709	820	697	665	820	697	745	0	566	747	0	548
V/C Ratio(X)	0.04	0.12	0.03	0.02	0.06	0.02	0.09	0.00	0.10	0.09	0.00	0.11
Avail Cap(c_a), veh/h	709	820	697	665	820	697	745	0	566	747	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	8.3	8.0	8.8	8.1	7.9	10.0	0.0	10.0	10.0	0.0	10.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.2	0.1	0.4	0.1	0.6	0.0	0.6	0.7	0.0	0.6
LnGrp Delay(d),s/veh	8.5	8.3	8.0	8.8	8.1	7.9	10.2	0.0	10.4	10.2	0.0	10.4
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		142			78			124			129	
Approach Delay, s/veh		8.3			8.2			10.3			10.3	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.2		3.5		3.4		3.8				
Green Ext Time (p_c), s		0.3		0.3		0.4		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				9.3								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
8: 5th Street & F Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↶	↷		↶	↷
Traffic Volume (veh/h)	69	1312	7	7	573	22	5	19	6	13	22	12
Future Volume (veh/h)	69	1312	7	7	573	22	5	19	6	13	22	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	75	1426	8	8	623	24	5	21	7	14	24	13
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	372	1754	10	136	1689	65	220	869	284	371	614	339
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	781	3609	20	371	3475	134	417	2157	706	771	1524	842
Grp Volume(v), veh/h	75	699	735	8	317	330	17	0	16	27	0	24
Grp Sat Flow(s),veh/h/ln	781	1770	1859	371	1770	1839	1711	0	1570	1590	0	1546
Q Serve(g_s), s	6.0	30.2	30.2	1.7	10.1	10.1	0.0	0.0	0.5	0.0	0.0	0.8
Cycle Q Clear(g_c), s	16.1	30.2	30.2	31.9	10.1	10.1	0.5	0.0	0.5	0.8	0.0	0.8
Prop In Lane	1.00		0.01	1.00		0.07	0.29		0.45	0.52		0.54
Lane Grp Cap(c), veh/h	372	860	904	136	860	894	740	0	632	701	0	623
V/C Ratio(X)	0.20	0.81	0.81	0.06	0.37	0.37	0.02	0.00	0.02	0.04	0.00	0.04
Avail Cap(c_a), veh/h	461	1062	1116	178	1062	1103	740	0	632	701	0	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	19.6	19.6	33.2	14.5	14.5	16.2	0.0	16.2	16.3	0.0	16.3
Incr Delay (d2), s/veh	0.3	4.0	3.8	0.2	0.3	0.2	0.1	0.0	0.1	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3	15.5	16.3	0.2	5.0	5.2	0.3	0.0	0.2	0.4	0.0	0.4
LnGrp Delay(d),s/veh	19.8	23.7	23.5	33.4	14.7	14.7	16.3	0.0	16.3	16.4	0.0	16.4
LnGrp LOS	B	C	C	C	B	B	B		B	B		B
Approach Vol, veh/h		1509			655			33			51	
Approach Delay, s/veh		23.4			15.0			16.3			16.4	
Approach LOS		C			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.2		48.8		41.2		48.8				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		54.0		26.0		54.0				
Max Q Clear Time (g_c+I1), s		2.5		32.2		2.8		33.9				
Green Ext Time (p_c), s		0.1		11.5		0.2		4.1				





















Intersection Summary

HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	350	24	31	420	57	27	258	36	41	181	30
Future Volume (veh/h)	39	350	24	31	420	57	27	258	36	41	181	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	42	380	26	34	457	62	29	280	39	45	197	33
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	787	54	349	763	103	133	448	62	149	450	75
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.18	0.66	0.66	0.10	0.34	0.34
Sat Flow, veh/h	1494	2832	193	1494	2640	356	1494	1348	188	1494	1310	220
Grp Volume(v), veh/h	42	199	207	34	257	262	29	0	319	45	0	230
Grp Sat Flow(s),veh/h/ln	1494	1490	1535	1494	1490	1506	1494	0	1535	1494	0	1530
Q Serve(g_s), s	1.7	10.0	10.1	1.3	13.3	13.5	1.5	0.0	10.7	2.5	0.0	10.5
Cycle Q Clear(g_c), s	1.7	10.0	10.1	1.3	13.3	13.5	1.5	0.0	10.7	2.5	0.0	10.5
Prop In Lane	1.00		0.13	1.00		0.24	1.00		0.12	1.00		0.14
Lane Grp Cap(c), veh/h	299	414	426	349	431	435	133	0	510	149	0	525
V/C Ratio(X)	0.14	0.48	0.48	0.10	0.60	0.60	0.22	0.00	0.63	0.30	0.00	0.44
Avail Cap(c_a), veh/h	299	414	426	349	431	435	133	0	510	149	0	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.00	0.95	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.1	27.1	27.1	19.1	27.5	27.5	34.3	0.0	11.9	37.6	0.0	22.8
Incr Delay (d2), s/veh	0.9	3.8	3.7	0.6	6.0	6.1	3.6	0.0	5.4	5.1	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.5	4.7	0.6	6.2	6.3	0.7	0.0	5.2	1.2	0.0	4.8
LnGrp Delay(d),s/veh	21.1	30.9	30.8	19.6	33.5	33.6	37.9	0.0	17.3	42.7	0.0	25.5
LnGrp LOS	C	C	C	B	C	C	D		B	D		C
Approach Vol, veh/h		448			553			348			275	
Approach Delay, s/veh		29.9			32.7			19.0			28.3	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	35.0	12.0	30.0	12.0	36.0	11.0	31.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	9.0	29.9	8.0	25.0	8.0	30.9	7.0	26.0				
Max Q Clear Time (g_c+I1), s	4.5	12.7	3.3	12.1	3.5	12.5	3.7	15.5				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.9	0.0	1.2	0.0	2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				28.3								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	19	27	12	10	25	15	19	294	10	5	231	9
Future Volume (veh/h)	19	27	12	10	25	15	19	294	10	5	231	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	21	29	13	11	27	16	21	320	11	5	251	10
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	62	23	62	66	33	133	1012	35	149	1022	41
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	336	798	295	175	846	430	1494	1508	52	1494	1498	60
Grp Volume(v), veh/h	63	0	0	54	0	0	21	0	331	5	0	261
Grp Sat Flow(s),veh/h/ln	428	0	0	1450	0	0	1494	0	1559	1494	0	1558
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	3.6	0.0	0.0	3.1	0.0	0.0	1.1	0.0	0.0	0.2	0.0	0.0
Prop In Lane	0.33		0.21	0.20		0.30	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	164	0	0	161	0	0	133	0	1047	149	0	1063
V/C Ratio(X)	0.38	0.00	0.00	0.34	0.00	0.00	0.16	0.00	0.32	0.03	0.00	0.25
Avail Cap(c_a), veh/h	471	0	0	476	0	0	166	0	1047	166	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.97	0.00	0.97	0.93	0.00	0.93
Uniform Delay (d), s/veh	39.9	0.0	0.0	39.7	0.0	0.0	34.2	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.0	0.0	1.2	0.0	0.0	0.5	0.0	0.8	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6	0.0	0.0	1.3	0.0	0.0	0.5	0.0	0.2	0.1	0.0	0.2
LnGrp Delay(d),s/veh	41.4	0.0	0.0	40.9	0.0	0.0	34.7	0.0	0.8	32.6	0.0	0.5
LnGrp LOS	D			D			C		A	C		A
Approach Vol, veh/h		63			54			352			266	
Approach Delay, s/veh		41.4			40.9			2.8			1.1	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	39.0			27.4	10.0	39.0		27.4				
Max Q Clear Time (g_c+1),s	2.0			5.6	3.1	2.0		5.1				
Green Ext Time (p_c), s	0.0	2.2		0.2	0.0	1.7		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				8.3								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	7	52	9	45	163	12	21	284	21	15	254	26
Future Volume (veh/h)	7	52	9	45	163	12	21	284	21	15	254	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	8	57	10	49	177	13	23	309	23	16	276	28
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	267	46	173	295	22	158	1124	84	177	1110	113
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1188	3024	517	1329	3346	244	1774	1713	127	1774	1664	169
Grp Volume(v), veh/h	8	33	34	49	93	97	23	0	332	16	0	304
Grp Sat Flow(s),veh/h/ln	1863	1770	1771	1329	1770	1820	1774	0	1840	1774	0	1833
Q Serve(g_s), s	0.6	1.5	1.6	3.2	4.5	4.6	1.0	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	5.2	1.5	1.6	4.8	4.5	4.6	1.0	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.13	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	124	156	156	173	156	161	158	0	1207	177	0	1223
V/C Ratio(X)	0.06	0.21	0.22	0.28	0.59	0.60	0.15	0.00	0.27	0.09	0.00	0.25
Avail Cap(c_a), veh/h	389	551	551	470	551	566	217	0	1207	217	0	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.00	0.88	0.98	0.00	0.98
Uniform Delay (d), s/veh	2.0	38.1	38.1	40.4	39.5	39.5	34.1	0.0	0.0	32.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.7	0.7	0.9	3.6	3.6	0.4	0.0	0.5	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2	0.8	0.8	1.2	2.4	2.5	0.5	0.0	0.2	0.3	0.0	0.2
LnGrp Delay(d),s/veh	42.2	38.8	38.8	41.3	43.1	43.1	34.5	0.0	0.5	32.9	0.0	0.5
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		75			239			355			320	
Approach Delay, s/veh		39.2			42.7			2.7			2.1	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	64.1		12.9	12.0	65.1		12.9				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	37.0			28.0	11.0	37.0		28.0				
Max Q Clear Time (g_c+R), s	2.0			7.2	3.0	2.0		6.8				
Green Ext Time (p_c), s	0.0	2.2		0.3	0.0	2.0		1.1				

Intersection Summary

HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	23	746	39	32	939	33	74	275	49	43	173	57
Future Volume (veh/h)	23	746	39	32	939	33	74	275	49	43	173	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	25	811	42	35	1021	36	80	299	53	47	188	62
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	1243	64	234	1266	45	153	618	110	123	515	170
Arrive On Green	0.73	0.73	0.73	0.36	0.36	0.36	0.09	0.40	0.40	0.14	0.77	0.77
Sat Flow, veh/h	532	3424	177	644	3488	123	1774	1541	273	1774	1342	443
Grp Volume(v), veh/h	25	419	434	35	518	539	80	0	352	47	0	250
Grp Sat Flow(s),veh/h/ln	532	1770	1831	644	1770	1841	1774	0	1815	1774	0	1785
Q Serve(g_s), s	3.7	11.1	11.1	3.9	23.7	23.7	3.9	0.0	13.0	2.2	0.0	4.1
Cycle Q Clear(g_c), s	27.5	11.1	11.1	15.0	23.7	23.7	3.9	0.0	13.0	2.2	0.0	4.1
Prop In Lane	1.00		0.10	1.00		0.07	1.00		0.15	1.00		0.25
Lane Grp Cap(c), veh/h	133	643	665	234	643	668	153	0	728	123	0	685
V/C Ratio(X)	0.19	0.65	0.65	0.15	0.81	0.81	0.52	0.00	0.48	0.38	0.00	0.37
Avail Cap(c_a), veh/h	147	688	712	251	688	716	189	0	728	197	0	685
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	22.1	9.4	9.4	27.5	25.8	25.8	39.3	0.0	20.0	37.0	0.0	6.9
Incr Delay (d2), s/veh	0.8	2.0	1.9	0.4	7.1	6.8	2.7	0.0	2.3	1.9	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6	5.5	5.6	0.7	12.8	13.2	2.0	0.0	6.9	1.1	0.0	2.2
LnGrp Delay(d),s/veh	22.9	11.4	11.3	27.9	32.9	32.6	42.1	0.0	22.3	38.9	0.0	8.4
LnGrp LOS	C	B	B	C	C	C	D		C	D		A
Approach Vol, veh/h		878			1092			432			297	
Approach Delay, s/veh		11.6			32.6			26.0			13.2	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	10.2	42.1		37.7	11.8	40.5		37.7				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax),s	30.0	30.0		35.0	9.6	30.4		35.0				
Max Q Clear Time (g_c+R),s	15.0	15.0		29.5	5.9	6.1		25.7				
Green Ext Time (p_c), s	0.0	2.6		3.2	0.0	2.1		5.8				

Intersection Summary

HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			EBT			EBT			EBT	
Traffic Volume (veh/h)	13	387	30	9	466	20	36	67	15	10	27	22
Future Volume (veh/h)	13	387	30	9	466	20	36	67	15	10	27	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	14	421	33	10	507	22	39	73	16	11	29	24
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	1343	103	82	1408	60	416	737	166	251	593	455
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	33	3198	246	18	3352	144	798	1939	437	412	1561	1197
Grp Volume(v), veh/h	246	0	222	283	0	256	69	0	59	34	0	30
Grp Sat Flow(s),veh/h/ln	825	0	1652	1845	0	1670	1556	0	1618	1686	0	1484
Q Serve(g_s), s	0.0	0.0	4.5	0.0	0.0	5.2	0.0	0.0	1.2	0.0	0.0	0.6
Cycle Q Clear(g_c), s	4.4	0.0	4.5	5.2	0.0	5.2	1.2	0.0	1.2	0.6	0.0	0.6
Prop In Lane	0.06		0.15	0.04		0.09	0.57		0.27	0.32		0.81
Lane Grp Cap(c), veh/h	843	0	694	849	0	701	704	0	615	736	0	564
V/C Ratio(X)	0.29	0.00	0.32	0.33	0.00	0.36	0.10	0.00	0.10	0.05	0.00	0.05
Avail Cap(c_a), veh/h	843	0	694	849	0	701	704	0	615	736	0	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.78	0.00	0.78	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	0.0	9.7	9.9	0.0	9.9	10.0	0.0	10.0	9.8	0.0	9.8
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.2	0.0	0.2	0.3	0.0	0.3	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.1	2.7	0.0	2.5	0.7	0.0	0.6	0.3	0.0	0.3
LnGrp Delay(d),s/veh	9.9	0.0	10.0	10.1	0.0	10.2	10.3	0.0	10.3	9.9	0.0	10.0
LnGrp LOS	A		A	B		B	B		B	A		A
Approach Vol, veh/h		468			539			128			64	
Approach Delay, s/veh		9.9			10.1			10.3			9.9	
Approach LOS		A			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		3.2		6.5		2.6		7.2				
Green Ext Time (p_c), s		0.5		2.4		0.2		2.8				

Intersection Summary

HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	4	13	8	17	27	28	14	90	6	12	37	12
Future Vol, veh/h	4	13	8	17	27	28	14	90	6	12	37	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	14	9	18	29	30	15	98	7	13	40	13





















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	227	201	40	212	207	98	53	0	0	105	0	0
Stage 1	66	66	-	128	128	-	-	-	-	-	-	-
Stage 2	161	135	-	84	79	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	728	695	1031	745	690	958	1553	-	-	1486	-	-
Stage 1	945	840	-	876	790	-	-	-	-	-	-	-
Stage 2	841	785	-	924	829	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	672	682	1031	717	677	958	1553	-	-	1486	-	-
Mov Cap-2 Maneuver	672	682	-	717	677	-	-	-	-	-	-	-
Stage 1	936	832	-	867	782	-	-	-	-	-	-	-
Stage 2	776	777	-	893	822	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	10.2	0.9	1.5
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1553	-	-	763	776	1486	-
HCM Lane V/C Ratio	0.01	-	-	0.036	0.101	0.009	-
HCM Control Delay (s)	7.3	0	-	9.9	10.2	7.4	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-

HCM 2010 Signalized Intersection Summary
7: F Street & 6th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	49	14	13	181	15	32	63	15	6	58	32
Future Volume (veh/h)	14	49	14	13	181	15	32	63	15	6	58	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	15	53	15	14	197	16	35	68	16	7	63	35
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	579	820	697	706	820	697	397	731	178	121	816	408
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1164	1863	1583	1328	1863	1583	752	1924	467	104	2147	1073
Grp Volume(v), veh/h	15	53	15	14	197	16	64	0	55	56	0	49
Grp Sat Flow(s),veh/h/ln	1164	1863	1583	1328	1863	1583	1531	0	1613	1819	0	1506
Q Serve(g_s), s	0.4	0.8	0.3	0.3	3.3	0.3	0.0	0.0	1.1	0.0	0.0	1.0
Cycle Q Clear(g_c), s	3.7	0.8	0.3	1.1	3.3	0.3	1.1	0.0	1.1	1.0	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	0.55		0.29	0.13		0.71
Lane Grp Cap(c), veh/h	579	820	697	706	820	697	693	0	613	772	0	572
V/C Ratio(X)	0.03	0.06	0.02	0.02	0.24	0.02	0.09	0.00	0.09	0.07	0.00	0.09
Avail Cap(c_a), veh/h	579	820	697	706	820	697	693	0	613	772	0	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	0.96	0.00	0.96	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.9	8.1	7.9	8.4	8.8	7.9	10.0	0.0	10.0	9.9	0.0	9.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.3	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	0.1	0.1	1.7	0.1	0.6	0.0	0.5	0.5	0.0	0.5
LnGrp Delay(d),s/veh	9.9	8.1	7.9	8.4	8.8	7.9	10.2	0.0	10.2	10.1	0.0	10.2
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		83			227			119			105	
Approach Delay, s/veh		8.4			8.7			10.2			10.2	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.1		5.7		3.0		5.3				
Green Ext Time (p_c), s		0.3		0.2		0.3		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				9.3								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
8: 5th Street & F Street

12-13-2023























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↗	↖
Traffic Volume (veh/h)	63	737	37	10	1023	17	25	32	14	20	38	79
Future Volume (veh/h)	63	737	37	10	1023	17	25	32	14	20	38	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	68	801	40	11	1112	18	27	35	15	22	41	86
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	1574	79	271	1635	26	443	604	274	277	493	620
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	496	3431	171	651	3564	58	873	1404	638	519	1146	1441
Grp Volume(v), veh/h	68	413	428	11	552	578	40	0	37	63	0	86
Grp Sat Flow(s),veh/h/ln	496	1770	1833	651	1770	1853	1332	0	1583	1665	0	1441
Q Serve(g_s), s	11.2	14.8	14.8	1.1	22.1	22.1	0.3	0.0	1.2	0.0	0.0	3.3
Cycle Q Clear(g_c), s	33.3	14.8	14.8	15.9	22.1	22.1	3.6	0.0	1.2	1.8	0.0	3.3
Prop In Lane	1.00		0.09	1.00		0.03	0.68		0.40	0.35		1.00
Lane Grp Cap(c), veh/h	186	812	841	271	812	850	640	0	681	770	0	620
V/C Ratio(X)	0.37	0.51	0.51	0.04	0.68	0.68	0.06	0.00	0.05	0.08	0.00	0.14
Avail Cap(c_a), veh/h	250	1042	1079	356	1042	1091	640	0	681	770	0	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.58	0.58	0.58	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.3	17.2	17.2	22.8	19.2	19.2	15.2	0.0	15.0	15.1	0.0	15.5
Incr Delay (d2), s/veh	1.2	0.5	0.5	0.0	0.7	0.7	0.2	0.0	0.2	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6	7.3	7.6	0.2	10.9	11.4	0.6	0.0	0.6	1.0	0.0	1.4
LnGrp Delay(d),s/veh	33.5	17.7	17.7	22.9	19.9	19.8	15.4	0.0	15.1	15.3	0.0	16.0
LnGrp LOS	C	B	B	C	B	B	B		B	B		B
Approach Vol, veh/h		909			1141			77			149	
Approach Delay, s/veh		18.9			19.9			15.2			15.7	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.7		46.3		43.7		46.3				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		27.0		53.0		27.0		53.0				
Max Q Clear Time (g_c+I1), s		5.6		35.3		5.3		24.1				
Green Ext Time (p_c), s		0.3		6.0		0.8		9.1				

Intersection Summary

HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
1: E Street & 9th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	455	34	51	416	71	10	124	15	56	209	26
Future Volume (veh/h)	16	455	34	51	416	71	10	124	15	56	209	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	17	495	37	55	452	77	11	135	16	61	227	28
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	812	61	313	765	130	133	427	51	166	455	56
Arrive On Green	0.08	0.29	0.29	0.09	0.30	0.30	0.18	0.62	0.62	0.11	0.33	0.33
Sat Flow, veh/h	1494	2812	210	1494	2551	432	1494	1377	163	1494	1370	169
Grp Volume(v), veh/h	17	262	270	55	263	266	11	0	151	61	0	255
Grp Sat Flow(s),veh/h/ln	1494	1490	1532	1494	1490	1492	1494	0	1540	1494	0	1539
Q Serve(g_s), s	0.7	13.6	13.7	2.1	13.5	13.7	0.6	0.0	4.2	3.4	0.0	11.9
Cycle Q Clear(g_c), s	0.7	13.6	13.7	2.1	13.5	13.7	0.6	0.0	4.2	3.4	0.0	11.9
Prop In Lane	1.00		0.14	1.00		0.29	1.00		0.11	1.00		0.11
Lane Grp Cap(c), veh/h	305	431	442	313	447	448	133	0	477	166	0	511
V/C Ratio(X)	0.06	0.61	0.61	0.18	0.59	0.59	0.08	0.00	0.32	0.37	0.00	0.50
Avail Cap(c_a), veh/h	305	431	442	313	447	448	133	0	477	166	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	27.6	27.6	19.2	26.8	26.8	33.9	0.0	12.6	37.1	0.0	24.1
Incr Delay (d2), s/veh	0.3	5.6	5.5	1.2	5.6	5.7	1.2	0.0	1.7	6.2	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.3	6.5	1.0	6.2	6.3	0.3	0.0	2.0	1.7	0.0	5.5
LnGrp Delay(d),s/veh	19.5	33.2	33.2	20.4	32.4	32.5	35.1	0.0	14.3	43.2	0.0	27.5
LnGrp LOS	B	C	C	C	C	C	D		B	D		C
Approach Vol, veh/h		549			584			162			316	
Approach Delay, s/veh		32.8			31.3			15.7			30.5	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	33.0	12.0	31.0	12.0	35.0	11.0	32.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	10.0	27.9	8.0	26.0	8.0	29.9	7.0	27.0				
Max Q Clear Time (g_c+I1), s	5.4	6.2	4.1	15.7	2.6	13.9	2.7	15.7				
Green Ext Time (p_c), s	0.0	0.8	0.0	2.3	0.0	1.3	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay				30.1								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	4	21	7	4	30	7	4	165	20	6	252	17
Future Volume (veh/h)	4	21	7	4	30	7	4	165	20	6	252	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	4	23	8	4	33	8	4	179	22	7	274	18
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	83	26	48	91	21	133	920	113	149	993	65
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	78	1064	338	61	1172	267	1494	1370	168	1494	1456	96
Grp Volume(v), veh/h	35	0	0	45	0	0	4	0	201	7	0	292
Grp Sat Flow(s),veh/h/ln	480	0	0	1500	0	0	1494	0	1539	1494	0	1552
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0	2.5	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.0
Prop In Lane	0.11		0.23	0.09		0.18	1.00		0.11	1.00		0.06
Lane Grp Cap(c), veh/h	160	0	0	160	0	0	133	0	1033	149	0	1059
V/C Ratio(X)	0.22	0.00	0.00	0.28	0.00	0.00	0.03	0.00	0.19	0.05	0.00	0.28
Avail Cap(c_a), veh/h	504	0	0	511	0	0	166	0	1033	183	0	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.99	0.90	0.00	0.90
Uniform Delay (d), s/veh	39.2	0.0	0.0	39.4	0.0	0.0	33.8	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.9	0.0	0.0	0.1	0.0	0.4	0.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	1.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.2
LnGrp Delay(d),s/veh	39.9	0.0	0.0	40.4	0.0	0.0	33.9	0.0	0.4	32.7	0.0	0.6
LnGrp LOS	D			D			C		A	C		A
Approach Vol, veh/h		35			45			205			299	
Approach Delay, s/veh		39.9			40.4			1.1			1.3	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc),s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	37.0			28.4	10.0	38.0		28.4				
Max Q Clear Time (g_c+R),s	2.0			4.0	2.2	2.0		4.5				
Green Ext Time (p_c), s	0.0	1.2		0.1	0.0	1.9		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				6.6								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	20	127	35	16	58	11	20	169	60	17	239	15
Future Volume (veh/h)	20	127	35	16	58	11	20	169	60	17	239	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	138	38	17	63	12	22	184	65	18	260	16
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	247	66	128	267	49	158	862	304	177	1157	71
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1319	2764	738	1204	2982	553	1774	1316	465	1774	1737	107
Grp Volume(v), veh/h	22	87	89	17	37	38	22	0	249	18	0	276
Grp Sat Flow(s),veh/h/ln	1319	1770	1732	1204	1770	1765	1774	0	1781	1774	0	1844
Q Serve(g_s), s	1.4	4.2	4.4	1.2	1.7	1.8	0.9	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	3.2	4.2	4.4	5.7	1.7	1.8	0.9	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.43	1.00		0.31	1.00		0.26	1.00		0.06
Lane Grp Cap(c), veh/h	171	158	155	128	158	158	158	0	1166	177	0	1228
V/C Ratio(X)	0.13	0.55	0.58	0.13	0.23	0.24	0.14	0.00	0.21	0.10	0.00	0.22
Avail Cap(c_a), veh/h	478	570	558	408	570	569	217	0	1166	217	0	1228
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	0.99	0.99	0.99	1.00	1.00	1.00	0.93	0.00	0.93	0.97	0.00	0.97
Uniform Delay (d), s/veh	39.6	39.2	39.3	42.1	38.1	38.1	34.1	0.0	0.0	32.7	0.0	0.0
Incr Delay (d2), s/veh	0.3	2.9	3.3	0.5	0.7	0.8	0.4	0.0	0.4	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.2	2.3	0.4	0.9	0.9	0.5	0.0	0.1	0.4	0.0	0.1
LnGrp Delay(d),s/veh	40.0	42.2	42.7	42.5	38.8	38.9	34.5	0.0	0.4	32.9	0.0	0.4
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		198			92			271			294	
Approach Delay, s/veh		42.1			39.6			3.2			2.4	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	63.9		13.1	12.0	64.9		13.1				
Change Period (Y+Rc),s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	36.0			29.0	11.0	36.0		29.0				
Max Q Clear Time (g_c+Y),s	2.0			6.4	2.9	2.0		7.7				
Green Ext Time (p_c), s	0.0	1.6		1.0	0.0	1.7		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				15.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	118	1510	51	17	702	15	29	115	37	35	194	39
Future Volume (veh/h)	118	1510	51	17	702	15	29	115	37	35	194	39
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	128	1641	55	18	763	16	32	125	40	38	211	42
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	1398	47	80	1418	30	98	503	161	109	571	114
Arrive On Green	0.80	0.80	0.80	0.40	0.40	0.40	0.06	0.37	0.37	0.12	0.76	0.76
Sat Flow, veh/h	690	3495	117	288	3545	74	1774	1353	433	1774	1509	300
Grp Volume(v), veh/h	128	828	868	18	381	398	32	0	165	38	0	253
Grp Sat Flow(s),veh/h/ln	690	1770	1842	288	1770	1850	1774	0	1786	1774	0	1810
Q Serve(g_s), s	14.0	36.0	36.0	0.0	14.8	14.8	1.6	0.0	5.8	1.8	0.0	4.3
Cycle Q Clear(g_c), s	28.8	36.0	36.0	36.0	14.8	14.8	1.6	0.0	5.8	1.8	0.0	4.3
Prop In Lane	1.00		0.06	1.00		0.04	1.00		0.24	1.00		0.17
Lane Grp Cap(c), veh/h	243	708	737	80	708	740	98	0	665	109	0	685
V/C Ratio(X)	0.53	1.17	1.18	0.22	0.54	0.54	0.33	0.00	0.25	0.35	0.00	0.37
Avail Cap(c_a), veh/h	243	708	737	80	708	740	187	0	665	197	0	685
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.41	0.41	0.41	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	4.5	9.0	9.0	45.0	20.6	20.6	40.9	0.0	19.6	37.8	0.0	7.3
Incr Delay (d2), s/veh	1.2	83.3	86.1	2.0	1.1	1.0	1.9	0.0	0.9	1.9	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17	32.1	34.4	0.5	7.4	7.7	0.8	0.0	3.0	0.9	0.0	2.2
LnGrp Delay(d),s/veh	15.7	92.3	95.1	47.0	21.7	21.7	42.8	0.0	20.4	39.7	0.0	8.8
LnGrp LOS	B	F	F	D	C	C	D		C	D		A
Approach Vol, veh/h		1824			797			197			291	
Approach Delay, s/veh		88.2			22.3			24.1			12.9	
Approach LOS		F			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.5	39.5		41.0	9.0	40.0		41.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	29.0			36.0	9.5	29.5		36.0				
Max Q Clear Time (g_c+bl), s	7.8			38.0	3.6	6.3		38.0				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	2.1		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	60.2
HCM 2010 LOS	E

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			EBT			EBT			EBT	
Traffic Volume (veh/h)	11	478	87	31	389	22	12	35	15	15	88	17
Future Volume (veh/h)	11	478	87	31	389	22	12	35	15	15	88	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	12	520	95	34	423	24	13	38	16	16	96	18
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	1220	219	130	1298	72	278	732	303	191	998	180
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	20	2904	522	115	3091	171	473	1927	797	270	2625	475
Grp Volume(v), veh/h	335	0	292	247	0	234	36	0	31	69	0	61
Grp Sat Flow(s),veh/h/ln	843	0	1603	1712	0	1665	1644	0	1554	1759	0	1611
Q Serve(g_s), s	0.0	0.0	6.5	0.0	0.0	4.7	0.0	0.0	0.6	0.0	0.0	1.2
Cycle Q Clear(g_c), s	6.4	0.0	6.5	4.4	0.0	4.7	0.6	0.0	0.6	1.2	0.0	1.2
Prop In Lane	0.04		0.33	0.14		0.10	0.36		0.51	0.23		0.29
Lane Grp Cap(c), veh/h	849	0	673	801	0	699	723	0	591	757	0	612
V/C Ratio(X)	0.39	0.00	0.43	0.31	0.00	0.33	0.05	0.00	0.05	0.09	0.00	0.10
Avail Cap(c_a), veh/h	849	0	673	801	0	699	723	0	591	757	0	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.78	0.00	0.78	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	0.0	10.3	9.7	0.0	9.8	9.8	0.0	9.8	10.0	0.0	10.0
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.2	0.0	0.2	0.1	0.0	0.2	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.9	2.3	0.0	2.2	0.3	0.0	0.3	0.7	0.0	0.6
LnGrp Delay(d),s/veh	10.6	0.0	10.7	9.9	0.0	10.0	9.9	0.0	10.0	10.2	0.0	10.3
LnGrp LOS	B		B	A		B	A		A	B		B
Approach Vol, veh/h		627			481			67			130	
Approach Delay, s/veh		10.6			9.9			10.0			10.3	
Approach LOS		B			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		2.6		8.5		3.2		6.7				
Green Ext Time (p_c), s		0.2		3.2		0.5		2.6				
Intersection Summary												
HCM 2010 Ctrl Delay				10.3								
HCM 2010 LOS				B								

Intersection

Int Delay, s/veh 3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	6	13	33	26	13	8	15	74	13	7	185	4
Future Vol, veh/h	6	13	33	26	13	8	15	74	13	7	185	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	14	36	28	14	9	16	80	14	8	201	4






















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	348	343	201	356	333	80	205	0	0	94	0	0
Stage 1	217	217	-	112	112	-	-	-	-	-	-	-
Stage 2	131	126	-	244	221	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	607	579	840	599	587	980	1366	-	-	1500	-	-
Stage 1	785	723	-	893	803	-	-	-	-	-	-	-
Stage 2	873	792	-	760	720	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	582	569	840	555	576	980	1366	-	-	1500	-	-
Mov Cap-2 Maneuver	582	569	-	555	576	-	-	-	-	-	-	-
Stage 1	776	719	-	882	793	-	-	-	-	-	-	-
Stage 2	840	782	-	709	716	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	11.5	1.1	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1366	-	-	718	606	1500	-
HCM Lane V/C Ratio	0.012	-	-	0.079	0.084	0.005	-
HCM Control Delay (s)	7.7	0	-	10.4	11.5	7.4	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0	-

HCM 2010 Signalized Intersection Summary
7: F Street & 6th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	113	26	16	61	17	21	74	53	21	61	73
Future Volume (veh/h)	30	113	26	16	61	17	21	74	53	21	61	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	33	123	28	17	66	18	23	80	58	23	66	79
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	693	820	697	637	820	697	212	653	439	207	534	548
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1308	1863	1583	1231	1863	1583	318	1720	1156	305	1406	1441
Grp Volume(v), veh/h	33	123	28	17	66	18	86	0	75	89	0	79
Grp Sat Flow(s),veh/h/ln	1308	1863	1583	1231	1863	1583	1702	0	1491	1712	0	1441
Q Serve(g_s), s	0.8	2.0	0.5	0.4	1.0	0.3	0.0	0.0	1.6	0.0	0.0	1.8
Cycle Q Clear(g_c), s	1.8	2.0	0.5	2.4	1.0	0.3	1.5	0.0	1.6	1.6	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	0.27		0.77	0.26		1.00
Lane Grp Cap(c), veh/h	693	820	697	637	820	697	738	0	567	741	0	548
V/C Ratio(X)	0.05	0.15	0.04	0.03	0.08	0.03	0.12	0.00	0.13	0.12	0.00	0.14
Avail Cap(c_a), veh/h	693	820	697	637	820	697	738	0	567	741	0	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	8.4	8.0	9.1	8.1	7.9	10.1	0.0	10.1	10.1	0.0	10.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.5	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	0.2	0.1	0.5	0.1	0.8	0.0	0.7	0.9	0.0	0.8
LnGrp Delay(d),s/veh	8.7	8.4	8.0	9.1	8.1	7.9	10.4	0.0	10.6	10.4	0.0	10.7
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		184			101			161				168
Approach Delay, s/veh		8.4			8.3			10.5				10.6
Approach LOS		A			A			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.6		4.0		3.8		4.4				
Green Ext Time (p_c), s		0.5		0.5		0.5		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				9.5								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
8: 5th Street & F Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗			↕			↖ ↗	
Traffic Volume (veh/h)	89	1690	10	10	738	29	7	25	8	17	29	16
Future Volume (veh/h)	89	1690	10	10	738	29	7	25	8	17	29	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	97	1837	11	11	802	32	8	27	9	18	32	17
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	382	2110	13	118	2030	81	201	632	209	283	476	256
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	656	3607	22	249	3470	138	486	2081	686	735	1565	843
Grp Volume(v), veh/h	97	900	948	11	409	425	23	0	21	36	0	31
Grp Sat Flow(s),veh/h/ln	656	1770	1859	249	1770	1838	1679	0	1574	1596	0	1546
Q Serve(g_s), s	8.4	38.7	38.8	3.5	11.2	11.2	0.0	0.0	0.8	0.0	0.0	1.3
Cycle Q Clear(g_c), s	19.7	38.7	38.8	42.4	11.2	11.2	0.8	0.0	0.8	1.2	0.0	1.3
Prop In Lane	1.00		0.01	1.00		0.08	0.34		0.44	0.50		0.54
Lane Grp Cap(c), veh/h	382	1035	1087	118	1035	1075	564	0	478	545	0	470
V/C Ratio(X)	0.25	0.87	0.87	0.09	0.40	0.40	0.04	0.00	0.04	0.07	0.00	0.07
Avail Cap(c_a), veh/h	406	1101	1157	127	1101	1144	564	0	478	545	0	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.4	15.8	15.8	33.7	10.1	10.1	22.1	0.0	22.1	22.2	0.0	22.3
Incr Delay (d2), s/veh	0.3	7.4	7.1	0.3	0.2	0.2	0.1	0.0	0.2	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5	20.9	21.9	0.3	5.5	5.7	0.4	0.0	0.4	0.7	0.0	0.6
LnGrp Delay(d),s/veh	15.7	23.2	23.0	34.0	10.3	10.3	22.2	0.0	22.3	22.5	0.0	22.5
LnGrp LOS	B	C	C	C	B	B	C		C	C		C
Approach Vol, veh/h		1945			845			44			67	
Approach Delay, s/veh		22.7			10.6			22.2			22.5	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.4		57.6		32.4		57.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		24.0		56.0		24.0		56.0				
Max Q Clear Time (g_c+I1), s		2.8		40.8		3.3		44.4				
Green Ext Time (p_c), s		0.1		11.8		0.3		4.3				





















