LORSON RANCH COMMERCIAL

MASTER TRAFFIC IMPACT STUDY

P-22-011

Prepared for:

El Paso County, CO

Prepared by:

Matrix

Excellence by Design

2435 Research Parkway, Suite 300
Colorado Springs, CO 80920
Contact: Scott Barnhart, PE, PTOE
719.575.0100

On Behalf of:

The Landhuis Company
212 N. Wahsatch Avenue Suite 301
Colorado Spring, CO 80903

Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

COLORADO LICENSED SCOTT BARNHART 37447 PROFESSIONAL ENGINEER

Scott D. Barnhart

October 10, 2022

Scott D. Barnhart, P.E. #37447 Date

Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

10/10/22

Jeff Mark, President Date

The Landhuis Company

212 N. Wahsatch Avenue, Suite 301

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Introduction

The Lorson Ranch Commercial project (Project) is a 13.45-acre development located in southern El Paso County. The project consists of 13.45 acres of unidentified retail with one parcel potentially becoming a convenience Store/Gas Station.

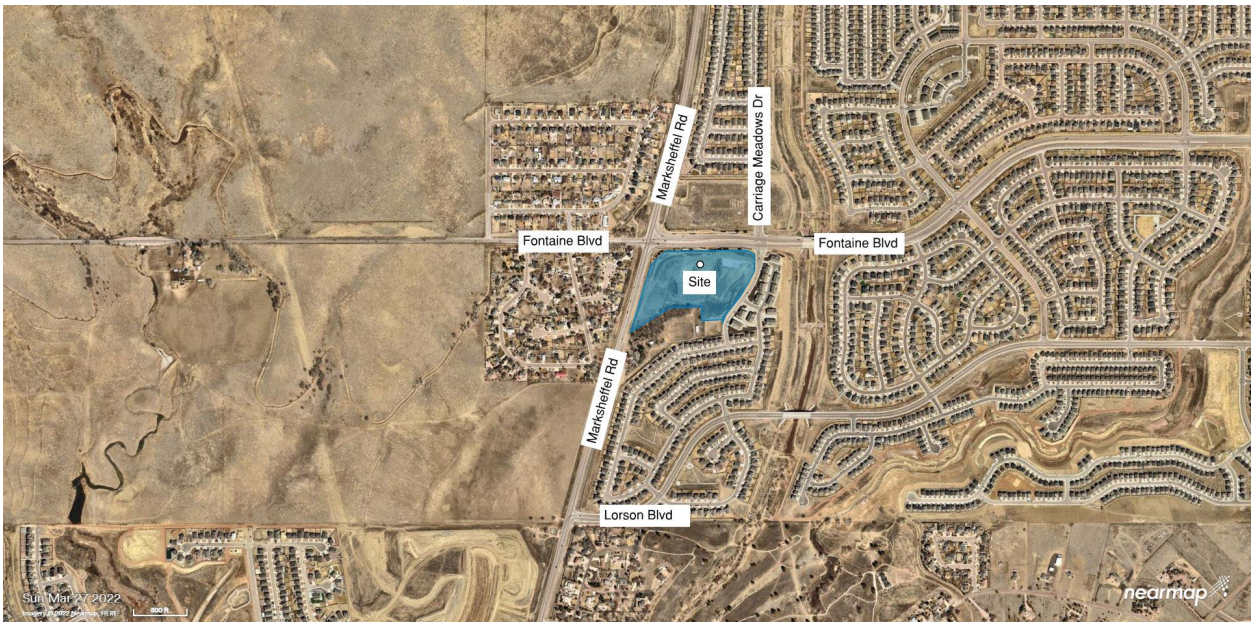
The project lies at the southeast corner of the Marksheffel Road and Fontaine Boulevard intersection.

The purpose of this study is to assess the effects this proposed development will have on the surrounding transportation system.

The report is organized as follows:

- ***Introduction –*** Describes the purpose and intent of this study.
- ***Area Conditions –*** Describes the study area land uses as well as the existing and future roadway network.
- ***Proposed Development –*** Describes the proposed development and the location.
- ***Projected Traffic –*** Identifies the expected number of daily and peak hour trips that will be generated by the Lorson Ranch Commercial development. The expected external trip distribution is also shown.
- ***Traffic Analysis –*** Will analyze the existing conditions in the study area as well as buildout year and horizon year (2040) conditions with and without the project.
- ***Findings and Conclusions –*** Identifies any deficiencies in the study area roadway network with or without the project and mitigation measures that will alleviate any identified deficiencies.
- ***Recommendations –*** Provides a summary of the study findings.

Figure 1. Vicinity Map



Proposed Development

The Project will consist of 12.83-acres of retail and Convenience Store/Gas Station with the remaining 0.62 acres in the southeast corner of the development reserved as a drainage pond.

Figure 2 illustrates the Project site plan. The development is at the southeast corner of Marksheffel Road and Fontaine Boulevard.

Figure 2. Lorson Ranch Commercial Site Plan

Area Conditions

This section describes the existing conditions and the planned level of improvements adjacent to the Lorson Ranch Commercial development.

Study Area Land Use

The Project will be constructed on vacant land and is bound on the west by Marksheffel Road, on the north by Fontaine Boulevard and on the east by Carriage Meadows Drive. Nearby trail corridors are planned along Jimmy Camp Creek. This area of El Paso County is growing rapidly and includes other developments such as Trails at Aspen Ridge, Bradley Heights, Banning Lewis Ranch, Corvallis and The Glen at Widefield.

Site Accessibility

The existing roadway system consists of the following transportation facilities:

Marksheffel Road is the primary north-south transportation facility and is built as a three-lane facility but is classified as a 4-lane expressway in the El Paso County 2040 Major Transportation Corridor Plan (MTCP). The daily traffic capacity is 48,000 Average Daily Traffic (ADT). Marksheffel Road provides a paved shoulder to accommodate cyclists. El Paso County's 2060 Corridor Preservation Plan calls for Marksheffel Road to be preserved as a 6-lane expressway.

Fontaine Boulevard is an east-west facility classified as a 4-lane principal arterial in the 2040 MTCP. The daily traffic capacity is 40,000 ADT. Fontaine Boulevard provides a paved shoulder to accommodate cyclists. This road is classified as a 4-lane principal arterial in the 2060 Corridor Preservation Plan.

Carriage Meadows Drive is a north-south local street. This facility provides one lane in each direction. Sidewalk, curb, and gutter are provided on both sides of the road. The posted speed limit is 25 mph and ADT threshold capacity is 3,000 vehicles. As a local road, it does not appear on the County's 2040 MTCP or 2060 Corridor Preservation Plan.

An unpaved tail path is provided along the Jimmy Camp Creek to accommodate alternative modes of travel. Fontaine Boulevard and Carriage Meadows Drive, and Lorson Boulevard all provide sidewalk along both sides of the road.

This traffic impact analysis is confined to the intersections of Marksheffel Road/Fontaine Boulevard, Marksheffel Road/Lorson Boulevard and Fontaine Boulevard/Carriage Meadows Drive. Traffic counts were collected on April 26, 2022 to analyze the existing conditions, however, this study builds on the traffic volumes presented in other adjacent developments for the buildout and horizon scenarios. The studies of surrounding developments are as follows:

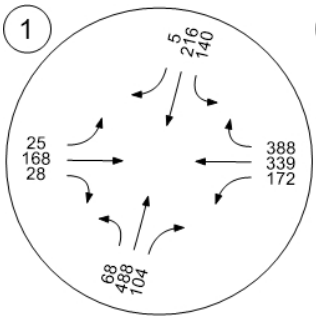
- Creekside at Lorson Ranch Filing No. 1 Traffic Impact and Access Analysis; October 25, 2018
- Creekside South at Lorson Ranch Transportation Memorandum; Revised May 5, 2020
- Lorson Ranch Sketch Plan Amendment 2 Traffic Impact and Access Analysis; December 17, 2018
- Creekside at Lorson Ranch Traffic Impact Study; May 10, 2022
- Ridges at Lorson Ranch Traffic Impact Analysis; October 8, 2021
- Hillside at Larson Ranch Traffic Impact Study; May 20, 2022
- Carriage Meadows South Traffic Impact Study; February 25,2020

Traffic volumes along Fontaine Boulevard were taken from the Hillside at Lorson Ranch Traffic Impact Analysis and volumes along Lorson Boulevard were taken from the Creekside at Lorson Ranch Traffic Impact Study. Traffic Volumes on Carriage Meadows Drive/Firesteel Drive were taken from the Carriage Meadows Townhomes Traffic Impact Study.

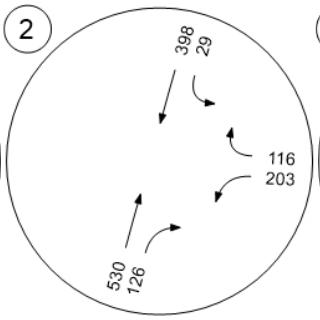
The AM and PM peak hour volumes at these intersections are shown in Figures 3 and 4 and the daily traffic volumes in the existing conditions are shown in Figure 5.

Figure 3. Existing Conditions Traffic Volumes (AM Peak Hour)

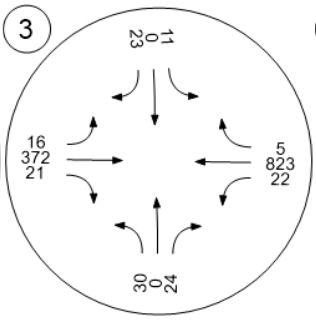
Marksheffel Road/Fontaine Bl



Marksheffel Rd/Lorson Bl



Fontaine Bl/Carriage Meadows Dr



Carriage Meadows Dr/Firesteel Dr

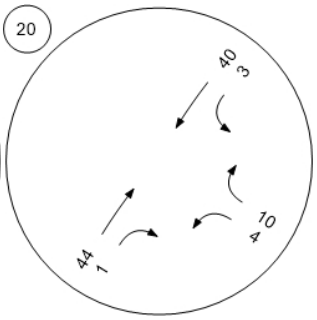
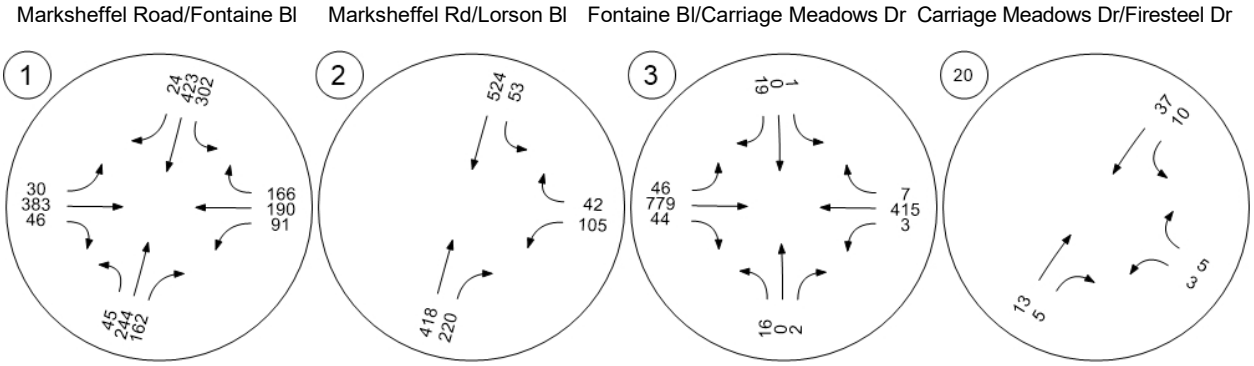


Figure 4. Existing Conditions Traffic Volumes (PM Peak Hour)



Intersection LOS analysis was performed for the study area intersections and the results are shown in Tables 1 and 2.

Figure 5. Existing Conditions Daily Traffic Volumes

The existing intersection configurations are shown in Figure 6

Figure 6. Existing Conditions Intersection Configurations

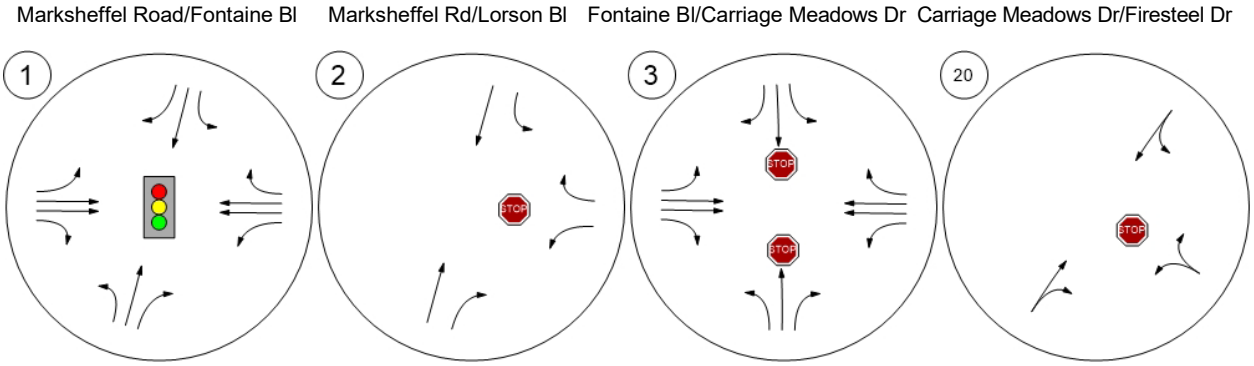


Table 1. Existing Conditions Intersection Operations (AM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	EB Thru	0.483	21.2	C
2	Marksheffel Rd/Lorson Bl	Two-way stop	HCM 7th Edition	WB Left	1.090	133.0	F
3	Fontaine BL/Carriage Meadows Dr	Two-way stop	HCM 7th Edition	SB Left	0.124	36.9	E
20	Carriage Meadows Dr/Firesteel Dr	Two-way stop	HCM 7th Edition	WB Left	0.004	9.0	A

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

Table 2. Existing Conditions Intersection Operations (PM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	EB Thru	0.416	19.6	B
2	Marksheffel Rd/Lorson Bl	Two-way stop	HCM 7th Edition	WB Left	0.617	46.0	E
3	Fontaine BL/Carriage Meadows Dr	Two-way stop	HCM 7th Edition	NB Left	0.196	59.7	F
20	Carriage Meadows Dr/Fire steel Dr	Two-way stop	HCM 7th Edition	WB Left	0.003	8.9	A

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

Tables 1 and 2 indicate intersections 2 and 3 operate below the acceptable LOS. Acceptable operations per the El Paso County Engineering Criteria Manual (ECM) is defined as any intersection that operates at LOS D or better. At Marksheffel Road/Lorson Boulevard, the westbound left-turn movement from Lorson Boulevard operates at LOS F during the AM Peak hour and at LOS E during the PM peak hour. Eight-hour volume, Four-hour volume and Peak hour warrants are met for installing a traffic signal at this intersection. It is understood that this signal will be constructed by other Lorson Ranch developments and that all responsibility for the signal construction has been assigned. Therefore, The Project has no responsibility to contribute towards the cost of this traffic signal. At Fontaine Boulevard/Carriage Meadows Drive, the northbound left-turn operates at LOS F during the PM peak hour, and the southbound left-turn operates at LOS E during the AM peak hour. However, the 95-percentile queue

length is less than one vehicle in both situations. The remaining movements operate at acceptable LOS. The intersection does not meet MUTCD warrants for installation of a traffic signal under existing conditions. The daily traffic volumes along Marksheffel Road, Fontaine Boulevard, Lorson Boulevard, and Carriage Meadows Drive are within the capacities for each road as defined by the El Paso County ECM.

There are no fixed route transit services in the area and there are also no transportation system management or traffic demand management programs in the area.

Crash History

The El Paso County Road Safety Plan website was used to obtain the number of fatal and severe crashes in the vicinity of the project. Crash data from the year 2015 to 2019 were collected and shown as a density map on the website. As shown in Figure 7 and, Figure 8 no fatal or serious injury crashes have occurred near the project

Figure 7. Serious Injury Crash Density Map

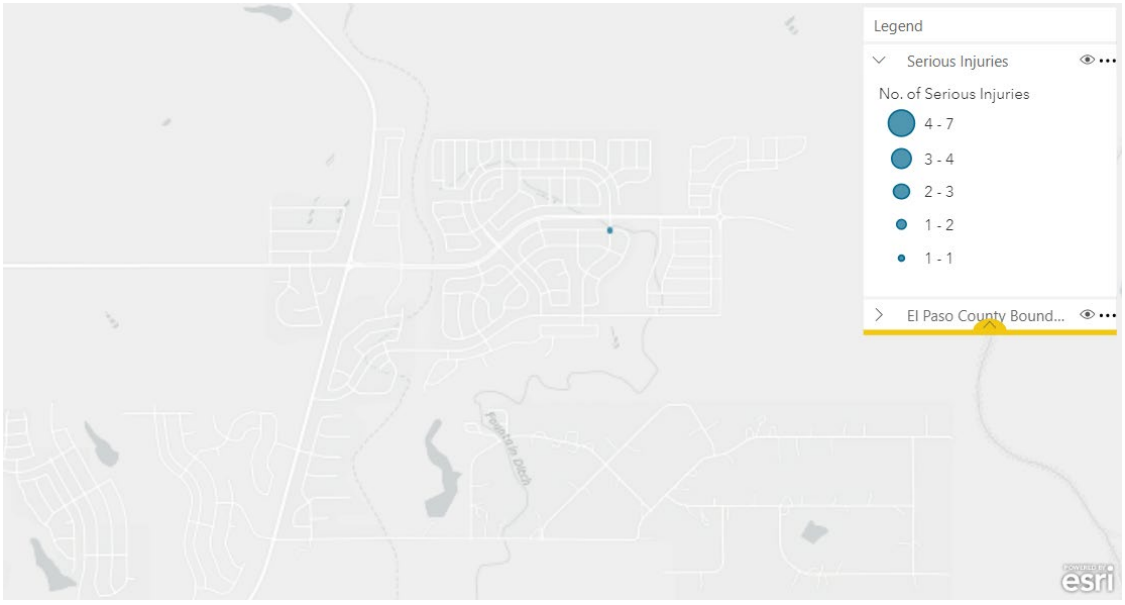
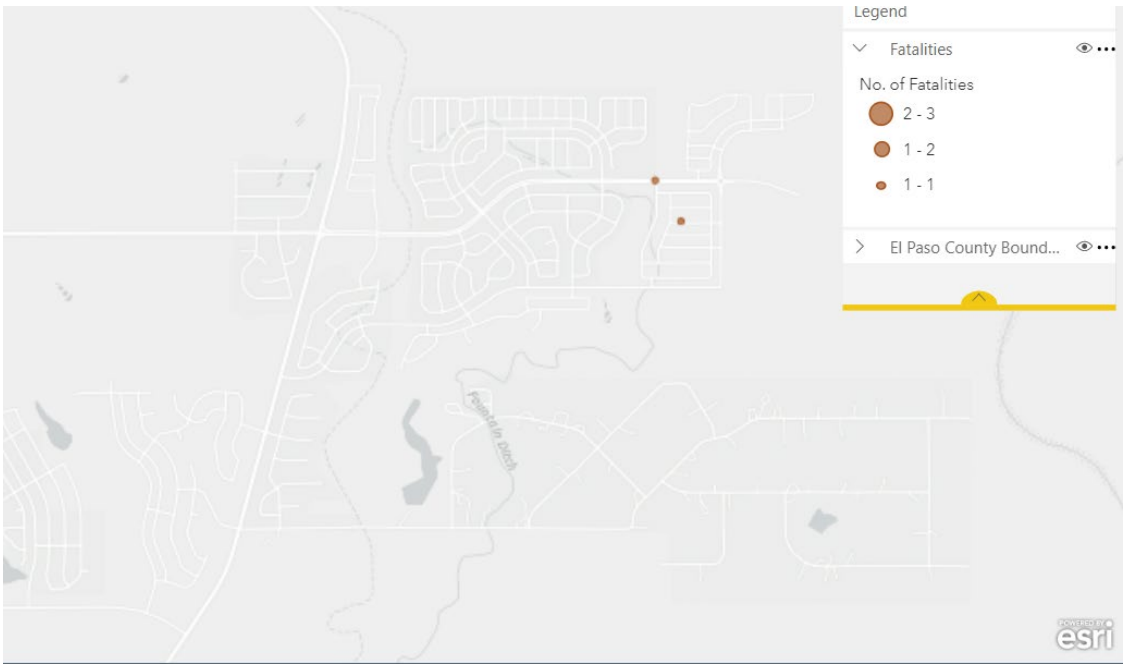


Figure 8. Fatal Crash Density Map



Projected Development Traffic

This section documents how much traffic the Project development is expected to generate and how the external site trips will be distributed on the adjacent roadway network.

Trip Generation

The vehicle trips associated with the Project were calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition.* This methodology consists of choosing an independent variable for the land use for a particular time of day. The independent variable correlates to the variation in trip ends and is related to the land use. The value of the independent variable is either multiplied by a weighted average or used in a regression equation to calculate the trips generated by the land use. The *ITE Trip Generation Manual* provides guidance on when to use the weighted average versus the regression equation. Since the exact land use of parcels except for the Gas Station/Convenience Store are not determined yet, we assumed 25% of each parcel will be allocated to retail floor space.

Table 5 shows the trips that are expected to be generated by Lorson Ranch Commercial at build out.

