

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Lone Tree Dutch Bros development located in Lone Tree, Colorado. The development is located on the southeast corner of the Park Meadows Drive & Business Center Drive / Quebec Street intersection.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2025), opening day (2026), and future (2046) conditions with and without the proposed project and to recommend mitigation measures as needed. The morning and evening peak hour level of service (LOS) results are shown in Table ES-1. A site plan of the project is provided in Appendix A.

Table ES-1: Peak Hour Level of Service Results

Intersection		Level of Service									
		Existing (2025-2026)						Future (2046)			
		Background		Background Mitigated		Plus Project		Background		Plus Project	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	8664 South / Quebec St	A	B	-	-	A	C	A	B	B	C
2	Southwest Access / Quebec St	d	c	-	-	d	c	d	c	e	c
3	Park Meadows Dr & Business Center Dr / Quebec St	D	F	D	D	D	D	D	D	D	D
4	West Access / Park Meadows Drive	b	b	-	-	b	b	b	b	b	b
5	East Access / Park Meadows Drive	c	f	-	-	d	f	d	f	e	f
1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)											
Source: Hales Engineering, July 2025											

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

Project Conditions		
- The development will consist of a coffee shop with a drive-thru and no indoor seating - The project is anticipated to generate approximately 358 weekday daily trips, including 146 trips in the morning peak hour, and 74 trips in the evening peak hour - Approximately 90 percent are pass-by trips during the morning peak hour, and approximately 98 percent are pass-by trips during the evening peak hour		
2026	Background	Plus Project
Assumptions	None	Opening day in 2026
Findings	- Poor LOS at: - Park Meadows Dr & Business Center Dr / Quebec St - East Access / Park Meadows Dr	Poor LOS at East Access / Park Meadows Dr
Mitigations	Park Meadows Drive & Business Center Drive / Quebec Street: - Optimize signal timing East Access / Park Meadows Drive: - City could consider egress left-turn restriction. Otherwise, drivers will learn to re-route to avoid delays.	None
2046	Background	Plus Project
Assumptions	No capital improvement planned in Douglas County or Lone Tree TMP	None
Findings	Poor LOS at East Access / Park Meadows Dr	- Poor LOS at: - Southwest Access / Quebec Street - East Access / Park Meadows Dr
Mitigations	None	None

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I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed Lone Tree Dutch Bros development located in Lone Tree, Colorado. The proposed project is located on the southeast corner of the Park Meadows Drive & Business Center Drive / Quebec Street intersection. Figure 1 shows a vicinity map of the proposed development.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2025), future (2026), and future (2046) conditions with and without the proposed project and to recommend mitigation measures as needed.



Figure 1: Vicinity map showing the project location in Lone Tree, Colorado

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersections:

- 8664 South / Quebec Street
- Southwest Access / Quebec Street
- Park Meadows Drive & Business Center Drive / Quebec Street
- West Access / Park Meadows Drive
- East Access / Park Meadows Drive

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM), 7th Edition, 2022 methodology was used in this study to remain consistent with “state-of-the-practice” professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Vistro software, which follows the HCM methodology, the peak hour LOS was computed for each study intersection. The detailed LOS and 95th percentile queue length reports are provided in Appendix C.

Many of the figures in this report are printouts of the Vistro model. These figures are not meant to be a design exhibit for exact lane striping and design, due to the limitations of the Vistro software. Instead, the purpose of these figures is to show assumed peak hour turning movement volumes and the conceptual travel lane configuration of the study roadway network.

D. Level of Service Standards

For the purposes of this study, a minimum acceptable intersection performance for each of the study intersections was set at LOS D. If levels of service E or F conditions exist, an explanation and/or mitigation measures will be presented. A LOS D threshold is consistent with “state-of-the-practice” traffic engineering principles for urbanized areas and City of Lone Tree development standards.

Table 1: Level of Service Description

LOS		Description of Traffic Conditions	Average Delay (seconds/vehicle)	
			Signalized Intersections	Unsignalized Intersections
A		Free Flow / Insignificant Delay	≤ 10	≤ 10
B		Stable Operations / Minimum Delays	> 10 to 20	> 10 to 15
C		Stable Operations / Acceptable Delays	> 20 to 35	> 15 to 25
D		Approaching Unstable Flows / Tolerable Delays	> 35 to 55	> 25 to 35
E		Unstable Operations / Significant Delays	> 55 to 80	> 35 to 50
F		Forced Flows / Unpredictable Flows / Excessive Delays	> 80	> 50

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 7th Edition, 2022 Methodology (Transportation Research Board)

II. EXISTING (2025) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified, and potential mitigation measures are recommended. This analysis provides a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site are described below:

Quebec Street – is a county-maintained roadway which is classified by Douglas County's 2040 Transportation Master Plan (September 2019) as a major arterial. The roadway has three travel lanes in each direction. The posted speed limit is 40 mph in the study area.

Park Meadows Drive & Business Center Drive – is a city-maintained roadway which is classified by the City of Lone Tree's 2040 Transportation Master Plan (March 2020) as a collector. The roadway has two travel lanes in each. The posted speed limit is 35 mph in the study area.

C. Crash Data Summary

Hales Engineering obtained crash data within 250 feet of the study intersections. Six years of crash data were collected between January 1, 2020, and December 31, 2025, and the data is summarized by crash severity in Table 2 and by crash type in Table 3. As shown, there were a total of 69 crashes within the study area. The detailed crash data reports are provided in Appendix E.

There was one suspected serious injury, or fatal crashes reported in the study area, which are detailed below:

- In January 2021, there was a broadside collision at the 8664 South / Quebec Street intersection when the northbound vehicle did not stop at the red light and hit the southbound vehicle turning left.

Table 2: Crash Severity by Intersection

Intersection	Crash Severity					Total Crashes at Intersection
	Fatal	Suspected Serious Injury	Suspected Minor Injury	Possible Injury	Property Damage Only	
8664 South / Quebec Street	0	1	0	0	2	3
Park Meadows Drive & Business Center Drive / Quebec Street	0	0	2	8	56	66
TOTAL	0	1	2	8	58	69

Source: UDOT Numetric AASHTOWare, July 2025

Table 3: Crash Type by Intersection

Intersection	Crash Type					Total Crashes at Intersection
	Front to Rear	Single Vehicle	Angle	Sideswipe	Other	
8664 South / Quebec Street	2	0	2	0	0	4
Park Meadows Drive & Business Center Drive / Quebec Street	32	0	12	19	2	65
TOTAL	34	0	14	19	2	69

Source: UDOT Numetric AASHTOWare, July 2025

D. Traffic Volumes

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period traffic counts were performed at the following intersections:

- 8664 South / Quebec Street
- Park Meadows Drive & Business Center Drive / Quebec Street
- West Access / Park Meadows Drive
- East Access / Park Meadows Drive

The counts were performed on Tuesday, June 10, 2025. The morning peak hour was determined to be between 8:00 and 9:00 a.m., and the evening peak hour was determined to be between 4:30 and 5:30 p.m. The evening peak hour volumes were approximately 34% higher than the morning peak hour volumes. Both the morning and evening peak hour volumes were used in the analysis. Detailed count data are included in Appendix B.

Hales Engineering made seasonal adjustments to the observed traffic volumes due to Skyview Academy not being in session in June. It is located on Business Center Drive approximately three-quarters of a mile west of the Park Meadows Drive & Business Center Drive / Quebec Street intersection and produces a substantial amount of traffic during peak hours. Therefore, trips were added to the counted volumes to represent the highest feasible traffic volume conditions in the study area. It is assumed that traffic volumes in June will be generally higher than typical with

summer travel and older school age children driving more during summer break for a more conservative analysis. Institute of Transportation Engineers (ITE) survey data was used to estimate typical trips generated for the SkyView Academy that were added to the existing traffic counts for the existing (2025) background scenario to model typical peak hour conditions when school is in session. The observed traffic volumes were adjusted accordingly to determine average turning movement counts at the study intersections. Annual Average Daily Traffic (AADT) volume were gathered from the State's Traffic Count Database System (TCDS). 2024 AADT is 36,573 vehicles per day (vpd) on Quebec Street north of Park Meadows Drive and 17,395 vpd on Park Meadows Drive east of Quebec Street.

Figure 2 shows the existing morning and evening peak hour volumes as well as intersection geometry at the study intersections.

E. Level of Service Analysis

Hales Engineering determined that the Park Meadows Drive & Business Center Drive / Quebec Street and East Access / Park Meadows Drive intersections are currently operating at poor levels of service during the evening peak hour, as shown in Table 4. These results serve as a baseline condition for the impact analysis of the proposed development during opening day (2026) conditions.

Table 4: Existing (2025) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
8664 South / Quebec Street	Signal	A (9.6)	B (13.8)
Southwest Access / Quebec Street	WB Stop	d (30.4) WBRT	c (17.5) WBRT
Park Meadows Drive & Business Center Drive / Quebec Street	Signal	D (38.7)	F (81.3)
West Access / Park Meadows Drive	NB Stop	b (11.3) NBRT	b (12.4) NBRT
East Access / Park Meadows Drive	SB/NB Stop	c (24.4) NBLT	f (67.1) SBT
¹ . Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc. ² . Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.			
Source: Hales Engineering, July 2025			

F. Queuing Analysis

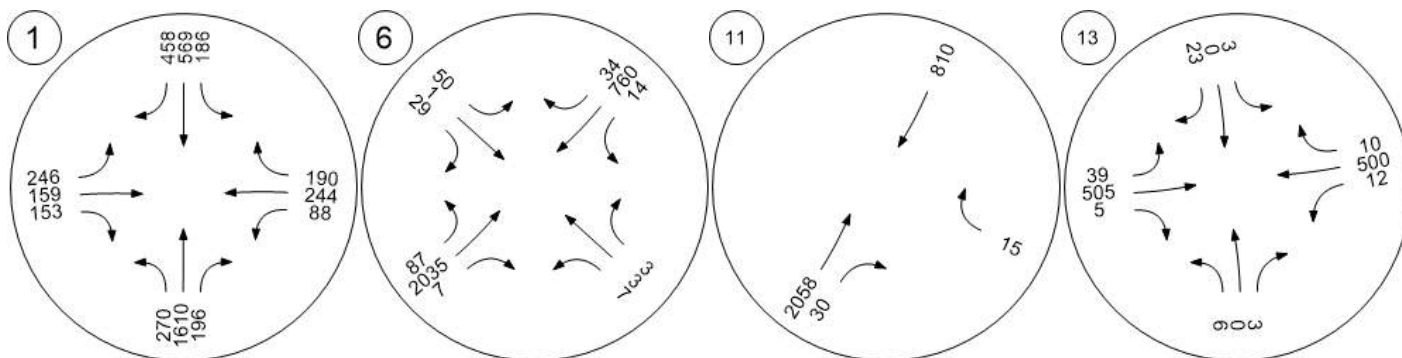
Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths during the morning and evening peak hour are summarized as follows:

- Park Meadows Drive & Business Center Drive Quebec Street:
 - Westbound Left: 500 feet
 - Westbound Right: 1000 feet

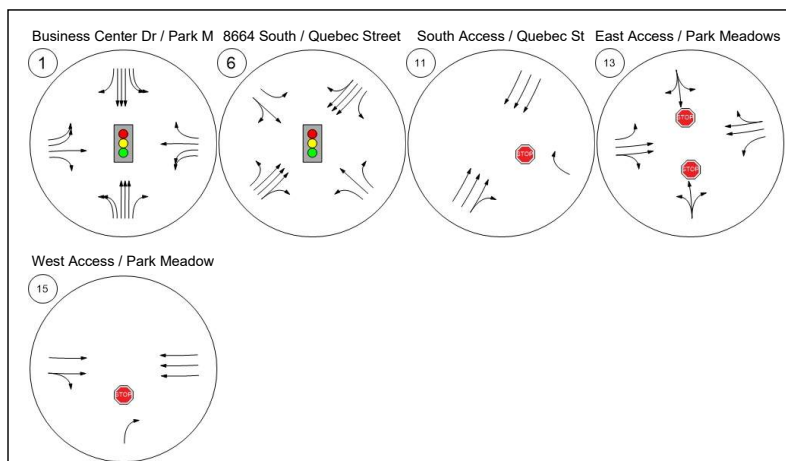
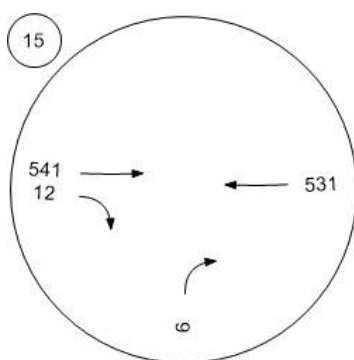
Traffic Volume - Base Volume



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



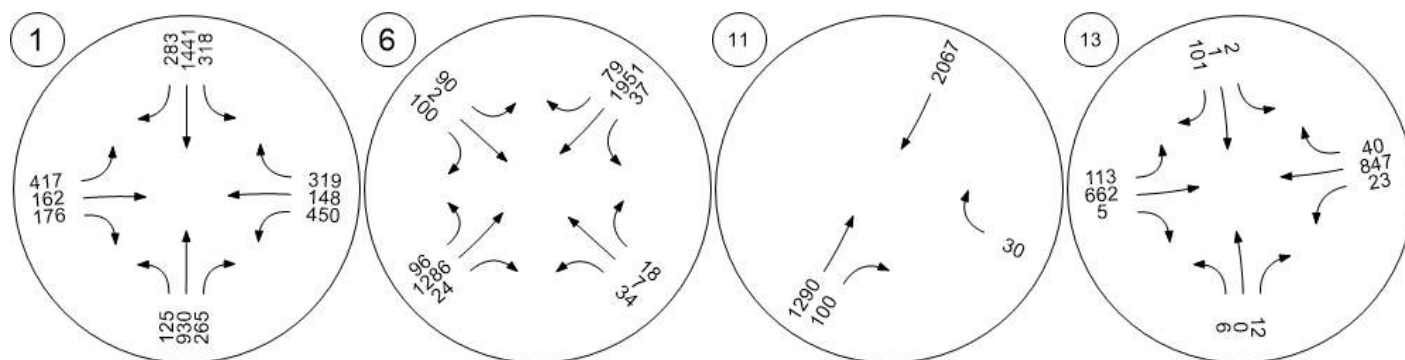
West Access / Park Meadow



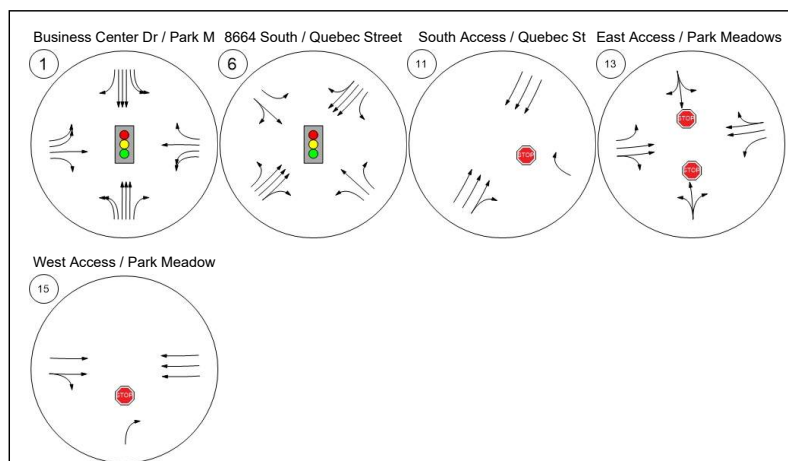
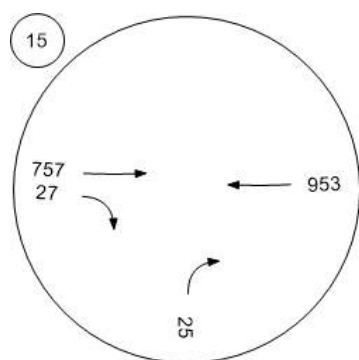
Traffic Volume - Base Volume



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



West Access / Park Meadow



G. Mitigation Measures

It is recommended that the signal timing at the Park Meadows Drive & Business Center Drive / Quebec Street intersection be optimized to minimize critical movement delays. With signal timing optimization it is anticipated that the intersection will operate at an acceptable LOS by giving more cycle split time to the critical movements, as shown in Table 5.

Table 5: Existing (2025) Background Peak Hour LOS (Mitigated)

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
Park Meadows Drive & Business Center Drive / Quebec Street	Signal	D (37.4)	D (45.7)
1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc. 2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.			
Source: Hales Engineering, July 2025			

Though not assumed in the mitigated scenario, the City could consider restricting the egress (northbound and southbound) left-turn movements at the East Access / Park Meadows Drive intersection, making it a three-quarter access. If the left-turn movements are not restricted, drivers may choose to re-route to other locations to avoid delays. Less delay is expected during non-peak hours, where drivers will be able to more easily take left-turns. Other mitigations, such as a traffic signal, are not feasible due to the close proximity to Quebec Street.

III. PROJECT CONDITIONS

A. Purpose

The project conditions discussion explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in Chapter I.

B. Project Description

The proposed Lone Tree Dutch Bros development is located on the southeast corner of the Park Meadows Drive & Business Center Drive / Quebec Street intersection. The development will consist of a coffee shop with a drive-thru and no indoor seating. A concept plan for the proposed development is provided in Appendix A. The proposed land use for the development has been identified in Table 6.

Table 6: Project Land Uses

Land Use	Intensity
Coffee Shop with No Indoor Seating	2 Drive-thru Lanes / 900 square feet

C. Trip Generation

Trip generation for the development was calculated using both data from similar Dutch Bros sites and trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 11th Edition, 2021. Trip reductions for pass-by trips were estimated and applied to the project. Pass-by trips are trips already on the road that visit the site before continuing the original route. Hales Engineering referenced average ITE pass-by rates and assumed lower percentages to be conservative in the analysis, as shown in Table 7.

Table 7: Trip Reductions

Time Period	Pass-by	
	ITE	Assumed
Daily	94%	94%
Morning	90%	90%
Evening	98%	98%

Trip generation for the proposed project is included in Table 8. The total trip generation for the development is as follows:

- Daily Trips: 358
- Morning Peak Hour Trips: 146
- Evening Peak Hour Trips: 74

Table 8: Trip Generation

Trip Generation Lone Tree - Dutch Bros														
	Land Use ¹	# of Units	Unit Type	Trip Generation					Reductions			New Trips		
				Total	% In	% Out	In	Out	Internal Capture	Transit	Pass-by	In	Out	Total
Weekday Daily														
	Coffee Shop w/Drive-thru & No Indoor Seating (938)	2	Drive-thru Lanes	358	50%	50%	179	179	0%	0%	94%	10	11	21
TOTAL				358			179	179				10	11	21
AM Peak Hour														
	Dutch Bros with Drive-Through (Local Data)	.9	KSF	146	51%	49%	74	72	0%	0%	90%	8	7	15
TOTAL				146			74	72				8	7	15
PM Peak Hour														
	Dutch Bros with Drive-Through (Local Data)	.9	KSF	74	49%	51%	36	38	0%	0%	98%	0	1	1
TOTAL				74			36	38				0	1	1
1. Land Use Code from the Institute of Transportation Engineers (ITE) <i>Trip Generation</i> , 11th Edition, 2021. SOURCE: Hales Engineering, June 2025														

D. Trip Distribution and Assignment

Trip distribution percentages for new trips were based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection were also used to establish these distribution percentages, especially near the site. The assumed distribution of new trips during the morning and evening peak hour is shown in Table 9.

Trip distribution percentages for pass-by trips were calculated based on the existing directional traffic on the major roads near the project, as summarized in Table 10.

Table 9: New Trip Distribution

Direction	% To/From Project
North	30%
South	30%
East	30%
West	10%

Table 10: Pass-by Trip Distribution

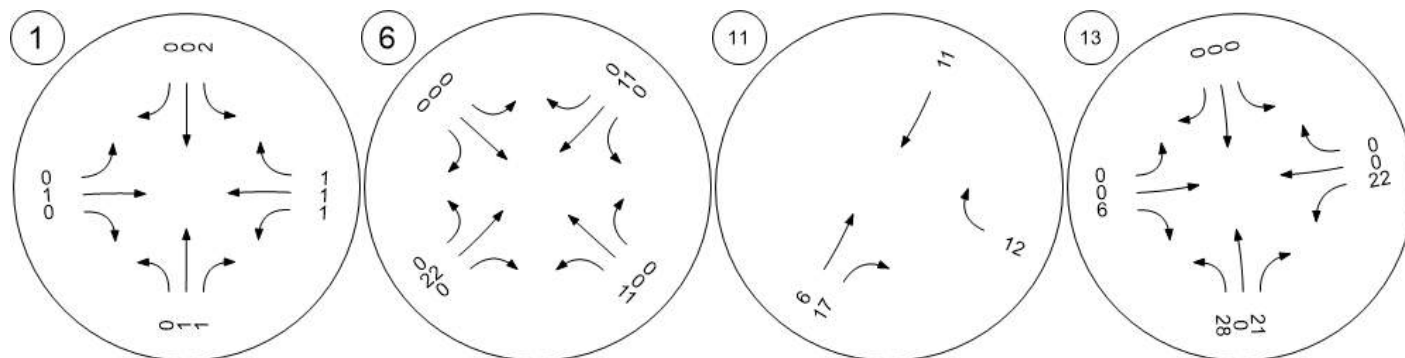
Direction	%
Eastbound	70%
Westbound	30%

These trip distribution assumptions were used to assign the morning and evening peak hour trip generation at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.

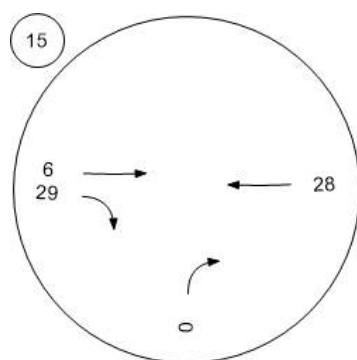
Traffic Volume - Net New Site Trips



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



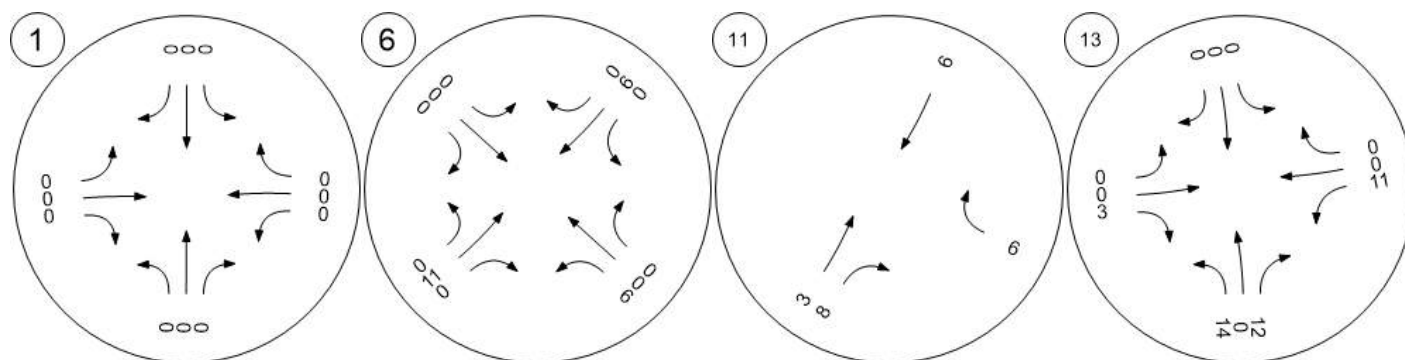
West Access / Park Meadow



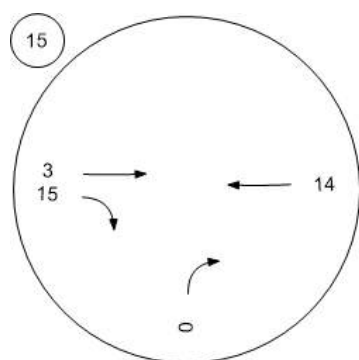
Traffic Volume - Net New Site Trips



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



West Access / Park Meadow



E. Access

The proposed access for the site will be gained at the following locations:

Park Meadows Drive:

- West access is located approximately 150 feet east of the Park Meadows Drive & Business Center Drive / Quebec Street intersection. It will access the project on the south side of Park Meadows Drive. It is anticipated that the access will be stop-controlled.
- East access is located approximately 350 feet east of the Park Meadows Drive & Business Center Drive / Quebec Street intersection. It will access the project on the south side of Park Meadows Drive. It is anticipated that the access will be stop-controlled.

Quebec Street:

- 8664 South is located at the 8664 South / Quebec Street intersection. It will access the project on the east side of Quebec Street. It is anticipated that the access will be signal-controlled.
- South access is located approximately 250 feet north of the 8664 South / Quebec Street intersection. It will access the project on the east side of Quebec Street. It is anticipated that the access will be stop-controlled.

F. Auxiliary Lanes

Auxiliary lanes are deceleration (ingress) or acceleration (egress) turn lanes that provide for safe turning movements that have less impact on through traffic. These lanes are sometimes needed at accesses or roadway intersections if right- or left-turn volumes are high enough.

Douglas County and City of Lone Tree / CDOT auxiliary lane requirements for non-rural arterial roadways state deceleration lanes are needed when there are at least 50 right-turn vehicles or 25 left-turn vehicles in an hour. These guidelines were used for the County and City roadways in the study area. Based on these guidelines and the anticipated project traffic, no additional auxiliary lanes are recommended.

G. On-site Queuing Analysis

Based on existing usage data, it is anticipated that the Dutch Bros drive-through will experience peak queues during the morning peak hour. At the Dutch Bros drive-throughs, the maximum queues counted were:

- 3478 Clear Creek Drive, Wheat Ridge, CO – 19 Vehicles
- 1571 East 120th Avenue, Northglenn, CO – 22 Vehicles
- 3705 South Santa Fe Drive, Sheridan, CO – 16 Vehicles

The average queue length calculated is 19 vehicles. It is anticipated that the proposed drive-through in Lone Tree will be sufficient to accommodate up to 20 vehicles without interfering with

internal circulation in the parking lot. As a precautionary measure, it is recommended that Dutch Bros consider having vehicles park and wait for their order if the drive-through queuing exceeds the capacity of the proposed drive-through lane. Figure 4 shows a potential maximum queue scenario.

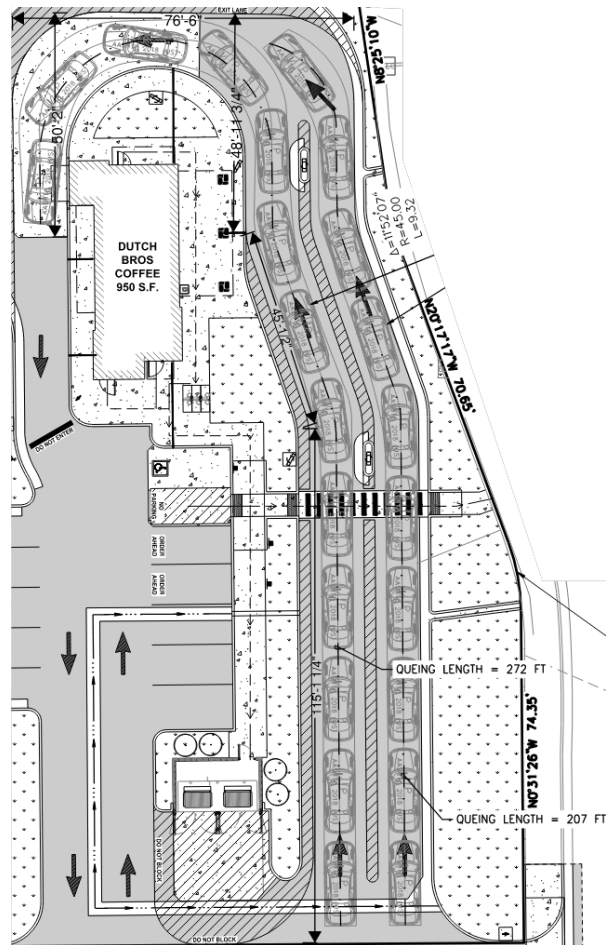


Figure 4: Drive-through queue layout

IV. OPENING DAY (2026) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the opening day (2026) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for existing background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the opening day (2026) background traffic volumes to predict turning movement volumes for opening day (2026) plus project conditions. Opening day (2026) plus project morning and evening peak hour turning movement volumes are shown in Figure 5.

C. Level of Service Analysis

Hales Engineering determined that the East Access / Park Meadows Drive intersection is anticipated to operate at LOS F with project traffic added, as shown in Table 11.

Table 11: Opening Day (2026) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
8664 South / Quebec Street	Signal	A (9.8)	C (33.5)
Southwest Access / Quebec Street	WB Stop	d (33.6) WBRT	c (17.9) WBRT
Park Meadows Drive & Business Center Drive / Quebec Street	Signal	D (39.0)	D (45.8)
West Access / Park Meadows Drive	NB Stop	b (11.5) NBRT	b (12.6) NBRT
East Access / Park Meadows Drive	SB/NB Stop	d (29.9) NBLT	f (76.1) SBLT
¹ Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc. ² Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.			
Source: Hales Engineering, July 2025			

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing are anticipated during the morning and evening peak hours.

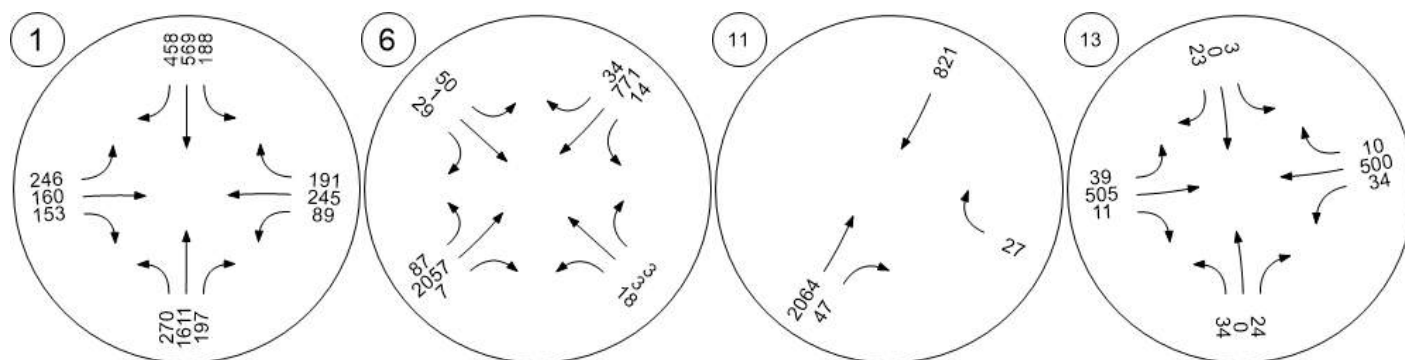
E. Mitigation Measures

No additional mitigation measures are recommended.

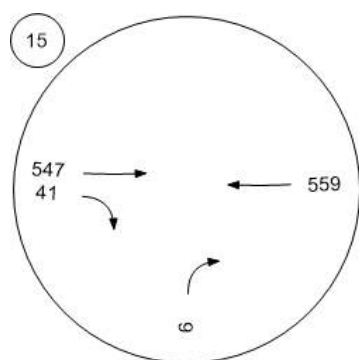
Traffic Volume - Future Total Volume



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



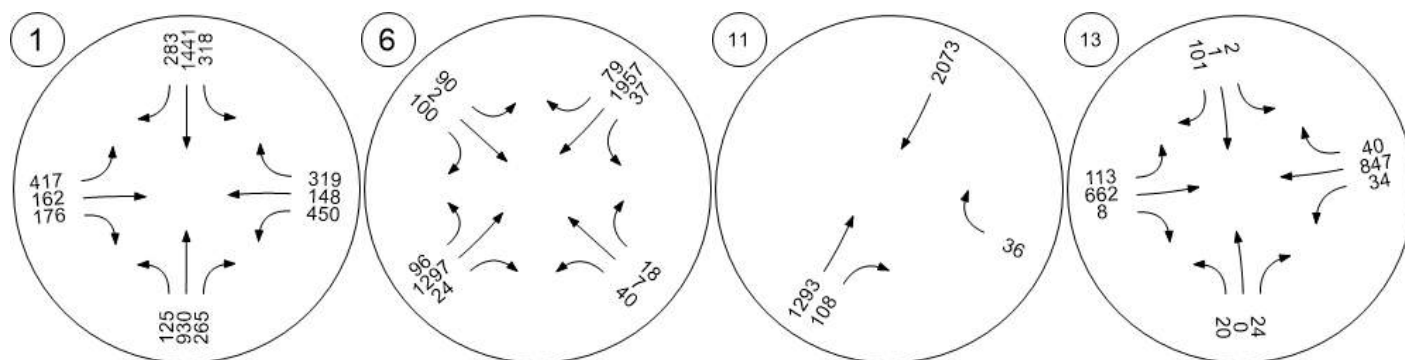
West Access / Park Meadow



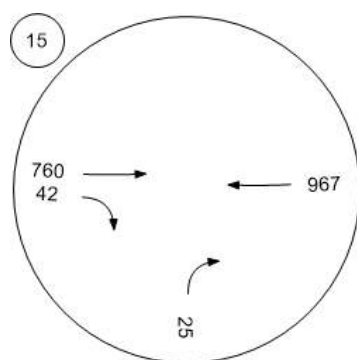
Traffic Volume - Future Total Volume



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



West Access / Park Meadow



V. FUTURE (2046) BACKGROUND CONDITIONS

A. Purpose

The purpose of the future (2046) background analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified, and potential mitigation measures recommended.