Intersection Summary

HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	472	33	42	566	77	37	348	49	56	244	41
Future Volume (veh/h)	53	472	33	42	566	77	37	348	49	56	244	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	58	513	36	46	615	84	40	378	53	61	265	45
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	785	55	305	762	104	133	423	59	168	442	75
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.18	0.63	0.63	0.11	0.34	0.34
Sat Flow, veh/h	1494	2826	198	1494	2636	359	1494	1347	189	1494	1307	222
Grp Volume(v), veh/h	58	270	279	46	347	352	40	0	431	61	0	310
Grp Sat Flow(s),veh/h/ln	1494	1490	1534	1494	1490	1505	1494	0	1535	1494	0	1529
Q Serve(g_s), s	2.3	14.4	14.5	1.8	19.4	19.5	2.1	0.0	21.4	3.4	0.0	15.2
Cycle Q Clear(g_c), s	2.3	14.4	14.5	1.8	19.4	19.5	2.1	0.0	21.4	3.4	0.0	15.2
Prop In Lane	1.00		0.13	1.00		0.24	1.00		0.12	1.00		0.15
Lane Grp Cap(c), veh/h	250	414	426	305	431	435	133	0	483	168	0	517
V/C Ratio(X)	0.23	0.65	0.65	0.15	0.81	0.81	0.30	0.00	0.89	0.36	0.00	0.60
Avail Cap(c_a), veh/h	250	414	426	305	431	435	133	0	483	168	0	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	0.89	0.89	0.89	1.00	1.00	1.00	0.89	0.00	0.89	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	28.7	28.7	19.5	29.7	29.7	34.6	0.0	15.4	37.0	0.0	24.8
Incr Delay (d2), s/veh	1.9	7.0	6.8	1.0	14.9	14.9	5.1	0.0	19.7	6.0	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.7	6.9	0.8	9.8	9.9	1.1	0.0	11.2	1.7	0.0	7.1
LnGrp Delay(d),s/veh	23.1	35.6	35.5	20.6	44.5	44.6	39.7	0.0	35.1	43.0	0.0	29.8
LnGrp LOS	C	D	D	C	D	D	D		D	D		C
Approach Vol, veh/h		607			745			471			371	
Approach Delay, s/veh		34.4			43.1			35.5			32.0	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	33.4	12.5	30.0	12.0	35.5	11.5	31.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	10.1	28.3	8.5	25.0	8.0	30.4	7.5	26.0				
Max Q Clear Time (g_c+I1), s	5.4	23.4	3.8	16.5	4.1	17.2	4.3	21.5				
Green Ext Time (p_c), s	0.0	1.2	0.0	2.2	0.0	1.5	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				37.2								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	26	37	17	14	34	21	26	396	14	7	311	13
Future Volume (veh/h)	26	37	17	14	34	21	26	396	14	7	311	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	28	40	18	15	37	23	28	430	15	8	338	14
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	65	25	63	68	37	133	1005	35	149	1014	42
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	360	791	304	189	835	453	1494	1507	53	1494	1496	62
Grp Volume(v), veh/h	86	0	0	75	0	0	28	0	445	8	0	352
Grp Sat Flow(s),veh/h/ln	455	0	0	1476	0	0	1494	0	1559	1494	0	1558
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	0.0	4.3	0.0	0.0	1.4	0.0	0.0	0.4	0.0	0.0
Prop In Lane	0.33		0.21	0.20		0.31	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	172	0	0	169	0	0	133	0	1040	149	0	1056
V/C Ratio(X)	0.50	0.00	0.00	0.44	0.00	0.00	0.21	0.00	0.43	0.05	0.00	0.33
Avail Cap(c_a), veh/h	457	0	0	462	0	0	143	0	1040	159	0	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.00	0.93	0.83	0.00	0.83
Uniform Delay (d), s/veh	40.2	0.0	0.0	39.9	0.0	0.0	34.3	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	1.8	0.0	0.0	0.7	0.0	1.2	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2	0.0	0.0	1.9	0.0	0.0	0.6	0.0	0.3	0.2	0.0	0.2
LnGrp Delay(d),s/veh	42.4	0.0	0.0	41.8	0.0	0.0	35.0	0.0	1.2	32.7	0.0	0.7
LnGrp LOS	D			D			D		A	C		A
Approach Vol, veh/h		86			75			473			360	
Approach Delay, s/veh		42.4			41.8			3.2			1.4	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.0		12.0	12.0	66.0		12.0				
Change Period (Y+Rc),s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	40.4			26.4	8.6	41.4		26.4				
Max Q Clear Time (g_c+R),s	2.0			7.0	3.4	2.0		6.3				
Green Ext Time (p_c), s	0.0	3.1		0.4	0.0	2.4		0.3				

Intersection Summary

HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	10	70	13	61	220	17	29	383	29	21	342	35
Future Volume (veh/h)	10	70	13	61	220	17	29	383	29	21	342	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	76	14	66	239	18	32	416	32	23	372	38
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	335	60	194	373	28	158	1081	83	177	1071	109
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1118	2999	539	1301	3339	250	1774	1708	131	1774	1663	170
Grp Volume(v), veh/h	11	44	46	66	126	131	32	0	448	23	0	410
Grp Sat Flow(s),veh/h/ln	1118	1770	1768	1301	1770	1819	1774	0	1840	1774	0	1833
Q Serve(g_s), s	0.9	2.0	2.1	4.4	6.1	6.2	1.4	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	7.1	2.0	2.1	6.5	6.1	6.2	1.4	0.0	0.0	1.0	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.14	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	128	198	197	194	198	203	158	0	1164	177	0	1180
V/C Ratio(X)	0.09	0.22	0.23	0.34	0.64	0.65	0.20	0.00	0.38	0.13	0.00	0.35
Avail Cap(c_a), veh/h	338	531	530	440	531	546	177	0	1164	197	0	1180
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.56	0.00	0.56	0.95	0.00	0.95
Uniform Delay (d), s/veh	41.7	36.4	36.5	39.4	38.2	38.3	34.3	0.0	0.0	32.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.6	0.6	1.0	3.4	3.4	0.3	0.0	0.5	0.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.1	1.6	3.2	3.3	0.7	0.0	0.2	0.5	0.0	0.3
LnGrp Delay(d),s/veh	41.9	37.0	37.1	40.5	41.6	41.7	34.6	0.0	0.5	33.1	0.0	0.8
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		101			323			480			433	
Approach Delay, s/veh		37.6			41.4			2.8			2.5	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	62.0		15.0	12.0	63.0		15.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	39.0			27.0	9.0	40.0		27.0				
Max Q Clear Time (g_c+bl), s	2.0			9.1	3.4	2.0		8.5				
Green Ext Time (p_c), s	0.0	3.2		0.4	0.0	2.9		1.5				

Intersection Summary

HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

12-13-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	31	1005	53	44	1264	45	100	371	66	58	233	77
Future Volume (veh/h)	31	1005	53	44	1264	45	100	371	66	58	233	77
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	34	1092	58	48	1374	49	109	403	72	63	253	84
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	1406	75	204	1433	51	166	528	94	141	440	146
Arrive On Green	0.82	0.82	0.82	0.41	0.41	0.41	0.09	0.34	0.34	0.16	0.66	0.66
Sat Flow, veh/h	375	3419	182	487	3486	124	1774	1539	275	1774	1340	445
Grp Volume(v), veh/h	34	565	585	48	697	726	109	0	475	63	0	337
Grp Sat Flow(s),veh/h/ln	375	1770	1831	487	1770	1841	1774	0	1814	1774	0	1784
Q Serve(g_s), s	2.5	14.1	14.2	7.3	34.4	34.5	5.3	0.0	21.0	2.9	0.0	9.4
Cycle Q Clear(g_c), s	37.0	14.1	14.2	21.5	34.4	34.5	5.3	0.0	21.0	2.9	0.0	9.4
Prop In Lane	1.00		0.10	1.00		0.07	1.00		0.15	1.00		0.25
Lane Grp Cap(c), veh/h	90	728	753	204	728	757	166	0	622	141	0	587
V/C Ratio(X)	0.38	0.78	0.78	0.24	0.96	0.96	0.66	0.00	0.76	0.45	0.00	0.57
Avail Cap(c_a), veh/h	90	728	753	204	728	757	203	0	622	197	0	587
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.00	0.94
Uniform Delay (d), s/veh	26.1	6.0	6.0	27.8	25.7	25.8	39.4	0.0	26.3	36.1	0.0	11.9
Incr Delay (d2), s/veh	3.0	4.6	4.5	0.8	23.5	23.4	5.5	0.0	8.6	2.1	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.2	7.4	1.0	21.4	22.3	2.9	0.0	11.9	1.5	0.0	5.1
LnGrp Delay(d),s/veh	29.1	10.6	10.5	28.6	49.3	49.2	44.9	0.0	35.0	38.2	0.0	15.8
LnGrp LOS	C	B	B	C	D	D	D		C	D		B
Approach Vol, veh/h		1184			1471			584			400	
Approach Delay, s/veh		11.1			48.5			36.8			19.3	
Approach LOS		B			D			D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	36.9		42.0	12.4	35.6		42.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0	28.0		37.0	10.3	27.7		37.0				
Max Q Clear Time (g_c+Rc), s	23.0	23.0		39.0	7.3	11.4		36.5				
Green Ext Time (p_c), s	0.0	1.7		0.0	0.1	2.5		0.4				

Intersection Summary

HCM 2010 Ctrl Delay	31.3
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

12-13-2023
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			WBT			NBT			SBT	
Traffic Volume (veh/h)	18	521	41	13	628	27	49	91	21	14	37	30
Future Volume (veh/h)	18	521	41	13	628	27	49	91	21	14	37	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	20	566	45	14	683	29	53	99	23	15	40	33
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	1329	104	84	1404	59	413	726	173	248	591	455
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	40	3165	247	22	3342	140	789	1911	455	402	1556	1197
Grp Volume(v), veh/h	330	0	301	381	0	345	93	0	82	47	0	41
Grp Sat Flow(s),veh/h/ln	801	0	1651	1834	0	1670	1540	0	1615	1672	0	1484
Q Serve(g_s), s	0.0	0.0	6.5	0.0	0.0	7.6	0.1	0.0	1.6	0.0	0.0	0.9
Cycle Q Clear(g_c), s	6.2	0.0	6.5	7.4	0.0	7.6	1.7	0.0	1.6	0.8	0.0	0.9
Prop In Lane	0.06		0.15	0.04		0.08	0.57		0.28	0.32		0.81
Lane Grp Cap(c), veh/h	833	0	694	845	0	702	698	0	614	730	0	564
V/C Ratio(X)	0.40	0.00	0.43	0.45	0.00	0.49	0.13	0.00	0.13	0.06	0.00	0.07
Avail Cap(c_a), veh/h	833	0	694	845	0	702	698	0	614	730	0	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.52	0.00	0.52	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.2	0.0	10.3	10.6	0.0	10.6	10.1	0.0	10.1	9.9	0.0	9.9
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.2	0.0	0.3	0.4	0.0	0.4	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	3.0	3.9	0.0	3.5	0.9	0.0	0.8	0.4	0.0	0.4
LnGrp Delay(d),s/veh	10.5	0.0	10.7	10.8	0.0	10.9	10.5	0.0	10.6	10.0	0.0	10.1
LnGrp LOS	B		B	B		B	B		B	B		B
Approach Vol, veh/h		631			726			175			88	
Approach Delay, s/veh		10.6			10.8			10.5			10.1	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		3.7		8.5		2.9		9.6				
Green Ext Time (p_c), s		0.8		3.2		0.3		3.5				
Intersection Summary												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	6	18	11	23	37	38	19	122	9	17	50	17
Future Vol, veh/h	6	18	11	23	37	38	19	122	9	17	50	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	20	12	25	40	41	21	133	10	18	54	18
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	311	275	54	290	283	133	72	0	0	143	0	0
Stage 1	90	90	-	175	175	-	-	-	-	-	-	-
Stage 2	221	185	-	115	108	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	642	632	1013	662	626	916	1528	-	-	1440	-	-
Stage 1	917	820	-	827	754	-	-	-	-	-	-	-
Stage 2	781	747	-	890	806	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	570	614	1013	625	608	916	1528	-	-	1440	-	-
Mov Cap-2 Maneuver	570	614	-	625	608	-	-	-	-	-	-	-
Stage 1	903	809	-	815	743	-	-	-	-	-	-	-
Stage 2	695	736	-	847	796	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	10.5		11			0.9			1.5			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1528	-	-	690	704	1440	-	-				
HCM Lane V/C Ratio	0.014	-	-	0.055	0.151	0.013	-	-				
HCM Control Delay (s)	7.4	0	-	10.5	11	7.5	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0	-	-				

HCM 2010 Signalized Intersection Summary
7: F Street & 6th Street

12-13-2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	66	19	18	244	21	44	85	21	9	79	44
Future Volume (veh/h)	19	66	19	18	244	21	44	85	21	9	79	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	72	21	20	265	23	48	92	23	10	86	48
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	521	820	697	686	820	697	394	715	184	123	809	409
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1087	1863	1583	1298	1863	1583	743	1881	485	110	2130	1076
Grp Volume(v), veh/h	21	72	21	20	265	23	87	0	76	77	0	67
Grp Sat Flow(s),veh/h/ln	1087	1863	1583	1298	1863	1583	1499	0	1609	1811	0	1505
Q Serve(g_s), s	0.6	1.1	0.4	0.5	4.6	0.4	0.0	0.0	1.5	0.0	0.0	1.4
Cycle Q Clear(g_c), s	5.3	1.1	0.4	1.6	4.6	0.4	1.5	0.0	1.5	1.3	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	0.55		0.30	0.13		0.71
Lane Grp Cap(c), veh/h	521	820	697	686	820	697	682	0	612	770	0	572
V/C Ratio(X)	0.04	0.09	0.03	0.03	0.32	0.03	0.13	0.00	0.12	0.10	0.00	0.12
Avail Cap(c_a), veh/h	521	820	697	686	820	697	682	0	612	770	0	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	0.84	0.00	0.84	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.9	8.2	7.9	8.6	9.1	8.0	10.1	0.0	10.1	10.0	0.0	10.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.4	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.2	0.2	2.4	0.2	0.8	0.0	0.7	0.7	0.0	0.7
LnGrp Delay(d),s/veh	10.9	8.2	8.0	8.6	9.2	8.0	10.4	0.0	10.4	10.3	0.0	10.5
LnGrp LOS	B	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		114			308			163			144	
Approach Delay, s/veh		8.6			9.1			10.4			10.4	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.5		7.3		3.4		6.6				
Green Ext Time (p_c), s		0.5		0.2		0.4		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				9.6								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
8: 5th Street & F Street

12-13-2023























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↶↷			↶↷	
Traffic Volume (veh/h)	85	992	50	14	1377	23	34	44	19	27	52	107
Future Volume (veh/h)	85	992	50	14	1377	23	34	44	19	27	52	107
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	92	1078	54	15	1497	25	37	48	21	29	57	116
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	2070	104	289	2150	36	280	381	178	187	344	411
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	341	3430	172	495	3562	59	741	1335	623	469	1205	1441
Grp Volume(v), veh/h	92	556	576	15	743	779	53	0	53	86	0	116
Grp Sat Flow(s),veh/h/ln	341	1770	1832	495	1770	1852	1113	0	1585	1673	0	1441
Q Serve(g_s), s	22.7	16.4	16.4	1.6	25.8	25.9	1.6	0.0	2.2	0.0	0.0	5.6
Cycle Q Clear(g_c), s	48.7	16.4	16.4	18.0	25.8	25.9	7.3	0.0	2.2	3.1	0.0	5.6
Prop In Lane	1.00		0.09	1.00		0.03	0.70		0.39	0.34		1.00
Lane Grp Cap(c), veh/h	188	1068	1106	289	1068	1118	386	0	453	531	0	411
V/C Ratio(X)	0.49	0.52	0.52	0.05	0.70	0.70	0.14	0.00	0.12	0.16	0.00	0.28
Avail Cap(c_a), veh/h	194	1101	1140	298	1101	1153	386	0	453	531	0	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.29	0.29	0.29	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.9	10.3	10.3	15.5	12.2	12.2	25.8	0.0	23.8	24.1	0.0	25.0
Incr Delay (d2), s/veh	2.0	0.4	0.4	0.0	0.6	0.5	0.7	0.0	0.5	0.7	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2	8.0	8.3	0.2	12.5	13.1	1.1	0.0	1.0	1.7	0.0	2.4
LnGrp Delay(d),s/veh	30.8	10.7	10.7	15.5	12.8	12.7	26.5	0.0	24.3	24.7	0.0	26.7
LnGrp LOS	C	B	B	B	B	B	C		C	C		C
Approach Vol, veh/h		1224			1537			106			202	
Approach Delay, s/veh		12.2			12.8			25.4			25.9	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.7		59.3		30.7		59.3				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		24.0		56.0		24.0		56.0				
Max Q Clear Time (g_c+I1), s		9.3		50.7		7.6		27.9				
Green Ext Time (p_c), s		0.4		3.6		1.0		13.9				
Intersection Summary												
HCM 2010 Ctrl Delay					13.9							
HCM 2010 LOS					B							

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

01-24-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	332	24	36	306	51	11	96	15	40	152	18
Future Volume (veh/h)	11	332	24	36	306	51	11	96	15	40	152	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	12	361	26	39	333	55	12	104	16	43	165	20
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	359	815	58	367	770	126	133	427	66	149	456	55
Arrive On Green	0.08	0.29	0.29	0.09	0.30	0.30	0.18	0.64	0.64	0.10	0.33	0.33
Sat Flow, veh/h	1494	2821	202	1494	2565	419	1494	1328	204	1494	1373	166
Grp Volume(v), veh/h	12	190	197	39	192	196	12	0	120	43	0	185
Grp Sat Flow(s),veh/h/ln	1494	1490	1533	1494	1490	1495	1494	0	1533	1494	0	1539
Q Serve(g_s), s	0.5	9.4	9.4	1.5	9.3	9.5	0.6	0.0	3.0	2.4	0.0	8.2
Cycle Q Clear(g_c), s	0.5	9.4	9.4	1.5	9.3	9.5	0.6	0.0	3.0	2.4	0.0	8.2
Prop In Lane	1.00		0.13	1.00		0.28	1.00		0.13	1.00		0.11
Lane Grp Cap(c), veh/h	359	431	443	367	447	448	133	0	492	149	0	511
V/C Ratio(X)	0.03	0.44	0.44	0.11	0.43	0.44	0.09	0.00	0.24	0.29	0.00	0.36
Avail Cap(c_a), veh/h	359	431	443	367	447	448	133	0	492	149	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	26.1	26.1	18.4	25.3	25.4	34.0	0.0	11.5	37.5	0.0	22.8
Incr Delay (d2), s/veh	0.2	3.1	3.1	0.6	3.0	3.1	1.3	0.0	1.2	4.8	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.2	4.4	0.7	4.2	4.3	0.3	0.0	1.4	1.2	0.0	3.8
LnGrp Delay(d),s/veh	18.8	29.2	29.2	19.0	28.3	28.5	35.3	0.0	12.6	42.3	0.0	24.8
LnGrp LOS	B	C	C	B	C	C	D		B	D		C
Approach Vol, veh/h		399			427			132			228	
Approach Delay, s/veh		28.9			27.5			14.7			28.1	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	34.0	12.0	31.0	12.0	35.0	11.0	32.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	9.0	28.9	8.0	26.0	8.0	29.9	7.0	27.0				
Max Q Clear Time (g_c+I1), s	4.4	5.0	3.5	11.4	2.6	10.2	2.5	11.5				
Green Ext Time (p_c), s	0.0	0.6	0.0	1.9	0.0	0.9	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			26.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	2	15	4	2	21	4	13	135	19	3	183	12
Future Volume (veh/h)	2	15	4	2	21	4	13	135	19	3	183	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	2	16	4	2	23	4	14	147	21	3	199	13
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	91	21	46	98	16	133	901	129	149	994	65
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	55	1174	273	42	1266	209	1494	1343	192	1494	1457	95
Grp Volume(v), veh/h	22	0	0	29	0	0	14	0	168	3	0	212
Grp Sat Flow(s),veh/h/ln	501	0	0	1517	0	0	1494	0	1535	1494	0	1552
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	1.6	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.0
Prop In Lane	0.09		0.18	0.07		0.14	1.00		0.13	1.00		0.06
Lane Grp Cap(c), veh/h	160	0	0	161	0	0	133	0	1030	149	0	1059
V/C Ratio(X)	0.14	0.00	0.00	0.18	0.00	0.00	0.11	0.00	0.16	0.02	0.00	0.20
Avail Cap(c_a), veh/h	495	0	0	500	0	0	183	0	1030	199	0	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.99	0.96	0.00	0.96
Uniform Delay (d), s/veh	38.8	0.0	0.0	39.0	0.0	0.0	34.0	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.5	0.0	0.0	0.3	0.0	0.3	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.7	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	39.2	0.0	0.0	39.5	0.0	0.0	34.3	0.0	0.3	32.5	0.0	0.4
LnGrp LOS	D			D			C		A	C		A
Approach Vol, veh/h		22			29			182			215	
Approach Delay, s/veh		39.2			39.5			3.0			0.9	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	37.0			27.4	11.0	38.0		27.4				
Max Q Clear Time (g_c+R), s	2.0			3.2	2.7	2.0		3.6				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.0	1.3		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				6.1								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	29	92	25	11	42	9	14	148	43	12	174	10
Future Volume (veh/h)	29	92	25	11	42	9	14	148	43	12	174	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	100	27	12	46	10	15	161	47	13	189	11
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	216	56	133	226	48	158	924	270	177	1182	69
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1342	2779	725	1258	2911	613	1774	1387	405	1774	1743	101
Grp Volume(v), veh/h	32	62	65	12	27	29	15	0	208	13	0	200
Grp Sat Flow(s),veh/h/ln	1342	1770	1735	1258	1770	1755	1774	0	1791	1774	0	1845
Q Serve(g_s), s	2.1	3.0	3.2	0.8	1.3	1.4	0.6	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	3.4	3.0	3.2	4.0	1.3	1.4	0.6	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.35	1.00		0.23	1.00		0.05
Lane Grp Cap(c), veh/h	164	138	135	133	138	136	158	0	1194	177	0	1250
V/C Ratio(X)	0.20	0.45	0.48	0.09	0.20	0.21	0.10	0.00	0.17	0.07	0.00	0.16
Avail Cap(c_a), veh/h	492	570	559	441	570	565	217	0	1194	237	0	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.98	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.5	39.7	39.8	41.7	38.9	38.9	34.0	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	0.6	2.3	2.6	0.3	0.7	0.8	0.3	0.0	0.3	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.6	1.6	0.3	0.7	0.7	0.3	0.0	0.1	0.3	0.0	0.1
LnGrp Delay(d),s/veh	41.1	42.0	42.4	42.0	39.6	39.7	34.2	0.0	0.3	32.8	0.0	0.3
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		159			68			223			213	
Approach Delay, s/veh		42.0			40.0			2.6			2.3	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.0		12.0	12.0	66.0		12.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	35.0			29.0	11.0	36.0		29.0				
Max Q Clear Time (g_c+Y),s	2.0			5.4	2.6	2.0		6.0				
Green Ext Time (p_c), s	0.0	1.3		0.7	0.0	1.2		0.3				

Intersection Summary

HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗		↖ ↗	↖ ↗		↖ ↗	↖ ↗	
Traffic Volume (veh/h)	98	1104	36	12	513	14	20	91	26	25	141	28
Future Volume (veh/h)	98	1104	36	12	513	14	20	91	26	25	141	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	107	1200	39	13	558	15	22	99	28	27	153	30
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	1319	43	128	1327	36	75	569	161	87	627	123
Arrive On Green	0.75	0.75	0.75	0.38	0.38	0.38	0.04	0.41	0.41	0.10	0.83	0.83
Sat Flow, veh/h	836	3499	114	447	3521	95	1774	1398	395	1774	1514	297
Grp Volume(v), veh/h	107	607	632	13	280	293	22	0	127	27	0	183
Grp Sat Flow(s),veh/h/ln	836	1770	1843	447	1770	1846	1774	0	1793	1774	0	1810
Q Serve(g_s), s	7.4	24.2	24.2	2.4	10.6	10.6	1.1	0.0	4.1	1.3	0.0	2.0
Cycle Q Clear(g_c), s	18.0	24.2	24.2	26.6	10.6	10.6	1.1	0.0	4.1	1.3	0.0	2.0
Prop In Lane	1.00		0.06	1.00		0.05	1.00		0.22	1.00		0.16
Lane Grp Cap(c), veh/h	297	667	695	128	667	696	75	0	730	87	0	750
V/C Ratio(X)	0.36	0.91	0.91	0.10	0.42	0.42	0.29	0.00	0.17	0.31	0.00	0.24
Avail Cap(c_a), veh/h	326	728	758	143	728	759	189	0	730	197	0	750
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	12.5	9.9	9.9	36.9	20.8	20.8	41.8	0.0	17.0	39.2	0.0	4.7
Incr Delay (d2), s/veh	0.6	10.2	10.0	0.5	0.6	0.6	2.1	0.0	0.5	2.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7	13.0	13.5	0.3	5.2	5.5	0.6	0.0	2.1	0.7	0.0	1.1
LnGrp Delay(d),s/veh	13.2	20.1	19.9	37.4	21.4	21.3	43.9	0.0	17.5	41.1	0.0	5.5
LnGrp LOS	B	C	B	D	C	C	D		B	D		A
Approach Vol, veh/h		1346			586			149			210	
Approach Delay, s/veh		19.4			21.7			21.4			10.1	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.4	42.7		38.9	7.8	43.3		38.9				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0	28.0		37.0	9.6	28.4		37.0				
Max Q Clear Time (g_c+Rc), s	3.0	6.1		26.2	3.1	4.0		28.6				
Green Ext Time (p_c), s	0.0	0.9		7.7	0.0	1.4		3.0				
Intersection Summary												
HCM 2010 Ctrl Delay					19.3							
HCM 2010 LOS					B							

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			EBT			EBT			EBT	
Traffic Volume (veh/h)	7	349	67	24	289	16	8	25	10	10	72	12
Future Volume (veh/h)	7	349	67	24	289	16	8	25	10	10	72	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	8	379	73	26	314	17	9	27	11	11	78	13
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	1214	229	134	1310	69	276	746	298	172	1040	167
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	16	2890	544	123	3119	165	470	1963	783	224	2736	438
Grp Volume(v), veh/h	246	0	214	185	0	172	25	0	22	54	0	48
Grp Sat Flow(s),veh/h/ln	851	0	1599	1741	0	1666	1659	0	1557	1781	0	1618
Q Serve(g_s), s	0.0	0.0	4.5	0.0	0.0	3.3	0.0	0.0	0.4	0.0	0.0	0.9
Cycle Q Clear(g_c), s	4.4	0.0	4.5	3.2	0.0	3.3	0.4	0.0	0.4	0.9	0.0	0.9
Prop In Lane	0.03		0.34	0.14		0.10	0.36		0.50	0.20		0.27
Lane Grp Cap(c), veh/h	852	0	672	813	0	700	728	0	592	763	0	615
V/C Ratio(X)	0.29	0.00	0.32	0.23	0.00	0.25	0.03	0.00	0.04	0.07	0.00	0.08
Avail Cap(c_a), veh/h	852	0	672	813	0	700	728	0	592	763	0	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.91	0.00	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	0.0	9.7	9.3	0.0	9.4	9.7	0.0	9.7	9.9	0.0	9.9
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.1	0.0	0.2	0.1	0.0	0.1	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	2.0	1.7	0.0	1.6	0.2	0.0	0.2	0.5	0.0	0.5
LnGrp Delay(d),s/veh	9.9	0.0	10.0	9.5	0.0	9.5	9.8	0.0	9.9	10.1	0.0	10.2
LnGrp LOS	A		A	A		A	A		A	B		B
Approach Vol, veh/h		460			357			47			102	
Approach Delay, s/veh		9.9			9.5			9.8			10.1	
Approach LOS		A			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		2.4		6.5		2.9		5.3				
Green Ext Time (p_c), s		0.1		2.4		0.4		1.9				
Intersection Summary												
HCM 2010 Ctrl Delay				9.8								
HCM 2010 LOS				A								

Intersection

Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	3	9	23	29	9	5	10	53	9	4	149	2
Future Vol, veh/h	3	9	23	29	9	5	10	53	9	4	149	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	10	25	32	10	5	11	58	10	4	162	2






















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	263	260	162	269	252	58	164	0	0	68	0	0
Stage 1	170	170	-	80	80	-	-	-	-	-	-	-
Stage 2	93	90	-	189	172	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	690	645	883	684	651	1008	1414	-	-	1533	-	-
Stage 1	832	758	-	929	828	-	-	-	-	-	-	-
Stage 2	914	820	-	813	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	673	638	883	651	644	1008	1414	-	-	1533	-	-
Mov Cap-2 Maneuver	673	638	-	651	644	-	-	-	-	-	-	-
Stage 1	825	756	-	922	821	-	-	-	-	-	-	-
Stage 2	891	813	-	777	754	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	10.7	1.1	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1414	-	-	785	677	1533	-
HCM Lane V/C Ratio	0.008	-	-	0.048	0.069	0.003	-
HCM Control Delay (s)	7.6	0	-	9.8	10.7	7.4	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-

HCM 2010 Signalized Intersection Summary
 7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	82	18	11	44	12	15	53	38	30	55	52
Future Volume (veh/h)	21	82	18	11	44	12	15	53	38	30	55	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	23	89	20	12	48	13	16	58	41	33	60	57
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	712	820	697	671	820	697	209	668	435	310	508	463
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1336	1863	1583	1279	1863	1583	310	1757	1144	548	1336	1217
Grp Volume(v), veh/h	23	89	20	12	48	13	61	0	54	81	0	69
Grp Sat Flow(s),veh/h/ln	1336	1863	1583	1279	1863	1583	1718	0	1493	1620	0	1480
Q Serve(g_s), s	0.5	1.4	0.4	0.3	0.7	0.2	0.0	0.0	1.2	0.0	0.0	1.5
Cycle Q Clear(g_c), s	1.2	1.4	0.4	1.7	0.7	0.2	1.1	0.0	1.2	1.4	0.0	1.5
Prop In Lane	1.00		1.00	1.00		1.00	0.26		0.77	0.41		0.82
Lane Grp Cap(c), veh/h	712	820	697	671	820	697	744	0	567	717	0	563
V/C Ratio(X)	0.03	0.11	0.03	0.02	0.06	0.02	0.08	0.00	0.09	0.11	0.00	0.12
Avail Cap(c_a), veh/h	712	820	697	671	820	697	744	0	567	717	0	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	8.2	7.9	8.7	8.0	7.9	9.9	0.0	10.0	10.0	0.0	10.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.2	0.1	0.4	0.1	0.6	0.0	0.5	0.8	0.0	0.7
LnGrp Delay(d),s/veh	8.4	8.3	7.9	8.7	8.1	7.9	10.2	0.0	10.3	10.4	0.0	10.5
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		132			73			115				150
Approach Delay, s/veh		8.2			8.1			10.2				10.4
Approach LOS		A			A			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.2		3.4		3.5		3.7				
Green Ext Time (p_c), s		0.3		0.3		0.4		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			9.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary

8: 5th Street & F Street

01-24-2024























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↶			↷	
Traffic Volume (veh/h)	65	1249	6	6	540	20	4	17	5	12	23	19
Future Volume (veh/h)	65	1249	6	6	540	20	4	17	5	12	23	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	71	1358	7	7	587	22	4	18	5	13	25	21
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	1687	9	138	1626	61	224	954	262	320	582	478
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	809	3610	19	397	3479	130	409	2263	622	625	1381	1135
Grp Volume(v), veh/h	71	666	699	7	298	311	14	0	13	31	0	28
Grp Sat Flow(s),veh/h/ln	809	1770	1859	397	1770	1840	1709	0	1585	1646	0	1495
Q Serve(g_s), s	5.6	28.9	28.9	1.4	9.7	9.7	0.0	0.0	0.4	0.0	0.0	1.0
Cycle Q Clear(g_c), s	15.3	28.9	28.9	30.3	9.7	9.7	0.4	0.0	0.4	0.9	0.0	1.0
Prop In Lane	1.00		0.01	1.00		0.07	0.28		0.39	0.41		0.76
Lane Grp Cap(c), veh/h	370	827	869	138	827	860	772	0	668	750	0	630
V/C Ratio(X)	0.19	0.80	0.81	0.05	0.36	0.36	0.02	0.00	0.02	0.04	0.00	0.04
Avail Cap(c_a), veh/h	478	1062	1116	191	1062	1104	772	0	668	750	0	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.3	20.5	20.5	33.4	15.4	15.4	15.2	0.0	15.2	15.3	0.0	15.3
Incr Delay (d2), s/veh	0.2	3.6	3.4	0.1	0.3	0.2	0.0	0.0	0.1	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3	14.9	15.6	0.2	4.8	5.0	0.2	0.0	0.2	0.5	0.0	0.4
LnGrp Delay(d),s/veh	20.5	24.0	23.9	33.5	15.6	15.6	15.2	0.0	15.2	15.4	0.0	15.5
LnGrp LOS	C	C	C	C	B	B	B		B	B		B
Approach Vol, veh/h		1436			616			27			59	
Approach Delay, s/veh		23.8			15.8			15.2			15.4	
Approach LOS		C			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		42.9		47.1		42.9		47.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		54.0		26.0		54.0				
Max Q Clear Time (g_c+I1), s		2.4		30.9		3.0		32.3				
Green Ext Time (p_c), s		0.1		11.1		0.2		3.9				
Intersection Summary												
HCM 2010 Ctrl Delay				21.2								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

01-24-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	329	22	29	396	53	30	250	38	38	170	28
Future Volume (veh/h)	36	329	22	29	396	53	30	250	38	38	170	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	39	358	24	32	430	58	33	272	41	41	185	30
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	310	788	53	358	763	102	133	443	67	149	452	73
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.18	0.66	0.66	0.10	0.34	0.34
Sat Flow, veh/h	1494	2836	189	1494	2642	354	1494	1332	201	1494	1317	214
Grp Volume(v), veh/h	39	187	195	32	241	247	33	0	313	41	0	215
Grp Sat Flow(s),veh/h/ln	1494	1490	1535	1494	1490	1506	1494	0	1533	1494	0	1531
Q Serve(g_s), s	1.6	9.4	9.4	1.2	12.4	12.5	1.7	0.0	10.4	2.3	0.0	9.7
Cycle Q Clear(g_c), s	1.6	9.4	9.4	1.2	12.4	12.5	1.7	0.0	10.4	2.3	0.0	9.7
Prop In Lane	1.00		0.12	1.00		0.24	1.00		0.13	1.00		0.14
Lane Grp Cap(c), veh/h	310	414	426	358	431	435	133	0	509	149	0	526
V/C Ratio(X)	0.13	0.45	0.46	0.09	0.56	0.57	0.25	0.00	0.61	0.27	0.00	0.41
Avail Cap(c_a), veh/h	310	414	426	358	431	435	133	0	509	149	0	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	0.95	0.00	0.95	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.0	26.8	26.9	19.0	27.2	27.2	34.4	0.0	11.8	37.5	0.0	22.6
Incr Delay (d2), s/veh	0.8	3.4	3.3	0.5	5.2	5.3	4.2	0.0	5.2	4.5	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.2	4.4	0.6	5.7	5.8	0.9	0.0	4.9	1.1	0.0	4.4
LnGrp Delay(d),s/veh	20.8	30.2	30.2	19.5	32.4	32.5	38.6	0.0	17.0	42.0	0.0	24.9
LnGrp LOS	C	C	C	B	C	C	D		B	D		C
Approach Vol, veh/h		421			520			346			256	
Approach Delay, s/veh		29.4			31.6			19.1			27.7	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	35.0	12.0	30.0	12.0	36.0	11.0	31.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	9.0	29.9	8.0	25.0	8.0	30.9	7.0	26.0				
Max Q Clear Time (g_c+I1), s	4.3	12.4	3.2	11.4	3.7	11.7	3.6	14.5				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.8	0.0	1.1	0.0	2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			27.5									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	17	25	11	9	23	14	29	294	14	4	217	8
Future Volume (veh/h)	17	25	11	9	23	14	29	294	14	4	217	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	18	27	12	10	25	15	32	320	15	4	236	9
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	64	23	61	66	34	133	998	47	149	1024	39
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	303	823	300	166	844	433	1494	1487	70	1494	1501	57
Grp Volume(v), veh/h	57	0	0	50	0	0	32	0	335	4	0	245
Grp Sat Flow(s),veh/h/ln	426	0	0	1442	0	0	1494	0	1556	1494	0	1559
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	3.3	0.0	0.0	2.9	0.0	0.0	1.7	0.0	0.0	0.2	0.0	0.0
Prop In Lane	0.32		0.21	0.20		0.30	1.00		0.04	1.00		0.04
Lane Grp Cap(c), veh/h	164	0	0	160	0	0	133	0	1044	149	0	1063
V/C Ratio(X)	0.35	0.00	0.00	0.31	0.00	0.00	0.24	0.00	0.32	0.03	0.00	0.23
Avail Cap(c_a), veh/h	472	0	0	476	0	0	166	0	1044	183	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.97	0.00	0.97	0.94	0.00	0.94
Uniform Delay (d), s/veh	39.8	0.0	0.0	39.6	0.0	0.0	34.4	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	1.1	0.0	0.0	0.9	0.0	0.8	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	0.0	0.0	1.2	0.0	0.0	0.7	0.0	0.2	0.1	0.0	0.1
LnGrp Delay(d),s/veh	41.0	0.0	0.0	40.7	0.0	0.0	35.3	0.0	0.8	32.5	0.0	0.5
LnGrp LOS	D			D			D		A	C		A
Approach Vol, veh/h		57			50			367			249	
Approach Delay, s/veh		41.0			40.7			3.8			1.0	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	38.0			27.4	10.0	39.0		27.4				
Max Q Clear Time (g_c+R),s	2.0			5.3	3.7	2.0		4.9				
Green Ext Time (p_c), s	0.0	2.2		0.2	0.0	1.5		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				8.3								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	13	49	8	42	153	12	19	280	19	14	239	24
Future Volume (veh/h)	13	49	8	42	153	12	19	280	19	14	239	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	14	53	9	46	166	13	21	304	21	15	260	26
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	259	43	172	284	22	158	1136	78	177	1117	112
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1200	3040	504	1335	3328	258	1774	1723	119	1774	1667	167
Grp Volume(v), veh/h	14	30	32	46	88	91	21	0	325	15	0	286
Grp Sat Flow(s),veh/h/ln	1770	1774	1774	1335	1770	1817	1774	0	1842	1774	0	1833
Q Serve(g_s), s	1.0	1.4	1.5	3.0	4.3	4.4	0.9	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	5.4	1.4	1.5	4.5	4.3	4.4	0.9	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.28	1.00		0.14	1.00		0.06	1.00		0.09
Lane Grp Cap(c), veh/h	124	151	151	172	151	155	158	0	1214	177	0	1229
V/C Ratio(X)	0.11	0.20	0.21	0.27	0.58	0.59	0.13	0.00	0.27	0.08	0.00	0.23
Avail Cap(c_a), veh/h	409	570	572	488	570	586	217	0	1214	217	0	1229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.00	0.90	0.98	0.00	0.98
Uniform Delay (d), s/veh	2.2	38.3	38.3	40.4	39.6	39.7	34.1	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.6	0.7	0.8	3.5	3.6	0.3	0.0	0.5	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.7	0.8	1.1	2.2	2.3	0.4	0.0	0.2	0.3	0.0	0.1
LnGrp Delay(d),s/veh	42.6	39.0	39.0	41.3	43.1	43.2	34.4	0.0	0.5	32.8	0.0	0.4
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		76			225			346			301	
Approach Delay, s/veh		39.7			42.8			2.5			2.1	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.0	64.3		12.7	12.0	65.3		12.7				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	36.0			29.0	11.0	36.0		29.0				
Max Q Clear Time (g_c+Y), s	2.0			7.4	2.9	2.0		6.5				
Green Ext Time (p_c), s	0.0	2.1		0.3	0.0	1.8		1.1				