Table 3. Lorson Ranch Commercial Trip Generation

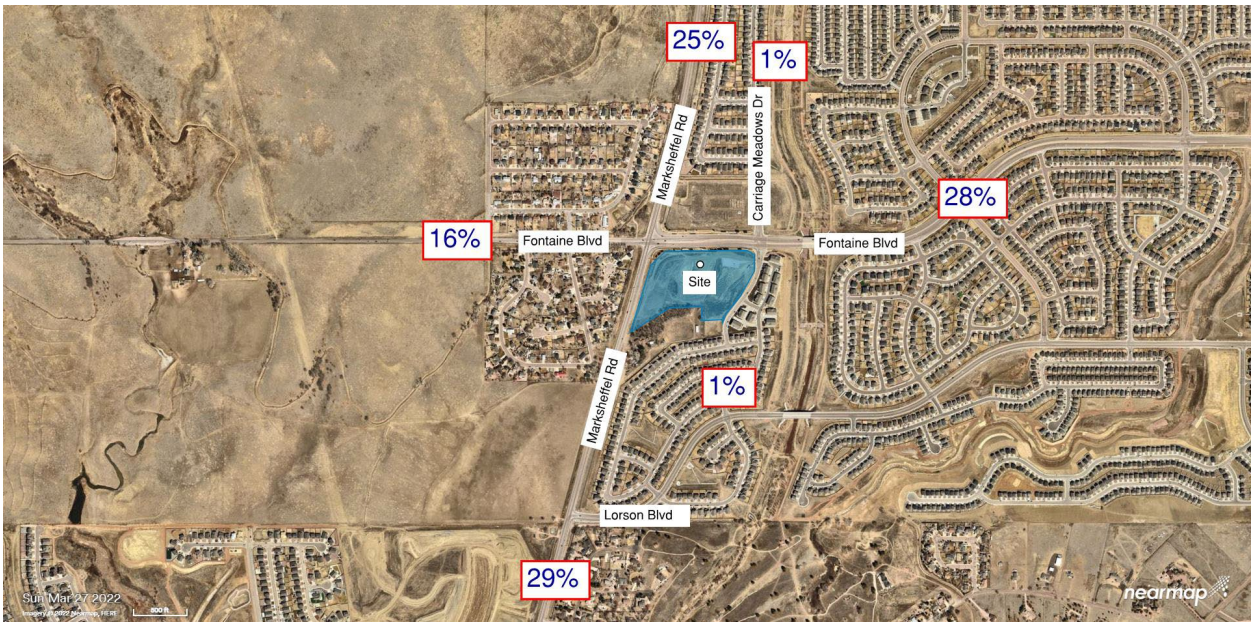
Lorson Ranch Commercials											
ITE Land Use and Code	Size	Units	Weekday			AM Peak Hour			PM Peak Hour		
			Total	Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting
945 - Convenience Store/Gas Station - VFP (9-15)	5.2	KSF/VFP	3466	1733	1733	102	51	51	63	34	29
821 - Shopping Plaza (40-150k) - Supermarket - No	104.97	KSF	7088	3544	3544	164	104	60	294	138	156
Total			10554	5277	5277	266	155	111	357	172	185

Lorson Ranch Commercial consists of 104,970 square feet of retail and 5,200 square feet of convenience store/gas station. The ITE trip generation manual uses a multivariable analysis for the convenience store/gas station land use (945) where the trip generation is first assigned to one of the subcategories based on number of vehicle fueling positions (VFP), then the size of the development is used as an independent variable. Also, ITE considers the convenience store/gas station of this size as a Restaurant in the land use grouping. It was assumed that 100% of trips will be made by personal vehicles. Additionally, internal trips and pass-by trips were captured and deducted per ITE guidelines from the total trips generated by the Project. Matrix assumed 8% internal trip capture during the AM Peak Hour (7% on entering trips and 8% on exiting trips), and 24% internal trip capture during the PM Peak Hour (24% on entering trips and 24% on exiting trips) based on ITE guidelines. Pass-by trips were also assumed to account for 174 trips during the AM Peak Hour (87 vehicles entering/87 vehicles exiting), and 274 trips during the PM Peak Hour (138 vehicles entering/136vehicles exiting)

Trip Distribution

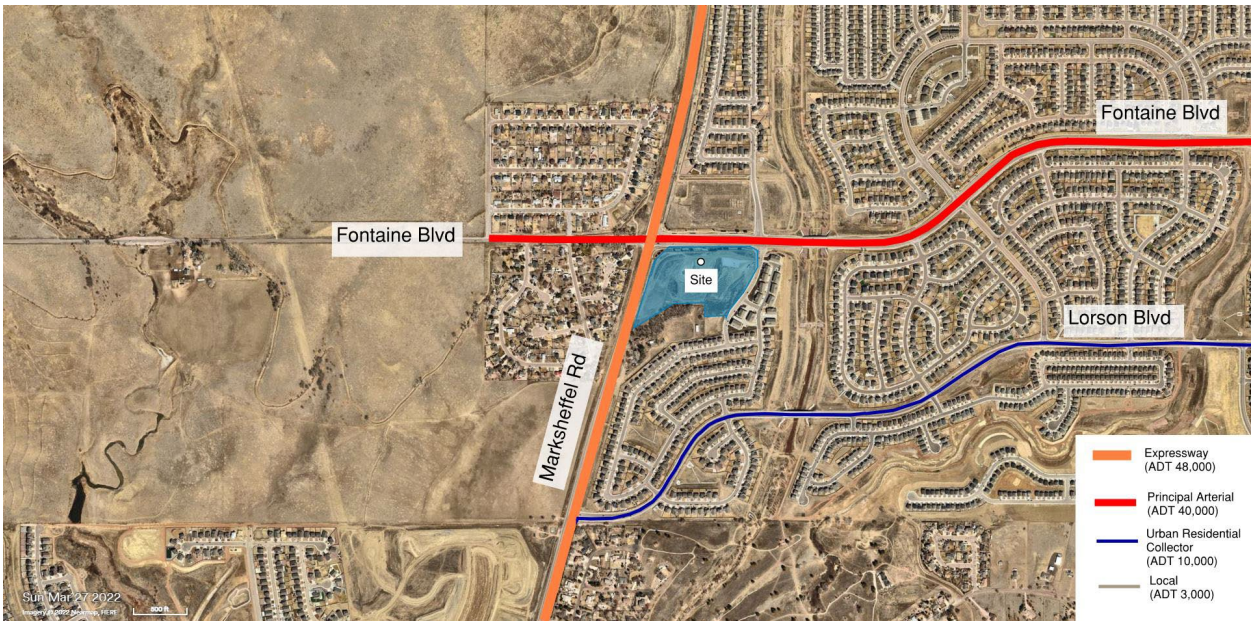
Figure 9 illustrates the expected external distribution of travel for the site-generated trips. This distribution was determined by reviewing the total trips on the roadway network and, the ultimate volumes on the network as they more realistically reflect the traffic in and out of the neighborhood in the future.

Figure 9. Trip Distribution



Roadways adjacent to the new development were classified based on the 2040 Major Transportation Corridor Plan and are shown in Figure 10.

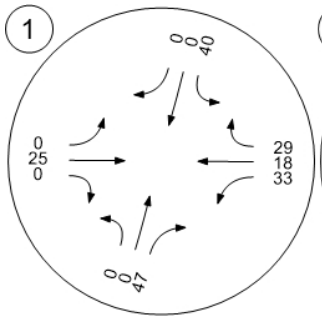
Figure 10. Roadway Classification



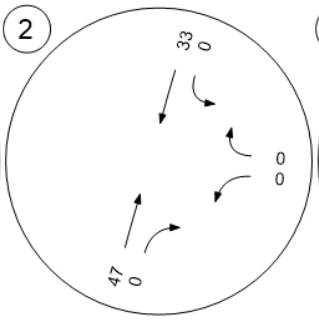
The project trips for both the AM and PM peak hours are shown in Figure 11and Figure 12 and daily project trips are shown in Figure 13.

Figure 11. Lorson Ranch Commercial Project Trips (AM Peak Hour)

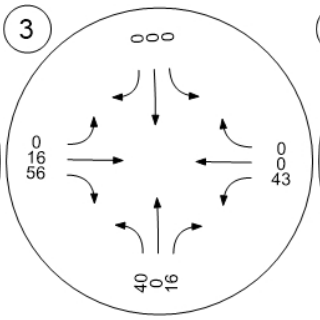
Marksheffel Road/Fontaine Bl



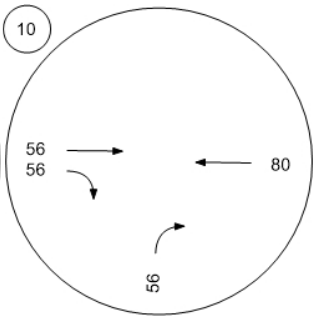
Marksheffel Rd/Lorson Bl



Fontaine Bl/Carriage Meadows



Fontaine Blvd/Access 1



Access 2 / Carriage Meadows Dr/Firesteel Dr

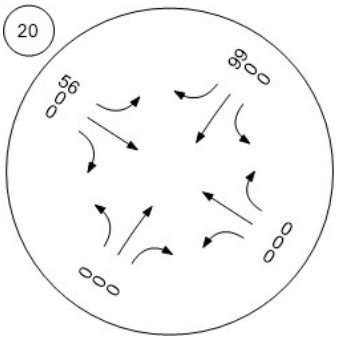
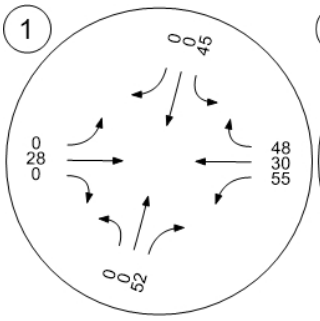
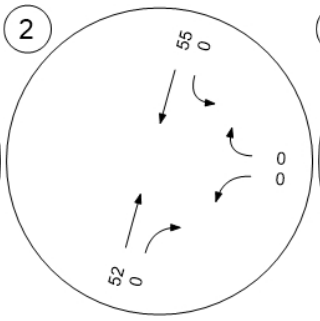


Figure 12. Lorson Ranch Commercial Project Trips (PM Peak Hour)

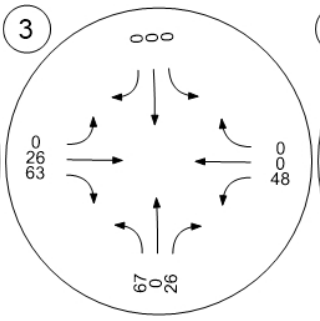
Marksheffel Road/Fontaine Bl



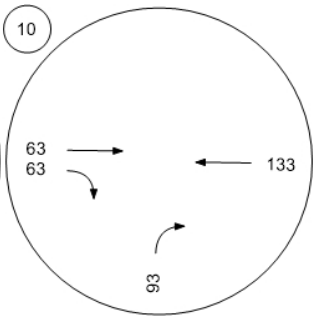
Marksheffel Rd/Lorson Bl



Fontaine Bl/Carriage Meadows



Fontaine Blvd/Access1



Access 2 / Carriage Meadows Dr/ Firesteel Dr

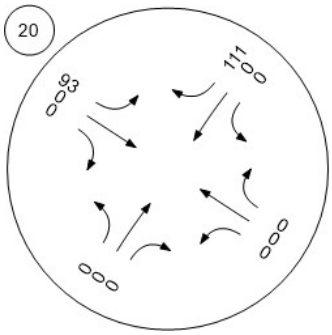


Figure 13. Lorson Ranch Commercial Daily Site Trips

Spacing and Sight Distance

The proposed access points from the project to Fontaine Boulevard and Carriage Meadows Drive were analyzed based on the County's ECM. Access 2 on Carriage Meadows satisfies the criteria for minimum intersection spacing on a local road. Table 2-7 in ECM states 150-feet intersection spacing is required for a local road intersecting a public roadway.

The proposed access point on Fontaine Boulevard will be located half-way between Marks and Carriage Meadows Drive. Although, ECM prohibits access points on an arterial road, v entering and exiting the new development will use the deceleration lane on Fontaine Boule stretches along the entire segment. This access will also add a relief on the Carriage Mead access that otherwise would carry all the trips from this project.

Include that a deviation is being requested for the spacing requirement for Access 1

Concur with comment from C Durham. Variance required.

In addition, required sight distance for the access points were checked based on Table 2-21 of EP ECM. The intersection of Fontaine Boulevard/Access 1 (#10) requires a 555-ft sight distance based on 45 mph

posted speed, and intersection of Carriage Meadows/Access 2(#20) requires a 335-ft sight distance based on 30 mph design speed. A sight triangle exhibit can be found in Appendix D.

Traffic Analysis

Traffic conditions both with and without the project have been analyzed for buildout year (2025) and horizon year (2040) conditions.

Buildout Background Conditions

The buildout year traffic volumes without the Project are shown in Figure 14 and Figure 15 and daily traffic volumes are shown in Figure 16. It is assumed that the Corvallis development on the west side of Marksheffel Road will not be built out by the time that Lorson Ranch Commercial is built, so traffic from the Corvallis development is not included in the Buildout scenario. Corvallis traffic is included in the Horizon year analysis.

Figure 14. Build Out Background Traffic Volumes (AM Peak Hour)

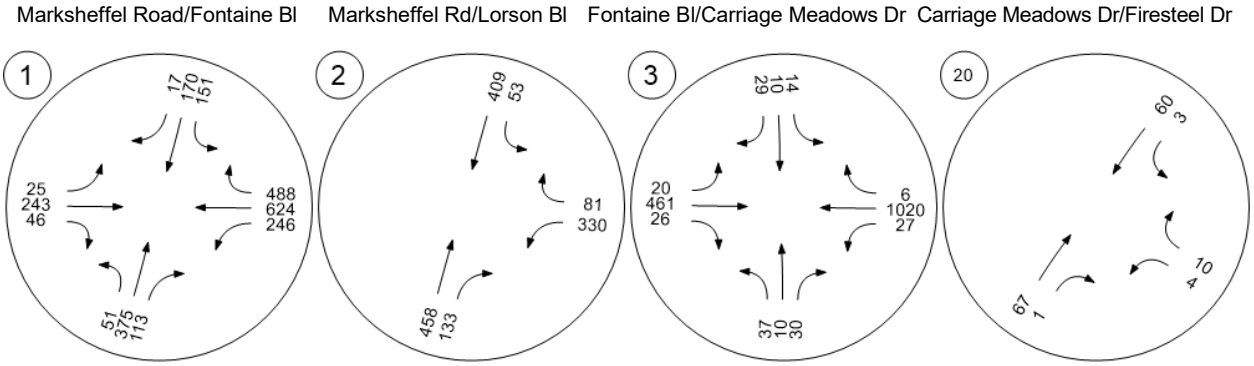


Figure 15. Build Out Background Traffic Volumes (PM Peak Hour)

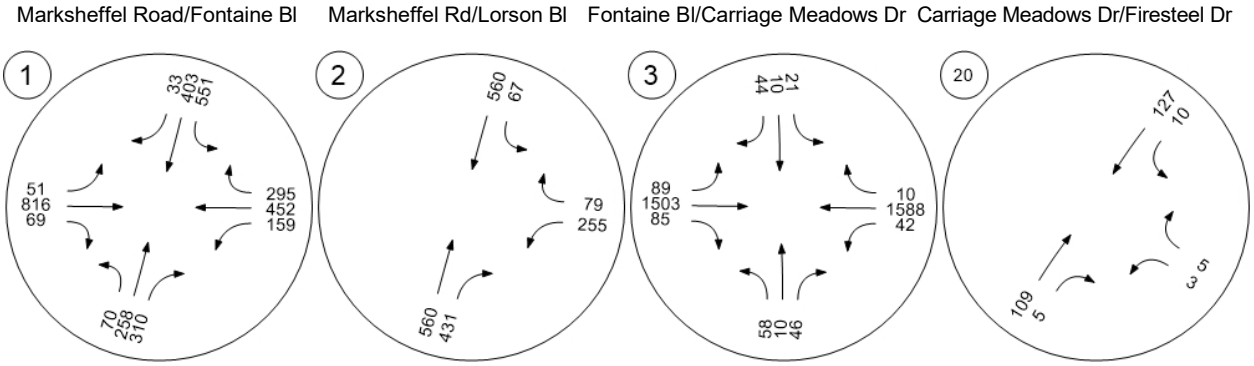


Figure 16. Build Out Background Daily Traffic Volumes

We allowed our traffic analysis software to optimize the cycle length at each signalized intersection between a 60-second cycle and a 120-second cycle. We allowed each signalized intersection to optimize independently of any coordination between signals. Since we are ultimately determining the number of lanes and length of turn lanes and not trying to determine traffic signal timing, this will give us the best answer. We assumed protected/permitted left-turn phasing at single left-turn lanes unless they are already permissive left-turn lanes. Any double left-turn lanes were assumed to be fully protected. In addition, we allowed the software to perform traffic signal warrant analysis based on FHWA MUTCD criteria. Our software uses AM and PM peak hour volumes to project four-hour and eight-hour volumes to simulate whether traffic signal warrants are met. For more information see Appendix A - Existing Conditions Analysis, Appendix C - Buildout Analysis, and Appendix D - Horizon Analysis. Since Marksheffel Boulevard/Lorson Boulevard met the MUTCD signal warrants in the Buildout Background Conditions analysis and is programmed to be constructed as part of other development projects, it is assumed that this intersection will be signalized by the time this Project is constructed. Also, the intersection of Fontaine Boulevard/Carriage Meadows has met the signal warrants in the buildout year without the Lorson Ranch Commercial constructions. Therefore, this intersection was assumed to be signalized in the buildout year with or without the project.

Consideration of progression is required per ECM.

You have 24-hour distributions - do not use simulation to project conditions.

The operations of the study area intersections in the build out background (no project) scenario are shown in Tables 4 and 5. The assumed intersection configurations are shown in Figure 17. Southbound double left-turn lanes on Marksheffel Road/Fontaine Boulevard require a 290-ft lane length, a 240-ft bay taper, and a 100-ft storage length . Currently, there is a 385-ft storage lane and a 270-ft taper on the southbound of this intersection that is adequate for the future improvement from a single left-turn to double left-turn.

Storage lengths should be reviewed / updated based on coordinated signal operations.

Figure 17. Build Out Background Intersection Configurations

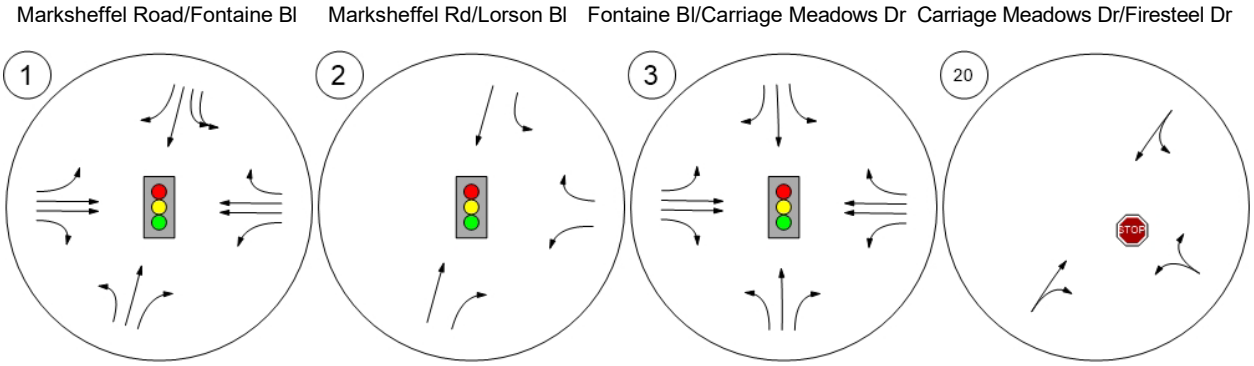


Table 4. Build Out Background Intersection Operations (AM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	SB Left	0.467	34.1	C
2	Marksheffel Rd/Lorson Bl	Signalized	HCM 7th Edition	WB Left	0.537	14.9	B
3	Fontaine BL/Carriage Meadows Dr	Signalized	HCM 7th Edition	SB Right	0.383	7.9	A
20	Carriage Meadows Dr/Firesteel Dr	Two-way stop	HCM 7th Edition	WB Left	0.005	9.3	A

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

Table 5. Build Out Background Intersection Operations (PM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	EB Thru	0.642	34.1	C
2	Marksheffel Rd/Lorson Bl	Signalized	HCM 7th Edition	WB Left	0.555	14.1	B
3	Fontaine BL/Carriage Meadows Dr	Signalized	HCM 7th Edition	SB Right	0.607	12.9	B
20	Carriage Meadows Dr/Firesteel Dr	Two-way stop	HCM 7th Edition	WB Left	0.004	10.2	B

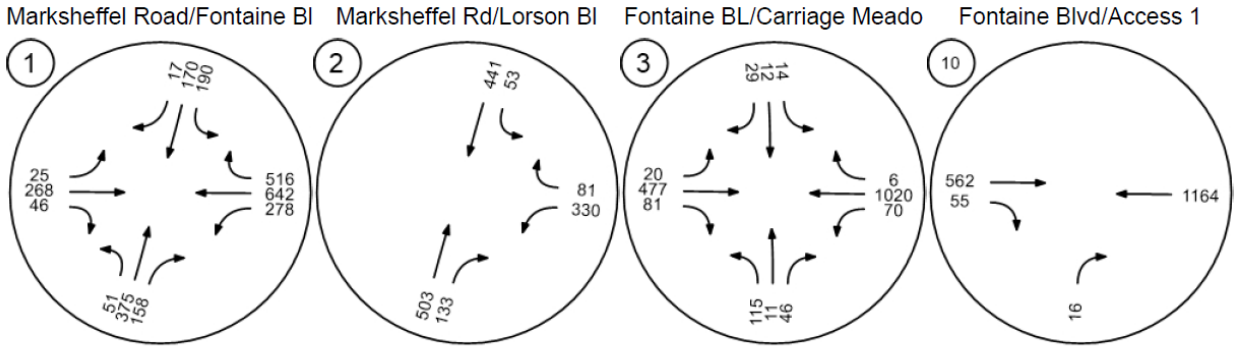
V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

All study area intersections are projected to operate at an acceptable LOS at buildout without the project traffic as shown in Tables 6 and 7. Additionally, all the roadways will carry a daily volume of traffic that is under their capacity per the El Paso County ECM. Since all three signal warrants are met at the Fontaine Boulevard/Carriage Meadows Drive intersection it was assumed that the signal will be built by the build out year, and Lorson Ranch Commercial fair share for this improvement was calculated to be 21 percent (See Appendix D). Therefore, we assumed Fontaine Boulevard/Carriage Meadows Drive is signalized in our analysis

Build Out Total Conditions

Build Out traffic volumes with the project traffic added are shown in Figure 18 and Figure 18 for AM Peak Hour and PM Peak Hour respectively and daily traffic volumes with the project are shown in Figure 20.

Figure 18. Build Out Total Traffic Volumes (AM Peak Hour)



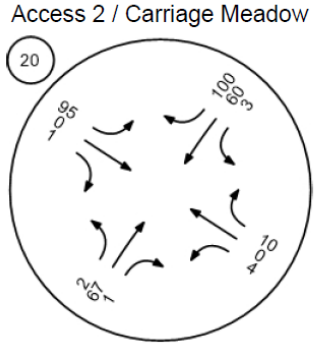
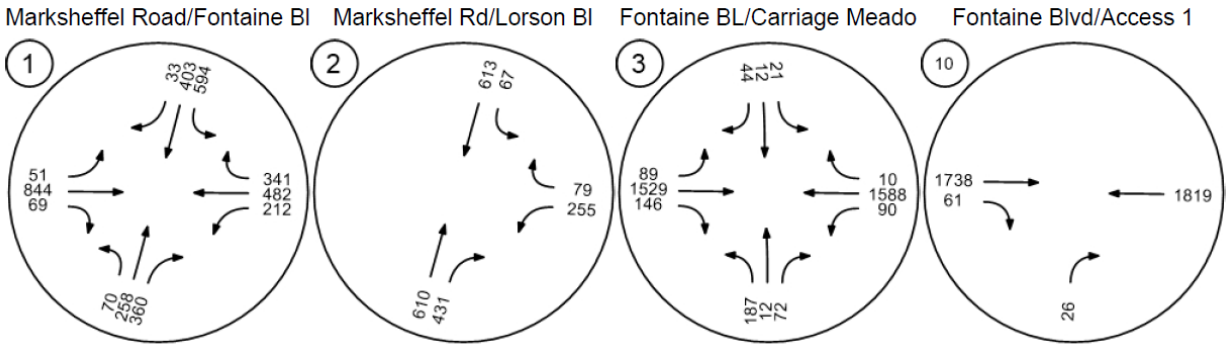


Figure 19. Build Out Total Traffic Volumes (PM Peak Hour)



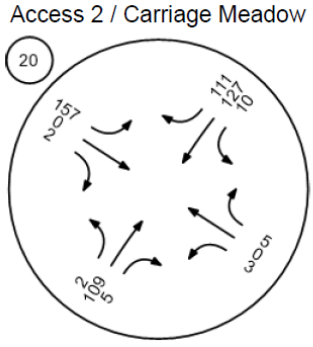
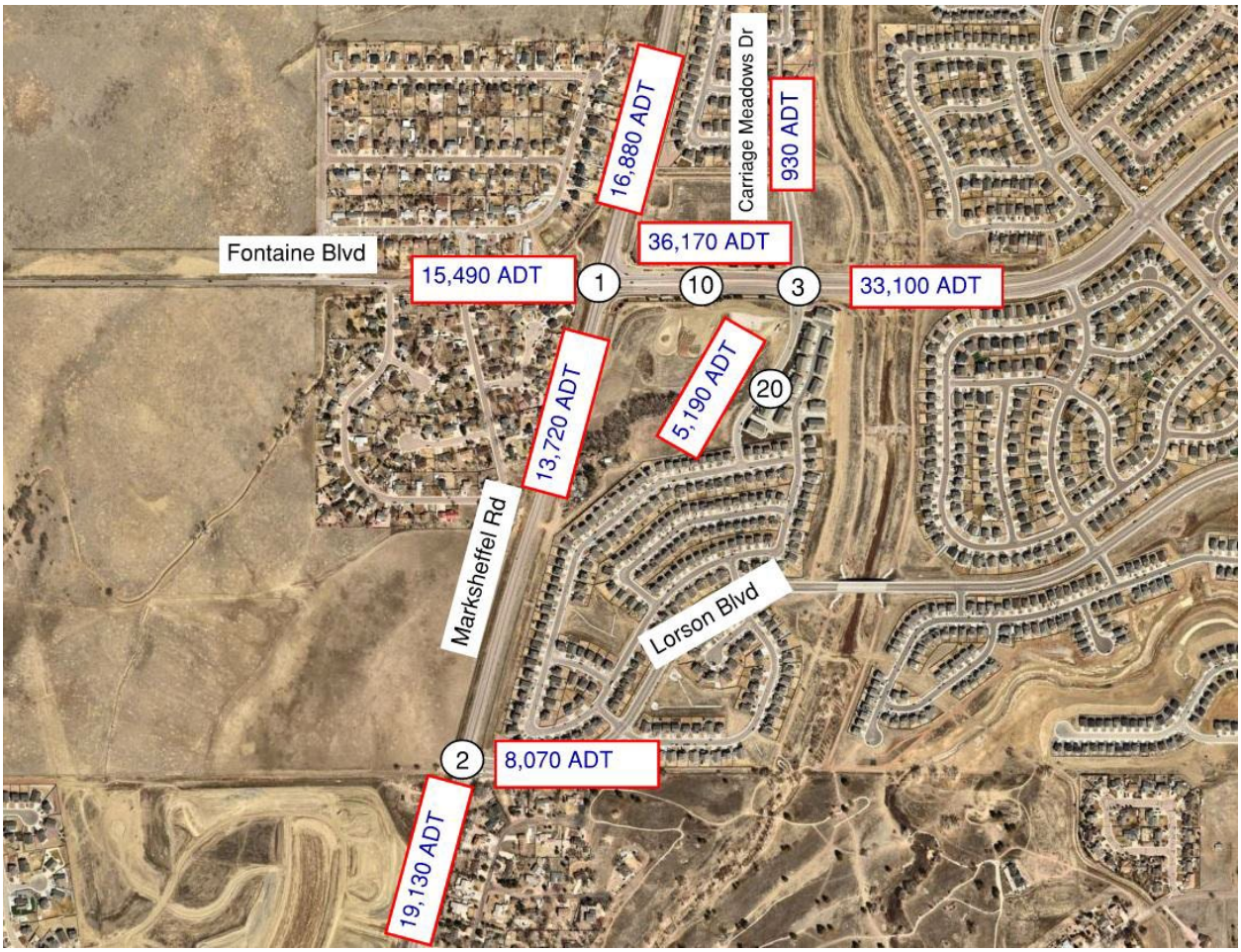


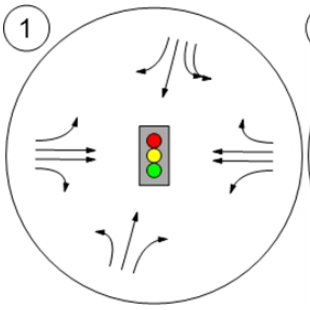
Figure 20. Build Out Total Daily Traffic Volumes



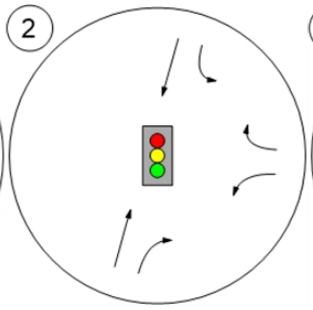
Assumed intersection configurations for the project intersections are shown in Figure 21.