B. Roadway Network

According to both the Douglas County and City of Lone Tree *2040 Transportation Master Plan*, there are no projects planned by 2040 in the study area. Therefore, no changes were made to the roadway network for the future (2046) analysis.

C. Traffic Volumes

Hales Engineering obtained future (2046) forecasted volumes from the DRCOG travel demand model and peak period turning movement counts were estimated with projection at the major intersections or segments. Future (2046) background morning and evening peak hour turning movement volumes are shown in Figure 6.

D. Level of Service Analysis

Hales Engineering determined that the East Access / Park Meadows Drive intersection is anticipated to operate at LOS F during the evening peak hour in future (2046) background conditions, as shown in Table 12. These results serve as a baseline condition for the impact analysis of the proposed development for future (2046) conditions.

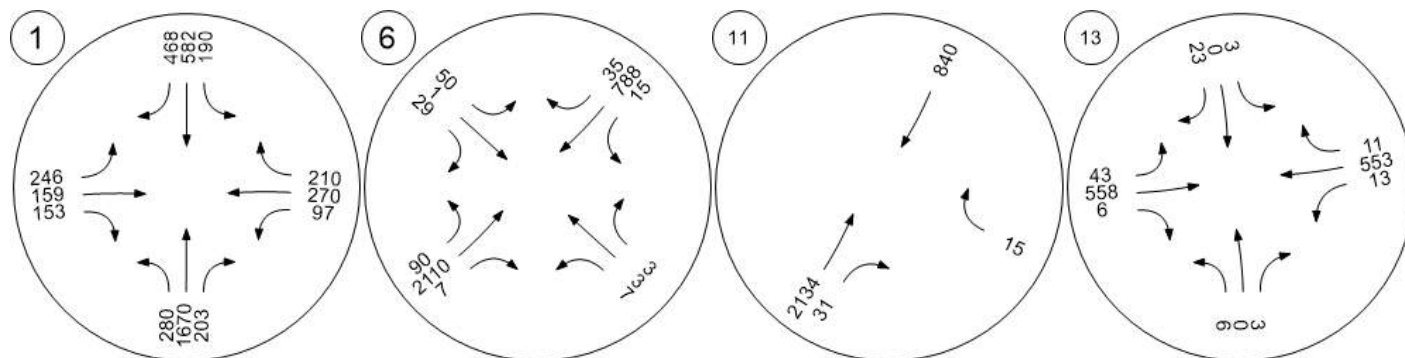
Table 12: Future (2046) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
8664 South / Quebec Street	Signal	A (9.8)	B (13.9)
Southwest Access / Quebec Street	WB Stop	d (32.4) WBRT	c (18.0) WBRT
Park Meadows Drive & Business Center Drive / Quebec Street	Signal	D (40.6)	D (48.6)
West Access / Park Meadows Drive	NB Stop	b (11.6) NBRT	b (13.0) NBRT
East Access / Park Meadows Drive	SB/NB Stop	d (28.5) NBLT	f (91.2) SBLT
¹ Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc. ² Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.			
Source: Hales Engineering, July 2025			

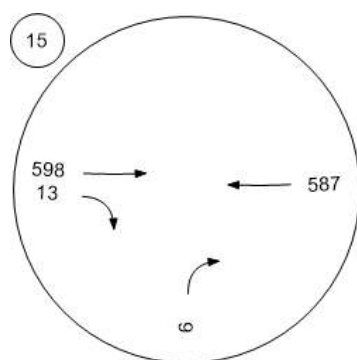
Traffic Volume - Future Background Volume



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



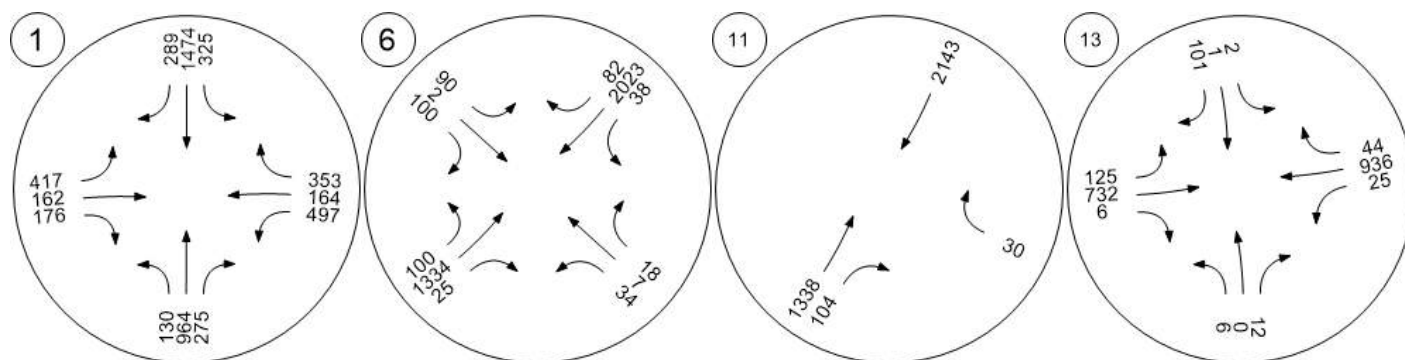
West Access / Park Meadow



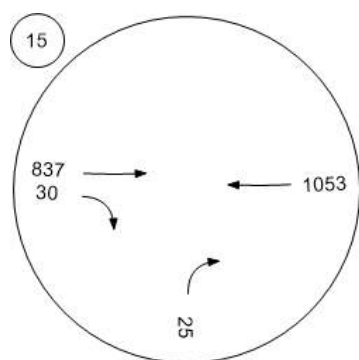
Traffic Volume - Future Background Volume



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



West Access / Park Meadow



E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths during the morning and evening peak hour are summarized as follows:

- Park Meadows Drive & Business Center Drive Quebec Street:
 - Westbound Left: 340 feet
 - Westbound Right: 510 feet

F. Mitigation Measures

No mitigation measures are recommended.

VI. FUTURE (2046) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the future (2046) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on future background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the future (2046) background traffic volumes to predict turning movement volumes for future (2046) plus project conditions. Future (2046) plus project morning and evening peak hour turning movement volumes are shown in Figure 7.

C. Level of Service Analysis

Hales Engineering determined that the Southwest Access / Quebec Street and East Access / Park Meadows Drive intersections are anticipated to operate at poor levels of service during the morning and evening peak hours in future (2046) plus project conditions, as shown in Table 13.

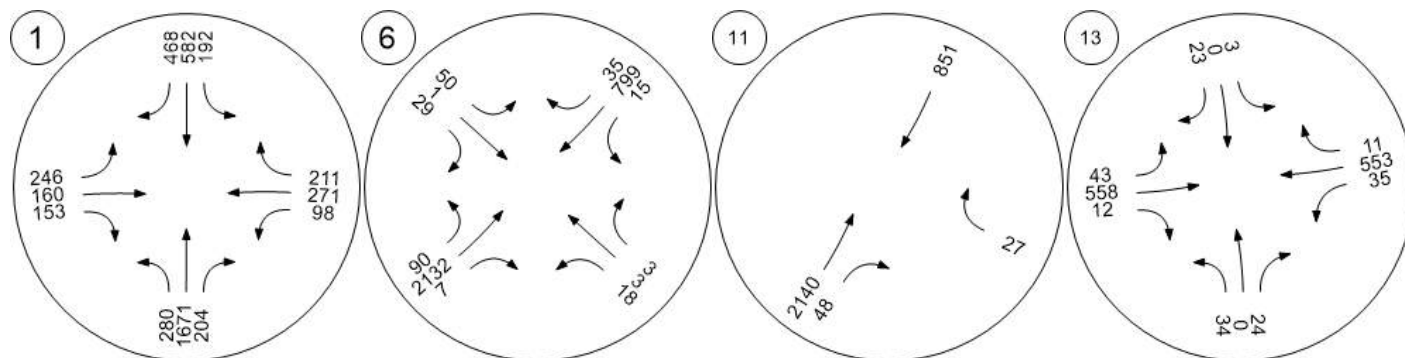
Table 13: Future (2046) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement ¹	
Description	Control	Morning Peak	Evening Peak
8664 South / Quebec Street	Signal	B (10.0)	C (35.2)
Southwest Access / Quebec Street	WB Stop	e (36.0) WBRT	c (18.5) WBRT
Park Meadows Drive & Business Center Drive / Quebec Street	Signal	D (40.8)	D (48.6)
West Access / Park Meadows Drive	NB Stop	b (11.8) NBRT	b (13.1) NBRT
East Access / Park Meadows Drive	SB/NB Stop	e (35.9) NBLT	f (114.1) SBLT
¹ Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc. ² Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.			
Source: Hales Engineering, July 2025			

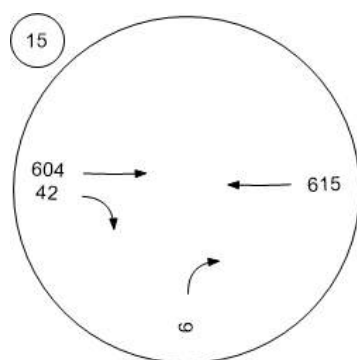
Traffic Volume - Future Total Volume



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



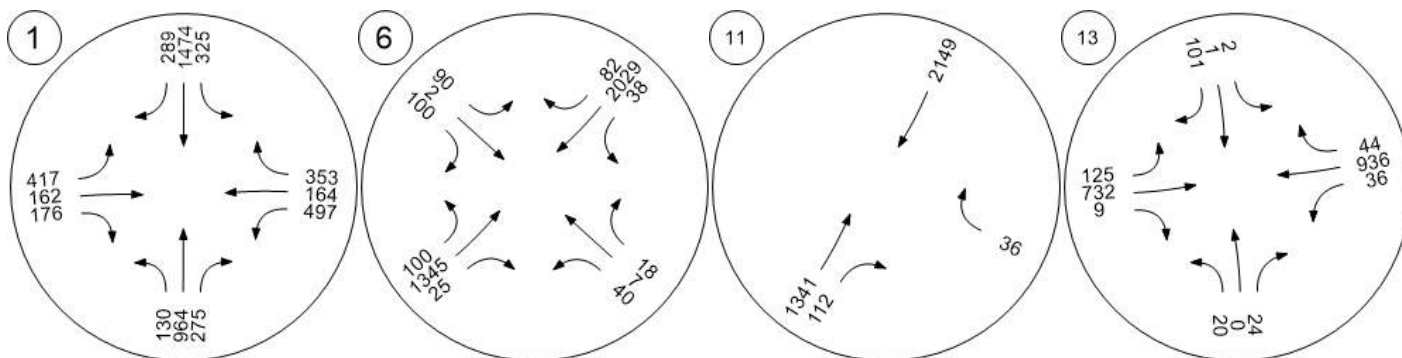
West Access / Park Meadow



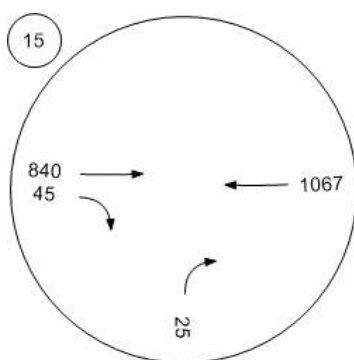
Traffic Volume - Future Total Volume



Business Center Dr / Park M 8664 South / Quebec Street South Access / Quebec St East Access / Park Meadows



West Access / Park Meadow



D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths during the morning and evening peak hour are summarized as follows:

- Park Meadows Drive & Business Center Drive Quebec Street:
 - Westbound Left: 340 feet
 - Westbound Right: 510 feet

E. Mitigation Measures

No mitigation measures are recommended.

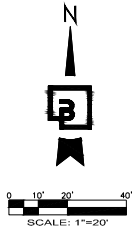
APPENDIX A

Site Plan

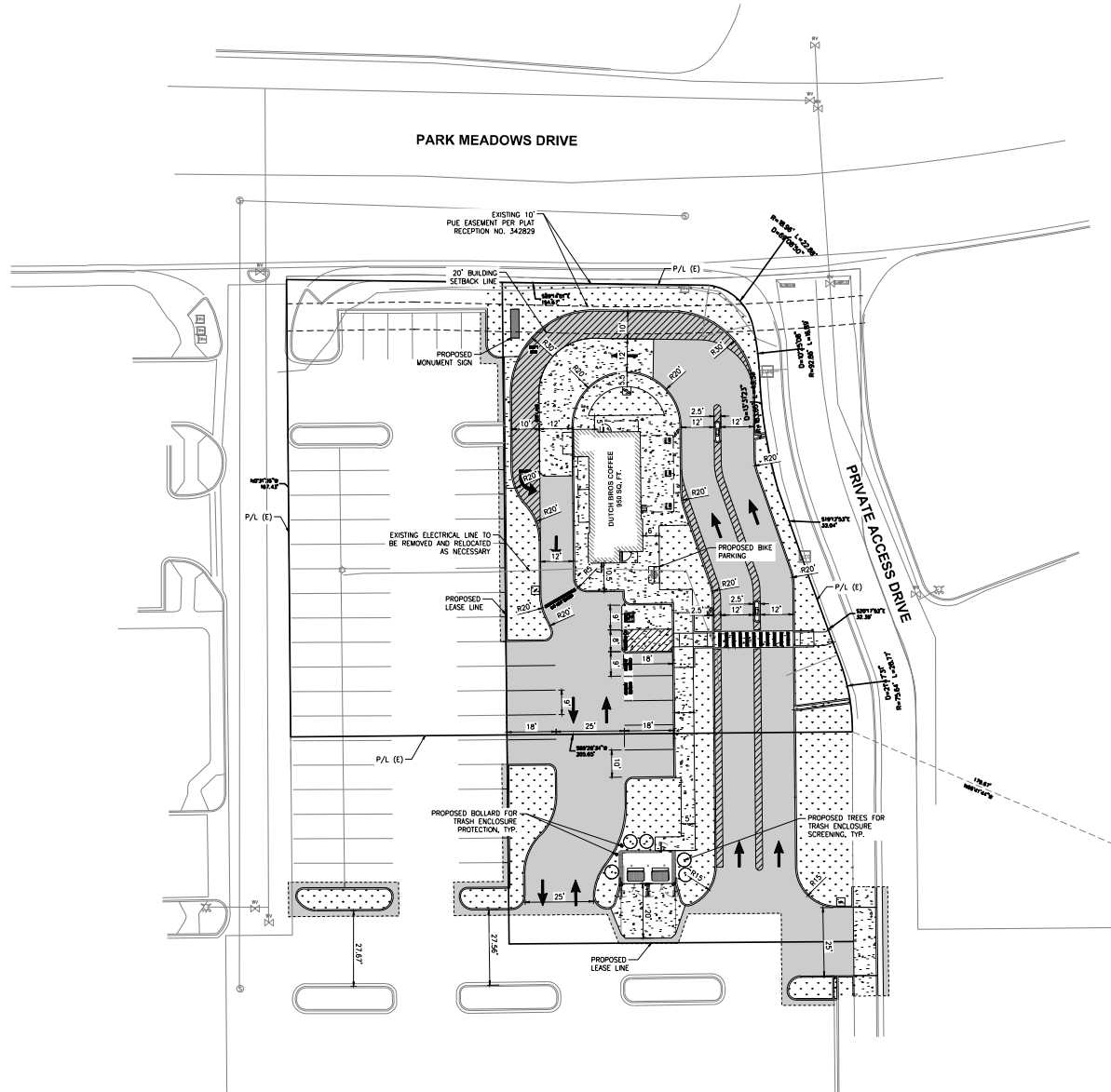
The name DUTCH BROS, and all associated logos, distinctive designs, content, information, and other materials featured, displayed, contained herein, and made available by Dutch Bros, including but not limited to, the "look and feel" of the establishments and products, all text, images, colors, configurations, graphics, designs, illustrations, photographs, and pictures (collectively, the "Materials") are owned by and/or licensed by DB Franchising USA, LLC and are protected by copyright, trademark, trade dress, patent, and/or other intellectual property rights and unfair competition laws under the United States and foreign laws.



Know what's below.
Call before you dig.
Dial 811



DUTCH BROS COFFEE CO1404 - LONE TREE, CO SEQ PARK MEADOWS AND QUEBEC PRELIMINARY SITE PLAN



PROJECT DATA

DB2550-A1
NAME: DUTCH BROS COFFEE - LONE TREE, CO
ADDRESS: SEQ PARK MEADOWS & S. QUEBEC, LONE TREE, CO
PARCEL NO.: A PORTION OF 2231-042-03-065
PARCEL AREA = 30,492 SQ. FT. (0.70 ACRES)
PROPOSED LEASE AREA = 27,017 SQ. FT. (0.62 ACRES)
LANDSCAPING REQUIRED = 25.0%
LANDSCAPING PROVIDED = 25.3%
PARKING SPACES:
- PROPOSED ADA PARKING = 1
- PROPOSED REGULAR PARKING = 10
- EXISTING REGULAR SHARED PARKING = 2
TOTAL PARKING = 13
QUELING = 23
TRASH ENCLOSURE = 20' x 12'

LEGEND	
BUILDING LINE	----
EXISTING CURB TO REMAIN	----
PROPOSED CURB	----
PROPOSED LANDSCAPING	----
PROPOSED ASPHALT	----
PROPOSED CONCRETE	----

PRELIMINARY NOT FOR CONSTRUCTION

PRELIMINARY SITE PLAN
SEQ PARK MEADOWS AND QUEBEC
LONE TREE, CO



Scale:
Horizontal
1" = 20'
Vertical
N/A

Designed: BAG
Drawn: AM
Checked: AM
Approved: AM
Date: 10/20/24

Barghausen Consulting Engineers, Inc.
1805 72nd Avenue South
West, VA 98042
425-521-6222
barghausen.com

Job Number
23707
Sheet
1 OF 1

APPENDIX B

Turning Movement Counts



File Name : 1 Quebec and Business Center AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 1

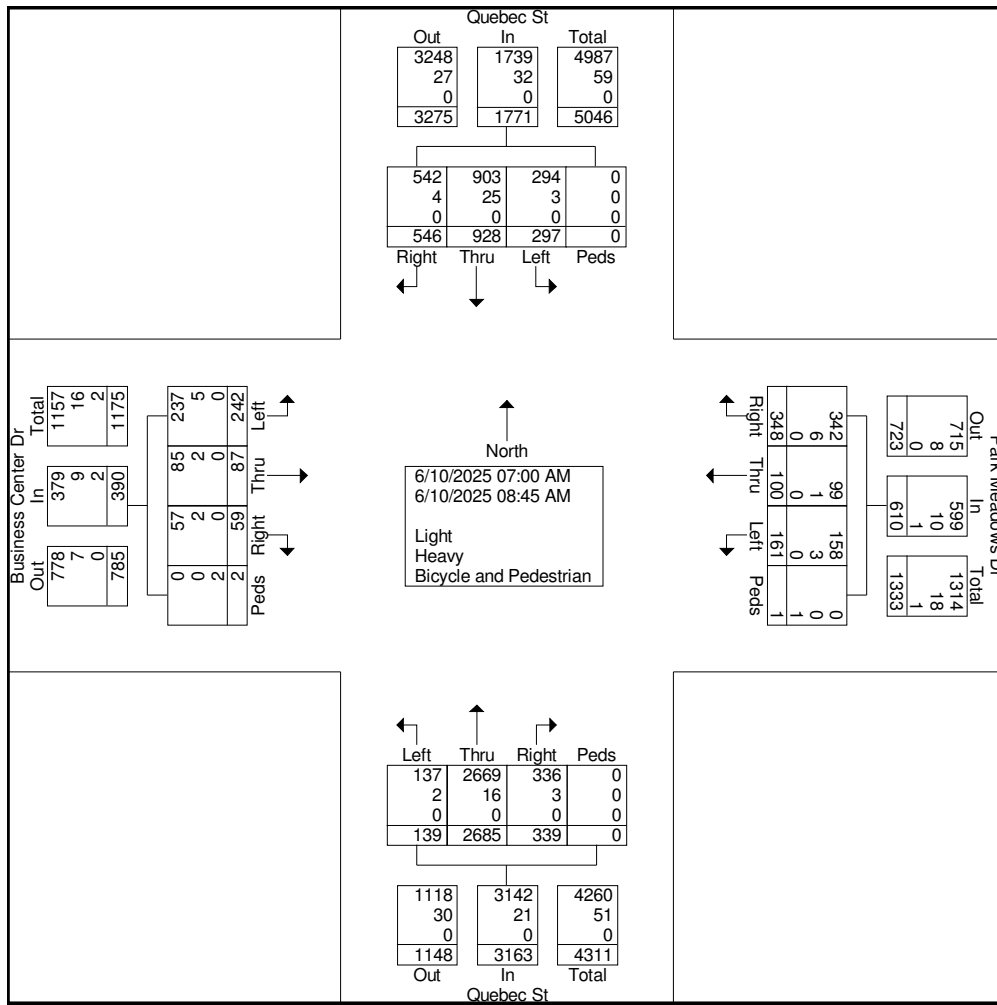
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Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Quebec St and Business Center Dr

File Name : 1 Quebec and Business Center AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 2



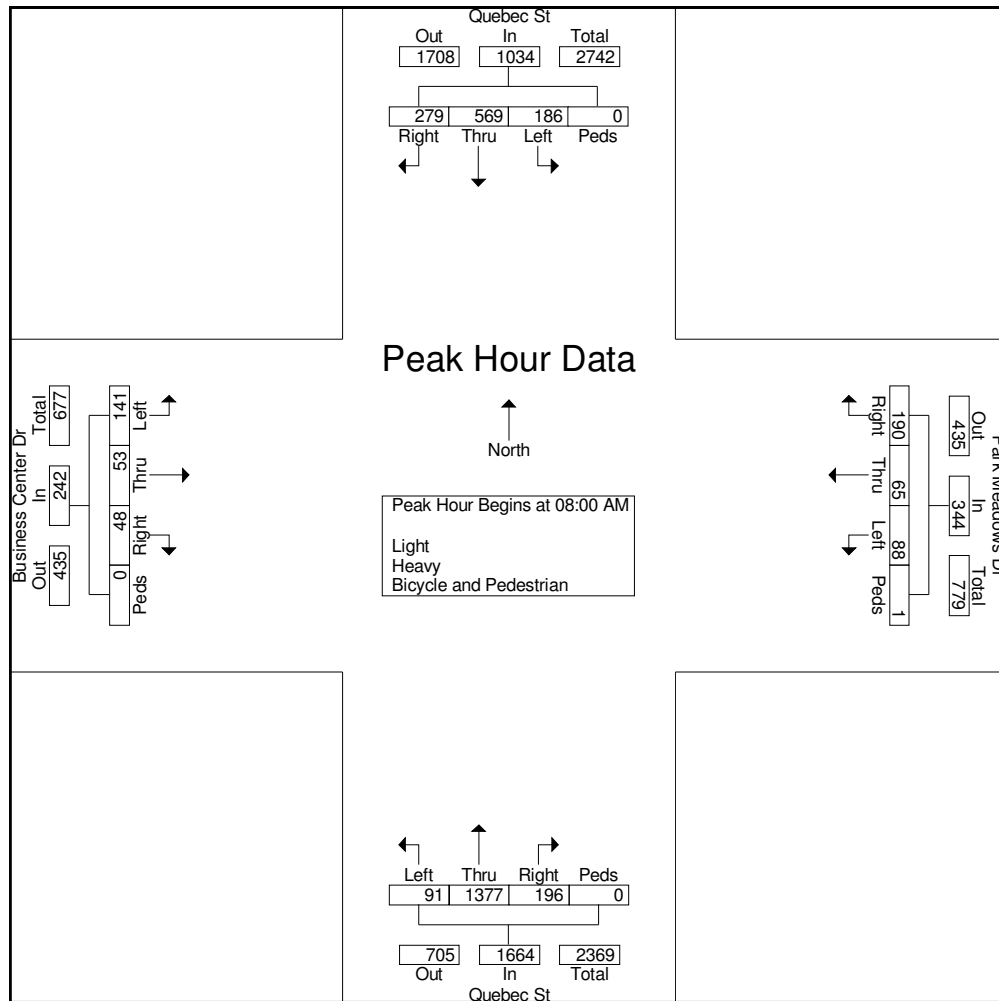


Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Quebec St and Business Center Dr

File Name : 1 Quebec and Business Center AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 3

	Business Center Dr Eastbound					Park Meadows Dr Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
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																					
08:00 AM	25	10	5	0	40	17	14	44	0	75	14	331	58	0	403	38	129	67	0	234	752
08:15 AM	31	10	7	0	48	20	13	55	0	88	22	350	43	0	415	38	129	63	0	230	781
08:30 AM	38	8	11	0	57	24	17	40	0	81	24	356	46	0	426	45	149	69	0	263	827
08:45 AM	47	25	25	0	97	27	21	51	1	100	31	340	49	0	420	65	162	80	0	307	924
Total Volume	141	53	48	0	242	88	65	190	1	344	91	1377	196	0	1664	186	569	279	0	1034	3284
% App. Total	58.3	21.9	19.8	0		25.6	18.9	55.2	0.3		5.5	82.8	11.8	0		18	55	27	0		
PHF	.750	.530	.480	.000	.624	.815	.774	.864	.250	.860	.734	.967	.845	.000	.977	.715	.878	.872	.000	.842	.889





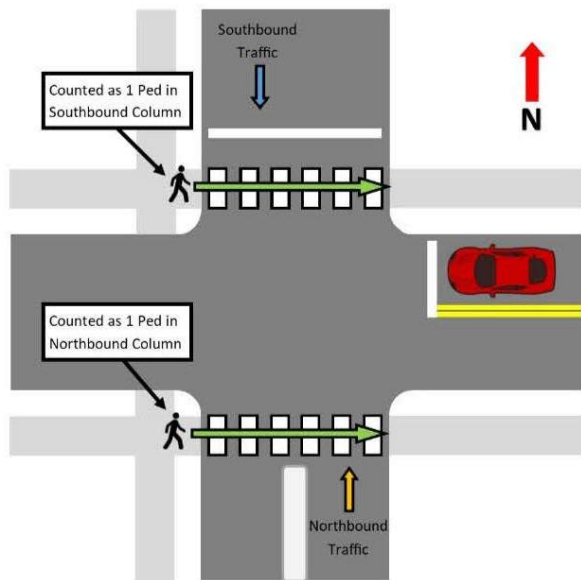
Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Quebec St and Business Center Dr

File Name : 1 Quebec and Business Center AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Quebec St and Business Center Dr

File Name : 1 Quebec and Business Center PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 1

Groups Printed- Light - Heavy - Bicycle and Pedestrian

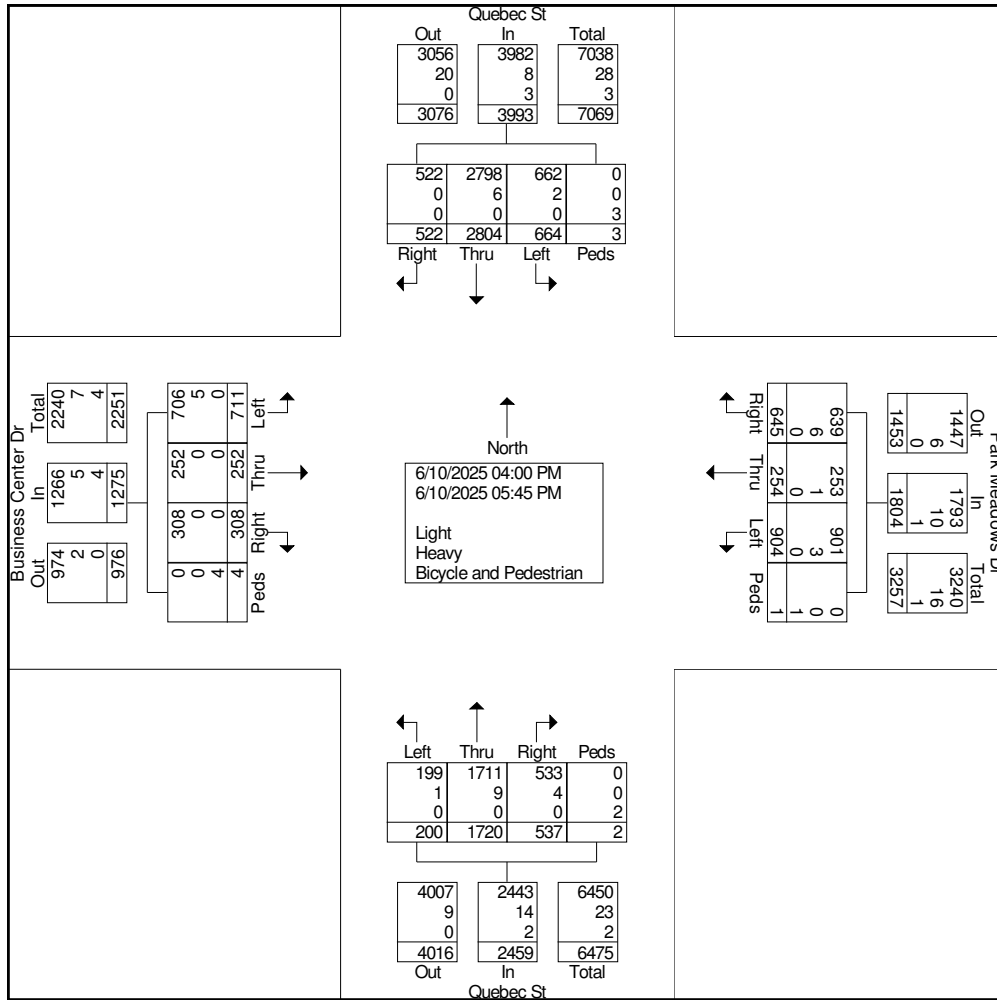
	Business Center Dr Eastbound					Park Meadows Dr Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	83	36	44	0	163	96	25	87	0	208	25	211	77	0	313	89	341	91	0	521	1205
04:15 PM	100	32	38	0	170	130	41	95	0	266	25	198	64	1	288	77	327	56	0	460	1184
04:30 PM	102	26	27	1	156	98	23	82	0	203	25	223	75	0	323	82	366	69	0	517	1199
04:45 PM	97	34	37	0	168	116	31	66	0	213	26	205	79	0	310	75	369	61	0	505	1196
Total	382	128	146	1	657	440	120	330	0	890	101	837	295	1	1234	323	1403	277	0	2003	4784
05:00 PM	105	33	44	1	183	126	42	92	1	261	30	200	45	0	275	89	320	58	2	469	1188
05:15 PM	78	35	33	0	146	110	26	79	0	215	18	269	66	0	353	72	386	69	1	528	1242
05:30 PM	78	33	47	0	158	119	41	64	0	224	22	192	64	0	278	85	339	50	0	474	1134
05:45 PM	68	23	38	2	131	109	25	80	0	214	29	222	67	1	319	95	356	68	0	519	1183
Total	329	124	162	3	618	464	134	315	1	914	99	883	242	1	1225	341	1401	245	3	1990	4747
Grand Total	711	252	308	4	1275	904	254	645	1	1804	200	1720	537	2	2459	664	2804	522	3	3993	9531
Apprch %	55.8	19.8	24.2	0.3		50.1	14.1	35.8	0.1		8.1	69.9	21.8	0.1		16.6	70.2	13.1	0.1		
Total %	7.5	2.6	3.2	0	13.4	9.5	2.7	6.8	0	18.9	2.1	18	5.6	0	25.8	7	29.4	5.5	0	41.9	
Light	706	252	308	0	1266	901	253	639	0	1793	199	1711	533	0	2443	662	2798	522	0	3982	9484
% Light	99.3	100	100	0	99.3	99.7	99.6	99.1	0	99.4	99.5	99.5	99.3	0	99.3	99.7	99.8	100	0	99.7	99.5
Heavy	5	0	0	0	5	3	1	6	0	10	1	9	4	0	14	2	6	0	0	8	37
% Heavy	0.7	0	0	0	0.4	0.3	0.4	0.9	0	0.6	0.5	0.5	0.7	0	0.6	0.3	0.2	0	0	0.2	0.4
Bicycle and Pedestrian	0	0	0	4	4	0	0	0	1	1	0	0	0	2	2	0	0	0	3	3	10
% Bicycle and Pedestrian	0	0	0	100	0.3	0	0	0	100	0.1	0	0	0	100	0.1	0	0	0	100	0.1	0.1



Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Quebec St and Business Center Dr

File Name : 1 Quebec and Business Center PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 2



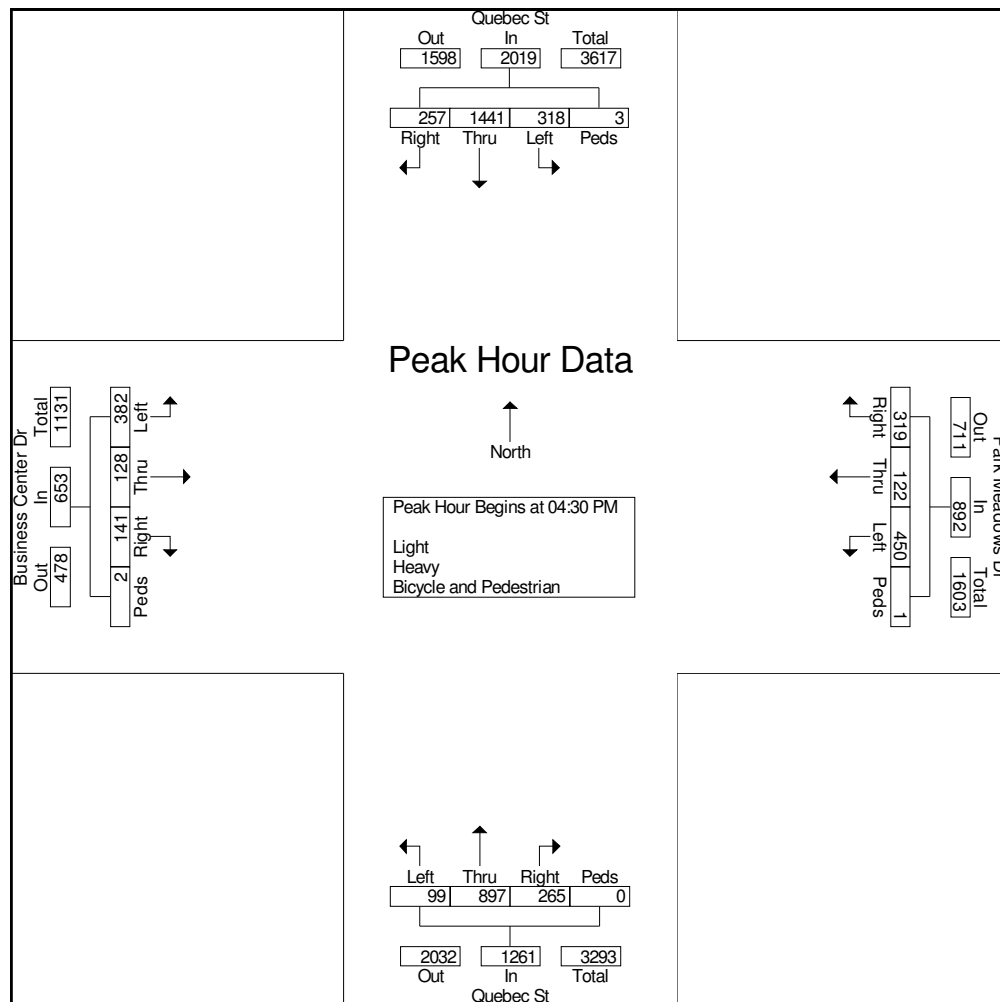


Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Quebec St and Business Center Dr

File Name : 1 Quebec and Business Center PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 3

	Business Center Dr Eastbound					Park Meadows Dr Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	102	26	27	1	156	98	23	82	0	203	25	223	75	0	323	82	366	69	0	517	1199
04:45 PM	97	34	37	0	168	116	31	66	0	213	26	205	79	0	310	75	369	61	0	505	1196
05:00 PM	105	33	44	1	183	126	42	92	1	261	30	200	45	0	275	89	320	58	2	469	1188
05:15 PM	78	35	33	0	146	110	26	79	0	215	18	269	66	0	353	72	386	69	1	528	1242
Total Volume	382	128	141	2	653	450	122	319	1	892	99	897	265	0	1261	318	1441	257	3	2019	4825
% App. Total	58.5	19.6	21.6	0.3		50.4	13.7	35.8	0.1		7.9	71.1	21	0		15.8	71.4	12.7	0.1		
PHF	.910	.914	.801	.500	.892	.893	.726	.867	.250	.854	.825	.834	.839	.000	.893	.893	.933	.931	.375	.956	.971





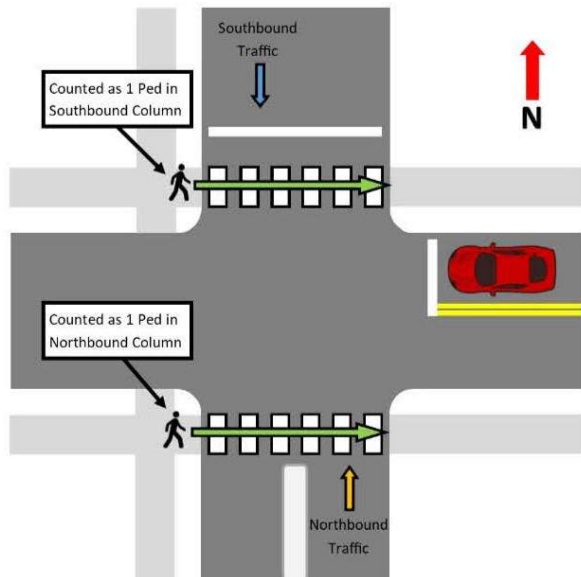
Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Quebec St and Business Center Dr

File Name : 1 Quebec and Business Center PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Park Meadows Dr and W Driveway

File Name : 2 Park Meadows and West Driveway AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 1

Groups Printed- Light - Heavy - Bicycle and Pedestrian

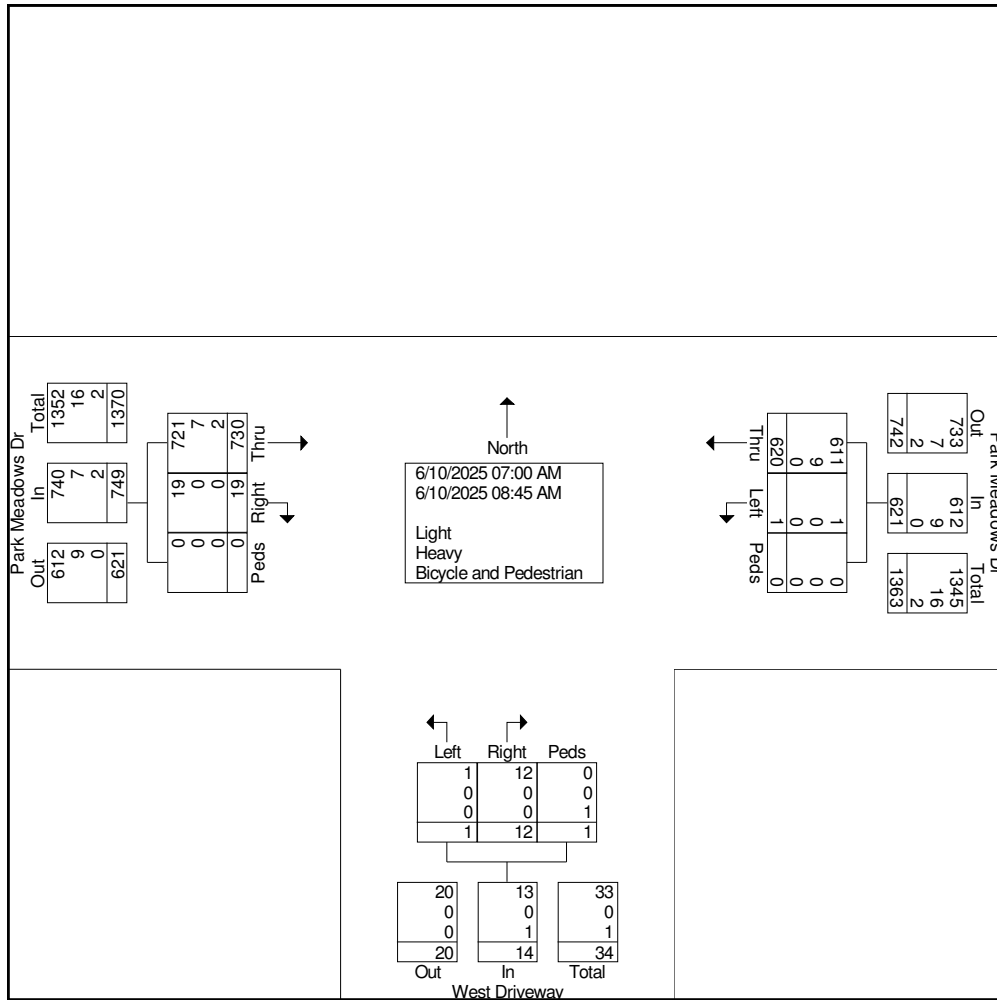
	Park Meadows Dr Eastbound				Park Meadows Dr Westbound				West Driveway Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
07:00 AM	61	0	0	61	0	62	0	62	0	0	0	0	123
07:15 AM	69	2	0	71	0	58	0	58	0	0	1	1	130
07:30 AM	67	2	0	69	0	78	0	78	1	1	0	2	149
07:45 AM	98	3	0	101	0	71	0	71	0	2	0	2	174
Total	295	7	0	302	0	269	0	269	1	3	1	5	576
08:00 AM	100	4	0	104	0	81	0	81	0	0	0	0	185
08:15 AM	92	2	0	94	0	82	0	82	0	2	0	2	178
08:30 AM	102	3	0	105	0	84	0	84	0	3	0	3	192
08:45 AM	141	3	0	144	1	104	0	105	0	4	0	4	253
Total	435	12	0	447	1	351	0	352	0	9	0	9	808
Grand Total	730	19	0	749	1	620	0	621	1	12	1	14	1384
Apprch %	97.5	2.5	0		0.2	99.8	0		7.1	85.7	7.1		
Total %	52.7	1.4	0	54.1	0.1	44.8	0	44.9	0.1	0.9	0.1	1	
Light	721	19	0	740	1	611	0	612	1	12	0	13	1365
% Light	98.8	100	0	98.8	100	98.5	0	98.6	100	100	0	92.9	98.6
Heavy	7	0	0	7	0	9	0	9	0	0	0	0	16
% Heavy	1	0	0	0.9	0	1.5	0	1.4	0	0	0	0	1.2
Bicycle and Pedestrian	2	0	0	2	0	0	0	0	0	0	1	1	3
% Bicycle and Pedestrian	0.3	0	0	0.3	0	0	0	0	0	0	100	7.1	0.2



Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Park Meadows Dr and W Driveway

File Name : 2 Park Meadows and West Driveway AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 2



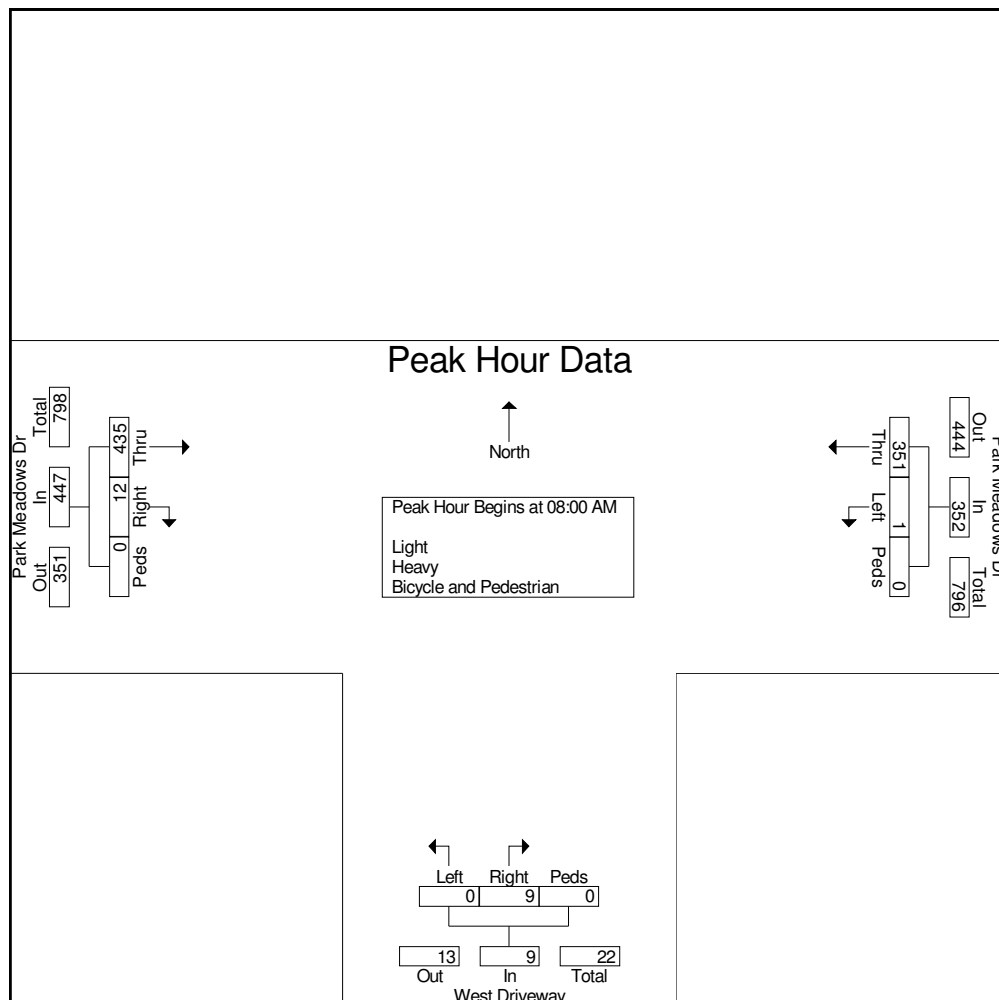


Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Park Meadows Dr and W Driveway

File Name : 2 Park Meadows and West Driveway AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 3

	Park Meadows Dr Eastbound				Park Meadows Dr Westbound				West Driveway Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
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													
08:00 AM	100	4	0	104	0	81	0	81	0	0	0	0	185
08:15 AM	92	2	0	94	0	82	0	82	0	2	0	2	178
08:30 AM	102	3	0	105	0	84	0	84	0	3	0	3	192
08:45 AM	141	3	0	144	1	104	0	105	0	4	0	4	253
Total Volume	435	12	0	447	1	351	0	352	0	9	0	9	808
% App. Total	97.3	2.7	0		0.3	99.7	0		0	100	0		
PHF	.771	.750	.000	.776	.250	.844	.000	.838	.000	.563	.000	.563	.798





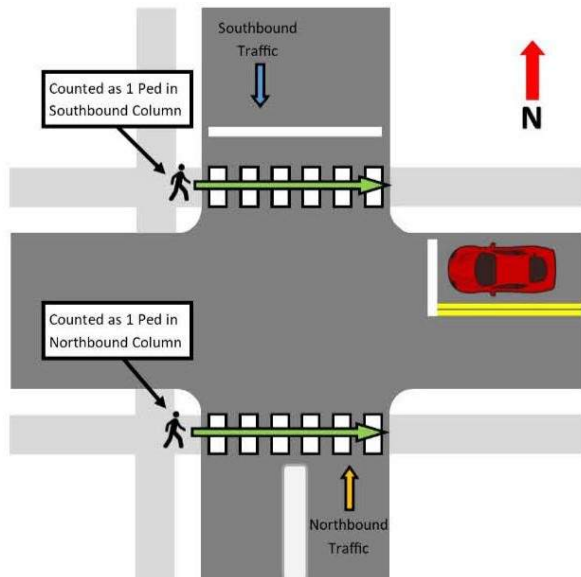
Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Park Meadows Dr and W Driveway

File Name : 2 Park Meadows and West Driveway AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 4

Image 1

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Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Park Meadows Dr and W Driveway

File Name : 2 Park Meadows and West Driveway PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 1

Groups Printed- Light - Heavy - Bicycle and Pedestrian

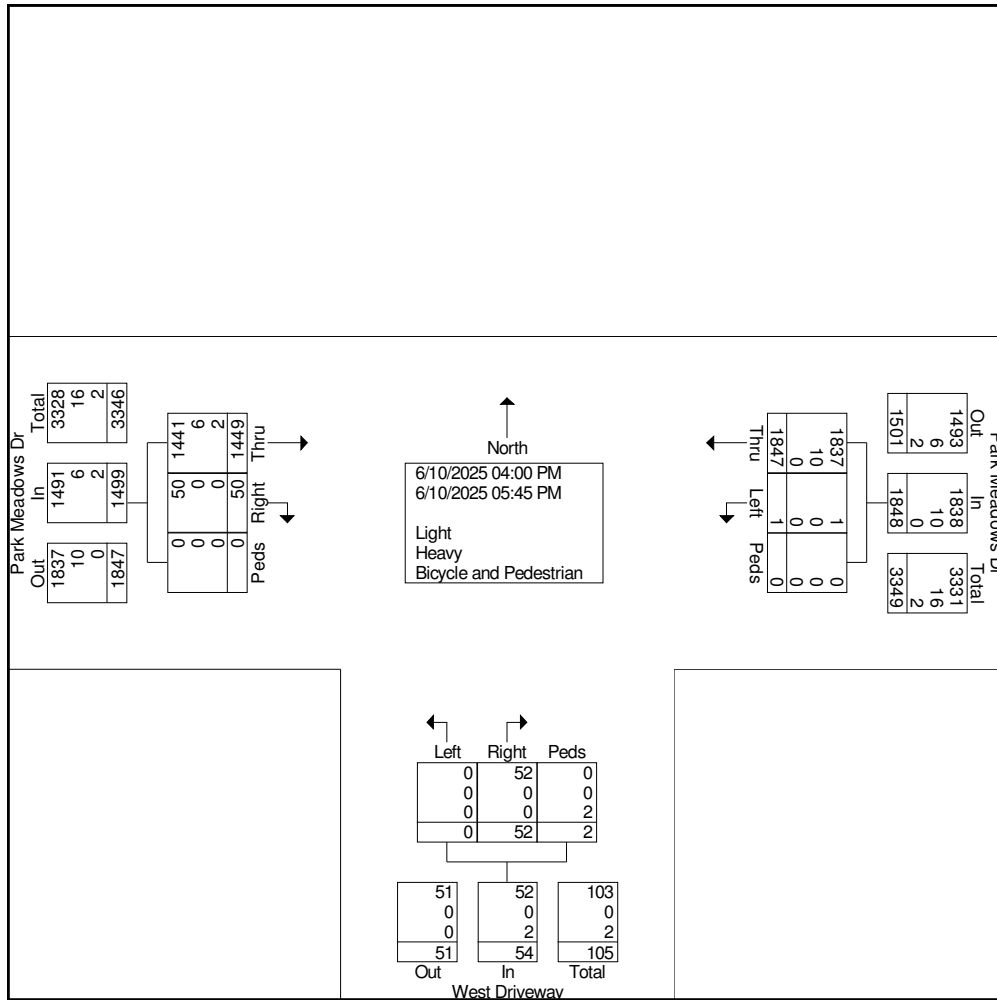
	Park Meadows Dr Eastbound				Park Meadows Dr Westbound				West Driveway Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
04:00 PM	185	10	0	195	0	230	0	230	0	11	0	11	436
04:15 PM	177	3	0	180	0	247	0	247	0	3	1	4	431
04:30 PM	196	3	0	199	1	210	0	211	0	8	0	8	418
04:45 PM	184	11	0	195	0	218	0	218	0	8	0	8	421
Total	742	27	0	769	1	905	0	906	0	30	1	31	1706
05:00 PM	170	9	0	179	0	269	0	269	0	7	0	7	455
05:15 PM	173	4	0	177	0	229	0	229	0	2	0	2	408
05:30 PM	177	5	0	182	0	218	0	218	0	7	0	7	407
05:45 PM	187	5	0	192	0	226	0	226	0	6	1	7	425
Total	707	23	0	730	0	942	0	942	0	22	1	23	1695
Grand Total	1449	50	0	1499	1	1847	0	1848	0	52	2	54	3401
Apprch %	96.7	3.3	0		0.1	99.9	0		0	96.3	3.7		
Total %	42.6	1.5	0	44.1	0	54.3	0	54.3	0	1.5	0.1	1.6	
Light	1441	50	0	1491	1	1837	0	1838	0	52	0	52	3381
% Light	99.4	100	0	99.5	100	99.5	0	99.5	0	100	0	96.3	99.4
Heavy	6	0	0	6	0	10	0	10	0	0	0	0	16
% Heavy	0.4	0	0	0.4	0	0.5	0	0.5	0	0	0	0	0.5
Bicycle and Pedestrian	2	0	0	2	0	0	0	0	0	0	2	2	4
% Bicycle and Pedestrian	0.1	0	0	0.1	0	0	0	0	0	0	100	3.7	0.1



Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Park Meadows Dr and W Driveway

File Name : 2 Park Meadows and West Driveway PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 2



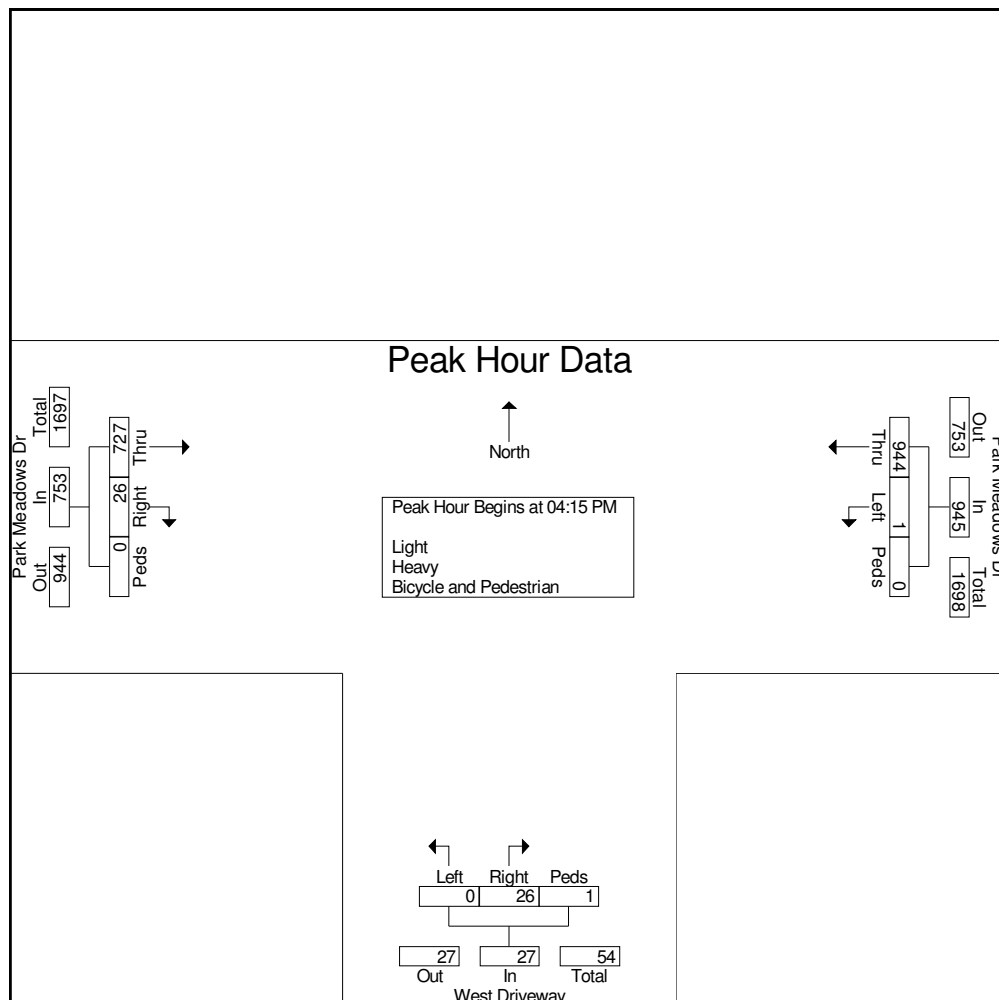


Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Park Meadows Dr and W Driveway

File Name : 2 Park Meadows and West Driveway PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 3

	Park Meadows Dr Eastbound				Park Meadows Dr Westbound				West Driveway Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
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													
04:15 PM	177	3	0	180	0	247	0	247	0	3	1	4	431
04:30 PM	196	3	0	199	1	210	0	211	0	8	0	8	418
04:45 PM	184	11	0	195	0	218	0	218	0	8	0	8	421
05:00 PM	170	9	0	179	0	269	0	269	0	7	0	7	455
Total Volume	727	26	0	753	1	944	0	945	0	26	1	27	1725
% App. Total	96.5	3.5	0		0.1	99.9	0		0	96.3	3.7		
PHF	.927	.591	.000	.946	.250	.877	.000	.878	.000	.813	.250	.844	.948





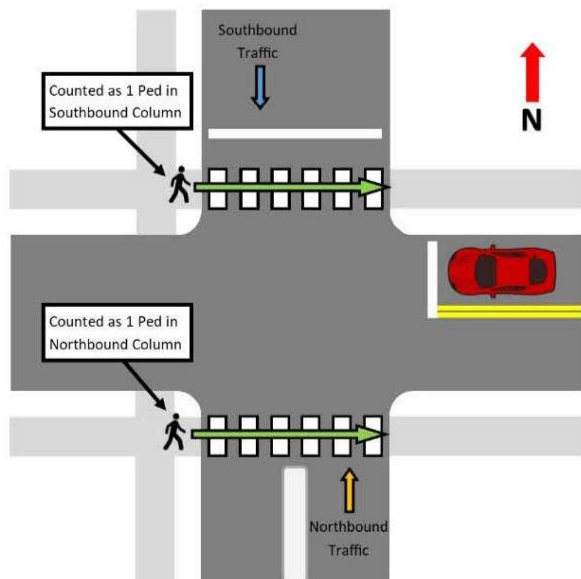
Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Park Meadows Dr and W Driveway

File Name : 2 Park Meadows and West Driveway PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Park Meadows Dr and East Driveway

File Name : 3 Park Meadows and East Driveway AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 1

Groups Printed- Light - Heavy - Bicycle and Pedestrian

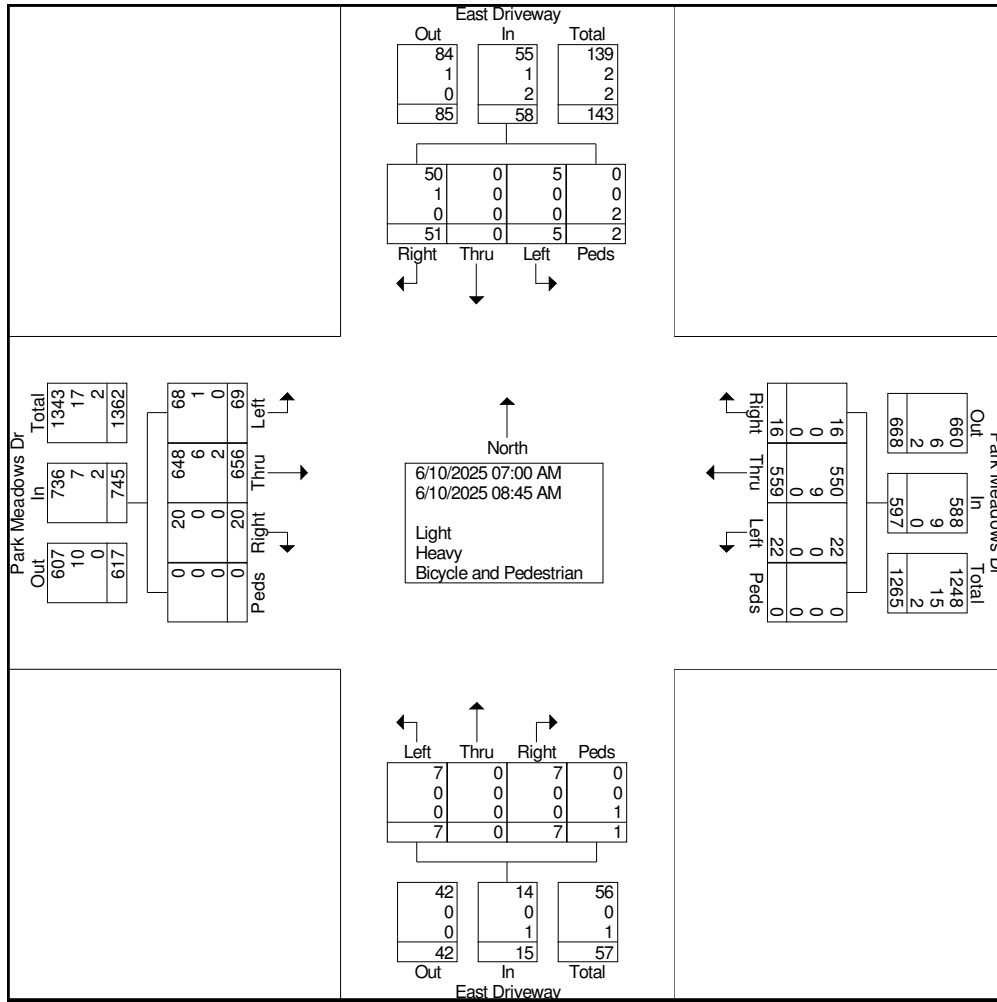
	Park Meadows Dr Eastbound					Park Meadows Dr Westbound					East Driveway Northbound					East Driveway Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	9	54	4	0	67	2	52	2	0	56	1	0	0	0	1	1	0	9	0	10	134
07:15 AM	4	61	3	0	68	2	53	1	0	56	0	0	1	1	2	0	0	6	0	6	132
07:30 AM	10	55	3	0	68	2	68	2	0	72	0	0	1	0	1	1	0	7	0	8	149
07:45 AM	7	87	5	0	99	4	65	1	0	70	0	0	2	0	2	0	0	6	2	8	179
Total	30	257	15	0	302	10	238	6	0	254	1	0	4	1	6	2	0	28	2	32	594
08:00 AM	8	93	1	0	102	1	75	1	0	77	1	0	0	0	1	0	0	5	0	5	185
08:15 AM	4	84	2	0	90	9	74	2	0	85	3	0	2	0	5	0	0	6	0	6	186
08:30 AM	13	95	0	0	108	0	81	2	0	83	0	0	1	0	1	3	0	3	0	6	198
08:45 AM	14	127	2	0	143	2	91	5	0	98	2	0	0	0	2	0	0	9	0	9	252
Total	39	399	5	0	443	12	321	10	0	343	6	0	3	0	9	3	0	23	0	26	821
Grand Total	69	656	20	0	745	22	559	16	0	597	7	0	7	1	15	5	0	51	2	58	1415
Apprch %	9.3	88.1	2.7	0		3.7	93.6	2.7	0		46.7	0	46.7	6.7		8.6	0	87.9	3.4		
Total %	4.9	46.4	1.4	0	52.7	1.6	39.5	1.1	0	42.2	0.5	0	0.5	0.1	1.1	0.4	0	3.6	0.1	4.1	
Light	68	648	20	0	736	22	550	16	0	588	7	0	7	0	14	5	0	50	0	55	1393
% Light	98.6	98.8	100	0	98.8	100	98.4	100	0	98.5	100	0	100	0	93.3	100	0	98	0	94.8	98.4
Heavy	1	6	0	0	7	0	9	0	0	9	0	0	0	0	0	0	0	1	0	1	17
% Heavy	1.4	0.9	0	0	0.9	0	1.6	0	0	1.5	0	0	0	0	0	0	0	2	0	1.7	1.2
Bicycle and Pedestrian	0	2	0	0	2	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	5
% Bicycle and Pedestrian	0	0.3	0	0	0.3	0	0	0	0	0	0	0	0	100	6.7	0	0	0	100	3.4	0.4



Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Park Meadows Dr and East Driveway

File Name : 3 Park Meadows and East Driveway AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 2



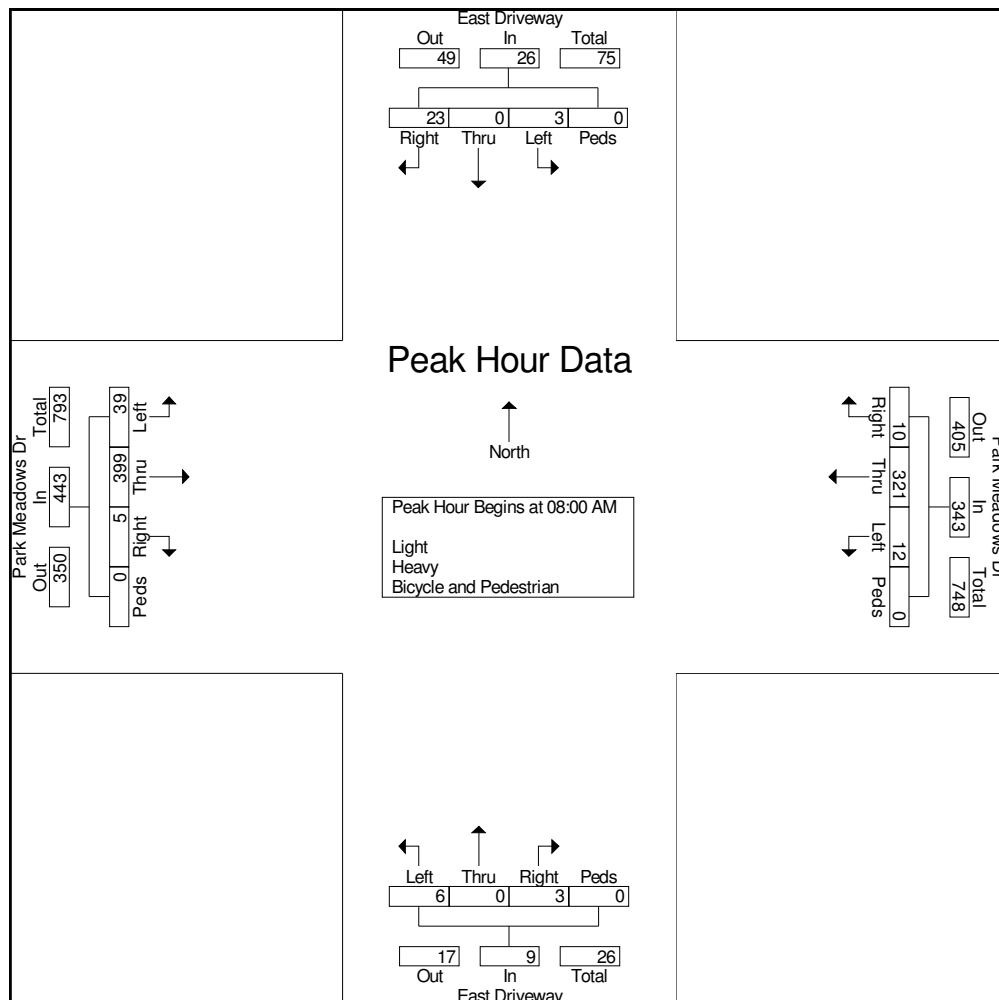


Ridgeview Data Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Park Meadows Dr and East Driveway

File Name : 3 Park Meadows and East Driveway AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 3

	Park Meadows Dr Eastbound					Park Meadows Dr Westbound					East Driveway Northbound					East Driveway Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
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																					
08:00 AM	8	93	1	0	102	1	75	1	0	77	1	0	0	0	1	0	0	5	0	5	185
08:15 AM	4	84	2	0	90	9	74	2	0	85	3	0	2	0	5	0	0	6	0	6	186
08:30 AM	13	95	0	0	108	0	81	2	0	83	0	0	1	0	1	3	0	3	0	6	198
08:45 AM	14	127	2	0	143	2	91	5	0	98	2	0	0	0	2	0	0	9	0	9	252
Total Volume	39	399	5	0	443	12	321	10	0	343	6	0	3	0	9	3	0	23	0	26	821
% App. Total	8.8	90.1	1.1	0		3.5	93.6	2.9	0		66.7	0	33.3	0		11.5	0	88.5	0		
PHF	.696	.785	.625	.000	.774	.333	.882	.500	.000	.875	.500	.000	.375	.000	.450	.250	.000	.639	.000	.722	.814





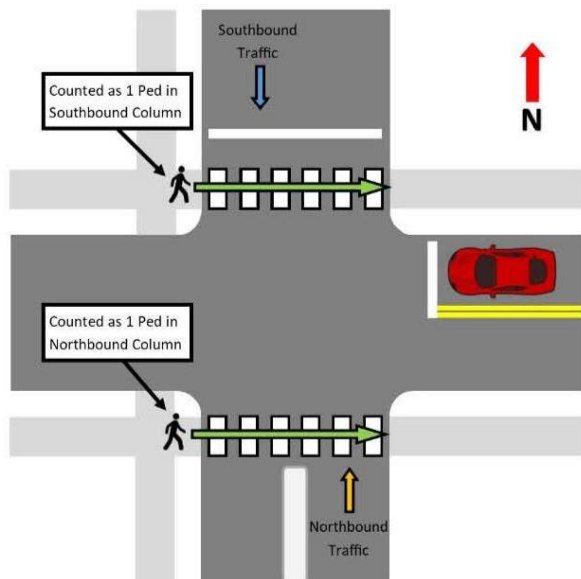
Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Park Meadows Dr and East Driveway

File Name : 3 Park Meadows and East Driveway AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Park Meadows Dr and East Driveway

File Name : 3 Park Meadows and East Driveway PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 1

Groups Printed- Light - Heavy - Bicycle and Pedestrian

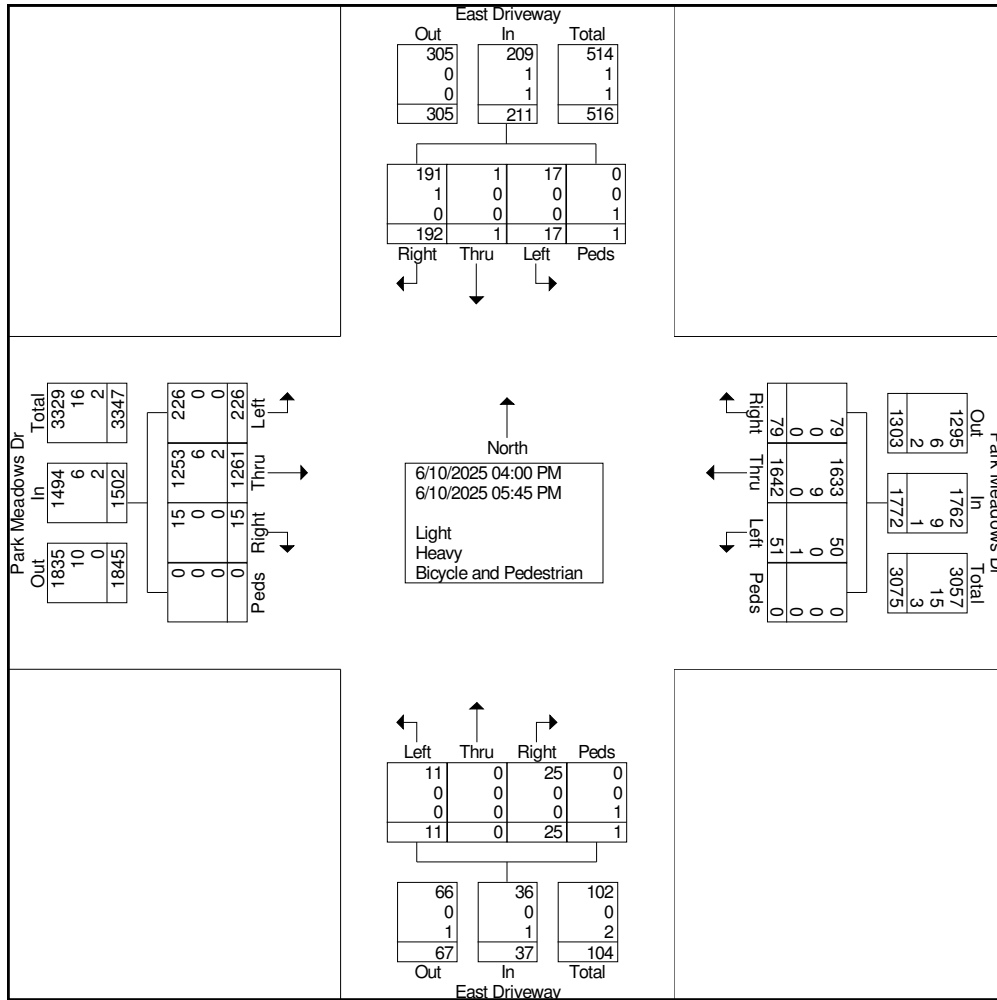
	Park Meadows Dr Eastbound					Park Meadows Dr Westbound					East Driveway Northbound					East Driveway Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	33	162	3	0	198	3	209	11	0	223	2	0	3	0	5	5	0	18	0	23	449
04:15 PM	17	161	3	0	181	10	230	7	0	247	2	0	4	0	6	1	0	14	0	15	449
04:30 PM	22	178	4	0	204	8	189	7	0	204	4	0	3	0	7	1	0	19	0	20	435
04:45 PM	28	161	1	0	190	5	196	13	0	214	1	0	1	0	2	0	0	26	1	27	433
Total	100	662	11	0	773	26	824	38	0	888	9	0	11	0	20	7	0	77	1	85	1766
05:00 PM	31	146	0	0	177	6	231	7	0	244	0	0	2	0	2	1	0	32	0	33	456
05:15 PM	32	143	0	0	175	5	205	13	0	223	1	0	6	0	7	0	1	24	0	25	430
05:30 PM	30	151	2	0	183	5	189	10	0	204	1	0	3	0	4	6	0	30	0	36	427
05:45 PM	33	159	2	0	194	9	193	11	0	213	0	0	3	1	4	3	0	29	0	32	443
Total	126	599	4	0	729	25	818	41	0	884	2	0	14	1	17	10	1	115	0	126	1756
Grand Total	226	1261	15	0	1502	51	1642	79	0	1772	11	0	25	1	37	17	1	192	1	211	3522
Apprch %	15	84	1	0		2.9	92.7	4.5	0		29.7	0	67.6	2.7		8.1	0.5	91	0.5		
Total %	6.4	35.8	0.4	0	42.6	1.4	46.6	2.2	0	50.3	0.3	0	0.7	0	1.1	0.5	0	5.5	0	6	
Light	226	1253	15	0	1494	50	1633	79	0	1762	11	0	25	0	36	17	1	191	0	209	3501
% Light	100	99.4	100	0	99.5	98	99.5	100	0	99.4	100	0	100	0	97.3	100	100	99.5	0	99.1	99.4
Heavy	0	6	0	0	6	0	9	0	0	9	0	0	0	0	0	0	0	1	0	1	16
% Heavy	0	0.5	0	0	0.4	0	0.5	0	0	0.5	0	0	0	0	0	0	0	0.5	0	0.5	0.5
Bicycle and Pedestrian	0	2	0	0	2	1	0	0	0	1	0	0	0	1	1	0	0	0	1	1	5
% Bicycle and Pedestrian	0	0.2	0	0	0.1	2	0	0	0	0.1	0	0	0	100	2.7	0	0	0	100	0.5	0.1



Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Park Meadows Dr and East Driveway

File Name : 3 Park Meadows and East Driveway PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 2



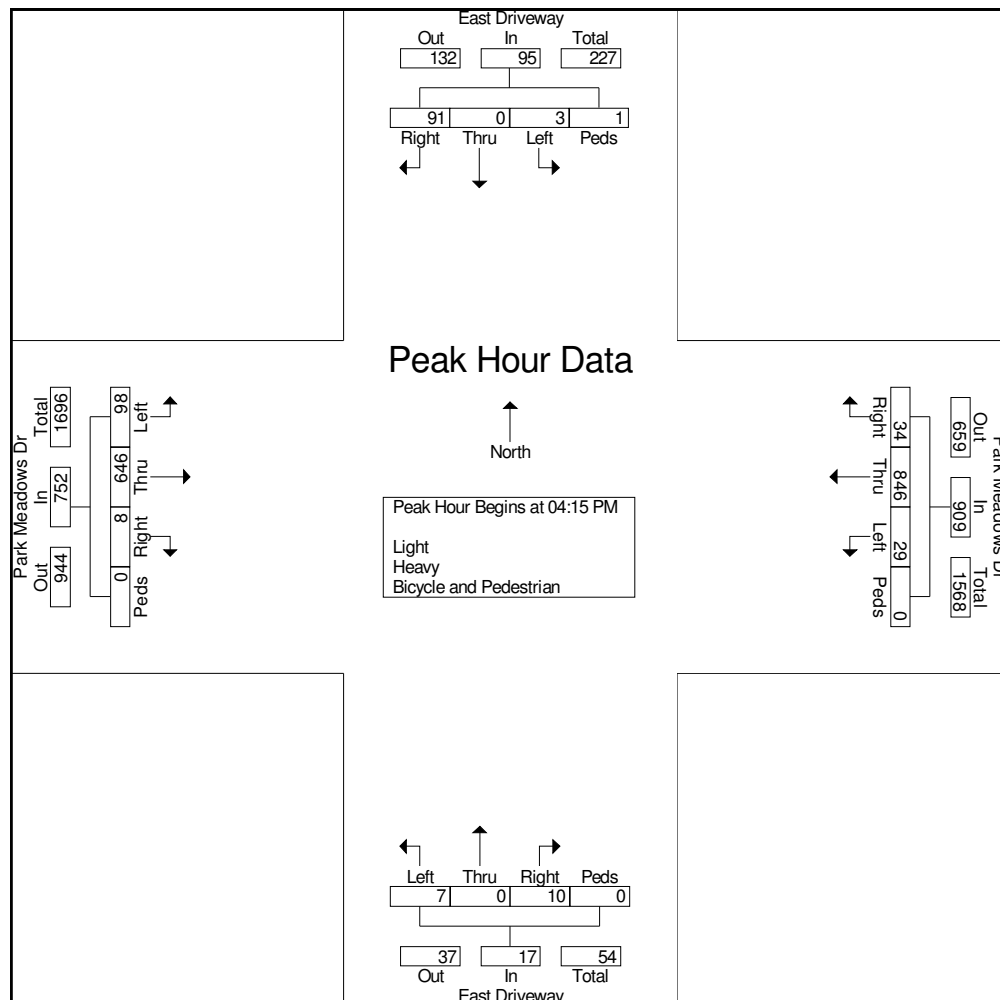


Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Park Meadows Dr and East Driveway

File Name : 3 Park Meadows and East Driveway PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 3

	Park Meadows Dr Eastbound					Park Meadows Dr Westbound					East Driveway Northbound					East Driveway Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
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																					
04:15 PM	17	161	3	0	181	10	230	7	0	247	2	0	4	0	6	1	0	14	0	15	449
04:30 PM	22	178	4	0	204	8	189	7	0	204	4	0	3	0	7	1	0	19	0	20	435
04:45 PM	28	161	1	0	190	5	196	13	0	214	1	0	1	0	2	0	0	26	1	27	433
05:00 PM	31	146	0	0	177	6	231	7	0	244	0	0	2	0	2	1	0	32	0	33	456
Total Volume	98	646	8	0	752	29	846	34	0	909	7	0	10	0	17	3	0	91	1	95	1773
% App. Total	13	85.9	1.1	0		3.2	93.1	3.7	0		41.2	0	58.8	0		3.2	0	95.8	1.1		
PHF	.790	.907	.500	.000	.922	.725	.916	.654	.000	.920	.438	.000	.625	.000	.607	.750	.000	.711	.250	.720	.972





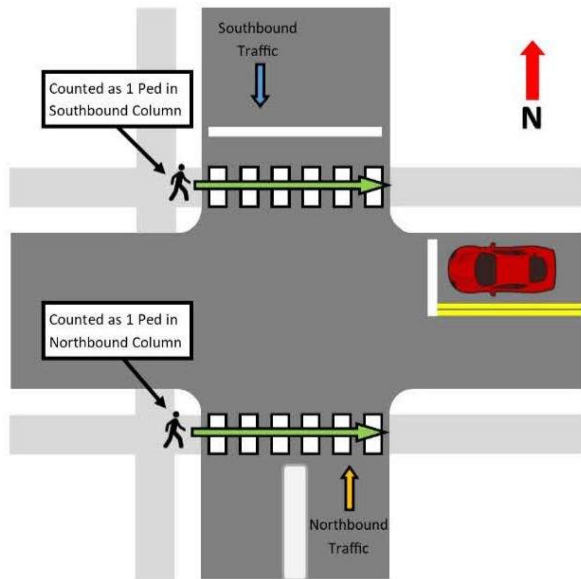
Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Park Meadows Dr and East Driveway

File Name : 3 Park Meadows and East Driveway PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Quebec St and 8664 South

File Name : 4 Quebec and 8664 South AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 1

Groups Printed- Light - Heavy - Bicycle and Pedestrian

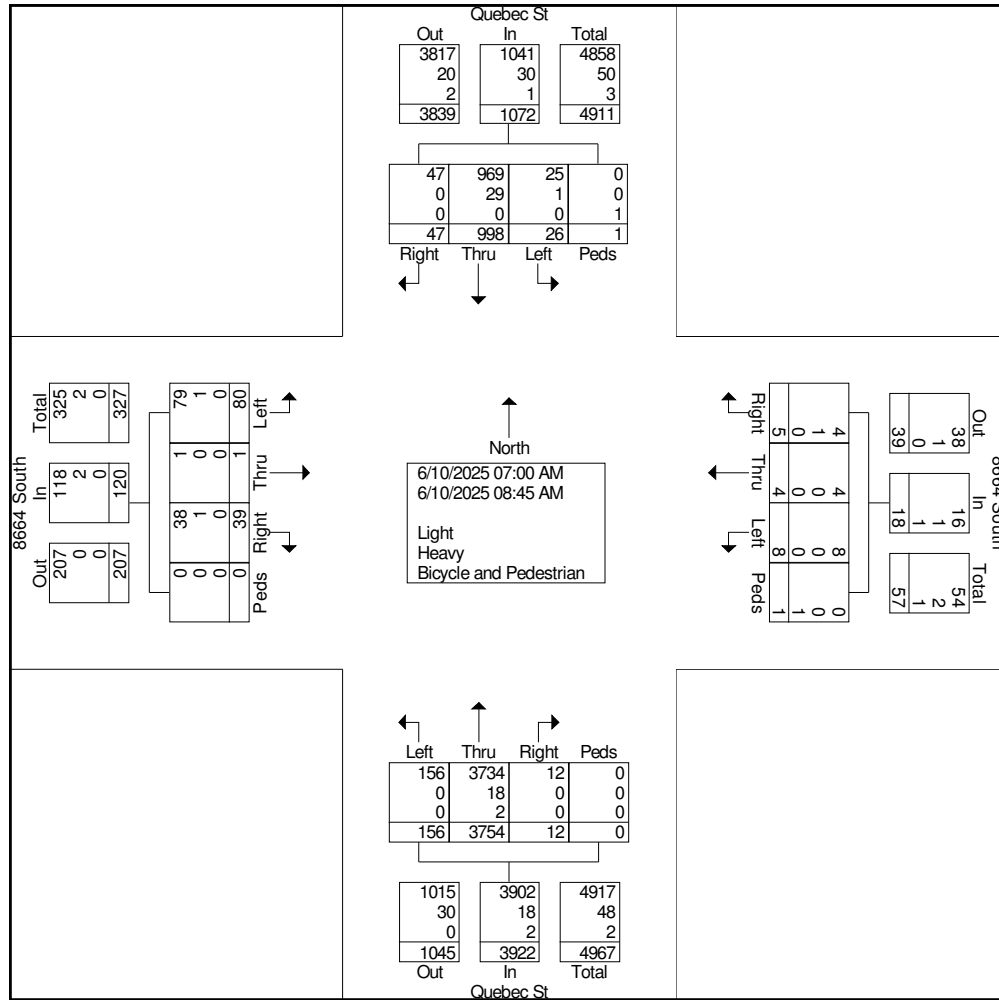
	8664 South Eastbound					8664 South Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	9	0	1	0	10	0	0	0	0	0	8	455	1	0	464	3	88	3	0	94	568
07:15 AM	7	0	3	0	10	0	0	0	1	1	14	483	1	0	498	2	78	4	0	84	593
07:30 AM	8	0	3	0	11	0	0	0	0	0	26	459	1	0	486	3	94	2	0	99	596
07:45 AM	6	0	3	0	9	1	1	2	0	4	21	501	2	0	524	4	132	4	0	140	677
Total	30	0	10	0	40	1	1	2	1	5	69	1898	5	0	1972	12	392	13	0	417	2434
08:00 AM	6	0	8	0	14	2	0	1	0	3	19	463	1	0	483	1	142	1	0	144	644
08:15 AM	16	0	8	0	24	1	1	1	0	3	29	462	1	0	492	5	137	7	0	149	668
08:30 AM	19	0	7	0	26	3	1	0	0	4	20	460	1	0	481	5	138	13	0	156	667
08:45 AM	9	1	6	0	16	1	1	1	0	3	19	471	4	0	494	3	189	13	1	206	719
Total	50	1	29	0	80	7	3	3	0	13	87	1856	7	0	1950	14	606	34	1	655	2698
Grand Total	80	1	39	0	120	8	4	5	1	18	156	3754	12	0	3922	26	998	47	1	1072	5132
Apprch %	66.7	0.8	32.5	0		44.4	22.2	27.8	5.6		4	95.7	0.3	0		2.4	93.1	4.4	0.1		
Total %	1.6	0	0.8	0	2.3	0.2	0.1	0.1	0	0.4	3	73.1	0.2	0	76.4	0.5	19.4	0.9	0	20.9	
Light	79	1	38	0	118	8	4	4	0	16	156	3734	12	0	3902	25	969	47	0	1041	5077
% Light	98.8	100	97.4	0	98.3	100	100	80	0	88.9	100	99.5	100	0	99.5	96.2	97.1	100	0	97.1	98.9
Heavy	1	0	1	0	2	0	0	1	0	1	0	18	0	0	18	1	29	0	0	30	51
% Heavy	1.2	0	2.6	0	1.7	0	0	20	0	5.6	0	0.5	0	0	0.5	3.8	2.9	0	0	2.8	1
Bicycle and Pedestrian	0	0	0	0	0	0	0	0	1	1	0	2	0	0	2	0	0	0	1	1	4
% Bicycle and Pedestrian	0	0	0	0	0	0	0	0	100	5.6	0	0.1	0	0	0.1	0	0	0	100	0.1	0.1



Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Quebec St and 8664 South

File Name : 4 Quebec and 8664 South AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 2



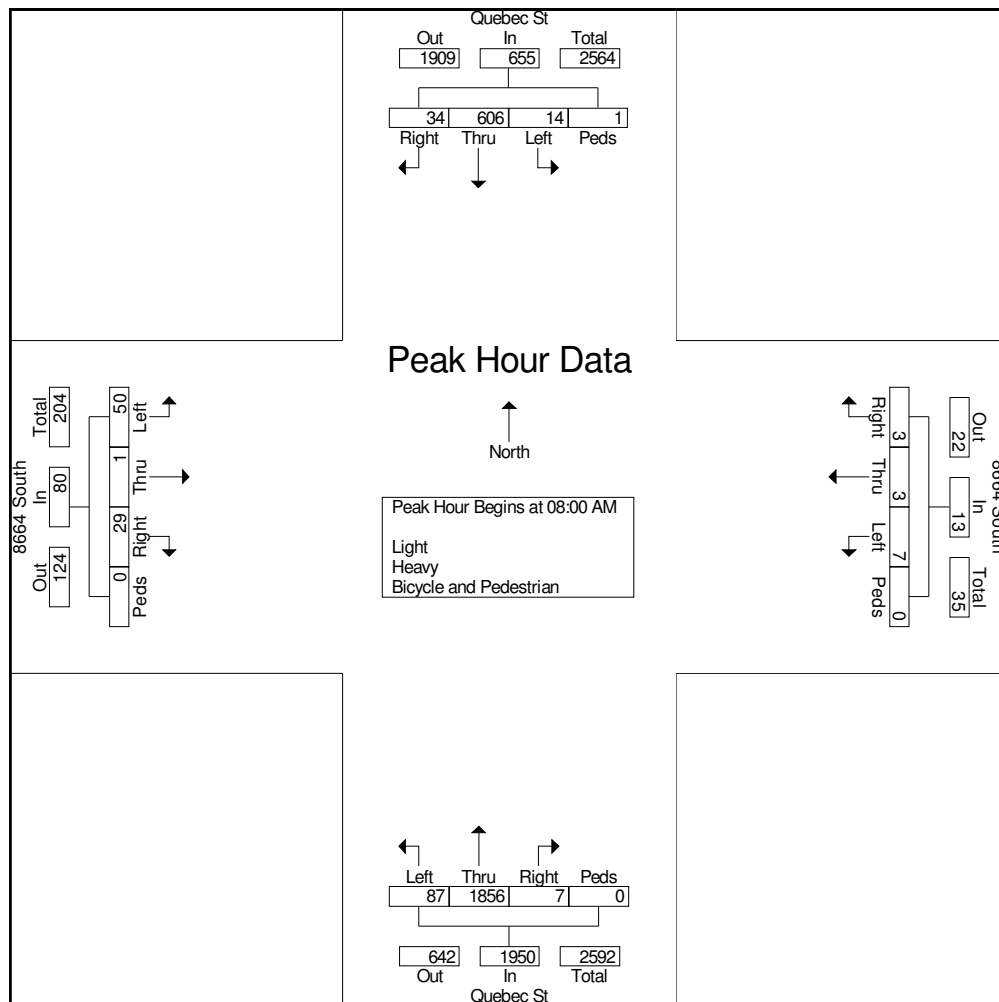


Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Quebec St and 8664 South

File Name : 4 Quebec and 8664 South AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 3

	8664 South Eastbound					8664 South Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
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																					
08:00 AM	6	0	8	0	14	2	0	1	0	3	19	463	1	0	483	1	142	1	0	144	644
08:15 AM	16	0	8	0	24	1	1	1	0	3	29	462	1	0	492	5	137	7	0	149	668
08:30 AM	19	0	7	0	26	3	1	0	0	4	20	460	1	0	481	5	138	13	0	156	667
08:45 AM	9	1	6	0	16	1	1	1	0	3	19	471	4	0	494	3	189	13	1	206	719
Total Volume	50	1	29	0	80	7	3	3	0	13	87	1856	7	0	1950	14	606	34	1	655	2698
% App. Total	62.5	1.2	36.2	0		53.8	23.1	23.1	0		4.5	95.2	0.4	0		2.1	92.5	5.2	0.2		
PHF	.658	.250	.906	.000	.769	.583	.750	.750	.000	.813	.750	.985	.438	.000	.987	.700	.802	.654	.250	.795	.938





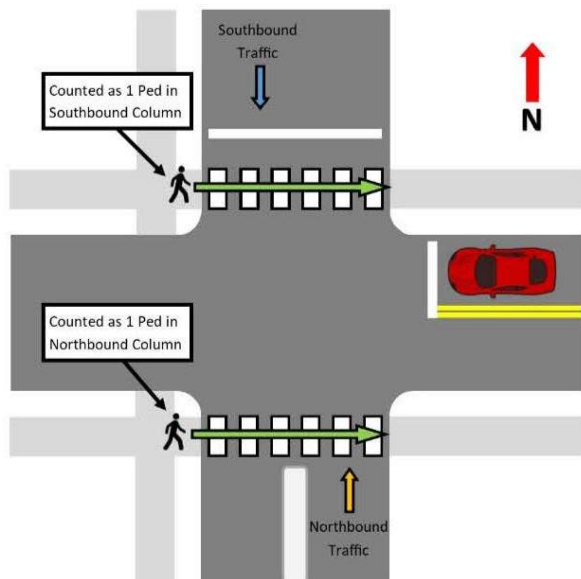
Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
AM Peak
Quebec St and 8664 South

File Name : 4 Quebec and 8664 South AM
Site Code : HALES
Start Date : 6/10/2025
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.





Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Quebec St and 8664 South

File Name : 4 Quebec and 8664 South PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 1

Groups Printed- Light - Heavy - Bicycle and Pedestrian

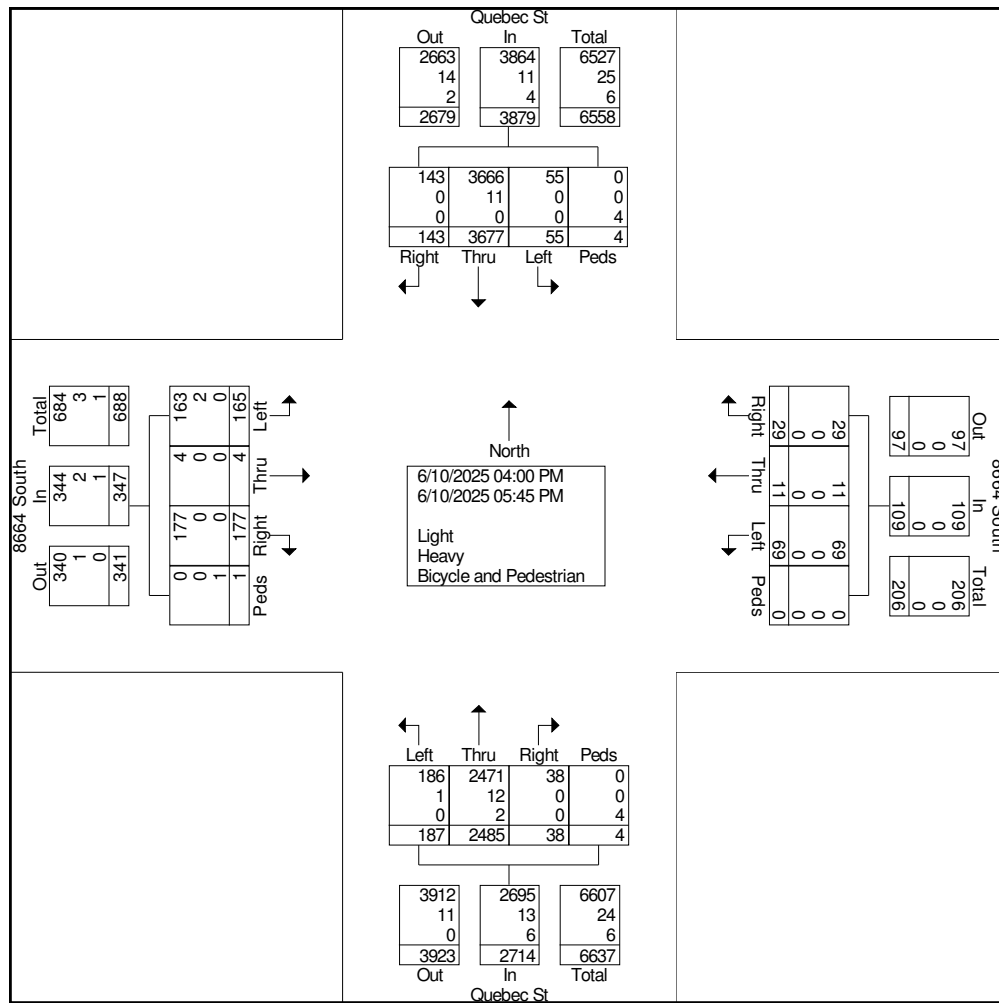
	8664 South Eastbound					8664 South Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	20	0	21	0	41	8	0	3	0	11	23	298	2	0	323	2	428	16	0	446	821
04:15 PM	20	0	24	0	44	14	3	3	0	20	23	317	3	0	343	4	409	23	0	436	843
04:30 PM	23	0	22	0	45	10	1	2	0	13	26	308	5	0	339	14	433	18	0	465	862
04:45 PM	20	1	26	0	47	5	4	6	0	15	27	332	9	0	368	3	457	24	0	484	914
Total	83	1	93	0	177	37	8	14	0	59	99	1255	19	0	1373	23	1727	81	0	1831	3440
05:00 PM	26	1	28	0	55	10	2	8	0	20	24	283	7	3	317	7	458	9	0	474	866
05:15 PM	21	0	24	1	46	9	0	2	0	11	19	337	3	0	359	13	530	28	0	571	987
05:30 PM	21	1	17	0	39	6	1	1	0	8	23	307	6	0	336	7	470	13	1	491	874
05:45 PM	14	1	15	0	30	7	0	4	0	11	22	303	3	1	329	5	492	12	3	512	882
Total	82	3	84	1	170	32	3	15	0	50	88	1230	19	4	1341	32	1950	62	4	2048	3609
Grand Total	165	4	177	1	347	69	11	29	0	109	187	2485	38	4	2714	55	3677	143	4	3879	7049
Apprch %	47.6	1.2	51	0.3		63.3	10.1	26.6	0		6.9	91.6	1.4	0.1		1.4	94.8	3.7	0.1		
Total %	2.3	0.1	2.5	0	4.9	1	0.2	0.4	0	1.5	2.7	35.3	0.5	0.1	38.5	0.8	52.2	2	0.1	55	
Light	163	4	177	0	344	69	11	29	0	109	186	2471	38	0	2695	55	3666	143	0	3864	7012
% Light	98.8	100	100	0	99.1	100	100	100	0	100	99.5	99.4	100	0	99.3	100	99.7	100	0	99.6	99.5
Heavy	2	0	0	0	2	0	0	0	0	0	1	12	0	0	13	0	11	0	0	11	26
% Heavy	1.2	0	0	0	0.6	0	0	0	0	0	0.5	0.5	0	0	0.5	0	0.3	0	0	0.3	0.4
Bicycle and Pedestrian	0	0	0	1	1	0	0	0	0	0	0	2	0	4	6	0	0	0	4	4	11
% Bicycle and Pedestrian	0	0	0	100	0.3	0	0	0	0	0	0	0.1	0	100	0.2	0	0	0	100	0.1	0.2



Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Quebec St and 8664 South

File Name : 4 Quebec and 8664 South PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 2



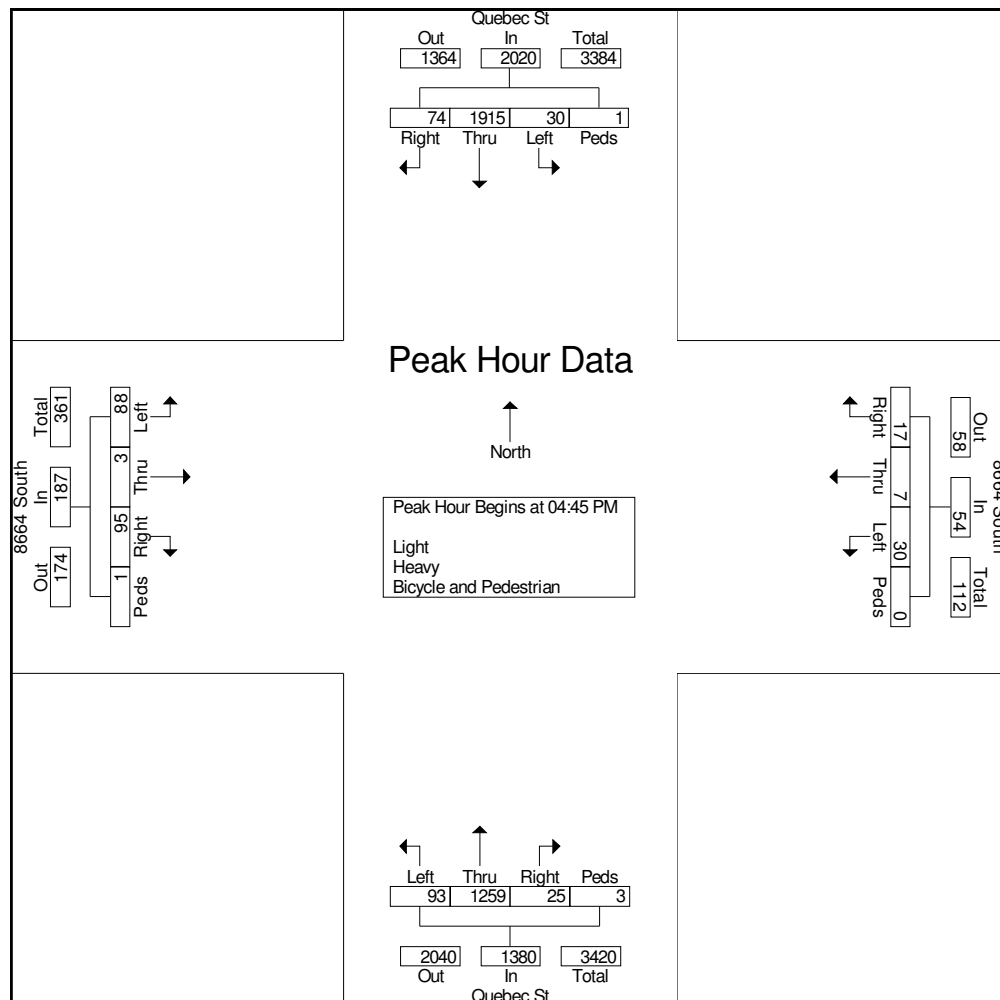


Ridgeview Data Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Quebec St and 8664 South

File Name : 4 Quebec and 8664 South PM
Site Code : HALES
Start Date : 6/10/2025
Page No : 3

	8664 South Eastbound					8664 South Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	20	1	26	0	47	5	4	6	0	15	27	332	9	0	368	3	457	24	0	484	914
05:00 PM	26	1	28	0	55	10	2	8	0	20	24	283	7	3	317	7	458	9	0	474	866
05:15 PM	21	0	24	1	46	9	0	2	0	11	19	337	3	0	359	13	530	28	0	571	987
05:30 PM	21	1	17	0	39	6	1	1	0	8	23	307	6	0	336	7	470	13	1	491	874
Total Volume	88	3	95	1	187	30	7	17	0	54	93	1259	25	3	1380	30	1915	74	1	2020	3641
% App. Total	47.1	1.6	50.8	0.5		55.6	13	31.5	0		6.7	91.2	1.8	0.2		1.5	94.8	3.7	0		
PHF	.846	.750	.848	.250	.850	.750	.438	.531	.000	.675	.861	.934	.694	.250	.938	.577	.903	.661	.250	.884	.922





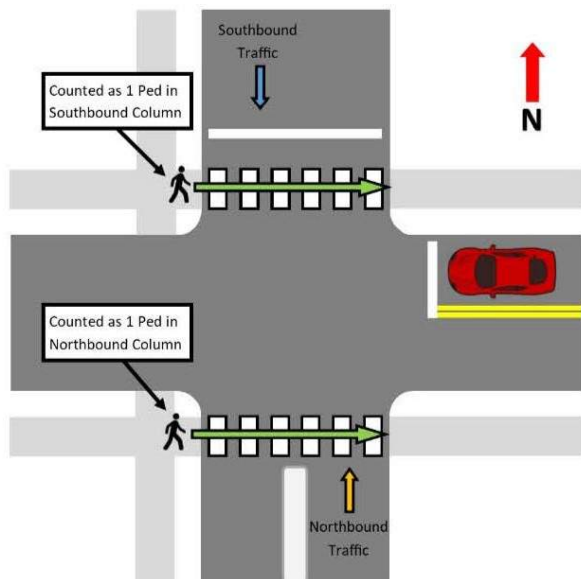
Ridgeview Data
Collection

Highlands Ranch, CO
Lone Tree Count
PM Peak
Quebec St and 8664 South

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Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.



APPENDIX C

LOS Results and 95th Percentile Queue Length Reports

Intersection Level Of Service Report

Intersection 1: Business Center Dr / Park Meadows Dr / Quebec St

Control Type:	Signalized	Delay (sec / veh):	38.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.642

Intersection Setup

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	1	1	0	0
Entry Pocket Length [ft]	400.00	100.00	180.00	600.00	100.00	300.00	300.00	100.00	300.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Base Volume Input [veh/h]	270	1610	196	186	569	458	246	159	153	88	244	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	270	1610	196	186	569	458	246	159	153	88	244	190
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	452	55	52	160	129	69	45	43	25	69	53
Total Analysis Volume [veh/h]	303	1809	220	209	639	515	276	179	172	99	274	213
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Maximum Green [s]	25	50	0	25	50	0	40	40	0	20	50	0
Amber [s]	3.0	4.5	0.0	3.0	4.5	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	25.0	73.0	0.0	17.0	65.0	0.0	25.0	25.0	0.0	20.0	20.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	0	5	5	0	5	5	0
Vehicle Extension [s]	1.0	5.0	0.0	2.0	5.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	Yes		No	Yes		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	5.00	6.00	6.00	5.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	4.00	4.00	3.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	13.7	69.5	69.5	10.1	65.9	65.9	12.8	28.6	28.6	5.7	21.5	21.5
g / C, Green / Cycle	0.10	0.52	0.52	0.07	0.49	0.49	0.10	0.21	0.21	0.04	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.09	0.36	0.14	0.06	0.13	0.32	0.08	0.10	0.11	0.03	0.15	0.13
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	1870	1589	3459	1870	1589
c, Capacity [veh/h]	352	2626	819	259	2489	777	329	395	336	147	297	253
d1, Uniform Delay [s]	59.69	24.58	18.39	61.48	20.18	26.11	60.06	46.41	47.06	63.70	55.95	55.14
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.30	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.44	1.50	0.80	2.26	0.25	4.43	2.22	0.30	0.45	1.99	25.29	15.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.69	0.27	0.81	0.26	0.66	0.84	0.45	0.51	0.67	0.92	0.84
d, Delay for Lane Group [s/veh]	62.13	26.08	19.20	63.73	20.43	30.54	62.28	46.71	47.51	65.69	81.24	70.39
Lane Group LOS	E	C	B	E	C	C	E	D	D	E	F	E
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.16	14.25	3.97	3.57	3.92	13.03	4.72	5.27	5.14	1.71	11.21	8.06
50th-Percentile Queue Length [ft/ln]	128.96	356.14	99.34	89.21	97.95	325.78	118.09	131.69	128.55	42.80	280.26	201.48
95th-Percentile Queue Length [veh/ln]	8.88	20.44	7.15	6.42	7.05	18.95	8.29	9.03	8.86	3.08	16.70	12.71
95th-Percentile Queue Length [ft/ln]	222.08	510.89	178.80	160.58	176.30	473.79	207.21	225.79	221.53	77.03	417.53	317.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.13	26.08	19.20	63.73	20.43	30.54	62.28	46.71	47.51	65.69	81.24	70.39
Movement LOS	E	C	B	E	C	C	E	D	D	E	F	E
d_A, Approach Delay [s/veh]	30.11			30.89			53.79			74.67		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.67											
Intersection LOS	D											
Intersection V/C	0.642											

Emissions

Vehicle Miles Traveled [mph]	28.99	173.08	21.05	27.16	83.04	66.93	20.08	13.02	12.51	4.52	12.51	9.72
Stops [stops/h]	275.11	1139.66	105.96	190.32	313.43	347.50	251.94	140.47	137.13	91.30	298.94	214.91
Fuel consumption [US gal/h]	7.57	27.00	2.65	5.55	8.71	9.01	6.16	3.25	3.17	2.18	7.25	5.04
CO [g/h]	529.25	1886.98	185.54	388.15	608.86	629.92	430.42	227.47	221.66	152.53	507.07	352.13
NOx [g/h]	102.97	367.14	36.10	75.52	118.46	122.56	83.74	44.26	43.13	29.68	98.66	68.51
VOC [g/h]	122.66	437.33	43.00	89.96	141.11	145.99	99.75	52.72	51.37	35.35	117.52	81.61

Other Modes

g_Walk,mi, Effective Walk Time [s]	20.0			15.0			59.0			67.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	48.98			53.33			21.39			17.13		
I_p,int, Pedestrian LOS Score for Intersectio	3.331			3.459			2.759			2.650		
Crosswalk LOS	C			C			C			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	993			874			296			222		
d_b, Bicycle Delay [s]	17.13			21.39			48.98			53.33		
I_b,int, Bicycle LOS Score for Intersection	2.842			2.309			2.594			2.527		
Bicycle LOS	C			B			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 6: 8664 South / Quebec Street

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Base Volume Input [veh/h]	87	2035	7	14	760	34	50	1	29	7	3	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	2035	7	14	760	34	50	1	29	7	3	3
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	572	2	4	213	10	14	0	8	2	1	1
Total Analysis Volume [veh/h]	98	2287	8	16	854	38	56	1	33	8	3	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	15.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	16	50	0	10	50	0	0	30	0	0	30	0
Amber [s]	3.0	4.5	0.0	3.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	15.0	0.0	0.0	15.0	0.0	0.0	30.0	0.0	0.0	28.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30.0	80.0	0.0	15.0	65.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	25	0	5	25	0	0	5	0	0	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	Yes		No	Yes			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10.1	109.7	109.7	2.3	101.9	101.9	11.0	11.0	11.0	11.0	11.0
g / C, Green / Cycle	0.07	0.81	0.81	0.02	0.75	0.75	0.08	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.06	0.47	0.47	0.01	0.18	0.18	0.04	0.02	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1603	3204	1680	1603	3204	1647	1269	1437	1237	1683	1431
c, Capacity [veh/h]	120	2606	1367	27	2421	1244	133	116	106	136	116
d1, Uniform Delay [s]	61.55	4.43	4.43	65.91	4.94	4.95	62.02	58.40	62.32	57.12	57.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.66	0.94	1.79	19.23	0.24	0.47	2.11	1.38	0.30	0.06	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.58	0.58	0.60	0.24	0.24	0.42	0.29	0.08	0.02	0.03
d, Delay for Lane Group [s/veh]	74.22	5.37	6.22	85.14	5.18	5.41	64.13	59.77	62.63	57.18	57.23
Lane Group LOS	E	A	A	F	A	A	E	E	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.69	5.57	6.17	0.69	2.19	2.34	1.98	1.15	0.28	0.10	0.10
50th-Percentile Queue Length [ft/ln]	92.37	139.28	154.28	17.14	54.81	58.50	49.49	28.78	6.91	2.45	2.46
95th-Percentile Queue Length [veh/ln]	6.65	9.44	10.25	1.23	3.95	4.21	3.56	2.07	0.50	0.18	0.18
95th-Percentile Queue Length [ft/ln]	166.27	236.06	256.13	30.85	98.66	105.30	89.08	51.80	12.44	4.41	4.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	74.22	5.66	6.22	85.14	5.26	5.41	64.13	59.77	59.77	62.63	57.18	57.23
Movement LOS	E	A	A	F	A	A	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	8.47			6.67			62.49			60.30		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	9.63											
Intersection LOS	A											
Intersection V/C	0.524											

Emissions

Vehicle Miles Traveled [mph]	16.21	248.98	130.63	0.85	31.27	16.12	2.07	1.25	0.44	0.16	0.16
Stops [stops/h]	98.53	297.14	164.56	18.28	116.93	62.40	52.79	30.70	7.37	2.61	2.62
Fuel consumption [US gal/h]	3.03	13.48	7.30	0.49	2.89	1.52	1.03	0.59	0.15	0.05	0.05
CO [g/h]	211.69	942.48	509.98	34.06	201.99	106.57	71.73	41.08	10.47	3.65	3.66
NOx [g/h]	41.19	183.37	99.22	6.63	39.30	20.73	13.96	7.99	2.04	0.71	0.71
VOC [g/h]	49.06	218.43	118.19	7.89	46.81	24.70	16.62	9.52	2.43	0.85	0.85

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	58.80			58.80			58.80			58.80		
I_p,int, Pedestrian LOS Score for Intersectio	3.237			3.299			2.023			2.160		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1096			881			519			519		
d_b, Bicycle Delay [s]	13.78			21.11			37.04			37.04		
I_b,int, Bicycle LOS Score for Intersection	2.876			2.059			1.708			1.583		
Bicycle LOS	C			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 11: South Access / Quebec St

Control Type:	Two-way stop	Delay (sec / veh):	30.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.107

Intersection Setup

Name	Quebec Street		Quebec Street		South Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Quebec Street		Quebec Street		South Access	
Base Volume Input [veh/h]	2058	30	0	810	0	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2058	30	0	810	0	15
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	578	8	0	228	0	4
Total Analysis Volume [veh/h]	2312	34	0	910	0	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.11
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	30.37
Movement LOS	A	A		A		D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.35
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	8.82
d_A, Approach Delay [s/veh]	0.00		0.00		30.37	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.16					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 13: East Access / Park Meadows Dr

Control Type: Two-way stop
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 24.4
Level Of Service: C
Volume to Capacity (v/c): 0.037

Intersection Setup

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Base Volume Input [veh/h]	6	0	3	3	0	23	39	505	5	12	500	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	3	3	0	23	39	505	5	12	500	10
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	1	1	0	6	11	142	1	3	140	3
Total Analysis Volume [veh/h]	7	0	3	3	0	26	44	567	6	13	562	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes	Yes		
Storage Area [veh]	1	1	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report
Intersection 15: West Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Base Volume Input [veh/h]	0	9	541	12	0	531
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	9	541	12	0	531
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	152	3	0	149
Total Analysis Volume [veh/h]	0	10	608	13	0	597
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings						
Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	11.26	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.30	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.26		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	B					

Option 1: Copy of Business Center Dr / Park Meadows Dr / Quebec St

Number	1											
Intersection	Business Center Dr / Park Meadows Dr / Quebec St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	270	1610	196	186	569	458	246	159	153	88	244	190
Total Analysis Volume [veh/h]	303	1809	220	209	639	515	276	179	172	99	274	213

Intersection Settings

Cycle Length [s]	135											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fully actuated											
Lost time [s]	0.00											

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	7	7	4	0	3	8	0
Auxiliary Signal Groups						6,7						
Maximum Green [s]	25	50	0	25	50	40	40	40	0	20	50	0
Amber [s]	3.0	4.5	0.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0

Phasing & Timing: Pattern 1

Split [s]	37.0	55.0	0.0	22.0	40.0	24.0	24.0	34.0	0.0	24.0	34.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	5	5	5	0	5	5	0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	Yes		No	Yes	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

g / C, Green / Cycle	0.10	0.47	0.47	0.08	0.44	0.63	0.14	0.26	0.26	0.04	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.09	0.36	0.14	0.06	0.13	0.32	0.08	0.10	0.11	0.03	0.15	0.13
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
saturation flow rate [pc/h/ln]	2450	5204	4500	2450	5204	4500	2450	4070	4500	2450	4070	4500

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s, saturation flow rate [veh/n]	3459	5094	1589	3459	5094	1589	3459	1870	1589	3459	1870	1589
c, Capacity [veh/h]	354	2373	740	263	2239	993	487	485	412	149	302	257
X, volume / capacity	0.86	0.76	0.30	0.79	0.29	0.52	0.57	0.37	0.42	0.66	0.91	0.83
d, Delay for Lane Group [s/veh]	61.93	32.25	23.38	63.38	24.56	16.00	54.55	41.13	41.78	65.49	68.62	61.05
Lane Group LOS	E	C	C	E	C	B	D	D	D	E	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.15	16.13	4.47	3.56	4.37	8.70	4.39	4.90	4.78	1.71	10.19	7.42
50th-Percentile Queue Length [ft/ln]	128.77	403.14	111.78	88.95	109.22	217.53	109.80	122.61	119.61	42.73	254.76	185.38
95th-Percentile Queue Length [veh/ln]	8.87	22.71	7.94	6.40	7.80	13.54	7.83	8.54	8.37	3.08	15.43	11.88
95th-Percentile Queue Length [ft/ln]	221.83	567.78	198.48	160.11	194.92	338.48	195.72	213.41	209.29	76.92	385.64	297.03

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report

Intersection 1: Business Center Dr / Park Meadows Dr / Quebec St

Control Type:	Signalized	Delay (sec / veh):	81.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	1	1	0	0
Entry Pocket Length [ft]	400.00	100.00	180.00	600.00	100.00	300.00	300.00	100.00	300.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Base Volume Input [veh/h]	125	930	265	318	1441	283	417	162	176	450	148	319
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	930	265	318	1441	283	417	162	176	450	148	319
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	240	68	82	371	73	107	42	45	116	38	82
Total Analysis Volume [veh/h]	129	959	273	328	1486	292	430	167	181	464	153	329
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Maximum Green [s]	25	50	0	25	50	0	40	40	0	20	20	0
Amber [s]	3.0	1.5	0.0	3.0	4.5	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	25.0	73.0	0.0	17.0	65.0	0.0	25.0	25.0	0.0	20.0	20.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	0	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	Yes		No	Yes		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8.7	69.0	69.0	13.0	73.3	73.3	21.0	21.0	21.0	16.0	16.0	16.0
g / C, Green / Cycle	0.06	0.51	0.51	0.10	0.54	0.54	0.16	0.16	0.16	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.21	0.19	0.11	0.32	0.20	0.14	0.10	0.13	0.15	0.09	0.23
s, saturation flow rate [veh/h]	3113	4584	1431	3113	4584	1431	3113	1683	1431	3113	1683	1431
c, Capacity [veh/h]	202	2343	731	300	2486	776	484	262	223	369	199	170
d1, Uniform Delay [s]	61.56	20.40	19.94	61.00	20.92	17.76	55.85	53.44	55.11	59.50	57.69	59.50
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.19	0.32	0.18	0.28	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.31	0.53	1.46	54.77	1.07	1.39	5.72	4.56	18.72	124.00	14.70	444.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.41	0.37	1.09	0.60	0.38	0.89	0.64	0.81	1.26	0.77	1.94
d, Delay for Lane Group [s/veh]	64.87	20.93	21.40	115.77	21.98	19.15	61.57	57.99	73.83	183.50	72.39	503.60
Lane Group LOS	E	C	C	F	C	B	E	E	E	F	E	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.23	6.18	5.36	7.35	10.36	5.36	7.51	5.63	7.07	12.62	5.85	26.67
50th-Percentile Queue Length [ft/ln]	55.73	154.42	133.89	183.67	259.03	134.10	187.71	140.64	176.87	315.50	146.35	666.87
95th-Percentile Queue Length [veh/ln]	4.01	10.25	9.15	12.19	15.64	9.16	12.00	9.52	11.44	20.15	9.82	42.70
95th-Percentile Queue Length [ft/ln]	100.31	256.32	228.78	304.65	391.01	229.05	300.06	237.89	285.92	503.63	245.55	1067.54

Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	64.87	20.93	21.40	115.77	21.98	19.15	61.57	57.99	73.83	183.50	72.39	503.60
Movement LOS	E	C	C	F	C	B	E	E	E	F	E	F
d_A, Approach Delay [s/veh]	25.19			36.20			63.65			276.86		
Approach LOS	C			D			E			F		
d_I, Intersection Delay [s/veh]	81.28											
Intersection LOS	F											
Intersection V/C	0.734											

Emissions												
Vehicle Miles Traveled [mph]	12.34	91.76	26.12	42.63	193.12	37.95	32.49	12.62	13.68	21.18	6.98	15.02
Stops [stops/h]	118.89	494.15	142.82	391.83	828.90	143.04	400.45	150.02	188.66	673.06	156.11	711.32
Fuel consumption [US gal/h]	3.31	12.23	3.53	13.10	21.71	3.90	9.64	3.58	4.66	23.19	3.69	39.63
CO [g/h]	231.55	854.60	246.56	915.83	1517.42	272.80	673.63	250.23	325.67	1621.19	258.20	2770.17
NOx [g/h]	45.05	166.27	47.97	178.19	295.24	53.08	131.06	48.69	63.36	315.42	50.24	538.97
VOC [g/h]	53.66	198.06	57.14	212.25	351.68	63.22	156.12	57.99	75.48	375.73	59.84	642.01

Other Modes												
g_Walk,mi, Effective Walk Time [s]	20.0			15.0			59.0			70.0		
M_corner, Corner Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	48.98			53.33			21.39			15.65		
I_p,int, Pedestrian LOS Score for Intersectio	3.367			3.480			2.689			2.745		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1037			874			296			222		
d_b, Bicycle Delay [s]	15.65			21.39			48.98			53.33		
I_b,int, Bicycle LOS Score for Intersection	2.308			2.718			2.843			3.121		
Bicycle LOS	B			B			C			C		

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



Intersection Level Of Service Report
Intersection 6: 8664 South / Quebec Street

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Base Volume Input [veh/h]	96	1286	24	37	1951	79	90	2	100	34	7	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	1286	24	37	1951	79	90	2	100	34	7	18
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	331	6	10	503	20	23	1	26	9	2	5
Total Analysis Volume [veh/h]	99	1326	25	38	2011	81	93	2	103	35	7	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	15.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	16	50	0	10	50	0	0	30	0	0	30	0
Amber [s]	3.0	4.5	0.0	3.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	15.0	0.0	0.0	15.0	0.0	0.0	30.0	0.0	0.0	28.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30.0	80.0	0.0	15.0	65.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	25	0	5	25	0	0	5	0	0	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	Yes		No	Yes			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9.4	103.4	103.4	3.8	97.9	97.9	15.8	15.8	15.8	15.8	15.8
g / C, Green / Cycle	0.07	0.77	0.77	0.03	0.72	0.72	0.12	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.25	0.25	0.02	0.39	0.39	0.07	0.07	0.03	0.00	0.01
s, saturation flow rate [veh/h]	1781	3560	1852	1781	3560	1833	1384	1594	1289	1870	1589
c, Capacity [veh/h]	124	2729	1420	50	2582	1330	186	185	100	218	185
d1, Uniform Delay [s]	61.89	4.90	4.90	65.14	8.31	8.34	59.19	56.42	64.43	52.90	53.34
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.22	0.32	0.61	20.36	0.80	1.55	2.09	2.70	2.07	0.06	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.33	0.33	0.76	0.53	0.54	0.50	0.57	0.35	0.03	0.10
d, Delay for Lane Group [s/veh]	73.11	5.22	5.51	85.50	9.11	9.89	61.28	59.12	66.50	52.96	53.58
Lane Group LOS	E	A	A	F	A	A	E	E	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.69	3.34	3.59	1.57	8.14	8.72	3.22	3.56	1.26	0.22	0.60
50th-Percentile Queue Length [ft/ln]	92.34	83.47	89.74	39.23	203.56	218.00	80.55	89.07	31.53	5.44	14.95
95th-Percentile Queue Length [veh/ln]	6.65	6.01	6.46	2.82	12.82	13.56	5.80	6.41	2.27	0.39	1.08
95th-Percentile Queue Length [ft/ln]	166.22	150.25	161.53	70.62	320.55	339.07	144.99	160.32	56.76	9.79	26.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.11	5.32	5.51	85.50	9.35	9.89	61.28	59.12	59.12	66.50	52.96	53.58
Movement LOS	E	A	A	F	A	A	E	E	E	E	D	D
d_A, Approach Delay [s/veh]	9.95			10.73			60.13			60.92		
Approach LOS	A			B			E			E		
d_I, Intersection Delay [s/veh]	13.78											
Intersection LOS	B											
Intersection V/C	0.512											

Emissions

Vehicle Miles Traveled [mph]	16.38	146.99	76.47	2.02	73.26	37.88	3.43	3.87	1.91	0.38	1.03
Stops [stops/h]	98.50	178.07	95.72	41.85	434.26	232.53	85.92	95.00	33.64	5.80	15.95
Fuel consumption [US gal/h]	3.03	7.96	4.20	1.14	9.45	5.08	1.64	1.80	0.69	0.11	0.31
CO [g/h]	211.59	556.32	293.46	80.00	660.32	354.81	114.88	125.94	48.12	8.03	22.01
NOx [g/h]	41.17	108.24	57.10	15.57	128.47	69.03	22.35	24.50	9.36	1.56	4.28
VOC [g/h]	49.04	128.93	68.01	18.54	153.04	82.23	26.62	29.19	11.15	1.86	5.10

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	58.80			58.80			58.80			58.80		
I_p,int, Pedestrian LOS Score for Intersectio	3.333			3.410			2.065			2.177		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1096			881			519			519		
d_b, Bicycle Delay [s]	13.78			21.11			37.04			37.04		
I_b,int, Bicycle LOS Score for Intersection	2.357			2.731			1.886			1.660		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 11: South Access / Quebec St

Control Type:	Two-way stop	Delay (sec / veh):	17.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.097

Intersection Setup

Name	Quebec Street		Quebec Street		South Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Quebec Street		Quebec Street		South Access	
Base Volume Input [veh/h]	1290	100	0	2067	0	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1290	100	0	2067	0	30
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	332	26	0	533	0	8
Total Analysis Volume [veh/h]	1330	103	0	2131	0	31
Pedestrian Volume [ped/h]	0		0		0	

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

Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.00	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	17.48
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.32
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	7.99
d_A, Approach Delay [s/veh]	0.00		0.00		17.48	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.15					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 13: East Access / Park Meadows Dr

Control Type: Two-way stop
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 67.1
Level Of Service: F
Volume to Capacity (v/c): 0.017

Intersection Setup

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Base Volume Input [veh/h]	6	0	12	2	1	101	113	662	5	23	847	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	12	2	1	101	113	662	5	23	847	40
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	3	1	0	26	29	171	1	6	218	10
Total Analysis Volume [veh/h]	6	0	12	2	1	104	116	682	5	24	873	41
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes	Yes		
Storage Area [veh]	1	1	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report
Intersection 15: West Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.051

Intersection Setup

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Base Volume Input [veh/h]	0	25	757	27	0	953
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	25	757	27	0	953
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	195	7	0	246
Total Analysis Volume [veh/h]	0	26	780	28	0	982
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings						
Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	12.45	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.16	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.02	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.45		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	B					

Option 1: Copy of Business Center Dr / Park Meadows Dr / Quebec St

Number	1											
Intersection	Business Center Dr / Park Meadows Dr / Quebec St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	125	930	265	318	1441	283	417	162	176	450	148	319
Total Analysis Volume [veh/h]	129	959	273	328	1486	292	430	167	181	464	153	329

Intersection Settings

Cycle Length [s]	135											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fully actuated											
Lost time [s]	0.00											

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	7	7	4	0	3	8	0
Auxiliary Signal Groups						6,7						
Maximum Green [s]	25	50	0	25	50	40	40	40	0	20	20	0
Amber [s]	3.0	1.5	0.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0

Phasing & Timing: Pattern 1

Split [s]	16.0	39.0	0.0	26.0	49.0	28.0	28.0	35.0	0.0	35.0	42.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	5	5	5	0	5	5	0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	Yes		No	Yes	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

g / C, Green / Cycle	0.06	0.34	0.34	0.13	0.40	0.60	0.16	0.24	0.24	0.17	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.04	0.21	0.19	0.11	0.32	0.20	0.14	0.10	0.13	0.15	0.09	0.23
so, Base Saturation Flow per Lane [pc/h/lane]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
saturation flow rate [pc/h/lane]	2440	4884	4484	2440	4884	4484	2440	4880	4484	2440	4880	4484

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s, saturation flow rate [veh/n]	3113	4584	1431	3113	4584	1431	3113	1683	1431	3113	1683	1431
c, Capacity [veh/h]	199	1547	483	405	1850	841	505	403	343	543	424	360
X, volume / capacity	0.65	0.62	0.57	0.81	0.80	0.35	0.85	0.41	0.53	0.86	0.36	0.91
d, Delay for Lane Group [s/veh]	65.21	39.36	41.37	60.98	39.33	15.53	59.14	44.01	45.94	58.07	42.09	70.20
Lane Group LOS	E	D	D	E	D	B	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.23	8.96	7.89	5.59	14.59	4.71	7.35	4.79	5.38	7.90	4.26	12.77
50th-Percentile Queue Length [ft/ln]	55.87	224.04	197.27	139.69	364.77	117.66	183.86	119.63	134.59	197.41	106.50	319.31
95th-Percentile Queue Length [veh/ln]	4.02	13.87	12.50	9.46	20.86	8.26	11.80	8.37	9.19	12.50	7.64	18.63
95th-Percentile Queue Length [ft/ln]	100.57	346.77	312.44	236.61	521.38	206.61	295.05	209.32	229.72	312.62	191.12	465.84