Intersection Summary

HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	27	703	36	30	885	33	69	263	46	40	163	53
Future Volume (veh/h)	27	703	36	30	885	33	69	263	46	40	163	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	29	764	39	33	962	36	75	286	50	43	177	58
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	1213	62	240	1232	46	150	639	112	117	530	174
Arrive On Green	0.71	0.71	0.71	0.35	0.35	0.35	0.08	0.41	0.41	0.13	0.79	0.79
Sat Flow, veh/h	562	3427	175	675	3479	130	1774	1545	270	1774	1344	441
Grp Volume(v), veh/h	29	394	409	33	489	509	75	0	336	43	0	235
Grp Sat Flow(s),veh/h/ln	562	1770	1832	675	1770	1840	1774	0	1815	1774	0	1785
Q Serve(g_s), s	4.1	10.6	10.6	3.5	22.2	22.2	3.6	0.0	12.0	2.0	0.0	3.4
Cycle Q Clear(g_c), s	26.3	10.6	10.6	14.1	22.2	22.2	3.6	0.0	12.0	2.0	0.0	3.4
Prop In Lane	1.00		0.10	1.00		0.07	1.00		0.15	1.00		0.25
Lane Grp Cap(c), veh/h	140	627	649	240	627	652	150	0	750	117	0	704
V/C Ratio(X)	0.21	0.63	0.63	0.14	0.78	0.78	0.50	0.00	0.45	0.37	0.00	0.33
Avail Cap(c_a), veh/h	160	688	712	263	688	715	189	0	750	197	0	704
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	22.0	10.0	10.0	27.6	25.9	25.9	39.4	0.0	19.0	37.4	0.0	6.1
Incr Delay (d2), s/veh	0.9	1.6	1.6	0.4	5.8	5.6	2.6	0.0	1.9	1.9	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7	5.1	5.3	0.7	11.9	12.3	1.9	0.0	6.4	1.0	0.0	1.8
LnGrp Delay(d),s/veh	22.9	11.7	11.6	27.9	31.7	31.5	41.9	0.0	20.9	39.2	0.0	7.4
LnGrp LOS	C	B	B	C	C	C	D		C	D		A
Approach Vol, veh/h		832			1031			411			278	
Approach Delay, s/veh		12.0			31.5			24.8			12.3	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.9	43.2		36.9	11.6	41.5		36.9				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0			35.0	9.6	30.4		35.0				
Max Q Clear Time (g_c+R), s	14.0			28.3	5.6	5.4		24.2				
Green Ext Time (p_c), s	0.0	2.5		3.6	0.0	2.0		6.2				
Intersection Summary												
HCM 2010 Ctrl Delay				22.0								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

01-24-2024
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			EBT			EBT			EBT	
Traffic Volume (veh/h)	12	364	30	9	444	18	33	63	14	9	29	20
Future Volume (veh/h)	12	364	30	9	444	18	33	63	14	9	29	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	13	396	33	10	483	20	36	68	15	10	32	22
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1338	109	83	1411	58	413	738	167	232	659	421
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	32	3186	260	19	3359	137	791	1943	441	366	1735	1107
Grp Volume(v), veh/h	233	0	209	269	0	244	64	0	55	34	0	30
Grp Sat Flow(s),veh/h/ln	828	0	1649	1844	0	1671	1558	0	1617	1708	0	1500
Q Serve(g_s), s	0.0	0.0	4.2	0.0	0.0	4.9	0.0	0.0	1.1	0.0	0.0	0.6
Cycle Q Clear(g_c), s	4.1	0.0	4.2	4.9	0.0	4.9	1.1	0.0	1.1	0.6	0.0	0.6
Prop In Lane	0.06		0.16	0.04		0.08	0.56		0.27	0.29		0.74
Lane Grp Cap(c), veh/h	844	0	693	849	0	702	704	0	615	742	0	570
V/C Ratio(X)	0.28	0.00	0.30	0.32	0.00	0.35	0.09	0.00	0.09	0.05	0.00	0.05
Avail Cap(c_a), veh/h	844	0	693	849	0	702	704	0	615	742	0	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.82	0.00	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.6	0.0	9.6	9.8	0.0	9.8	10.0	0.0	9.9	9.8	0.0	9.8
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.2	0.0	0.2	0.3	0.0	0.3	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1	0.0	2.0	2.5	0.0	2.3	0.6	0.0	0.5	0.3	0.0	0.3
LnGrp Delay(d),s/veh	9.8	0.0	9.9	10.0	0.0	10.1	10.2	0.0	10.2	9.9	0.0	10.0
LnGrp LOS	A		A	B		B	B		B	A		A
Approach Vol, veh/h		442			513			119			64	
Approach Delay, s/veh		9.8			10.0			10.2			9.9	
Approach LOS		A			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		3.1		6.2		2.6		6.9				
Green Ext Time (p_c), s		0.5		2.3		0.2		2.6				
Intersection Summary												
HCM 2010 Ctrl Delay				10.0								
HCM 2010 LOS				A								

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	3	12	7	28	25	26	13	84	5	11	41	11
Future Vol, veh/h	3	12	7	28	25	26	13	84	5	11	41	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	13	8	30	27	28	14	91	5	12	45	12
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	218	193	45	205	200	91	57	0	0	96	0	0
Stage 1	69	69	-	119	119	-	-	-	-	-	-	-
Stage 2	149	124	-	86	81	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	738	702	1025	753	696	967	1547	-	-	1498	-	-
Stage 1	941	837	-	885	797	-	-	-	-	-	-	-
Stage 2	854	793	-	922	828	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	685	689	1025	727	683	967	1547	-	-	1498	-	-
Mov Cap-2 Maneuver	685	689	-	727	683	-	-	-	-	-	-	-
Stage 1	932	830	-	876	789	-	-	-	-	-	-	-
Stage 2	792	785	-	894	821	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.8		10.2			0.9			1.3			
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1547	-	-	769	774	1498	-	-				
HCM Lane V/C Ratio	0.009	-	-	0.031	0.111	0.008	-	-				
HCM Control Delay (s)	7.3	0	-	9.8	10.2	7.4	0	-				
HCM Lane LOS	A	A	-	A	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-				

HCM 2010 Signalized Intersection Summary
7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	46	13	12	170	14	30	59	14	12	66	30
Future Volume (veh/h)	13	46	13	12	170	14	30	59	14	12	66	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	14	50	14	13	185	15	33	64	15	13	72	33
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	589	820	697	710	820	697	396	730	177	173	819	349
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1178	1863	1583	1332	1863	1583	750	1922	466	227	2156	918
Grp Volume(v), veh/h	14	50	14	13	185	15	60	0	52	63	0	55
Grp Sat Flow(s),veh/h/ln	1178	1863	1583	1332	1863	1583	1525	0	1613	1768	0	1533
Q Serve(g_s), s	0.4	0.8	0.2	0.3	3.1	0.3	0.0	0.0	1.0	0.0	0.0	1.2
Cycle Q Clear(g_c), s	3.5	0.8	0.2	1.1	3.1	0.3	1.0	0.0	1.0	1.1	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	0.55		0.29	0.21		0.60
Lane Grp Cap(c), veh/h	589	820	697	710	820	697	691	0	613	759	0	583
V/C Ratio(X)	0.02	0.06	0.02	0.02	0.23	0.02	0.09	0.00	0.08	0.08	0.00	0.09
Avail Cap(c_a), veh/h	589	820	697	710	820	697	691	0	613	759	0	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	0.96	0.00	0.96	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	8.1	7.9	8.4	8.7	7.9	9.9	0.0	9.9	9.9	0.0	10.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	0.1	0.1	1.6	0.1	0.6	0.0	0.5	0.6	0.0	0.5
LnGrp Delay(d),s/veh	9.8	8.1	7.9	8.4	8.8	7.9	10.2	0.0	10.2	10.2	0.0	10.3
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		78			213			112				118
Approach Delay, s/veh		8.3			8.7			10.2				10.2
Approach LOS		A			A			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.0		5.5		3.2		5.1				
Green Ext Time (p_c), s		0.3		0.1		0.3		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			9.3									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
8: 5th Street & F Street

01-24-2024























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Volume (veh/h)	59	700	34	9	964	16	23	30	13	18	38	82
Future Volume (veh/h)	59	700	34	9	964	16	23	30	13	18	38	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	64	761	37	10	1048	17	25	33	14	20	41	89
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	1490	72	265	1545	25	463	644	290	276	541	656
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	528	3436	167	678	3564	58	870	1415	637	489	1189	1441
Grp Volume(v), veh/h	64	392	406	10	520	545	37	0	35	61	0	89
Grp Sat Flow(s),veh/h/ln	528	1770	1833	678	1770	1853	1339	0	1583	1678	0	1441
Q Serve(g_s), s	10.0	14.5	14.5	1.0	21.2	21.2	0.1	0.0	1.1	0.0	0.0	3.2
Cycle Q Clear(g_c), s	31.2	14.5	14.5	15.5	21.2	21.2	3.3	0.0	1.1	1.7	0.0	3.2
Prop In Lane	1.00		0.09	1.00		0.03	0.67		0.40	0.33		1.00
Lane Grp Cap(c), veh/h	184	767	795	265	767	803	677	0	721	817	0	656
V/C Ratio(X)	0.35	0.51	0.51	0.04	0.68	0.68	0.06	0.00	0.05	0.07	0.00	0.14
Avail Cap(c_a), veh/h	266	1042	1080	370	1042	1091	677	0	721	817	0	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.62	0.62	0.62	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	18.5	18.5	24.2	20.5	20.5	13.7	0.0	13.6	13.8	0.0	14.2
Incr Delay (d2), s/veh	1.1	0.5	0.5	0.0	0.7	0.6	0.2	0.0	0.1	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5	7.2	7.4	0.2	10.4	10.9	0.6	0.0	0.5	0.9	0.0	1.4
LnGrp Delay(d),s/veh	34.1	19.1	19.1	24.2	21.1	21.1	13.8	0.0	13.8	14.0	0.0	14.7
LnGrp LOS	C	B	B	C	C	C	B		B	B		B
Approach Vol, veh/h		862			1075			72			150	
Approach Delay, s/veh		20.2			21.1			13.8			14.4	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		46.0		44.0		46.0		44.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		27.0		53.0		27.0		53.0				
Max Q Clear Time (g_c+I1), s		5.3		33.2		5.2		23.2				
Green Ext Time (p_c), s		0.3		5.8		0.8		8.4				
Intersection Summary												
HCM 2010 Ctrl Delay				20.0								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

01-24-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	353	26	39	325	55	12	102	16	43	162	20
Future Volume (veh/h)	12	353	26	39	325	55	12	102	16	43	162	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	13	384	28	42	353	60	13	111	17	47	176	22
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	348	814	59	357	766	129	133	427	65	149	454	57
Arrive On Green	0.08	0.29	0.29	0.09	0.30	0.30	0.18	0.64	0.64	0.10	0.33	0.33
Sat Flow, veh/h	1494	2818	205	1494	2553	430	1494	1329	204	1494	1368	171
Grp Volume(v), veh/h	13	202	210	42	205	208	13	0	128	47	0	198
Grp Sat Flow(s),veh/h/ln	1494	1490	1533	1494	1490	1493	1494	0	1533	1494	0	1538
Q Serve(g_s), s	0.5	10.1	10.1	1.6	10.0	10.2	0.7	0.0	3.2	2.6	0.0	8.9
Cycle Q Clear(g_c), s	0.5	10.1	10.1	1.6	10.0	10.2	0.7	0.0	3.2	2.6	0.0	8.9
Prop In Lane	1.00		0.13	1.00		0.29	1.00		0.13	1.00		0.11
Lane Grp Cap(c), veh/h	348	431	443	357	447	448	133	0	492	149	0	511
V/C Ratio(X)	0.04	0.47	0.47	0.12	0.46	0.47	0.10	0.00	0.26	0.31	0.00	0.39
Avail Cap(c_a), veh/h	348	431	443	357	447	448	133	0	492	149	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.7	26.3	26.4	18.5	25.6	25.6	34.0	0.0	11.5	37.6	0.0	23.0
Incr Delay (d2), s/veh	0.2	3.5	3.4	0.7	3.4	3.4	1.5	0.0	1.3	5.4	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.5	4.7	0.7	4.5	4.7	0.3	0.0	1.5	1.3	0.0	4.1
LnGrp Delay(d),s/veh	18.9	29.8	29.8	19.2	28.9	29.1	35.4	0.0	12.8	43.1	0.0	25.2
LnGrp LOS	B	C	C	B	C	C	D		B	D		C
Approach Vol, veh/h		425			455			141			245	
Approach Delay, s/veh		29.4			28.1			14.9			28.7	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	34.0	12.0	31.0	12.0	35.0	11.0	32.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	9.0	28.9	8.0	26.0	8.0	29.9	7.0	27.0				
Max Q Clear Time (g_c+I1), s	4.6	5.2	3.6	12.1	2.7	10.9	2.5	12.2				
Green Ext Time (p_c), s	0.0	0.6	0.0	2.0	0.0	1.0	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			27.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	3	16	5	3	23	5	14	143	20	4	195	13
Future Volume (veh/h)	3	16	5	3	23	5	14	143	20	4	195	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	3	17	5	3	25	5	15	155	22	4	212	14
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	87	23	48	95	18	133	902	128	149	993	66
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	77	1114	298	59	1220	228	1494	1344	191	1494	1456	96
Grp Volume(v), veh/h	25	0	0	33	0	0	15	0	177	4	0	226
Grp Sat Flow(s),veh/h/ln	489	0	0	1508	0	0	1494	0	1535	1494	0	1552
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	1.8	0.0	0.0	0.8	0.0	0.0	0.2	0.0	0.0
Prop In Lane	0.12		0.20	0.09		0.15	1.00		0.12	1.00		0.06
Lane Grp Cap(c), veh/h	161	0	0	161	0	0	133	0	1030	149	0	1059
V/C Ratio(X)	0.16	0.00	0.00	0.21	0.00	0.00	0.11	0.00	0.17	0.03	0.00	0.21
Avail Cap(c_a), veh/h	490	0	0	497	0	0	183	0	1030	199	0	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.99	0.95	0.00	0.95
Uniform Delay (d), s/veh	38.9	0.0	0.0	39.1	0.0	0.0	34.0	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.6	0.0	0.0	0.4	0.0	0.4	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	39.4	0.0	0.0	39.7	0.0	0.0	34.4	0.0	0.4	32.5	0.0	0.4
LnGrp LOS	D			D			C		A	C		A
Approach Vol, veh/h		25			33			192			230	
Approach Delay, s/veh		39.4			39.7			3.0			1.0	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	37.0			27.4	11.0	38.0		27.4				
Max Q Clear Time (g_c+Y),s	2.0	2.0		3.4	2.8	2.0		3.8				
Green Ext Time (p_c), s	0.0	1.1		0.1	0.0	1.4		0.1				

Intersection Summary

HCM 2010 Ctrl Delay	6.5
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	30	98	27	12	45	10	15	156	46	13	185	11
Future Volume (veh/h)	30	98	27	12	45	10	15	156	46	13	185	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	107	29	13	49	11	16	170	50	14	201	12
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	216	57	129	225	49	158	923	271	177	1180	70
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1337	2776	728	1248	2893	629	1774	1384	407	1774	1740	104
Grp Volume(v), veh/h	33	67	69	13	29	31	16	0	220	14	0	213
Grp Sat Flow(s),veh/h/ln	1337	1770	1734	1248	1770	1752	1774	0	1791	1774	0	1844
Q Serve(g_s), s	2.1	3.3	3.4	0.9	1.4	1.5	0.7	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	3.6	3.3	3.4	4.4	1.4	1.5	0.7	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.36	1.00		0.23	1.00		0.06
Lane Grp Cap(c), veh/h	162	138	135	129	138	136	158	0	1194	177	0	1250
V/C Ratio(X)	0.20	0.49	0.51	0.10	0.21	0.22	0.10	0.00	0.18	0.08	0.00	0.17
Avail Cap(c_a), veh/h	489	570	559	434	570	564	217	0	1194	217	0	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.00	0.97	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.7	39.8	39.9	42.0	38.9	39.0	34.0	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	0.6	2.6	3.0	0.3	0.8	0.8	0.3	0.0	0.3	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	1.8	0.3	0.7	0.7	0.3	0.0	0.1	0.3	0.0	0.1
LnGrp Delay(d),s/veh	41.3	42.4	42.8	42.3	39.7	39.8	34.3	0.0	0.3	32.8	0.0	0.3
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		169			73			236			227	
Approach Delay, s/veh		42.4			40.2			2.6			2.3	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.0		12.0	12.0	66.0		12.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	36.0			29.0	11.0	36.0		29.0				
Max Q Clear Time (g_c+R),s	2.0			5.6	2.7	2.0		6.4				
Green Ext Time (p_c), s	0.0	1.4		0.8	0.0	1.3		0.3				

Intersection Summary

HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	104	1172	39	13	545	15	22	97	28	27	150	30
Future Volume (veh/h)	104	1172	39	13	545	15	22	97	28	27	150	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	113	1274	42	14	592	16	24	105	30	29	163	33
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	1364	45	119	1374	37	80	546	156	91	599	121
Arrive On Green	0.78	0.78	0.78	0.39	0.39	0.39	0.05	0.39	0.39	0.10	0.80	0.80
Sat Flow, veh/h	809	3497	115	416	3520	95	1774	1394	398	1774	1504	305
Grp Volume(v), veh/h	113	644	672	14	297	311	24	0	135	29	0	196
Grp Sat Flow(s),veh/h/ln	809	1770	1842	416	1770	1846	1774	0	1792	1774	0	1809
Q Serve(g_s), s	8.1	26.5	26.6	2.8	11.1	11.1	1.2	0.0	4.5	1.4	0.0	2.5
Cycle Q Clear(g_c), s	19.2	26.5	26.6	29.4	11.1	11.1	1.2	0.0	4.5	1.4	0.0	2.5
Prop In Lane	1.00		0.06	1.00		0.05	1.00		0.22	1.00		0.17
Lane Grp Cap(c), veh/h	296	690	719	119	690	720	80	0	702	91	0	720
V/C Ratio(X)	0.38	0.93	0.93	0.12	0.43	0.43	0.30	0.00	0.19	0.32	0.00	0.27
Avail Cap(c_a), veh/h	313	728	757	128	728	759	189	0	702	197	0	720
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.59	0.59	0.59	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	11.7	8.9	8.9	38.2	20.1	20.1	41.6	0.0	18.0	38.9	0.0	5.8
Incr Delay (d2), s/veh	0.7	12.7	12.4	0.6	0.6	0.6	2.1	0.0	0.6	1.9	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8	14.2	14.8	0.3	5.5	5.7	0.6	0.0	2.3	0.7	0.0	1.4
LnGrp Delay(d),s/veh	12.4	21.6	21.4	38.8	20.7	20.7	43.7	0.0	18.6	40.8	0.0	6.7
LnGrp LOS	B	C	C	D	C	C	D		B	D		A
Approach Vol, veh/h		1429			622			159			225	
Approach Delay, s/veh		20.8			21.1			22.4			11.1	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	41.2		40.1	8.1	41.8		40.1				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0	28.0		37.0	9.6	28.4		37.0				
Max Q Clear Time (g_c+R), s	3.1	6.5		28.6	3.2	4.5		31.4				
Green Ext Time (p_c), s	0.0	0.9		6.5	0.0	1.5		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				20.1								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			EBT			EBT			EBT	
Traffic Volume (veh/h)	8	371	71	26	307	17	9	27	11	11	76	13
Future Volume (veh/h)	8	371	71	26	307	17	9	27	11	11	76	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	9	403	77	28	334	18	10	29	12	12	83	14
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1214	227	135	1306	69	282	736	299	175	1034	168
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	17	2891	540	125	3110	164	482	1937	787	231	2722	442
Grp Volume(v), veh/h	261	0	228	197	0	183	27	0	24	58	0	51
Grp Sat Flow(s),veh/h/ln	849	0	1600	1733	0	1666	1650	0	1556	1777	0	1617
Q Serve(g_s), s	0.0	0.0	4.8	0.0	0.0	3.6	0.0	0.0	0.5	0.0	0.0	1.0
Cycle Q Clear(g_c), s	4.7	0.0	4.8	3.4	0.0	3.6	0.5	0.0	0.5	1.0	0.0	1.0
Prop In Lane	0.03		0.34	0.14		0.10	0.37		0.51	0.21		0.27
Lane Grp Cap(c), veh/h	851	0	672	810	0	700	726	0	591	762	0	615
V/C Ratio(X)	0.31	0.00	0.34	0.24	0.00	0.26	0.04	0.00	0.04	0.08	0.00	0.08
Avail Cap(c_a), veh/h	851	0	672	810	0	700	726	0	591	762	0	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.89	0.00	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	0.0	9.8	9.4	0.0	9.4	9.8	0.0	9.8	9.9	0.0	9.9
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.1	0.0	0.2	0.1	0.0	0.1	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	2.1	1.8	0.0	1.7	0.3	0.0	0.2	0.5	0.0	0.5
LnGrp Delay(d),s/veh	10.0	0.0	10.1	9.5	0.0	9.6	9.9	0.0	9.9	10.1	0.0	10.2
LnGrp LOS	A		B	A		A	A		A	B		B
Approach Vol, veh/h		489			380			51			109	
Approach Delay, s/veh		10.0			9.6			9.9			10.1	
Approach LOS		B			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		2.5		6.8		3.0		5.6				
Green Ext Time (p_c), s		0.2		2.5		0.4		2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				9.9								
HCM 2010 LOS				A								

Intersection

Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	4	10	25	31	10	6	11	57	10	5	158	3
Future Vol, veh/h	4	10	25	31	10	6	11	57	10	5	158	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	11	27	34	11	7	12	62	11	5	172	3






















Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	283	279	172	289	271	62	175	0	0	73	0	0
Stage 1	182	182	-	86	86	-	-	-	-	-	-	-
Stage 2	101	97	-	203	185	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	669	629	872	663	636	1003	1401	-	-	1527	-	-
Stage 1	820	749	-	922	824	-	-	-	-	-	-	-
Stage 2	905	815	-	799	747	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	650	621	872	627	628	1003	1401	-	-	1527	-	-
Mov Cap-2 Maneuver	650	621	-	627	628	-	-	-	-	-	-	-
Stage 1	813	746	-	914	817	-	-	-	-	-	-	-
Stage 2	879	808	-	760	744	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	10.9	1.1	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1401	-	-	766	659	1527	-
HCM Lane V/C Ratio	0.009	-	-	0.055	0.078	0.004	-
HCM Control Delay (s)	7.6	0	-	10	10.9	7.4	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0	-

HCM 2010 Signalized Intersection Summary
 7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	87	20	12	47	13	16	57	41	31	58	56
Future Volume (veh/h)	23	87	20	12	47	13	16	57	41	31	58	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	25	95	22	13	51	14	17	62	45	34	63	61
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	709	820	697	665	820	697	206	662	442	303	506	469
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1331	1863	1583	1270	1863	1583	303	1743	1162	532	1333	1234
Grp Volume(v), veh/h	25	95	22	13	51	14	66	0	58	85	0	73
Grp Sat Flow(s),veh/h/ln	1331	1863	1583	1270	1863	1583	1718	0	1490	1621	0	1477
Q Serve(g_s), s	0.6	1.5	0.4	0.3	0.8	0.2	0.0	0.0	1.2	0.0	0.0	1.6
Cycle Q Clear(g_c), s	1.3	1.5	0.4	1.8	0.8	0.2	1.1	0.0	1.2	1.5	0.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	0.26		0.78	0.40		0.84
Lane Grp Cap(c), veh/h	709	820	697	665	820	697	743	0	566	717	0	561
V/C Ratio(X)	0.04	0.12	0.03	0.02	0.06	0.02	0.09	0.00	0.10	0.12	0.00	0.13
Avail Cap(c_a), veh/h	709	820	697	665	820	697	743	0	566	717	0	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	8.3	8.0	8.8	8.1	7.9	10.0	0.0	10.0	10.1	0.0	10.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.2	0.1	0.4	0.1	0.6	0.0	0.6	0.8	0.0	0.7
LnGrp Delay(d),s/veh	8.5	8.3	8.0	8.8	8.1	7.9	10.2	0.0	10.4	10.4	0.0	10.6
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		142			78			124			158	
Approach Delay, s/veh		8.3			8.2			10.3			10.5	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.2		3.5		3.6		3.8				
Green Ext Time (p_c), s		0.3		0.3		0.5		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			9.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary

8: 5th Street & F Street

01-24-2024























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗		↑	↖	↗		
Traffic Volume (veh/h)	69	1325	7	7	573	22	5	19	6	13	25	20
Future Volume (veh/h)	69	1325	7	7	573	22	5	19	6	13	25	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	75	1440	8	8	623	24	5	21	7	14	27	22
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	1768	10	135	1702	66	217	860	282	307	558	446
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	781	3609	20	366	3475	134	415	2154	706	626	1397	1116
Grp Volume(v), veh/h	75	706	742	8	317	330	17	0	16	33	0	30
Grp Sat Flow(s),veh/h/ln	781	1770	1859	366	1770	1839	1705	0	1570	1642	0	1498
Q Serve(g_s), s	5.9	30.5	30.5	1.7	10.0	10.0	0.0	0.0	0.5	0.0	0.0	1.1
Cycle Q Clear(g_c), s	16.0	30.5	30.5	32.2	10.0	10.0	0.5	0.0	0.5	1.0	0.0	1.1
Prop In Lane	1.00		0.01	1.00		0.07	0.29		0.45	0.42		0.75
Lane Grp Cap(c), veh/h	375	867	911	135	867	901	732	0	627	712	0	598
V/C Ratio(X)	0.20	0.81	0.81	0.06	0.37	0.37	0.02	0.00	0.02	0.05	0.00	0.05
Avail Cap(c_a), veh/h	461	1062	1116	176	1062	1103	732	0	627	712	0	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	19.5	19.5	33.2	14.3	14.3	16.4	0.0	16.4	16.5	0.0	16.6
Incr Delay (d2), s/veh	0.3	4.1	3.9	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3	15.7	16.5	0.2	4.9	5.1	0.3	0.0	0.2	0.5	0.0	0.5
LnGrp Delay(d),s/veh	19.5	23.6	23.4	33.3	14.5	14.5	16.5	0.0	16.5	16.7	0.0	16.7
LnGrp LOS	B	C	C	C	B	B	B		B	B		B
Approach Vol, veh/h		1523			655			33			63	
Approach Delay, s/veh		23.3			14.7			16.5			16.7	
Approach LOS		C			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.9		49.1		40.9		49.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		54.0		26.0		54.0				
Max Q Clear Time (g_c+I1), s		2.5		32.5		3.1		34.2				
Green Ext Time (p_c), s		0.1		11.6		0.3		4.1				
Intersection Summary												
HCM 2010 Ctrl Delay				20.6								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

01-24-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	350	24	31	421	57	32	265	41	41	181	30
Future Volume (veh/h)	39	350	24	31	421	57	32	265	41	41	181	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	42	380	26	34	458	62	35	288	45	45	197	33
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	787	54	349	763	103	133	440	69	149	450	75
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.18	0.66	0.66	0.10	0.34	0.34
Sat Flow, veh/h	1494	2832	193	1494	2640	356	1494	1325	207	1494	1310	220
Grp Volume(v), veh/h	42	199	207	34	258	262	35	0	333	45	0	230
Grp Sat Flow(s),veh/h/ln	1494	1490	1535	1494	1490	1506	1494	0	1532	1494	0	1530
Q Serve(g_s), s	1.7	10.0	10.1	1.3	13.4	13.5	1.8	0.0	11.6	2.5	0.0	10.5
Cycle Q Clear(g_c), s	1.7	10.0	10.1	1.3	13.4	13.5	1.8	0.0	11.6	2.5	0.0	10.5
Prop In Lane	1.00		0.13	1.00		0.24	1.00		0.14	1.00		0.14
Lane Grp Cap(c), veh/h	299	414	426	349	431	435	133	0	509	149	0	525
V/C Ratio(X)	0.14	0.48	0.48	0.10	0.60	0.60	0.26	0.00	0.65	0.30	0.00	0.44
Avail Cap(c_a), veh/h	299	414	426	349	431	435	133	0	509	149	0	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.00	0.95	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	27.1	27.1	19.1	27.5	27.6	34.5	0.0	12.0	37.6	0.0	22.8
Incr Delay (d2), s/veh	0.9	3.8	3.7	0.6	6.0	6.1	4.5	0.0	6.1	5.1	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.5	4.7	0.6	6.2	6.4	0.9	0.0	5.5	1.2	0.0	4.8
LnGrp Delay(d),s/veh	21.1	30.9	30.8	19.6	33.5	33.6	39.0	0.0	18.1	42.7	0.0	25.5
LnGrp LOS	C	C	C	B	C	C	D		B	D		C
Approach Vol, veh/h		448			554			368			275	
Approach Delay, s/veh		29.9			32.7			20.1			28.3	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	35.0	12.0	30.0	12.0	36.0	11.0	31.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	9.0	29.9	8.0	25.0	8.0	30.9	7.0	26.0				
Max Q Clear Time (g_c+I1), s	4.5	13.6	3.3	12.1	3.8	12.5	3.7	15.5				
Green Ext Time (p_c), s	0.0	1.8	0.0	1.9	0.0	1.2	0.0	2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				28.4								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	19	27	12	10	25	15	31	311	15	5	231	9
Future Volume (veh/h)	19	27	12	10	25	15	31	311	15	5	231	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	21	29	13	11	27	16	34	338	16	5	251	10
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	62	23	62	66	33	133	997	47	149	1022	41
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	336	798	295	175	846	430	1494	1486	70	1494	1498	60
Grp Volume(v), veh/h	63	0	0	54	0	0	34	0	354	5	0	261
Grp Sat Flow(s),veh/h/ln	428	0	0	1450	0	0	1494	0	1556	1494	0	1558
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	3.6	0.0	0.0	3.1	0.0	0.0	1.8	0.0	0.0	0.2	0.0	0.0
Prop In Lane	0.33		0.21	0.20		0.30	1.00		0.05	1.00		0.04
Lane Grp Cap(c), veh/h	164	0	0	161	0	0	133	0	1044	149	0	1063
V/C Ratio(X)	0.38	0.00	0.00	0.34	0.00	0.00	0.26	0.00	0.34	0.03	0.00	0.25
Avail Cap(c_a), veh/h	471	0	0	476	0	0	166	0	1044	166	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.97	0.00	0.97	0.93	0.00	0.93
Uniform Delay (d), s/veh	39.9	0.0	0.0	39.7	0.0	0.0	34.4	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.0	0.0	1.2	0.0	0.0	1.0	0.0	0.9	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6	0.0	0.0	1.3	0.0	0.0	0.8	0.0	0.2	0.1	0.0	0.2
LnGrp Delay(d),s/veh	41.4	0.0	0.0	40.9	0.0	0.0	35.4	0.0	0.9	32.6	0.0	0.5
LnGrp LOS	D			D			D		A	C		A
Approach Vol, veh/h		63			54			388			266	
Approach Delay, s/veh		41.4			40.9			3.9			1.1	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc)	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc), s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax), s	39.0			27.4	10.0	39.0		27.4				
Max Q Clear Time (g_c+R), s	2.0			5.6	3.8	2.0		5.1				
Green Ext Time (p_c), s	0.0	2.4		0.2	0.0	1.7		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				8.6								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖		↖	↖	
Traffic Volume (veh/h)	14	52	9	45	163	13	21	297	21	15	254	26
Future Volume (veh/h)	14	52	9	45	163	13	21	297	21	15	254	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	15	57	10	49	177	14	23	323	23	16	276	28
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	271	46	175	298	23	158	1126	80	177	1108	112
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1187	3024	517	1329	3326	261	1774	1719	122	1774	1664	169
Grp Volume(v), veh/h	15	33	34	49	93	98	23	0	346	16	0	304
Grp Sat Flow(s),veh/h/ln	1863	1770	1771	1329	1770	1817	1774	0	1841	1774	0	1833
Q Serve(g_s), s	1.1	1.5	1.6	3.2	4.6	4.6	1.0	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	5.8	1.5	1.6	4.8	4.6	4.6	1.0	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.14	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	125	159	159	175	159	163	158	0	1206	177	0	1221
V/C Ratio(X)	0.12	0.21	0.22	0.28	0.59	0.60	0.15	0.00	0.29	0.09	0.00	0.25
Avail Cap(c_a), veh/h	388	551	551	470	551	565	217	0	1206	217	0	1221
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.00	0.88	0.98	0.00	0.98
Uniform Delay (d), s/veh	2.2	38.0	38.0	40.3	39.4	39.4	34.1	0.0	0.0	32.7	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.6	0.7	0.9	3.5	3.5	0.4	0.0	0.5	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.8	0.8	1.2	2.4	2.5	0.5	0.0	0.2	0.3	0.0	0.2
LnGrp Delay(d),s/veh	42.6	38.6	38.7	41.1	42.8	42.9	34.5	0.0	0.5	32.9	0.0	0.5
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		82			240			369			320	
Approach Delay, s/veh		39.4			42.5			2.6			2.1	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	63.9		13.1	12.0	64.9		13.1				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	37.0			28.0	11.0	37.0		28.0				
Max Q Clear Time (g_c+R), s	2.0			7.8	3.0	2.0		6.8				
Green Ext Time (p_c), s	0.0	2.3		0.3	0.0	2.0		1.1				

Intersection Summary

HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	29	746	39	32	939	35	74	279	49	43	173	57
Future Volume (veh/h)	29	746	39	32	939	35	74	279	49	43	173	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	811	42	35	1021	38	80	303	53	47	188	62
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	1263	65	241	1283	48	153	611	107	123	507	167
Arrive On Green	0.74	0.74	0.74	0.37	0.37	0.37	0.09	0.40	0.40	0.14	0.76	0.76
Sat Flow, veh/h	531	3424	177	644	3480	130	1774	1545	270	1774	1342	443
Grp Volume(v), veh/h	32	419	434	35	519	540	80	0	356	47	0	250
Grp Sat Flow(s),veh/h/ln	531	1770	1831	644	1770	1840	1774	0	1815	1774	0	1785
Q Serve(g_s), s	4.9	10.6	10.6	3.9	23.6	23.6	3.9	0.0	13.3	2.2	0.0	4.3
Cycle Q Clear(g_c), s	28.4	10.6	10.6	14.5	23.6	23.6	3.9	0.0	13.3	2.2	0.0	4.3
Prop In Lane	1.00		0.10	1.00		0.07	1.00		0.15	1.00		0.25
Lane Grp Cap(c), veh/h	137	653	675	241	653	678	153	0	718	123	0	675
V/C Ratio(X)	0.23	0.64	0.64	0.14	0.80	0.80	0.52	0.00	0.50	0.38	0.00	0.37
Avail Cap(c_a), veh/h	147	688	712	254	688	716	189	0	718	197	0	675
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	21.7	8.9	8.9	26.7	25.4	25.4	39.3	0.0	20.5	37.0	0.0	7.3
Incr Delay (d2), s/veh	1.0	1.9	1.8	0.4	6.6	6.4	2.7	0.0	2.4	1.9	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7	5.2	5.4	0.7	12.7	13.2	2.0	0.0	7.1	1.1	0.0	2.2
LnGrp Delay(d),s/veh	22.8	10.7	10.7	27.1	32.0	31.8	42.1	0.0	22.9	38.9	0.0	8.9
LnGrp LOS	C	B	B	C	C	C	D		C	D		A
Approach Vol, veh/h		885			1094			436			297	
Approach Delay, s/veh		11.1			31.7			26.4			13.6	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	10.2	41.6		38.2	11.8	40.0		38.2				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax),s	30.0			35.0	9.6	30.4		35.0				
Max Q Clear Time (g_c+R),s	15.3			30.4	5.9	6.3		25.6				
Green Ext Time (p_c), s	0.0	2.6		2.7	0.0	2.1		5.9				
Intersection Summary												
HCM 2010 Ctrl Delay					22.2							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			WBT			NBT			SBT	
Traffic Volume (veh/h)	13	387	32	10	471	20	36	67	15	10	31	22
Future Volume (veh/h)	13	387	32	10	471	20	36	67	15	10	31	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	14	421	35	11	512	22	39	73	16	11	34	24
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	1336	109	83	1407	60	415	736	166	236	648	425
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	33	3182	259	21	3349	142	796	1937	437	375	1706	1119
Grp Volume(v), veh/h	247	0	223	286	0	259	69	0	59	37	0	32
Grp Sat Flow(s),veh/h/ln	825	0	1649	1842	0	1670	1552	0	1618	1702	0	1498
Q Serve(g_s), s	0.0	0.0	4.5	0.0	0.0	5.3	0.0	0.0	1.2	0.0	0.0	0.7
Cycle Q Clear(g_c), s	4.4	0.0	4.5	5.3	0.0	5.3	1.2	0.0	1.2	0.6	0.0	0.7
Prop In Lane	0.06		0.16	0.04		0.09	0.57		0.27	0.30		0.75
Lane Grp Cap(c), veh/h	842	0	693	848	0	701	703	0	615	740	0	569
V/C Ratio(X)	0.29	0.00	0.32	0.34	0.00	0.37	0.10	0.00	0.10	0.05	0.00	0.06
Avail Cap(c_a), veh/h	842	0	693	848	0	701	703	0	615	740	0	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.78	0.00	0.78	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	0.0	9.7	9.9	0.0	10.0	10.0	0.0	10.0	9.8	0.0	9.8
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.2	0.0	0.3	0.3	0.0	0.3	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.1	2.7	0.0	2.5	0.7	0.0	0.6	0.3	0.0	0.3
LnGrp Delay(d),s/veh	9.9	0.0	10.0	10.1	0.0	10.2	10.3	0.0	10.3	9.9	0.0	10.0
LnGrp LOS	A		A	B		B	B		B	A		B
Approach Vol, veh/h		470			545			128			69	
Approach Delay, s/veh		9.9			10.2			10.3			10.0	
Approach LOS		A			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		3.2		6.5		2.7		7.3				
Green Ext Time (p_c), s		0.5		2.4		0.2		2.8				

Intersection Summary

HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Intersection

Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	4	13	8	29	27	28	14	90	6	12	44	12
Future Vol, veh/h	4	13	8	29	27	28	14	90	6	12	44	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	14	9	32	29	30	15	98	7	13	48	13

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	235	209	48	220	215	98	61	0	0	105	0	0
Stage 1	74	74	-	128	128	-	-	-	-	-	-	-
Stage 2	161	135	-	92	87	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	720	688	1021	736	683	958	1542	-	-	1486	-	-
Stage 1	935	833	-	876	790	-	-	-	-	-	-	-
Stage 2	841	785	-	915	823	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	664	675	1021	708	670	958	1542	-	-	1486	-	-
Mov Cap-2 Maneuver	664	675	-	708	670	-	-	-	-	-	-	-
Stage 1	926	826	-	867	782	-	-	-	-	-	-	-
Stage 2	776	777	-	884	816	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	10.4	0.9	1.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1542	-	-	755	760	1486	-
HCM Lane V/C Ratio	0.01	-	-	0.036	0.12	0.009	-
HCM Control Delay (s)	7.4	0	-	9.9	10.4	7.4	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-