Figure 21. Build Out Total Project Intersection Configurations

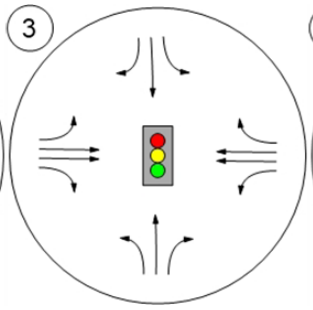
Marksheffel Road/Fontaine Bl



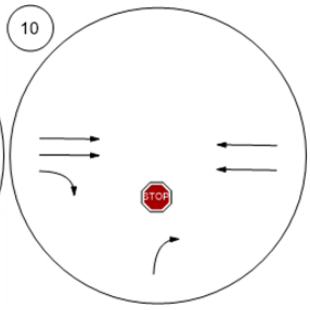
Marksheffel Rd/Lorson Bl



Fontaine Bl/Carriage Meadows



Fontaine Blvd/Access 1



Access 2 / Carriage Meadow

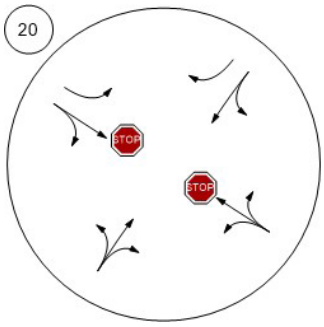


Table 6. Build Out Total Intersection Operations (AM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	SB Left	0.485	25.9	C
2	Marksheffel Rd/Lorson Bl	Signalized	HCM 7th Edition	WB Left	0.566	15.4	B
3	Fontaine BL/Carriage Meadows Dr	Signalized	HCM 7th Edition	WB Left	0.442	12.5	B
10	Fontaine Blvd/Access 1	Two-way stop	HCM 7th Edition	NB Right	0.025	10.3	B
20	Access 2 / Carriage Meadows Dr/FireSteel Dr	Two-way stop	HCM 7th Edition	EB Left	0.129	10.2	B

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

Table 7. Build Out Total Intersection Operations (PM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	WB Left	0.685	36.9	D
2	Marksheffel Rd/Lorson Bl	Signalized	HCM 7th Edition	WB Left	0.587	14.1	B
3	Fontaine BL/Carriage Meadows Dr	Signalized	HCM 7th Edition	SB Right	0.654	15.6	B
10	Fontaine Blvd/Access 1	Two-way stop	HCM 7th Edition	NB Right	0.106	20.3	C
20	Access 2 / Carriage Meadows Dr/Firesteel Dr	Two-way stop	HCM 7th Edition	EB Left	0.261	12.4	B

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

Tables 6 and 7 indicate that all study area intersections will operate at an acceptable LOS. Additionally, all study area roadways except for Carriage Meadows Drive south of Fontaine Boulevard will have daily traffic volumes over its theoretical capacity in build out conditions with project traffic added. This implies that providing the additional access directly onto Fontaine Boulevard will help maintain Carriage Meadows Drive to operate properly. Since all the movements on Carriage Meadows Drive intersections (Intersection 20 and Intersection 3) operate at acceptable LOS, no mitigation measures are necessary for build out conditions with or without the project traffic.

Horizon (2040) Year Background Conditions

The horizon year traffic volumes without the Lorson Ranch Commercial project are shown in Figure 22 and Figure 23 and daily traffic volumes are shown in Figure 24. It is assumed that Marksheffel Road is widened to a four-lane cross-section by the Horizon Year.

Figure 22. Horizon Year Background Traffic Volumes (AM Peak Hour)

Figure 23. Horizon Year Background Traffic Volumes (PM Peak Hour)

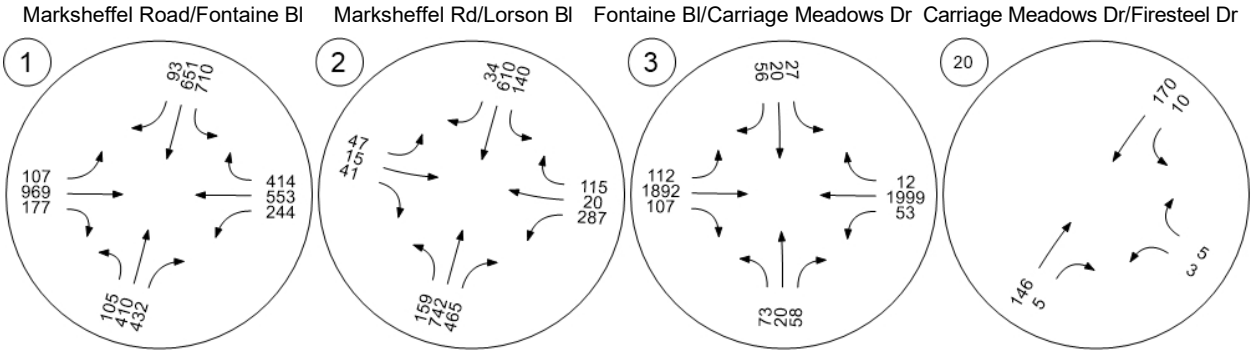


Figure 24. Horizon Background Daily Traffic Volumes

The assumed intersection configurations are shown in Figure 25. The operations of the study area intersections in the build out background (no project) scenario are shown in Tables 10 and 11.

Figure 25. Horizon Background Intersection Configurations

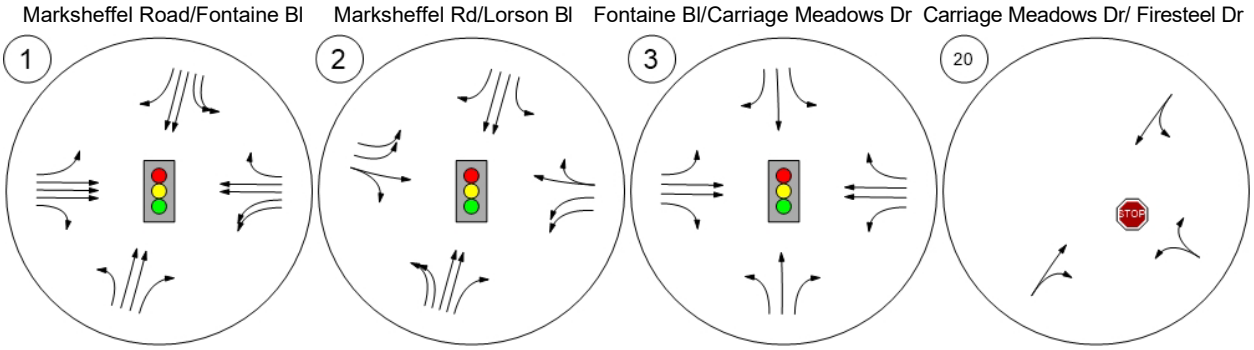


Table 8. Horizon Background Intersection Operations (AM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	SB Left	0.507	24.5	C
2	Marksheffel Rd/Lorson Bl/Corvallis	Signalized	HCM 7th Edition	WB Left	0.574	26.4	C
3	Fontaine BL/Carriage Meadows Dr	Signalized	HCM 7th Edition	SB Right	0.474	9.9	A
20	Carriage Meadows Dr/Firesteel Dr	Two-way stop	HCM 7th Edition	WB Left	0.005	9.6	A

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

Table 9. Horizon Background Intersection Operations (PM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	EB Thru	0.636	33.1	C
2	Marksheffel Rd/Lorson Bl/Corvallis Rd	Signalized	HCM 7th Edition	WB Left	0.472	23.9	C
3	Fontaine BL/Carriage Meadows Dr	Signalized	HCM 7th Edition	SB Right	0.765	24.2	C
20	Carriage Meadows Dr/Firesteel Dr	Two-way stop	HCM 7th Edition	WB Left	0.005	10.8	B

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

All study area intersections are projected to operate at an acceptable LOS in the horizon year without the project traffic as shown in Tables 10 and 11. Fontaine Boulevard carries volume above its theoretical capacity. Considering how closely spaced the intersections along this road are, intersection operations should be considered as a more critical measure compared to the volume along this road segment. Carriage Meadows Drive also has volume above its capacity, however, all intersection approaches operate at acceptable LOS.

Horizon (2040) Year Total Conditions

When the project traffic is added to the 2040 background traffic, the resulting AM Peak Hour, PM Peak Hour and Daily traffic volumes are as shown in Figure 26, Figure 27 and Figure 28.

The fact that Fontaine is operating over its theoretical capacity at the proposed site access is a reason to disapprove the access variance.

Figure 26. Horizon Total Traffic Volumes (AM Peak Hour)

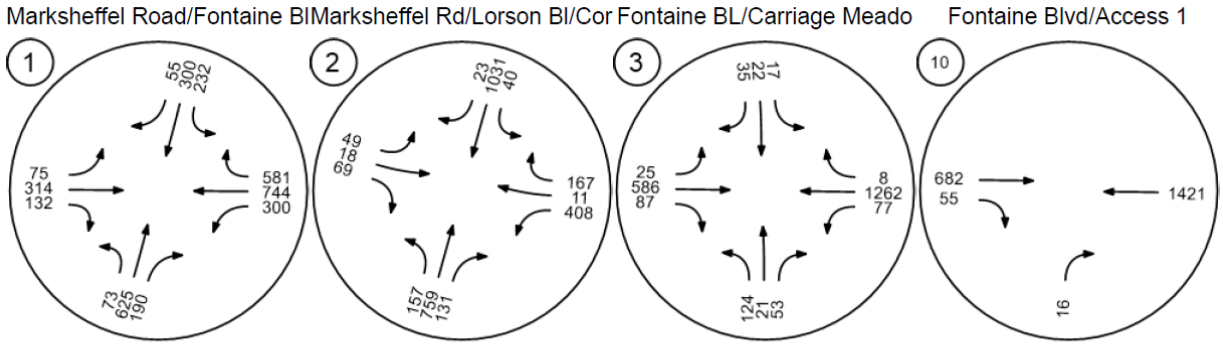
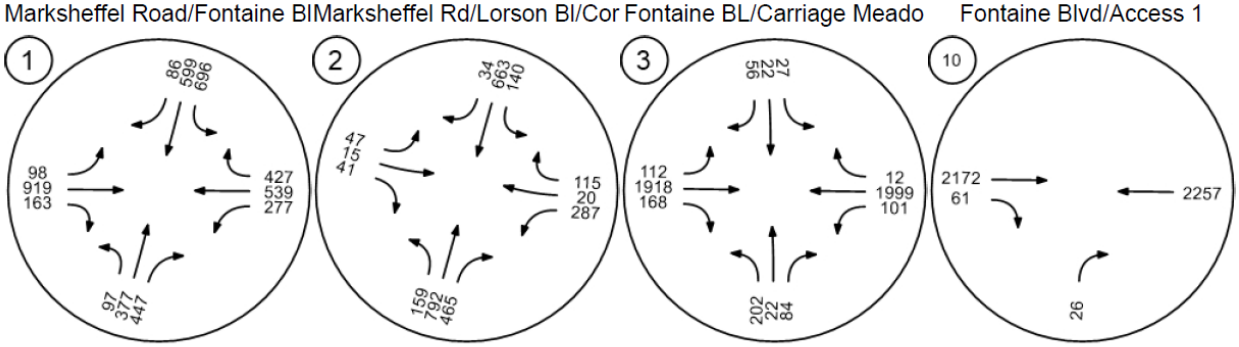


Figure 27. Horizon Total Traffic Volumes (PM Peak Hour)



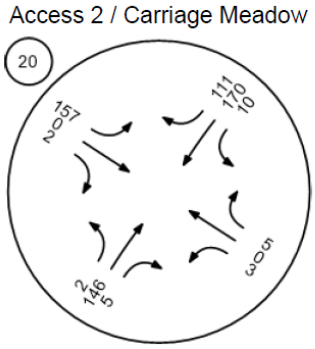
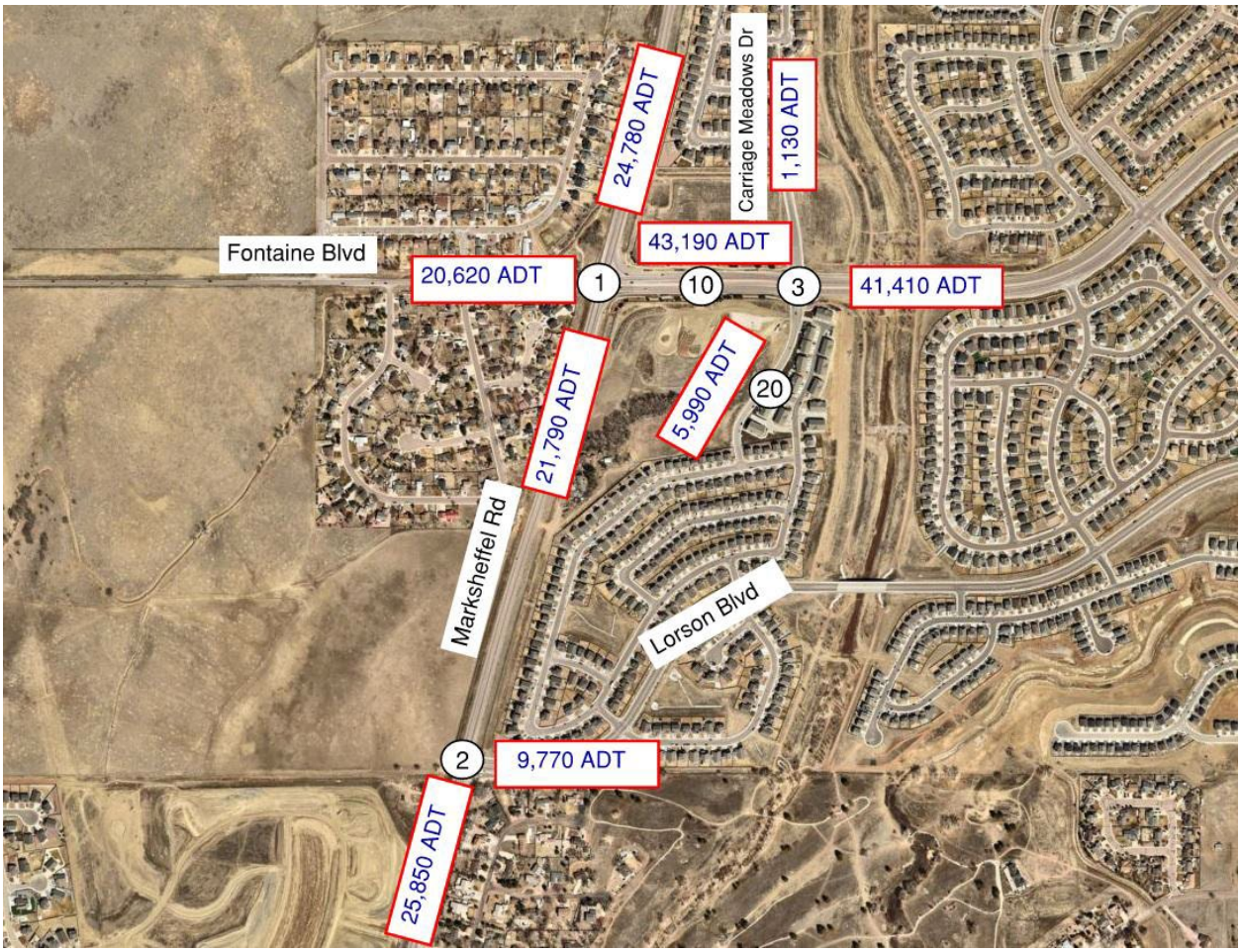


Figure 28. Horizon Total Daily Traffic Volumes



Assumed intersection configurations for the project intersections are shown in Figure 19.

Analysis of the intersections and roadways for build out conditions with the volumes and configurations shown above results in the operations shown in Tables 10 and 11.

Table 10. Horizon Total Intersection Operations (AM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	SB Left	0.524	29.6	C
2	Marksheffel Rd/Lorson Bl/Corvallis Rd	Signalized	HCM 7th Edition	WB Left	0.585	26.3	C
3	Fontaine BL/Carriage Meadows Dr	Signalized	HCM 7th Edition	SB Thru	0.524	11.7	B
10	Fontaine Blvd/Access 1	Two-way stop	HCM 7th Edition	NB Right	0.027	10.9	B
20	Access 2 / Carriage Meadows Dr	Two-way stop	HCM 7th Edition	EB Left	0.139	10.7	B

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

Table 11. Horizon Total Intersection Operations (PM Peak Hour)

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Marksheffel Road/Fontaine Blvd	Signalized	HCM 7th Edition	WB Left	0.654	37.4	D
2	Marksheffel Rd/Lorson Bl/Corvallis	Signalized	HCM 7th Edition	WB Left	0.489	23.6	C
3	Fontaine BL/Carriage Meadows Dr	Signalized	HCM 7th Edition	SB Right	0.822	32.6	C
10	Fontaine Blvd/Access 1	Two-way stop	HCM 7th Edition	NB Right	0.153	28.2	D
20	Access 2 / Carriage Meadows Dr	Two-way stop	HCM 7th Edition	EB Left	0.299	13.9	B

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

All study area intersections will operate at acceptable LOS (LOS D or better) in the horizon year (2040) with the addition of project traffic. Therefore, no mitigation is recommended. Table 12 shows the required turn lengths at Fontaine Boulevard/Carriage Meadows Drive, and Carriage Meadows Drive/Firesteel Drive/Access 2 with and without the project.

Table 12. Turn Lane Requirements With and Without the Project

Existing

Intersection	Movement	Speed Limit	Lane	Taper	Total
Fontaine Bl/Carriage Meadows Dr	NBLT	25	80	110	190
	NBRT	25	75	100	175
	SBLT	25	100	130	230
	SBRT	25	100	130	230
	EBLT	45	450	60	510
	EBRT	45	Continuous Auxiliary Lane		
	WBLT	45	420	90	510
	WBRT	45	260	70	330

Buildout Background

Intersection	Movement	Speed Limit	Turning Vol	95% Queue (ft)	Storage	Deceleration Length	Taper	Total
Fontaine Bl/Carriage Meadows Dr	NBLT	25	58	79	79	115	120	314
	NBRT	25	46	34	34	115	120	269
	SBLT	25	21	28	28	115	120	263
	SBRT	25	44	34	34	115	120	269
	EBLT	45	89	26	26	235	200	461
	EBRT	45	Continuous Auxiliary Lane					
	WBLT	45	42	7	7	235	200	442
	WBRT	45	10	2	2	235	200	437

Buildout Total

Intersection	Movement	Speed Limit	Turning Vol	95% Queue (ft)	Storage	Deceleration Length	Taper	Total	Improvement (ft)
Fontaine Bl/Carriage Meadows Dr	NBLT	25	187	241	241	115	120	476	162
	NBRT	25	72	48	48	115	120	283	14
	SBLT	25	21	25	25	115	120	260	
	SBRT	25	44	30	30	115	120	265	
	EBLT	45	89	26	26	235	200	461	
	EBRT	45	Continuous Auxiliary Lane						
	WBLT	45	90	25	25	235	200	460	18
	WBRT	45	10	1	1	235	200	436	
Carriage Meadows Dr/Firesteel Dr/Access 2	SBRT	25	111	0	100	115	120	335	335
	EBLT	25	157	26	150	115	120	385	385

Horizon Background

Intersection	Movement	Speed Limit	Turning Vol	95% Queue (ft)	Storage	Deceleration Length	Taper	Total
Fontaine Bl/Carriage Meadows Dr	NBLT	25	73	99	99	115	120	334
	NBRT	25	58	43	43	115	120	278
	SBLT	25	27	35	35	115	120	270
	SBRT	25	56	41	41	115	120	276
	EBLT	45	112	54	54	235	200	489
	EBRT	45	Continuous Auxiliary Lane					
	WBLT	45	53	15	15	235	200	450
	WBRT	45	12	2	2	235	200	437

Horizon Total

Intersection	Movement	Speed Limit	Turning Vol	95% Queue (ft)	Storage	Deceleration Length	Taper	Total	Improvement (ft)
Fontaine Bl/Carriage Meadows Dr	NBLT	25	202	277	277	115	120	512	36
	NBRT	25	84	60	60	115	120	295	12
	SBLT	25	27	34	34	115	120	269	9
	SBRT	25	56	41	41	115	120	276	11
	EBLT	45	112	64	64	235	200	499	38
	EBRT	45	Continuous Auxiliary Lane						
	WBLT	45	101	50	50	235	200	485	25
	WBRT	45	12	2	2	235	200	437	1
Carriage Meadows Dr/Firesteel Dr/Access 2	SBRT	25	111	0	100	115	120	335	
	EBLT	25	157	32	150	115	120	385	

These results should be compared with ECM requirements and any deficiencies should be addressed in the TIS.