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report

Intersection 1: Business Center Dr / Park Meadows Dr / Quebec St

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.643

Intersection Setup

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	1	1	0	0
Entry Pocket Length [ft]	400.00	100.00	180.00	600.00	100.00	300.00	300.00	100.00	300.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Base Volume Input [veh/h]	270	1610	196	186	569	458	246	159	153	88	244	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	11	6	22	0	0	0	7	0	11	6	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	-1	-10	-5	-20	0	0	0	-6	0	-10	-5	-10
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	270	1611	197	188	569	458	246	160	153	89	245	191
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	453	55	53	160	129	69	45	43	25	69	54
Total Analysis Volume [veh/h]	303	1810	221	211	639	515	276	180	172	100	275	215
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	7	7	4	0	3	8	0
Auxiliary Signal Groups						6,7						
Maximum Green [s]	25	50	0	25	50	40	40	40	0	20	20	0
Amber [s]	3.0	4.5	0.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	4.0	0.0	3.0	4.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	50.0	0.0	24.0	39.0	26.0	26.0	35.0	0.0	26.0	35.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	5	5	5	0	5	5	0
Vehicle Extension [s]	1.0	5.0	0.0	2.0	5.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	Yes		No	Yes	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	5.00	6.00	6.00	5.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	4.00	4.00	3.00	4.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	13.8	60.7	60.7	10.4	57.3	84.3	21.0	37.1	37.1	5.8	21.9	21.9
g / C, Green / Cycle	0.10	0.45	0.45	0.08	0.42	0.62	0.16	0.27	0.27	0.04	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.09	0.36	0.14	0.06	0.13	0.32	0.08	0.10	0.11	0.03	0.15	0.14
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	1870	1589	3459	1870	1589
c, Capacity [veh/h]	354	2290	715	266	2160	992	538	513	436	151	304	258
d1, Uniform Delay [s]	59.61	31.72	23.75	61.26	25.59	14.11	52.31	39.34	39.86	63.57	55.52	54.76
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.13	0.09
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.33	2.88	1.12	2.04	0.35	1.94	0.28	0.15	0.22	1.85	11.87	5.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.79	0.31	0.79	0.30	0.52	0.51	0.35	0.39	0.66	0.91	0.83
d, Delay for Lane Group [s/veh]	61.95	34.59	24.87	63.30	25.94	16.05	52.59	39.49	40.08	65.42	67.39	60.52
Lane Group LOS	E	C	C	E	C	B	D	D	D	E	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.15	16.79	4.66	3.59	4.51	8.72	4.30	4.82	4.67	1.73	10.13	7.45
50th-Percentile Queue Length [ft/ln]	128.79	419.86	116.55	89.76	112.84	218.02	107.59	120.51	116.82	43.15	253.15	186.24
95th-Percentile Queue Length [veh/ln]	8.87	23.52	8.20	6.46	8.00	13.56	7.71	8.42	8.22	3.11	15.34	11.93
95th-Percentile Queue Length [ft/ln]	221.85	587.88	205.08	161.57	199.94	339.10	192.64	210.52	205.45	77.67	383.62	298.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.95	34.59	24.87	63.30	25.94	16.05	52.59	39.49	40.08	65.42	67.39	60.52
Movement LOS	E	C	C	E	C	B	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	37.23			27.98			45.41			64.55		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	38.98											
Intersection LOS	D											
Intersection V/C	0.643											

Emissions

Vehicle Miles Traveled [mph]	28.99	173.18	21.15	27.42	83.04	66.93	20.08	13.09	12.51	4.56	12.55	9.81
Stops [stops/h]	274.75	1343.54	124.32	191.49	361.08	232.55	229.52	128.54	124.61	92.05	270.03	198.66
Fuel consumption [US gal/h]	7.56	32.14	3.10	5.58	9.90	6.36	5.44	2.91	2.82	2.20	6.28	4.52
CO [g/h]	528.21	2246.83	216.51	390.11	691.68	444.83	380.60	203.56	196.89	153.60	438.97	315.66
NOx [g/h]	102.77	437.15	42.12	75.90	134.58	86.55	74.05	39.60	38.31	29.89	85.41	61.42
VOC [g/h]	122.42	520.72	50.18	90.41	160.30	103.09	88.21	47.18	45.63	35.60	101.74	73.16

Other Modes

g_Walk,mi, Effective Walk Time [s]	30.0			30.0			33.0			44.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	40.83			40.83			38.53			30.67		
I_p,int, Pedestrian LOS Score for Intersectio	3.324			3.449			2.783			2.675		
Crosswalk LOS	C			C			C			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	652			489			444			444		
d_b, Bicycle Delay [s]	30.67			38.53			40.83			40.83		
I_b,int, Bicycle LOS Score for Intersection	2.843			2.310			2.596			2.533		
Bicycle LOS	C			B			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 6: 8664 South / Quebec Street

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

Intersection Setup

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Base Volume Input [veh/h]	87	2035	7	14	760	34	50	1	29	7	3	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	22	0	0	11	0	0	0	0	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	2057	7	14	771	34	50	1	29	18	3	3
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	578	2	4	217	10	14	0	8	5	1	1
Total Analysis Volume [veh/h]	98	2311	8	16	866	38	56	1	33	20	3	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	15.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	16	50	0	10	50	0	0	30	0	0	30	0
Amber [s]	3.0	4.5	0.0	3.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	15.0	0.0	0.0	15.0	0.0	0.0	30.0	0.0	0.0	28.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30.0	80.0	0.0	15.0	65.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	25	0	5	25	0	0	5	0	0	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10.1	109.7	109.7	2.3	101.9	101.9	11.0	11.0	11.0	11.0	11.0
g / C, Green / Cycle	0.07	0.81	0.81	0.02	0.75	0.75	0.08	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.06	0.47	0.48	0.01	0.19	0.19	0.04	0.02	0.02	0.00	0.00
s, saturation flow rate [veh/h]	1603	3204	1680	1603	3204	1647	1269	1437	1237	1683	1431
c, Capacity [veh/h]	120	2606	1367	27	2421	1244	133	116	106	136	116
d1, Uniform Delay [s]	61.55	4.47	4.48	65.91	4.96	4.96	62.02	58.40	62.94	57.12	57.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.66	0.96	1.83	19.23	0.24	0.47	2.11	1.38	0.86	0.06	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.58	0.58	0.60	0.25	0.25	0.42	0.29	0.19	0.02	0.03
d, Delay for Lane Group [s/veh]	74.22	5.44	6.31	85.14	5.20	5.44	64.13	59.77	63.80	57.18	57.23
Lane Group LOS	E	A	A	F	A	A	E	E	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.69	5.68	6.30	0.69	2.23	2.38	1.98	1.15	0.70	0.10	0.10
50th-Percentile Queue Length [ft/ln]	92.37	142.09	157.44	17.14	55.72	59.47	49.49	28.78	17.52	2.45	2.46
95th-Percentile Queue Length [veh/ln]	6.65	9.59	10.41	1.23	4.01	4.28	3.56	2.07	1.26	0.18	0.18
95th-Percentile Queue Length [ft/ln]	166.27	239.84	260.33	30.85	100.29	107.05	89.08	51.80	31.53	4.41	4.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	74.22	5.73	6.31	85.14	5.28	5.44	64.13	59.77	59.77	63.80	57.18	57.23
Movement LOS	E	A	A	F	A	A	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	8.51			6.67			62.49			62.28		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	9.83											
Intersection LOS	A											
Intersection V/C	0.529											

Emissions

Vehicle Miles Traveled [mph]	16.21	251.58	132.00	0.85	31.69	16.34	2.07	1.25	1.09	0.16	0.16
Stops [stops/h]	98.53	303.13	167.93	18.28	118.86	63.44	52.79	30.70	18.69	2.61	2.62
Fuel consumption [US gal/h]	3.03	13.67	7.40	0.49	2.93	1.55	1.03	0.59	0.38	0.05	0.05
CO [g/h]	211.69	955.71	517.43	34.06	205.11	108.25	71.73	41.08	26.58	3.65	3.66
NOx [g/h]	41.19	185.95	100.67	6.63	39.91	21.06	13.96	7.99	5.17	0.71	0.71
VOC [g/h]	49.06	221.49	119.92	7.89	47.54	25.09	16.62	9.52	6.16	0.85	0.85

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	58.80			58.80			58.80			58.80		
I_p,int, Pedestrian LOS Score for Intersectio	3.263			3.305			2.023			2.162		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1096			881			519			519		
d_b, Bicycle Delay [s]	13.78			21.11			37.04			37.04		
I_b,int, Bicycle LOS Score for Intersection	2.889			2.066			1.708			1.603		
Bicycle LOS	C			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 11: South Access / Quebec St

Control Type:	Two-way stop	Delay (sec / veh):	33.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.193

Intersection Setup

Name	Quebec Street		Quebec Street		South Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Quebec Street		Quebec Street		South Access	
Base Volume Input [veh/h]	2058	30	0	810	0	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	17	0	11	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2064	47	0	821	0	27
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	580	13	0	231	0	8
Total Analysis Volume [veh/h]	2319	53	0	922	0	30
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.19
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	33.57
Movement LOS	A	A		A		D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.69
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	17.16
d_A, Approach Delay [s/veh]	0.00		0.00		33.57	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.30					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 13: East Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	29.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.224

Intersection Setup

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Base Volume Input [veh/h]	6	0	3	3	0	23	39	505	5	12	500	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	0	21	0	0	0	0	0	6	22	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	24	3	0	23	39	505	11	34	500	10
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	7	1	0	6	11	142	3	10	140	3
Total Analysis Volume [veh/h]	38	0	27	3	0	26	44	567	12	38	562	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes	Yes		
Storage Area [veh]	1	1	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report
Intersection 15: West Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Base Volume Input [veh/h]	0	9	541	12	0	531
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	29	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	9	547	41	0	559
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	154	12	0	157
Total Analysis Volume [veh/h]	0	10	615	46	0	628
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	11.45	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.34	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.45		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 1: Business Center Dr / Park Meadows Dr / Quebec St

Control Type:	Signalized	Delay (sec / veh):	45.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	1	1	0	0
Entry Pocket Length [ft]	400.00	100.00	180.00	600.00	100.00	300.00	300.00	100.00	300.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Base Volume Input [veh/h]	125	930	265	318	1441	283	417	162	176	450	148	319
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	6	3	11	0	0	0	4	0	6	3	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	-1	-6	-3	-11	0	0	0	-4	0	-6	-3	-6
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	930	265	318	1441	283	417	162	176	450	148	319
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	240	68	82	371	73	107	42	45	116	38	82
Total Analysis Volume [veh/h]	129	959	273	328	1486	292	430	167	181	464	153	329
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	7	7	4	0	3	8	0
Auxiliary Signal Groups						6,7						
Maximum Green [s]	25	50	0	25	50	40	40	40	0	20	20	0
Amber [s]	3.0	1.5	0.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	16.0	39.0	0.0	26.0	49.0	28.0	28.0	35.0	0.0	35.0	42.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	5	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	Yes		No	Yes	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8.6	45.6	45.6	17.6	54.5	80.4	21.9	32.4	32.4	23.5	34.0	34.0
g / C, Green / Cycle	0.06	0.34	0.34	0.13	0.40	0.60	0.16	0.24	0.24	0.17	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.04	0.21	0.19	0.11	0.32	0.20	0.14	0.10	0.13	0.15	0.09	0.23
s, saturation flow rate [veh/h]	3113	4584	1431	3113	4584	1431	3113	1683	1431	3113	1683	1431
c, Capacity [veh/h]	199	1547	483	405	1850	841	505	403	343	543	424	360
d1, Uniform Delay [s]	61.70	37.48	36.63	57.08	35.52	14.40	54.98	43.33	44.68	54.08	41.57	49.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.31
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.52	1.88	4.74	3.90	3.81	1.13	4.17	0.68	1.26	3.99	0.52	21.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.62	0.57	0.81	0.80	0.35	0.85	0.41	0.53	0.86	0.36	0.91
d, Delay for Lane Group [s/veh]	65.21	39.36	41.37	60.98	39.33	15.53	59.14	44.01	45.94	58.07	42.09	70.20
Lane Group LOS	E	D	D	E	D	B	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.23	8.96	7.89	5.59	14.59	4.71	7.35	4.79	5.38	7.90	4.26	12.77
50th-Percentile Queue Length [ft/ln]	55.87	224.04	197.27	139.69	364.77	117.66	183.86	119.63	134.59	197.41	106.50	319.31
95th-Percentile Queue Length [veh/ln]	4.02	13.87	12.50	9.46	20.86	8.26	11.80	8.37	9.19	12.50	7.64	18.63
95th-Percentile Queue Length [ft/ln]	100.57	346.77	312.44	236.61	521.38	206.61	295.05	209.32	229.72	312.62	191.12	465.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.21	39.36	41.37	60.98	39.33	15.53	59.14	44.01	45.94	58.07	42.09	70.20
Movement LOS	E	D	D	E	D	B	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	42.21			39.40			52.82			59.70		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	45.85											
Intersection LOS	D											
Intersection V/C	0.734											

Emissions

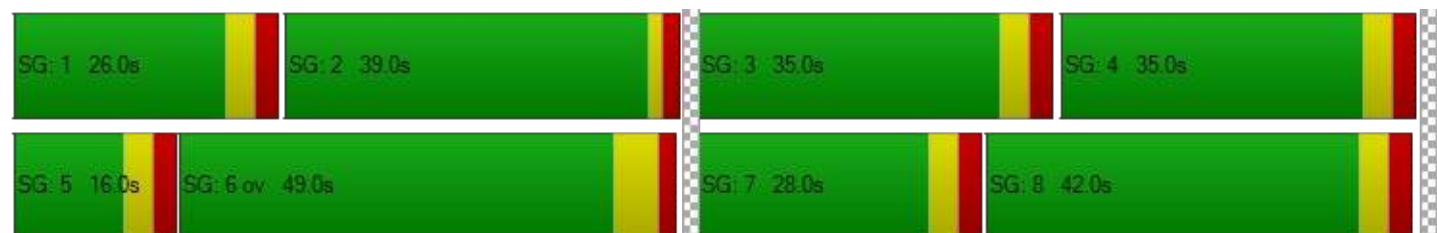
Vehicle Miles Traveled [mph]	12.30	91.43	26.03	42.63	193.12	37.95	32.49	12.62	13.68	21.17	6.98	15.01
Stops [stops/h]	119.20	716.91	210.42	298.01	1167.26	125.51	392.24	127.61	143.56	421.13	113.60	340.60
Fuel consumption [US gal/h]	3.32	18.00	5.30	8.52	30.28	3.52	9.36	2.94	3.29	9.46	2.43	7.83
CO [g/h]	232.29	1258.05	370.30	595.85	2116.37	245.71	654.48	205.23	230.18	661.04	169.91	547.52
NOx [g/h]	45.20	244.77	72.05	115.93	411.77	47.81	127.34	39.93	44.78	128.61	33.06	106.53
VOC [g/h]	53.84	291.57	85.82	138.09	490.49	56.95	151.68	47.56	53.35	153.20	39.38	126.89

Other Modes

g_Walk,mi, Effective Walk Time [s]	30.0			37.0			43.0			36.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	40.83			35.57			31.35			36.30		
I_p,int, Pedestrian LOS Score for Intersectio	3.360			3.464			2.705			2.779		
Crosswalk LOS	C			C			B			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	533			637			444			548		
d_b, Bicycle Delay [s]	36.30			31.35			40.83			35.57		
I_b,int, Bicycle LOS Score for Intersection	2.308			2.718			2.843			3.121		
Bicycle LOS	B			B			C			C		

Sequence

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



Intersection Level Of Service Report
Intersection 6: 8664 South / Quebec Street

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

Intersection Setup

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Base Volume Input [veh/h]	96	1286	24	37	1951	79	90	2	100	34	7	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	6	0	0	0	0	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	1297	24	37	1957	79	90	2	100	40	7	18
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	334	6	10	504	20	23	1	26	10	2	5
Total Analysis Volume [veh/h]	99	1337	25	38	2018	81	93	2	103	41	7	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	15.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	16	50	0	10	50	0	0	30	0	0	30	0
Amber [s]	3.0	4.5	0.0	3.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	15.0	0.0	0.0	15.0	0.0	0.0	30.0	0.0	0.0	28.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30.0	80.0	0.0	15.0	65.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	25	0	5	25	0	0	5	0	0	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26.0	76.0	76.0	11.0	61.0	61.0	36.0	36.0	36.0	36.0	36.0
g / C, Green / Cycle	0.19	0.56	0.56	0.08	0.45	0.45	0.27	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.25	0.25	0.02	0.39	0.39	0.07	0.07	0.03	0.00	0.01
s, saturation flow rate [veh/h]	1781	3560	1852	1781	3560	1833	1384	1594	1289	1870	1589
c, Capacity [veh/h]	343	2004	1043	145	1609	828	398	425	311	499	424
d1, Uniform Delay [s]	46.59	17.23	17.23	58.19	33.17	33.26	40.80	38.86	44.60	36.44	36.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.12	0.72	1.39	4.34	6.25	11.58	1.37	1.38	0.88	0.05	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.45	0.45	0.26	0.86	0.86	0.23	0.25	0.13	0.01	0.04
d, Delay for Lane Group [s/veh]	48.71	17.95	18.61	62.53	39.42	44.84	42.17	40.24	45.48	36.49	36.94
Lane Group LOS	D	B	B	E	D	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.03	8.01	8.53	1.38	20.88	22.87	2.69	2.96	1.23	0.18	0.50
50th-Percentile Queue Length [ft/ln]	75.64	200.33	213.26	34.57	521.95	571.65	67.35	73.89	30.83	4.54	12.53
95th-Percentile Queue Length [veh/ln]	5.45	12.66	13.32	2.49	28.37	30.71	4.85	5.32	2.22	0.33	0.90
95th-Percentile Queue Length [ft/ln]	136.15	316.39	333.01	62.23	709.29	767.71	121.24	133.01	55.50	8.17	22.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.71	18.17	18.61	62.53	41.13	44.84	42.17	40.24	40.24	45.48	36.49	36.94
Movement LOS	D	B	B	E	D	D	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	20.25			41.65			41.15			42.12		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	33.54											
Intersection LOS	C											
Intersection V/C	0.513											

Emissions

Vehicle Miles Traveled [mph]	16.38	148.19	77.10	2.02	73.50	38.01	3.43	3.87	2.23	0.38	1.03
Stops [stops/h]	80.68	427.37	227.48	36.88	1113.50	609.76	71.84	78.82	32.89	4.84	13.36
Fuel consumption [US gal/h]	2.36	12.78	6.76	0.92	24.67	13.88	1.23	1.34	0.61	0.09	0.24
CO [g/h]	164.99	893.27	472.67	64.18	1724.48	970.16	85.83	93.41	42.36	6.13	16.82
NOx [g/h]	32.10	173.80	91.96	12.49	335.52	188.76	16.70	18.17	8.24	1.19	3.27
VOC [g/h]	38.24	207.02	109.55	14.87	399.66	224.84	19.89	21.65	9.82	1.42	3.90

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	58.80			58.80			58.80			58.80		
I_p,int, Pedestrian LOS Score for Intersectio	3.346			3.413			2.065			2.179		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1096			881			519			519		
d_b, Bicycle Delay [s]	13.78			21.11			37.04			37.04		
I_b,int, Bicycle LOS Score for Intersection	2.363			2.735			1.886			1.670		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 11: South Access / Quebec St

Control Type:	Two-way stop	Delay (sec / veh):	17.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.117

Intersection Setup

Name	Quebec Street		Quebec Street		South Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Quebec Street		Quebec Street		South Access	
Base Volume Input [veh/h]	1290	100	0	2067	0	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	8	0	6	0	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1293	108	0	2073	0	36
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	333	28	0	534	0	9
Total Analysis Volume [veh/h]	1333	111	0	2137	0	37
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.00	0.12
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	17.86
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.39
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	9.81
d_A, Approach Delay [s/veh]	0.00		0.00		17.86	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 13: East Access / Park Meadows Dr

Control Type: Two-way stop
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 76.1
Level Of Service: F
Volume to Capacity (v/c): 0.338

Intersection Setup

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Base Volume Input [veh/h]	6	0	12	2	1	101	113	662	5	23	847	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	12	0	0	0	0	0	3	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	0	24	2	1	101	113	662	8	34	847	40
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	6	1	0	26	29	171	2	9	218	10
Total Analysis Volume [veh/h]	21	0	25	2	1	104	116	682	8	35	873	41
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes	Yes		
Storage Area [veh]	1	1	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report
Intersection 15: West Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

Intersection Setup

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Base Volume Input [veh/h]	0	25	757	27	0	953
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	15	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	25	760	42	0	967
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	196	11	0	249
Total Analysis Volume [veh/h]	0	26	784	43	0	997
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	12.56	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.16	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.08	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.56		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 1: Business Center Dr / Park Meadows Dr / Quebec St

Control Type:	Signalized	Delay (sec / veh):	40.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	1	1	0	0
Entry Pocket Length [ft]	400.00	100.00	180.00	600.00	100.00	300.00	300.00	100.00	300.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Base Volume Input [veh/h]	270	1610	196	186	569	458	246	159	153	88	244	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0370	1.0370	1.0370	1.0227	1.0227	1.0227	1.0000	1.0000	1.0000	1.1053	1.1053	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	280	1670	203	190	582	468	246	159	153	97	270	210
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	469	57	53	163	131	69	45	43	27	76	59
Total Analysis Volume [veh/h]	315	1876	228	213	654	526	276	179	172	109	303	236
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	7	7	4	0	3	8	0
Auxiliary Signal Groups						6,7						
Maximum Green [s]	25	50	0	25	50	40	40	40	0	20	50	0
Amber [s]	3.0	4.5	0.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	4.0	0.0	3.0	4.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	51.0	0.0	23.0	39.0	25.0	25.0	35.0	0.0	26.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	5	5	5	0	5	5	0
Vehicle Extension [s]	1.0	5.0	0.0	2.0	5.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	Yes		No	Yes	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	5.00	6.00	6.00	5.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	4.00	4.00	3.00	4.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14.3	59.6	59.6	10.4	55.8	81.8	20.0	37.6	37.6	6.3	23.9	23.9
g / C, Green / Cycle	0.11	0.44	0.44	0.08	0.41	0.61	0.15	0.28	0.28	0.05	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.09	0.37	0.14	0.06	0.13	0.33	0.08	0.10	0.11	0.03	0.16	0.15
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	1870	1589	3459	1870	1589
c, Capacity [veh/h]	368	2248	701	269	2102	962	512	520	442	163	332	282
d1, Uniform Delay [s]	59.31	33.36	24.60	61.19	26.72	15.72	53.23	38.88	39.42	63.27	54.51	53.64
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.17	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.26	3.84	1.23	2.01	0.39	2.23	0.33	0.15	0.21	1.75	14.38	7.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.83	0.33	0.79	0.31	0.55	0.54	0.34	0.39	0.67	0.91	0.84
d, Delay for Lane Group [s/veh]	61.58	37.21	25.84	63.20	27.11	17.96	53.56	39.03	39.63	65.02	68.89	60.94
Lane Group LOS	E	D	C	E	C	B	D	D	D	E	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.35	18.22	4.92	3.62	4.74	9.59	4.35	4.76	4.64	1.88	11.36	8.26
50th-Percentile Queue Length [ft/ln]	133.70	455.55	123.11	90.57	118.58	239.80	108.69	118.95	116.03	46.92	283.92	206.52
95th-Percentile Queue Length [veh/ln]	9.14	25.22	8.56	6.52	8.32	14.67	7.77	8.34	8.17	3.38	16.88	12.97
95th-Percentile Queue Length [ft/ln]	228.52	630.56	214.10	163.03	207.88	366.78	194.18	208.39	204.36	84.45	422.09	324.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.58	37.21	25.84	63.20	27.11	17.96	53.56	39.03	39.63	65.02	68.89	60.94
Movement LOS	E	D	C	E	C	B	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	39.31			29.17			45.59			65.35		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	40.62											
Intersection LOS	D											
Intersection V/C	0.672											

Emissions

Vehicle Miles Traveled [mph]	30.14	179.49	21.81	27.68	84.99	68.36	20.08	13.02	12.51	4.98	13.83	10.77
Stops [stops/h]	285.23	1457.75	131.32	193.22	379.47	255.79	231.87	126.88	123.76	100.09	302.85	220.29
Fuel consumption [US gal/h]	7.83	34.95	3.27	5.63	10.38	6.88	5.52	2.87	2.79	2.38	7.05	4.99
CO [g/h]	547.20	2443.23	228.58	393.47	725.54	481.17	385.63	200.75	195.36	166.67	492.95	349.07
NOx [g/h]	106.47	475.36	44.47	76.55	141.16	93.62	75.03	39.06	38.01	32.43	95.91	67.92
VOC [g/h]	126.82	566.24	52.98	91.19	168.15	111.52	89.37	46.53	45.28	38.63	114.25	80.90

Other Modes

g_Walk,mi, Effective Walk Time [s]	30.0			31.0			33.0			45.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	40.83			40.06			38.53			30.00		
I_p,int, Pedestrian LOS Score for Intersectio	3.340			3.463			2.792			2.687		
Crosswalk LOS	C			C			C			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	667			489			444			459		
d_b, Bicycle Delay [s]	30.00			38.53			40.83			40.06		
I_b,int, Bicycle LOS Score for Intersection	2.890			2.326			2.594			2.629		
Bicycle LOS	C			B			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 6: 8664 South / Quebec Street

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.542

Intersection Setup

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Base Volume Input [veh/h]	87	2035	7	14	760	34	50	1	29	7	3	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0370	1.0370	1.0370	1.0370	1.0370	1.0370	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	2110	7	15	788	35	50	1	29	7	3	3
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	593	2	4	221	10	14	0	8	2	1	1
Total Analysis Volume [veh/h]	101	2371	8	17	885	39	56	1	33	8	3	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	15.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	16	50	0	10	50	0	0	30	0	0	30	0
Amber [s]	3.0	4.5	0.0	3.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	15.0	0.0	0.0	15.0	0.0	0.0	30.0	0.0	0.0	28.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30.0	80.0	0.0	15.0	65.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	25	0	5	25	0	0	5	0	0	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10.4	109.6	109.6	2.4	101.6	101.6	11.0	11.0	11.0	11.0	11.0
g / C, Green / Cycle	0.08	0.81	0.81	0.02	0.75	0.75	0.08	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.06	0.49	0.49	0.01	0.19	0.19	0.04	0.02	0.01	0.00	0.00
s, saturation flow rate [veh/h]	1603	3204	1680	1603	3204	1647	1269	1437	1237	1683	1431
c, Capacity [veh/h]	123	2604	1365	28	2414	1241	133	116	106	136	116
d1, Uniform Delay [s]	61.40	4.62	4.62	65.85	5.07	5.07	62.02	58.40	62.32	57.12	57.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.54	1.03	1.95	19.17	0.25	0.49	2.11	1.38	0.30	0.06	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.60	0.60	0.61	0.25	0.25	0.42	0.29	0.08	0.02	0.03
d, Delay for Lane Group [s/veh]	73.94	5.64	6.57	85.02	5.32	5.56	64.13	59.77	62.63	57.18	57.23
Lane Group LOS	E	A	A	F	A	A	E	E	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.80	6.02	6.67	0.73	2.32	2.47	1.98	1.15	0.28	0.10	0.10
50th-Percentile Queue Length [ft/ln]	95.02	150.45	166.79	18.13	57.98	61.85	49.49	28.78	6.91	2.45	2.46
95th-Percentile Queue Length [veh/ln]	6.84	10.04	10.91	1.31	4.17	4.45	3.56	2.07	0.50	0.18	0.18
95th-Percentile Queue Length [ft/ln]	171.04	251.03	272.69	32.64	104.36	111.34	89.08	51.80	12.44	4.41	4.43

Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	73.94	5.96	6.57	85.02	5.40	5.56	64.13	59.77	59.77	62.63	57.18	57.23
Movement LOS	E	A	A	F	A	A	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	8.73			6.84			62.49			60.30		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	9.81											
Intersection LOS	A											
Intersection V/C	0.542											

Emissions												
Vehicle Miles Traveled [mph]	16.71	258.08	135.43	0.90	32.39	16.69	2.07	1.25	0.44	0.16	0.16	
Stops [stops/h]	101.35	320.96	177.91	19.34	123.69	65.98	52.79	30.70	7.37	2.61	2.62	
Fuel consumption [US gal/h]	3.11	14.19	7.69	0.52	3.04	1.60	1.03	0.59	0.15	0.05	0.05	
CO [g/h]	217.64	991.88	537.83	36.10	212.19	111.97	71.73	41.08	10.47	3.65	3.66	
NOx [g/h]	42.35	192.98	104.64	7.02	41.29	21.79	13.96	7.99	2.04	0.71	0.71	
VOC [g/h]	50.44	229.88	124.65	8.37	49.18	25.95	16.62	9.52	2.43	0.85	0.85	

Other Modes												
g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	58.80			58.80			58.80			58.80		
I_p,int, Pedestrian LOS Score for Intersectio	3.259			3.320			2.024			2.160		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1096			881			519			519		
d_b, Bicycle Delay [s]	13.78			21.11			37.04			37.04		
I_b,int, Bicycle LOS Score for Intersection	2.924			2.077			1.708			1.583		
Bicycle LOS	C			B			A			A		

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



Intersection Level Of Service Report
Intersection 11: South Access / Quebec St

Control Type:	Two-way stop	Delay (sec / veh):	32.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.115

Intersection Setup

Name	Quebec Street		Quebec Street		South Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Quebec Street		Quebec Street		South Access	
Base Volume Input [veh/h]	2058	30	0	810	0	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0370	1.0370	1.0000	1.0370	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2134	31	0	840	0	15
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	599	9	0	236	0	4
Total Analysis Volume [veh/h]	2398	35	0	944	0	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.11
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	32.37
Movement LOS	A	A		A		D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.38
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	9.48
d_A, Approach Delay [s/veh]	0.00		0.00		32.37	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.16					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 13: East Access / Park Meadows Dr

Control Type: Two-way stop
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 28.5
Level Of Service: D
Volume to Capacity (v/c): 0.044

Intersection Setup

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Base Volume Input [veh/h]	6	0	3	3	0	23	39	505	5	12	500	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.1053	1.1053	1.1053	1.1053	1.1053	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	3	3	0	23	43	558	6	13	553	11
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	1	1	0	6	12	157	2	4	155	3
Total Analysis Volume [veh/h]	7	0	3	3	0	26	48	627	7	15	621	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes	Yes		
Storage Area [veh]	1	1	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report
Intersection 15: West Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Base Volume Input [veh/h]	0	9	541	12	0	531
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.1053	1.1053	1.0000	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	9	598	13	0	587
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	168	4	0	165
Total Analysis Volume [veh/h]	0	10	672	15	0	660
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	11.58	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.05	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.37	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.58		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 1: Business Center Dr / Park Meadows Dr / Quebec St

Control Type:	Signalized	Delay (sec / veh):	48.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	1	1	0	0
Entry Pocket Length [ft]	400.00	100.00	180.00	600.00	100.00	300.00	300.00	100.00	300.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Base Volume Input [veh/h]	125	930	265	318	1441	283	417	162	176	450	148	319
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0370	1.0370	1.0370	1.0227	1.0227	1.0227	1.0000	1.0000	1.0000	1.1053	1.1053	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	964	275	325	1474	289	417	162	176	497	164	353
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	248	71	84	380	74	107	42	45	128	42	91
Total Analysis Volume [veh/h]	134	994	284	335	1520	298	430	167	181	512	169	364
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	7	7	4	0	3	8	0
Auxiliary Signal Groups						6,7						
Maximum Green [s]	25	50	0	25	50	40	40	40	0	20	20	0
Amber [s]	3.0	1.5	0.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15.0	39.0	0.0	25.0	49.0	27.0	27.0	35.0	0.0	36.0	44.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	5	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	Yes		No	Yes	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8.8	42.4	42.4	17.8	51.4	77.1	21.7	33.2	33.2	25.6	37.1	37.1
g / C, Green / Cycle	0.07	0.31	0.31	0.13	0.38	0.57	0.16	0.25	0.25	0.19	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.04	0.22	0.20	0.11	0.33	0.21	0.14	0.10	0.13	0.16	0.10	0.25
s, saturation flow rate [veh/h]	3113	4584	1431	3113	4584	1431	3113	1683	1431	3113	1683	1431
c, Capacity [veh/h]	204	1438	449	410	1743	806	500	414	352	591	463	394
d1, Uniform Delay [s]	61.61	40.59	39.66	57.01	38.80	16.27	55.16	42.59	43.92	53.03	39.42	47.57
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.35
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.59	2.75	6.64	4.02	6.35	1.31	4.43	0.63	1.16	4.01	0.48	23.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.69	0.63	0.82	0.87	0.37	0.86	0.40	0.51	0.87	0.36	0.92
d, Delay for Lane Group [s/veh]	65.21	43.34	46.31	61.03	45.14	17.58	59.59	43.22	45.09	57.03	39.91	71.02
Lane Group LOS	E	D	D	E	D	B	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.32	9.84	8.76	5.71	16.10	5.20	7.38	4.74	5.33	8.69	4.58	14.32
50th-Percentile Queue Length [ft/ln]	58.06	245.91	219.02	142.87	402.59	129.97	184.60	118.40	133.15	217.20	114.61	357.94
95th-Percentile Queue Length [veh/ln]	4.18	14.98	13.61	9.64	22.68	8.94	11.84	8.31	9.11	13.52	8.10	20.52
95th-Percentile Queue Length [ft/ln]	104.50	374.50	340.37	240.88	567.12	223.46	296.01	207.63	227.77	338.05	202.39	513.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.21	43.34	46.31	61.03	45.14	17.58	59.59	43.22	45.09	57.03	39.91	71.02
Movement LOS	E	D	D	E	D	B	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	46.01			43.80			52.71			59.14		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	48.64											
Intersection LOS	D											
Intersection V/C	0.767											