HCM 2010 Signalized Intersection Summary
 7: F Street & 6th Street

01-31-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	49	14	13	181	15	32	63	15	13	70	32
Future Volume (veh/h)	14	49	14	13	181	15	32	63	15	13	70	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	15	53	15	14	197	16	35	68	16	14	76	35
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	579	820	697	706	820	697	395	729	177	175	815	349
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1164	1863	1583	1328	1863	1583	747	1919	467	232	2146	919
Grp Volume(v), veh/h	15	53	15	14	197	16	64	0	55	67	0	58
Grp Sat Flow(s),veh/h/ln	1164	1863	1583	1328	1863	1583	1520	0	1613	1764	0	1533
Q Serve(g_s), s	0.4	0.8	0.3	0.3	3.3	0.3	0.0	0.0	1.1	0.0	0.0	1.2
Cycle Q Clear(g_c), s	3.7	0.8	0.3	1.1	3.3	0.3	1.1	0.0	1.1	1.1	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	0.55		0.29	0.21		0.60
Lane Grp Cap(c), veh/h	579	820	697	706	820	697	689	0	613	758	0	583
V/C Ratio(X)	0.03	0.06	0.02	0.02	0.24	0.02	0.09	0.00	0.09	0.09	0.00	0.10
Avail Cap(c_a), veh/h	579	820	697	706	820	697	689	0	613	758	0	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	0.96	0.00	0.96	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.9	8.1	7.9	8.4	8.8	7.9	10.0	0.0	10.0	10.0	0.0	10.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	0.1	0.1	1.7	0.1	0.6	0.0	0.5	0.6	0.0	0.6
LnGrp Delay(d),s/veh	9.9	8.1	7.9	8.4	8.8	7.9	10.2	0.0	10.2	10.2	0.0	10.3
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		83			227			119			125	
Approach Delay, s/veh		8.4			8.7			10.2			10.3	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.1		5.7		3.2		5.3				
Green Ext Time (p_c), s		0.3		0.2		0.3		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			9.3									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↶	↷		↶	↷
Traffic Volume (veh/h)	63	743	37	10	1023	17	25	32	14	20	41	87
Future Volume (veh/h)	63	743	37	10	1023	17	25	32	14	20	41	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	68	808	40	11	1112	18	27	35	15	22	45	95
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	1576	78	269	1637	26	437	599	273	262	512	619
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	496	3432	170	647	3564	58	859	1394	635	486	1192	1441
Grp Volume(v), veh/h	68	417	431	11	552	578	40	0	37	67	0	95
Grp Sat Flow(s),veh/h/ln	496	1770	1833	647	1770	1853	1305	0	1583	1678	0	1441
Q Serve(g_s), s	11.2	15.0	15.0	1.1	22.1	22.1	0.3	0.0	1.2	0.0	0.0	3.6
Cycle Q Clear(g_c), s	33.3	15.0	15.0	16.1	22.1	22.1	3.9	0.0	1.2	1.9	0.0	3.6
Prop In Lane	1.00		0.09	1.00		0.03	0.68		0.40	0.33		1.00
Lane Grp Cap(c), veh/h	186	813	842	269	813	851	628	0	680	774	0	619
V/C Ratio(X)	0.37	0.51	0.51	0.04	0.68	0.68	0.06	0.00	0.05	0.09	0.00	0.15
Avail Cap(c_a), veh/h	250	1042	1079	353	1042	1091	628	0	680	774	0	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.58	0.58	0.58	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.2	17.2	17.2	22.9	19.1	19.1	15.3	0.0	15.0	15.2	0.0	15.7
Incr Delay (d2), s/veh	1.2	0.5	0.5	0.0	0.7	0.7	0.2	0.0	0.2	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6	7.4	7.7	0.2	10.9	11.4	0.6	0.0	0.6	1.0	0.0	1.5
LnGrp Delay(d),s/veh	33.4	17.7	17.7	22.9	19.8	19.8	15.4	0.0	15.1	15.4	0.0	16.2
LnGrp LOS	C	B	B	C	B	B	B		B	B		B
Approach Vol, veh/h		916			1141			77			162	
Approach Delay, s/veh		18.9			19.9			15.3			15.9	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.7		46.3		43.7		46.3				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		27.0		53.0		27.0		53.0				
Max Q Clear Time (g_c+I1), s		5.9		35.3		5.6		24.1				
Green Ext Time (p_c), s		0.3		6.0		0.9		9.1				





















Intersection Summary

HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

01-24-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	455	34	51	418	71	15	130	20	56	209	26
Future Volume (veh/h)	16	455	34	51	418	71	15	130	20	56	209	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	17	495	37	55	454	77	16	141	22	61	227	28
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	812	61	313	766	129	133	411	64	166	455	56
Arrive On Green	0.08	0.29	0.29	0.09	0.30	0.30	0.18	0.62	0.62	0.11	0.33	0.33
Sat Flow, veh/h	1494	2812	210	1494	2552	430	1494	1325	207	1494	1370	169
Grp Volume(v), veh/h	17	262	270	55	264	267	16	0	163	61	0	255
Grp Sat Flow(s),veh/h/ln	1494	1490	1532	1494	1490	1493	1494	0	1532	1494	0	1539
Q Serve(g_s), s	0.7	13.6	13.7	2.1	13.6	13.7	0.8	0.0	4.6	3.4	0.0	11.9
Cycle Q Clear(g_c), s	0.7	13.6	13.7	2.1	13.6	13.7	0.8	0.0	4.6	3.4	0.0	11.9
Prop In Lane	1.00		0.14	1.00		0.29	1.00		0.13	1.00		0.11
Lane Grp Cap(c), veh/h	304	431	442	313	447	448	133	0	475	166	0	511
V/C Ratio(X)	0.06	0.61	0.61	0.18	0.59	0.60	0.12	0.00	0.34	0.37	0.00	0.50
Avail Cap(c_a), veh/h	304	431	442	313	447	448	133	0	475	166	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	27.6	27.6	19.2	26.8	26.9	34.0	0.0	12.7	37.1	0.0	24.1
Incr Delay (d2), s/veh	0.3	5.6	5.5	1.2	5.6	5.8	1.8	0.0	1.9	6.2	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.3	6.5	1.0	6.3	6.4	0.4	0.0	2.2	1.7	0.0	5.5
LnGrp Delay(d),s/veh	19.5	33.2	33.2	20.4	32.4	32.6	35.9	0.0	14.6	43.2	0.0	27.5
LnGrp LOS	B	C	C	C	C	C	D		B	D		C
Approach Vol, veh/h		549			586			179			316	
Approach Delay, s/veh		32.8			31.4			16.5			30.5	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	33.0	12.0	31.0	12.0	35.0	11.0	32.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	10.0	27.9	8.0	26.0	8.0	29.9	7.0	27.0				
Max Q Clear Time (g_c+I1), s	5.4	6.6	4.1	15.7	2.8	13.9	2.7	15.7				
Green Ext Time (p_c), s	0.0	0.8	0.0	2.3	0.0	1.3	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay				30.1								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	4	21	7	4	30	7	15	180	25	6	252	17
Future Volume (veh/h)	4	21	7	4	30	7	15	180	25	6	252	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	4	23	8	4	33	8	16	196	27	7	274	18
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	83	26	48	91	21	133	906	125	149	993	65
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	78	1064	338	61	1172	267	1494	1350	186	1494	1456	96
Grp Volume(v), veh/h	35	0	0	45	0	0	16	0	223	7	0	292
Grp Sat Flow(s),veh/h/ln	480	0	0	1500	0	0	1494	0	1536	1494	0	1552
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0	2.5	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.0
Prop In Lane	0.11		0.23	0.09		0.18	1.00		0.12	1.00		0.06
Lane Grp Cap(c), veh/h	160	0	0	160	0	0	133	0	1031	149	0	1059
V/C Ratio(X)	0.22	0.00	0.00	0.28	0.00	0.00	0.12	0.00	0.22	0.05	0.00	0.28
Avail Cap(c_a), veh/h	504	0	0	511	0	0	166	0	1031	183	0	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.98	0.00	0.98	0.90	0.00	0.90
Uniform Delay (d), s/veh	39.2	0.0	0.0	39.4	0.0	0.0	34.0	0.0	0.0	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.5	0.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	1.1	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.2
LnGrp Delay(d),s/veh	39.9	0.0	0.0	40.4	0.0	0.0	34.4	0.0	0.5	32.7	0.0	0.6
LnGrp LOS	D			D			C		A	C		A
Approach Vol, veh/h		35			45			239			299	
Approach Delay, s/veh		39.9			40.4			2.7			1.3	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.4		11.6	12.0	66.4		11.6				
Change Period (Y+Rc),s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	37.0			28.4	10.0	38.0		28.4				
Max Q Clear Time (g_c+R),s	2.0			4.0	2.8	2.0		4.5				
Green Ext Time (p_c), s	0.0	1.4		0.1	0.0	1.9		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				6.9								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	35	127	35	16	58	13	20	194	60	17	239	15
Future Volume (veh/h)	35	127	35	16	58	13	20	194	60	17	239	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	138	38	17	63	14	22	211	65	18	260	16
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	248	66	128	260	56	158	895	276	177	1157	71
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1317	2764	738	1204	2898	624	1774	1367	421	1774	1737	107
Grp Volume(v), veh/h	38	87	89	17	38	39	22	0	276	18	0	276
Grp Sat Flow(s),veh/h/ln	1317	1770	1732	1204	1770	1753	1774	0	1788	1774	0	1844
Q Serve(g_s), s	2.5	4.2	4.4	1.2	1.8	1.9	0.9	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	4.4	4.2	4.4	5.7	1.8	1.9	0.9	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.43	1.00		0.36	1.00		0.24	1.00		0.06
Lane Grp Cap(c), veh/h	170	159	155	128	159	157	158	0	1171	177	0	1228
V/C Ratio(X)	0.22	0.55	0.57	0.13	0.24	0.25	0.14	0.00	0.24	0.10	0.00	0.22
Avail Cap(c_a), veh/h	477	570	558	408	570	565	217	0	1171	217	0	1228
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	0.99	0.99	0.99	1.00	1.00	1.00	0.91	0.00	0.91	0.97	0.00	0.97
Uniform Delay (d), s/veh	40.2	39.2	39.3	42.1	38.1	38.2	34.1	0.0	0.0	32.7	0.0	0.0
Incr Delay (d2), s/veh	0.6	2.9	3.3	0.5	0.8	0.8	0.4	0.0	0.4	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.2	2.3	0.4	0.9	0.9	0.5	0.0	0.1	0.4	0.0	0.1
LnGrp Delay(d),s/veh	40.8	42.1	42.6	42.5	38.9	39.0	34.5	0.0	0.4	32.9	0.0	0.4
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		214			94			298			294	
Approach Delay, s/veh		42.1			39.6			2.9			2.4	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	63.9		13.1	12.0	64.9		13.1				
Change Period (Y+Rc),s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	36.0			29.0	11.0	36.0		29.0				
Max Q Clear Time (g_c+R),s	2.0			6.4	2.9	2.0		7.7				
Green Ext Time (p_c), s	0.0	1.8		1.0	0.0	1.7		0.4				

Intersection Summary

HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	131	1510	51	17	702	19	29	123	37	35	194	39
Future Volume (veh/h)	131	1510	51	17	702	19	29	123	37	35	194	39
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	142	1641	55	18	763	21	32	134	40	38	211	42
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	1398	47	80	1407	39	98	513	153	109	571	114
Arrive On Green	0.80	0.80	0.80	0.40	0.40	0.40	0.06	0.37	0.37	0.12	0.76	0.76
Sat Flow, veh/h	687	3495	117	288	3518	97	1774	1379	412	1774	1509	300
Grp Volume(v), veh/h	142	828	868	18	384	400	32	0	174	38	0	253
Grp Sat Flow(s),veh/h/ln	687	1770	1842	288	1770	1846	1774	0	1790	1774	0	1810
Q Serve(g_s), s	16.9	36.0	36.0	0.0	14.9	15.0	1.6	0.0	6.1	1.8	0.0	4.3
Cycle Q Clear(g_c), s	31.8	36.0	36.0	36.0	14.9	15.0	1.6	0.0	6.1	1.8	0.0	4.3
Prop In Lane	1.00		0.06	1.00		0.05	1.00		0.23	1.00		0.17
Lane Grp Cap(c), veh/h	241	708	737	80	708	738	98	0	666	109	0	685
V/C Ratio(X)	0.59	1.17	1.18	0.22	0.54	0.54	0.33	0.00	0.26	0.35	0.00	0.37
Avail Cap(c_a), veh/h	241	708	737	80	708	738	187	0	666	197	0	685
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.40	0.40	0.40	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	15.4	9.0	9.0	45.0	20.7	20.7	40.9	0.0	19.7	37.8	0.0	7.3
Incr Delay (d2), s/veh	1.9	83.1	85.9	2.0	1.1	1.1	1.9	0.0	1.0	1.9	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	32.1	34.4	0.5	7.5	7.8	0.8	0.0	3.2	0.9	0.0	2.2
LnGrp Delay(d),s/veh	17.2	92.1	94.9	47.0	21.8	21.7	42.8	0.0	20.6	39.7	0.0	8.8
LnGrp LOS	B	F	F	D	C	C	D		C	D		A
Approach Vol, veh/h		1838			802			206			291	
Approach Delay, s/veh		87.7			22.3			24.1			12.9	
Approach LOS		F			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.5	39.5		41.0	9.0	40.0		41.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	29.0			36.0	9.5	29.5		36.0				
Max Q Clear Time (g_c+Rc), s	8.1			38.0	3.6	6.3		38.0				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	2.1		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	59.8
HCM 2010 LOS	E

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			WBT			NBT			SBT	
Traffic Volume (veh/h)	11	478	91	33	394	22	12	35	15	15	96	17
Future Volume (veh/h)	11	478	91	33	394	22	12	35	15	15	96	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	12	520	99	36	428	24	13	38	16	16	104	18
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	1211	227	134	1292	71	278	731	303	182	1021	170
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	20	2883	540	122	3076	168	472	1924	797	248	2687	448
Grp Volume(v), veh/h	337	0	294	250	0	238	36	0	31	73	0	65
Grp Sat Flow(s),veh/h/ln	843	0	1600	1701	0	1665	1639	0	1554	1767	0	1616
Q Serve(g_s), s	0.0	0.0	6.5	0.0	0.0	4.8	0.0	0.0	0.6	0.0	0.0	1.3
Cycle Q Clear(g_c), s	6.4	0.0	6.5	4.5	0.0	4.8	0.6	0.0	0.6	1.3	0.0	1.3
Prop In Lane	0.04		0.34	0.14		0.10	0.36		0.51	0.22		0.28
Lane Grp Cap(c), veh/h	849	0	672	797	0	699	721	0	591	759	0	614
V/C Ratio(X)	0.40	0.00	0.44	0.31	0.00	0.34	0.05	0.00	0.05	0.10	0.00	0.11
Avail Cap(c_a), veh/h	849	0	672	797	0	699	721	0	591	759	0	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.79	0.00	0.79	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	0.0	10.3	9.7	0.0	9.8	9.8	0.0	9.8	10.0	0.0	10.0
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.2	0.0	0.2	0.1	0.0	0.2	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	2.9	2.3	0.0	2.2	0.3	0.0	0.3	0.7	0.0	0.6
LnGrp Delay(d),s/veh	10.6	0.0	10.7	9.9	0.0	10.0	9.9	0.0	10.0	10.3	0.0	10.4
LnGrp LOS	B		B	A		B	A		A	B		B
Approach Vol, veh/h		631			488			67			138	
Approach Delay, s/veh		10.7			10.0			10.0			10.3	
Approach LOS		B			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		2.6		8.5		3.3		6.8				
Green Ext Time (p_c), s		0.2		3.2		0.6		2.6				
Intersection Summary												
HCM 2010 Ctrl Delay				10.3								
HCM 2010 LOS				B								

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	6	13	33	37	13	8	15	74	13	7	200	4
Future Vol, veh/h	6	13	33	37	13	8	15	74	13	7	200	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	14	36	40	14	9	16	80	14	8	217	4






















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	364	359	217	372	349	80	221	0	0	94	0	0
Stage 1	233	233	-	112	112	-	-	-	-	-	-	-
Stage 2	131	126	-	260	237	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	592	568	823	585	575	980	1348	-	-	1500	-	-
Stage 1	770	712	-	893	803	-	-	-	-	-	-	-
Stage 2	873	792	-	745	709	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	567	557	823	541	564	980	1348	-	-	1500	-	-
Mov Cap-2 Maneuver	567	557	-	541	564	-	-	-	-	-	-	-
Stage 1	760	708	-	881	793	-	-	-	-	-	-	-
Stage 2	839	782	-	694	705	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	11.9	1.1	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1348	-	-	703	582	1500	-
HCM Lane V/C Ratio	0.012	-	-	0.08	0.108	0.005	-
HCM Control Delay (s)	7.7	0	-	10.6	11.9	7.4	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0	-

HCM 2010 Signalized Intersection Summary
7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	113	26	16	61	17	21	74	53	36	72	73
Future Volume (veh/h)	30	113	26	16	61	17	21	74	53	36	72	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	33	123	28	17	66	18	23	80	58	39	78	79
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	693	820	697	637	820	697	212	652	439	281	507	486
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1308	1863	1583	1231	1863	1583	317	1716	1155	480	1335	1279
Grp Volume(v), veh/h	33	123	28	17	66	18	86	0	75	105	0	91
Grp Sat Flow(s),veh/h/ln	1308	1863	1583	1231	1863	1583	1697	0	1491	1625	0	1469
Q Serve(g_s), s	0.8	2.0	0.5	0.4	1.0	0.3	0.0	0.0	1.6	0.0	0.0	2.0
Cycle Q Clear(g_c), s	1.8	2.0	0.5	2.4	1.0	0.3	1.5	0.0	1.6	1.9	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	0.27		0.77	0.37		0.87
Lane Grp Cap(c), veh/h	693	820	697	637	820	697	736	0	567	716	0	558
V/C Ratio(X)	0.05	0.15	0.04	0.03	0.08	0.03	0.12	0.00	0.13	0.15	0.00	0.16
Avail Cap(c_a), veh/h	693	820	697	637	820	697	736	0	567	716	0	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	8.4	8.0	9.1	8.1	7.9	10.1	0.0	10.1	10.2	0.0	10.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.5	0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	0.2	0.1	0.5	0.1	0.8	0.0	0.7	1.0	0.0	0.9
LnGrp Delay(d),s/veh	8.7	8.4	8.0	9.1	8.1	7.9	10.4	0.0	10.6	10.6	0.0	10.9
LnGrp LOS	A	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		184			101			161			196	
Approach Delay, s/veh		8.4			8.3			10.5			10.7	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.6		4.0		4.0		4.4				
Green Ext Time (p_c), s		0.5		0.5		0.6		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			9.6									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Volume (veh/h)	89	1703	10	10	738	29	7	25	8	17	32	24
Future Volume (veh/h)	89	1703	10	10	738	29	7	25	8	17	32	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	97	1851	11	11	802	32	8	27	9	18	35	26
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	384	2118	13	117	2038	81	199	627	207	244	440	321
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	656	3607	21	245	3470	138	483	2077	686	620	1460	1064
Grp Volume(v), veh/h	97	907	955	11	409	425	23	0	21	42	0	37
Grp Sat Flow(s),veh/h/ln	656	1770	1859	245	1770	1838	1672	0	1574	1638	0	1507
Q Serve(g_s), s	8.4	39.1	39.2	3.6	11.2	11.2	0.0	0.0	0.8	0.0	0.0	1.6
Cycle Q Clear(g_c), s	19.6	39.1	39.2	42.8	11.2	11.2	0.8	0.0	0.8	1.5	0.0	1.6
Prop In Lane	1.00		0.01	1.00		0.08	0.34		0.44	0.43		0.71
Lane Grp Cap(c), veh/h	384	1039	1092	117	1039	1080	558	0	475	551	0	455
V/C Ratio(X)	0.25	0.87	0.87	0.09	0.39	0.39	0.04	0.00	0.04	0.08	0.00	0.08
Avail Cap(c_a), veh/h	407	1101	1157	126	1101	1144	558	0	475	551	0	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.2	15.7	15.8	33.9	10.0	10.0	22.2	0.0	22.2	22.5	0.0	22.5
Incr Delay (d2), s/veh	0.3	7.6	7.4	0.3	0.2	0.2	0.1	0.0	0.2	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5	21.1	22.1	0.3	5.5	5.7	0.4	0.0	0.4	0.8	0.0	0.7
LnGrp Delay(d),s/veh	15.6	23.3	23.1	34.2	10.2	10.2	22.4	0.0	22.4	22.7	0.0	22.8
LnGrp LOS	B	C	C	C	B	B	C		C	C		C
Approach Vol, veh/h		1959			845			44			79	
Approach Delay, s/veh		22.9			10.5			22.4			22.8	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.1		57.9		32.1		57.9				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		24.0		56.0		24.0		56.0				
Max Q Clear Time (g_c+I1), s		2.8		41.2		3.6		44.8				
Green Ext Time (p_c), s		0.1		11.6		0.3		4.2				





















Intersection Summary

HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary

1: E Street & 9th Street

01-24-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	472	33	42	567	77	42	355	54	56	244	41
Future Volume (veh/h)	53	472	33	42	567	77	42	355	54	56	244	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1569	1569	1600	1569	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	58	513	36	46	616	84	46	386	59	61	265	45
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	785	55	305	762	104	133	418	64	168	442	75
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.18	0.63	0.63	0.11	0.34	0.34
Sat Flow, veh/h	1494	2826	198	1494	2637	359	1494	1330	203	1494	1307	222
Grp Volume(v), veh/h	58	270	279	46	348	352	46	0	445	61	0	310
Grp Sat Flow(s),veh/h/ln	1494	1490	1534	1494	1490	1505	1494	0	1533	1494	0	1529
Q Serve(g_s), s	2.3	14.4	14.5	1.8	19.5	19.6	2.4	0.0	23.1	3.4	0.0	15.2
Cycle Q Clear(g_c), s	2.3	14.4	14.5	1.8	19.5	19.6	2.4	0.0	23.1	3.4	0.0	15.2
Prop In Lane	1.00		0.13	1.00		0.24	1.00		0.13	1.00		0.15
Lane Grp Cap(c), veh/h	249	414	426	305	431	435	133	0	482	168	0	517
V/C Ratio(X)	0.23	0.65	0.65	0.15	0.81	0.81	0.35	0.00	0.92	0.36	0.00	0.60
Avail Cap(c_a), veh/h	249	414	426	305	431	435	133	0	482	168	0	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	0.88	0.00	0.88	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	28.7	28.7	19.5	29.7	29.7	34.7	0.0	15.7	37.0	0.0	24.8
Incr Delay (d2), s/veh	1.9	7.0	6.8	1.0	15.0	15.0	6.2	0.0	23.4	6.0	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.7	6.9	0.8	9.8	9.9	1.2	0.0	12.5	1.7	0.0	7.1
LnGrp Delay(d),s/veh	23.2	35.6	35.5	20.6	44.6	44.7	40.9	0.0	39.2	43.0	0.0	29.8
LnGrp LOS	C	D	D	C	D	D	D		D	D		C
Approach Vol, veh/h		607			746			491			371	
Approach Delay, s/veh		34.4			43.2			39.3			32.0	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	33.4	12.5	30.0	12.0	35.5	11.5	31.0				
Change Period (Y+Rc), s	4.0	5.1	4.0	5.0	4.0	5.1	4.0	5.0				
Max Green Setting (Gmax), s	10.1	28.3	8.5	25.0	8.0	30.4	7.5	26.0				
Max Q Clear Time (g_c+I1), s	5.4	25.1	3.8	16.5	4.4	17.2	4.3	21.6				
Green Ext Time (p_c), s	0.0	0.8	0.0	2.2	0.0	1.5	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				38.1								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	26	37	17	14	34	21	38	413	19	7	311	13
Future Volume (veh/h)	26	37	17	14	34	21	38	413	19	7	311	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1600	1569	1600	1600	1569	1600	1569	1569	1600	1569	1569	1600
Adj Flow Rate, veh/h	28	40	18	15	37	23	41	449	21	8	338	14
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	65	25	63	68	37	133	992	46	149	1014	42
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	360	791	304	189	835	453	1494	1487	70	1494	1496	62
Grp Volume(v), veh/h	86	0	0	75	0	0	41	0	470	8	0	352
Grp Sat Flow(s),veh/h/ln	455	0	0	1476	0	0	1494	0	1556	1494	0	1558
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	0.0	4.3	0.0	0.0	2.1	0.0	0.0	0.4	0.0	0.0
Prop In Lane	0.33		0.21	0.20		0.31	1.00		0.04	1.00		0.04
Lane Grp Cap(c), veh/h	172	0	0	169	0	0	133	0	1038	149	0	1056
V/C Ratio(X)	0.50	0.00	0.00	0.44	0.00	0.00	0.31	0.00	0.45	0.05	0.00	0.33
Avail Cap(c_a), veh/h	457	0	0	462	0	0	143	0	1038	159	0	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.00	0.92	0.82	0.00	0.82
Uniform Delay (d), s/veh	40.2	0.0	0.0	39.9	0.0	0.0	34.6	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	1.8	0.0	0.0	1.2	0.0	1.3	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2	0.0	0.0	1.9	0.0	0.0	0.9	0.0	0.4	0.2	0.0	0.2
LnGrp Delay(d),s/veh	42.4	0.0	0.0	41.8	0.0	0.0	35.8	0.0	1.3	32.7	0.0	0.7
LnGrp LOS	D			D			D		A	C		A
Approach Vol, veh/h		86			75			511			360	
Approach Delay, s/veh		42.4			41.8			4.1			1.4	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	65.0		12.0	12.0	66.0		12.0				
Change Period (Y+Rc),s	4.0	5.0		4.6	4.0	5.0		4.6				
Max Green Setting (Gmax),s	40.4			26.4	8.6	41.4		26.4				
Max Q Clear Time (g_c+R),s	2.0			7.0	4.1	2.0		6.3				
Green Ext Time (p_c), s	0.0	3.4		0.4	0.0	2.4		0.3				

Intersection Summary

HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	17	70	13	61	220	18	29	396	29	21	342	35
Future Volume (veh/h)	17	70	13	61	220	18	29	396	29	21	342	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	18	76	14	66	239	20	32	430	32	23	372	38
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	336	60	195	371	31	158	1083	81	177	1070	109
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.18	1.00	1.00	0.20	1.00	1.00
Sat Flow, veh/h	1116	2999	539	1301	3309	275	1774	1713	127	1774	1663	170
Grp Volume(v), veh/h	18	44	46	66	127	132	32	0	462	23	0	410
Grp Sat Flow(s),veh/h/ln	1116	1770	1768	1301	1770	1814	1774	0	1840	1774	0	1833
Q Serve(g_s), s	1.4	2.0	2.1	4.4	6.2	6.3	1.4	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	7.7	2.0	2.1	6.5	6.2	6.3	1.4	0.0	0.0	1.0	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.15	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	127	199	198	195	199	204	158	0	1164	177	0	1179
V/C Ratio(X)	0.14	0.22	0.23	0.34	0.64	0.65	0.20	0.00	0.40	0.13	0.00	0.35
Avail Cap(c_a), veh/h	337	531	530	440	531	544	177	0	1164	197	0	1179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.54	0.00	0.54	0.94	0.00	0.94
Uniform Delay (d), s/veh	41.9	36.4	36.4	39.4	38.2	38.3	34.3	0.0	0.0	32.8	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.6	0.6	1.0	3.4	3.5	0.3	0.0	0.5	0.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	1.1	1.6	3.2	3.3	0.7	0.0	0.2	0.5	0.0	0.3
LnGrp Delay(d),s/veh	42.4	36.9	37.0	40.4	41.6	41.7	34.6	0.0	0.5	33.1	0.0	0.8
LnGrp LOS	D	D	D	D	D	D	C		A	C		A
Approach Vol, veh/h		108			325			494			433	
Approach Delay, s/veh		37.9			41.4			2.8			2.5	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	3.0	61.9		15.1	12.0	62.9		15.1				
Change Period (Y+Rc),s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax),s	39.0			27.0	9.0	40.0		27.0				
Max Q Clear Time (g_c+bl),s	2.0			9.7	3.4	2.0		8.5				
Green Ext Time (p_c), s	0.0	3.3		0.4	0.0	2.9		1.5				

Intersection Summary

HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	37	1005	53	44	1264	47	100	375	66	58	233	77
Future Volume (veh/h)	37	1005	53	44	1264	47	100	375	66	58	233	77
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	40	1092	58	48	1374	51	109	408	72	63	253	84
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	1406	75	204	1431	53	166	529	93	141	440	146
Arrive On Green	0.82	0.82	0.82	0.41	0.41	0.41	0.09	0.34	0.34	0.16	0.66	0.66
Sat Flow, veh/h	375	3419	182	487	3481	129	1774	1543	272	1774	1340	445
Grp Volume(v), veh/h	40	565	585	48	698	727	109	0	480	63	0	337
Grp Sat Flow(s),veh/h/ln	375	1770	1831	487	1770	1840	1774	0	1815	1774	0	1784
Q Serve(g_s), s	2.4	14.1	14.2	7.3	34.5	34.6	5.3	0.0	21.3	2.9	0.0	9.4
Cycle Q Clear(g_c), s	37.0	14.1	14.2	21.5	34.5	34.6	5.3	0.0	21.3	2.9	0.0	9.4
Prop In Lane	1.00		0.10	1.00		0.07	1.00		0.15	1.00		0.25
Lane Grp Cap(c), veh/h	90	728	753	204	728	756	166	0	622	141	0	587
V/C Ratio(X)	0.45	0.78	0.78	0.24	0.96	0.96	0.66	0.00	0.77	0.45	0.00	0.57
Avail Cap(c_a), veh/h	90	728	753	204	728	756	203	0	622	197	0	587
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.00	0.94
Uniform Delay (d), s/veh	26.2	6.0	6.0	27.8	25.8	25.8	39.4	0.0	26.4	36.1	0.0	11.9
Incr Delay (d2), s/veh	4.0	4.6	4.5	0.8	23.8	23.7	5.5	0.0	9.0	2.1	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1	7.2	7.4	1.0	21.5	22.4	2.9	0.0	12.2	1.5	0.0	5.1
LnGrp Delay(d),s/veh	30.2	10.6	10.4	28.6	49.6	49.5	44.9	0.0	35.4	38.2	0.0	15.8
LnGrp LOS	C	B	B	C	D	D	D		D	D		B
Approach Vol, veh/h		1190			1473			589			400	
Approach Delay, s/veh		11.2			48.9			37.2			19.3	
Approach LOS		B			D			D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	36.9		42.0	12.4	35.6		42.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0				
Max Green Setting (Gmax), s	28.0			37.0	10.3	27.7		37.0				
Max Q Clear Time (g_c+Rc), s	23.3			39.0	7.3	11.4		36.6				
Green Ext Time (p_c), s	0.0	1.7		0.0	0.1	2.5		0.3				

Intersection Summary

HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		EBT			WBT			NBT			SBT	
Traffic Volume (veh/h)	18	521	43	14	633	27	49	91	21	14	41	30
Future Volume (veh/h)	18	521	43	14	633	27	49	91	21	14	41	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	20	566	47	15	688	29	53	99	23	15	45	33
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	1324	108	85	1402	58	412	725	173	237	632	433
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	40	3153	257	24	3339	139	787	1909	455	376	1664	1139
Grp Volume(v), veh/h	331	0	302	384	0	348	93	0	82	50	0	43
Grp Sat Flow(s),veh/h/ln	800	0	1650	1831	0	1671	1536	0	1615	1685	0	1494
Q Serve(g_s), s	0.0	0.0	6.5	0.0	0.0	7.6	0.1	0.0	1.7	0.0	0.0	0.9
Cycle Q Clear(g_c), s	6.3	0.0	6.5	7.5	0.0	7.6	1.7	0.0	1.7	0.9	0.0	0.9
Prop In Lane	0.06		0.16	0.04		0.08	0.57		0.28	0.30		0.76
Lane Grp Cap(c), veh/h	833	0	693	844	0	702	696	0	614	734	0	568
V/C Ratio(X)	0.40	0.00	0.44	0.45	0.00	0.50	0.13	0.00	0.13	0.07	0.00	0.08
Avail Cap(c_a), veh/h	833	0	693	844	0	702	696	0	614	734	0	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.52	0.00	0.52	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.2	0.0	10.3	10.6	0.0	10.6	10.1	0.0	10.1	9.9	0.0	9.9
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.2	0.0	0.3	0.4	0.0	0.4	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	3.0	3.9	0.0	3.5	0.9	0.0	0.8	0.5	0.0	0.4
LnGrp Delay(d),s/veh	10.5	0.0	10.7	10.8	0.0	10.9	10.5	0.0	10.6	10.1	0.0	10.2
LnGrp LOS	B		B	B		B	B		B	B		B
Approach Vol, veh/h		633			732			175			93	
Approach Delay, s/veh		10.6			10.8			10.5			10.1	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		26.0		24.0		26.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		19.0		21.0		19.0		21.0				
Max Q Clear Time (g_c+I1), s		3.7		8.5		2.9		9.6				
Green Ext Time (p_c), s		0.8		3.2		0.4		3.6				
Intersection Summary												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								

Intersection

Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	↔
Traffic Vol, veh/h	6	18	11	35	37	38	19	122	9	17	57	17
Future Vol, veh/h	6	18	11	35	37	38	19	122	9	17	57	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	20	12	38	40	41	21	133	10	18	62	18






















Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	319	283	62	298	291	133	80	0	0	143	0	0
Stage 1	98	98	-	175	175	-	-	-	-	-	-	-
Stage 2	221	185	-	123	116	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	634	626	1003	654	619	916	1518	-	-	1440	-	-
Stage 1	908	814	-	827	754	-	-	-	-	-	-	-
Stage 2	781	747	-	881	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	562	608	1003	617	602	916	1518	-	-	1440	-	-
Mov Cap-2 Maneuver	562	608	-	617	602	-	-	-	-	-	-	-
Stage 1	894	803	-	815	743	-	-	-	-	-	-	-
Stage 2	695	736	-	838	790	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	11.3	0.9	1.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1518	-	-	683	689	1440	-
HCM Lane V/C Ratio	0.014	-	-	0.056	0.174	0.013	-
HCM Control Delay (s)	7.4	0	-	10.6	11.3	7.5	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.2	0.6	0	-

HCM 2010 Signalized Intersection Summary
 7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	66	19	18	244	21	44	85	21	16	91	44
Future Volume (veh/h)	19	66	19	18	244	21	44	85	21	16	91	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	72	21	20	265	23	48	92	23	17	99	48
Adj No. of Lanes	1	1	1	1	1	1	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	521	820	697	686	820	697	392	712	184	164	809	364
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1087	1863	1583	1298	1863	1583	737	1875	484	206	2130	958
Grp Volume(v), veh/h	21	72	21	20	265	23	87	0	76	88	0	76
Grp Sat Flow(s),veh/h/ln	1087	1863	1583	1298	1863	1583	1486	0	1610	1767	0	1526
Q Serve(g_s), s	0.6	1.1	0.4	0.5	4.6	0.4	0.0	0.0	1.5	0.0	0.0	1.6
Cycle Q Clear(g_c), s	5.3	1.1	0.4	1.6	4.6	0.4	1.6	0.0	1.5	1.5	0.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	0.55		0.30	0.19		0.63
Lane Grp Cap(c), veh/h	521	820	697	686	820	697	677	0	612	758	0	580
V/C Ratio(X)	0.04	0.09	0.03	0.03	0.32	0.03	0.13	0.00	0.12	0.12	0.00	0.13
Avail Cap(c_a), veh/h	521	820	697	686	820	697	677	0	612	758	0	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	0.84	0.00	0.84	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.9	8.2	7.9	8.6	9.1	8.0	10.1	0.0	10.1	10.1	0.0	10.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.4	0.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.2	0.2	2.4	0.2	0.8	0.0	0.7	0.8	0.0	0.8
LnGrp Delay(d),s/veh	10.9	8.2	8.0	8.6	9.2	8.0	10.4	0.0	10.4	10.4	0.0	10.6
LnGrp LOS	B	A	A	A	A	A	B		B	B		B
Approach Vol, veh/h		114			308			163				164
Approach Delay, s/veh		8.6			9.1			10.4				10.5
Approach LOS		A			A			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		26.5		23.5		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		22.0		19.0		22.0				
Max Q Clear Time (g_c+I1), s		3.6		7.3		3.6		6.6				
Green Ext Time (p_c), s		0.5		0.2		0.5		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			9.6									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Volume (veh/h)	85	998	50	14	1377	23	34	44	19	27	55	115
Future Volume (veh/h)	85	998	50	14	1377	23	34	44	19	27	55	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	92	1085	54	15	1497	25	37	48	21	29	60	125
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	2071	103	287	2150	36	274	377	176	182	351	411
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	341	3431	171	492	3562	59	721	1322	618	450	1230	1441
Grp Volume(v), veh/h	92	559	580	15	743	779	52	0	54	89	0	125
Grp Sat Flow(s),veh/h/ln	341	1770	1833	492	1770	1852	1075	0	1586	1681	0	1441
Q Serve(g_s), s	22.7	16.5	16.5	1.6	25.8	25.9	1.7	0.0	2.3	0.0	0.0	6.1
Cycle Q Clear(g_c), s	48.6	16.5	16.5	18.1	25.8	25.9	7.8	0.0	2.3	3.2	0.0	6.1
Prop In Lane	1.00		0.09	1.00		0.03	0.71		0.39	0.33		1.00
Lane Grp Cap(c), veh/h	188	1068	1106	287	1068	1118	375	0	453	533	0	411
V/C Ratio(X)	0.49	0.52	0.52	0.05	0.70	0.70	0.14	0.00	0.12	0.17	0.00	0.30
Avail Cap(c_a), veh/h	194	1101	1140	296	1101	1153	375	0	453	533	0	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.29	0.29	0.29	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.9	10.3	10.3	15.6	12.2	12.2	26.1	0.0	23.8	24.1	0.0	25.2
Incr Delay (d2), s/veh	2.0	0.4	0.4	0.0	0.6	0.5	0.8	0.0	0.5	0.7	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2	8.1	8.3	0.2	12.5	13.1	1.1	0.0	1.1	1.8	0.0	2.6
LnGrp Delay(d),s/veh	30.8	10.8	10.8	15.6	12.7	12.7	26.9	0.0	24.3	24.8	0.0	27.1
LnGrp LOS	C	B	B	B	B	B	C		C	C		C
Approach Vol, veh/h		1231			1537			106			214	
Approach Delay, s/veh		12.3			12.8			25.6			26.1	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.7		59.3		30.7		59.3				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		24.0		56.0		24.0		56.0				
Max Q Clear Time (g_c+I1), s		9.8		50.6		8.1		27.9				
Green Ext Time (p_c), s		0.4		3.7		1.1		13.9				