Conclusions and Recommendations

The *El Paso County Engineering Criteria Manual* requires a separate left-turn lane along minor arterials and lower classifications for any left-turn movement equal or greater than 25 vehicles-per-hour and a separate right-turn lane for any right-turn movement equal or greater than 50 vehicles-per-hour. Access 2 requires an eastbound left-turn lane with a 115 feet length, a 120 feet taper, and a 100 feet storage, and southbound right-turn lane with a 115 feet length, 120 feet taper, and 100 feet storage. Table 13 summarizes the new required improvements caused by the Project.

Table 13. Required Improvements

Intersection	Improvement	Details	When
Carriage Madows Drive/Access 2	Stop Controlled Intersection	A new access point on Carriage Meadows Drive. A 385-ft eastbound left-turn. A 335-ft southbound right-turn	Build-out
Fontaine Boulevard/Carriage Meadows Drive	Turn lane Extension	A 162-ft extension of northbound left-turn. A 14-ft extesion of northbound right-turn. An 18-ft extension of westbound left-turn.	Build-out
Fontaine Boulevard/Carriage Meadows Drive	Turn lane Extension	A 36-ft extesion of northbound left-turn. A 12-ft extesion of northbound right-turn. A 9-ft extension of southbound left-turn. An 11-ft extesioin of southbound right-turn. A 38-ft extension of eastbound-left turn. A 25-ft extension of westbound left-turn.	Horizon

Table 14 summarizes the signal warrant report summary for the studied intersections

Table 14. Signal Warrant Summary

ID	Name	Year	Warrant #1 Eight-Hour Vehiclular Volume	Warrant #2 Four-Hour Vehiclular Volume	Warrant #3 Peak Hour
3	Fontaine Bl/Carriage Meadows Dr	Buildout No Project	✓	✓	✓

The study area roadway network has been analyzed many times by multiple Lorson Ranch filings, and the Corvallis development. The assumed future roadway network does not need to be mitigated to accommodate the additional traffic from the Project with the following exceptions:

Carriage Meadows Drive/Access 2 (#20)

- A new access point on Carriage Meadows Drive.
- A 385-ft eastbound left-turn. Include 115-ft of deceleration length, 120-ft long bay taper and 150-ft of storage based on 30 mph design speed and 157 vph turning volumes.
- A 335-ft southbound right-turn lane. Include 115-ft of deceleration length; 120-ft long approach taper and 100-ft of storage based on 30 mph design speed and 111 vph turning volumes.

Fontaine Boulevard/Carriage Meadows Drive (#3)

- A 162-ft extension of northbound left-turn.
- A 14-ft extension of northbound right-turn.
- An 18-ft extension of westbound left-turn.

The RI/RO on Fontaine requires a variance. This study has not provided adequate traffic justification for the variance.

The following improvements are required in the horizon year

Fontaine Boulevard/Carriage Meadows Drive (#3)

- A 36-ft extension of northbound left-turn.
- A 12-ft extension of northbound right-turn.
- A 9-ft extension of southbound left-turn.
- An 11-ft extension of southbound right-turn.
- A 38-ft extension of eastbound left-turn.
- A 25-ft extension of westbound left-turn.

Finally, the applicant is required to pay road impact fees to El Paso County. The County allows for the applicant to pay three different upfront fee amounts. The applicant can either pay the full fee amount, a smaller upfront fee to the 5 mill Public Improvement District (PID), or an even smaller upfront fee amount to the 10 mill PID. The different fee amounts are shown in Table 16 below, calculated using 104.97 square feet of retails and 5,209 square feet of Convenience store/Gas Station. The applicant will choose which fee method to follow at a later date. If the applicant chooses one of the PIDs, the PID will collect taxes over time. Table 15 summarized the road impact fees.

Table 15. Road Impact Fee Schedule

Convenience Comm.	**Full Fee**	**5 Mill PID**	**10 Mill PID**
5.2 KSF	$45,760	$27,409	$9,095
General Commercial	**Full Fee**	**5 Mill PID**	**10 Mill PID**
104.97 KSF	$520,441.26	$404,239.47	$288,142.65
Total	**$566,201.26**	**$431,648.67**	**$297,237.45**

Appendix A – Traffic Counts

All Traffic Data Services

1 - MARKSHEFFEL ROAD NORTH OF FONTAINE BOULEVARD

Time	NB	SB	Total
4/26/2022	2	7	9
4/26/2022 12:15:00 AM	0	4	4
4/26/2022 12:30:00 AM	3	8	11
4/26/2022 12:45:00 AM	2	2	4
4/26/2022 1:00:00 AM	1	10	11
4/26/2022 1:15:00 AM	9	4	13
4/26/2022 1:30:00 AM	3	5	8
4/26/2022 1:45:00 AM	1	8	9
4/26/2022 2:00:00 AM	0	2	2
4/26/2022 2:15:00 AM	1	4	5
4/26/2022 2:30:00 AM	3	2	5
4/26/2022 2:45:00 AM	5	0	5
4/26/2022 3:00:00 AM	5	0	5
4/26/2022 3:15:00 AM	4	3	7
4/26/2022 3:30:00 AM	11	8	19
4/26/2022 3:45:00 AM	8	2	10
4/26/2022 4:00:00 AM	12	2	14
4/26/2022 4:15:00 AM	15	2	17
4/26/2022 4:30:00 AM	23	6	29
4/26/2022 4:45:00 AM	20	8	28
4/26/2022 5:00:00 AM	23	6	29
4/26/2022 5:15:00 AM	44	20	64
4/26/2022 5:30:00 AM	76	16	92
4/26/2022 5:45:00 AM	65	31	96
4/26/2022 6:00:00 AM	104	40	144
4/26/2022 6:15:00 AM	124	51	175
4/26/2022 6:30:00 AM	201	79	280
4/26/2022 6:45:00 AM	173	74	247
4/26/2022 7:00:00 AM	248	83	331
4/26/2022 7:15:00 AM	247	72	319
4/26/2022 7:30:00 AM	248	91	339
4/26/2022 7:45:00 AM	158	115	273
4/26/2022 8:00:00 AM	135	99	234
4/26/2022 8:15:00 AM	155	80	235
4/26/2022 8:30:00 AM	134	59	193
4/26/2022 8:45:00 AM	93	69	162
4/26/2022 9:00:00 AM	70	63	133
4/26/2022 9:15:00 AM	96	42	138
4/26/2022 9:30:00 AM	87	54	141
4/26/2022 9:45:00 AM	62	49	111
4/26/2022 10:00:00 AM	68	57	125
4/26/2022 10:15:00 AM	89	64	153
4/26/2022 10:30:00 AM	92	62	154
4/26/2022 10:45:00 AM	71	57	128
4/26/2022 11:00:00 AM	76	67	143
4/26/2022 11:15:00 AM	87	76	163
4/26/2022 11:30:00 AM	77	57	134
4/26/2022 11:45:00 AM	76	69	145
Total	3,307	1,789	5,096
Percentage	64.9%	35.1%	
Peak Hour	6:45 AM	7:30 AM	7:00 AM
Volume	916	385	1262
PHF	0.923	0.837	0.931

All Traffic Data Services

ALL TRAFFIC DATA SERVICES

1 - MARKSHEFFEL ROAD NORTH OF FONTAINE BOULEVARD

Time	NB	SB	Total
4/26/2022 12:00:00 PM	74	78	152
4/26/2022 12:15:00 PM	75	79	154
4/26/2022 12:30:00 PM	77	71	148
4/26/2022 12:45:00 PM	61	74	135
4/26/2022 1:00:00 PM	64	70	134
4/26/2022 1:15:00 PM	63	84	147
4/26/2022 1:30:00 PM	88	66	154
4/26/2022 1:45:00 PM	66	93	159
4/26/2022 2:00:00 PM	76	82	158
4/26/2022 2:15:00 PM	87	101	188
4/26/2022 2:30:00 PM	86	118	204
4/26/2022 2:45:00 PM	79	88	167
4/26/2022 3:00:00 PM	93	119	212
4/26/2022 3:15:00 PM	93	125	218
4/26/2022 3:30:00 PM	123	133	256
4/26/2022 3:45:00 PM	132	138	270
4/26/2022 4:00:00 PM	115	149	264
4/26/2022 4:15:00 PM	105	197	302
4/26/2022 4:30:00 PM	101	198	299
4/26/2022 4:45:00 PM	107	182	289
4/26/2022 5:00:00 PM	127	172	299
4/26/2022 5:15:00 PM	110	147	257
4/26/2022 5:30:00 PM	97	142	239
4/26/2022 5:45:00 PM	80	142	222
4/26/2022 6:00:00 PM	80	123	203
4/26/2022 6:15:00 PM	76	97	173
4/26/2022 6:30:00 PM	62	80	142
4/26/2022 6:45:00 PM	51	67	118
4/26/2022 7:00:00 PM	52	75	127
4/26/2022 7:15:00 PM	45	73	118
4/26/2022 7:30:00 PM	36	56	92
4/26/2022 7:45:00 PM	37	68	105
4/26/2022 8:00:00 PM	30	82	112
4/26/2022 8:15:00 PM	26	71	97
4/26/2022 8:30:00 PM	32	45	77
4/26/2022 8:45:00 PM	16	41	57
4/26/2022 9:00:00 PM	11	39	50
4/26/2022 9:15:00 PM	15	26	41
4/26/2022 9:30:00 PM	7	30	37
4/26/2022 9:45:00 PM	10	31	41
4/26/2022 10:00:00 PM	8	24	32
4/26/2022 10:15:00 PM	4	12	16
4/26/2022 10:30:00 PM	12	15	27
4/26/2022 10:45:00 PM	5	13	18
4/26/2022 11:00:00 PM	2	9	11
4/26/2022 11:15:00 PM	4	7	11
4/26/2022 11:30:00 PM	3	4	7
4/26/2022 11:45:00 PM	6	7	13
Total	2,809	3,943	6,752
Percentage	41.6%	58.4%	
Peak Hour	3:30 PM	4:15 PM	4:15 PM
Volume	475	749	1189
PHF	0.900	0.946	0.984
Grand Total	6,116	5,732	11,848
Percentage	51.6%	48.4%	

All Traffic Data Services

ALL TRAFFIC DATA SERVICES

3 - MARKSHEFFEL ROAD SOUTH OF LORSON BOULEVARD

Time	NB	SB	Total
4/26/2022	9	6	15
4/26/2022 12:15:00 AM	9	6	15
4/26/2022 12:30:00 AM	9	2	11
4/26/2022 12:45:00 AM	2	1	3
4/26/2022 1:00:00 AM	7	8	15
4/26/2022 1:15:00 AM	9	3	12
4/26/2022 1:30:00 AM	4	2	6
4/26/2022 1:45:00 AM	2	3	5
4/26/2022 2:00:00 AM	1	3	4
4/26/2022 2:15:00 AM	0	2	2
4/26/2022 2:30:00 AM	3	4	7
4/26/2022 2:45:00 AM	5	2	7
4/26/2022 3:00:00 AM	1	1	2
4/26/2022 3:15:00 AM	2	6	8
4/26/2022 3:30:00 AM	3	5	8
4/26/2022 3:45:00 AM	2	5	7
4/26/2022 4:00:00 AM	7	6	13
4/26/2022 4:15:00 AM	4	7	11
4/26/2022 4:30:00 AM	11	16	27
4/26/2022 4:45:00 AM	11	27	38
4/26/2022 5:00:00 AM	13	34	47
4/26/2022 5:15:00 AM	16	71	87
4/26/2022 5:30:00 AM	50	87	137
4/26/2022 5:45:00 AM	52	101	153
4/26/2022 6:00:00 AM	73	88	161
4/26/2022 6:15:00 AM	91	96	187
4/26/2022 6:30:00 AM	137	127	264
4/26/2022 6:45:00 AM	142	129	271
4/26/2022 7:00:00 AM	162	152	314
4/26/2022 7:15:00 AM	191	148	339
4/26/2022 7:30:00 AM	167	157	324
4/26/2022 7:45:00 AM	136	144	280
4/26/2022 8:00:00 AM	125	116	241
4/26/2022 8:15:00 AM	122	135	257
4/26/2022 8:30:00 AM	117	114	231
4/26/2022 8:45:00 AM	75	100	175
4/26/2022 9:00:00 AM	72	88	160
4/26/2022 9:15:00 AM	85	66	151
4/26/2022 9:30:00 AM	77	77	154
4/26/2022 9:45:00 AM	64	71	135
4/26/2022 10:00:00 AM	61	58	119
4/26/2022 10:15:00 AM	70	69	139
4/26/2022 10:30:00 AM	91	75	166
4/26/2022 10:45:00 AM	77	77	154
4/26/2022 11:00:00 AM	92	76	168
4/26/2022 11:15:00 AM	82	80	162
4/26/2022 11:30:00 AM	101	83	184
4/26/2022 11:45:00 AM	103	85	188
Total	2,745	2,819	5,564
Percentage	49.3%	50.7%	
Peak Hour	6:45 AM	7:00 AM	7:00 AM
Volume	662	601	1257
PHF	0.866	0.957	0.927

3 - MARKSHEFFEL ROAD SOUTH OF LORSON BOULEVARD

Time	NB	SB	Total
4/26/2022 12:00:00 PM	75	80	155
4/26/2022 12:15:00 PM	92	96	188
4/26/2022 12:30:00 PM	80	91	171
4/26/2022 12:45:00 PM	73	81	154
4/26/2022 1:00:00 PM	69	77	146
4/26/2022 1:15:00 PM	88	92	180
4/26/2022 1:30:00 PM	72	74	146
4/26/2022 1:45:00 PM	83	92	175
4/26/2022 2:00:00 PM	83	81	164
4/26/2022 2:15:00 PM	105	87	192
4/26/2022 2:30:00 PM	97	83	180
4/26/2022 2:45:00 PM	111	108	219
4/26/2022 3:00:00 PM	132	141	273
4/26/2022 3:15:00 PM	113	127	240
4/26/2022 3:30:00 PM	151	122	273
4/26/2022 3:45:00 PM	165	140	305
4/26/2022 4:00:00 PM	154	132	286
4/26/2022 4:15:00 PM	137	157	294
4/26/2022 4:30:00 PM	153	162	315
4/26/2022 4:45:00 PM	168	165	333
4/26/2022 5:00:00 PM	180	145	325
4/26/2022 5:15:00 PM	177	123	300
4/26/2022 5:30:00 PM	156	130	286
4/26/2022 5:45:00 PM	155	122	277
4/26/2022 6:00:00 PM	127	105	232
4/26/2022 6:15:00 PM	118	75	193
4/26/2022 6:30:00 PM	106	74	180
4/26/2022 6:45:00 PM	105	74	179
4/26/2022 7:00:00 PM	90	46	136
4/26/2022 7:15:00 PM	89	82	171
4/26/2022 7:30:00 PM	60	48	108
4/26/2022 7:45:00 PM	60	41	101
4/26/2022 8:00:00 PM	67	56	123
4/26/2022 8:15:00 PM	68	51	119
4/26/2022 8:30:00 PM	51	50	101
4/26/2022 8:45:00 PM	32	32	64
4/26/2022 9:00:00 PM	41	28	69
4/26/2022 9:15:00 PM	34	20	54
4/26/2022 9:30:00 PM	29	16	45
4/26/2022 9:45:00 PM	19	23	42
4/26/2022 10:00:00 PM	13	17	30
4/26/2022 10:15:00 PM	10	8	18
4/26/2022 10:30:00 PM	15	8	23
4/26/2022 10:45:00 PM	12	9	21
4/26/2022 11:00:00 PM	12	12	24
4/26/2022 11:15:00 PM	7	4	11
4/26/2022 11:30:00 PM	5	4	9
4/26/2022 11:45:00 PM	7	8	15
Total	4,046	3,599	7,645
Percentage	52.9%	47.1%	
Peak Hour	4:45 PM	4:15 PM	4:30 PM
Volume	681	630	1274
PHF	0.946	0.955	0.956
Grand Total	6,791	6,418	13,209
Percentage	51.4%	48.6%	

All Traffic Data Services

2 - FONTAINE BOULEVARD WEST OF MARKSHEFFEL ROAD

Time	EB	WB	Total
4/26/2022	5	1	6
4/26/2022 12:15:00 AM	2	3	5
4/26/2022 12:30:00 AM	4	1	5
4/26/2022 12:45:00 AM	3	0	3
4/26/2022 1:00:00 AM	5	0	5
4/26/2022 1:15:00 AM	3	2	5
4/26/2022 1:30:00 AM	1	2	3
4/26/2022 1:45:00 AM	3	1	4
4/26/2022 2:00:00 AM	5	0	5
4/26/2022 2:15:00 AM	1	2	3
4/26/2022 2:30:00 AM	0	1	1
4/26/2022 2:45:00 AM	0	1	1
4/26/2022 3:00:00 AM	0	2	2
4/26/2022 3:15:00 AM	0	2	2
4/26/2022 3:30:00 AM	2	6	8
4/26/2022 3:45:00 AM	4	1	5
4/26/2022 4:00:00 AM	1	4	5
4/26/2022 4:15:00 AM	0	5	5
4/26/2022 4:30:00 AM	0	12	12
4/26/2022 4:45:00 AM	2	14	16
4/26/2022 5:00:00 AM	3	18	21
4/26/2022 5:15:00 AM	7	40	47
4/26/2022 5:30:00 AM	15	49	64
4/26/2022 5:45:00 AM	9	48	57
4/26/2022 6:00:00 AM	17	42	59
4/26/2022 6:15:00 AM	31	47	78
4/26/2022 6:30:00 AM	30	104	134
4/26/2022 6:45:00 AM	55	97	152
4/26/2022 7:00:00 AM	42	129	171
4/26/2022 7:15:00 AM	74	97	171
4/26/2022 7:30:00 AM	50	96	146
4/26/2022 7:45:00 AM	55	90	145
4/26/2022 8:00:00 AM	53	68	121
4/26/2022 8:15:00 AM	53	82	135
4/26/2022 8:30:00 AM	34	73	107
4/26/2022 8:45:00 AM	25	60	85
4/26/2022 9:00:00 AM	25	63	88
4/26/2022 9:15:00 AM	30	46	76
4/26/2022 9:30:00 AM	40	48	88
4/26/2022 9:45:00 AM	39	41	80
4/26/2022 10:00:00 AM	31	32	63
4/26/2022 10:15:00 AM	28	31	59
4/26/2022 10:30:00 AM	34	44	78
4/26/2022 10:45:00 AM	39	47	86
4/26/2022 11:00:00 AM	40	42	82
4/26/2022 11:15:00 AM	41	42	83
4/26/2022 11:30:00 AM	46	44	90
4/26/2022 11:45:00 AM	43	38	81
Total	1,030	1,718	2,748
Percentage	37.5%	62.5%	
Peak Hour	7:15 AM	6:30 AM	6:45 AM
Volume	232	427	640
PHF	0.784	0.828	0.936

All Traffic Data Services

2 - FONTAINE BOULEVARD WEST OF MARKSHEFFEL ROAD

Time	EB	WB	Total
4/26/2022 12:00:00 PM	47	51	98
4/26/2022 12:15:00 PM	58	60	118
4/26/2022 12:30:00 PM	28	38	66
4/26/2022 12:45:00 PM	34	42	76
4/26/2022 1:00:00 PM	46	48	94
4/26/2022 1:15:00 PM	27	48	75
4/26/2022 1:30:00 PM	40	39	79
4/26/2022 1:45:00 PM	53	51	104
4/26/2022 2:00:00 PM	47	49	96
4/26/2022 2:15:00 PM	58	64	122
4/26/2022 2:30:00 PM	64	69	133
4/26/2022 2:45:00 PM	53	60	113
4/26/2022 3:00:00 PM	65	76	141
4/26/2022 3:15:00 PM	49	55	104
4/26/2022 3:30:00 PM	89	75	164
4/26/2022 3:45:00 PM	101	67	168
4/26/2022 4:00:00 PM	88	52	140
4/26/2022 4:15:00 PM	92	59	151
4/26/2022 4:30:00 PM	110	67	177
4/26/2022 4:45:00 PM	133	70	203
4/26/2022 5:00:00 PM	124	63	187
4/26/2022 5:15:00 PM	105	64	169
4/26/2022 5:30:00 PM	116	60	176
4/26/2022 5:45:00 PM	91	52	143
4/26/2022 6:00:00 PM	78	53	131
4/26/2022 6:15:00 PM	106	65	171
4/26/2022 6:30:00 PM	71	70	141
4/26/2022 6:45:00 PM	52	50	102
4/26/2022 7:00:00 PM	53	44	97
4/26/2022 7:15:00 PM	40	29	69
4/26/2022 7:30:00 PM	47	28	75
4/26/2022 7:45:00 PM	50	34	84
4/26/2022 8:00:00 PM	50	33	83
4/26/2022 8:15:00 PM	33	24	57
4/26/2022 8:30:00 PM	30	26	56
4/26/2022 8:45:00 PM	35	14	49
4/26/2022 9:00:00 PM	23	21	44
4/26/2022 9:15:00 PM	26	15	41
4/26/2022 9:30:00 PM	18	11	29
4/26/2022 9:45:00 PM	14	8	22
4/26/2022 10:00:00 PM	12	5	17
4/26/2022 10:15:00 PM	17	8	25
4/26/2022 10:30:00 PM	16	8	24
4/26/2022 10:45:00 PM	14	3	17
4/26/2022 11:00:00 PM	11	7	18
4/26/2022 11:15:00 PM	6	4	10
4/26/2022 11:30:00 PM	8	3	11
4/26/2022 11:45:00 PM	2	2	4
Total	2,530	1,944	4,474
Percentage	56.5%	43.5%	
Peak Hour	4:45 PM	3:00 PM	4:30 PM
Volume	478	273	736
PHF	0.898	0.898	0.906
Grand Total	3,560	3,662	7,222
Percentage	49.3%	50.7%	

All Traffic Data Services

4 - FONTAINE BOULEVARD EAST OF CARRIAGE MEADOWS DRIVE

Time	EB	WB	Total
4/26/2022	7	1	8
4/26/2022 12:15:00 AM	6	2	8
4/26/2022 12:30:00 AM	16	1	17
4/26/2022 12:45:00 AM	1	1	2
4/26/2022 1:00:00 AM	6	0	6
4/26/2022 1:15:00 AM	4	6	10
4/26/2022 1:30:00 AM	4	3	7
4/26/2022 1:45:00 AM	8	1	9
4/26/2022 2:00:00 AM	5	0	5
4/26/2022 2:15:00 AM	3	3	6
4/26/2022 2:30:00 AM	2	2	4
4/26/2022 2:45:00 AM	1	2	3
4/26/2022 3:00:00 AM	0	5	5
4/26/2022 3:15:00 AM	1	3	4
4/26/2022 3:30:00 AM	5	6	11
4/26/2022 3:45:00 AM	2	7	9
4/26/2022 4:00:00 AM	4	10	14
4/26/2022 4:15:00 AM	0	13	13
4/26/2022 4:30:00 AM	1	25	26
4/26/2022 4:45:00 AM	3	22	25
4/26/2022 5:00:00 AM	3	35	38
4/26/2022 5:15:00 AM	9	67	76
4/26/2022 5:30:00 AM	9	79	88
4/26/2022 5:45:00 AM	18	82	100
4/26/2022 6:00:00 AM	24	77	101
4/26/2022 6:15:00 AM	48	103	151
4/26/2022 6:30:00 AM	51	164	215
4/26/2022 6:45:00 AM	82	169	251
4/26/2022 7:00:00 AM	87	240	327
4/26/2022 7:15:00 AM	112	207	319
4/26/2022 7:30:00 AM	101	234	335
4/26/2022 7:45:00 AM	110	169	279
4/26/2022 8:00:00 AM	108	134	242
4/26/2022 8:15:00 AM	66	158	224
4/26/2022 8:30:00 AM	57	127	184
4/26/2022 8:45:00 AM	61	109	170
4/26/2022 9:00:00 AM	57	94	151
4/26/2022 9:15:00 AM	58	74	132
4/26/2022 9:30:00 AM	68	101	169
4/26/2022 9:45:00 AM	61	54	115
4/26/2022 10:00:00 AM	64	62	126
4/26/2022 10:15:00 AM	65	90	155
4/26/2022 10:30:00 AM	77	93	170
4/26/2022 10:45:00 AM	63	74	137
4/26/2022 11:00:00 AM	81	88	169
4/26/2022 11:15:00 AM	81	92	173
4/26/2022 11:30:00 AM	74	82	156
4/26/2022 11:45:00 AM	82	81	163
Total	1,856	3,252	5,108
Percentage	36.3%	63.7%	
Peak Hour	7:15 AM	6:45 AM	7:00 AM
Volume	431	850	1260
PHF	0.962	0.885	0.940