Emissions

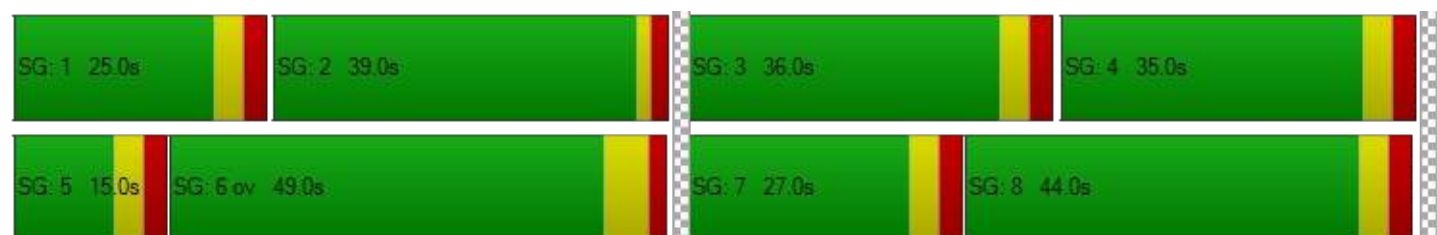
Vehicle Miles Traveled [mph]	12.82	95.10	27.17	43.54	197.54	38.73	32.49	12.62	13.68	23.37	7.71	16.62
Stops [stops/h]	123.85	786.91	233.62	304.78	1288.29	138.64	393.80	126.30	142.03	463.37	122.25	381.80
Fuel consumption [US gal/h]	3.45	19.90	5.94	8.71	33.69	3.82	9.41	2.90	3.25	10.32	2.59	8.77
CO [g/h]	241.42	1391.17	415.52	609.08	2355.23	266.68	658.06	202.68	227.17	721.19	180.74	612.68
NOx [g/h]	46.97	270.67	80.84	118.50	458.24	51.89	128.03	39.43	44.20	140.32	35.17	119.21
VOC [g/h]	55.95	322.42	96.30	141.16	545.85	61.80	152.51	46.97	52.65	167.14	41.89	141.99

Other Modes

g_Walk,mi, Effective Walk Time [s]	30.0			39.0			43.0			36.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	40.83			34.13			31.35			36.30		
I_p,int, Pedestrian LOS Score for Intersectio	3.379			3.478			2.710			2.801		
Crosswalk LOS	C			C			B			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	533			637			444			578		
d_b, Bicycle Delay [s]	36.30			31.35			40.83			34.13		
I_b,int, Bicycle LOS Score for Intersection	2.336			2.744			2.843			3.284		
Bicycle LOS	B			B			C			C		

Sequence

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



Intersection Level Of Service Report
Intersection 6: 8664 South / Quebec Street

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

Intersection Setup

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Base Volume Input [veh/h]	96	1286	24	37	1951	79	90	2	100	34	7	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0370	1.0370	1.0370	1.0370	1.0370	1.0370	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	1334	25	38	2023	82	90	2	100	34	7	18
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	344	6	10	521	21	23	1	26	9	2	5
Total Analysis Volume [veh/h]	103	1375	26	39	2086	85	93	2	103	35	7	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	15.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	16	50	0	10	50	0	0	30	0	0	30	0
Amber [s]	3.0	4.5	0.0	3.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	15.0	0.0	0.0	15.0	0.0	0.0	30.0	0.0	0.0	28.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30.0	80.0	0.0	15.0	65.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	25	0	5	25	0	0	5	0	0	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9.7	103.4	103.4	3.8	97.5	97.5	15.8	15.8	15.8	15.8	15.8
g / C, Green / Cycle	0.07	0.77	0.77	0.03	0.72	0.72	0.12	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.26	0.26	0.02	0.40	0.40	0.07	0.07	0.03	0.00	0.01
s, saturation flow rate [veh/h]	1781	3560	1852	1781	3560	1833	1384	1594	1289	1870	1589
c, Capacity [veh/h]	128	2728	1419	51	2574	1325	186	185	100	218	185
d1, Uniform Delay [s]	61.71	4.98	4.98	65.13	8.67	8.70	59.19	56.42	64.43	52.90	53.34
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.10	0.34	0.65	21.11	0.87	1.71	2.09	2.70	2.07	0.06	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.34	0.34	0.77	0.56	0.56	0.50	0.57	0.35	0.03	0.10
d, Delay for Lane Group [s/veh]	72.81	5.31	5.62	86.24	9.54	10.40	61.28	59.12	66.50	52.96	53.58
Lane Group LOS	E	A	A	F	A	B	E	E	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.83	3.51	3.78	1.62	8.77	9.41	3.22	3.56	1.26	0.22	0.60
50th-Percentile Queue Length [ft/ln]	95.87	87.85	94.46	40.43	219.27	235.36	80.55	89.07	31.53	5.44	14.95
95th-Percentile Queue Length [veh/ln]	6.90	6.33	6.80	2.91	13.63	14.45	5.80	6.41	2.27	0.39	1.08
95th-Percentile Queue Length [ft/ln]	172.56	158.13	170.02	72.78	340.69	361.15	144.99	160.32	56.76	9.79	26.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.81	5.42	5.62	86.24	9.81	10.40	61.28	59.12	59.12	66.50	52.96	53.58
Movement LOS	E	A	A	F	A	B	E	E	E	E	D	D
d_A, Approach Delay [s/veh]	10.03			11.18			60.13			60.92		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	13.95											
Intersection LOS	B											
Intersection V/C	0.529											

Emissions

Vehicle Miles Traveled [mph]	17.04	152.44	79.30	2.07	76.00	39.33	3.43	3.87	1.91	0.38	1.03
Stops [stops/h]	102.26	187.41	100.75	43.13	467.77	251.05	85.92	95.00	33.64	5.80	15.95
Fuel consumption [US gal/h]	3.14	8.30	4.38	1.18	10.10	5.44	1.64	1.80	0.69	0.11	0.31
CO [g/h]	219.54	580.03	306.09	82.64	705.65	380.45	114.88	125.94	48.12	8.03	22.01
NOx [g/h]	42.71	112.85	59.55	16.08	137.29	74.02	22.35	24.50	9.36	1.56	4.28
VOC [g/h]	50.88	134.43	70.94	19.15	163.54	88.17	26.62	29.19	11.15	1.86	5.10

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	58.80			58.80			58.80			58.80		
I_p,int, Pedestrian LOS Score for Intersectio	3.357			3.433			2.067			2.178		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1096			881			519			519		
d_b, Bicycle Delay [s]	13.78			21.11			37.04			37.04		
I_b,int, Bicycle LOS Score for Intersection	2.387			2.775			1.886			1.660		
Bicycle LOS	B			C			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 11: South Access / Quebec St

Control Type:	Two-way stop	Delay (sec / veh):	18.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.101

Intersection Setup

Name	Quebec Street		Quebec Street		South Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Quebec Street		Quebec Street		South Access	
Base Volume Input [veh/h]	1290	100	0	2067	0	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0370	1.0370	1.0000	1.0370	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1338	104	0	2143	0	30
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	345	27	0	552	0	8
Total Analysis Volume [veh/h]	1379	107	0	2209	0	31
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.00	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	18.05
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.33
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	8.35
d_A, Approach Delay [s/veh]	0.00		0.00		18.05	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.15					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 13: East Access / Park Meadows Dr

Control Type: Two-way stop
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 91.2
Level Of Service: F
Volume to Capacity (v/c): 0.023

Intersection Setup

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Base Volume Input [veh/h]	6	0	12	2	1	101	113	662	5	23	847	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.1053	1.1053	1.1053	1.1053	1.1053	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	12	2	1	101	125	732	6	25	936	44
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	3	1	0	26	32	189	2	6	241	11
Total Analysis Volume [veh/h]	6	0	12	2	1	104	129	755	6	26	965	45
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes	Yes		
Storage Area [veh]	1	1	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report
Intersection 15: West Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.054

Intersection Setup

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Base Volume Input [veh/h]	0	25	757	27	0	953
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.1053	1.1053	1.0000	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	25	837	30	0	1053
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	216	8	0	271
Total Analysis Volume [veh/h]	0	26	863	31	0	1086
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	12.96	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.30	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.96		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 1: Business Center Dr / Park Meadows Dr / Quebec St

Control Type:	Signalized	Delay (sec / veh):	40.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

Intersection Setup

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	1	1	0	0
Entry Pocket Length [ft]	400.00	100.00	180.00	600.00	100.00	300.00	300.00	100.00	300.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Base Volume Input [veh/h]	270	1610	196	186	569	458	246	159	153	88	244	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0370	1.0370	1.0370	1.0227	1.0227	1.0227	1.0000	1.0000	1.0000	1.1053	1.1053	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	11	6	22	0	0	0	7	0	11	6	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	-1	-10	-5	-20	0	0	0	-6	0	-10	-5	-10
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	280	1671	204	192	582	468	246	160	153	98	271	211
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	469	57	54	163	131	69	45	43	28	76	59
Total Analysis Volume [veh/h]	315	1878	229	216	654	526	276	180	172	110	304	237
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	7	7	4	0	3	8	0
Auxiliary Signal Groups						6,7						
Maximum Green [s]	25	50	0	25	50	40	40	40	0	20	20	0
Amber [s]	3.0	4.5	0.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	4.0	0.0	3.0	4.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	51.0	0.0	23.0	39.0	25.0	25.0	35.0	0.0	26.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	5	5	5	0	5	5	0
Vehicle Extension [s]	1.0	5.0	0.0	2.0	5.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	Yes		No	Yes	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	5.00	6.00	6.00	5.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	4.00	4.00	3.00	4.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14.3	59.4	59.4	10.6	55.7	81.7	20.0	37.7	37.7	6.3	24.0	24.0
g / C, Green / Cycle	0.11	0.44	0.44	0.08	0.41	0.61	0.15	0.28	0.28	0.05	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.09	0.37	0.14	0.06	0.13	0.33	0.08	0.10	0.11	0.03	0.16	0.15
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	1870	1589	3459	1870	1589
c, Capacity [veh/h]	368	2240	699	272	2099	961	512	521	443	164	333	283
d1, Uniform Delay [s]	59.31	33.55	24.74	61.13	26.77	15.77	53.23	38.88	39.40	63.24	54.47	53.61
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.17	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.26	3.95	1.25	2.02	0.39	2.24	0.33	0.15	0.21	1.75	14.51	7.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.84	0.33	0.80	0.31	0.55	0.54	0.35	0.39	0.67	0.91	0.84
d, Delay for Lane Group [s/veh]	61.58	37.50	25.99	63.15	27.16	18.01	53.56	39.03	39.61	65.00	68.99	61.07
Lane Group LOS	E	D	C	E	C	B	D	D	D	E	E	E
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.35	18.32	4.97	3.67	4.75	9.61	4.35	4.79	4.64	1.89	11.40	8.31
50th-Percentile Queue Length [ft/ln]	133.70	458.05	124.13	91.84	118.71	240.22	108.69	119.65	115.99	47.35	285.12	207.69
95th-Percentile Queue Length [veh/ln]	9.14	25.34	8.62	6.61	8.32	14.69	7.77	8.37	8.17	3.41	16.94	13.03
95th-Percentile Queue Length [ft/ln]	228.52	633.55	215.49	165.31	208.05	367.31	194.18	209.35	204.30	85.22	423.59	325.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.58	37.50	25.99	63.15	27.16	18.01	53.56	39.03	39.61	65.00	68.99	61.07
Movement LOS	E	D	C	E	C	B	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	39.54			29.28			45.57			65.43		
Approach LOS	D			C			D			E		
d_I, Intersection Delay [s/veh]	40.78											
Intersection LOS	D											
Intersection V/C	0.674											

Emissions

Vehicle Miles Traveled [mph]	30.14	179.69	21.91	28.07	84.99	68.36	20.08	13.09	12.51	5.02	13.88	10.82
Stops [stops/h]	285.23	1465.77	132.41	195.92	379.88	256.23	231.87	127.63	123.72	101.00	304.13	221.53
Fuel consumption [US gal/h]	7.83	35.16	3.30	5.71	10.39	6.89	5.52	2.89	2.79	2.41	7.08	5.02
CO [g/h]	547.20	2458.01	230.45	398.83	726.27	481.83	385.63	201.90	195.28	168.16	495.14	351.14
NOx [g/h]	106.47	478.24	44.84	77.60	141.31	93.75	75.03	39.28	37.99	32.72	96.34	68.32
VOC [g/h]	126.82	569.67	53.41	92.43	168.32	111.67	89.37	46.79	45.26	38.97	114.75	81.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	30.0			31.0			33.0			45.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	40.83			40.06			38.53			30.00		
I_p,int, Pedestrian LOS Score for Intersectio	3.340			3.464			2.793			2.688		
Crosswalk LOS	C			C			C			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	667			489			444			459		
d_b, Bicycle Delay [s]	30.00			38.53			40.83			40.06		
I_b,int, Bicycle LOS Score for Intersection	2.892			2.327			2.596			2.634		
Bicycle LOS	C			B			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 6: 8664 South / Quebec Street

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

Intersection Setup

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Base Volume Input [veh/h]	87	2035	7	14	760	34	50	1	29	7	3	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0370	1.0370	1.0370	1.0370	1.0370	1.0370	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	22	0	0	11	0	0	0	0	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	2132	7	15	799	35	50	1	29	18	3	3
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	599	2	4	224	10	14	0	8	5	1	1
Total Analysis Volume [veh/h]	101	2396	8	17	898	39	56	1	33	20	3	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	15.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	16	50	0	10	50	0	0	30	0	0	30	0
Amber [s]	3.0	4.5	0.0	3.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	15.0	0.0	0.0	15.0	0.0	0.0	30.0	0.0	0.0	28.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30.0	80.0	0.0	15.0	65.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	25	0	5	25	0	0	5	0	0	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10.4	109.6	109.6	2.4	101.6	101.6	11.0	11.0	11.0	11.0	11.0
g / C, Green / Cycle	0.08	0.81	0.81	0.02	0.75	0.75	0.08	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.06	0.49	0.49	0.01	0.19	0.19	0.04	0.02	0.02	0.00	0.00
s, saturation flow rate [veh/h]	1603	3204	1680	1603	3204	1647	1269	1437	1237	1683	1431
c, Capacity [veh/h]	123	2604	1365	28	2414	1241	133	116	106	136	116
d1, Uniform Delay [s]	61.40	4.66	4.67	65.85	5.09	5.09	62.02	58.40	62.94	57.12	57.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.54	1.05	2.00	19.17	0.26	0.50	2.11	1.38	0.86	0.06	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.61	0.61	0.61	0.26	0.26	0.42	0.29	0.19	0.02	0.03
d, Delay for Lane Group [s/veh]	73.94	5.72	6.67	85.02	5.34	5.59	64.13	59.77	63.80	57.18	57.23
Lane Group LOS	E	A	A	F	A	A	E	E	E	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.80	6.14	6.81	0.73	2.36	2.52	1.98	1.15	0.70	0.10	0.10
50th-Percentile Queue Length [ft/ln]	95.02	153.61	170.35	18.13	58.99	62.94	49.49	28.78	17.52	2.45	2.46
95th-Percentile Queue Length [veh/ln]	6.84	10.21	11.10	1.31	4.25	4.53	3.56	2.07	1.26	0.18	0.18
95th-Percentile Queue Length [ft/ln]	171.04	255.24	277.38	32.64	106.18	113.29	89.08	51.80	31.53	4.41	4.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.94	6.04	6.67	85.02	5.42	5.59	64.13	59.77	59.77	63.80	57.18	57.23
Movement LOS	E	A	A	F	A	A	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	8.78			6.84			62.49			62.28		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	10.01											
Intersection LOS	B											
Intersection V/C	0.547											

Emissions

Vehicle Miles Traveled [mph]	16.71	260.79	136.86	0.90	32.85	16.93	2.07	1.25	1.09	0.16	0.16
Stops [stops/h]	101.35	327.70	181.71	19.34	125.85	67.14	52.79	30.70	18.69	2.61	2.62
Fuel consumption [US gal/h]	3.11	14.40	7.81	0.52	3.09	1.63	1.03	0.59	0.38	0.05	0.05
CO [g/h]	217.64	1006.25	545.97	36.10	215.65	113.83	71.73	41.08	26.58	3.65	3.66
NOx [g/h]	42.35	195.78	106.23	7.02	41.96	22.15	13.96	7.99	5.17	0.71	0.71
VOC [g/h]	50.44	233.21	126.53	8.37	49.98	26.38	16.62	9.52	6.16	0.85	0.85

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	58.80			58.80			58.80			58.80		
I_p,int, Pedestrian LOS Score for Intersectio	3.285			3.327			2.024			2.162		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1096			881			519			519		
d_b, Bicycle Delay [s]	13.78			21.11			37.04			37.04		
I_b,int, Bicycle LOS Score for Intersection	2.937			2.084			1.708			1.603		
Bicycle LOS	C			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 11: South Access / Quebec St

Control Type:	Two-way stop	Delay (sec / veh):	36.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.206

Intersection Setup

Name	Quebec Street		Quebec Street		South Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Quebec Street		Quebec Street		South Access	
Base Volume Input [veh/h]	2058	30	0	810	0	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0370	1.0370	1.0000	1.0370	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	17	0	11	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2140	48	0	851	0	27
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	601	13	0	239	0	8
Total Analysis Volume [veh/h]	2404	54	0	956	0	30
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.21
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	36.04
Movement LOS	A	A		A		E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.74
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	18.52
d_A, Approach Delay [s/veh]	0.00		0.00		36.04	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 13: East Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	35.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.269

Intersection Setup

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Base Volume Input [veh/h]	6	0	3	3	0	23	39	505	5	12	500	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.1053	1.1053	1.1053	1.1053	1.1053	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	0	21	0	0	0	0	0	6	22	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	24	3	0	23	43	558	12	35	553	11
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	7	1	0	6	12	157	3	10	155	3
Total Analysis Volume [veh/h]	38	0	27	3	0	26	48	627	13	39	621	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes	Yes		
Storage Area [veh]	1	1	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

[illegible]

Intersection Level Of Service Report
Intersection 15: West Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Base Volume Input [veh/h]	0	9	541	12	0	531
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.1053	1.1053	1.0000	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	29	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	9	604	42	0	615
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	170	12	0	173
Total Analysis Volume [veh/h]	0	10	679	47	0	691
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	11.78	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.41	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.78		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 1: Business Center Dr / Park Meadows Dr / Quebec St

Control Type:	Signalized	Delay (sec / veh):	48.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	1	1	0	0
Entry Pocket Length [ft]	400.00	100.00	180.00	600.00	100.00	300.00	300.00	100.00	300.00	200.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			Business Center Drive			Park Meadows Drive		
Base Volume Input [veh/h]	125	930	265	318	1441	283	417	162	176	450	148	319
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0370	1.0370	1.0370	1.0227	1.0227	1.0227	1.0000	1.0000	1.0000	1.1053	1.1053	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	6	3	11	0	0	0	4	0	6	3	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	-1	-6	-3	-11	0	0	0	-4	0	-6	-3	-6
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	964	275	325	1474	289	417	162	176	497	164	353
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	248	71	84	380	74	107	42	45	128	42	91
Total Analysis Volume [veh/h]	134	994	284	335	1520	298	430	167	181	512	169	364
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	5	2	0	1	6	7	7	4	0	3	8	0
Auxiliary Signal Groups						6,7						
Maximum Green [s]	25	50	0	25	50	40	40	40	0	20	20	0
Amber [s]	3.0	1.5	0.0	3.0	4.5	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	2.0	1.5	0.0	2.0	1.5	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [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 Clearance [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
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15.0	39.0	0.0	25.0	49.0	27.0	27.0	35.0	0.0	36.0	44.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	20	0	5	20	5	5	5	0	5	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	Yes		No	Yes	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8.8	42.4	42.4	17.8	51.4	77.1	21.7	33.2	33.2	25.6	37.1	37.1
g / C, Green / Cycle	0.07	0.31	0.31	0.13	0.38	0.57	0.16	0.25	0.25	0.19	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.04	0.22	0.20	0.11	0.33	0.21	0.14	0.10	0.13	0.16	0.10	0.25
s, saturation flow rate [veh/h]	3113	4584	1431	3113	4584	1431	3113	1683	1431	3113	1683	1431
c, Capacity [veh/h]	204	1438	449	410	1743	806	500	414	352	591	463	394
d1, Uniform Delay [s]	61.61	40.59	39.66	57.01	38.80	16.27	55.16	42.59	43.92	53.03	39.42	47.57
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.35
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.59	2.75	6.64	4.02	6.35	1.31	4.43	0.63	1.16	4.01	0.48	23.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.69	0.63	0.82	0.87	0.37	0.86	0.40	0.51	0.87	0.36	0.92
d, Delay for Lane Group [s/veh]	65.21	43.34	46.31	61.03	45.14	17.58	59.59	43.22	45.09	57.03	39.91	71.02
Lane Group LOS	E	D	D	E	D	B	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.32	9.84	8.76	5.71	16.10	5.20	7.38	4.74	5.33	8.69	4.58	14.32
50th-Percentile Queue Length [ft/ln]	58.06	245.91	219.02	142.87	402.59	129.97	184.60	118.40	133.15	217.20	114.61	357.94
95th-Percentile Queue Length [veh/ln]	4.18	14.98	13.61	9.64	22.68	8.94	11.84	8.31	9.11	13.52	8.10	20.52
95th-Percentile Queue Length [ft/ln]	104.50	374.50	340.37	240.88	567.12	223.46	296.01	207.63	227.77	338.05	202.39	513.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.21	43.34	46.31	61.03	45.14	17.58	59.59	43.22	45.09	57.03	39.91	71.02
Movement LOS	E	D	D	E	D	B	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	46.01			43.80			52.71			59.14		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	48.64											
Intersection LOS	D											
Intersection V/C	0.767											

Emissions

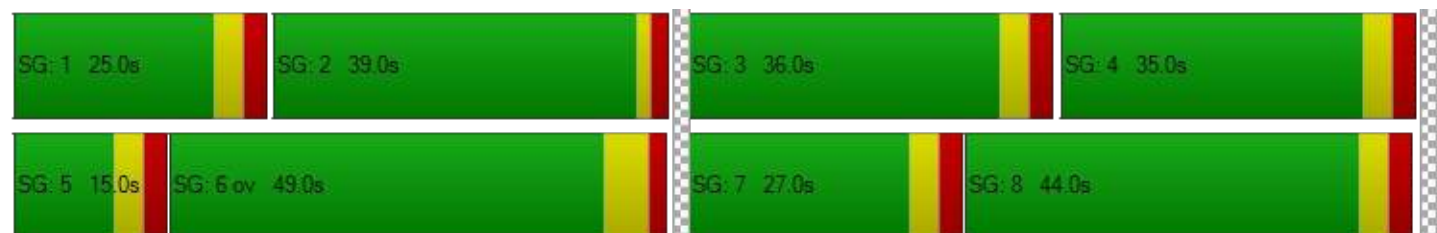
Vehicle Miles Traveled [mph]	12.78	94.77	27.08	43.54	197.54	38.73	32.49	12.62	13.68	23.36	7.71	16.61
Stops [stops/h]	123.85	786.91	233.62	304.78	1288.29	138.64	393.80	126.30	142.03	463.37	122.25	381.80
Fuel consumption [US gal/h]	3.45	19.89	5.94	8.71	33.69	3.82	9.41	2.90	3.25	10.32	2.59	8.76
CO [g/h]	241.31	1390.32	415.28	609.08	2355.23	266.68	658.06	202.68	227.17	721.17	180.74	612.66
NOx [g/h]	46.95	270.51	80.80	118.50	458.24	51.89	128.03	39.43	44.20	140.31	35.16	119.20
VOC [g/h]	55.93	322.22	96.24	141.16	545.85	61.80	152.51	46.97	52.65	167.14	41.89	141.99

Other Modes

g_Walk,mi, Effective Walk Time [s]	30.0			39.0			43.0			36.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	40.83			34.13			31.35			36.30		
I_p,int, Pedestrian LOS Score for Intersectio	3.379			3.478			2.710			2.801		
Crosswalk LOS	C			C			B			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	533			637			444			578		
d_b, Bicycle Delay [s]	36.30			31.35			40.83			34.13		
I_b,int, Bicycle LOS Score for Intersection	2.336			2.744			2.843			3.284		
Bicycle LOS	B			B			C			C		

Sequence

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



Intersection Level Of Service Report
Intersection 6: 8664 South / Quebec Street

Control Type:	Signalized	Delay (sec / veh):	35.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.530

Intersection Setup

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Quebec Street			Quebec Street			8664 South			8664 South		
Base Volume Input [veh/h]	96	1286	24	37	1951	79	90	2	100	34	7	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0370	1.0370	1.0370	1.0370	1.0370	1.0370	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	6	0	0	0	0	6	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	1345	25	38	2029	82	90	2	100	40	7	18
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	347	6	10	523	21	23	1	26	10	2	5
Total Analysis Volume [veh/h]	103	1387	26	39	2092	85	93	2	103	41	7	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	15.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Maximum Green [s]	16	50	0	10	50	0	0	30	0	0	30	0
Amber [s]	3.0	4.5	0.0	3.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	15.0	0.0	0.0	15.0	0.0	0.0	30.0	0.0	0.0	28.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	30.0	80.0	0.0	15.0	65.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	25	0	5	25	0	0	5	0	0	5	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Calculated Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	26.0	76.0	76.0	11.0	61.0	61.0	36.0	36.0	36.0	36.0	36.0
g / C, Green / Cycle	0.19	0.56	0.56	0.08	0.45	0.45	0.27	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.26	0.26	0.02	0.40	0.41	0.07	0.07	0.03	0.00	0.01
s, saturation flow rate [veh/h]	1781	3560	1852	1781	3560	1833	1384	1594	1289	1870	1589
c, Capacity [veh/h]	343	2004	1043	145	1609	828	398	425	311	499	424
d1, Uniform Delay [s]	46.70	17.45	17.45	58.22	33.97	34.09	40.80	38.86	44.60	36.44	36.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.24	0.77	1.48	4.50	7.92	14.38	1.37	1.38	0.88	0.05	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.46	0.46	0.27	0.89	0.90	0.23	0.25	0.13	0.01	0.04
d, Delay for Lane Group [s/veh]	48.94	18.22	18.93	62.72	41.89	48.47	42.17	40.24	45.48	36.49	36.94
Lane Group LOS	D	B	B	E	D	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.16	8.42	8.97	1.42	22.45	24.80	2.69	2.96	1.23	0.18	0.50
50th-Percentile Queue Length [ft/ln]	78.96	210.58	224.26	35.54	561.34	619.89	67.35	73.89	30.83	4.54	12.53
95th-Percentile Queue Length [veh/ln]	5.68	13.18	13.88	2.56	30.22	32.96	4.85	5.32	2.22	0.33	0.90
95th-Percentile Queue Length [ft/ln]	142.12	329.57	347.05	63.97	755.62	824.05	121.24	133.01	55.50	8.17	22.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.94	18.46	18.93	62.72	43.96	48.47	42.17	40.24	40.24	45.48	36.49	36.94
Movement LOS	D	B	B	E	D	D	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	20.53			44.46			41.15			42.12		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	35.18											
Intersection LOS	D											
Intersection V/C	0.530											

Emissions

Vehicle Miles Traveled [mph]	17.04	153.74	79.99	2.07	76.21	39.44	3.43	3.87	2.23	0.38	1.03
Stops [stops/h]	84.22	449.23	239.21	37.91	1197.53	661.21	71.84	78.82	32.89	4.84	13.36
Fuel consumption [US gal/h]	2.46	13.37	7.08	0.94	26.72	15.23	1.23	1.34	0.61	0.09	0.24
CO [g/h]	172.19	934.31	494.75	66.01	1867.86	1064.64	85.83	93.41	42.36	6.13	16.82
NOx [g/h]	33.50	181.78	96.26	12.84	363.42	207.14	16.70	18.17	8.24	1.19	3.27
VOC [g/h]	39.91	216.53	114.66	15.30	432.89	246.74	19.89	21.65	9.82	1.42	3.90

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	58.80			58.80			58.80			58.80		
I_p,int, Pedestrian LOS Score for Intersectio	3.370			3.437			2.067			2.179		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1096			881			519			519		
d_b, Bicycle Delay [s]	13.78			21.11			37.04			37.04		
I_b,int, Bicycle LOS Score for Intersection	2.393			2.778			1.886			1.670		
Bicycle LOS	B			C			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 11: South Access / Quebec St

Control Type:	Two-way stop	Delay (sec / veh):	18.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.122

Intersection Setup

Name	Quebec Street		Quebec Street		South Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Quebec Street		Quebec Street		South Access	
Base Volume Input [veh/h]	1290	100	0	2067	0	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0370	1.0370	1.0000	1.0370	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	8	0	6	0	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1341	112	0	2149	0	36
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	346	29	0	554	0	9
Total Analysis Volume [veh/h]	1382	115	0	2215	0	37
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.00	0.12
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	18.46
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.41
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	10.26
d_A, Approach Delay [s/veh]	0.00		0.00		18.46	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 13: East Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	114.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

Intersection Setup

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	East Access			East Access			Park Meadows Drive			Park Meadows Drive		
Base Volume Input [veh/h]	6	0	12	2	1	101	113	662	5	23	847	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.1053	1.1053	1.1053	1.1053	1.1053	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	12	0	0	0	0	0	3	11	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	0	24	2	1	101	125	732	9	36	936	44
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	6	1	0	26	32	189	2	9	241	11
Total Analysis Volume [veh/h]	21	0	25	2	1	104	129	755	9	37	965	45
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	Yes	Yes		
Storage Area [veh]	1	1	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.47	0.00	0.04	0.04	0.02	0.20	0.19	0.01	0.00	0.04	0.01	0.00
d_M, Delay for Movement [s/veh]	114.13	124.89	39.82	87.70	95.52	13.99	11.51	0.00	0.00	9.46	0.00	0.00
Movement LOS	F	F	E	F	F	B	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.02	2.02	2.02	0.81	0.81	0.81	0.69	0.00	0.00	0.14	0.00	0.00
95th-Percentile Queue Length [ft/ln]	50.59	50.59	50.59	20.15	20.15	20.15	17.32	0.00	0.00	3.43	0.00	0.00
d_A, Approach Delay [s/veh]	73.74			16.13			1.66			0.33		
Approach LOS	F			C			A			A		
d_I, Intersection Delay [s/veh]	3.32											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 15: West Access / Park Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	West Access		Park Meadows Drive		Park Meadows Drive	
Base Volume Input [veh/h]	0	25	757	27	0	953
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.1053	1.1053	1.0000	1.1053
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	15	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	25	840	45	0	1067
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	216	12	0	275
Total Analysis Volume [veh/h]	0	26	866	46	0	1100
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	13.08	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.36	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.08		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	B					