Intersection Summary

HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

APPENDIX E

Intersection Capacity Utilization Reports

Intersection Capacity Utilization
1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	11	332	24	36	304	51	6	90	10	40	152	18
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	11	356	0	36	355	0	6	100	0	40	170	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3016	0	1520	2981	0	1520	1576	0	1520	1575	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	0.9	14.2	0.0	2.8	14.3	0.0	0.5	7.6	0.0	3.2	13.0	0.0
Adj Reference Time (s)	11.0	19.2	0.0	12.0	19.3	0.0	12.0	15.1	0.0	13.0	18.1	0.0
Permitted Option												
Adj Saturation A (vph)	101	1508		101	1490		101	1576		101	1575	
Reference Time A (s)	13.0	14.2		42.6	14.3		7.1	7.6		47.4	13.0	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1575	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		11.2	13.0	
Reference Time (s)		14.2			42.6			7.6			13.0	
Adj Reference Time (s)		19.2			47.6			15.1			18.1	
Split Option												
Ref Time Combined (s)	0.9	14.2		2.8	14.3		0.5	7.6		3.2	13.0	
Ref Time Seperate (s)	0.9	13.2		2.8	12.2		0.5	6.9		3.2	11.6	
Reference Time (s)	14.2	14.2		14.3	14.3		7.6	7.6		13.0	13.0	
Adj Reference Time (s)	19.2	19.2		19.3	19.3		15.1	15.1		18.1	18.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	31.2		30.1									
Permitted Option (s)	47.6		18.1									
Split Option (s)	38.5		33.2									
Minimum (s)	31.2		18.1		49.2							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	41.0%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	2	15	4	2	21	4	2	120	14	3	183	12
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	21	0	0	27	0	2	134	0	3	195	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1547	0	0	1559	0	1520	1575	0	1520	1585	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)			0.0			0.0	0.2	10.2	0.0	0.2	14.8	0.0
Adj Reference Time (s)			0.0			0.0	12.0	15.2	0.0	13.0	19.8	0.0
Permitted Option												
Adj Saturation A (vph)	0	1106		0	1256		101	1575		101	1585	
Reference Time A (s)	0.0	2.3		0.0	2.6		2.4	10.2		3.6	14.8	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.2	9.6		8.2	10.1		NA	NA		NA	NA	
Reference Time (s)			2.3			2.6			10.2			14.8
Adj Reference Time (s)			11.6			11.6			15.2			19.8
Split Option												
Ref Time Combined (s)	0.0	1.6		0.0	2.1		0.2	10.2		0.2	14.8	
Ref Time Seperate (s)	0.2	1.2		0.2	1.6		0.2	9.1		0.2	13.9	
Reference Time (s)	1.6	1.6		2.1	2.1		10.2	10.2		14.8	14.8	
Adj Reference Time (s)	11.6	11.6		11.6	11.6		15.2	15.2		19.8	19.8	
Summary												
Protected Option (s)	NA		31.8									
Permitted Option (s)	11.6		19.8									
Split Option (s)	23.2		35.0									
Minimum (s)	11.6		19.8		31.4							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	26.1%		ICU Level of Service				A					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	14	92	25	11	42	7	14	123	43	12	174	10
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	14	117	0	11	49	0	14	166	0	12	184	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.96	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3502	0	1805	3540	0	1805	1826	0	1805	1885	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	0.9	4.0	0.0	0.7	1.7	0.0	0.9	10.9	0.0	0.8	11.7	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	15.9	0.0	13.0	16.7	0.0
Permitted Option												
Adj Saturation A (vph)	120	1751		120	1770		120	1826		120	1885	
Reference Time A (s)	14.0	4.0		11.0	1.7		14.0	10.9		12.0	11.7	
Adj Saturation B (vph)	0	3502		0	3540		NA	NA		NA	NA	
Reference Time B (s)	8.9	4.0		8.7	1.7		NA	NA		NA	NA	
Reference Time (s)		8.9			8.7			14.0			12.0	
Adj Reference Time (s)		13.9			13.7			19.0			17.0	
Split Option												
Ref Time Combined (s)	0.9	4.0		0.7	1.7		0.9	10.9		0.8	11.7	
Ref Time Seperate (s)	0.9	3.2		0.7	1.4		0.9	8.1		0.8	11.1	
Reference Time (s)	4.0	4.0		1.7	1.7		10.9	10.9		11.7	11.7	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		15.9	15.9		16.7	16.7	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.0		28.9									
Permitted Option (s)	13.9		19.0									
Split Option (s)	24.0		32.6									
Minimum (s)	13.9		19.0		32.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	27.4%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	85	1104	36	12	513	10	20	83	26	25	141	28
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	85	1140	0	12	523	0	20	109	0	25	169	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1805	3600	0	1805	3607	0	1805	1832	0	1805	1853	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	5.7	38.0	0.0	0.8	17.4	0.0	1.3	7.1	0.0	1.7	10.9	0.0
Adj Reference Time (s)	14.0	43.0	0.0	14.0	22.4	0.0	13.0	15.0	0.0	13.0	16.9	0.0
Permitted Option												
Adj Saturation A (vph)	120	1800		120	1804		120	1832		120	1853	
Reference Time A (s)	84.8	38.0		12.0	17.4		19.9	7.1		24.9	10.9	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1853	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		9.7	10.9	
Reference Time (s)		84.8			17.4			19.9			10.9	
Adj Reference Time (s)		89.8			22.4			25.9			16.9	
Split Option												
Ref Time Combined (s)	5.7	38.0		0.8	17.4		1.3	7.1		1.7	10.9	
Ref Time Seperate (s)	5.7	36.8		0.8	17.1		1.3	5.4		1.7	9.1	
Reference Time (s)	38.0	38.0		17.4	17.4		7.1	7.1		10.9	10.9	
Adj Reference Time (s)	43.0	43.0		22.4	22.4		15.0	15.0		16.9	16.9	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	57.0		29.9									
Permitted Option (s)	89.8		25.9									
Split Option (s)	65.4		31.9									
Minimum (s)	57.0		25.9		82.9							

Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												

Intersection Summary												
Intersection Capacity Utilization	69.1%		ICU Level of Service						C			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	7	349	63	22	284	16	8	25	10	10	64	12
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	419	0	0	322	0	0	43	0	0	86	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	3533	0	0	3578	0	0	3459	0	0	3521	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	No			No			No			No		
Reference Time (s)	0.0			0.0			0.0			0.0		
Adj Reference Time (s)	0.0			0.0			0.0			0.0		
Permitted Option												
Adj Saturation A (vph)	0	1168	0	465	0	115	0	227	0	12.2	0	227
Reference Time A (s)	0.0	20.1	0.0	30.2	0.0	8.3	0.0	12.2	0.0	12.2	0.0	12.2
Adj Saturation B (vph)	NA	NA	NA	NA	0	1731	0	1766	0	1766	0	1766
Reference Time B (s)	NA	NA	NA	NA	8.5	5.5	8.7	6.9	8.7	6.9	8.7	6.9
Reference Time (s)	20.1		30.2			8.3			8.7			
Adj Reference Time (s)	26.0		35.2			22.0			22.0			
Split Option												
Ref Time Combined (s)	0.0	14.2	0.0	10.8	0.0	1.5	0.0	2.9	0.0	2.9	0.0	2.9
Ref Time Seperate (s)	0.5	11.8	1.5	9.5	0.5	0.9	0.7	2.2	0.7	2.2	0.7	2.2
Reference Time (s)	14.2	14.2	10.8	10.8	1.5	1.5	2.9	2.9	2.9	2.9	2.9	2.9
Adj Reference Time (s)	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Summary												
Protected Option (s)	NA		NA			NA			NA			
Permitted Option (s)	35.2		22.0			22.0			22.0			
Split Option (s)	52.0		44.0			44.0			44.0			
Minimum (s)	35.2		22.0			57.2			57.2			
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	47.7%		ICU Level of Service			A			A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑	↑		↑	↑
Volume (vph)	3	9	23	18	9	5	10	53	9	4	134	2
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	35	0	0	32	0	0	63	9	0	138	2
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	1705	0	0	1803	0	0	1885	1615	0	1897	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		No		No		No		No	
Reference Time (s)	0.0		0.0		0.0		0.7		0.7		0.1	
Adj Reference Time (s)	0.0		0.0		0.0		8.0		8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1713	0	0	459	0	0	557	0	0	1343	0
Reference Time A (s)	0.0	2.5	0.0	0.0	8.4	0.0	0.0	13.6	0.0	0.0	12.3	0.0
Adj Saturation B (vph)	0	0	0	0	0	NA	NA	NA	0	0	0	0
Reference Time B (s)	8.2	10.5	9.2	9.2	10.1	NA	NA	NA	8.3	8.3	16.7	16.7
Reference Time (s)	2.5		2.5		8.4		13.6		13.6		12.3	
Adj Reference Time (s)	8.0		8.0		12.4		17.6		17.6		16.3	
Split Option												
Ref Time Combined (s)	0.0	2.5	0.0	0.0	2.1	0.0	0.0	4.0	0.0	0.0	8.7	8.7
Ref Time Seperate (s)	0.2	0.6	1.2	1.2	0.6	0.7	0.7	3.3	0.3	0.3	8.5	8.5
Reference Time (s)	2.5	2.5	2.1	2.1	2.1	4.0	4.0	4.0	8.7	8.7	8.7	8.7
Adj Reference Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	12.7	12.7	12.7	12.7
Summary												
Protected Option (s)	NA		NA		NA		NA		NA		NA	
Permitted Option (s)	12.4		17.6		17.6		17.6		17.6		17.6	
Split Option (s)	16.0		20.7		20.7		20.7		20.7		20.7	
Minimum (s)	12.4		17.6		29.9		29.9		29.9		29.9	
Right Turns												
Adj Reference Time (s)	8.0		8.0		8.0		8.0		8.0		8.0	
Cross Thru Ref Time (s)	8.0		8.0		8.0		8.0		8.0		8.0	
Oncoming Left Ref Time (s)	12.7		8.0		8.0		8.0		8.0		8.0	
Combined (s)	28.7		24.0		24.0		24.0		24.0		24.0	

Intersection Summary			
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Reference Times and Phasing Options do not represent an optimized timing plan.			

Intersection Capacity Utilization

7: F Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	82	18	11	44	12	15	53	38	15	44	52
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	21	82	18	11	44	12	0	106	0	0	111	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.92	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3399	0	0	3341	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00				0.00			0.00		
Protected Option Allowed	Yes			Yes			No			No		
Reference Time (s)	1.4	5.2	1.3	0.7	2.8	0.9			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	155		0	166	
Reference Time A (s)	20.9	5.2		11.0	2.8		0.0	17.8		0.0	18.4	
Adj Saturation B (vph)	0	1900		0	1900		0	1696		0	1662	
Reference Time B (s)	9.4	5.2		8.7	2.8		9.0	7.8		9.0	8.0	
Reference Time (s)		9.4			8.7			9.0			9.0	
Adj Reference Time (s)		26.5			26.5			23.5			23.5	
Split Option												
Ref Time Combined (s)	1.4	5.2		0.7	2.8		0.0	3.7		0.0	4.0	
Ref Time Seperate (s)	1.4	5.2		0.7	2.8		1.0	1.9		1.0	1.6	
Reference Time (s)	5.2	5.2		2.8	2.8		3.7	3.7		4.0	4.0	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		23.5									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		23.5		50.0							
Right Turns												
	EBR		WBR									
Adj Reference Time (s)	26.5		26.5									
Cross Thru Ref Time (s)	23.5		23.5									
Oncoming Left Ref Time (s)	26.5		26.5									
Combined (s)	76.5		76.5									

Intersection Summary
 Intersection Capacity Utilization 63.7% ICU Level of Service B
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↷			↷	
Volume (vph)	65	1236	6	6	540	20	4	17	5	12	20	11
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	65	1242	0	6	560	0	0	26	0	0	43	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.95	0.85
Saturated Flow (vph)	1805	3615	0	1805	3598	0	0	3486	0	0	3430	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			No			No			
Reference Time (s)	4.3	41.2	0.0	0.4	18.7	0.0			0.0			0.0
Adj Reference Time (s)	29.0	46.2	0.0	29.0	29.0	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1807		120	1799		0	136		0	114	
Reference Time A (s)	64.8	41.2		6.0	18.7		0.0	4.4		0.0	12.6	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1747		0	1713	
Reference Time B (s)	NA	NA		NA	NA		8.3	4.9		8.8	5.5	
Reference Time (s)		64.8			18.7			4.4			8.8	
Adj Reference Time (s)		69.8			29.0			12.0			13.8	
Split Option												
Ref Time Combined (s)	4.3	41.2		0.4	18.7		0.0	0.9		0.0	1.5	
Ref Time Seperate (s)	4.3	41.0		0.4	18.0		0.3	0.6		0.8	0.7	
Reference Time (s)	41.2	41.2		18.7	18.7		0.9	0.9		1.5	1.5	
Adj Reference Time (s)	46.2	46.2		29.0	29.0		12.0	12.0		12.0	12.0	
Summary												
Protected Option (s)	75.2		NA									
Permitted Option (s)	69.8		13.8									
Split Option (s)	75.2		24.0									
Minimum (s)	69.8		13.8			83.6						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	69.7%		ICU Level of Service			C						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↖	↕		↗	↕	
Volume (vph)	36	329	22	29	395	53	25	243	33	38	170	28
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	36	351	0	29	448	0	25	276	0	38	198	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3018	0	1520	2992	0	1520	1571	0	1520	1566	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	2.8	14.0	0.0	2.3	18.0	0.0	2.0	21.1	0.0	3.0	15.2	0.0
Adj Reference Time (s)	11.0	19.0	0.0	12.0	23.0	0.0	12.0	26.2	0.0	13.0	20.3	0.0
Permitted Option												
Adj Saturation A (vph)	101	1509		101	1496		101	1571		101	1566	
Reference Time A (s)	42.6	14.0		34.3	18.0		29.6	21.1		45.0	15.2	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		42.6			34.3			29.6			45.0	
Adj Reference Time (s)		47.6			39.3			34.7			50.1	
Split Option												
Ref Time Combined (s)	2.8	14.0		2.3	18.0		2.0	21.1		3.0	15.2	
Ref Time Seperate (s)	2.8	13.1		2.3	15.8		2.0	18.6		3.0	13.0	
Reference Time (s)	14.0	14.0		18.0	18.0		21.1	21.1		15.2	15.2	
Adj Reference Time (s)	19.0	19.0		23.0	23.0		26.2	26.2		20.3	20.3	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	34.0		39.2									
Permitted Option (s)	47.6		50.1									
Split Option (s)	41.9		46.4									
Minimum (s)	34.0		39.2		73.1							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	61.0%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	17	25	11	9	23	14	17	277	9	4	217	8
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	53	0	0	46	0	17	286	0	4	225	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1525	0	0	1512	0	1520	1592	0	1520	1591	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00				0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)			0.0			0.0	1.3	21.6	0.0	0.3	17.0	0.0
Adj Reference Time (s)			0.0			0.0	12.0	26.6	0.0	13.0	22.0	0.0
Permitted Option												
Adj Saturation A (vph)	0	924	0		1310	101		1592	101		1591	
Reference Time A (s)	0.0	6.9	0.0		4.2	20.1		21.6	4.7		17.0	
Adj Saturation B (vph)	0	0	0		0	NA		NA	NA		NA	
Reference Time B (s)	9.3	12.2	8.7		11.7	NA		NA	NA		NA	
Reference Time (s)	6.9		4.2				21.6			17.0		
Adj Reference Time (s)	11.6		11.6				26.6			22.0		
Split Option												
Ref Time Combined (s)	0.0	4.2	0.0		3.7	1.3		21.6	0.3		17.0	
Ref Time Seperate (s)	1.3	2.0	0.7		1.8	1.3		20.9	0.3		16.4	
Reference Time (s)	4.2	4.2	3.7		3.7	21.6		21.6	17.0		17.0	
Adj Reference Time (s)	11.6	11.6	11.6		11.6	26.6		26.6	22.0		22.0	
Summary												
Protected Option (s)	NA		39.6									
Permitted Option (s)	11.6		26.6									
Split Option (s)	23.2		48.5									
Minimum (s)	11.6		26.6			38.2						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	31.8%		ICU Level of Service					A				
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	49	8	42	153	11	19	267	19	14	239	24
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	6	57	0	42	164	0	19	286	0	14	263	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3541	0	1805	3581	0	1805	1881	0	1805	1874	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	0.4	1.9	0.0	2.8	5.5	0.0	1.3	18.2	0.0	0.9	16.8	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	23.2	0.0	13.0	21.8	0.0
Permitted Option												
Adj Saturation A (vph)	120	1771		120	1791		120	1881		120	1874	
Reference Time A (s)	6.0	1.9		41.9	5.5		18.9	18.2		14.0	16.8	
Adj Saturation B (vph)	NA	NA		0	3581		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		10.8	5.5		NA	NA		NA	NA	
Reference Time (s)		6.0			10.8			18.9			16.8	
Adj Reference Time (s)		12.0			15.8			23.9			21.8	
Split Option												
Ref Time Combined (s)	0.4	1.9		2.8	5.5		1.3	18.2		0.9	16.8	
Ref Time Seperate (s)	0.4	1.7		2.8	5.1		1.3	17.0		0.9	15.3	
Reference Time (s)	1.9	1.9		5.5	5.5		18.2	18.2		16.8	16.8	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		23.2	23.2		21.8	21.8	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.0		36.2									
Permitted Option (s)	15.8		23.9									
Split Option (s)	24.0		45.1									
Minimum (s)	15.8		23.9		39.7							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	33.1%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Volume (vph)	21	703	36	30	885	31	69	259	46	40	163	53
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	21	739	0	30	916	0	69	305	0	40	216	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.96	0.85
Saturated Flow (vph)	1805	3591	0	1805	3599	0	1805	1857	0	1805	1830	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	1.4	24.7	0.0	2.0	30.5	0.0	4.6	19.7	0.0	2.7	14.2	0.0
Adj Reference Time (s)	14.0	29.7	0.0	14.0	35.5	0.0	13.0	25.7	0.0	13.0	20.2	0.0
Permitted Option												
Adj Saturation A (vph)	120	1796		120	1800		120	1857		120	1830	
Reference Time A (s)	20.9	24.7		29.9	30.5		68.8	19.7		39.9	14.2	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		24.7			30.5			68.8			39.9	
Adj Reference Time (s)		29.7			35.5			74.8			45.9	
Split Option												
Ref Time Combined (s)	1.4	24.7		2.0	30.5		4.6	19.7		2.7	14.2	
Ref Time Seperate (s)	1.4	23.5		2.0	29.5		4.6	16.7		2.7	10.7	
Reference Time (s)	24.7	24.7		30.5	30.5		19.7	19.7		14.2	14.2	
Adj Reference Time (s)	29.7	29.7		35.5	35.5		25.7	25.7		20.2	20.2	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	49.5		38.7									
Permitted Option (s)	35.5		74.8									
Split Option (s)	65.2		45.9									
Minimum (s)	35.5		38.7		74.2							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	61.9%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	12	364	28	8	439	18	33	63	14	9	25	20
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	404	0	0	465	0	0	110	0	0	54	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.97	0.85	0.95	0.94	0.85
Saturated Flow (vph)	0	3575	0	0	3594	0	0	3495	0	0	3388	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	903		0	1175		0	117		0	113	
Reference Time A (s)	0.0	23.7		0.0	22.1		0.0	34.0		0.0	9.6	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1759		0	1688	
Reference Time B (s)	NA	NA		NA	NA		10.2	7.7		8.6	5.9	
Reference Time (s)		23.7			22.1			10.2			8.6	
Adj Reference Time (s)		28.7			27.1			22.0			22.0	
Split Option												
Ref Time Combined (s)	0.0	13.6		0.0	15.5		0.0	3.8		0.0	1.9	
Ref Time Seperate (s)	0.8	12.2		0.5	14.6		2.2	2.1		0.6	0.9	
Reference Time (s)	13.6	13.6		15.5	15.5		3.8	3.8		1.9	1.9	
Adj Reference Time (s)	26.0	26.0		26.0	26.0		22.0	22.0		22.0	22.0	
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	28.7		22.0									
Split Option (s)	52.0		44.0									
Minimum (s)	28.7		22.0		50.7							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	42.2%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	3	12	7	16	25	26	13	84	5	11	34	11
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	22	0	0	67	0	0	97	5	0	45	11
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.93	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1797	0	0	1768	0	0	1887	1615	0	1877	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	No		No			No			No		No	
Reference Time (s)	0.0		0.0			0.4			0.8		0.8	
Adj Reference Time (s)	0.0		0.0			8.0			8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1548	0	1061	0	629	0	395	0	0	0	395
Reference Time A (s)	0.0	1.7	0.0	7.6	0.0	18.5	0.0	13.7	0.0	0.0	0.0	13.7
Adj Saturation B (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Reference Time B (s)	8.2	9.5	9.1	12.5	8.9	14.2	8.7	10.9	8.7	10.9	8.7	10.9
Reference Time (s)	1.7		7.6			14.2			10.9		10.9	
Adj Reference Time (s)	8.0		11.6			18.2			14.9		14.9	
Split Option												
Ref Time Combined (s)	0.0	1.5	0.0	4.5	0.0	6.2	0.0	2.9	0.0	0.0	2.9	2.9
Ref Time Seperate (s)	0.2	0.8	1.1	1.7	0.9	5.3	0.7	2.1	0.7	0.7	2.1	2.1
Reference Time (s)	1.5	1.5	4.5	4.5	6.2	6.2	2.9	2.9	2.9	2.9	2.9	2.9
Adj Reference Time (s)	8.0	8.0	8.5	8.5	10.2	10.2	8.0	8.0	8.0	8.0	8.0	8.0
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	11.6		18.2									
Split Option (s)	16.5		18.2									
Minimum (s)	11.6		18.2			29.7						
Right Turns												
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	8.0		8.5									
Oncoming Left Ref Time (s)	8.0		10.2									
Combined (s)	24.0		26.7									

Intersection Summary
 Intersection Capacity Utilization 24.8% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: F Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	46	13	12	170	14	30	59	14	5	54	30
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	13	46	13	12	170	14	0	103	0	0	89	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.95	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3492	0	0	3425	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00				0.00		0.00		0.00	
Protected Option Allowed	Yes		Yes				No		No		No	
Reference Time (s)	0.9	2.9	1.0	0.8	10.7	1.0			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	116		0	540	
Reference Time A (s)	13.0	2.9		12.0	10.7		0.0	30.9		0.0	7.7	
Adj Saturation B (vph)	NA	NA		0	1900		0	1757		0	1712	
Reference Time B (s)	NA	NA		8.8	10.7		10.0	7.5		8.3	7.1	
Reference Time (s)		13.0			10.7			10.0			7.7	
Adj Reference Time (s)		26.5			26.5			23.5			23.5	
Split Option												
Ref Time Combined (s)	0.9	2.9		0.8	10.7		0.0	3.5		0.0	3.1	
Ref Time Seperate (s)	0.9	2.9		0.8	10.7		2.0	2.0		0.3	1.9	
Reference Time (s)	2.9	2.9		10.7	10.7		3.5	3.5		3.1	3.1	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		23.5									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		23.5		50.0							
Right Turns												
	EBR		WBR									
Adj Reference Time (s)	26.5		26.5									
Cross Thru Ref Time (s)	23.5		23.5									
Oncoming Left Ref Time (s)	26.5		26.5									
Combined (s)	76.5		76.5									

Intersection Summary
 Intersection Capacity Utilization 63.7% ICU Level of Service B
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↶↷			↶↷	
Volume (vph)	59	694	34	9	964	16	23	30	13	18	35	74
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	59	728	0	9	980	0	0	66	0	0	127	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.91	0.85
Saturated Flow (vph)	1805	3592	0	1805	3609	0	0	3450	0	0	3278	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	Yes		Yes			No			No			
Reference Time (s)	3.9	24.3	0.0	0.6	32.6	0.0			0.0			0.0
Adj Reference Time (s)	29.0	29.3	0.0	29.0	37.6	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1796		120	1804		0	115		0	149	
Reference Time A (s)	58.8	24.3		9.0	32.6		0.0	24.0		0.0	22.1	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1727		0	1625	
Reference Time B (s)	NA	NA		NA	NA		9.5	6.3		9.2	8.7	
Reference Time (s)		58.8			32.6			9.5			9.2	
Adj Reference Time (s)		63.8			37.6			14.5			14.2	
Split Option												
Ref Time Combined (s)	3.9	24.3		0.6	32.6		0.0	2.3		0.0	4.6	
Ref Time Seperate (s)	3.9	23.2		0.6	32.1		1.5	1.0		1.2	1.3	
Reference Time (s)	24.3	24.3		32.6	32.6		2.3	2.3		4.6	4.6	
Adj Reference Time (s)	29.3	29.3		37.6	37.6		12.0	12.0		12.0	12.0	
Summary												
Protected Option (s)	66.6		NA									
Permitted Option (s)	63.8		14.5									
Split Option (s)	66.9		24.0									
Minimum (s)	63.8		14.5			78.4						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	65.3%		ICU Level of Service			C						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	12	353	26	39	323	55	7	96	11	43	162	20
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	12	379	0	39	378	0	7	107	0	43	182	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3015	0	1520	2980	0	1520	1575	0	1520	1574	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	Yes		Yes		Yes		Yes		Yes		Yes	
Reference Time (s)	0.9	15.1	0.0	3.1	15.2	0.0	0.6	8.2	0.0	3.4	13.9	0.0
Adj Reference Time (s)	11.0	20.1	0.0	12.0	20.2	0.0	12.0	15.1	0.0	13.0	19.0	0.0
Permitted Option												
Adj Saturation A (vph)	101	1508		101	1490		101	1575		101	1574	
Reference Time A (s)	14.2	15.1		46.2	15.2		8.3	8.2		50.9	13.9	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1574	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		11.4	13.9	
Reference Time (s)		15.1			46.2			8.3			13.9	
Adj Reference Time (s)		20.1			51.2			15.1			19.0	
Split Option												
Ref Time Combined (s)	0.9	15.1		3.1	15.2		0.6	8.2		3.4	13.9	
Ref Time Seperate (s)	0.9	14.0		3.1	13.0		0.6	7.3		3.4	12.4	
Reference Time (s)	15.1	15.1		15.2	15.2		8.2	8.2		13.9	13.9	
Adj Reference Time (s)	20.1	20.1		20.2	20.2		15.1	15.1		19.0	19.0	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	32.1		31.0									
Permitted Option (s)	51.2		19.0									
Split Option (s)	40.3		34.1									
Minimum (s)	32.1		19.0		51.1							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	42.6%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Volume (vph)	3	16	5	3	23	5	3	128	15	4	195	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	24	0	0	31	0	3	143	0	4	208	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1540	0	0	1554	0	1520	1575	0	1520	1585	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)			0.0			0.0	0.2	10.9	0.0	0.3	15.7	0.0
Adj Reference Time (s)			0.0			0.0	12.0	15.9	0.0	13.0	20.7	0.0
Permitted Option												
Adj Saturation A (vph)	0	1078		0	1246		101	1575		101	1585	
Reference Time A (s)	0.0	2.7		0.0	3.0		3.6	10.9		4.7	15.7	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.2	9.9		8.2	10.4		NA	NA		NA	NA	
Reference Time (s)								10.9			15.7	
Adj Reference Time (s)								15.9			20.7	
Split Option												
Ref Time Combined (s)	0.0	1.9		0.0	2.4		0.2	10.9		0.3	15.7	
Ref Time Seperate (s)	0.2	1.2		0.2	1.8		0.2	9.8		0.3	14.8	
Reference Time (s)	1.9	1.9		2.4	2.4		10.9	10.9		15.7	15.7	
Adj Reference Time (s)	11.6	11.6		11.6	11.6		15.9	15.9		20.7	20.7	
Summary												
Protected Option (s)	NA		32.7									
Permitted Option (s)	11.6		20.7									
Split Option (s)	23.2		36.6									
Minimum (s)	11.6		20.7		32.3							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	27.0%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	15	98	27	12	45	8	15	131	46	13	185	11
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	15	125	0	12	53	0	15	177	0	13	196	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.96	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3500	0	1805	3536	0	1805	1826	0	1805	1884	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	1.0	4.3	0.0	0.8	1.8	0.0	1.0	11.6	0.0	0.9	12.5	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	16.6	0.0	13.0	17.5	0.0
Permitted Option												
Adj Saturation A (vph)	120	1750		120	1768		120	1826		120	1884	
Reference Time A (s)	15.0	4.3		12.0	1.8		15.0	11.6		13.0	12.5	
Adj Saturation B (vph)	0	3500		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	9.0	4.3		NA	NA		NA	NA		NA	NA	
Reference Time (s)	9.0		12.0			15.0			13.0			
Adj Reference Time (s)	14.0		17.0			20.0			18.0			
Split Option												
Ref Time Combined (s)	1.0	4.3		0.8	1.8		1.0	11.6		0.9	12.5	
Ref Time Seperate (s)	1.0	3.4		0.8	1.5		1.0	8.6		0.9	11.8	
Reference Time (s)	4.3	4.3		1.8	1.8		11.6	11.6		12.5	12.5	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		16.6	16.6		17.5	17.5	
Summary												
Protected Option (s)	24.0		29.6									
Permitted Option (s)	17.0		20.0									
Split Option (s)	24.0		34.1									
Minimum (s)	17.0		20.0			36.9						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	30.8%		ICU Level of Service			A						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↖	↕		↗	↕	
Volume (vph)	91	1172	39	13	545	11	22	89	28	27	150	30
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	91	1211	0	13	556	0	22	117	0	27	180	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.85	0.95	0.97	0.85
Saturated Flow (vph)	1805	3600	0	1805	3607	0	1805	1832	0	1805	1853	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	6.0	40.4	0.0	0.9	18.5	0.0	1.5	7.7	0.0	1.8	11.7	0.0
Adj Reference Time (s)	14.0	45.4	0.0	14.0	23.5	0.0	13.0	15.0	0.0	13.0	17.7	0.0
Permitted Option												
Adj Saturation A (vph)	120	1800		120	1803		120	1832		120	1853	
Reference Time A (s)	90.7	40.4		13.0	18.5		21.9	7.7		26.9	11.7	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1853	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		9.8	11.7	
Reference Time (s)		90.7			18.5			21.9			11.7	
Adj Reference Time (s)		95.7			23.5			27.9			17.7	
Split Option												
Ref Time Combined (s)	6.0	40.4		0.9	18.5		1.5	7.7		1.8	11.7	
Ref Time Seperate (s)	6.0	39.1		0.9	18.1		1.5	5.8		1.8	9.7	
Reference Time (s)	40.4	40.4		18.5	18.5		7.7	7.7		11.7	11.7	
Adj Reference Time (s)	45.4	45.4		23.5	23.5		15.0	15.0		17.7	17.7	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	59.4		30.7									
Permitted Option (s)	95.7		27.9									
Split Option (s)	68.9		32.7									
Minimum (s)	59.4		27.9		87.3							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	72.8%		ICU Level of Service						C			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	8	371	67	24	302	17	9	27	11	11	68	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	446	0	0	343	0	0	47	0	0	92	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	3533	0	0	3578	0	0	3457	0	0	3520	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	1137		0	453		0	115		0	217	
Reference Time A (s)	0.0	21.8		0.0	32.7		0.0	9.4		0.0	13.3	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1730		0	1765	
Reference Time B (s)	NA	NA		NA	NA		8.6	5.6		8.7	7.1	
Reference Time (s)		21.8			32.7			8.6			8.7	
Adj Reference Time (s)		26.8			37.7			22.0			22.0	
Split Option												
Ref Time Combined (s)	0.0	15.1		0.0	11.5		0.0	1.6		0.0	3.1	
Ref Time Seperate (s)	0.5	12.6		1.6	10.1		0.6	0.9		0.7	2.3	
Reference Time (s)	15.1	15.1		11.5	11.5		1.6	1.6		3.1	3.1	
Adj Reference Time (s)	26.0	26.0		26.0	26.0		22.0	22.0		22.0	22.0	
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	37.7		22.0									
Split Option (s)	52.0		44.0									
Minimum (s)	37.7		22.0		59.7							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	49.8%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	4	10	25	20	10	6	11	57	10	5	143	3
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	39	0	0	36	0	0	68	10	0	148	3
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	1709	0	0	1801	0	0	1885	1615	0	1897	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		No		No		No		No	
Reference Time (s)	0.0		0.0		0.0		0.7		0.7		0.2	
Adj Reference Time (s)	0.0		0.0		0.0		8.0		8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1712	0	0	513	0	0	549	0	0	1279	0
Reference Time A (s)	0.0	2.7	0.0	0.0	8.4	0.0	0.0	14.9	0.0	0.0	13.9	0.0
Adj Saturation B (vph)	0	0	0	0	0	NA	NA	NA	0	0	0	0
Reference Time B (s)	8.3	10.7	9.3	9.3	10.4	NA	NA	NA	8.3	8.3	17.4	17.4
Reference Time (s)	2.7		2.7		8.4		14.9		14.9		13.9	
Adj Reference Time (s)	8.0		8.0		12.4		18.9		18.9		17.9	
Split Option												
Ref Time Combined (s)	0.0	2.7	0.0	0.0	2.4	0.0	0.0	4.3	0.0	0.0	9.4	9.4
Ref Time Seperate (s)	0.3	0.7	1.3	1.3	0.7	0.7	0.7	3.6	0.3	0.3	9.0	9.0
Reference Time (s)	2.7	2.7	2.4	2.4	2.4	4.3	4.3	4.3	9.4	9.4	9.4	9.4
Adj Reference Time (s)	8.0	8.0	8.0	8.0	8.0	8.3	8.3	8.3	13.4	13.4	13.4	13.4
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	12.4		18.9									
Split Option (s)	16.0		21.7									
Minimum (s)	12.4		18.9		31.3							
Right Turns												
	NBR		SBR									
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	8.0		8.0									
Oncoming Left Ref Time (s)	13.4		8.3									
Combined (s)	29.4		24.3									

Intersection Summary
 Intersection Capacity Utilization 26.1% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: F Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	87	20	12	47	13	16	57	41	16	47	56
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	23	87	20	12	47	13	0	114	0	0	119	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.92	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3398	0	0	3340	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00				0.00		0.00		0.00	
Protected Option Allowed	Yes		Yes				No		No		No	
Reference Time (s)	1.5	5.5	1.5	0.8	3.0	1.0			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	158		0	168	
Reference Time A (s)	22.9	5.5		12.0	3.0		0.0	19.0		0.0	19.7	
Adj Saturation B (vph)	0	1900		0	1900		0	1695		0	1661	
Reference Time B (s)	9.5	5.5		8.8	3.0		9.1	8.0		9.1	8.3	
Reference Time (s)		9.5			8.8			9.1			9.1	
Adj Reference Time (s)		26.5			26.5			23.5			23.5	
Split Option												
Ref Time Combined (s)	1.5	5.5		0.8	3.0		0.0	4.0		0.0	4.3	
Ref Time Seperate (s)	1.5	5.5		0.8	3.0		1.1	2.0		1.1	1.7	
Reference Time (s)	5.5	5.5		3.0	3.0		4.0	4.0		4.3	4.3	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		23.5									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		23.5		50.0							
Right Turns												
Adj Reference Time (s)	EBR	WBR										
Cross Thru Ref Time (s)	26.5	26.5										
Oncoming Left Ref Time (s)	23.5	23.5										
Combined (s)	26.5	26.5										
	76.5	76.5										

Intersection Summary
 Intersection Capacity Utilization 63.7% ICU Level of Service B
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	↶	↶↷		↶	↶↷			↶↷			↶↷			
Volume (vph)	69	1312	7	7	573	22	5	19	6	13	22	12		
Pedestrians														
Ped Button														
Pedestrian Timing (s)														
Free Right			No				No				No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0		
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0		
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120		
Volume Combined (vph)	69	1319	0	7	595	0	0	30	0	0	47	0		
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.95	0.85		
Saturated Flow (vph)	1805	3615	0	1805	3598	0	0	3480	0	0	3431	0		
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Pedestrian Frequency (%)	0.00				0.00				0.00		0.00			
Protected Option Allowed	Yes				Yes				No		No			
Reference Time (s)	4.6	43.8	0.0	0.5	19.8	0.0			0.0			0.0		
Adj Reference Time (s)	29.0	48.8	0.0	29.0	29.0	0.0			0.0			0.0		
Permitted Option														
Adj Saturation A (vph)	120	1807			120	1799			0	116			0	114
Reference Time A (s)	68.8	43.8			7.0	19.8			0.0	5.2			0.0	13.6
Adj Saturation B (vph)	NA	NA			NA	NA			0	1744			0	1713
Reference Time B (s)	NA	NA			NA	NA			8.3	5.0			8.9	5.6
Reference Time (s)	68.8				19.8				5.2				8.9	
Adj Reference Time (s)	73.8				29.0				12.0				13.9	
Split Option														
Ref Time Combined (s)	4.6	43.8			0.5	19.8			0.0	1.0			0.0	1.6
Ref Time Seperate (s)	4.6	43.6			0.5	19.1			0.3	0.7			0.9	0.8
Reference Time (s)	43.8	43.8			19.8	19.8			1.0	1.0			1.6	1.6
Adj Reference Time (s)	48.8	48.8			29.0	29.0			12.0	12.0			12.0	12.0
Summary														
	EB WB		NB SB		Combined									
Protected Option (s)	77.8		NA											
Permitted Option (s)	73.8		13.9											
Split Option (s)	77.8		24.0											
Minimum (s)	73.8		13.9		87.7									
Right Turns														
Adj Reference Time (s)														
Cross Thru Ref Time (s)														
Oncoming Left Ref Time (s)														
Combined (s)														
Intersection Summary														
Intersection Capacity Utilization	73.1%		ICU Level of Service		D									
Reference Times and Phasing Options do not represent an optimized timing plan.														