All Traffic Data Services

ALL TRAFFIC DATA SERVICES

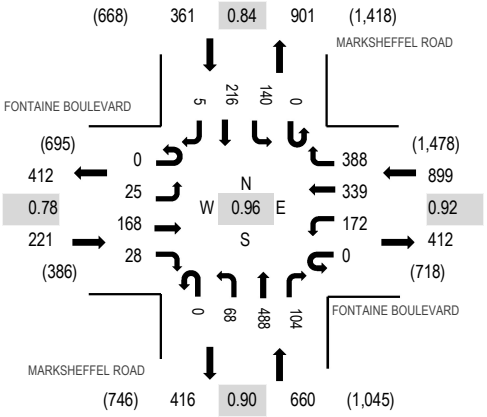
4 - FONTAINE BOULEVARD EAST OF CARRIAGE MEADOWS DRIVE

Time	EB	WB	Total
4/26/2022 12:00:00 PM	90	86	176
4/26/2022 12:15:00 PM	101	104	205
4/26/2022 12:30:00 PM	84	93	177
4/26/2022 12:45:00 PM	68	83	151
4/26/2022 1:00:00 PM	81	85	166
4/26/2022 1:15:00 PM	81	80	161
4/26/2022 1:30:00 PM	60	74	134
4/26/2022 1:45:00 PM	98	82	180
4/26/2022 2:00:00 PM	88	85	173
4/26/2022 2:15:00 PM	130	99	229
4/26/2022 2:30:00 PM	133	86	219
4/26/2022 2:45:00 PM	106	116	222
4/26/2022 3:00:00 PM	141	115	256
4/26/2022 3:15:00 PM	106	114	220
4/26/2022 3:30:00 PM	125	120	245
4/26/2022 3:45:00 PM	171	109	280
4/26/2022 4:00:00 PM	158	104	262
4/26/2022 4:15:00 PM	157	98	255
4/26/2022 4:30:00 PM	199	98	297
4/26/2022 4:45:00 PM	208	118	326
4/26/2022 5:00:00 PM	196	108	304
4/26/2022 5:15:00 PM	179	101	280
4/26/2022 5:30:00 PM	185	89	274
4/26/2022 5:45:00 PM	161	86	247
4/26/2022 6:00:00 PM	143	85	228
4/26/2022 6:15:00 PM	167	88	255
4/26/2022 6:30:00 PM	109	82	191
4/26/2022 6:45:00 PM	98	73	171
4/26/2022 7:00:00 PM	100	63	163
4/26/2022 7:15:00 PM	84	61	145
4/26/2022 7:30:00 PM	77	50	127
4/26/2022 7:45:00 PM	106	38	144
4/26/2022 8:00:00 PM	100	40	140
4/26/2022 8:15:00 PM	76	36	112
4/26/2022 8:30:00 PM	56	35	91
4/26/2022 8:45:00 PM	64	24	88
4/26/2022 9:00:00 PM	42	23	65
4/26/2022 9:15:00 PM	37	16	53
4/26/2022 9:30:00 PM	36	12	48
4/26/2022 9:45:00 PM	36	15	51
4/26/2022 10:00:00 PM	20	12	32
4/26/2022 10:15:00 PM	21	8	29
4/26/2022 10:30:00 PM	26	16	42
4/26/2022 10:45:00 PM	20	2	22
4/26/2022 11:00:00 PM	16	10	26
4/26/2022 11:15:00 PM	14	6	20
4/26/2022 11:30:00 PM	12	5	17
4/26/2022 11:45:00 PM	6	5	11
Total	4,572	3,138	7,710
Percentage	59.3%	40.7%	
Peak Hour	4:30 PM	2:45 PM	4:30 PM
Volume	782	465	1207
PHF	0.940	0.969	0.926
Grand Total	6,428	6,390	12,818
Percentage	50.1%	49.9%	

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

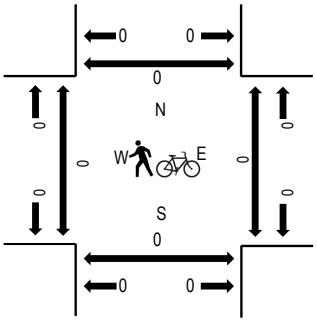
Location: 1 MARKSHEFFEL ROAD & FONTAINE BOULEVARD AM
Date: Tuesday, April 26, 2022
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	FONTAINE BOULEVARD Eastbound				FONTAINE BOULEVARD Westbound				MARKSHEFFEL ROAD Northbound				MARKSHEFFEL ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	8	31	3	0	45	106	94	0	22	146	16	0	32	50	1	554	2,141	0	0	0	0
7:15 AM	0	8	55	11	0	43	81	102	0	15	137	32	0	25	46	1	556	1,988	0	0	0	0
7:30 AM	0	4	38	8	0	44	82	112	0	14	132	25	0	37	54	0	550	1,843	0	0	0	0
7:45 AM	0	5	44	6	0	40	70	80	0	17	73	31	0	46	66	3	481	1,634	0	0	0	0
8:00 AM	0	5	39	9	0	29	54	59	0	14	71	22	0	51	48	0	401	1,436	0	0	0	0
8:15 AM	0	10	30	13	0	40	71	62	0	4	83	18	0	27	46	7	411		0	0	0	0
8:30 AM	0	6	24	4	0	35	60	51	0	12	77	13	0	21	37	1	341		0	0	0	0
8:45 AM	0	5	14	6	0	31	49	38	0	8	50	13	0	34	32	3	283		0	0	0	0
Count Total	0	51	275	60	0	307	573	598	0	106	769	170	0	273	379	16	3,577		0	0	0	0
Peak Hour	0	25	168	28	0	172	339	388	0	68	488	104	0	140	216	5	2,141		0	0	0	0

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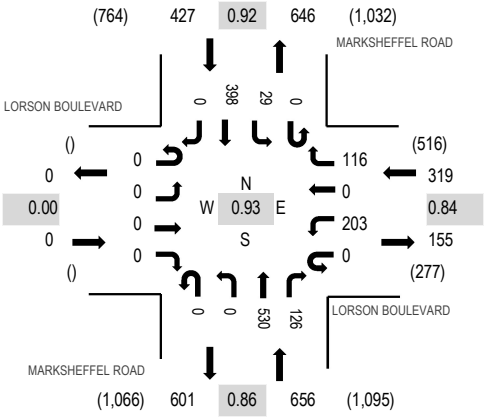
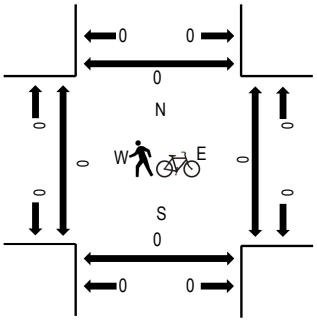
Location: 2 MARKSHEFFEL ROAD & LORSON BOULEVARD AM
Date: Tuesday, April 26, 2022
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	LORSON BOULEVARD Eastbound				LORSON BOULEVARD Westbound				MARKSHEFFEL ROAD Northbound				MARKSHEFFEL ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	58	0	37	0	0	144	18	0	6	94	0	357	1,402	0	0	0	0
7:15 AM	0	0	0	0	0	52	0	32	0	0	154	37	0	7	96	0	378	1,305	0	0	0	0
7:30 AM	0	0	0	0	0	54	0	29	0	0	138	29	0	5	103	0	358	1,195	0	0	0	0
7:45 AM	0	0	0	0	0	39	0	18	0	0	94	42	0	11	105	0	309	1,087	0	0	0	0
8:00 AM	0	0	0	0	0	26	0	15	0	0	95	30	0	4	90	0	260	973	0	0	0	0
8:15 AM	0	0	0	0	0	51	0	5	0	0	100	22	0	6	84	0	268		0	0	0	0
8:30 AM	0	0	0	0	0	41	0	14	0	0	90	27	0	5	73	0	250		0	0	0	0
8:45 AM	0	0	0	0	0	35	0	10	0	0	57	18	0	10	65	0	195		0	0	0	0
Count Total	0	0	0	0	0	356	0	160	0	0	872	223	0	54	710	0	2,375		0	0	0	0
Peak Hour	0	0	0	0	0	203	0	116	0	0	530	126	0	29	398	0	1,402		0	0	0	0

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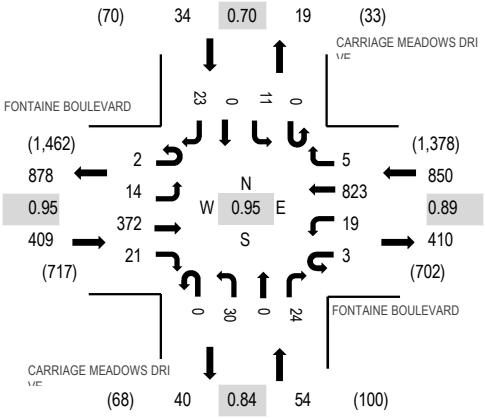
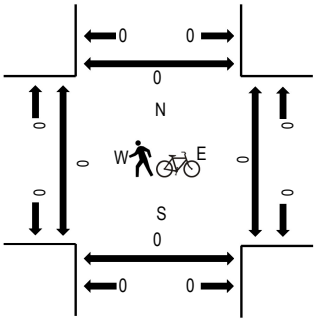
Location: 3 CARRIAGE MEADOWS DRIVE & FONTAINE BOULEVARD AM
Date: Tuesday, April 26, 2022
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	FONTAINE BOULEVARD Eastbound				FONTAINE BOULEVARD Westbound				CARRIAGE MEADOWS DRIVE Northbound				CARRIAGE MEADOWS DRIVE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	2	79	5	0	4	236	0	0	9	0	2	0	6	0	5	348	1,347	0	0	0	0
7:15 AM	1	6	96	5	1	4	202	0	0	3	0	13	0	2	0	5	338	1,274	0	0	0	0
7:30 AM	0	2	92	6	1	8	222	3	0	9	0	6	0	2	0	4	355	1,190	0	0	0	0
7:45 AM	1	4	105	5	1	3	163	2	0	9	0	3	0	1	0	9	306	1,037	0	0	0	0
8:00 AM	1	4	103	7	1	2	131	0	0	8	0	3	0	1	0	14	275	918	0	0	3	0
8:15 AM	0	3	62	7	0	2	156	0	0	9	0	4	0	0	1	10	254		0	0	0	0
8:30 AM	1	2	53	4	0	2	125	0	0	7	0	3	0	1	1	3	202		0	0	0	0
8:45 AM	0	4	55	2	1	0	107	1	0	7	0	5	0	0	0	5	187		0	0	0	0
Count Total	4	27	645	41	5	25	1,342	6	0	61	0	39	0	13	2	55	2,265		0	0	3	0
Peak Hour	2	14	372	21	3	19	823	5	0	30	0	24	0	11	0	23	1,347		0	0	0	0

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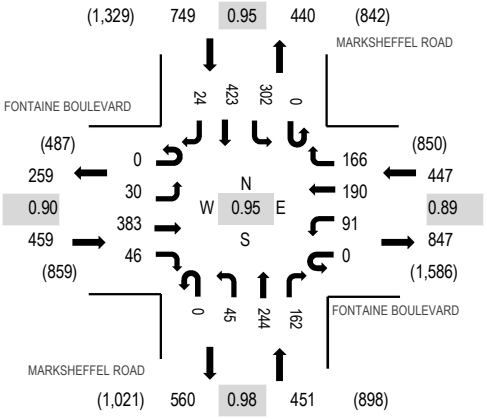
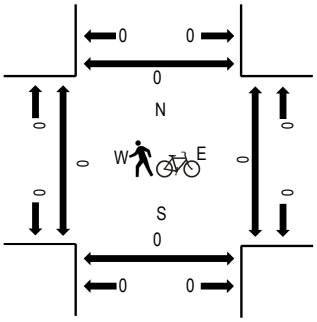
Location: 1 MARKSHEFFEL ROAD & FONTAINE BOULEVARD PM
Date: Tuesday, April 26, 2022
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	FONTAINE BOULEVARD Eastbound				FONTAINE BOULEVARD Westbound				MARKSHEFFEL ROAD Northbound				MARKSHEFFEL ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	5	70	13	0	25	39	40	0	7	70	41	0	51	92	6	459	2,031	0	0	0	0
4:15 PM	0	10	73	9	0	19	40	44	0	12	51	31	0	73	117	7	486	2,106	0	0	0	0
4:30 PM	0	5	96	9	0	26	48	27	0	14	69	37	0	84	109	5	529	2,096	0	0	0	0
4:45 PM	0	7	111	15	0	33	53	40	0	8	60	48	0	71	102	9	557	2,039	0	0	0	0
5:00 PM	0	8	103	13	0	13	49	55	0	11	64	46	0	74	95	3	534	1,905	0	0	0	0
5:15 PM	0	7	83	15	0	21	46	39	0	12	64	42	0	62	79	6	476		0	0	0	0
5:30 PM	0	5	98	13	0	19	45	35	0	9	57	49	0	59	77	6	472		0	0	0	0
5:45 PM	0	3	78	10	1	21	40	32	0	9	45	42	0	63	76	3	423		0	0	0	0
Count Total	0	50	712	97	1	177	360	312	0	82	480	336	0	537	747	45	3,936		0	0	0	0
Peak Hour	0	30	383	46	0	91	190	166	0	45	244	162	0	302	423	24	2,106		0	0	0	0

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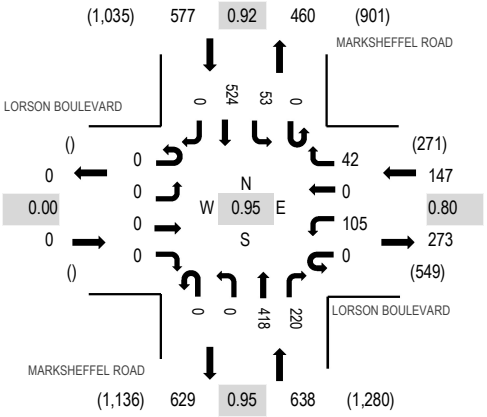
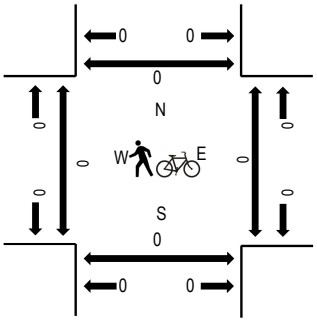
Location: 2 MARKSHEFFEL ROAD & LORSON BOULEVARD PM
Date: Tuesday, April 26, 2022
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	LORSON BOULEVARD Eastbound				LORSON BOULEVARD Westbound				MARKSHEFFEL ROAD Northbound				MARKSHEFFEL ROAD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	22	0	8	0	0	107	47	0	13	110	0	307	1,324	0	0	0	0
4:15 PM	0	0	0	0	0	18	0	12	0	0	89	48	0	13	139	0	319	1,362	0	0	0	0
4:30 PM	0	0	0	0	0	33	0	13	0	0	106	47	0	12	129	0	340	1,360	0	0	0	0
4:45 PM	0	0	0	0	0	23	0	10	0	0	108	60	0	15	142	0	358	1,328	0	0	0	0
5:00 PM	0	0	0	0	0	31	0	7	0	0	115	65	0	13	114	0	345	1,262	0	0	0	0
5:15 PM	0	0	0	0	0	19	0	7	0	0	110	67	0	10	104	0	317		0	0	0	0
5:30 PM	0	0	0	0	0	26	0	11	0	0	99	57	0	11	104	0	308		0	0	0	0
5:45 PM	0	0	0	0	0	25	0	6	0	0	93	62	0	9	97	0	292		0	0	0	0
Count Total	0	0	0	0	0	197	0	74	0	0	827	453	0	96	939	0	2,586		0	0	0	0
Peak Hour	0	0	0	0	0	105	0	42	0	0	418	220	0	53	524	0	1,362		0	0	0	0

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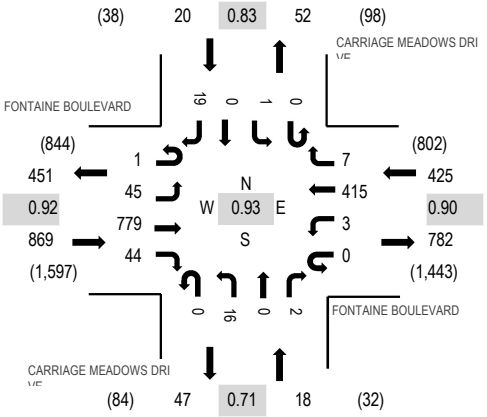
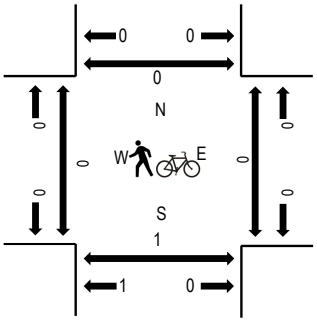
Location: 3 CARRIAGE MEADOWS DRIVE & FONTAINE BOULEVARD PM
Date: Tuesday, April 26, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	FONTAINE BOULEVARD Eastbound				FONTAINE BOULEVARD Westbound				CARRIAGE MEADOWS DRIVE Northbound				CARRIAGE MEADOWS DRIVE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	12	156	5	0	0	103	1	0	0	1	2	0	0	0	3	283	1,246	0	0	0	0
4:15 PM	0	6	154	9	1	2	93	2	0	1	0	1	0	1	0	4	274	1,294	0	0	0	0
4:30 PM	1	11	197	11	0	1	95	2	0	3	0	2	0	0	0	6	329	1,332	0	0	0	0
4:45 PM	0	13	208	14	0	0	117	1	0	3	0	0	0	0	0	4	360	1,311	0	0	0	0
5:00 PM	0	9	195	9	0	1	106	1	0	5	0	0	0	1	0	4	331	1,223	0	0	1	0
5:15 PM	0	12	179	10	0	1	97	3	0	5	0	0	0	0	0	5	312		0	0	0	0
5:30 PM	0	10	185	13	0	1	87	1	0	7	0	0	0	0	0	4	308		1	0	1	3
5:45 PM	0	12	160	6	0	1	84	1	0	1	0	1	0	0	0	6	272		0	0	0	0
Count Total	1	85	1,434	77	1	7	782	12	0	25	1	6	0	2	0	36	2,469		1	0	2	3
Peak Hour	1	45	779	44	0	3	415	7	0	16	0	2	0	1	0	19	1,332		0	0	1	0

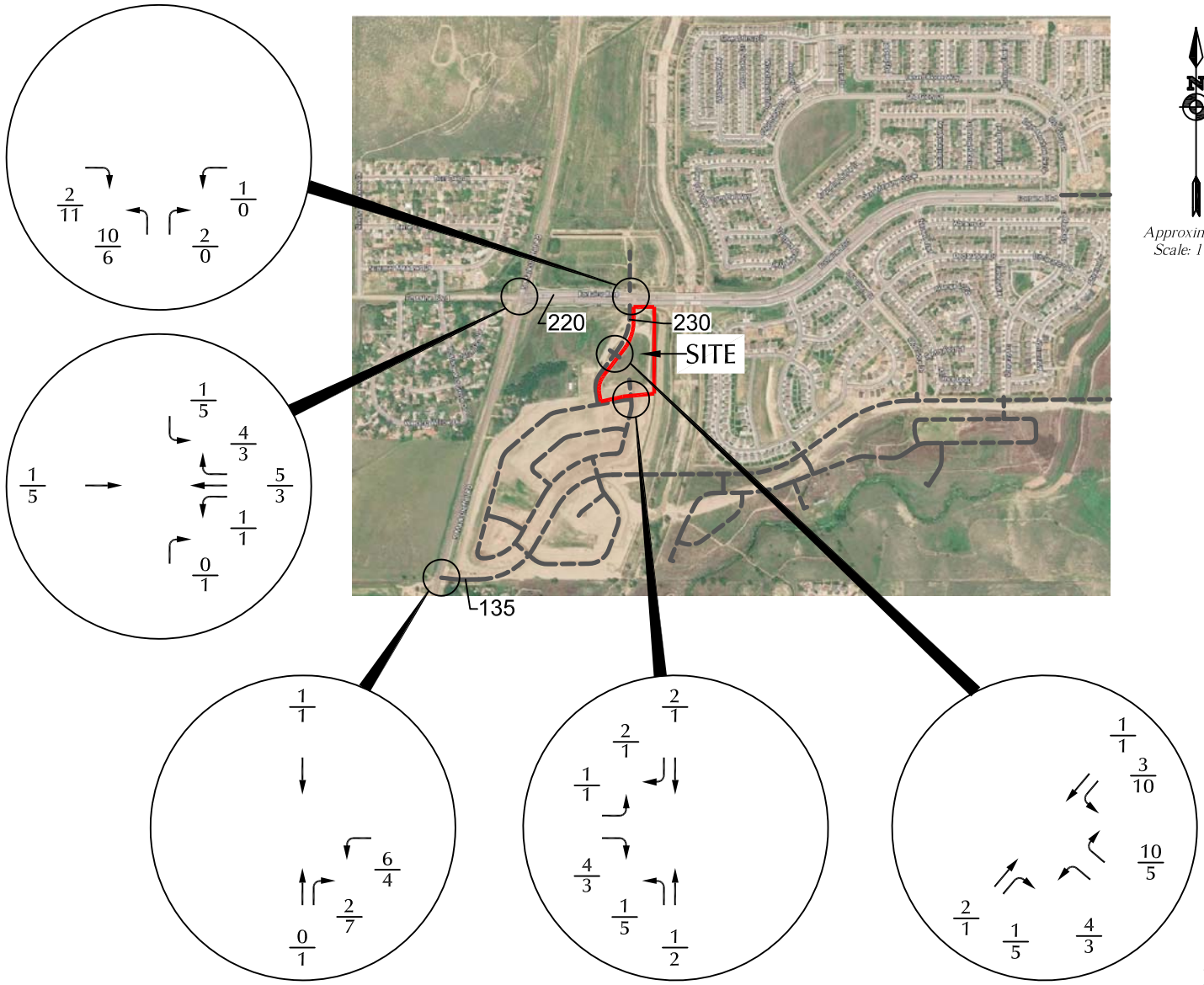


Figure 8

Assignment of Short-Term Site-Generated Traffic

Carriage Meadows South Multi-Family (LSC #184720)

LEGEND:

XX/XX = AM Weekday Peak-Hour Traffic (vehicles per hour) / PM Weekday Peak-Hour Traffic (vehicles per hour)

X,XXX= Average Daily Traffic (vehicles per day) (Estimates by LSC)

Appendix B – Existing Conditions Analyses

Entire appendix - update peak hour factors to be in conformance with ECM Section B.3.1.B.

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Obtain and apply existing signal timing and any existing signal coordination data for Marksheffel / Fontaine intersection.