APPENDIX D

Crash Data Reports

CUID	System	Cox Rd	NumbeiRd	Section	City	Street	Crash Date	Crash Time	Agency Id	City	County	Latitude	Longitude	Location 1	Link	Location 2	Location	Road Descr	First HE	Second HE	Third HE	Fourth HE	MHE	Crash Type	Approach	C Wild Anima	Number Killed	Number Injured
424144	County Roa	4700	QUEBE	BUSIN	1/25/2024	09:53:00	DSO			DOUGLAS				S QUEBEC :NEAR		BUSINESS (On Roadwa	Non-Interse	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
424612	County Roa	4700	QUEBE	PARKM	2/6/2024	06:20:00	DSO			DOUGLAS				S QUEBEC :AT		PARK MEAT On Roadwa	At Intersect	Front to Sid					Front to Sid Sideswipe	Not Applica		0	0	
456053	City Street	0624	QUEBE	BUSIN	5/8/2024	09:45:00	DSO			HIGHLAND DOUGLAS	39.56056	-104.905		S QUEBEC :AT		BUSINESS (On Roadwa	Intersection	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
979571	County Roa	4700	QUEBE	CHEST	6/22/2024	08:58:00	DSO			DOUGLAS	39.55965	-104.905		S QUEBEC :AT		8600 BLK On Roadwa	Non-Interse	Front to Re					Front to Re:Rear-End	Not Applica		0	1	
1216168	County Roa	4700	QUEBE	PARKM	7/22/2024	08:37:00	DSO			DOUGLAS	39.56067	-104.904		S QUEBEC :AT		PARK MEAT On Roadwa	At Intersect	Side to Side					Side to Side Broadside	Not Applica		0	0	
1229058	County Roa	4700	QUEBE	PARKM	8/27/2024	18:04:00	DSO			DOUGLAS	39.56059	-104.904		S QUEBEC :00030FS		PARK MEAT On Roadwa	Intersection	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
1228273	County Roa	4700	QUEBE	BUSIN	9/10/2024	15:38:00	DSO			DOUGLAS	39.56059	-104.904		S QUEBEC :AT		BUSINESS (On Roadwa	Intersection	Side to Side					Side to Side Overtaking	Overtaking		0	0	
1241106	County Roa	4700	QUEBE	PARKM	10/23/2024	15:31:00	DSO			DOUGLAS	39.56059	-104.904		S QUEBEC :00010FS		PARK MEAT On Roadwa	Intersection	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
1242818	County Roa	4700	QUEBE	BUSIN	10/24/2024	17:14:00	DSO			DOUGLAS	39.56059	-104.904		S QUEBEC :00290FN		BUSINESS (On Roadwa	Driveway A	Front to Sid					Front to Sid Broadside	Not Applica		0	0	
1243648	County Roa	4700	QUEBE	BUSIN	10/29/2024	16:27:00	DSO			DOUGLAS	39.56059	-104.904		S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Front to Sid					Front to Sid Broadside	Not Applica		0	1	
1245574	County Roa	4700	QUEBE	PARKM	10/31/2024	16:49:00	DSO			DOUGLAS	39.56059	-104.904		S QUEBEC :00375FN		PARK MEAT On Roadwa	Non-Interse	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
1250028	County Roa	4700	QUEBE	BUSIN	11/23/2024	12:30:00	DSO			DOUGLAS	39.56058	-104.904		S QUEBEC :00535FN		BUSINESS (On Roadwa	Non-Interse	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
1258011	County Roa	4700	QUEBE	BUSIN	12/6/2024	12:05:00	DSO			DOUGLAS	39.55999	-104.905		S QUEBEC :00200FS		BUSINESS (On Roadwa	Intersection	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
1257359	County Roa	4700	QUEBE	PARKM	12/18/2024	13:50:00	DSO			DOUGLAS	39.56102	-104.904		S QUEBEC :00100FN		PARK MEAT On Roadwa	Intersection	Front to Re:Front to Re:					Front to Re:Rear-End	Not Applica		0	1	
291605	County Roa	4700	QUEBE	BUSIN	1/10/2023	05:48:00	DSO			DOUGLAS	39.56068	-104.904		S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
296943	County Roa	4700	QUEBE	PARKM	1/20/2023	04:46:00	DSO			DOUGLAS	39.56054	-104.905		S QUEBEC :AT		PARK MEAT On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
296957	County Roa	4700	QUEBE	PARKM	1/21/2023	12:02:00	DSO			DOUGLAS	39.56068	-104.904		S QUEBEC :SO		PARK MEAT On Roadwa	Non-Interse	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
301563	County Roa	4700	BUSIN	BUSIN	2/2/2023	06:43:00	DSO			DOUGLAS	39.56068	-104.904		S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Front to Fro					Front to Fro Approach	T Approach T		0	0	
324266	County Roa	4700	QUEBE	BUSIN	2/24/2023	10:40:00	DSO			DOUGLAS	39.56062	-104.904		S QUEBEC :SO		BUSINESS (On Roadwa	Intersection	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
325731	County Roa	4700	QUEBE	BUSIN	2/25/2023	19:11:00	CSP			DOUGLAS	39.56138	-104.904		S QUEBEC :00800FN		E BUSINESS Ran off left	Non-Interse	Barricade					Barricade	Barricade	Not Applica		0	0
336819	County Roa	4700	QUEBE	BUSIN	4/7/2023	05:20:00	DSO			DOUGLAS	39.56061	-104.904		S QUEBEC :STAT		BUSINESS (On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
337638	County Roa	4700	QUEBE	PARKM	4/8/2023	11:00:00	CSP			DOUGLAS	39.56076	-104.904		S QUEBEC :AT		PARK MEAT On Roadwa	Intersection	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
337863	County Roa	4700	QUEBE	BUSIN	4/13/2023	04:47:00	DSO			DOUGLAS	39.56058	-104.904		S QUEBEC :STAT		BUSINESS (On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	1	
342757	County Roa	4700	QUEBE	PARKM	5/7/2023	01:42:00	DSO			DOUGLAS	39.56054	-104.905		S QUEBEC :STJSO		PARK MEAT On Roadwa	Intersection	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
348300	County Roa	4700	QUEBE	PARKM	5/30/2023	07:11:00	DSO			DOUGLAS	39.56068	-104.904		S QUEBEC :STAT		PARK MEAT On Roadwa	At Intersect	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
382016	County Roa	4700	QUEBE	QUEBE	9/1/2023	10:02:00	DSO			DOUGLAS				S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Front to Fro					Front to Fro Approach	T Approach T		0	2	
388638	County Roa	4700	QUEBE	PARKM	9/20/2023	10:08:00	DSO			DOUGLAS	39.56064	-104.904		S QUEBEC :AT		PARK MEAT On Roadwa	At Intersect	Side to Side					Side to Side Broadside	Not Applica		0	0	
393815	County Roa	4700	QUEBE	BUSIN	10/7/2023	03:07:00	DSO			DOUGLAS				S QUEBEC :S/O		BUSINESS (On Roadwa	Intersection	Front to Re					Front to Re:Rear-End	Not Applica		0	1	
397217	County Roa	4700	QUEBE	BUSIN	10/15/2023	08:08:00	DSO			DOUGLAS				S QUEBEC :STAT		BUSINESS (On Roadwa	At Intersect	Front to Sid					Front to Sid Approach	T Approach T		0	0	
414791	County Roa	4700	QUEBE	BUSIN	12/17/2023	12:14:00	DSO			DOUGLAS				S QUEBEC :AT		BUSINESS (On Roadwa	Intersection	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
417642	County Roa	4700	QUEBE	PARKM	12/28/2023	12:00:00	DSO			DOUGLAS				S QUEBEC :AT		PARK MEAT On Roadwa	Intersection	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
191628	County Roa	4700	PARKM	PARKM	1/13/2022	09:54:00	DSO			DOUGLAS				S QUEBEC :STAT		PARK MEAT On Roadwa	At Intersect	Front to Sid					Front to Sid Broadside	Not Applica		0	0	
192968	County Roa	4700	QUEBE	PARKM	1/15/2022	15:15:00	CSP			DOUGLAS				S QUEBEC :ST00100FN		E PARK ME/On Roadwa	Non-Interse	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
194620	County Roa	4700	QUEBE	BUSIN	1/24/2022	12:01:00	DSO			DOUGLAS				S QUEBEC :STS/O		BUSINESS (On Roadwa	Driveway A	Front to Sid					Front to Sid Broadside	Not Applica		0	0	
210734	County Roa	4700	QUEBE	BUSIN	3/8/2022	06:46:00	DSO			DOUGLAS				S QUEBEC :STAT		8664 S QUE On Roadwa	Driveway A	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
213032	County Roa	4700	QUEBE	BUSIN	3/15/2022	02:09:00	DSO			DOUGLAS	39.56068	-104.904		S QUEBEC :STAT		BUSINESS (On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	1	
229975	County Roa	4700	QUEBE	PARKM	5/23/2022	01:38:00	DSO			DOUGLAS				S QUEBEC :STAT		PARK MEAT On Roadwa	At Intersect	Front to Re:Front to Re:					Front to Re:Rear-End	Not Applica		0	0	
233881	County Roa	4700	QUEBE	PARKM	6/15/2022	11:59:00	DSO			DOUGLAS	39.56068	-104.904		S QUEBEC :STAT		PARK MEAT On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	1	
238668	County Roa	4700	QUEBE	BUSIN	7/6/2022	07:16:00	DSO			DOUGLAS				S QUEBEC :STN/O		BUSINESS (On Roadwa	Non-Interse	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
244771	County Roa	4700	QUEBE	PARKM	7/16/2022	09:01:00	DSO			DOUGLAS				S QUEBEC :N/O		PARK MEAT On Roadwa	Non-Interse	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
252890	County Roa	4700	QUEBE	BUSIN	8/8/2022	03:25:00	DSO			DOUGLAS				S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Rear to Sid					Rear to Sid Broadside	Not Applica		0	0	
251762	City Street	0817	QUEBE	PARKM	8/14/2022	12:49:00	DSO			LONE TREE DOUGLAS				S QUEBEC :STS/O		PARK MEAT On Roadwa	Driveway A	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
262345	County Roa	4700	QUEBE	PARKM	9/23/2022	02:09:00	DSO			DOUGLAS				S QUEBEC :S/O		PARK MEAT On Roadwa	Intersection	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
264713	County Roa	4700	QUEBE	BUSIN	10/2/2022	05:26:00	DSO			DOUGLAS				S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Front to Sid					Front to Sid Broadside	Not Applica		0	0	
274075	County Roa	4700	QUEBE	BUSIN	11/12/2022	04:25:00	DSO			DOUGLAS				S QUEBEC :S/O		BUSINESS (On Roadwa	Intersection	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
279890	County Roa	4700	QUEBE	PARKM	12/6/2022	07:19:00	DSO			DOUGLAS				S QUEBEC :AT		PARK MEAT On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
285769	County Roa	4700	QUEBE	BUSIN	12/18/2022	03:58:00	DSO			DOUGLAS	39.56048	-104.904		S QUEBEC :STAT		BUSINESS (On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
285802	County Roa	4700	QUEBE	BUSIN	12/18/2022	03:58:00	DSO			DOUGLAS	39.56049	-104.904		S QUEBEC :STAT		BUSINESS (On Roadwa	At Intersect	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
45867	County Roa	4700	QUEBE	QUEBE	1/12/2021	17:27:00	DSO			DOUGLAS	39.55894	-104.905		S QUEBEC :STAT		8664 S QUE On Roadwa	Driveway A	Front to Sid					Front to Sid Approach	T Approach T		0	2	
103635	County Roa	4700	QUEBE	BUSIN	3/21/2021	15:45:00	DSO			DOUGLAS				S QUEBEC :ST00025FS		BUSINESS (On Roadwa	Non-Interse	Other Non-Curb					Curb Sideswipe	Not Applica		0	0	
132478	County Roa	4700	QUEBE	BUSIN	7/4/2021	01:50:00	DSO			DOUGLAS				S QUEBEC :99999FN		BUSINESS (On Roadwa	Non-Interse	Side to Side					Side to Side Sideswipe	Not Applica		0	0	
141912	County Roa	4700	QUEBE	BUSIN	7/30/2021	07:54:00	DSO			DOUGLAS				S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Front to Sid					Front to Sid Sideswipe	Not Applica		0	1	
159527	County Roa	4700	QUEBE	BUSIN	9/29/2021	11:55:00	DSO			DOUGLAS				S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
175801	County Roa	4700	BUSIN	QUEBE	10/7/2021	07:41:00	DSO			DOUGLAS	39.56059	-104.904		S BUSINESS :0.25MW		S QUEBEC :On Roadwa	Non-Interse	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
165289	County Roa	4700	QUEBE	BUSIN	10/12/2021	08:19:00	DSO			DOUGLAS				S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
165435	County Roa	4700	QUEBE	PARKM	10/20/2021	05:08:00	DSO			DOUGLAS				S QUEBEC :AT		PARK MEAT On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	0	
167216	County Roa	4700	QUEBE	BUSIN	10/22/2021	07:07:00	DSO			DOUGLAS				S QUEBEC :AT		BUSINESS (On Roadwa	At Intersect	Front to Re					Front to Re:Rear-End	Not Applica		0	0	

CUID	Injury 00	Injury 01	Injury 02	Injury 03	Injury 04	Total Vehicle	Secondary	Constructic	School Zon	Road Contc	Road Contc	Road Contc	Road Cond	Lighting Co	Weather Cr	Weather Cc	Lane Positi	TU-1 Direct	TU-2 Direct	TU-1 Mover	TU-2 Mover	TU-1 Type	TU-2 Type	TU-1 Spec	TU-2 Spec	TU-1 Auto	TU-2 Auto	TU-1 Hit An	
421444	5	0	0	0	0	0	2	FALSE	FALSE	FALSE	Curve Right	Level	Wet	Dark – Light Clear			S03	South	South	Going Strai	Stowing	SUV	Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
424612	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Dark – Light Clear			S03	South	South	Making Left Making Left Passenger	(SUV		No Special	No Special	No Automa	No Automa	FALSE		
456053	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Dark – Light Clear			S04	South	South	Changing L Going Strai	SUV	Passenger	(No Special	No Special	No Automa	No Automa	FALSE		
979571	1	1	0	0	0	0	2	FALSE	FALSE	FALSE	Curve Left	Level	Dry	Daylight	Clear		N02	Northeast	Northeast	Going Strai	Stopped in	Passenger	(SUV	No Special	No Special	No Automa	No Automa	FALSE	
1216168	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N02	West	North	Changing L Going Strai	Passenger	(Passenger	(No Special	No Special	No Automa	No Automa	FALSE		
1229058	1	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N04	North	North	Changing L Stopped in Unknown	SUV		No Special	No Special	Unknown	Unknown	TRUE		
1228273	3	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N02	East	East	Changing L Making Left SUV	SUV		No Special	No Special	No Automa	No Automa	TRUE		
1241106	1	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N02	North	North	Going Strai	Stopped in	SUV	SUV		No Special	No Special	No Automa	No Automa	TRUE
1242818	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S03	West	South	Making Left Going Strai	SUV	SUV		No Special	No Special	No Automa	No Automa	FALSE	
1243648	3	0	1	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N03	North	East	Going Strai	Going Strai	SUV	SUV		No Special	No Special	No Automa	No Automa	FALSE
1245574	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N01	North	North	Going Strai	Stowing	SUV	SUV		No Special	No Special	No Automa	No Automa	FALSE
1250028	3	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Downhill	Dry	Daylight	Clear		N01	North	North	Going Strai	Stopped in	SUV	Pickup Truc	No Special	No Special	No Automa	No Automa	FALSE	
1258011	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S03	South	South	Changing L Going Strai	SUV	SUV		No Special	No Special	No Automa	No Automa	TRUE	
1257359	4	1	0	0	0	0	3	FALSE	FALSE	FALSE	Straight	Downhill	Dry	Daylight	Clear		N01	North	North	Going Strai	Stowing	Passenger	(SUV		No Special	No Special	No Automa	No Automa	TRUE
291605	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Dark – Light Clear			S02	South	South	Changing L Stowing	Passenger	(SUV		No Special	No Special	No Automa	No Automa	TRUE	
296943	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Wet	Dawn or Du Freezing Ra Wind			N01	North	North	Going Strai	Stopped in	SUV	Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
296957	3	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Uphill	Wet	Daylight	Snow		N03	North	North	Changing L Going Strai	SUV	SUV		No Special	No Special	No Automa	No Automa	TRUE	
301563	3	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Dark – Light Clear			E01	East	West	Going Strai	Making Left Passenger	(SUV		No Special	No Special	No Automa	No Automa	FALSE	
324266	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Curve Left	Uphill	Dry	Daylight	Clear		N03	North	North	Stowing	Stopped in	Passenger	(SUV		No Special	No Special	No Automa	No Automa	FALSE
325731	1	0	0	0	0	0	1	FALSE	FALSE	FALSE	Straight	Downhill	Dry	Dark – Unliq Cloudy			N01	North	North	Other (Des		Pickup Truc		No Special		No Automa		FALSE	
336819	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S04	South	South	Going Strai	Stopped in	SUV	Motorcycle	No Special	No Special	No Automa	No Automa	FALSE	
337638	5	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		W04	West	West	Going Strai	Stopped in	SUV	Pickup Truc	No Special	No Special	No Automa	No Automa	FALSE	
337863	4	1	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Uphill	Dry	Daylight	Clear		S04	South	South	Going Strai	Stopped in	SUV	SUV		No Special	No Special	No Automa	No Automa	FALSE
342757	4	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S01	South	South	Going Strai	Going Strai	SUV	SUV		No Special	No Special	No Automa	No Automa	FALSE
348300	3	0	0	0	0	0	2	TRUE	FALSE	FALSE	Straight	Uphill	Dry	Daylight	Clear		N02	North	North	Changing L Going Strai	SUV	Pickup Truc	No Special	No Special	No Automa	No Automa	FALSE		
382016	0	2	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Dark – Light Clear			S02	South	North	Going Strai	Making Left Passenger	(SUV		No Special	No Special	Driver Assis	Driver Assis	FALSE	
388638	1	0	0	0	0	0	2	TRUE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N02	West	North	Making Rigi Going Strai	Medium/He	Unknown		No Special		No Automa		FALSE	
393815	1	1	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Uphill	Dry	Daylight	Clear		N01	North	North	Stowing	Stopped in	SUV	Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
397217	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Dark – Light Clear			S01	South	North	Making Left Going Strai	Passenger	(SUV		No Special	No Special	No Automa	No Automa	FALSE	
414791	3	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S01	South	South	Stowing	Stopped in	Pickup Truc	SUV		No Special	No Special	No Automa	No Automa	FALSE
417642	4	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N03	North	North	Going Strai	Stopped in	Passenger	(Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
191628	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Dark – Light Clear			E02	North	East	Going Strai	Going Strai	SUV	SUV		No Special	No Special	No Automa	No Automa	FALSE
192968	4	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N02	North	North	Weaving	Going Strai	Passenger	(Pickup Truc	No Special	No Special	No Automa	No Automa	FALSE	
194620	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Downhill	Dry	Daylight	Clear		S03	West	South	Making Left Going Strai	SUV	Pickup Truc	No Special	No Special	No Automa	No Automa	FALSE		
210734	1	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Downhill	Dry	Dark – Light Clear			S04	South	South	Going Strai	Stowing	SUV	SUV		No Special	No Special	No Automa	No Automa	TRUE
213032	1	0	1	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Dark – Light Clear			S02	South	South	Going Strai	Stopped in	Passenger	(Medium/He	No Special	Towing – In	No Automa	No Automa	FALSE	
229975	3	0	0	0	0	0	3	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N01	North	North	Going Strai	Stopped in	SUV	SUV		No Special	No Special	No Automa	No Automa	FALSE
233881	2	1	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Uphill	Dry	Daylight	Clear		N03	North	North	Going Strai	Stopped in	Passenger	(SUV		No Special	No Special	No Automa	No Automa	FALSE
238668	2	0	0	0	0	0	2	FALSE	TRUE	FALSE	Straight	Hill Crest	Wet	Daylight	Rain		S04	South	South	Other (Des	Going Strai	SUV	SUV		No Special	No Special	No Automa	No Automa	FALSE
244771	3	0	0	0	0	0	2	FALSE	FALSE	FALSE	Curve Right	Downhill	Dry	Dark – Light Clear			S03	South	South	Changing L Negotiating	Passenger	(SUV		No Special	No Special	No Automa	No Automa	TRUE	
252890	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S03	South	West	Backing	Going Strai	Medium/He	SUV	Highway/M	No Special	No Automa	No Automa	FALSE	
251762	5	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N03	North	North	Other (Des	Stopped in	Passenger	(SUV		No Special	No Special	No Automa	No Automa	FALSE
262345	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Uphill	Dry	Daylight	Clear		N01	North	North	Going Strai	Stopped in	Pickup Truc	Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
264713	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S02	East	South	Making Rigi Going Strai	SUV	Passenger	(No Special	No Special	No Automa	No Automa	FALSE		
274075	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Curve Left	Uphill	Dry	Daylight	Clear		N02	North	North	Going Strai	Stopped in	Passenger	(SUV		No Special	No Special	No Automa	No Automa	FALSE
279890	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Uphill	Dry	Daylight	Clear		N02	North	North	Going Strai	Stopped in	SUV	Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
285769	1	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		N03	North	North	Going Strai	Stopped in	Passenger	(SUV		No Special	No Special	No Automa	No Automa	TRUE
285802	1	0	0	0	0	0	2	FALSE	FALSE	FALSE	Curve Left	Uphill	Dry	Daylight	Clear		N03	North	North	Going Strai	Stopped in	Passenger	(Passenger	(No Special	No Special	No Automa	No Automa	TRUE	
45867	2	0	1	1	0	0	2	FALSE	FALSE	FALSE			Dry	Dark – Light Clear			North	South	Going Strai	Making Left SUV		Passenger	(					FALSE	
103635	6	0	0	0	0	0	1	FALSE	FALSE	FALSE			Wet	Daylight	Steeet or Hai		South	South	Changing L Swerve/Av	SUV	SUV						FALSE		
132478	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S03	South	South	Changing L Going Strai	SUV	SUV		No Special	No Special	Driver Assis	No Automa	FALSE	
141912	3	1	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S03	East	West	Making Rigi Making Left Passenger	(Passenger	(No Special	No Special	No Automa	No Automa	FALSE			
159527	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Curve Right	Uphill	Dry	Daylight	Clear		S04	Southeast	Southeast	Entering Tr	Entering Tr	Passenger	(Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
175801	6	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		W01	West	West	Going Strai	Going Strai	SUV	SUV		No Special	No Special	No Automa	No Automa	FALSE
165289	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S01	South	South	Going Strai	Stopped in	SUV	Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
165435	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S02	South	South	Stowing	Stopped in	SUV	Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
167216	2	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Level	Dry	Dark – Unliq	Clear		S03	South	South	Going Strai	Stowing	SUV	Passenger	(No Special	No Special	No Automa	No Automa	FALSE	
304042	1	0	0	0	0	0	1	FALSE	FALSE	FALSE	Straight	Level	Dry	Daylight	Clear		S02	South	South	Going Strai		Passenger	(	No Special		Partial Auto		FALSE	
167473	4	0	0	0	0	0	2	FALSE	FALSE	FALSE	Straight	Uphill	Dry	Daylight	Clear		N04	North	North	Other (Des	Stopped in	Passenger	(Pickup Truc	No Special	No Special	No Automa	No Automa	FALSE	
	2	0	0	0	0	0																							
	2	0	0	0	0	0																							
	3	0	0	0	0	0																							
	2	0	0	0	0	0																							
	1	2	0	0	0	0																							
	2	0	0	0	0	0																							
	2	0	0	0	0	0																							

CUID	TU-2 Hit At	TU-1 Speed	TU-2 Speed	TU-1 Estim.	TU-2 Estim.	TU-1 Speed	TU-2 Speed	TU-1 Driver	TU-2 Driver	TU-1 Huma	TU-2 Huma	TU-1 Age	TU-2 Age	TU-1 Sex	TU-2 Sex	TU-1 Safety	TU-2 Safety	TU-1 Safety	TU-2 Safety	TU-1 Safety	TU-2 Safety	TU-1 Safety	TU-2 Safety	TU-1 Safety	TU-2 Safety	TU-1 Alcohol	TU-2 Alcohol	TU-1 Mariju	TU-2 Mariju	TU-1 Other	TU-2 Other
424144	FALSE	40	40	35	35	35	35	Followed Tc	No Contribi	Not Observ	No Apparer	20	40	M					No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen						
424612	FALSE	45	45	10	25	10	25	Turned fron	No Contribi	Not Observ	No Apparer	49	22	F					No - SFST	No - Obsen	Marijuana	Marijuana	N	No - SFST	No - Obsen						
456053	FALSE	40	40	45	40	46	0	Lane Violati	No Contribi	Looked/Did No	Apparer	54	26	F					No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen						
979571	FALSE	40	40	5	0	1	0	Followed Tc	No Contribi	Not Observ	No Apparer	38	52	M	F				No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen						
1216168	FALSE	45	45	35	35	20	40	Lane Violati	No Contribi	Looked/Did No	Apparer	77	71	M	F				No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen						
1229058	TRUE	45	45	5	0	0	0	Improper P	No Contribi	Not Observ	No Apparent Contributi	62		F		Shoulder at	Property Us	N/A (Cars/T	No - Obsen		Marijuana	N	No - Obsen	No - Obsen							
1228273	FALSE	35	35	35	5	0	0	Lane Violati	No Contribi	Age/Driver / No	Apparer	77	40	F	F	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T	No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen			
1241106	FALSE	0	45	0	0	0	0	Lane Violati	No Contribi	Not Observ	No Apparent Contributi	51		F		Shoulder at	Property Us	N/A (Cars/T	No - Other I		Marijuana	N	No - Other I	No - Other I							
1242818	FALSE	45	45	5	5	5	5	Improper Ti	No Contribi	Other Factc	No Apparer	33	54	M	F	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T	No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen			
1243648	FALSE	45	35	45	30	40	30	Failed to St	No Contribi	Sun Glare / No	Apparer	39	41	M	F	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T	No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen			
1245574	FALSE	40	40	10	5	10	5	Followed Tc	No Contribi	Looked/Did No	Apparer	62	65	F	F	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T	No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen			
1250028	FALSE	40	40	25	0	20	0	Careless Di	No Contribi		No Apparer	19	66	M	F	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T	No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen			
1258011	FALSE	40	40	10	10	0	10	Lane Violati	No Contribi		Driver Inexperience	17		F		Shoulder at	Property Us	N/A (Cars/T	No - Other I		Marijuana	N	No - Other I	No - Other I							
1257389	FALSE	40	40	40	5	0	0	Followed Tc	No Contribi	Looked/Did No	Apparer	21	24	F	M	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T	No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen			
291605	FALSE	45	40	30	20	20	25	Followed Tc	No Contribi	Distracted - No	Apparer	30	43	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
296943	FALSE	40	40	5	0	5	0	Followed Tc	No Contribi	Not Observ	No Apparer	20	58	M	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
296957	FALSE	40	40	40	35	0	35	Lane Violati	No Contribi	Looked/Did No	Apparer	52	51	M	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
301563	FALSE	35	35	10	20	10	20	Failed to St	No Contribi	Driver Inexg	No Apparer	21	66	M	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
324266	FALSE	40	40	10	0	0	0	Followed Tc	No Contribi	Driver Inexg	No Apparer	19	64	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
325731	FALSE	35	0	35	0	0	0	No Contribi		No Apparer		50		M		Shoulder ar	Property Us	N/A (Cars/T	No - Obsen		Marijuana	N	No - Obsen	No - Obsen							
336819	FALSE	35	35	5	0	5	0	Followed Tc	No Contribi	Looked/Did No	Apparer	27	40	F	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
337638	FALSE	35	35	5	0	5	0	Followed Tc	No Contribi	Distracted - No	Apparer	55	30	F	M	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T	No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen			
337863	FALSE	45	45	4	0	4	0	Followed Tc	No Contribi	Distracted/ No	Apparer	17	19	M	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Other I	No - Obsen	
342757	FALSE	45	45	40	40	40	40	Lane Violati	No Contribi	Distracted - No	Apparer	46	31	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
348300	FALSE	40	40	10	5	10	5	Lane Violati	No Contribi	Looked/Did No	Apparer	64	23	F	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
382016	FALSE	45	45	10	10	10	10	Failed to St	No Contribi	Not Observ	No Apparer	18	45	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
388638	TRUE	45	0	5	0	5	0	Improper P		Other Factc		80		M										No - Obsen	No - Obsen	Marijuana	N	No - Obsen			
393815	FALSE	45	45	6	0	0	0	Followed Tc	No Contribi	Distracted - No	Apparer	21	82	M	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
397217	FALSE	45	45	20	30	20	0	Failed to Yi	No Contribi	Not Observ	No Apparer	37	25	F	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
414791	FALSE	40	40	10	0	10	0	Followed Tc	No Contribi	Not Observ	No Apparer	59	17	M	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
417642	FALSE	40	40	5	0	0	0	Followed Tc	No Contribi	Looked/Did No	Apparer	68	48	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
191628	FALSE	40	30	30	10	0	15	Failed to St	No Contribi	No Apparer	No Apparer	28	55	F	M									No - Obsen	Yes - Obser	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
192968	FALSE	40	40	30	30	30	30	No Contribi	No Contribi	No Apparer	No Apparer	38	77	F	M	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T	No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen			
194620	FALSE	40	40	4	35	4	35	Turned fron	No Contribi	Looked/Did No	Apparer	93	48	F	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
210734	FALSE	40	40	25	10	0	10	Followed Tc	No Contribi	Not Observ	No Apparent Contributi	23		F										No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
213032	FALSE	45	45	50	0	50	0	Failed to St	No Contribi	Asleep or F	No Apparer	31	29	M	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
229975	FALSE	45	45	25	0	25	0	Careless Di	No Contribi		No Apparer	51	16	M	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
233881	FALSE	45	45	5	0	5	0	Followed Tc	No Contribi	Not Observ	No Apparer	22	17	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
239868	FALSE	40	40	15	15	15	15	Turned fron	No Contribi	Distracted - No	Apparer	66	24	F	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
244771	FALSE	45	45	45	45	0	0	Lane Violati	No Contribi	Not Observ	No Apparent Contributi	47		F										No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
252890	FALSE	40	40	10	10	10	10	Failed to St	No Contribi	No Apparer	No Apparer	34	74	M	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
251762	FALSE	40	40	1	0	1	0	Followed Tc	No Contribi	No Apparer	No Apparer	76	47	M	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
262345	FALSE	40	40	5	0	5	0	Followed Tc	No Contribi	Distracted - No	Apparer	47	39	M	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
264713	FALSE	45	45	25	35	20	35	Improper Ti	No Contribi	Looked/Did No	Apparer	52	85	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
274075	FALSE	40	40	25	0	25	0	Followed Tc	No Contribi	No Apparer	No Apparer	47	49	M	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
279890	FALSE	40	40	10	0	5	0	Followed Tc	No Contribi	Distracted - No	Apparer	18	26	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
285769	FALSE	40	40	50	0	0	0	Reckless Di	No Contribi	Evading Lav	No Apparent Contributi	19		M										No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
285802	FALSE	40	40	55	0	0	0	Reckless Di	No Contribi	Evading Lav	No Apparent Contributi	34		F										No - Obsen	No - Obsen	Marijuana	N	No - Obsen			
45867	FALSE	40	40	40	20	0	0	Failed to St	No Contribi	No Apparer	No Apparer	27	52	F	F	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T			Marijuana	Marijuana	N					
103635	FALSE	35	35	35	35	0	0	Signaling Vi	No Contribi	Distracted/ No	Apparer	34	35	F	M	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T			Marijuana	Marijuana	N					
132478	FALSE	40	40	30	40	30	40	Failed to Yi	No Contribi	No Apparer	No Apparer	50	21	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
141912	FALSE	45	45	10	25	10	20	Failed to Yi	Lane Violati	Looked/Did No	Apparer	25	64	F	M									No - Other I	No - Other I	Marijuana	Marijuana	N	No - Other I	No - Other I	
159527	FALSE	40	40	10	10	10	10	Followed Tc	No Contribi	No Apparer	No Apparer	38	69	M	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
175801	FALSE	35	35	15	0	15	0	Followed Tc	No Contribi	Driver Inexg	No Apparer	17	13	M	M	Shoulder at	Shoulder at	Property Us	Property Us	N/A (Cars/T	N/A (Cars/T	No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen			
165289	FALSE	40	40	2	0	2	0	Followed Tc	No Contribi	No Apparer	No Apparer	47	49	M	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
165435	FALSE	40	40	5	0	5	0	Failed to St	No Contribi	Distracted - No	Apparer	28	51	F	F									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
167216	FALSE	45	45	5	5	5	5	Other Contn	No Contribi	Other Factc	No Apparer	39	24	F	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen	No - Obsen	
304042	FALSE	45	0	45	0	10	0	No Contribi		No Apparer		43		F										No - Obsen	No - Obsen	Marijuana	N	No - Obsen			
167473	FALSE	40	40	8	0	8	0	Improper P	No Contribi	No Apparer	No Apparer	40	42	M	M									No - Obsen	No - Obsen	Marijuana	Marijuana	N	No - Obsen		