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↷		↶	↷	
Volume (vph)	39	350	24	31	420	57	27	258	36	41	181	30
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	39	374	0	31	477	0	27	294	0	41	211	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3017	0	1520	2992	0	1520	1571	0	1520	1566	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	Yes		Yes			Yes			Yes		Yes	
Reference Time (s)	3.1	14.9	0.0	2.4	19.1	0.0	2.1	22.5	0.0	3.2	16.2	0.0
Adj Reference Time (s)	11.0	19.9	0.0	12.0	24.1	0.0	12.0	27.6	0.0	13.0	21.3	0.0
Permitted Option												
Adj Saturation A (vph)	101	1509		101	1496		101	1571		101	1566	
Reference Time A (s)	46.2	14.9		36.7	19.1		32.0	22.5		48.6	16.2	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		46.2			36.7			32.0			48.6	
Adj Reference Time (s)		51.2			41.7			37.1			53.7	
Split Option												
Ref Time Combined (s)	3.1	14.9		2.4	19.1		2.1	22.5		3.2	16.2	
Ref Time Seperate (s)	3.1	13.9		2.4	16.8		2.1	19.7		3.2	13.9	
Reference Time (s)	14.9	14.9		19.1	19.1		22.5	22.5		16.2	16.2	
Adj Reference Time (s)	19.9	19.9		24.1	24.1		27.6	27.6		21.3	21.3	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	35.1		40.6									
Permitted Option (s)	51.2		53.7									
Split Option (s)	44.0		48.8									
Minimum (s)	35.1		40.6		75.7							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	63.1%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	19	27	12	10	25	15	19	294	10	5	231	9
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	58	0	0	50	0	19	304	0	5	240	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1525	0	0	1513	0	1520	1592	0	1520	1591	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00				0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)			0.0			0.0	1.5	22.9	0.0	0.4	18.1	0.0
Adj Reference Time (s)			0.0			0.0	12.0	27.9	0.0	13.0	23.1	0.0
Permitted Option												
Adj Saturation A (vph)	0	923	0		1312	101		1592	101		1591	
Reference Time A (s)	0.0	7.5	0.0		4.6	22.5		22.9	5.9		18.1	
Adj Saturation B (vph)	0	0	0		0	NA		NA	NA		NA	
Reference Time B (s)	9.5	12.6	8.8		12.0	NA		NA	NA		NA	
Reference Time (s)	7.5		4.6				22.9			18.1		
Adj Reference Time (s)	12.1		11.6				27.9			23.1		
Split Option												
Ref Time Combined (s)	0.0	4.6	0.0		4.0	1.5		22.9	0.4		18.1	
Ref Time Seperate (s)	1.5	2.1	0.8		2.0	1.5		22.2	0.4		17.4	
Reference Time (s)	4.6	4.6	4.0		4.0	22.9		22.9	18.1		18.1	
Adj Reference Time (s)	11.6	11.6	11.6		11.6	27.9		27.9	23.1		23.1	
Summary												
Protected Option (s)	NA		40.9									
Permitted Option (s)	12.1		27.9									
Split Option (s)	23.2		51.0									
Minimum (s)	12.1		27.9			40.0						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	33.4%		ICU Level of Service				A					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	7	52	9	45	163	12	21	284	21	15	254	26
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	7	61	0	45	175	0	21	305	0	15	280	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3538	0	1805	3580	0	1805	1880	0	1805	1874	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	0.5	2.1	0.0	3.0	5.9	0.0	1.4	19.5	0.0	1.0	17.9	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	24.5	0.0	13.0	22.9	0.0
Permitted Option												
Adj Saturation A (vph)	120	1769		120	1790		120	1880		120	1874	
Reference Time A (s)	7.0	2.1		44.9	5.9		20.9	19.5		15.0	17.9	
Adj Saturation B (vph)	NA	NA		0	3580		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		11.0	5.9		NA	NA		NA	NA	
Reference Time (s)		7.0			11.0			20.9			17.9	
Adj Reference Time (s)		12.0			16.0			25.9			22.9	
Split Option												
Ref Time Combined (s)	0.5	2.1		3.0	5.9		1.4	19.5		1.0	17.9	
Ref Time Seperate (s)	0.5	1.8		3.0	5.5		1.4	18.1		1.0	16.3	
Reference Time (s)	2.1	2.1		5.9	5.9		19.5	19.5		17.9	17.9	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		24.5	24.5		22.9	22.9	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.0		37.5									
Permitted Option (s)	16.0		25.9									
Split Option (s)	24.0		47.4									
Minimum (s)	16.0		25.9		41.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	34.9%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Volume (vph)	23	746	39	32	939	33	74	275	49	43	173	57
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	23	785	0	32	972	0	74	324	0	43	230	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.96	0.85
Saturated Flow (vph)	1805	3591	0	1805	3599	0	1805	1857	0	1805	1829	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	1.5	26.2	0.0	2.1	32.4	0.0	4.9	20.9	0.0	2.9	15.1	0.0
Adj Reference Time (s)	14.0	31.2	0.0	14.0	37.4	0.0	13.0	26.9	0.0	13.0	21.1	0.0
Permitted Option												
Adj Saturation A (vph)	120	1795		120	1800		120	1857		120	1829	
Reference Time A (s)	22.9	26.2		31.9	32.4		73.8	20.9		42.9	15.1	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		26.2			32.4			73.8			42.9	
Adj Reference Time (s)		31.2			37.4			79.8			48.9	
Split Option												
Ref Time Combined (s)	1.5	26.2		2.1	32.4		4.9	20.9		2.9	15.1	
Ref Time Seperate (s)	1.5	24.9		2.1	31.3		4.9	17.8		2.9	11.3	
Reference Time (s)	26.2	26.2		32.4	32.4		20.9	20.9		15.1	15.1	
Adj Reference Time (s)	31.2	31.2		37.4	37.4		26.9	26.9		21.1	21.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	51.4		39.9									
Permitted Option (s)	37.4		79.8									
Split Option (s)	68.6		48.0									
Minimum (s)	37.4		39.9		77.3							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	64.5%		ICU Level of Service						C			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	13	387	30	9	466	20	36	67	15	10	27	22
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	430	0	0	495	0	0	118	0	0	59	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.97	0.85	0.95	0.94	0.85
Saturated Flow (vph)	0	3574	0	0	3592	0	0	3494	0	0	3386	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	No		No			No			No		No	
Reference Time (s)	0.0		0.0			0.0			0.0		0.0	
Adj Reference Time (s)	0.0		0.0			0.0			0.0		0.0	
Permitted Option												
Adj Saturation A (vph)	0	894	0	1150	0	116	0	113	0	113	0	113
Reference Time A (s)	0.0	25.4	0.0	23.9	0.0	37.1	0.0	10.6	0.0	10.6	0.0	10.6
Adj Saturation B (vph)	NA	NA	NA	NA	NA	NA	0	1759	0	1687	0	1687
Reference Time B (s)	NA	NA	NA	NA	NA	NA	10.4	8.0	8.7	6.1	8.7	6.1
Reference Time (s)	25.4		23.9			10.4			8.7		6.1	
Adj Reference Time (s)	30.4		28.9			22.0			22.0		22.0	
Split Option												
Ref Time Combined (s)	0.0	14.4	0.0	16.5	0.0	4.1	0.0	2.1	0.0	2.1	0.0	2.1
Ref Time Seperate (s)	0.9	13.0	0.6	15.6	2.4	2.3	0.7	1.0	0.7	1.0	0.7	1.0
Reference Time (s)	14.4	14.4	16.5	16.5	4.1	4.1	2.1	2.1	2.1	2.1	2.1	2.1
Adj Reference Time (s)	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Summary												
Protected Option (s)	NA		NA			NA			NA		NA	
Permitted Option (s)	30.4		22.0			22.0			22.0		22.0	
Split Option (s)	52.0		44.0			44.0			44.0		44.0	
Minimum (s)	30.4		22.0			52.4			52.4		52.4	
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	43.7%		ICU Level of Service			A			A		A	
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	4	13	8	17	27	28	14	90	6	12	37	12
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	25	0	0	72	0	0	104	6	0	49	12
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.94	0.85	0.95	0.93	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1794	0	0	1768	0	0	1887	1615	0	1877	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		No		No		No		No	
Reference Time (s)	0.0		0.0		0.0		0.4		0.0		0.9	
Adj Reference Time (s)	0.0		0.0		0.0		8.0		0.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1494	0	0	1139	0	0	627	0	0	395	0
Reference Time A (s)	0.0	2.0	0.0	0.0	7.6	0.0	0.0	19.9	0.0	0.0	14.9	0.0
Adj Saturation B (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Reference Time B (s)	8.3	9.7	9.1	9.1	12.9	8.9	8.9	14.6	8.8	8.8	11.1	11.1
Reference Time (s)	2.0		7.6		14.6		14.6		11.1		11.1	
Adj Reference Time (s)	8.0		11.6		18.6		18.6		15.1		15.1	
Split Option												
Ref Time Combined (s)	0.0	1.7	0.0	0.0	4.9	0.0	0.0	6.6	0.0	0.0	3.1	3.1
Ref Time Seperate (s)	0.3	0.9	1.1	1.1	1.8	0.9	0.9	5.7	0.8	0.8	2.3	2.3
Reference Time (s)	1.7	1.7	4.9	4.9	4.9	6.6	6.6	6.6	3.1	3.1	3.1	3.1
Adj Reference Time (s)	8.0	8.0	8.9	8.9	8.9	10.6	10.6	10.6	8.0	8.0	8.0	8.0
Summary	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	11.6		18.6									
Split Option (s)	16.9		18.6									
Minimum (s)	11.6		18.6		30.2							
Right Turns	NBR		SBR									
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	8.0		8.9									
Oncoming Left Ref Time (s)	8.0		10.6									
Combined (s)	24.0		27.5									

Intersection Summary
 Intersection Capacity Utilization 25.2% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: F Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	49	14	13	181	15	32	63	15	6	58	32
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	14	49	14	13	181	15	0	110	0	0	96	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.95	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3492	0	0	3426	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	Yes		Yes		No		No		No		No	
Reference Time (s)	0.9	3.1	1.0	0.9	11.4	1.1			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	116		0	488	
Reference Time A (s)	14.0	3.1		13.0	11.4		0.0	33.0		0.0	8.9	
Adj Saturation B (vph)	NA	NA		0	1900		0	1757		0	1712	
Reference Time B (s)	NA	NA		8.9	11.4		10.1	7.8		8.4	7.4	
Reference Time (s)		14.0			11.4			10.1			8.4	
Adj Reference Time (s)		26.5			26.5			23.5			23.5	
Split Option												
Ref Time Combined (s)	0.9	3.1		0.9	11.4		0.0	3.8		0.0	3.4	
Ref Time Seperate (s)	0.9	3.1		0.9	11.4		2.1	2.2		0.4	2.0	
Reference Time (s)	3.1	3.1		11.4	11.4		3.8	3.8		3.4	3.4	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		23.5									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		23.5		50.0							
Right Turns												
	EBR		WBR									
Adj Reference Time (s)	26.5		26.5									
Cross Thru Ref Time (s)	23.5		23.5									
Oncoming Left Ref Time (s)	26.5		26.5									
Combined (s)	76.5		76.5									

Intersection Summary
 Intersection Capacity Utilization 63.7% ICU Level of Service B
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Volume (vph)	63	737	37	10	1023	17	25	32	14	20	38	79
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	63	774	0	10	1040	0	0	71	0	0	137	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.91	0.85
Saturated Flow (vph)	1805	3592	0	1805	3609	0	0	3449	0	0	3281	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			No			No			
Reference Time (s)	4.2	25.9	0.0	0.7	34.6	0.0			0.0			0.0
Adj Reference Time (s)	29.0	30.9	0.0	29.0	39.6	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1796		120	1804		0	115		0	141	
Reference Time A (s)	62.8	25.9		10.0	34.6		0.0	26.1		0.0	24.2	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1726		0	1626	
Reference Time B (s)	NA	NA		NA	NA		9.7	6.5		9.3	9.0	
Reference Time (s)		62.8			34.6			9.7			9.3	
Adj Reference Time (s)		67.8			39.6			14.7			14.3	
Split Option												
Ref Time Combined (s)	4.2	25.9		0.7	34.6		0.0	2.5		0.0	5.0	
Ref Time Seperate (s)	4.2	24.6		0.7	34.0		1.7	1.1		1.3	1.4	
Reference Time (s)	25.9	25.9		34.6	34.6		2.5	2.5		5.0	5.0	
Adj Reference Time (s)	30.9	30.9		39.6	39.6		12.0	12.0		12.0	12.0	
Summary												
Protected Option (s)	68.6		NA									
Permitted Option (s)	67.8		14.7									
Split Option (s)	70.4		24.0									
Minimum (s)	67.8		14.7			82.5						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	68.7%		ICU Level of Service			C						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	16	455	34	51	416	71	10	124	15	56	209	26
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	16	489	0	51	487	0	10	139	0	56	235	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3015	0	1520	2980	0	1520	1574	0	1520	1573	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	1.3	19.5	0.0	4.0	19.6	0.0	0.8	10.6	0.0	4.4	17.9	0.0
Adj Reference Time (s)	11.0	24.5	0.0	12.0	24.6	0.0	12.0	15.7	0.0	13.0	23.0	0.0
Permitted Option												
Adj Saturation A (vph)	101	1507		101	1490		101	1574		101	1573	
Reference Time A (s)	18.9	19.5		60.4	19.6		11.8	10.6		66.3	17.9	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		19.5			60.4			11.8			66.3	
Adj Reference Time (s)		24.5			65.4			16.9			71.4	
Split Option												
Ref Time Combined (s)	1.3	19.5		4.0	19.6		0.8	10.6		4.4	17.9	
Ref Time Seperate (s)	1.3	18.1		4.0	16.8		0.8	9.5		4.4	15.9	
Reference Time (s)	19.5	19.5		19.6	19.6		10.6	10.6		17.9	17.9	
Adj Reference Time (s)	24.5	24.5		24.6	24.6		15.7	15.7		23.0	23.0	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	36.5		35.0									
Permitted Option (s)	65.4		71.4									
Split Option (s)	49.1		38.7									
Minimum (s)	36.5		35.0		71.5							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	59.6%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	4	21	7	4	30	7	4	165	20	6	252	17
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	32	0	0	41	0	4	185	0	6	269	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1538	0	0	1551	0	1520	1574	0	1520	1585	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		Yes		Yes		Yes		Yes	
Reference Time (s)	0.0		0.0		0.3		14.1		0.0		20.4	
Adj Reference Time (s)	0.0		0.0		12.0		19.1		0.0		25.4	
Permitted Option												
Adj Saturation A (vph)	0	1078	0	1241	0	101	1574	0	101	1585	0	0
Reference Time A (s)	0.0	3.6	0.0	4.0	0.0	4.7	14.1	0.0	7.1	20.4	0.0	0.0
Adj Saturation B (vph)	0	0	0	0	0	NA	NA	0	NA	NA	0	0
Reference Time B (s)	8.3	10.5	8.3	11.2	8.3	NA	NA	8.3	NA	NA	8.3	11.2
Reference Time (s)	3.6		4.0		14.1		14.1		20.4		20.4	
Adj Reference Time (s)	11.6		11.6		19.1		19.1		25.4		25.4	
Split Option												
Ref Time Combined (s)	0.0	2.5	0.0	3.2	0.0	0.3	14.1	0.0	0.5	20.4	0.0	0.0
Ref Time Seperate (s)	0.3	1.6	0.3	2.3	0.3	0.3	12.6	0.3	0.5	19.1	0.3	0.3
Reference Time (s)	2.5	2.5	3.2	3.2	14.1	14.1	20.4	20.4	20.4	20.4	20.4	20.4
Adj Reference Time (s)	11.6	11.6	11.6	11.6	19.1	19.1	25.4	25.4	25.4	25.4	25.4	25.4
Summary												
Protected Option (s)	NA		37.4									
Permitted Option (s)	11.6		25.4									
Split Option (s)	23.2		44.5									
Minimum (s)	11.6		25.4		37.0							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	30.8%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	20	127	35	16	58	11	20	169	60	17	239	15
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	20	162	0	16	69	0	20	229	0	17	254	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.96	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3500	0	1805	3531	0	1805	1825	0	1805	1883	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	Yes		Yes			Yes			Yes		Yes	
Reference Time (s)	1.3	5.6	0.0	1.1	2.3	0.0	1.3	15.1	0.0	1.1	16.2	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	20.1	0.0	13.0	21.2	0.0
Permitted Option												
Adj Saturation A (vph)	120	1750		120	1766		120	1825		120	1883	
Reference Time A (s)	19.9	5.6		16.0	2.3		19.9	15.1		17.0	16.2	
Adj Saturation B (vph)	0	3500		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	9.3	5.6		NA	NA		NA	NA		NA	NA	
Reference Time (s)		9.3			16.0			19.9			17.0	
Adj Reference Time (s)		14.3			21.0			24.9			22.0	
Split Option												
Ref Time Combined (s)	1.3	5.6		1.1	2.3		1.3	15.1		1.1	16.2	
Ref Time Seperate (s)	1.3	4.4		1.1	2.0		1.3	11.1		1.1	15.2	
Reference Time (s)	5.6	5.6		2.3	2.3		15.1	15.1		16.2	16.2	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		20.1	20.1		21.2	21.2	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.0		33.2									
Permitted Option (s)	21.0		24.9									
Split Option (s)	24.0		41.2									
Minimum (s)	21.0		24.9		45.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	38.3%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↷		↶	↷	
Volume (vph)	118	1510	51	17	702	15	29	115	37	35	194	39
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	118	1561	0	17	717	0	29	152	0	35	233	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.85	0.95	0.97	0.85
Saturated Flow (vph)	1805	3600	0	1805	3606	0	1805	1831	0	1805	1852	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	Yes		Yes			Yes			Yes		Yes	
Reference Time (s)	7.8	52.0	0.0	1.1	23.9	0.0	1.9	10.0	0.0	2.3	15.1	0.0
Adj Reference Time (s)	14.0	57.0	0.0	14.0	28.9	0.0	13.0	16.0	0.0	13.0	21.1	0.0
Permitted Option												
Adj Saturation A (vph)	120	1800		120	1803		120	1831		120	1852	
Reference Time A (s)	117.7	52.0		17.0	23.9		28.9	10.0		34.9	15.1	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		117.7			23.9			28.9			34.9	
Adj Reference Time (s)		122.7			28.9			34.9			40.9	
Split Option												
Ref Time Combined (s)	7.8	52.0		1.1	23.9		1.9	10.0		2.3	15.1	
Ref Time Seperate (s)	7.8	50.3		1.1	23.4		1.9	7.5		2.3	12.6	
Reference Time (s)	52.0	52.0		23.9	23.9		10.0	10.0		15.1	15.1	
Adj Reference Time (s)	57.0	57.0		28.9	28.9		16.0	16.0		21.1	21.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	71.0		34.1									
Permitted Option (s)	122.7		40.9									
Split Option (s)	85.9		37.1									
Minimum (s)	71.0		34.1		105.1							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	87.6%		ICU Level of Service						E			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	11	478	87	31	389	22	12	35	15	15	88	17
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	576	0	0	442	0	0	62	0	0	120	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.95	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	3532	0	0	3578	0	0	3453	0	0	3519	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	1109		0	452		0	115		0	201	
Reference Time A (s)	0.0	28.8		0.0	42.2		0.0	12.5		0.0	17.9	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1727		0	1765	
Reference Time B (s)	NA	NA		NA	NA		8.8	6.2		9.0	8.1	
Reference Time (s)		28.8			42.2			8.8			9.0	
Adj Reference Time (s)		33.8			47.2			22.0			22.0	
Split Option												
Ref Time Combined (s)	0.0	19.6		0.0	14.8		0.0	2.2		0.0	4.1	
Ref Time Seperate (s)	0.7	16.2		2.1	13.0		0.8	1.2		1.0	3.0	
Reference Time (s)	19.6	19.6		14.8	14.8		2.2	2.2		4.1	4.1	
Adj Reference Time (s)	26.0	26.0		26.0	26.0		22.0	22.0		22.0	22.0	
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	47.2		22.0									
Split Option (s)	52.0		44.0									
Minimum (s)	47.2		22.0		69.2							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	57.7%		ICU Level of Service		B							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	6	13	33	26	13	8	15	74	13	7	185	4
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	52	0	0	47	0	0	89	13	0	192	4
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	1709	0	0	1800	0	0	1884	1615	0	1897	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		No		No		No		No	
Reference Time (s)	0.0		0.0		0.0		1.0		0.3		0.3	
Adj Reference Time (s)	0.0		0.0		0.0		8.0		8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1710	0	552	0	532	0	1246	0	1246	0	1246
Reference Time A (s)	0.0	3.6	0.0	10.2	0.0	20.1	0.0	18.5	0.0	18.5	0.0	18.5
Adj Saturation B (vph)	0	0	0	0	0	NA	NA	0	0	0	0	0
Reference Time B (s)	8.4	11.7	9.7	11.1	NA	NA	8.5	20.1	8.5	20.1	8.5	20.1
Reference Time (s)	3.6		10.2		20.1		18.5		18.5		18.5	
Adj Reference Time (s)	8.0		14.2		24.1		22.5		22.5		22.5	
Split Option												
Ref Time Combined (s)	0.0	3.7	0.0	3.1	0.0	5.7	0.0	12.1	0.0	12.1	0.0	12.1
Ref Time Seperate (s)	0.4	0.9	1.7	0.9	1.0	4.7	0.5	11.7	0.5	11.7	0.5	11.7
Reference Time (s)	3.7	3.7	3.1	3.1	5.7	5.7	12.1	12.1	12.1	12.1	12.1	12.1
Adj Reference Time (s)	8.0	8.0	8.0	8.0	9.7	9.7	16.1	16.1	16.1	16.1	16.1	16.1
Summary												
Protected Option (s)	NA		NA		NA		NA		NA		NA	
Permitted Option (s)	14.2		24.1		24.1		24.1		24.1		24.1	
Split Option (s)	16.0		25.8		25.8		25.8		25.8		25.8	
Minimum (s)	14.2		24.1		38.3		38.3		38.3		38.3	
Right Turns												
Adj Reference Time (s)	8.0		8.0		8.0		8.0		8.0		8.0	
Cross Thru Ref Time (s)	8.0		8.0		8.0		8.0		8.0		8.0	
Oncoming Left Ref Time (s)	16.1		9.7		9.7		9.7		9.7		9.7	
Combined (s)	32.1		25.7		25.7		25.7		25.7		25.7	

Intersection Summary
 Intersection Capacity Utilization 31.9% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: F Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	113	26	16	61	17	21	74	53	21	61	73
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	30	113	26	16	61	17	0	148	0	0	155	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.92	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3399	0	0	3339	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00				0.00		0.00		0.00	
Protected Option Allowed	Yes		Yes				No		No		No	
Reference Time (s)	2.0	7.1	1.9	1.1	3.9	1.3			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	155		0	165	
Reference Time A (s)	29.9	7.1		16.0	3.9		0.0	24.8		0.0	25.7	
Adj Saturation B (vph)	0	1900		0	1900		NA	NA		NA	NA	
Reference Time B (s)	10.0	7.1		9.1	3.9		NA	NA		NA	NA	
Reference Time (s)		10.0			9.1			24.8			25.7	
Adj Reference Time (s)		26.5			26.5			29.3			30.2	
Split Option												
Ref Time Combined (s)	2.0	7.1		1.1	3.9		0.0	5.2		0.0	5.6	
Ref Time Seperate (s)	2.0	7.1		1.1	3.9		1.4	2.6		1.4	2.2	
Reference Time (s)	7.1	7.1		3.9	3.9		5.2	5.2		5.6	5.6	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		30.2									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		30.2		56.7							
Right Turns												
Adj Reference Time (s)	EBR	WBR										
	26.5	26.5										
Cross Thru Ref Time (s)	23.5	23.5										
Oncoming Left Ref Time (s)	26.5	26.5										
Combined (s)	76.5	76.5										

Intersection Summary
 Intersection Capacity Utilization 63.7% ICU Level of Service B
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↶↷			↶↷	
Volume (vph)	89	1690	10	10	738	29	7	25	8	17	29	16
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	89	1700	0	10	767	0	0	40	0	0	62	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.95	0.85
Saturated Flow (vph)	1805	3614	0	1805	3597	0	0	3478	0	0	3430	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			No			No			
Reference Time (s)	5.9	56.4	0.0	0.7	25.6	0.0			0.0			0.0
Adj Reference Time (s)	29.0	61.4	0.0	29.0	30.6	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1807		120	1799		0	116		0	114	
Reference Time A (s)	88.8	56.4		10.0	25.6		0.0	7.2		0.0	17.8	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1743		0	1712	
Reference Time B (s)	NA	NA		NA	NA		8.5	5.4		9.1	6.2	
Reference Time (s)		88.8			25.6			7.2			9.1	
Adj Reference Time (s)		93.8			30.6			12.2			14.1	
Split Option												
Ref Time Combined (s)	5.9	56.4		0.7	25.6		0.0	1.4		0.0	2.2	
Ref Time Seperate (s)	5.9	56.1		0.7	24.6		0.5	0.9		1.1	1.0	
Reference Time (s)	56.4	56.4		25.6	25.6		1.4	1.4		2.2	2.2	
Adj Reference Time (s)	61.4	61.4		30.6	30.6		12.0	12.0		12.0	12.0	
Summary												
Protected Option (s)	90.4		NA									
Permitted Option (s)	93.8		14.1									
Split Option (s)	92.0		24.0									
Minimum (s)	90.4		14.1			104.6						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	87.1%		ICU Level of Service			E						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↷		↶	↷	
Volume (vph)	53	472	33	42	566	77	37	348	49	56	244	41
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	53	505	0	42	643	0	37	397	0	56	285	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3017	0	1520	2992	0	1520	1570	0	1520	1565	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	4.2	20.1	0.0	3.3	25.8	0.0	2.9	30.3	0.0	4.4	21.8	0.0
Adj Reference Time (s)	11.0	25.1	0.0	12.0	30.8	0.0	12.0	35.4	0.0	13.0	26.9	0.0
Permitted Option												
Adj Saturation A (vph)	101	1508		101	1496		101	1570		101	1565	
Reference Time A (s)	62.8	20.1		49.7	25.8		43.8	30.3		66.3	21.8	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		62.8			49.7			43.8			66.3	
Adj Reference Time (s)		67.8			54.7			48.9			71.4	
Split Option												
Ref Time Combined (s)	4.2	20.1		3.3	25.8		2.9	30.3		4.4	21.8	
Ref Time Seperate (s)	4.2	18.8		3.3	22.7		2.9	26.6		4.4	18.7	
Reference Time (s)	20.1	20.1		25.8	25.8		30.3	30.3		21.8	21.8	
Adj Reference Time (s)	25.1	25.1		30.8	30.8		35.4	35.4		26.9	26.9	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	41.8		48.4									
Permitted Option (s)	67.8		71.4									
Split Option (s)	55.9		62.4									
Minimum (s)	41.8		48.4		90.2							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	75.2%		ICU Level of Service						D			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	26	37	17	14	34	21	26	396	14	7	311	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	80	0	0	69	0	26	410	0	7	324	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.94	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1524	0	0	1511	0	1520	1592	0	1520	1590	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00				0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)			0.0			0.0	2.1	30.9	0.0	0.6	24.4	0.0
Adj Reference Time (s)			0.0			0.0	12.0	35.9	0.0	13.0	29.4	0.0
Permitted Option												
Adj Saturation A (vph)	0	933	0		1305	101		1592	101		1590	
Reference Time A (s)	0.0	10.3	0.0		6.3	30.8		30.9	8.3		24.4	
Adj Saturation B (vph)	0	0	0		0	NA		NA	NA		NA	
Reference Time B (s)	10.1	14.3	9.1		13.5	NA		NA	NA		NA	
Reference Time (s)	10.3		6.3				30.9			24.4		
Adj Reference Time (s)	14.9		11.6				35.9			29.4		
Split Option												
Ref Time Combined (s)	0.0	6.3	0.0		5.5	2.1		30.9	0.6		24.4	
Ref Time Seperate (s)	2.1	2.9	1.1		2.7	2.1		29.9	0.6		23.5	
Reference Time (s)	6.3	6.3	5.5		5.5	30.9		30.9	24.4		24.4	
Adj Reference Time (s)	11.6	11.6	11.6		11.6	35.9		35.9	29.4		29.4	
Summary												
Protected Option (s)	NA		48.9									
Permitted Option (s)	14.9		35.9									
Split Option (s)	23.2		65.4									
Minimum (s)	14.9		35.9				50.8					
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	42.3%		ICU Level of Service				A					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	10	70	13	61	220	17	29	383	29	21	342	35
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	10	83	0	61	237	0	29	412	0	21	377	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3533	0	1805	3579	0	1805	1880	0	1805	1874	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	0.7	2.8	0.0	4.1	7.9	0.0	1.9	26.3	0.0	1.4	24.1	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.9	0.0	12.0	31.3	0.0	13.0	29.1	0.0
Permitted Option												
Adj Saturation A (vph)	120	1766		120	1789		120	1880		120	1874	
Reference Time A (s)	10.0	2.8		60.8	7.9		28.9	26.3		20.9	24.1	
Adj Saturation B (vph)	NA	NA		0	3579		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		12.1	7.9		NA	NA		NA	NA	
Reference Time (s)		10.0			12.1			28.9			24.1	
Adj Reference Time (s)		15.0			17.1			33.9			29.1	
Split Option												
Ref Time Combined (s)	0.7	2.8		4.1	7.9		1.9	26.3		1.4	24.1	
Ref Time Seperate (s)	0.7	2.4		4.1	7.4		1.9	24.4		1.4	21.9	
Reference Time (s)	2.8	2.8		7.9	7.9		26.3	26.3		24.1	24.1	
Adj Reference Time (s)	12.0	12.0		12.9	12.9		31.3	31.3		29.1	29.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.9		44.3									
Permitted Option (s)	17.1		33.9									
Split Option (s)	24.9		60.4									
Minimum (s)	17.1		33.9		51.0							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	42.5%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	1005	53	44	1264	45	100	371	66	58	233	77
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	31	1058	0	44	1309	0	100	437	0	58	310	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.96	0.85
Saturated Flow (vph)	1805	3590	0	1805	3599	0	1805	1857	0	1805	1829	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	2.1	35.4	0.0	2.9	43.6	0.0	6.6	28.2	0.0	3.9	20.3	0.0
Adj Reference Time (s)	14.0	40.4	0.0	14.0	48.6	0.0	13.0	34.2	0.0	13.0	26.3	0.0
Permitted Option												
Adj Saturation A (vph)	120	1795		120	1799		120	1857		120	1829	
Reference Time A (s)	30.9	35.4		43.9	43.6		99.7	28.2		57.8	20.3	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		35.4			43.9			99.7			57.8	
Adj Reference Time (s)		40.4			48.9			105.7			63.8	
Split Option												
Ref Time Combined (s)	2.1	35.4		2.9	43.6		6.6	28.2		3.9	20.3	
Ref Time Seperate (s)	2.1	33.6		2.9	42.1		6.6	24.0		3.9	15.3	
Reference Time (s)	35.4	35.4		43.6	43.6		28.2	28.2		20.3	20.3	
Adj Reference Time (s)	40.4	40.4		48.6	48.6		34.2	34.2		26.3	26.3	
Summary												
Protected Option (s)	62.6		47.2									
Permitted Option (s)	48.9		105.7									
Split Option (s)	89.0		60.6									
Minimum (s)	48.9		47.2			96.1						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	80.1%		ICU Level of Service			D						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	
Volume (vph)	18	521	41	13	628	27	49	91	21	14	37	30
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	580	0	0	668	0	0	161	0	0	81	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.97	0.85	0.95	0.94	0.85
Saturated Flow (vph)	0	3574	0	0	3592	0	0	3493	0	0	3387	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	880		0	1119		0	116		0	113	
Reference Time A (s)	0.0	34.7		0.0	33.0		0.0	50.5		0.0	14.9	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1758		0	1687	
Reference Time B (s)	NA	NA		NA	NA		11.3	9.5		8.9	6.9	
Reference Time (s)		34.7			33.0			11.3			8.9	
Adj Reference Time (s)		39.7			38.0			22.0			22.0	
Split Option												
Ref Time Combined (s)	0.0	19.5		0.0	22.3		0.0	5.5		0.0	2.9	
Ref Time Seperate (s)	1.2	17.5		0.9	21.0		3.3	3.1		0.9	1.3	
Reference Time (s)	19.5	19.5		22.3	22.3		5.5	5.5		2.9	2.9	
Adj Reference Time (s)	26.0	26.0		27.3	27.3		22.0	22.0		22.0	22.0	
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	39.7		22.0									
Split Option (s)	53.3		44.0									
Minimum (s)	39.7		22.0		61.7							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	51.4%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	6	18	11	23	37	38	19	122	9	17	50	17
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	35	0	0	98	0	0	141	9	0	67	17
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.94	0.85	0.95	0.93	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1795	0	0	1768	0	0	1887	1615	0	1876	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	No		No			No			No		No	
Reference Time (s)			0.0			0.0			0.7		1.3	
Adj Reference Time (s)			0.0			0.0			8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1469	0		1174	0		627	0		383	
Reference Time A (s)	0.0	2.9	0.0		10.0	0.0		27.0	0.0		21.0	
Adj Saturation B (vph)	0	0	0		0	0		0	NA		NA	
Reference Time B (s)	8.4	10.3	9.5		14.6	9.3		17.0	NA		NA	
Reference Time (s)	2.9		10.0			17.0			21.0			
Adj Reference Time (s)	8.0		14.0			21.0			25.0			
Split Option												
Ref Time Combined (s)	0.0	2.3	0.0		6.6	0.0		9.0	0.0		4.3	
Ref Time Seperate (s)	0.4	1.2	1.5		2.5	1.3		7.7	1.1		3.2	
Reference Time (s)	2.3	2.3	6.6		6.6	9.0		9.0	4.3		4.3	
Adj Reference Time (s)	8.0	8.0	10.6		10.6	13.0		13.0	8.3		8.3	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	14.0		25.0									
Split Option (s)	18.6		21.3									
Minimum (s)	14.0		21.3		35.3							
Right Turns												
	NBR		SBR									
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	8.0		10.6									
Oncoming Left Ref Time (s)	8.3		13.0									
Combined (s)	24.3		31.6									

Intersection Summary

Intersection Capacity Utilization 29.4% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: F Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	19	66	19	18	244	21	44	85	21	9	79	44	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0	
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	19	66	19	18	244	21	0	150	0	0	132	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.85	0.95	0.95	0.85	
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3490	0	0	3425	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00		0.00				0.00		0.00		0.00		
Protected Option Allowed	Yes			Yes			No			No			
Reference Time (s)	1.3	4.2	1.4	1.2	15.4	1.6			0.0			0.0	
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0	
Permitted Option													
Adj Saturation A (vph)	120	1900		120	1900		0	116		0	446		
Reference Time A (s)	18.9	4.2		18.0	15.4		0.0	45.4		0.0	12.9		
Adj Saturation B (vph)	NA	NA		0	1900		NA	NA		0	1712		
Reference Time B (s)	NA	NA		9.2	15.4		NA	NA		8.6	8.6		
Reference Time (s)		18.9			15.4			45.4			8.6		
Adj Reference Time (s)		26.5			26.5			49.9			23.5		
Split Option													
Ref Time Combined (s)	1.3	4.2		1.2	15.4		0.0	5.2		0.0	4.6		
Ref Time Seperate (s)	1.3	4.2		1.2	15.4		2.9	2.9		0.6	2.8		
Reference Time (s)	4.2	4.2		15.4	15.4		5.2	5.2		4.6	4.6		
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5		
Summary													
Protected Option (s)	53.0		NA										
Permitted Option (s)	26.5		49.9										
Split Option (s)	53.0		47.0										
Minimum (s)	26.5		47.0		73.5								
Right Turns													
Adj Reference Time (s)	EBR	WBR											
Cross Thru Ref Time (s)	26.5	26.5											
Oncoming Left Ref Time (s)	23.5	23.5											
Combined (s)	26.5	26.5											
	76.5	76.5											