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	68	488	104	140	216	5	25	168	28	172	339	388
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	52	0	0	3	0	0	14	0	0	194
Total Hourly Volume [veh/h]	68	488	52	140	216	2	25	168	14	172	339	194
Peak Hour Factor	0.9000	0.9000	0.9000	0.8400	0.8400	0.8400	0.7800	0.7800	0.7800	0.9200	0.9200	0.9200
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]	19	136	14	42	64	1	8	54	4	47	92	53
Total Analysis Volume [veh/h]	76	542	58	167	257	2	32	215	18	187	368	211
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	36	0	9	32	0	9	23	0	12	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	50	41	41	50	42	42	22	10	10	22	15	15
g / C, Green / Cycle	0.63	0.51	0.51	0.63	0.52	0.52	0.27	0.12	0.12	0.27	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.29	0.04	0.17	0.14	0.00	0.03	0.06	0.01	0.13	0.10	0.13
s, saturation flow rate [veh/h]	1202	1870	1589	955	1870	1589	1036	3560	1589	1437	3560	1589
c, Capacity [veh/h]	796	957	814	562	978	831	340	443	198	465	682	305
d1, Uniform Delay [s]	6.16	13.46	9.92	8.36	10.58	9.14	21.85	32.73	31.11	23.71	29.23	30.22
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	0.05	2.42	0.17	1.35	0.65	0.01	0.12	0.83	0.20	0.56	0.67	2.82
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	0.10	0.57	0.07	0.30	0.26	0.00	0.09	0.49	0.09	0.40	0.54	0.69
d, Delay for Lane Group [s/veh]	6.21	15.88	10.09	9.70	11.23	9.14	21.96	33.56	31.31	24.27	29.89	33.04
Lane Group LOS	A	B	B	A	B	A	C	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.35	5.85	0.45	1.01	2.14	0.01	0.42	1.87	0.30	2.70	3.02	3.75
50th-Percentile Queue Length [ft/ln]	8.84	146.33	11.23	25.13	53.42	0.36	10.53	46.81	7.52	67.50	75.52	93.64
95th-Percentile Queue Length [veh/ln]	0.64	9.82	0.81	1.81	3.85	0.03	0.76	3.37	0.54	4.86	5.44	6.74
95th-Percentile Queue Length [ft/ln]	15.92	245.52	20.21	45.23	96.16	0.65	18.95	84.26	13.53	121.50	135.94	168.55

Movement, Approach, & Intersection Results

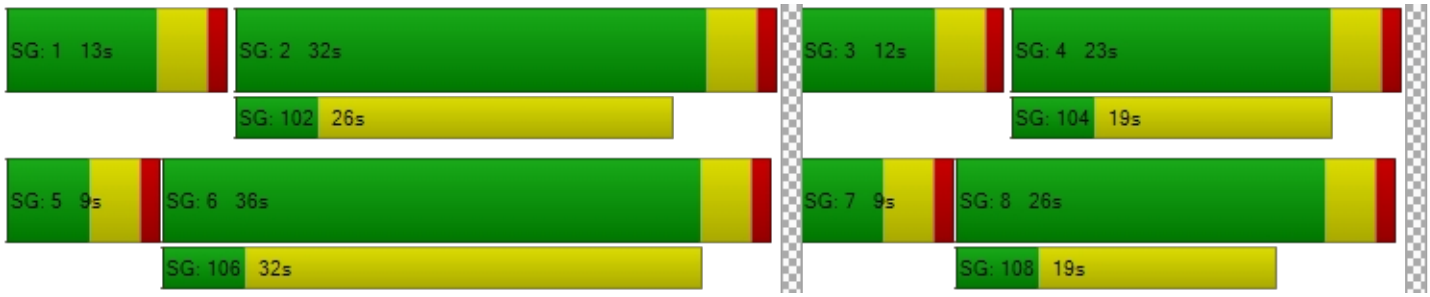
d_M, Delay for Movement [s/veh]	6.21	15.88	10.09	9.70	11.23	9.14	21.96	33.56	31.31	24.27	29.89	33.04
Movement LOS	A	B	B	A	B	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.30			10.62			32.01			29.39		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.18											
Intersection LOS	C											
Intersection V/C	0.483											

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]	31.56	31.56	31.56	31.56
l_p,int, Pedestrian LOS Score for Intersection	2.779	2.770	2.705	3.297
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	799	699	474	549
d_b, Bicycle Delay [s]	14.45	16.95	23.31	21.08
l_b,int, Bicycle LOS Score for Intersection	2.761	2.267	1.790	2.352
Bicycle LOS	C	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl

Control Type:	Two-way stop	Delay (sec / veh):	133.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.090

Intersection Setup

Name	Marksheffel Rd		Marksheffel Rd		Lorson Blvd	
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	1	1	0	1	0
Entry Pocket Length [ft]	100.00	250.00	400.00	100.00	250.00	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]	55.00		55.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Marksheffel Rd		Marksheffel Rd		Lorson Blvd	
Base Volume Input [veh/h]	530	126	29	398	203	116
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]	530	126	29	398	203	116
Peak Hour Factor	0.8600	0.8600	0.9200	0.9200	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	37	8	108	60	35
Total Analysis Volume [veh/h]	616	147	32	433	242	138
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	0.04	0.00	1.09	0.28
d_M, Delay for Movement [s/veh]	0.00	0.00	9.40	0.00	133.00	15.19
Movement LOS	A	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.12	0.00	10.86	1.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.93	0.00	271.49	28.62
d_A, Approach Delay [s/veh]	0.00		0.65		90.21	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	21.51					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	36.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.124

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	30	0	24	11	0	23	16	372	21	22	823	5
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]	30	0	24	11	0	23	16	372	21	22	823	5
Peak Hour Factor	0.8400	0.8400	0.8400	0.7000	0.7000	0.7000	0.9500	0.9500	0.9500	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]	9	0	7	4	0	8	4	98	6	6	231	1
Total Analysis Volume [veh/h]	36	0	29	16	0	33	17	392	22	25	925	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.18	0.00	0.04	0.12	0.00	0.06	0.02	0.00	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	27.39	32.34	9.60	36.95	32.96	12.02	10.04	0.00	0.00	8.22	0.00	0.00
Movement LOS	D	D	A	E	D	B	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.65	0.00	0.11	0.41	0.00	0.19	0.07	0.00	0.00	0.07	0.00	0.00
95th-Percentile Queue Length [ft/ln]	16.30	0.00	2.77	10.36	0.00	4.81	1.79	0.00	0.00	1.68	0.00	0.00
d_A, Approach Delay [s/veh]	19.45			20.16			0.40			0.22		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	1.75											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 20: Carriage Meadows Dr/Firesteel Dr

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Base Volume Input [veh/h]	44	1	3	40	4	10
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]	44	1	3	40	4	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	0	1	10	1	3
Total Analysis Volume [veh/h]	44	1	3	40	4	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.31	0.00	9.02	8.56
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.13	0.13	1.08	1.08
d_A, Approach Delay [s/veh]	0.00		0.51		8.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.41					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.416

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Obtain and apply existing signal timing and any existing signal coordination data for Marksheffel / Fontaine intersection.

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	45	244	162	302	423	24	30	383	46	91	190	166
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	81	0	0	12	0	0	23	0	0	83
Total Hourly Volume [veh/h]	45	244	81	302	423	12	30	383	23	91	190	83
Peak Hour Factor	0.9800	0.9800	0.9800	0.9500	0.9500	0.9500	0.9000	0.9000	0.9000	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]	11	62	21	79	111	3	8	106	6	26	53	23
Total Analysis Volume [veh/h]	46	249	83	318	445	13	33	426	26	102	213	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	36	0	9	36	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	51	42	42	51	44	44	21	12	12	21	15	15
g / C, Green / Cycle	0.64	0.52	0.52	0.64	0.54	0.54	0.26	0.15	0.15	0.26	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.13	0.05	0.28	0.24	0.01	0.03	0.12	0.02	0.08	0.06	0.06
s, saturation flow rate [veh/h]	1022	1870	1589	1150	1870	1589	1231	3560	1589	1219	3560	1589
c, Capacity [veh/h]	643	975	829	783	1016	864	405	541	241	350	646	288
d1, Uniform Delay [s]	6.44	10.59	9.69	6.85	10.97	8.43	22.17	32.77	29.33	23.56	28.59	28.55
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	0.05	0.63	0.24	1.56	1.37	0.03	0.09	2.60	0.19	0.46	0.30	0.64
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	0.07	0.26	0.10	0.41	0.44	0.02	0.08	0.79	0.11	0.29	0.33	0.32
d, Delay for Lane Group [s/veh]	6.49	11.22	9.93	8.41	12.34	8.46	22.26	35.37	29.52	24.02	28.89	29.20
Lane Group LOS	A	B	A	A	B	A	C	D	C	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.20	2.07	0.63	1.92	3.95	0.09	0.44	3.90	0.42	1.43	1.69	1.50
50th-Percentile Queue Length [ft/ln]	5.03	51.67	15.84	48.04	98.83	2.19	11.00	97.52	10.45	35.74	42.17	37.48
95th-Percentile Queue Length [veh/ln]	0.36	3.72	1.14	3.46	7.12	0.16	0.79	7.02	0.75	2.57	3.04	2.70
95th-Percentile Queue Length [ft/ln]	9.06	93.00	28.51	86.46	177.89	3.95	19.80	175.54	18.80	64.34	75.90	67.46

Movement, Approach, & Intersection Results

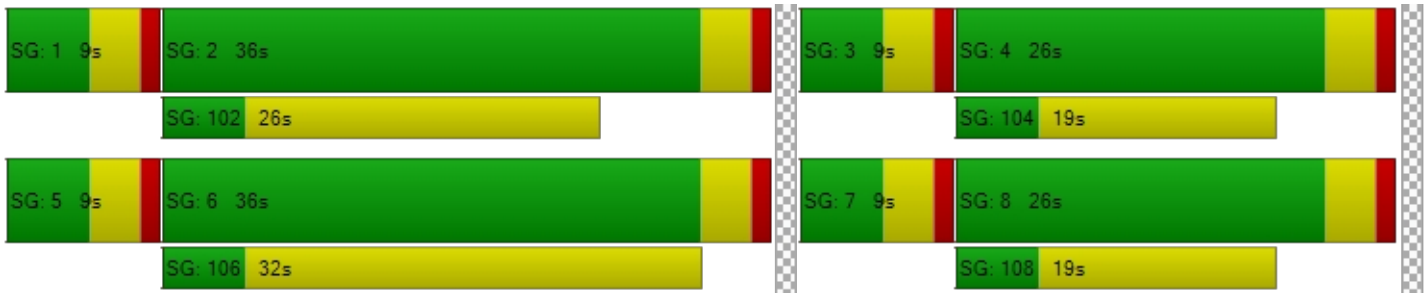
d_M, Delay for Movement [s/veh]	6.49	11.22	9.93	8.41	12.34	8.46	22.26	35.37	29.52	24.02	28.89	29.20
Movement LOS	A	B	A	A	B	A	C	D	C	C	C	C
d_A, Approach Delay [s/veh]	10.36			10.67			34.16			27.74		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.58											
Intersection LOS	B											
Intersection V/C	0.416											

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]	31.56	31.56	31.56	31.56
l_p,int, Pedestrian LOS Score for Intersection	2.739	2.710	2.712	3.248
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	799	799	549	549
d_b, Bicycle Delay [s]	14.45	14.45	21.08	21.08
l_b,int, Bicycle LOS Score for Intersection	2.317	2.860	1.979	1.965
Bicycle LOS	B	C	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl

Control Type:	Two-way stop	Delay (sec / veh):	46.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

Intersection Setup

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
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	1	1	0	1	0
Entry Pocket Length [ft]	100.00	250.00	400.00	100.00	250.00	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]	55.00		55.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
Base Volume Input [veh/h]	418	220	53	524	105	42
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]	418	220	53	524	105	42
Peak Hour Factor	0.9500	0.9500	0.9200	0.9200	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	110	58	14	142	33	13
Total Analysis Volume [veh/h]	440	232	58	570	131	53
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	0.00	0.00	0.06	0.01	0.62	0.09
d_M, Delay for Movement [s/veh]	0.00	0.00	9.18	0.00	45.96	11.38
Movement LOS	A	A	A	A	E	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.20	0.00	3.58	0.28
95th-Percentile Queue Length [ft/ln]	0.00	0.00	5.04	0.00	89.43	7.02
d_A, Approach Delay [s/veh]	0.00		0.85		36.00	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	4.82					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	59.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.196

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	16	0	2	1	0	19	46	779	44	3	415	7
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]	16	0	2	1	0	19	46	779	44	3	415	7
Peak Hour Factor	1.0000	1.0000	1.0000	0.8300	1.0000	0.8300	0.7100	0.7100	1.0000	1.0000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	1	0	0	6	16	274	11	1	115	2
Total Analysis Volume [veh/h]	16	0	2	1	0	23	65	1097	44	3	461	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.00	0.00	0.01	0.00	0.03	0.06	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	59.71	47.34	12.53	30.20	49.57	9.81	8.52	0.00	0.00	10.95	0.00	0.00
Movement LOS	F	E	B	D	E	A	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.68	0.00	0.01	0.02	0.00	0.09	0.19	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	16.94	0.00	0.31	0.52	0.00	2.30	4.75	0.00	0.00	0.37	0.00	0.00
d_A, Approach Delay [s/veh]	54.47			10.66			0.46			0.07		
Approach LOS	F			B			A			A		
d_I, Intersection Delay [s/veh]	1.06											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 20: Carriage Meadows Dr/Fire steel Dr

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Base Volume Input [veh/h]	13	5	10	37	3	5
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]	13	5	10	37	3	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	3	9	1	1
Total Analysis Volume [veh/h]	13	5	10	37	3	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.26	0.00	8.92	8.41
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.42	0.42	0.60	0.60
d_A, Approach Delay [s/veh]	0.00		1.55		8.60	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.94					
Intersection LOS	A					

Appendix C – Trip Generation Calculations

PROJECT DETAILS

Project Name:	Lorson Ranch Commercials TIS	Type of Project:	Traffic Impact Study
Project No:		City:	Colorado Springs
Country:		Built-up Area(Sq.ft):	
Analyst Name:	Scott Barnhart	Clients Name:	The Landhuis Company
Date:	6/2/2022	ZIP/Postal Code:	
State/Province:	**El Paso County**	No. of Scenarios:	3
Analysis Region:			

SCENARIO SUMMARY

Scenarios	Name	No. of Land Uses	Phases of Development	No. of Years to Project Traffic	User Group	Estimated New Vehicle Trips		
						Entry	Exit	Total
Scenario - 1	Weekday	2	1	0		5277	5277	10554
Scenario - 2	AM Peak Hour	2	1	0		155	111	266
Scenario - 3	PM Peak Hour	2	1	0		172	185	357

Scenario - 1

Scenario Name: Weekday
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry / Split%	Exit / Split%	Total
945 - Convenience Store/Gas Station - VFP (9-	General Urban/Suburban	1000 Sq. Ft. GFA	5.2	Weekday	Best Fit (LIN)	1733	1733	3466
Data Source: Trip Generation Manual, 11th Ed					T = 560.88(X) + 548.79	50%	50%	
821 - Shopping Plaza (40-150k) - Supermarket -	General Urban/Suburban	1000 Sq. Ft. GLA	104.97	Weekday	Average	3544	3544	7088
Data Source: Trip Generation Manual, 11th Ed					67.52	50%	50%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
945 - Convenience Store/Gas Station - VFP (9-15)	100	100	1	1	50	50
821 - Shopping Plaza (40-150k) - Supermarket - No	100	100	1	1	50	50

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	1733	1733	0	0	1733	1733
	3466		0		3466	
821 - Shopping Plaza (40-150k) - Supermarket - No	3544	3544	0	0	3544	3544
	7088		0		7088	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
945 - Convenience Store/Gas Station - VFP (9-15)	Resturant
821 - Shopping Plaza (40-150k) - Supermarket - No	Retail

BALANCED PERSON TRIPS:

945 - Convenience Store/Gas Station-VFP (9-15) | 821 - Shopping Plaza (40-150k)-Supermarket - No

Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
1733	1	0	0	**0**	0	0	1	3544
Persons Entry	**PAF**	**UIPTC**	**Unconstrained Demand**	**<<<== BALANCED <<<==**	**Unconstrained Demand**	**UIPTC**	**PAF**	**Persons Exit**
1733	1	0	0	**0**	0	0	1	3544

INTERNAL PERSON TRIPS:

945 - Convenience Store/Gas Station-VFP (9-15)

Internal Person Trips From	Entry	Exit	Total
821 - Shopping Plaza (40-150k)-Supermarket - No	0	0	0

Total Internal Person Trips	**0**	**0**	**0**

821 - Shopping Plaza (40-150k)-Supermarket - No

Internal Person Trips From	Entry	Exit	Total
945 - Convenience Store/Gas Station-VFP (9-15)	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:
945 - Convenience Store/Gas Station-VFP (9-15)

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	1733	1733	3466
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

821 - Shopping Plaza (40-150k)-Supermarket - No

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	3544	3544	7088
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	1733	1733	0.00%	0.00%	0	0
821 - Shopping Plaza (40-150k) - Supermarket - No	3544	3544	0.00%	0.00%	0	0

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	1733	1733	0.00%	0.00%	0	0
821 - Shopping Plaza (40-150k) - Supermarket - No	3544	3544	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	1733	1733	0.00%	0.00%	0	0
821 - Shopping Plaza (40-150k) - Supermarket - No	3544	3544	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
945 - Convenience Store/Gas Station - VFP (9-15)	1733	1733	3466
821 - Shopping Plaza (40-150k) - Supermarket - No	3544	3544	7088

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	5277	5277	10554
Internal Vehicle Trips	0	0	0
External Vehicle Trips	5277	5277	10554
Internal Vehicle Trip Capture	0%	0%	0%
Pass-by Vehicle Trips	0	0	0
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	5277	5277	10554

Scenario - 2

Scenario Name: AM Peak Hour
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry / Split%	Exit / Split%	Total
945 - Convenience Store/Gas Station - VFP (9-	General Urban/Suburban	1000 Sq. Ft. GFA	5.2	Weekday, Peak Hour of Adjacent Street Traffic,	Average	147	147	294
Data Source: Trip Generation Manual, 11th Ed					56.52	50%	50%	
821 - Shopping Plaza (40-150k) - Supermarket -	General Urban/Suburban	1000 Sq. Ft. GLA	104.97	Weekday, Peak Hour of Adjacent Street Traffic,	Average	113	69	182
Data Source: Trip Generation Manual, 11th Ed					1.73	62%	38%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
945 - Convenience Store/Gas Station - VFP (9-15)	100	100	1	1	50	50
821 - Shopping Plaza (40-150k) - Supermarket - No	100	100	1	1	62	38

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	147	147	0	0	147	147
	294		0		294	
821 - Shopping Plaza (40-150k) - Supermarket - No	113	69	0	0	113	69
	182		0		182	

VEHICLE TRIPS AFTER MULTI-MODAL ADJUSTMENT

MODE SHARE:

Land Use	Personal Passenger Vehicle		Truck		Other Modes	
	Entry (%)	Exit (%)	Entry (%)	Exit (%)	Entry (%)	Exit (%)
945 - Convenience Store/Gas Station - VFP (9-15)	100%	100%	0%	0%	0%	0%
821 - Shopping Plaza (40-150k) - Supermarket - No	100%	100%	0%	0%	0%	0%

OCCUPANCY:

Land Use	Vehicle	
	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	1.00	1.00
821 - Shopping Plaza (40-150k) - Supermarket - No	1.00	1.00

ADJUSTED VEHICLE TRIPS:

Land Use	Entry				Exit			
	Person Trips	Vehicle Mode Share (%)	Vehicle Occupancy	Vehical Trips	Person Trips	Vehicle Mode Share (%)	Vehicle Occupancy	Vehical Trips
945 - Convenience Store/Gas Station - VFP (9-	147	100%	1.00	147	147	100%	1.00	147
821 - Shopping Plaza (40-150k) - Supermarket -	113	100%	1.00	113	69	100%	1.00	69

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
945 - Convenience Store/Gas Station - VFP (9-15)	Resturant
821 - Shopping Plaza (40-150k) - Supermarket - No	Retail

BALANCED PERSON TRIPS:

945 - Convenience Store/Gas Station-VFP (9-15)						821 - Shopping Plaza (40-150k)-Supermarket - No		
Persons Exit	PAF	UIPTC	Unconstrained Demand	**==>>> BALANCED ==>>>**	Unconstrained Demand	UIPTC	PAF	Persons Entry
147	1	14	21	**9**	9	8	1	113
Persons Entry	PAF	UIPTC	Unconstrained Demand	**<<<== BALANCED <<<==**	Unconstrained Demand	UIPTC	PAF	Persons Exit
147	1	50	73	**9**	9	13	1	69

INTERNAL PERSON TRIPS:

945 - Convenience Store/Gas Station-VFP (9-15)

Internal Person Trips From	Entry	Exit	Total
821 - Shopping Plaza (40-150k)-Supermarket - No	9	9	18
Total Internal Person Trips	**9**	**9**	**18**

821 - Shopping Plaza (40-150k)-Supermarket - No

Internal Person Trips From	Entry	Exit	Total
945 - Convenience Store/Gas Station-VFP (9-15)	9	9	18
Total Internal Person Trips	**9**	**9**	**18**

INTERNAL VEHICLE TRIPS AND CAPTURE:

945 - Convenience Store/Gas Station-VFP (9-15)

Total Internal Person Trips	9	9	18
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**9**	**9**	**18**
Total External Vehicle Trips	138	138	276
Internal Vehicle Trip Capture	**6%**	**6%**	**6%**

821 - Shopping Plaza (40-150k)-Supermarket - No

Total Internal Person Trips	9	9	18
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**9**	**9**	**18**
Total External Vehicle Trips	104	60	164
Internal Vehicle Trip Capture	**8%**	**13%**	**10%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	138	138	63.00%	63.00%	87	87
821 - Shopping Plaza (40-150k) - Supermarket - No	104	60	0.00%	0.00%	0	0

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	138	138	0.00%	0.00%	0	0
821 - Shopping Plaza (40-150k) - Supermarket - No	104	60	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	51	51	0.00%	0.00%	0	0
821 - Shopping Plaza (40-150k) - Supermarket - No	104	60	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
945 - Convenience Store/Gas Station - VFP (9-15)	51	51	102
821 - Shopping Plaza (40-150k) - Supermarket - No	104	60	164

Land Use	New Vehicle Trips (PPV)		
	Entry	Exit	Total
945 - Convenience Store/Gas Station - VFP (9-15)	51	51	102
821 - Shopping Plaza (40-150k) - Supermarket - No	104	60	164

Land Use	New Vehicle Trips (Truck)		
	Entry	Exit	Total
945 - Convenience Store/Gas Station - VFP (9-15)	0	0	0
821 - Shopping Plaza (40-150k) - Supermarket - No	0	0	0

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	260	216	476
Vehicle Trips After Multi-modal Adjustment	260	216	476
Internal Vehicle Trips	18	18	36
External Vehicle Trips	242	198	440
Internal Vehicle Trip Capture	7%	8%	8%
Pass-by Vehicle Trips	87	87	174
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	155	111	266
PPV	155	111	266
Truck	0	0	0
Person Trips by Other Modes	0	0	0

Scenario - 3

Scenario Name: PM Peak Hour
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry / Split%	Exit / Split%	Total
945 - Convenience Store/Gas Station - VFP (9-	General Urban/Suburban	1000 Sq. Ft. GFA	5.2	Weekday, Peak Hour of Adjacent Street Traffic,	Average	142	142	284
Data Source: Trip Generation Manual, 11th Ed					54.52	50%	50%	
821 - Shopping Plaza (40-150k) - Supermarket -	General Urban/Suburban	1000 Sq. Ft. GLA	104.97	Weekday, Peak Hour of Adjacent Street Traffic,	Average	267	278	545
Data Source: Trip Generation Manual, 11th Ed					5.19	49%	51%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
945 - Convenience Store/Gas Station - VFP (9-15)	100	100	1	1	50	50
821 - Shopping Plaza (40-150k) - Supermarket - No	100	100	1	1	49	51

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	142	142	0	0	142	142
	284		0		284	
821 - Shopping Plaza (40-150k) - Supermarket - No	267	278	0	0	267	278
	545		0		545	

VEHICLE TRIPS AFTER MULTI-MODAL ADJUSTMENT

MODE SHARE:

Land Use	Personal Passenger Vehicle		Truck		Other Modes	
	Entry (%)	Exit (%)	Entry (%)	Exit (%)	Entry (%)	Exit (%)
945 - Convenience Store/Gas Station - VFP (9-15)	100%	100%	0%	0%	0%	0%
821 - Shopping Plaza (40-150k) - Supermarket - No	100%	100%	0%	0%	0%	0%

OCCUPANCY:

Land Use	Vehicle	
	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	1.00	1.00
821 - Shopping Plaza (40-150k) - Supermarket - No	1.00	1.00

ADJUSTED VEHICLE TRIPS:

Land Use	Entry				Exit			
	Person Trips	Vehicle Mode Share (%)	Vehicle Occupancy	Vehical Trips	Person Trips	Vehicle Mode Share (%)	Vehicle Occupancy	Vehical Trips
945 - Convenience Store/Gas Station - VFP (9-	142	100%	1.00	142	142	100%	1.00	142
821 - Shopping Plaza (40-150k) - Supermarket -	267	100%	1.00	267	278	100%	1.00	278

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
945 - Convenience Store/Gas Station - VFP (9-15)	Resturant
821 - Shopping Plaza (40-150k) - Supermarket - No	Retail

BALANCED PERSON TRIPS:

945 - Convenience Store/Gas Station-VFP (9-15)						821 - Shopping Plaza (40-150k)-Supermarket - No		
Persons Exit	PAF	UIPTC	Unconstrained Demand	**==>>> BALANCED ==>>>**	Unconstrained Demand	UIPTC	PAF	Persons Entry
142	1	41	58	**58**	133	50	1	267
Persons Entry	PAF	UIPTC	Unconstrained Demand	**<<<== BALANCED <<<==**	Unconstrained Demand	UIPTC	PAF	Persons Exit
142	1	29	41	**41**	81	29	1	278

INTERNAL PERSON TRIPS:

945 - Convenience Store/Gas Station-VFP (9-15)

Internal Person Trips From	Entry	Exit	Total
821 - Shopping Plaza (40-150k)-Supermarket - No	41	58	99
Total Internal Person Trips	**41**	**58**	**99**

821 - Shopping Plaza (40-150k)-Supermarket - No

Internal Person Trips From	Entry	Exit	Total
945 - Convenience Store/Gas Station-VFP (9-15)	58	41	99
Total Internal Person Trips	**58**	**41**	**99**

INTERNAL VEHICLE TRIPS AND CAPTURE:

945 - Convenience Store/Gas Station-VFP (9-15)

Total Internal Person Trips	41	58	99
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**41**	**58**	**99**
Total External Vehicle Trips	101	84	185
Internal Vehicle Trip Capture	**29%**	**41%**	**35%**

821 - Shopping Plaza (40-150k)-Supermarket - No

Total Internal Person Trips	58	41	99
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**58**	**41**	**99**
Total External Vehicle Trips	209	237	446
Internal Vehicle Trip Capture	**22%**	**15%**	**18%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	101	84	66.00%	66.00%	67	55
821 - Shopping Plaza (40-150k) - Supermarket - No	209	237	34.00%	34.00%	71	81

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	101	84	0.00%	0.00%	0	0
821 - Shopping Plaza (40-150k) - Supermarket - No	209	237	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
945 - Convenience Store/Gas Station - VFP (9-15)	34	29	0.00%	0.00%	0	0
821 - Shopping Plaza (40-150k) - Supermarket - No	138	156	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
945 - Convenience Store/Gas Station - VFP (9-15)	34	29	63
821 - Shopping Plaza (40-150k) - Supermarket - No	138	156	294

Land Use	New Vehicle Trips (PPV)		
	Entry	Exit	Total
945 - Convenience Store/Gas Station - VFP (9-15)	34	29	63
821 - Shopping Plaza (40-150k) - Supermarket - No	138	156	294

Land Use	New Vehicle Trips (Truck)		
	Entry	Exit	Total
945 - Convenience Store/Gas Station - VFP (9-15)	0	0	0
821 - Shopping Plaza (40-150k) - Supermarket - No	0	0	0

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	409	420	829
Vehicle Trips After Multi-modal Adjustment	409	420	829
Internal Vehicle Trips	99	99	198
External Vehicle Trips	310	321	631
Internal Vehicle Trip Capture	24%	24%	24%
Pass-by Vehicle Trips	138	136	274
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	172	185	357
PPV	172	185	357
Truck	0	0	0
Person Trips by Other Modes	0	0	0

Appendix D – Buildout Conditions Analyses

Entire appendix - update peak hour factors to be in conformance with ECM Section B.3.1.B.

Develop and apply appropriate yellow+all-red times for proposed signals; update y+ar times for the Marksheffel / Fontaine intersection if necessary based on future year geometric changes.

Evaluate progression in accordance with ECM requirements.

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	51	375	113	151	170	17	25	243	46	246	624	488
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	57	0	0	9	0	0	23	0	0	244
Total Hourly Volume [veh/h]	51	375	56	151	170	8	25	243	23	246	624	244
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	94	14	38	43	2	6	61	6	62	156	61
Total Analysis Volume [veh/h]	51	375	56	151	170	8	25	243	23	246	624	244
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	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]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Protect	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	43	0	15	49	0	9	43	0	9	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	34	0	0	21	0	0	27	0	0	34	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	72	61	61	7	64	64	30	21	21	30	23	23
g / C, Green / Cycle	0.66	0.56	0.56	0.06	0.58	0.58	0.27	0.19	0.19	0.27	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.04	0.20	0.04	0.04	0.09	0.01	0.03	0.07	0.01	0.19	0.18	0.15
s, saturation flow rate [veh/h]	1254	1870	1589	3459	1870	1589	820	3560	1589	1271	3560	1589
c, Capacity [veh/h]	861	1039	883	216	1087	924	215	677	302	380	752	336
d1, Uniform Delay [s]	6.89	13.59	11.26	50.61	10.61	9.70	31.13	38.75	36.63	37.40	41.54	40.47
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	0.03	0.97	0.14	4.08	0.31	0.02	0.24	0.32	0.11	1.86	2.45	3.01
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	0.06	0.36	0.06	0.70	0.16	0.01	0.12	0.36	0.08	0.65	0.83	0.73
d, Delay for Lane Group [s/veh]	6.92	14.56	11.40	54.68	10.92	9.71	31.36	39.07	36.74	39.26	43.99	43.48
Lane Group LOS	A	B	B	D	B	A	C	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.35	4.75	0.59	2.07	1.73	0.07	0.49	2.79	0.50	5.53	8.03	6.21
50th-Percentile Queue Length [ft/ln]	8.73	118.73	14.67	51.71	43.19	1.87	12.20	69.87	12.59	138.25	200.80	155.16
95th-Percentile Queue Length [veh/ln]	0.63	8.32	1.06	3.72	3.11	0.13	0.88	5.03	0.91	9.39	12.68	10.29
95th-Percentile Queue Length [ft/ln]	15.71	208.08	26.40	93.09	77.74	3.36	21.96	125.76	22.66	234.67	317.00	257.30

Movement, Approach, & Intersection Results

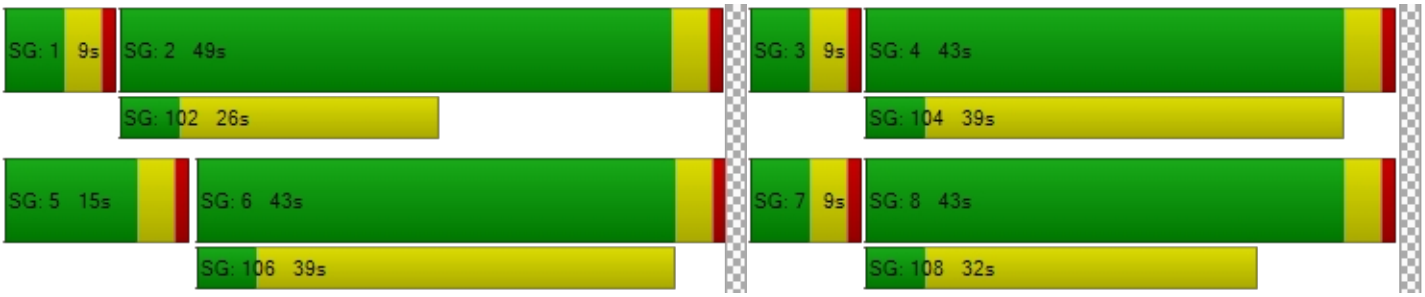
d_M, Delay for Movement [s/veh]	6.92	14.56	11.40	54.68	10.92	9.71	31.36	39.07	36.74	39.26	43.99	43.48
Movement LOS	A	B	B	D	B	A	C	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.38			30.98			38.22			42.83		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	34.06											
Intersection LOS	C											
Intersection V/C	0.430											

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]	46.39	46.39	46.39	46.39
l_p,int, Pedestrian LOS Score for Intersection	2.811	2.770	2.786	3.342
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	709	818	709	709
d_b, Bicycle Delay [s]	22.94	19.23	22.94	22.94
l_b,int, Bicycle LOS Score for Intersection	2.449	2.117	1.819	2.680
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.493

Intersection Setup

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
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	1	1	0	1	0
Entry Pocket Length [ft]	100.00	250.00	400.00	100.00	250.00	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]	55.00		55.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
Base Volume Input [veh/h]	458	133	53	409	330	81
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
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	67	0	0	0	41
Total Hourly Volume [veh/h]	458	66	53	409	330	40
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	115	17	13	102	83	10
Total Analysis Volume [veh/h]	458	66	53	409	330	40
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	10	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	25	0	9	34	26	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	16	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	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
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	31	31	38	38	14	14
g / C, Green / Cycle	0.51	0.51	0.63	0.63	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.27	0.05	0.06	0.24	0.21	0.03
s, saturation flow rate [veh/h]	1683	1431	900	1683	1603	1431
c, Capacity [veh/h]	854	726	581	1052	388	346
d1, Uniform Delay [s]	10.02	7.65	5.61	5.58	21.77	17.79
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.41	0.25	0.31	1.08	5.32	0.15
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.09	0.09	0.39	0.85	0.12
d, Delay for Lane Group [s/veh]	12.43	7.89	5.92	6.67	27.09	17.93
Lane Group LOS	B	A	A	A	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.19	0.34	0.17	1.52	4.54	0.41
50th-Percentile Queue Length [ft/ln]	79.87	8.46	4.30	37.95	113.60	10.18
95th-Percentile Queue Length [veh/ln]	5.75	0.61	0.31	2.73	8.04	0.73
95th-Percentile Queue Length [ft/ln]	143.76	15.23	7.74	68.31	201.00	18.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.43	7.89	5.92	6.67	27.09	17.93
Movement LOS	B	A	A	A	C	B
d_A, Approach Delay [s/veh]	11.86		6.58		26.10	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	13.95					
Intersection LOS	B					
Intersection V/C	0.493					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	2.809	2.517	2.247
Crosswalk LOS	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	699	999	732
d_b, Bicycle Delay [s]	12.71	7.53	12.07
l_b,int, Bicycle LOS Score for Intersection	2.535	2.322	1.560
Bicycle LOS	B	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Signalized	Delay (sec / veh):	4.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	37	10	30	14	10	29	20	461	26	27	1020	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	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	15	0	0	15	0	0	13	0	0	3
Total Hourly Volume [veh/h]	37	10	15	14	10	14	20	461	13	27	1020	3
Peak Hour Factor	1.0000	1.0000	1.0000	0.7000	1.0000	0.7000	0.8400	0.8400	1.0000	1.0000	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]	9	3	4	5	3	5	6	137	3	7	287	1
Total Analysis Volume [veh/h]	37	10	15	20	10	20	24	549	13	27	1146	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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	84	47	0	84	47	0	84	33	0	84	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	33	0	0	37	0	0	24	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	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	2.00
g_i, Effective Green Time [s]	8	8	8	8	8	8	64	64	64	64	64	64
g / C, Green / Cycle	0.09	0.09	0.09	0.09	0.09	0.09	0.81	0.81	0.81	0.81	0.81	0.81
(v / s)_i Volume / Saturation Flow Rate	0.03	0.01	0.01	0.02	0.01	0.01	0.05	0.17	0.01	0.04	0.36	0.00
s, saturation flow rate [veh/h]	1241	1683	1431	1247	1683	1431	440	3204	1431	763	3204	1431
c, Capacity [veh/h]	174	159	135	174	159	135	381	2581	1152	648	2581	1152
d1, Uniform Delay [s]	35.82	32.98	33.13	35.32	32.98	33.25	4.88	1.83	1.53	2.98	2.35	1.52
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00
d2, Incremental Delay [s]	0.60	0.16	0.36	0.29	0.16	0.50	0.32	0.19	0.02	0.12	0.56	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.06	0.11	0.11	0.06	0.15	0.06	0.21	0.01	0.04	0.44	0.00
d, Delay for Lane Group [s/veh]	36.43	33.14	33.49	35.61	33.14	33.75	5.20	2.01	1.54	3.10	2.91	1.52
Lane Group LOS	D	C	C	D	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.72	0.18	0.28	0.38	0.18	0.37	0.13	0.31	0.02	0.09	0.86	0.00
50th-Percentile Queue Length [ft/ln]	17.95	4.57	6.96	9.53	4.57	9.33	3.36	7.85	0.39	2.21	21.58	0.09
95th-Percentile Queue Length [veh/ln]	1.29	0.33	0.50	0.69	0.33	0.67	0.24	0.57	0.03	0.16	1.55	0.01
95th-Percentile Queue Length [ft/ln]	32.32	8.23	12.52	17.16	8.23	16.79	6.05	14.13	0.70	3.98	38.85	0.16

Movement, Approach, & Intersection Results

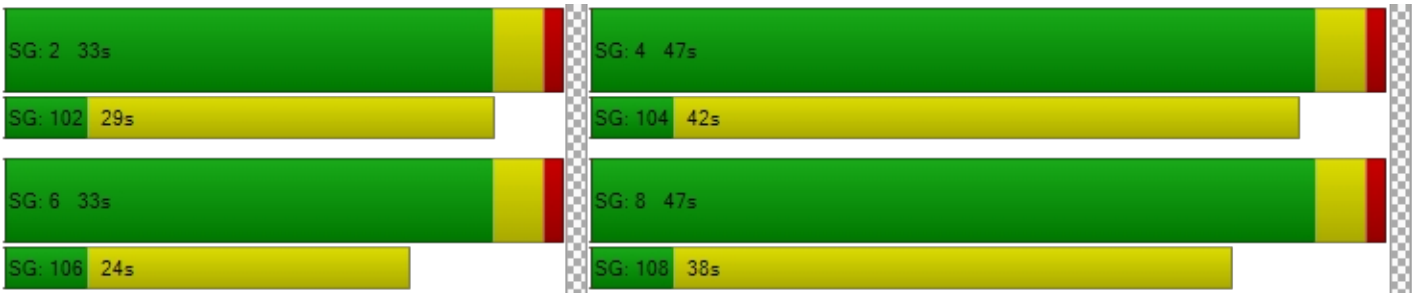
d_M, Delay for Movement [s/veh]	36.43	33.14	33.49	35.61	33.14	33.75	5.20	2.01	1.54	3.10	2.91	1.52
Movement LOS	D	C	C	D	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	35.19			34.37			2.13			2.91		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	4.58											
Intersection LOS	A											
Intersection V/C	0.387											

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]	31.49	31.49	31.49	31.49
l_p,int, Pedestrian LOS Score for Intersection	2.215	2.204	3.040	2.915
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1075	1075	725	725
d_b, Bicycle Delay [s]	8.55	8.55	16.25	16.25
l_b,int, Bicycle LOS Score for Intersection	1.687	1.667	2.054	2.532
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 20: Carriage Meadows Dr/Firesteel Dr

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Base Volume Input [veh/h]	67	1	3	60	4	10
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]	67	1	3	60	4	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	0	1	15	1	3
Total Analysis Volume [veh/h]	67	1	3	60	4	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.35	0.00	9.25	8.67
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.13	0.13	1.12	1.12
d_A, Approach Delay [s/veh]	0.00		0.35		8.84	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	70	258	310	551	403	33	51	816	69	159	452	295
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	155	0	0	17	0	0	35	0	0	148
Total Hourly Volume [veh/h]	70	258	155	551	403	16	51	816	34	159	452	147
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	65	39	138	101	4	13	204	9	40	113	37
Total Analysis Volume [veh/h]	70	258	155	551	403	16	51	816	34	159	452	147
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Protect	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	36	0	19	46	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	51	32	32	15	43	43	31	22	22	31	23	23
g / C, Green / Cycle	0.57	0.36	0.36	0.17	0.48	0.48	0.34	0.24	0.24	0.34	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.07	0.14	0.10	0.16	0.22	0.01	0.05	0.23	0.02	0.18	0.13	0.09
s, saturation flow rate [veh/h]	1065	1870	1589	3459	1870	1589	994	3560	1589	905	3560	1589
c, Capacity [veh/h]	590	668	567	576	893	759	369	865	386	283	920	411
d1, Uniform Delay [s]	9.68	21.59	20.62	37.17	15.65	12.40	20.60	33.46	26.36	24.24	28.35	27.27
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	0.09	1.69	1.19	9.78	1.65	0.05	0.17	6.04	0.10	1.76	0.41	0.53
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	0.12	0.39	0.27	0.96	0.45	0.02	0.14	0.94	0.09	0.56	0.49	0.36
d, Delay for Lane Group [s/veh]	9.76	23.28	21.81	46.95	17.30	12.45	20.77	39.51	26.45	25.99	28.75	27.80
Lane Group LOS	A	C	C	D	B	B	C	D	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.51	3.93	2.26	6.29	5.06	0.16	0.69	8.85	0.54	2.38	3.92	2.48
50th-Percentile Queue Length [ft/ln]	12.74	98.16	56.52	157.32	126.49	3.93	17.29	221.20	13.59	59.50	98.09	62.07
95th-Percentile Queue Length [veh/ln]	0.92	7.07	4.07	10.41	8.75	0.28	1.24	13.73	0.98	4.28	7.06	4.47
95th-Percentile Queue Length [ft/ln]	22.93	176.69	101.73	260.17	218.71	7.07	31.12	343.16	24.46	107.10	176.57	111.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.76	23.28	21.81	46.95	17.30	12.45	20.77	39.51	26.45	25.99	28.75	27.80
Movement LOS	A	C	C	D	B	B	C	D	C	C	C	C
d_A, Approach Delay [s/veh]	20.85			34.06			37.95			27.99		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	31.66											
Intersection LOS	C											
Intersection V/C	0.592											

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]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.980	2.915	2.917	3.346
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	933	489	489
d_b, Bicycle Delay [s]	18.69	12.80	25.69	25.69
l_b,int, Bicycle LOS Score for Intersection	2.612	3.188	2.332	2.307
Bicycle LOS	B	C	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

Intersection Setup

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
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	1	1	0	1	0
Entry Pocket Length [ft]	100.00	250.00	400.00	100.00	250.00	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]	55.00		55.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
Base Volume Input [veh/h]	560	431	67	560	255	79
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
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	560	431	67	560	255	79
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	140	108	17	140	64	20
Total Analysis Volume [veh/h]	560	431	67	560	255	79
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	10	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	25	0	9	34	26	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	16	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	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
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	33	33	40	40	12	12
g / C, Green / Cycle	0.55	0.55	0.67	0.67	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.33	0.30	0.10	0.33	0.16	0.06
s, saturation flow rate [veh/h]	1683	1431	660	1683	1603	1431
c, Capacity [veh/h]	918	780	492	1128	316	282
d1, Uniform Delay [s]	9.32	8.90	5.44	4.91	23.07	20.53
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.02	2.81	0.58	1.56	4.89	0.54
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.55	0.14	0.50	0.81	0.28
d, Delay for Lane Group [s/veh]	12.34	11.71	6.01	6.47	27.96	21.07
Lane Group LOS	B	B	A	A	C	C
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.74	2.79	0.18	1.73	3.55	0.90
50th-Percentile Queue Length [ft/ln]	93.50	69.80	4.55	43.18	88.86	22.59
95th-Percentile Queue Length [veh/ln]	6.73	5.03	0.33	3.11	6.40	1.63
95th-Percentile Queue Length [ft/ln]	168.29	125.64	8.18	77.73	159.94	40.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.34	11.71	6.01	6.47	27.96	21.07
Movement LOS	B	B	A	A	C	C
d_A, Approach Delay [s/veh]	12.06		6.42		26.33	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	12.69					
Intersection LOS	B					
Intersection V/C	0.509					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	2.997	2.675	2.292
Crosswalk LOS	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	699	999	732
d_b, Bicycle Delay [s]	12.71	7.53	12.07
l_b,int, Bicycle LOS Score for Intersection	3.195	2.594	1.560
Bicycle LOS	C	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Signalized	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	58	10	46	21	10	44	89	1503	85	42	1588	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
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	23	0	0	22	0	0	43	0	0	5
Total Hourly Volume [veh/h]	58	10	23	21	10	22	89	1503	42	42	1588	5
Peak Hour Factor	1.0000	1.0000	1.0000	0.8300	1.0000	0.8300	0.7100	0.7100	1.0000	1.0000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	3	6	6	3	7	31	529	11	11	441	1
Total Analysis Volume [veh/h]	58	10	23	25	10	27	125	2117	42	42	1764	6
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	124	35	0	124	35	0	124	85	0	124	85	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	25	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
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]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	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	2.00
g_i, Effective Green Time [s]	10	10	10	10	10	10	102	102	102	102	102	102
g / C, Green / Cycle	0.08	0.08	0.08	0.08	0.08	0.08	0.85	0.85	0.85	0.85	0.85	0.85
(v / s)_i Volume / Saturation Flow Rate	0.05	0.01	0.02	0.02	0.01	0.02	0.52	0.66	0.03	0.25	0.55	0.00
s, saturation flow rate [veh/h]	1234	1683	1431	1238	1683	1431	243	3204	1431	166	3204	1431
c, Capacity [veh/h]	134	135	114	134	135	114	216	2734	1221	149	2734	1221
d1, Uniform Delay [s]	55.54	51.01	51.53	54.02	51.01	51.68	15.74	3.80	1.33	17.43	2.87	1.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00
d2, Incremental Delay [s]	2.19	0.23	0.85	0.66	0.23	1.05	10.82	2.21	0.05	4.71	1.19	0.01
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	0.43	0.07	0.20	0.19	0.07	0.24	0.58	0.77	0.03	0.28	0.65	0.00
d, Delay for Lane Group [s/veh]	57.73	51.24	52.38	54.68	51.24	52.72	26.56	6.01	1.38	22.13	4.06	1.30
Lane Group LOS	E	D	D	D	D	D	C	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.82	0.29	0.68	0.76	0.29	0.80	2.80	4.98	0.08	0.87	3.05	0.01
50th-Percentile Queue Length [ft/ln]	45.62	7.25	17.03	18.89	7.25	20.08	69.89	124.44	1.88	21.67	76.36	0.26
95th-Percentile Queue Length [veh/ln]	3.28	0.52	1.23	1.36	0.52	1.45	5.03	8.64	0.14	1.56	5.50	0.02
95th-Percentile Queue Length [ft/ln]	82.12	13.06	30.65	34.00	13.06	36.14	125.79	215.91	3.38	39.00	137.44	0.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.73	51.24	52.38	54.68	51.24	52.72	26.56	6.01	1.38	22.13	4.06	1.30
Movement LOS	E	D	D	D	D	D	C	A	A	C	A	A
d_A, Approach Delay [s/veh]	55.66			53.27			7.05			4.47		
Approach LOS	E			D			A			A		
d_I, Intersection Delay [s/veh]	7.66											
Intersection LOS	A											
Intersection V/C	0.708											