Intersection Summary
 Intersection Capacity Utilization 63.7% ICU Level of Service B
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↶↷			↶↷	
Volume (vph)	85	992	50	14	1377	23	34	44	19	27	52	107
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	85	1042	0	14	1400	0	0	97	0	0	186	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.91	0.85
Saturated Flow (vph)	1805	3592	0	1805	3609	0	0	3450	0	0	3281	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			No			No			
Reference Time (s)	5.7	34.8	0.0	0.9	46.6	0.0			0.0			0.0
Adj Reference Time (s)	29.0	39.8	0.0	29.0	51.6	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1796		120	1804		0	115		0	143	
Reference Time A (s)	84.8	34.8		14.0	46.6		0.0	35.5		0.0	32.7	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1626	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		9.8	10.8	
Reference Time (s)		84.8			46.6			35.5			10.8	
Adj Reference Time (s)		89.8			51.6			40.5			15.8	
Split Option												
Ref Time Combined (s)	5.7	34.8		0.9	46.6		0.0	3.4		0.0	6.8	
Ref Time Seperate (s)	5.7	33.1		0.9	45.8		2.3	1.5		1.8	1.9	
Reference Time (s)	34.8	34.8		46.6	46.6		3.4	3.4		6.8	6.8	
Adj Reference Time (s)	39.8	39.8		51.6	51.6		12.0	12.0		12.0	12.0	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	80.6		NA									
Permitted Option (s)	89.8		40.5									
Split Option (s)	91.4		24.0									
Minimum (s)	80.6		24.0		104.6							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	87.1%		ICU Level of Service						E			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	11	332	24	36	306	51	11	96	15	40	152	18
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	11	356	0	36	357	0	11	111	0	40	170	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3016	0	1520	2981	0	1520	1568	0	1520	1575	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	0.9	14.2	0.0	2.8	14.4	0.0	0.9	8.5	0.0	3.2	13.0	0.0
Adj Reference Time (s)	11.0	19.2	0.0	12.0	19.4	0.0	12.0	15.1	0.0	13.0	18.1	0.0
Permitted Option												
Adj Saturation A (vph)	101	1508		101	1491		101	1568		101	1575	
Reference Time A (s)	13.0	14.2		42.6	14.4		13.0	8.5		47.4	13.0	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1575	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		11.2	13.0	
Reference Time (s)		14.2			42.6			13.0			13.0	
Adj Reference Time (s)		19.2			47.6			18.1			18.1	
Split Option												
Ref Time Combined (s)	0.9	14.2		2.8	14.4		0.9	8.5		3.2	13.0	
Ref Time Seperate (s)	0.9	13.2		2.8	12.3		0.9	7.3		3.2	11.6	
Reference Time (s)	14.2	14.2		14.4	14.4		8.5	8.5		13.0	13.0	
Adj Reference Time (s)	19.2	19.2		19.4	19.4		15.1	15.1		18.1	18.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	31.2		30.1									
Permitted Option (s)	47.6		18.1									
Split Option (s)	38.5		33.2									
Minimum (s)	31.2		18.1		49.3							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	41.1%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Volume (vph)	2	15	4	2	21	4	13	135	19	3	183	12
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	21	0	0	27	0	13	154	0	3	195	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1547	0	0	1559	0	1520	1570	0	1520	1585	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)			0.0			0.0	1.0	11.8	0.0	0.2	14.8	0.0
Adj Reference Time (s)			0.0			0.0	12.0	16.8	0.0	13.0	19.8	0.0
Permitted Option												
Adj Saturation A (vph)	0	1106		0	1256		101	1570		101	1585	
Reference Time A (s)	0.0	2.3		0.0	2.6		15.4	11.8		3.6	14.8	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.2	9.6		8.2	10.1		NA	NA		NA	NA	
Reference Time (s)			2.3			2.6			15.4			14.8
Adj Reference Time (s)			11.6			11.6			20.4			19.8
Split Option												
Ref Time Combined (s)	0.0	1.6		0.0	2.1		1.0	11.8		0.2	14.8	
Ref Time Seperate (s)	0.2	1.2		0.2	1.6		1.0	10.3		0.2	13.9	
Reference Time (s)	1.6	1.6		2.1	2.1		11.8	11.8		14.8	14.8	
Adj Reference Time (s)	11.6	11.6		11.6	11.6		16.8	16.8		19.8	19.8	
Summary												
Protected Option (s)	NA		31.8									
Permitted Option (s)	11.6		20.4									
Split Option (s)	23.2		36.5									
Minimum (s)	11.6		20.4		32.0							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	26.7%		ICU Level of Service				A					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↷		↶	↷	
Volume (vph)	29	92	25	11	42	9	14	148	43	12	174	10
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	29	117	0	11	51	0	14	191	0	12	184	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.97	0.85	0.95	0.97	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3502	0	1805	3522	0	1805	1836	0	1805	1885	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	1.9	4.0	0.0	0.7	1.7	0.0	0.9	12.5	0.0	0.8	11.7	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	17.5	0.0	13.0	16.7	0.0
Permitted Option												
Adj Saturation A (vph)	120	1751		120	1761		120	1836		120	1885	
Reference Time A (s)	28.9	4.0		11.0	1.7		14.0	12.5		12.0	11.7	
Adj Saturation B (vph)	0	3502		0	3522		NA	NA		NA	NA	
Reference Time B (s)	9.9	4.0		8.7	1.7		NA	NA		NA	NA	
Reference Time (s)	9.9		8.7			14.0			12.0			
Adj Reference Time (s)	14.9		13.7			19.0			17.0			
Split Option												
Ref Time Combined (s)	1.9	4.0		0.7	1.7		0.9	12.5		0.8	11.7	
Ref Time Seperate (s)	1.9	3.2		0.7	1.4		0.9	9.7		0.8	11.1	
Reference Time (s)	4.0	4.0		1.7	1.7		12.5	12.5		11.7	11.7	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		17.5	17.5		16.7	16.7	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.0		30.5									
Permitted Option (s)	14.9		19.0									
Split Option (s)	24.0		34.2									
Minimum (s)	14.9		19.0		33.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	28.2%		ICU Level of Service				A					
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↷		↶	↷	
Volume (vph)	98	1104	36	12	513	14	20	91	26	25	141	28
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	98	1140	0	12	527	0	20	117	0	25	169	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1805	3600	0	1805	3603	0	1805	1837	0	1805	1853	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	6.5	38.0	0.0	0.8	17.6	0.0	1.3	7.6	0.0	1.7	10.9	0.0
Adj Reference Time (s)	14.0	43.0	0.0	14.0	22.6	0.0	13.0	15.0	0.0	13.0	16.9	0.0
Permitted Option												
Adj Saturation A (vph)	120	1800		120	1802		120	1837		120	1853	
Reference Time A (s)	97.7	38.0		12.0	17.6		19.9	7.6		24.9	10.9	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1853	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		9.7	10.9	
Reference Time (s)		97.7			17.6			19.9			10.9	
Adj Reference Time (s)		102.7			22.6			25.9			16.9	
Split Option												
Ref Time Combined (s)	6.5	38.0		0.8	17.6		1.3	7.6		1.7	10.9	
Ref Time Seperate (s)	6.5	36.8		0.8	17.1		1.3	5.9		1.7	9.1	
Reference Time (s)	38.0	38.0		17.6	17.6		7.6	7.6		10.9	10.9	
Adj Reference Time (s)	43.0	43.0		22.6	22.6		15.0	15.0		16.9	16.9	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	57.0		29.9									
Permitted Option (s)	102.7		25.9									
Split Option (s)	65.5		31.9									
Minimum (s)	57.0		25.9		82.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	69.1%		ICU Level of Service						C			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	7	349	67	24	289	16	8	25	10	10	72	12
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	423	0	0	329	0	0	43	0	0	94	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.98	0.85
Saturated Flow (vph)	0	3529	0	0	3578	0	0	3459	0	0	3529	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	No		No			No			No		No	
Reference Time (s)	0.0		0.0			0.0			0.0		0.0	
Adj Reference Time (s)	0.0		0.0			0.0			0.0		0.0	
Permitted Option												
Adj Saturation A (vph)	0	1171	0	433	0	115	0	261	0	12.4	0	261
Reference Time A (s)	0.0	20.2	0.0	32.3	0.0	8.3	0.0	12.4	0.0	12.4	0.0	12.4
Adj Saturation B (vph)	NA	NA	NA	NA	0	1731	0	1770	0	1770	0	1770
Reference Time B (s)	NA	NA	NA	NA	8.5	5.5	8.7	7.2	8.7	7.2	8.7	7.2
Reference Time (s)	20.2		32.3			8.3			8.7		8.7	
Adj Reference Time (s)	26.0		37.3			22.0			22.0		22.0	
Split Option												
Ref Time Combined (s)	0.0	14.4	0.0	11.0	0.0	1.5	0.0	3.2	0.0	3.2	0.0	3.2
Ref Time Seperate (s)	0.5	11.9	1.6	9.7	0.5	0.9	0.7	2.4	0.7	2.4	0.7	2.4
Reference Time (s)	14.4	14.4	11.0	11.0	1.5	1.5	3.2	3.2	3.2	3.2	3.2	3.2
Adj Reference Time (s)	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	37.3		22.0									
Split Option (s)	52.0		44.0									
Minimum (s)	37.3		22.0			59.3						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	49.4%		ICU Level of Service			A						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑	↑		↑	↑
Volume (vph)	3	9	23	29	9	5	10	53	9	4	149	2
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	35	0	0	43	0	0	63	9	0	153	2
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	1705	0	0	1804	0	0	1885	1615	0	1898	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	No		No			No			No		No	
Reference Time (s)	0.0		0.0			0.7			0.1		0.1	
Adj Reference Time (s)	0.0		0.0			8.0			8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1736	0	390	0	557	0	1383	0	1383	0	1383
Reference Time A (s)	0.0	2.4	0.0	13.2	0.0	13.6	0.0	13.3	0.0	13.3	0.0	13.3
Adj Saturation B (vph)	0	0	0	0	NA	NA	0	0	0	0	0	0
Reference Time B (s)	8.2	10.5	9.9	10.9	NA	NA	8.3	17.7	8.3	17.7	8.3	17.7
Reference Time (s)	2.4		10.9			13.6			13.3		13.3	
Adj Reference Time (s)	8.0		14.9			17.6			17.6		17.3	
Split Option												
Ref Time Combined (s)	0.0	2.5	0.0	2.9	0.0	4.0	0.0	9.7	0.0	9.7	0.0	9.7
Ref Time Seperate (s)	0.2	0.6	1.9	0.6	0.7	3.3	0.3	9.4	0.3	9.4	0.3	9.4
Reference Time (s)	2.5	2.5	2.9	2.9	4.0	4.0	9.7	9.7	9.7	9.7	9.7	9.7
Adj Reference Time (s)	8.0	8.0	8.0	8.0	8.0	8.0	13.7	13.7	13.7	13.7	13.7	13.7
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	14.9		17.6									
Split Option (s)	16.0		21.7									
Minimum (s)	14.9		17.6		32.4							
Right Turns												
	NBR		SBR									
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	8.0		8.0									
Oncoming Left Ref Time (s)	13.7		8.0									
Combined (s)	29.7		24.0									

Intersection Summary
 Intersection Capacity Utilization 27.0% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	82	18	11	44	12	15	53	38	30	55	52
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	21	82	18	11	44	12	0	106	0	0	137	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.93	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3399	0	0	3374	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	1.4	5.2	1.3	0.7	2.8	0.9			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	155		0	112	
Reference Time A (s)	20.9	5.2		11.0	2.8		0.0	17.8		0.0	32.0	
Adj Saturation B (vph)	0	1900		0	1900		0	1696		0	1677	
Reference Time B (s)	9.4	5.2		8.7	2.8		9.0	7.8		10.0	8.9	
Reference Time (s)		9.4			8.7			9.0			10.0	
Adj Reference Time (s)		26.5			26.5			23.5			23.5	
Split Option												
Ref Time Combined (s)	1.4	5.2		0.7	2.8		0.0	3.7		0.0	4.9	
Ref Time Seperate (s)	1.4	5.2		0.7	2.8		1.0	1.9		2.0	2.0	
Reference Time (s)	5.2	5.2		2.8	2.8		3.7	3.7		4.9	4.9	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		23.5									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		23.5		50.0							
Right Turns												
	EBR		WBR									
Adj Reference Time (s)	26.5		26.5									
Cross Thru Ref Time (s)	23.5		23.5									
Oncoming Left Ref Time (s)	26.5		26.5									
Combined (s)	76.5		76.5									
Intersection Summary												
Intersection Capacity Utilization			63.7%		ICU Level of Service				B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Volume (vph)	65	1249	6	6	540	20	4	17	5	12	23	19
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	65	1255	0	6	560	0	0	26	0	0	54	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.94	0.85
Saturated Flow (vph)	1805	3615	0	1805	3598	0	0	3486	0	0	3389	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			No			No			
Reference Time (s)	4.3	41.7	0.0	0.4	18.7	0.0			0.0			0.0
Adj Reference Time (s)	29.0	46.7	0.0	29.0	29.0	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1808		120	1799		0	136		0	113	
Reference Time A (s)	64.8	41.7		6.0	18.7		0.0	4.4		0.0	12.7	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1747		0	1686	
Reference Time B (s)	NA	NA		NA	NA		8.3	4.9		8.8	5.9	
Reference Time (s)		64.8			18.7			4.4			8.8	
Adj Reference Time (s)		69.8			29.0			12.0			13.8	
Split Option												
Ref Time Combined (s)	4.3	41.7		0.4	18.7		0.0	0.9		0.0	1.9	
Ref Time Seperate (s)	4.3	41.5		0.4	18.0		0.3	0.6		0.8	0.8	
Reference Time (s)	41.7	41.7		18.7	18.7		0.9	0.9		1.9	1.9	
Adj Reference Time (s)	46.7	46.7		29.0	29.0		12.0	12.0		12.0	12.0	
Summary												
Protected Option (s)	75.7		NA									
Permitted Option (s)	69.8		13.8									
Split Option (s)	75.7		24.0									
Minimum (s)	69.8		13.8			83.6						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	69.7%		ICU Level of Service			C						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	36	329	22	29	396	53	30	250	38	38	170	28
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	36	351	0	29	449	0	30	288	0	38	198	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3018	0	1520	2992	0	1520	1568	0	1520	1566	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	2.8	14.0	0.0	2.3	18.0	0.0	2.4	22.0	0.0	3.0	15.2	0.0
Adj Reference Time (s)	11.0	19.0	0.0	12.0	23.0	0.0	12.0	27.1	0.0	13.0	20.3	0.0
Permitted Option												
Adj Saturation A (vph)	101	1509		101	1496		101	1568		101	1566	
Reference Time A (s)	42.6	14.0		34.3	18.0		35.5	22.0		45.0	15.2	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		42.6			34.3			35.5			45.0	
Adj Reference Time (s)		47.6			39.3			40.6			50.1	
Split Option												
Ref Time Combined (s)	2.8	14.0		2.3	18.0		2.4	22.0		3.0	15.2	
Ref Time Seperate (s)	2.8	13.1		2.3	15.9		2.4	19.1		3.0	13.0	
Reference Time (s)	14.0	14.0		18.0	18.0		22.0	22.0		15.2	15.2	
Adj Reference Time (s)	19.0	19.0		23.0	23.0		27.1	27.1		20.3	20.3	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	34.0		40.1									
Permitted Option (s)	47.6		50.1									
Split Option (s)	42.0		47.4									
Minimum (s)	34.0		40.1		74.1							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	61.8%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	17	25	11	9	23	14	29	294	14	4	217	8
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	53	0	0	46	0	29	308	0	4	225	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1525	0	0	1512	0	1520	1589	0	1520	1591	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		Yes		Yes		Yes		Yes	
Reference Time (s)	0.0		0.0		2.3		23.3		0.0		17.0	
Adj Reference Time (s)	0.0		0.0		12.0		28.3		0.0		22.0	
Permitted Option												
Adj Saturation A (vph)	0	924	0	1310	0	101	1589	0	101	1591	0	0
Reference Time A (s)	0.0	6.9	0.0	4.2	0.0	34.3	23.3	0.0	4.7	17.0	0.0	0.0
Adj Saturation B (vph)	0	0	0	0	0	NA	NA	0	NA	NA	0	0
Reference Time B (s)	9.3	12.2	8.7	11.7	8.7	NA	NA	0	NA	NA	0	0
Reference Time (s)	6.9		4.2		34.3		17.0		17.0		17.0	
Adj Reference Time (s)	11.6		11.6		39.3		22.0		22.0		22.0	
Split Option												
Ref Time Combined (s)	0.0	4.2	0.0	3.7	0.0	2.3	23.3	0.0	0.3	17.0	0.0	0.0
Ref Time Seperate (s)	1.3	2.0	0.7	1.8	0.7	2.3	22.2	0.0	0.3	16.4	0.0	0.0
Reference Time (s)	4.2	4.2	3.7	3.7	3.7	23.3	23.3	0.0	17.0	17.0	0.0	0.0
Adj Reference Time (s)	11.6	11.6	11.6	11.6	11.6	28.3	28.3	0.0	22.0	22.0	0.0	0.0
Summary												
Protected Option (s)	NA		41.3									
Permitted Option (s)	11.6		39.3									
Split Option (s)	23.2		50.2									
Minimum (s)	11.6		39.3		50.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	42.5%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Volume (vph)	13	49	8	42	153	12	19	280	19	14	239	24
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	13	57	0	42	165	0	19	299	0	14	263	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3541	0	1805	3578	0	1805	1882	0	1805	1874	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	Yes		Yes			Yes			Yes		Yes	
Reference Time (s)	0.9	1.9	0.0	2.8	5.5	0.0	1.3	19.1	0.0	0.9	16.8	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	24.1	0.0	13.0	21.8	0.0
Permitted Option												
Adj Saturation A (vph)	120	1771		120	1789		120	1882		120	1874	
Reference Time A (s)	13.0	1.9		41.9	5.5		18.9	19.1		14.0	16.8	
Adj Saturation B (vph)	NA	NA		0	3578		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		10.8	5.5		NA	NA		NA	NA	
Reference Time (s)		13.0			10.8			19.1			16.8	
Adj Reference Time (s)		18.0			15.8			24.1			21.8	
Split Option												
Ref Time Combined (s)	0.9	1.9		2.8	5.5		1.3	19.1		0.9	16.8	
Ref Time Seperate (s)	0.9	1.7		2.8	5.1		1.3	17.9		0.9	15.3	
Reference Time (s)	1.9	1.9		5.5	5.5		19.1	19.1		16.8	16.8	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		24.1	24.1		21.8	21.8	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.0		37.1									
Permitted Option (s)	18.0		24.1									
Split Option (s)	24.0		45.9									
Minimum (s)	18.0		24.1		42.0							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	35.0%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	27	703	36	30	885	33	69	263	46	40	163	53	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	27	739	0	30	918	0	69	309	0	40	216	0	
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.96	0.85	
Saturated Flow (vph)	1805	3591	0	1805	3598	0	1805	1858	0	1805	1830	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00		0.00				0.00			0.00			
Protected Option Allowed	Yes		Yes				Yes			Yes			
Reference Time (s)	1.8	24.7	0.0	2.0	30.6	0.0	4.6	20.0	0.0	2.7	14.2	0.0	
Adj Reference Time (s)	14.0	29.7	0.0	14.0	35.6	0.0	13.0	26.0	0.0	13.0	20.2	0.0	
Permitted Option													
Adj Saturation A (vph)	120	1796		120	1799		120	1858		120	1830		
Reference Time A (s)	26.9	24.7		29.9	30.6		68.8	20.0		39.9	14.2		
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time (s)		26.9			30.6			68.8			39.9		
Adj Reference Time (s)		31.9			35.6			74.8			45.9		
Split Option													
Ref Time Combined (s)	1.8	24.7		2.0	30.6		4.6	20.0		2.7	14.2		
Ref Time Seperate (s)	1.8	23.5		2.0	29.5		4.6	17.0		2.7	10.7		
Reference Time (s)	24.7	24.7		30.6	30.6		20.0	20.0		14.2	14.2		
Adj Reference Time (s)	29.7	29.7		35.6	35.6		26.0	26.0		20.2	20.2		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	49.6		39.0										
Permitted Option (s)	35.6		74.8										
Split Option (s)	65.3		46.1										
Minimum (s)	35.6		39.0		74.6								
Right Turns													
Adj Reference Time (s)													
Cross Thru Ref Time (s)													
Oncoming Left Ref Time (s)													
Combined (s)													
Intersection Summary													
Intersection Capacity Utilization	62.1%		ICU Level of Service						B				
Reference Times and Phasing Options do not represent an optimized timing plan.													

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	
Volume (vph)	12	364	30	9	444	18	33	63	14	9	29	20
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	406	0	0	471	0	0	110	0	0	58	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.97	0.85	0.95	0.94	0.85
Saturated Flow (vph)	0	3572	0	0	3593	0	0	3495	0	0	3404	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	905		0	1128		0	117		0	130	
Reference Time A (s)	0.0	23.7		0.0	23.1		0.0	34.0		0.0	10.1	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1759		0	1698	
Reference Time B (s)	NA	NA		NA	NA		10.2	7.7		8.6	6.1	
Reference Time (s)		23.7			23.1			10.2			8.6	
Adj Reference Time (s)		28.7			28.1			22.0			22.0	
Split Option												
Ref Time Combined (s)	0.0	13.6		0.0	15.7		0.0	3.8		0.0	2.0	
Ref Time Seperate (s)	0.8	12.2		0.6	14.8		2.2	2.1		0.6	1.0	
Reference Time (s)	13.6	13.6		15.7	15.7		3.8	3.8		2.0	2.0	
Adj Reference Time (s)	26.0	26.0		26.0	26.0		22.0	22.0		22.0	22.0	
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	28.7		22.0									
Split Option (s)	52.0		44.0									
Minimum (s)	28.7		22.0		50.7							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	42.3%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	3	12	7	28	25	26	13	84	5	11	41	11
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	22	0	0	79	0	0	97	5	0	52	11
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.93	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1797	0	0	1774	0	0	1887	1615	0	1880	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	No		No			No			No		No	
Reference Time (s)			0.0			0.0			0.4		0.8	
Adj Reference Time (s)			0.0			0.0			8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1674	0		844	0		629	0		445	
Reference Time A (s)	0.0	1.6	0.0		11.2	0.0		18.5	0.0		14.0	
Adj Saturation B (vph)	0	0	0		0	0		0	0		0	
Reference Time B (s)	8.2	9.5	9.9		13.3	8.9		14.2	8.7		11.3	
Reference Time (s)	1.6		11.2			14.2			11.3			
Adj Reference Time (s)	8.0		15.2			18.2			15.3			
Split Option												
Ref Time Combined (s)	0.0	1.5	0.0		5.3	0.0		6.2	0.0		3.3	
Ref Time Seperate (s)	0.2	0.8	1.9		1.7	0.9		5.3	0.7		2.6	
Reference Time (s)	1.5	1.5	5.3		5.3	6.2		6.2	3.3		3.3	
Adj Reference Time (s)	8.0	8.0	9.3		9.3	10.2		10.2	8.0		8.0	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	15.2		18.2									
Split Option (s)	17.3		18.2									
Minimum (s)	15.2		18.2		33.4							
Right Turns												
	NBR		SBR									
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	8.0		9.3									
Oncoming Left Ref Time (s)	8.0		10.2									
Combined (s)	24.0		27.5									

Intersection Summary			
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Reference Times and Phasing Options do not represent an optimized timing plan.			

Intersection Capacity Utilization
7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	46	13	12	170	14	30	59	14	12	66	30
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	13	46	13	12	170	14	0	103	0	0	108	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.95	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3492	0	0	3448	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	0.9	2.9	1.0	0.8	10.7	1.0			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	116		0	239	
Reference Time A (s)	13.0	2.9		12.0	10.7		0.0	30.9		0.0	15.1	
Adj Saturation B (vph)	NA	NA		0	1900		0	1757		0	1724	
Reference Time B (s)	NA	NA		8.8	10.7		10.0	7.5		8.8	7.8	
Reference Time (s)		13.0			10.7			10.0			8.8	
Adj Reference Time (s)		26.5			26.5			23.5			23.5	
Split Option												
Ref Time Combined (s)	0.9	2.9		0.8	10.7		0.0	3.5		0.0	3.8	
Ref Time Seperate (s)	0.9	2.9		0.8	10.7		2.0	2.0		0.8	2.3	
Reference Time (s)	2.9	2.9		10.7	10.7		3.5	3.5		3.8	3.8	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		23.5									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		23.5		50.0							
Right Turns												
	EBR		WBR									
Adj Reference Time (s)	26.5		26.5									
Cross Thru Ref Time (s)	23.5		23.5									
Oncoming Left Ref Time (s)	26.5		26.5									
Combined (s)	76.5		76.5									
Intersection Summary												
Intersection Capacity Utilization			63.7%		ICU Level of Service				B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↶	↷		↶	↷			↷			↷		
Volume (vph)	59	700	34	9	964	16	23	30	13	18	38	82	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	59	734	0	9	980	0	0	66	0	0	138	0	
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.90	0.85	
Saturated Flow (vph)	1805	3592	0	1805	3609	0	0	3450	0	0	3274	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00		
Protected Option Allowed	Yes		Yes			No			No				
Reference Time (s)	3.9	24.5	0.0	0.6	32.6	0.0			0.0			0.0	
Adj Reference Time (s)	29.0	29.5	0.0	29.0	37.6	0.0			0.0			0.0	
Permitted Option													
Adj Saturation A (vph)	120	1796		120	1804		0	115		0	174		
Reference Time A (s)	58.8	24.5		9.0	32.6		0.0	24.0		0.0	22.8		
Adj Saturation B (vph)	NA	NA		NA	NA		0	1727		0	1623		
Reference Time B (s)	NA	NA		NA	NA		9.5	6.3		9.2	9.1		
Reference Time (s)		58.8			32.6			9.5			9.2		
Adj Reference Time (s)		63.8			37.6			14.5			14.2		
Split Option													
Ref Time Combined (s)	3.9	24.5		0.6	32.6		0.0	2.3		0.0	5.1		
Ref Time Seperate (s)	3.9	23.4		0.6	32.1		1.5	1.0		1.2	1.4		
Reference Time (s)	24.5	24.5		32.6	32.6		2.3	2.3		5.1	5.1		
Adj Reference Time (s)	29.5	29.5		37.6	37.6		12.0	12.0		12.0	12.0		
Summary													
Protected Option (s)	66.6		NA										
Permitted Option (s)	63.8		14.5										
Split Option (s)	67.1		24.0										
Minimum (s)	63.8		14.5			78.4							
Right Turns													
Adj Reference Time (s)													
Cross Thru Ref Time (s)													
Oncoming Left Ref Time (s)													
Combined (s)													
Intersection Summary													
Intersection Capacity Utilization	65.3%		ICU Level of Service			C							
Reference Times and Phasing Options do not represent an optimized timing plan.													

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	12	353	26	39	325	55	12	102	16	43	162	20
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	12	379	0	39	380	0	12	118	0	43	182	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3015	0	1520	2980	0	1520	1567	0	1520	1574	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	0.9	15.1	0.0	3.1	15.3	0.0	0.9	9.0	0.0	3.4	13.9	0.0
Adj Reference Time (s)	11.0	20.1	0.0	12.0	20.3	0.0	12.0	15.1	0.0	13.0	19.0	0.0
Permitted Option												
Adj Saturation A (vph)	101	1508		101	1490		101	1567		101	1574	
Reference Time A (s)	14.2	15.1		46.2	15.3		14.2	9.0		50.9	13.9	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1574	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		11.4	13.9	
Reference Time (s)		15.1			46.2			14.2			13.9	
Adj Reference Time (s)		20.1			51.2			19.3			19.0	
Split Option												
Ref Time Combined (s)	0.9	15.1		3.1	15.3		0.9	9.0		3.4	13.9	
Ref Time Seperate (s)	0.9	14.0		3.1	13.1		0.9	7.8		3.4	12.4	
Reference Time (s)	15.1	15.1		15.3	15.3		9.0	9.0		13.9	13.9	
Adj Reference Time (s)	20.1	20.1		20.3	20.3		15.1	15.1		19.0	19.0	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	32.1		31.0									
Permitted Option (s)	51.2		19.3									
Split Option (s)	40.4		34.1									
Minimum (s)	32.1		19.3		51.4							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	42.8%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	3	16	5	3	23	5	14	143	20	4	195	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	24	0	0	31	0	14	163	0	4	208	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1540	0	0	1554	0	1520	1571	0	1520	1585	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)			0.0			0.0	1.1	12.5	0.0	0.3	15.7	0.0
Adj Reference Time (s)			0.0			0.0	12.0	17.5	0.0	13.0	20.7	0.0
Permitted Option												
Adj Saturation A (vph)	0	1078		0	1246		101	1571		101	1585	
Reference Time A (s)	0.0	2.7		0.0	3.0		16.6	12.5		4.7	15.7	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.2	9.9		8.2	10.4		NA	NA		NA	NA	
Reference Time (s)			2.7			3.0			16.6			15.7
Adj Reference Time (s)			11.6			11.6			21.6			20.7
Split Option												
Ref Time Combined (s)	0.0	1.9		0.0	2.4		1.1	12.5		0.3	15.7	
Ref Time Seperate (s)	0.2	1.2		0.2	1.8		1.1	10.9		0.3	14.8	
Reference Time (s)	1.9	1.9		2.4	2.4		12.5	12.5		15.7	15.7	
Adj Reference Time (s)	11.6	11.6		11.6	11.6		17.5	17.5		20.7	20.7	
Summary												
Protected Option (s)	NA		32.7									
Permitted Option (s)	11.6		21.6									
Split Option (s)	23.2		38.2									
Minimum (s)	11.6		21.6		33.2							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	27.6%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Volume (vph)	30	98	27	12	45	10	15	156	46	13	185	11
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	30	125	0	12	55	0	15	202	0	13	196	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.97	0.85	0.95	0.97	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3500	0	1805	3519	0	1805	1835	0	1805	1884	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	2.0	4.3	0.0	0.8	1.9	0.0	1.0	13.2	0.0	0.9	12.5	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	18.2	0.0	13.0	17.5	0.0
Permitted Option												
Adj Saturation A (vph)	120	1750		120	1759		120	1835		120	1884	
Reference Time A (s)	29.9	4.3		12.0	1.9		15.0	13.2		13.0	12.5	
Adj Saturation B (vph)	0	3500		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	10.0	4.3		NA	NA		NA	NA		NA	NA	
Reference Time (s)		10.0			12.0			15.0			13.0	
Adj Reference Time (s)		15.0			17.0			20.0			18.0	
Split Option												
Ref Time Combined (s)	2.0	4.3		0.8	1.9		1.0	13.2		0.9	12.5	
Ref Time Seperate (s)	2.0	3.4		0.8	1.5		1.0	10.2		0.9	11.8	
Reference Time (s)	4.3	4.3		1.9	1.9		13.2	13.2		12.5	12.5	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		18.2	18.2		17.5	17.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.0		31.2									
Permitted Option (s)	17.0		20.0									
Split Option (s)	24.0		35.7									
Minimum (s)	17.0		20.0		36.9							

Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												

Intersection Summary												
Intersection Capacity Utilization	30.8%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↷		↶	↷	
Volume (vph)	104	1172	39	13	545	15	22	97	28	27	150	30
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	104	1211	0	13	560	0	22	125	0	27	180	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.97	0.85
Saturated Flow (vph)	1805	3600	0	1805	3603	0	1805	1836	0	1805	1853	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	6.9	40.4	0.0	0.9	18.7	0.0	1.5	8.2	0.0	1.8	11.7	0.0
Adj Reference Time (s)	14.0	45.4	0.0	14.0	23.7	0.0	13.0	15.0	0.0	13.0	17.7	0.0
Permitted Option												
Adj Saturation A (vph)	120	1800		120	1802		120	1836		120	1853	
Reference Time A (s)	103.7	40.4		13.0	18.7		21.9	8.2		26.9	11.7	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		103.7			18.7			21.9			26.9	
Adj Reference Time (s)		108.7			23.7			27.9			32.9	
Split Option												
Ref Time Combined (s)	6.9	40.4		0.9	18.7		1.5	8.2		1.8	11.7	
Ref Time Seperate (s)	6.9	39.1		0.9	18.2		1.5	6.3		1.8	9.7	
Reference Time (s)	40.4	40.4		18.7	18.7		8.2	8.2		11.7	11.7	
Adj Reference Time (s)	45.4	45.4		23.7	23.7		15.0	15.0		17.7	17.7	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	59.4		30.7									
Permitted Option (s)	108.7		32.9									
Split Option (s)	69.0		32.7									
Minimum (s)	59.4		30.7		90.0							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	75.0%		ICU Level of Service						D			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	8	371	71	26	307	17	9	27	11	11	76	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	450	0	0	350	0	0	47	0	0	100	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.98	0.85
Saturated Flow (vph)	0	3529	0	0	3578	0	0	3457	0	0	3528	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	1140		0	424		0	115		0	248	
Reference Time A (s)	0.0	22.0		0.0	34.8		0.0	9.4		0.0	13.5	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1730		0	1769	
Reference Time B (s)	NA	NA		NA	NA		8.6	5.6		8.7	7.4	
Reference Time (s)		22.0			34.8			8.6			8.7	
Adj Reference Time (s)		27.0			39.8			22.0			22.0	
Split Option												
Ref Time Combined (s)	0.0	15.3		0.0	11.7		0.0	1.6		0.0	3.4	
Ref Time Seperate (s)	0.5	12.6		1.7	10.3		0.6	0.9		0.7	2.6	
Reference Time (s)	15.3	15.3		11.7	11.7		1.6	1.6		3.4	3.4	
Adj Reference Time (s)	26.0	26.0		26.0	26.0		22.0	22.0		22.0	22.0	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	39.8		22.0									
Split Option (s)	52.0		44.0									
Minimum (s)	39.8		22.0		61.8							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	51.5%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	4	10	25	31	10	6	11	57	10	5	158	3
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	39	0	0	47	0	0	68	10	0	163	3
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	1709	0	0	1802	0	0	1885	1615	0	1897	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		No		No		No		No	
Reference Time (s)	0.0		0.0		0.0		0.7		0.7		0.2	
Adj Reference Time (s)	0.0		0.0		0.0		8.0		8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1739	0	0	441	0	0	549	0	0	1320	0
Reference Time A (s)	0.0	2.7	0.0	0.0	12.8	0.0	0.0	14.9	0.0	0.0	14.8	0.0
Adj Saturation B (vph)	0	0	0	0	0	NA	NA	NA	0	0	0	0
Reference Time B (s)	8.3	10.7	10.1	10.1	11.1	NA	NA	NA	8.3	8.3	18.3	18.3
Reference Time (s)	2.7		11.1		11.1		14.9		14.9		14.8	
Adj Reference Time (s)	8.0		15.1		15.1		18.9		18.9		18.8	
Split Option												
Ref Time Combined (s)	0.0	2.7	0.0	3.1	3.1	0.0	4.3	4.3	0.0	0.0	10.3	10.3
Ref Time Seperate (s)	0.3	0.7	2.1	0.7	0.7	0.7	3.6	3.6	0.3	0.3	10.0	10.0
Reference Time (s)	2.7	2.7	3.1	3.1	3.1	4.3	4.3	4.3	10.3	10.3	10.3	10.3
Adj Reference Time (s)	8.0	8.0	8.0	8.0	8.0	8.3	8.3	8.3	14.3	14.3	14.3	14.3
Summary												
Protected Option (s)	NA		NA		NA		NA		NA		NA	
Permitted Option (s)	15.1		18.9		18.9		18.9		18.9		18.8	
Split Option (s)	16.0		22.6		22.6		22.6		22.6		22.6	
Minimum (s)	15.1		18.9		34.0		34.0		34.0		34.0	
Right Turns												
Adj Reference Time (s)	8.0		8.0		8.0		8.0		8.0		8.0	
Cross Thru Ref Time (s)	8.0		8.0		8.0		8.0		8.0		8.0	
Oncoming Left Ref Time (s)	14.3		8.3		8.3		8.3		8.3		8.3	
Combined (s)	30.3		24.3		24.3		24.3		24.3		24.3	

Intersection Summary
 Intersection Capacity Utilization 28.3% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	87	20	12	47	13	16	57	41	31	58	56
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	23	87	20	12	47	13	0	114	0	0	145	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.93	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3398	0	0	3372	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	Yes			Yes			No			No		
Reference Time (s)	1.5	5.5	1.5	0.8	3.0	1.0			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	158		0	112	
Reference Time A (s)	22.9	5.5		12.0	3.0		0.0	19.0		0.0	33.1	
Adj Saturation B (vph)	0	1900		0	1900		0	1695		0	1676	
Reference Time B (s)	9.5	5.5		8.8	3.0		9.1	8.0		10.1	9.2	
Reference Time (s)		9.5			8.8			9.1			10.1	
Adj Reference Time (s)		26.5			26.5			23.5			23.5	
Split Option												
Ref Time Combined (s)	1.5	5.5		0.8	3.0		0.0	4.0		0.0	5.2	
Ref Time Seperate (s)	1.5	5.5		0.8	3.0		1.1	2.0		2.1	2.1	
Reference Time (s)	5.5	5.5		3.0	3.0		4.0	4.0		5.2	5.2	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		23.5									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		23.5		50.0							
Right Turns												
	EBR		WBR									
Adj Reference Time (s)	26.5		26.5									
Cross Thru Ref Time (s)	23.5		23.5									
Oncoming Left Ref Time (s)	26.5		26.5									
Combined (s)	76.5		76.5									
Intersection Summary												
Intersection Capacity Utilization			63.7%		ICU Level of Service				B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↶↷			↶↷	
Volume (vph)	69	1325	7	7	573	22	5	19	6	13	25	20
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	69	1332	0	7	595	0	0	30	0	0	58	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.94	0.85
Saturated Flow (vph)	1805	3615	0	1805	3598	0	0	3480	0	0	3392	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			No			No			
Reference Time (s)	4.6	44.2	0.0	0.5	19.8	0.0			0.0			0.0
Adj Reference Time (s)	29.0	49.2	0.0	29.0	29.0	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1807		120	1799		0	116		0	113	
Reference Time A (s)	68.8	44.2		7.0	19.8		0.0	5.2		0.0	13.8	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1744		0	1688	
Reference Time B (s)	NA	NA		NA	NA		8.3	5.0		8.9	6.1	
Reference Time (s)		68.8			19.8			5.2			8.9	
Adj Reference Time (s)		73.8			29.0			12.0			13.9	
Split Option												
Ref Time Combined (s)	4.6	44.2		0.5	19.8		0.0	1.0		0.0	2.1	
Ref Time Seperate (s)	4.6	44.0		0.5	19.1		0.3	0.7		0.9	0.9	
Reference Time (s)	44.2	44.2		19.8	19.8		1.0	1.0		2.1	2.1	
Adj Reference Time (s)	49.2	49.2		29.0	29.0		12.0	12.0		12.0	12.0	
Summary												
Protected Option (s)	78.2		NA									
Permitted Option (s)	73.8		13.9									
Split Option (s)	78.2		24.0									
Minimum (s)	73.8		13.9			87.7						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	73.1%		ICU Level of Service			D						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	39	350	24	31	421	57	32	265	41	41	181	30
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	39	374	0	31	478	0	32	306	0	41	211	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3017	0	1520	2992	0	1520	1568	0	1520	1566	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	3.1	14.9	0.0	2.4	19.2	0.0	2.5	23.4	0.0	3.2	16.2	0.0
Adj Reference Time (s)	11.0	19.9	0.0	12.0	24.2	0.0	12.0	28.5	0.0	13.0	21.3	0.0
Permitted Option												
Adj Saturation A (vph)	101	1509		101	1496		101	1568		101	1566	
Reference Time A (s)	46.2	14.9		36.7	19.2		37.9	23.4		48.6	16.2	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		46.2			36.7			37.9			48.6	
Adj Reference Time (s)		51.2			41.7			43.0			53.7	
Split Option												
Ref Time Combined (s)	3.1	14.9		2.4	19.2		2.5	23.4		3.2	16.2	
Ref Time Seperate (s)	3.1	13.9		2.4	16.9		2.5	20.3		3.2	13.9	
Reference Time (s)	14.9	14.9		19.2	19.2		23.4	23.4		16.2	16.2	
Adj Reference Time (s)	19.9	19.9		24.2	24.2		28.5	28.5		21.3	21.3	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	35.2		41.5									
Permitted Option (s)	51.2		53.7									
Split Option (s)	44.0		49.8									
Minimum (s)	35.2		41.5		76.7							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	63.9%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕		↗	↘		↗	↘		
Volume (vph)	19	27	12	10	25	15	31	311	15	5	231	9	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0	
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	0	58	0	0	50	0	31	326	0	5	240	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	0.99	0.85	
Saturated Flow (vph)	0	1525	0	0	1513	0	1520	1589	0	1520	1591	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00		0.00				0.00			0.00			
Protected Option Allowed	No			No			Yes			Yes			
Reference Time (s)			0.0			0.0	2.4	24.6	0.0	0.4	18.1	0.0	
Adj Reference Time (s)			0.0			0.0	12.0	29.6	0.0	13.0	23.1	0.0	
Permitted Option													
Adj Saturation A (vph)	0	923	0		1312	101		1589	101		1591		
Reference Time A (s)	0.0	7.5	0.0		4.6	36.7		24.6	5.9		18.1		
Adj Saturation B (vph)	0	0	0		0	NA		NA	NA		NA		
Reference Time B (s)	9.5	12.6	8.8		12.0	NA		NA	NA		NA		
Reference Time (s)	7.5		4.6				36.7			18.1			
Adj Reference Time (s)	12.1		11.6				41.7			23.1			
Split Option													
Ref Time Combined (s)	0.0	4.6	0.0		4.0	2.4		24.6	0.4		18.1		
Ref Time Seperate (s)	1.5	2.1	0.8		2.0	2.4		23.5	0.4		17.4		
Reference Time (s)	4.6	4.6	4.0		4.0	24.6		24.6	18.1		18.1		
Adj Reference Time (s)	11.6	11.6	11.6		11.6	29.6		29.6	23.1		23.1		
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	NA		42.6										
Permitted Option (s)	12.1		41.7										
Split Option (s)	23.2		52.7										
Minimum (s)	12.1		41.7		53.8								
Right Turns													
Adj Reference Time (s)													
Cross Thru Ref Time (s)													
Oncoming Left Ref Time (s)													
Combined (s)													
Intersection Summary													
Intersection Capacity Utilization	44.9%		ICU Level of Service					A					
Reference Times and Phasing Options do not represent an optimized timing plan.													

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	14	52	9	45	163	13	21	297	21	15	254	26
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	14	61	0	45	176	0	21	318	0	15	280	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3538	0	1805	3578	0	1805	1881	0	1805	1874	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	0.9	2.1	0.0	3.0	5.9	0.0	1.4	20.3	0.0	1.0	17.9	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	25.3	0.0	13.0	22.9	0.0
Permitted Option												
Adj Saturation A (vph)	120	1769		120	1789		120	1881		120	1874	
Reference Time A (s)	14.0	2.1		44.9	5.9		20.9	20.3		15.0	17.9	
Adj Saturation B (vph)	NA	NA		0	3578		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		11.0	5.9		NA	NA		NA	NA	
Reference Time (s)		14.0			11.0			20.9			17.9	
Adj Reference Time (s)		19.0			16.0			25.9			22.9	
Split Option												
Ref Time Combined (s)	0.9	2.1		3.0	5.9		1.4	20.3		1.0	17.9	
Ref Time Seperate (s)	0.9	1.8		3.0	5.5		1.4	18.9		1.0	16.3	
Reference Time (s)	2.1	2.1		5.9	5.9		20.3	20.3		17.9	17.9	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		25.3	25.3		22.9	22.9	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.0		38.3									
Permitted Option (s)	19.0		25.9									
Split Option (s)	24.0		48.2									
Minimum (s)	19.0		25.9		44.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	37.4%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	29	746	39	32	939	35	74	279	49	43	173	57
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	29	785	0	32	974	0	74	328	0	43	230	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.96	0.85
Saturated Flow (vph)	1805	3591	0	1805	3598	0	1805	1857	0	1805	1829	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	1.9	26.2	0.0	2.1	32.5	0.0	4.9	21.2	0.0	2.9	15.1	0.0
Adj Reference Time (s)	14.0	31.2	0.0	14.0	37.5	0.0	13.0	27.2	0.0	13.0	21.1	0.0
Permitted Option												
Adj Saturation A (vph)	120	1795		120	1799		120	1857		120	1829	
Reference Time A (s)	28.9	26.2		31.9	32.5		73.8	21.2		42.9	15.1	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)	28.9		32.5			73.8			42.9			
Adj Reference Time (s)	33.9		37.5			79.8			48.9			
Split Option												
Ref Time Combined (s)	1.9	26.2		2.1	32.5		4.9	21.2		2.9	15.1	
Ref Time Seperate (s)	1.9	24.9		2.1	31.3		4.9	18.0		2.9	11.3	
Reference Time (s)	26.2	26.2		32.5	32.5		21.2	21.2		15.1	15.1	
Adj Reference Time (s)	31.2	31.2		37.5	37.5		27.2	27.2		21.1	21.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	51.5		40.2									
Permitted Option (s)	37.5		79.8									
Split Option (s)	68.7		48.3									
Minimum (s)	37.5		40.2		77.7							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	64.7%		ICU Level of Service						C			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	13	387	32	10	471	20	36	67	15	10	31	22
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	432	0	0	501	0	0	118	0	0	63	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.97	0.85	0.95	0.94	0.85
Saturated Flow (vph)	0	3572	0	0	3592	0	0	3494	0	0	3401	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	895		0	1107		0	116		0	125	
Reference Time A (s)	0.0	25.5		0.0	25.0		0.0	37.1		0.0	11.1	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1759		0	1696	
Reference Time B (s)	NA	NA		NA	NA		10.4	8.0		8.7	6.2	
Reference Time (s)		25.5			25.0			10.4			8.7	
Adj Reference Time (s)		30.5			30.0			22.0			22.0	
Split Option												
Ref Time Combined (s)	0.0	14.5		0.0	16.7		0.0	4.1		0.0	2.2	
Ref Time Seperate (s)	0.9	13.0		0.7	15.7		2.4	2.3		0.7	1.1	
Reference Time (s)	14.5	14.5		16.7	16.7		4.1	4.1		2.2	2.2	
Adj Reference Time (s)	26.0	26.0		26.0	26.0		22.0	22.0		22.0	22.0	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	30.5		22.0									
Split Option (s)	52.0		44.0									
Minimum (s)	30.5		22.0		52.5							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization		43.7%		ICU Level of Service							A	
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	4	13	8	29	27	28	14	90	6	12	44	12
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	25	0	0	84	0	0	104	6	0	56	12
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.94	0.85	0.95	0.93	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1794	0	0	1774	0	0	1887	1615	0	1880	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	No		No			No			No		No	
Reference Time (s)			0.0			0.0			0.4		0.9	
Adj Reference Time (s)			0.0			0.0			8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1633	0		932	0		627	0		440	
Reference Time A (s)	0.0	1.8	0.0		10.8	0.0		19.9	0.0		15.3	
Adj Saturation B (vph)	0	0	0		0	0		0	0		0	
Reference Time B (s)	8.3	9.7	9.9		13.7	8.9		14.6	8.8		11.6	
Reference Time (s)	1.8		10.8			14.6			11.6			
Adj Reference Time (s)	8.0		14.8			18.6			15.6			
Split Option												
Ref Time Combined (s)	0.0	1.7	0.0		5.7	0.0		6.6	0.0		3.6	
Ref Time Seperate (s)	0.3	0.9	1.9		1.8	0.9		5.7	0.8		2.8	
Reference Time (s)	1.7	1.7	5.7		5.7	6.6		6.6	3.6		3.6	
Adj Reference Time (s)	8.0	8.0	9.7		9.7	10.6		10.6	8.0		8.0	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		NA									
Permitted Option (s)	14.8		18.6									
Split Option (s)	17.7		18.6									
Minimum (s)	14.8		18.6		33.4							
Right Turns												
	NBR		SBR									
Adj Reference Time (s)	8.0		8.0									
Cross Thru Ref Time (s)	8.0		9.7									
Oncoming Left Ref Time (s)	8.0		10.6									
Combined (s)	24.0		28.3									

Intersection Summary
 Intersection Capacity Utilization 27.9% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	49	14	13	181	15	32	63	15	13	70	32
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	14	49	14	13	181	15	0	110	0	0	115	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.95	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3492	0	0	3447	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	0.9	3.1	1.0	0.9	11.4	1.1			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	116		0	232	
Reference Time A (s)	14.0	3.1		13.0	11.4		0.0	33.0		0.0	16.3	
Adj Saturation B (vph)	NA	NA		0	1900		0	1757		0	1724	
Reference Time B (s)	NA	NA		8.9	11.4		10.1	7.8		8.9	8.0	
Reference Time (s)		14.0			11.4			10.1			8.9	
Adj Reference Time (s)		26.5			26.5			23.5			23.5	
Split Option												
Ref Time Combined (s)	0.9	3.1		0.9	11.4		0.0	3.8		0.0	4.0	
Ref Time Seperate (s)	0.9	3.1		0.9	11.4		2.1	2.2		0.9	2.4	
Reference Time (s)	3.1	3.1		11.4	11.4		3.8	3.8		4.0	4.0	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		23.5									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		23.5		50.0							
Right Turns												
	EBR		WBR									
Adj Reference Time (s)	26.5		26.5									
Cross Thru Ref Time (s)	23.5		23.5									
Oncoming Left Ref Time (s)	26.5		26.5									
Combined (s)	76.5		76.5									
Intersection Summary												
Intersection Capacity Utilization			63.7%		ICU Level of Service				B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↕		↖	↕			↕			↕		
Volume (vph)	63	743	37	10	1023	17	25	32	14	20	41	87	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	63	780	0	10	1040	0	0	71	0	0	148	0	
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.91	0.85	
Saturated Flow (vph)	1805	3592	0	1805	3609	0	0	3449	0	0	3276	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00		
Protected Option Allowed	Yes		Yes			No			No				
Reference Time (s)	4.2	26.1	0.0	0.7	34.6	0.0			0.0			0.0	
Adj Reference Time (s)	29.0	31.1	0.0	29.0	39.6	0.0			0.0			0.0	
Permitted Option													
Adj Saturation A (vph)	120	1796		120	1804		0	115		0	163		
Reference Time A (s)	62.8	26.1		10.0	34.6		0.0	26.1		0.0	25.0		
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1624		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		9.3	9.5		
Reference Time (s)		62.8			34.6			26.1			9.5		
Adj Reference Time (s)		67.8			39.6			31.1			14.5		
Split Option													
Ref Time Combined (s)	4.2	26.1		0.7	34.6		0.0	2.5		0.0	5.4		
Ref Time Seperate (s)	4.2	24.8		0.7	34.0		1.7	1.1		1.3	1.5		
Reference Time (s)	26.1	26.1		34.6	34.6		2.5	2.5		5.4	5.4		
Adj Reference Time (s)	31.1	31.1		39.6	39.6		12.0	12.0		12.0	12.0		
Summary													
Protected Option (s)	68.6		NA										
Permitted Option (s)	67.8		31.1										
Split Option (s)	70.6		24.0										
Minimum (s)	67.8		24.0			91.8							
Right Turns													
Adj Reference Time (s)													
Cross Thru Ref Time (s)													
Oncoming Left Ref Time (s)													
Combined (s)													
Intersection Summary													
Intersection Capacity Utilization	76.5%		ICU Level of Service			D							
Reference Times and Phasing Options do not represent an optimized timing plan.													

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	16	455	34	51	418	71	15	130	20	56	209	26
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	16	489	0	51	489	0	15	150	0	56	235	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3015	0	1520	2980	0	1520	1568	0	1520	1573	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	1.3	19.5	0.0	4.0	19.7	0.0	1.2	11.5	0.0	4.4	17.9	0.0
Adj Reference Time (s)	11.0	24.5	0.0	12.0	24.7	0.0	12.0	16.6	0.0	13.0	23.0	0.0
Permitted Option												
Adj Saturation A (vph)	101	1507		101	1490		101	1568		101	1573	
Reference Time A (s)	18.9	19.5		60.4	19.7		17.8	11.5		66.3	17.9	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		19.5			60.4			17.8			66.3	
Adj Reference Time (s)		24.5			65.4			22.9			71.4	
Split Option												
Ref Time Combined (s)	1.3	19.5		4.0	19.7		1.2	11.5		4.4	17.9	
Ref Time Seperate (s)	1.3	18.1		4.0	16.8		1.2	9.9		4.4	15.9	
Reference Time (s)	19.5	19.5		19.7	19.7		11.5	11.5		17.9	17.9	
Adj Reference Time (s)	24.5	24.5		24.7	24.7		16.6	16.6		23.0	23.0	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	36.5		35.0									
Permitted Option (s)	65.4		71.4									
Split Option (s)	49.2		39.6									
Minimum (s)	36.5		35.0		71.5							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	59.6%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	4	21	7	4	30	7	15	180	25	6	252	17
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	32	0	0	41	0	15	205	0	6	269	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1538	0	0	1551	0	1520	1571	0	1520	1585	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		Yes		Yes		Yes		Yes	
Reference Time (s)	0.0		0.0		1.2		15.7		0.0		20.4	
Adj Reference Time (s)	0.0		0.0		12.0		20.7		0.0		25.4	
Permitted Option												
Adj Saturation A (vph)	0	1078	0	1241	0	101	1571	0	101	1585	0	0
Reference Time A (s)	0.0	3.6	0.0	4.0	0.0	17.8	15.7	0.0	7.1	20.4	0.0	0.0
Adj Saturation B (vph)	0	0	0	0	0	NA	NA	0	NA	NA	0	0
Reference Time B (s)	8.3	10.5	8.3	11.2	8.3	NA	NA	0	NA	NA	0	0
Reference Time (s)	3.6		4.0		17.8		20.4		20.4		20.4	
Adj Reference Time (s)	11.6		11.6		22.8		25.4		25.4		25.4	
Split Option												
Ref Time Combined (s)	0.0	2.5	0.0	3.2	0.0	1.2	15.7	0.0	0.5	20.4	0.0	0.0
Ref Time Seperate (s)	0.3	1.6	0.3	2.3	0.3	1.2	13.8	0.0	0.5	19.1	0.0	0.0
Reference Time (s)	2.5	2.5	3.2	3.2	3.2	15.7	15.7	0.0	20.4	20.4	0.0	0.0
Adj Reference Time (s)	11.6	11.6	11.6	11.6	11.6	20.7	20.7	0.0	25.4	25.4	0.0	0.0
Summary												
Protected Option (s)	NA		37.4		0.0		0.0		0.0		0.0	
Permitted Option (s)	11.6		25.4		0.0		0.0		0.0		0.0	
Split Option (s)	23.2		46.0		0.0		0.0		0.0		0.0	
Minimum (s)	11.6		25.4		37.0		0.0		0.0		0.0	
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	30.8%		ICU Level of Service		A		A		A		A	
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	35	127	35	16	58	13	20	194	60	17	239	15
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	35	162	0	16	71	0	20	254	0	17	254	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.97	0.85	0.95	0.96	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3500	0	1805	3518	0	1805	1833	0	1805	1883	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	2.3	5.6	0.0	1.1	2.4	0.0	1.3	16.6	0.0	1.1	16.2	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	12.0	0.0	12.0	21.6	0.0	13.0	21.2	0.0
Permitted Option												
Adj Saturation A (vph)	120	1750		120	1759		120	1833		120	1883	
Reference Time A (s)	34.9	5.6		16.0	2.4		19.9	16.6		17.0	16.2	
Adj Saturation B (vph)	0	3500		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	10.3	5.6		NA	NA		NA	NA		NA	NA	
Reference Time (s)		10.3			16.0			19.9			17.0	
Adj Reference Time (s)		15.3			21.0			24.9			22.0	
Split Option												
Ref Time Combined (s)	2.3	5.6		1.1	2.4		1.3	16.6		1.1	16.2	
Ref Time Seperate (s)	2.3	4.4		1.1	2.0		1.3	12.7		1.1	15.2	
Reference Time (s)	5.6	5.6		2.4	2.4		16.6	16.6		16.2	16.2	
Adj Reference Time (s)	12.0	12.0		12.0	12.0		21.6	21.6		21.2	21.2	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	24.0		34.6									
Permitted Option (s)	21.0		24.9									
Split Option (s)	24.0		42.8									
Minimum (s)	21.0		24.9		45.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	38.3%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕		
Volume (vph)	131	1510	51	17	702	19	29	123	37	35	194	39	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	131	1561	0	17	721	0	29	160	0	35	233	0	
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.97	0.85	
Saturated Flow (vph)	1805	3600	0	1805	3603	0	1805	1834	0	1805	1852	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00		
Protected Option Allowed	Yes		Yes			Yes			Yes		Yes		
Reference Time (s)	8.7	52.0	0.0	1.1	24.0	0.0	1.9	10.5	0.0	2.3	15.1	0.0	
Adj Reference Time (s)	14.0	57.0	0.0	14.0	29.0	0.0	13.0	16.5	0.0	13.0	21.1	0.0	
Permitted Option													
Adj Saturation A (vph)	120	1800		120	1802		120	1834		120	1852		
Reference Time A (s)	130.6	52.0		17.0	24.0		28.9	10.5		34.9	15.1		
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA		
Reference Time (s)		130.6			24.0			28.9			34.9		
Adj Reference Time (s)		135.6			29.0			34.9			40.9		
Split Option													
Ref Time Combined (s)	8.7	52.0		1.1	24.0		1.9	10.5		2.3	15.1		
Ref Time Seperate (s)	8.7	50.3		1.1	23.4		1.9	8.0		2.3	12.6		
Reference Time (s)	52.0	52.0		24.0	24.0		10.5	10.5		15.1	15.1		
Adj Reference Time (s)	57.0	57.0		29.0	29.0		16.5	16.5		21.1	21.1		
Summary													
Protected Option (s)	71.0		34.1										
Permitted Option (s)	135.6		40.9										
Split Option (s)	86.0		37.6										
Minimum (s)	71.0		34.1			105.1							
Right Turns													
Adj Reference Time (s)													
Cross Thru Ref Time (s)													
Oncoming Left Ref Time (s)													
Combined (s)													
Intersection Summary													
Intersection Capacity Utilization	87.6%		ICU Level of Service			E							
Reference Times and Phasing Options do not represent an optimized timing plan.													

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	
Volume (vph)	11	478	91	33	394	22	12	35	15	15	96	17
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	580	0	0	449	0	0	62	0	0	128	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.95	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	3529	0	0	3578	0	0	3453	0	0	3525	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	1111		0	429		0	115		0	224	
Reference Time A (s)	0.0	29.0		0.0	44.3		0.0	12.5		0.0	18.2	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1727		0	1768	
Reference Time B (s)	NA	NA		NA	NA		8.8	6.2		9.0	8.3	
Reference Time (s)		29.0			44.3			8.8			9.0	
Adj Reference Time (s)		34.0			49.3			22.0			22.0	
Split Option												
Ref Time Combined (s)	0.0	19.7		0.0	15.1		0.0	2.2		0.0	4.4	
Ref Time Seperate (s)	0.7	16.2		2.2	13.2		0.8	1.2		1.0	3.3	
Reference Time (s)	19.7	19.7		15.1	15.1		2.2	2.2		4.4	4.4	
Adj Reference Time (s)	26.0	26.0		26.0	26.0		22.0	22.0		22.0	22.0	
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	49.3		22.0									
Split Option (s)	52.0		44.0									
Minimum (s)	49.3		22.0		71.3							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	59.5%		ICU Level of Service		B							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	6	13	33	37	13	8	15	74	13	7	200	4
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	52	0	0	58	0	0	89	13	0	207	4
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.95	0.85	0.95	0.99	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	1709	0	0	1801	0	0	1884	1615	0	1897	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		No		No		No		No	
Reference Time (s)	0.0		0.0		0.0		1.0		0.3		8.0	
Adj Reference Time (s)	0.0		0.0		0.0		8.0		8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1735	0	487	0	532	0	1279	0	1279	0	1279
Reference Time A (s)	0.0	3.6	0.0	14.3	0.0	20.1	0.0	19.4	0.0	19.4	0.0	19.4
Adj Saturation B (vph)	0	0	0	0	0	NA	NA	0	0	0	0	0
Reference Time B (s)	8.4	11.7	10.5	11.9	NA	NA	8.5	21.1	8.5	21.1	8.5	21.1
Reference Time (s)	3.6		11.9		20.1		19.4		19.4		19.4	
Adj Reference Time (s)	8.0		15.9		24.1		23.4		23.4		23.4	
Split Option												
Ref Time Combined (s)	0.0	3.7	0.0	3.9	0.0	5.7	0.0	13.1	0.0	13.1	0.0	13.1
Ref Time Seperate (s)	0.4	0.9	2.5	0.9	1.0	4.7	0.5	12.6	0.5	12.6	0.5	12.6
Reference Time (s)	3.7	3.7	3.9	3.9	5.7	5.7	13.1	13.1	13.1	13.1	13.1	13.1
Adj Reference Time (s)	8.0	8.0	8.0	8.0	9.7	9.7	17.1	17.1	17.1	17.1	17.1	17.1
Summary												
Protected Option (s)	NA		NA		NA		NA		NA		NA	
Permitted Option (s)	15.9		24.1		24.1		24.1		24.1		24.1	
Split Option (s)	16.0		26.8		26.8		26.8		26.8		26.8	
Minimum (s)	15.9		24.1		39.9		39.9		39.9		39.9	
Right Turns												
Adj Reference Time (s)	8.0		8.0		8.0		8.0		8.0		8.0	
Cross Thru Ref Time (s)	8.0		8.0		8.0		8.0		8.0		8.0	
Oncoming Left Ref Time (s)	17.1		9.7		9.7		9.7		9.7		9.7	
Combined (s)	33.1		25.7		25.7		25.7		25.7		25.7	























Intersection Summary

Intersection Capacity Utilization 33.3% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	113	26	16	61	17	21	74	53	36	72	73
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	30	113	26	16	61	17	0	148	0	0	181	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.94	0.85	0.95	0.93	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3399	0	0	3365	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	Yes			Yes			No			No		
Reference Time (s)	2.0	7.1	1.9	1.1	3.9	1.3			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	155		0	112	
Reference Time A (s)	29.9	7.1		16.0	3.9		0.0	24.8		0.0	38.5	
Adj Saturation B (vph)	0	1900		0	1900		NA	NA		NA	NA	
Reference Time B (s)	10.0	7.1		9.1	3.9		NA	NA		NA	NA	
Reference Time (s)		10.0			9.1			24.8			38.5	
Adj Reference Time (s)		26.5			26.5			29.3			43.0	
Split Option												
Ref Time Combined (s)	2.0	7.1		1.1	3.9		0.0	5.2		0.0	6.5	
Ref Time Seperate (s)	2.0	7.1		1.1	3.9		1.4	2.6		2.4	2.6	
Reference Time (s)	7.1	7.1		3.9	3.9		5.2	5.2		6.5	6.5	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		43.0									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		43.0		69.5							
Right Turns												
	EBR		WBR									
Adj Reference Time (s)	26.5		26.5									
Cross Thru Ref Time (s)	23.5		23.5									
Oncoming Left Ref Time (s)	26.5		26.5									
Combined (s)	76.5		76.5									
Intersection Summary												
Intersection Capacity Utilization			63.7%		ICU Level of Service				B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↶↷			↶↷	
Volume (vph)	89	1703	10	10	738	29	7	25	8	17	32	24
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No		No		No		No		No		No	
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	89	1713	0	10	767	0	0	40	0	0	73	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.96	0.85	0.95	0.94	0.85
Saturated Flow (vph)	1805	3614	0	1805	3597	0	0	3478	0	0	3399	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	Yes		Yes		No		No		No		No	
Reference Time (s)	5.9	56.9	0.0	0.7	25.6	0.0			0.0			0.0
Adj Reference Time (s)	29.0	61.9	0.0	29.0	30.6	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1807		120	1799		0	116		0	113	
Reference Time A (s)	88.8	56.9		10.0	25.6		0.0	7.2		0.0	18.0	
Adj Saturation B (vph)	NA	NA		NA	NA		0	1743		0	1693	
Reference Time B (s)	NA	NA		NA	NA		8.5	5.4		9.1	6.6	
Reference Time (s)		88.8			25.6			7.2			9.1	
Adj Reference Time (s)		93.8			30.6			12.2			14.1	
Split Option												
Ref Time Combined (s)	5.9	56.9		0.7	25.6		0.0	1.4		0.0	2.6	
Ref Time Seperate (s)	5.9	56.5		0.7	24.6		0.5	0.9		1.1	1.1	
Reference Time (s)	56.9	56.9		25.6	25.6		1.4	1.4		2.6	2.6	
Adj Reference Time (s)	61.9	61.9		30.6	30.6		12.0	12.0		12.0	12.0	
Summary												
Protected Option (s)	90.9		NA									
Permitted Option (s)	93.8		14.1									
Split Option (s)	92.5		24.0									
Minimum (s)	90.9		14.1		105.0							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	87.5%		ICU Level of Service		E							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

1: E Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↷		↶	↷	
Volume (vph)	53	472	33	42	567	77	42	355	54	56	244	41
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.1	4.0	4.0	5.1	4.0
Minimum Green (s)	7.0	6.0	4.0	8.0	6.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	53	505	0	42	644	0	42	409	0	56	285	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	3017	0	1520	2992	0	1520	1568	0	1520	1565	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	4.2	20.1	0.0	3.3	25.8	0.0	3.3	31.3	0.0	4.4	21.8	0.0
Adj Reference Time (s)	11.0	25.1	0.0	12.0	30.8	0.0	12.0	36.4	0.0	13.0	26.9	0.0
Permitted Option												
Adj Saturation A (vph)	101	1508		101	1496		101	1568		101	1565	
Reference Time A (s)	62.8	20.1		49.7	25.8		49.7	31.3		66.3	21.8	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		62.8			49.7			49.7			66.3	
Adj Reference Time (s)		67.8			54.7			54.8			71.4	
Split Option												
Ref Time Combined (s)	4.2	20.1		3.3	25.8		3.3	31.3		4.4	21.8	
Ref Time Seperate (s)	4.2	18.8		3.3	22.7		3.3	27.2		4.4	18.7	
Reference Time (s)	20.1	20.1		25.8	25.8		31.3	31.3		21.8	21.8	
Adj Reference Time (s)	25.1	25.1		30.8	30.8		36.4	36.4		26.9	26.9	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	41.8		49.4									
Permitted Option (s)	67.8		71.4									
Split Option (s)	55.9		63.3									
Minimum (s)	41.8		49.4		91.2							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	76.0%		ICU Level of Service						D			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

2: E Street & 8th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (vph)	26	37	17	14	34	21	38	413	19	7	311	13
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.6	4.6	4.0	4.6	4.6	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	80	0	0	69	0	38	432	0	7	324	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.94	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1524	0	0	1511	0	1520	1589	0	1520	1590	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		Yes		Yes		Yes		Yes	
Reference Time (s)	0.0		0.0		3.0		32.6		0.6		24.4	
Adj Reference Time (s)	0.0		0.0		12.0		37.6		0.0		29.4	
Permitted Option												
Adj Saturation A (vph)	0	933	0	1305	101	1589	101	1590	101	1590	101	1590
Reference Time A (s)	0.0	10.3	0.0	6.3	45.0	32.6	8.3	24.4	8.3	24.4	8.3	24.4
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA
Reference Time B (s)	10.1	14.3	9.1	13.5	NA	NA	NA	NA	NA	NA	NA	NA
Reference Time (s)	10.3		6.3		45.0		24.4		24.4		24.4	
Adj Reference Time (s)	14.9		11.6		50.0		29.4		29.4		29.4	
Split Option												
Ref Time Combined (s)	0.0	6.3	0.0	5.5	3.0	32.6	0.6	24.4	0.6	24.4	0.6	24.4
Ref Time Seperate (s)	2.1	2.9	1.1	2.7	3.0	31.2	0.6	23.5	0.6	23.5	0.6	23.5
Reference Time (s)	6.3	6.3	5.5	5.5	32.6	32.6	24.4	24.4	24.4	24.4	24.4	24.4
Adj Reference Time (s)	11.6	11.6	11.6	11.6	37.6	37.6	29.4	29.4	29.4	29.4	29.4	29.4
Summary												
Protected Option (s)	NA		50.6									
Permitted Option (s)	14.9		50.0									
Split Option (s)	23.2		67.1									
Minimum (s)	14.9		50.0		64.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	54.1%		ICU Level of Service		A							
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

3: E Street & 6th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	17	70	13	61	220	18	29	396	29	21	342	35
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	8.0	10.0	4.0	9.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	17	83	0	61	238	0	29	425	0	21	377	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1805	3533	0	1805	3577	0	1805	1881	0	1805	1874	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	1.1	2.8	0.0	4.1	8.0	0.0	1.9	27.1	0.0	1.4	24.1	0.0
Adj Reference Time (s)	12.0	12.0	0.0	12.0	13.0	0.0	12.0	32.1	0.0	13.0	29.1	0.0
Permitted Option												
Adj Saturation A (vph)	120	1766		120	1788		120	1881		120	1874	
Reference Time A (s)	17.0	2.8		60.8	8.0		28.9	27.1		20.9	24.1	
Adj Saturation B (vph)	NA	NA		0	3577		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		12.1	8.0		NA	NA		NA	NA	
Reference Time (s)		17.0			12.1			28.9			24.1	
Adj Reference Time (s)		22.0			17.1			33.9			29.1	
Split Option												
Ref Time Combined (s)	1.1	2.8		4.1	8.0		1.9	27.1		1.4	24.1	
Ref Time Seperate (s)	1.1	2.4		4.1	7.4		1.9	25.3		1.4	21.9	
Reference Time (s)	2.8	2.8		8.0	8.0		27.1	27.1		24.1	24.1	
Adj Reference Time (s)	12.0	12.0		13.0	13.0		32.1	32.1		29.1	29.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	25.0		45.1									
Permitted Option (s)	22.0		33.9									
Split Option (s)	25.0		61.3									
Minimum (s)	22.0		33.9		55.9							
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	46.6%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

4: 5th Street & E Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Volume (vph)	37	1005	53	44	1264	47	100	375	66	58	233	77
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Minimum Green (s)	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0	9.0	9.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	37	1058	0	44	1311	0	100	441	0	58	310	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.96	0.85
Saturated Flow (vph)	1805	3590	0	1805	3598	0	1805	1857	0	1805	1829	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			Yes			Yes			
Reference Time (s)	2.5	35.4	0.0	2.9	43.7	0.0	6.6	28.5	0.0	3.9	20.3	0.0
Adj Reference Time (s)	14.0	40.4	0.0	14.0	48.7	0.0	13.0	34.5	0.0	13.0	26.3	0.0
Permitted Option												
Adj Saturation A (vph)	120	1795		120	1799		120	1857		120	1829	
Reference Time A (s)	36.9	35.4		43.9	43.7		99.7	28.5		57.8	20.3	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		36.9			43.9			99.7			57.8	
Adj Reference Time (s)		41.9			48.9			105.7			63.8	
Split Option												
Ref Time Combined (s)	2.5	35.4		2.9	43.7		6.6	28.5		3.9	20.3	
Ref Time Seperate (s)	2.5	33.6		2.9	42.2		6.6	24.2		3.9	15.3	
Reference Time (s)	35.4	35.4		43.7	43.7		28.5	28.5		20.3	20.3	
Adj Reference Time (s)	40.4	40.4		48.7	48.7		34.5	34.5		26.3	26.3	
Summary												
Protected Option (s)	62.7		47.5									
Permitted Option (s)	48.9		105.7									
Split Option (s)	89.1		60.8									
Minimum (s)	48.9		47.5			96.4						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	80.3%		ICU Level of Service			D						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

5: F Street & 9th Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	
Volume (vph)	18	521	43	14	633	27	49	91	21	14	41	30
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	21.0	21.0	4.0	21.0	21.0	4.0	17.0	17.0	4.0	17.0	17.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	582	0	0	674	0	0	161	0	0	85	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.99	0.85	0.95	0.97	0.85	0.95	0.94	0.85
Saturated Flow (vph)	0	3572	0	0	3592	0	0	3493	0	0	3398	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00		0.00	
Protected Option Allowed	No		No			No			No		No	
Reference Time (s)	0.0		0.0			0.0			0.0		0.0	
Adj Reference Time (s)	0.0		0.0			0.0			0.0		0.0	
Permitted Option												
Adj Saturation A (vph)	0	881	0	1088	0	116	0	116	0	116	0	116
Reference Time A (s)	0.0	34.7	0.0	34.1	0.0	50.5	0.0	15.0	0.0	15.0	0.0	15.0
Adj Saturation B (vph)	NA	NA	NA	NA	0	1758	0	1694	0	1694	0	1694
Reference Time B (s)	NA	NA	NA	NA	11.3	9.5	8.9	7.0	8.9	7.0	8.9	7.0
Reference Time (s)	34.7		34.1			11.3			8.9		8.9	
Adj Reference Time (s)	39.7		39.1			22.0			22.0		22.0	
Split Option												
Ref Time Combined (s)	0.0	19.6	0.0	22.5	0.0	5.5	0.0	3.0	0.0	3.0	0.0	3.0
Ref Time Seperate (s)	1.2	17.5	0.9	21.1	3.3	3.1	0.9	1.5	0.9	1.5	0.9	1.5
Reference Time (s)	19.6	19.6	22.5	22.5	5.5	5.5	3.0	3.0	3.0	3.0	3.0	3.0
Adj Reference Time (s)	26.0	26.0	27.5	27.5	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Summary												
Protected Option (s)	NA		NA									
Permitted Option (s)	39.7		22.0									
Split Option (s)	53.5		44.0									
Minimum (s)	39.7		22.0			61.7						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	51.4%		ICU Level of Service			A						
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

6: F Street & 8th Street

01-24-2024
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (vph)	6	18	11	35	37	38	19	122	9	17	57	17
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	35	0	0	110	0	0	141	9	0	74	17
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.94	0.85	0.95	0.93	0.85	0.95	0.99	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1795	0	0	1773	0	0	1887	1615	0	1878	1615
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		No		No		No		No	
Reference Time (s)	0.0		0.0		0.0		0.7		0.7		1.3	
Adj Reference Time (s)	0.0		0.0		0.0		8.0		8.0		8.0	
Permitted Option												
Adj Saturation A (vph)	0	1588	0	1012	0	627	0	416	0	416	0	416
Reference Time A (s)	0.0	2.6	0.0	13.0	0.0	27.0	0.0	21.3	0.0	21.3	0.0	21.3
Adj Saturation B (vph)	0	0	0	0	0	0	0	NA	NA	NA	NA	NA
Reference Time B (s)	8.4	10.3	10.3	15.4	9.3	17.0	17.0	NA	NA	NA	NA	NA
Reference Time (s)	2.6		13.0		17.0		17.0		21.3		21.3	
Adj Reference Time (s)	8.0		17.0		21.0		21.0		25.3		25.3	
Split Option												
Ref Time Combined (s)	0.0	2.3	0.0	7.4	0.0	9.0	0.0	9.0	0.0	4.7	0.0	4.7
Ref Time Seperate (s)	0.4	1.2	2.3	2.5	1.3	7.7	1.1	3.6	1.1	3.6	1.1	3.6
Reference Time (s)	2.3	2.3	7.4	7.4	9.0	9.0	4.7	4.7	4.7	4.7	4.7	4.7
Adj Reference Time (s)	8.0	8.0	11.4	11.4	13.0	13.0	8.7	8.7	8.7	8.7	8.7	8.7
Summary												
Protected Option (s)	NA		NA		NA		NA		NA		NA	
Permitted Option (s)	17.0		25.3		25.3		25.3		25.3		25.3	
Split Option (s)	19.4		21.7		21.7		21.7		21.7		21.7	
Minimum (s)	17.0		21.7		38.7		38.7		38.7		38.7	
Right Turns												
Adj Reference Time (s)	8.0		8.0		8.0		8.0		8.0		8.0	
Cross Thru Ref Time (s)	8.0		11.4		11.4		11.4		11.4		11.4	
Oncoming Left Ref Time (s)	8.7		13.0		13.0		13.0		13.0		13.0	
Combined (s)	24.7		32.4		32.4		32.4		32.4		32.4	

Intersection Summary
 Intersection Capacity Utilization 32.3% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: F Street & 6th Street

01-31-2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	66	19	18	244	21	44	85	21	16	91	44
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Minimum Green (s)	22.0	22.0	22.0	22.0	22.0	22.0	19.0	19.0	4.0	19.0	19.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	19	66	19	18	244	21	0	150	0	0	151	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.85	0.95	0.95	0.85
Saturated Flow (vph)	1805	1900	1615	1805	1900	1615	0	3490	0	0	3441	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	Yes			Yes			No			No		
Reference Time (s)	1.3	4.2	1.4	1.2	15.4	1.6			0.0			0.0
Adj Reference Time (s)	26.5	26.5	26.5	26.5	26.5	26.5			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1900		120	1900		0	116		0	256	
Reference Time A (s)	18.9	4.2		18.0	15.4		0.0	45.4		0.0	20.4	
Adj Saturation B (vph)	NA	NA		0	1900		NA	NA		0	1720	
Reference Time B (s)	NA	NA		9.2	15.4		NA	NA		9.1	9.3	
Reference Time (s)		18.9			15.4			45.4			9.3	
Adj Reference Time (s)		26.5			26.5			49.9			23.5	
Split Option												
Ref Time Combined (s)	1.3	4.2		1.2	15.4		0.0	5.2		0.0	5.3	
Ref Time Separate (s)	1.3	4.2		1.2	15.4		2.9	2.9		1.1	3.2	
Reference Time (s)	4.2	4.2		15.4	15.4		5.2	5.2		5.3	5.3	
Adj Reference Time (s)	26.5	26.5		26.5	26.5		23.5	23.5		23.5	23.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	53.0		NA									
Permitted Option (s)	26.5		49.9									
Split Option (s)	53.0		47.0									
Minimum (s)	26.5		47.0		73.5							
Right Turns												
	EBR		WBR									
Adj Reference Time (s)	26.5		26.5									
Cross Thru Ref Time (s)	23.5		23.5									
Oncoming Left Ref Time (s)	26.5		26.5									
Combined (s)	76.5		76.5									
Intersection Summary												
Intersection Capacity Utilization			63.7%		ICU Level of Service				B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization

8: 5th Street & F Street

01-24-2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↶↷			↶↷	
Volume (vph)	85	998	50	14	1377	23	34	44	19	27	55	115
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Minimum Green (s)	24.0	24.0	4.0	24.0	24.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	85	1048	0	14	1400	0	0	97	0	0	197	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.91	0.85
Saturated Flow (vph)	1805	3592	0	1805	3609	0	0	3450	0	0	3278	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00			0.00			0.00			
Protected Option Allowed	Yes		Yes			No			No			
Reference Time (s)	5.7	35.0	0.0	0.9	46.6	0.0			0.0			0.0
Adj Reference Time (s)	29.0	40.0	0.0	29.0	51.6	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	120	1796		120	1804		0	115		0	159	
Reference Time A (s)	84.8	35.0		14.0	46.6		0.0	35.5		0.0	33.6	
Adj Saturation B (vph)	NA	NA		NA	NA		NA	NA		0	1625	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		9.8	11.2	
Reference Time (s)		84.8			46.6			35.5			11.2	
Adj Reference Time (s)		89.8			51.6			40.5			16.2	
Split Option												
Ref Time Combined (s)	5.7	35.0		0.9	46.6		0.0	3.4		0.0	7.2	
Ref Time Seperate (s)	5.7	33.3		0.9	45.8		2.3	1.5		1.8	2.0	
Reference Time (s)	35.0	35.0		46.6	46.6		3.4	3.4		7.2	7.2	
Adj Reference Time (s)	40.0	40.0		51.6	51.6		12.0	12.0		12.2	12.2	
Summary												
Protected Option (s)	80.6		NA									
Permitted Option (s)	89.8		40.5									
Split Option (s)	91.6		24.2									
Minimum (s)	80.6		24.2			104.8						
Right Turns												
Adj Reference Time (s)												
Cross Thru Ref Time (s)												
Oncoming Left Ref Time (s)												
Combined (s)												
Intersection Summary												
Intersection Capacity Utilization	87.3%		ICU Level of Service			E						
Reference Times and Phasing Options do not represent an optimized timing plan.												