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]	51.29	51.29	51.29	51.29
l_p,int, Pedestrian LOS Score for Intersection	2.290	2.402	3.630	3.487
Crosswalk LOS	B	B	D	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	517	517	1351	1351
d_b, Bicycle Delay [s]	32.96	32.96	6.31	6.31
l_b,int, Bicycle LOS Score for Intersection	1.748	1.698	3.479	3.059
Bicycle LOS	A	A	C	C

Sequence

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

Intersection Level Of Service Report
Intersection 20: Carriage Meadows Dr/Firesteel Dr

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Base Volume Input [veh/h]	109	5	10	127	3	5
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]	109	5	10	127	3	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	1	3	32	1	1
Total Analysis Volume [veh/h]	109	5	10	127	3	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.45	0.00	10.01	8.86
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.02	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.42	0.42	0.72	0.72
d_A, Approach Delay [s/veh]	0.00		0.54		9.29	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.57					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	51	375	113	151	170	17	25	243	46	246	624	488
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	47	40	0	0	0	25	0	33	18	29
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	80	0	0	9	0	0	23	0	0	259
Total Hourly Volume [veh/h]	51	375	80	191	170	8	25	268	23	279	642	258
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	94	20	48	43	2	6	67	6	70	161	65
Total Analysis Volume [veh/h]	51	375	80	191	170	8	25	268	23	279	642	258
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Protect	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	36	0	12	39	0	9	23	0	9	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	48	38	38	6	41	41	24	15	15	24	18	18
g / C, Green / Cycle	0.60	0.47	0.47	0.08	0.51	0.51	0.30	0.19	0.19	0.30	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.04	0.20	0.05	0.06	0.09	0.01	0.03	0.08	0.01	0.22	0.18	0.16
s, saturation flow rate [veh/h]	1272	1870	1589	3459	1870	1589	824	3560	1589	1292	3560	1589
c, Capacity [veh/h]	840	878	746	278	945	804	272	667	298	445	793	354
d1, Uniform Delay [s]	6.72	14.13	11.90	35.91	10.79	9.86	21.21	28.64	26.87	25.56	29.56	28.93
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.14	0.11	0.11
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
d2, Incremental Delay [s]	0.03	1.52	0.29	3.03	0.42	0.02	0.14	0.39	0.11	1.89	2.04	2.88
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	0.06	0.43	0.11	0.69	0.18	0.01	0.09	0.40	0.08	0.63	0.81	0.73
d, Delay for Lane Group [s/veh]	6.75	15.65	12.19	38.94	11.20	9.88	21.36	29.03	26.98	27.45	31.60	31.81
Lane Group LOS	A	B	B	D	B	A	C	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.26	4.00	0.71	1.78	1.41	0.06	0.32	2.14	0.35	4.21	5.61	4.52
50th-Percentile Queue Length [ft/ln]	6.56	100.12	17.82	44.52	35.18	1.52	7.89	53.56	8.71	105.27	140.18	112.92
95th-Percentile Queue Length [veh/ln]	0.47	7.21	1.28	3.21	2.53	0.11	0.57	3.86	0.63	7.58	9.49	8.00
95th-Percentile Queue Length [ft/ln]	11.81	180.22	32.07	80.14	63.32	2.74	14.21	96.41	15.67	189.40	237.26	200.06

Movement, Approach, & Intersection Results

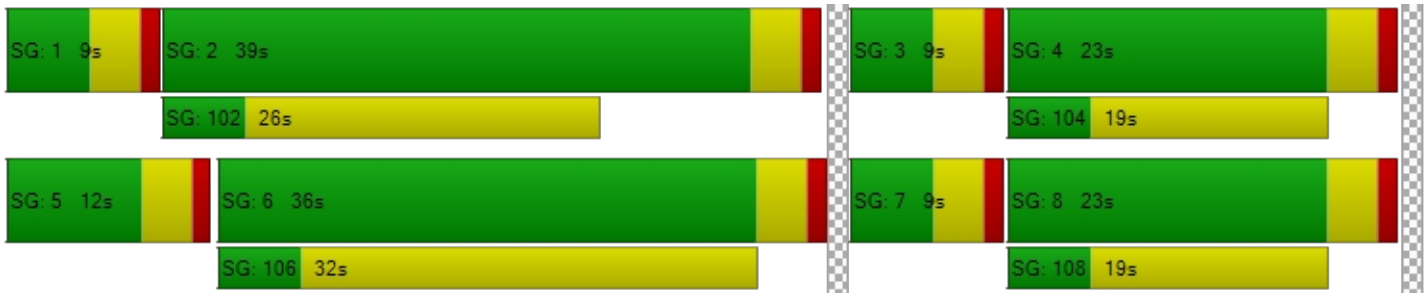
d_M, Delay for Movement [s/veh]	6.75	15.65	12.19	38.94	11.20	9.88	21.36	29.03	26.98	27.45	31.60	31.81
Movement LOS	A	B	B	D	B	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.21			25.53			28.27			30.66		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	26.03											
Intersection LOS	C											
Intersection V/C	0.447											

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]	31.56	31.56	31.56	31.56
l_p,int, Pedestrian LOS Score for Intersection	2.833	2.780	2.776	3.388
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	799	874	474	474
d_b, Bicycle Delay [s]	14.45	12.70	23.31	23.31
l_b,int, Bicycle LOS Score for Intersection	2.527	2.183	1.839	2.746
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.521

Intersection Setup

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
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	1	1	0	1	0
Entry Pocket Length [ft]	100.00	250.00	400.00	100.00	250.00	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]	55.00		55.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
Base Volume Input [veh/h]	458	133	53	409	330	81
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
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	47	0	0	33	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
Right Turn on Red Volume [veh/h]	0	67	0	0	0	41
Total Hourly Volume [veh/h]	505	66	53	442	330	40
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	126	17	13	111	83	10
Total Analysis Volume [veh/h]	505	66	53	442	330	40
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	10	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	25	0	9	34	26	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	16	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	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
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	31	31	38	38	14	14
g / C, Green / Cycle	0.51	0.51	0.63	0.63	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.30	0.05	0.06	0.26	0.21	0.03
s, saturation flow rate [veh/h]	1683	1431	871	1683	1603	1431
c, Capacity [veh/h]	854	726	548	1052	388	346
d1, Uniform Delay [s]	10.42	7.65	6.00	5.73	21.77	17.79
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.00	0.25	0.35	1.23	5.32	0.15
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.09	0.10	0.42	0.85	0.12
d, Delay for Lane Group [s/veh]	13.42	7.89	6.35	6.97	27.09	17.93
Lane Group LOS	B	A	A	A	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.72	0.34	0.18	1.69	4.54	0.41
50th-Percentile Queue Length [ft/ln]	92.98	8.46	4.38	42.33	113.60	10.18
95th-Percentile Queue Length [veh/ln]	6.69	0.61	0.32	3.05	8.04	0.73
95th-Percentile Queue Length [ft/ln]	167.37	15.23	7.89	76.19	201.00	18.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.42	7.89	6.35	6.97	27.09	17.93
Movement LOS	B	A	A	A	C	B
d_A, Approach Delay [s/veh]	12.78		6.90		26.10	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	14.18					
Intersection LOS	B					
Intersection V/C	0.521					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	2.856	2.565	2.247
Crosswalk LOS	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	699	999	732
d_b, Bicycle Delay [s]	12.71	7.53	12.07
l_b,int, Bicycle LOS Score for Intersection	2.612	2.376	1.560
Bicycle LOS	B	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Signalized	Delay (sec / veh):	5.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.420

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	37	10	30	14	10	29	20	461	26	27	1020	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	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]	40	0	16	0	0	0	0	16	56	43	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	23	0	0	15	0	0	41	0	0	3
Total Hourly Volume [veh/h]	77	10	23	14	10	14	20	477	41	70	1020	3
Peak Hour Factor	1.0000	1.0000	1.0000	0.7000	1.0000	0.7000	0.8400	0.8400	1.0000	1.0000	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]	19	3	6	5	3	5	6	142	10	18	287	1
Total Analysis Volume [veh/h]	77	10	23	20	10	20	24	568	41	70	1146	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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	64	35	0	64	35	0	64	25	0	64	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	25	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
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]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	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	2.00
g_i, Effective Green Time [s]	8	8	8	8	8	8	44	44	44	44	44	44
g / C, Green / Cycle	0.14	0.14	0.14	0.14	0.14	0.14	0.73	0.73	0.73	0.73	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.06	0.01	0.02	0.02	0.01	0.01	0.05	0.18	0.03	0.10	0.36	0.00
s, saturation flow rate [veh/h]	1241	1683	1431	1238	1683	1431	440	3204	1431	731	3204	1431
c, Capacity [veh/h]	260	241	205	260	241	205	348	2319	1035	572	2319	1035
d1, Uniform Delay [s]	25.20	22.19	22.42	24.02	22.19	22.37	7.37	2.78	2.36	4.82	3.57	2.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00
d2, Incremental Delay [s]	0.63	0.07	0.24	0.13	0.07	0.21	0.38	0.25	0.07	0.44	0.76	0.01
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	0.30	0.04	0.11	0.08	0.04	0.10	0.07	0.24	0.04	0.12	0.49	0.00
d, Delay for Lane Group [s/veh]	25.83	22.26	22.66	24.15	22.26	22.58	7.75	3.04	2.43	5.26	4.32	2.30
Lane Group LOS	C	C	C	C	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.04	0.12	0.29	0.26	0.12	0.25	0.15	0.43	0.06	0.28	1.15	0.00
50th-Percentile Queue Length [ft/ln]	26.09	3.05	7.15	6.41	3.05	6.20	3.75	10.80	1.59	7.09	28.77	0.11
95th-Percentile Queue Length [veh/ln]	1.88	0.22	0.52	0.46	0.22	0.45	0.27	0.78	0.11	0.51	2.07	0.01
95th-Percentile Queue Length [ft/ln]	46.96	5.49	12.88	11.53	5.49	11.17	6.74	19.45	2.86	12.76	51.78	0.20

Movement, Approach, & Intersection Results

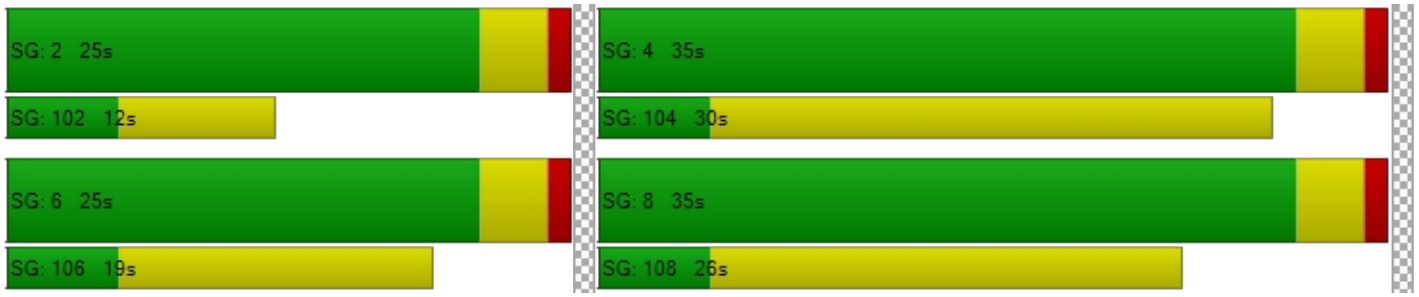
d_M, Delay for Movement [s/veh]	25.83	22.26	22.66	24.15	22.26	22.58	7.75	3.04	2.43	5.26	4.32	2.30
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	24.84			23.14			3.18			4.37		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	5.58											
Intersection LOS	A											
Intersection V/C	0.420											

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]	21.69	21.69	21.69	21.69
l_p,int, Pedestrian LOS Score for Intersection	2.304	2.189	3.146	2.919
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1033	1033	700	700
d_b, Bicycle Delay [s]	7.02	7.02	12.69	12.69
l_b,int, Bicycle LOS Score for Intersection	1.779	1.667	2.116	2.568
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 10: Fontaine Blvd/Access 1

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.078

Intersection Setup

Name	Aceess 1		Fontaine Bl		Fontaine Bl	
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	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Aceess 1		Fontaine Bl		Fontaine Bl	
Base Volume Input [veh/h]	0	0	507	0	0	1086
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	56	56	56	0	80
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	56	563	56	0	1166
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	14	141	14	0	292
Total Analysis Volume [veh/h]	0	56	563	56	0	1166
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	0.08	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	10.46	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.25	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	6.35	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.46		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.32					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 20: Access 2 / Carriage Meadows Dr/FireSteel Dr

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Access 2			Firesteel Dr		
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	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	235.00	235.00	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			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Access 2			Firesteel Dr		
Base Volume Input [veh/h]	0	67	1	3	60	0	0	0	0	4	0	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	99	56	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	67	1	3	60	99	56	0	0	4	0	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	17	0	1	15	25	14	0	0	1	0	3
Total Analysis Volume [veh/h]	0	67	1	3	60	99	56	0	0	4	0	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.01	0.00	0.01
d_M, Delay for Movement [s/veh]	7.53	0.00	0.00	7.35	0.00	0.00	9.70	9.77	8.58	9.70	10.46	8.68
Movement LOS	A	A	A	A	A	A	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.00	0.22	0.00	0.00	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.13	0.13	0.00	5.47	0.00	0.00	1.16	1.16	1.16
d_A, Approach Delay [s/veh]	0.00			0.14			9.70			8.97		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.30											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	33.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.634

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	70	258	310	551	403	33	51	816	69	159	452	295
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	52	45	0	0	0	28	0	55	30	48
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	181	0	0	17	0	0	35	0	0	172
Total Hourly Volume [veh/h]	70	258	181	596	403	16	51	844	34	214	482	171
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	65	45	149	101	4	13	211	9	54	121	43
Total Analysis Volume [veh/h]	70	258	181	596	403	16	51	844	34	214	482	171
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Protect	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	36	0	24	51	0	9	30	0	10	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	56	33	33	19	48	48	36	26	26	36	28	28
g / C, Green / Cycle	0.56	0.33	0.33	0.19	0.48	0.48	0.36	0.26	0.26	0.36	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.07	0.14	0.11	0.17	0.22	0.01	0.05	0.24	0.02	0.24	0.14	0.11
s, saturation flow rate [veh/h]	1059	1870	1589	3459	1870	1589	941	3560	1589	888	3560	1589
c, Capacity [veh/h]	569	618	525	661	895	761	353	920	411	278	998	446
d1, Uniform Delay [s]	11.03	26.00	25.30	39.52	17.32	13.72	21.94	36.06	28.11	28.51	29.95	29.02
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.31	0.11	0.11
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
d2, Incremental Delay [s]	0.10	2.07	1.79	4.84	1.64	0.05	0.19	4.24	0.09	11.91	0.36	0.54
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	0.12	0.42	0.34	0.90	0.45	0.02	0.14	0.92	0.08	0.77	0.48	0.38
d, Delay for Lane Group [s/veh]	11.13	28.08	27.09	44.36	18.95	13.77	22.12	40.29	28.20	40.43	30.31	29.56
Lane Group LOS	B	C	C	D	B	B	C	D	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	4.73	3.24	7.09	5.79	0.18	0.77	9.95	0.60	4.38	4.62	3.21
50th-Percentile Queue Length [ft/ln]	15.28	118.13	81.09	177.15	144.76	4.50	19.14	248.83	15.02	109.57	115.55	80.25
95th-Percentile Queue Length [veh/ln]	1.10	8.29	5.84	11.45	9.74	0.32	1.38	15.13	1.08	7.82	8.15	5.78
95th-Percentile Queue Length [ft/ln]	27.50	207.25	145.95	286.29	243.42	8.11	34.46	378.18	27.04	195.40	203.70	144.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.13	28.08	27.09	44.36	18.95	13.77	22.12	40.29	28.20	40.43	30.31	29.56
Movement LOS	B	C	C	D	B	B	C	D	C	D	C	C
d_A, Approach Delay [s/veh]	25.39			33.79			38.85			32.66		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	33.62											
Intersection LOS	C											
Intersection V/C	0.634											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [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]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.095	2.955	2.936	3.439
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	940	520	540
d_b, Bicycle Delay [s]	23.12	14.05	27.38	26.65
l_b,int, Bicycle LOS Score for Intersection	2.698	3.262	2.355	2.417
Bicycle LOS	B	C	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
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	1	1	0	1	0
Entry Pocket Length [ft]	100.00	250.00	400.00	100.00	250.00	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]	55.00		55.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Marksheffel Rd		Marksheffel Rd		Lorson Bl	
Base Volume Input [veh/h]	560	431	67	560	255	79
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
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	52	0	0	55	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
Right Turn on Red Volume [veh/h]	0	216	0	0	0	40
Total Hourly Volume [veh/h]	612	215	67	615	255	39
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	153	54	17	154	64	10
Total Analysis Volume [veh/h]	612	215	67	615	255	39
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	10	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	25	0	9	34	26	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	16	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	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
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	33	33	40	40	12	12
g / C, Green / Cycle	0.55	0.55	0.67	0.67	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.36	0.15	0.09	0.37	0.16	0.03
s, saturation flow rate [veh/h]	1683	1431	733	1683	1603	1431
c, Capacity [veh/h]	921	783	502	1131	313	279
d1, Uniform Delay [s]	9.69	7.26	5.95	5.10	23.18	20.03
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.78	0.87	0.55	1.88	5.17	0.23
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.27	0.13	0.54	0.82	0.14
d, Delay for Lane Group [s/veh]	13.47	8.13	6.50	6.98	28.35	20.26
Lane Group LOS	B	A	A	A	C	C
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.34	1.08	0.18	1.99	3.58	0.43
50th-Percentile Queue Length [ft/ln]	108.49	26.91	4.45	49.73	89.60	10.80
95th-Percentile Queue Length [veh/ln]	7.76	1.94	0.32	3.58	6.45	0.78
95th-Percentile Queue Length [ft/ln]	193.91	48.44	8.00	89.51	161.27	19.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.47	8.13	6.50	6.98	28.35	20.26
Movement LOS	B	A	A	A	C	C
d_A, Approach Delay [s/veh]	12.08		6.94		27.27	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	12.61					
Intersection LOS	B					
Intersection V/C	0.540					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	3.368	2.739	2.349
Crosswalk LOS	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	699	999	732
d_b, Bicycle Delay [s]	12.71	7.53	12.07
l_b,int, Bicycle LOS Score for Intersection	3.281	2.685	1.560
Bicycle LOS	C	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.774

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	58	10	46	21	10	44	89	1503	85	42	1588	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
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]	67	0	26	0	0	0	0	26	63	48	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	36	0	0	22	0	0	74	0	0	5
Total Hourly Volume [veh/h]	125	10	36	21	10	22	89	1529	74	90	1588	5
Peak Hour Factor	1.0000	1.0000	1.0000	0.8300	1.0000	0.8300	0.7100	0.7100	1.0000	1.0000	0.9000	0.9000
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]	31	3	9	6	3	7	31	538	19	23	441	1
Total Analysis Volume [veh/h]	125	10	36	25	10	27	125	2154	74	90	1764	6
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	94	46	0	94	46	0	94	44	0	94	44	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	33	0	0	37	0	0	24	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	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	2.00
g_i, Effective Green Time [s]	14	14	14	14	14	14	68	68	68	68	68	68
g / C, Green / Cycle	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.76	0.76	0.76	0.76	0.76
(v / s)_i Volume / Saturation Flow Rate	0.10	0.01	0.03	0.02	0.01	0.02	0.52	0.67	0.05	0.58	0.55	0.00
s, saturation flow rate [veh/h]	1234	1683	1431	1224	1683	1431	243	3204	1431	155	3204	1431
c, Capacity [veh/h]	233	259	220	232	259	220	188	2426	1083	119	2426	1083
d1, Uniform Delay [s]	38.41	32.40	33.04	35.23	32.40	32.82	27.72	8.09	2.80	40.19	5.90	2.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00
d2, Incremental Delay [s]	1.91	0.06	0.34	0.20	0.06	0.25	17.10	5.31	0.12	35.93	1.95	0.01
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	0.54	0.04	0.16	0.11	0.04	0.12	0.67	0.89	0.07	0.76	0.73	0.01
d, Delay for Lane Group [s/veh]	40.32	32.46	33.38	35.44	32.46	33.07	44.81	13.40	2.92	76.11	7.85	2.67
Lane Group LOS	D	C	C	D	C	C	D	B	A	E	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.80	0.19	0.70	0.50	0.19	0.52	3.55	10.00	0.23	3.11	5.56	0.02
50th-Percentile Queue Length [ft/ln]	70.00	4.76	17.60	12.60	4.76	13.10	88.77	250.09	5.79	77.80	139.02	0.45
95th-Percentile Queue Length [veh/ln]	5.04	0.34	1.27	0.91	0.34	0.94	6.39	15.19	0.42	5.60	9.43	0.03
95th-Percentile Queue Length [ft/ln]	126.00	8.57	31.69	22.68	8.57	23.58	159.79	379.77	10.43	140.04	235.71	0.80

Movement, Approach, & Intersection Results

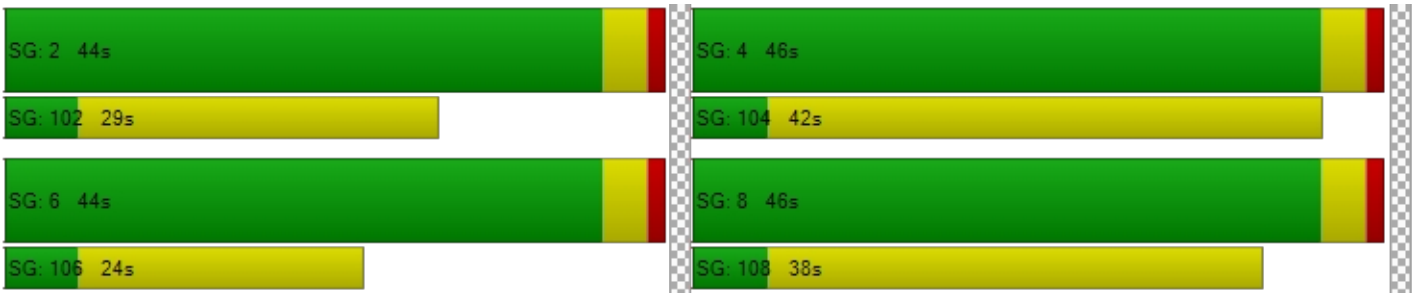
d_M, Delay for Movement [s/veh]	40.32	32.46	33.38	35.44	32.46	33.07	44.81	13.40	2.92	76.11	7.85	2.67
Movement LOS	D	C	C	D	C	C	D	B	A	E	A	A
d_A, Approach Delay [s/veh]	38.40			33.93			14.74			11.13		
Approach LOS	D			C			B			B		
d_I, Intersection Delay [s/veh]	14.41											
Intersection LOS	B											
Intersection V/C	0.774											

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]	36.44	36.44	36.44	36.44
l_p,int, Pedestrian LOS Score for Intersection	2.404	2.388	3.790	3.500
Crosswalk LOS	B	B	D	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	933	933	889	889
d_b, Bicycle Delay [s]	12.80	12.80	13.88	13.88
l_b,int, Bicycle LOS Score for Intersection	1.901	1.698	3.562	3.098
Bicycle LOS	A	A	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 10: Fontaine Blvd/Access 1

Control Type:	Two-way stop	Delay (sec / veh):	22.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.316

Intersection Setup

Name	Aceess 1		Fontaine Bl		Fontaine Bl	
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	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Aceess 1		Fontaine Bl		Fontaine Bl	
Base Volume Input [veh/h]	0	0	1677	0	0	1690
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	93	63	63	0	133
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	93	1740	63	0	1823
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	23	435	16	0	456
Total Analysis Volume [veh/h]	0	93	1740	63	0	1823
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	0.32	0.02	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	22.75	0.00	0.00	0.00	0.00
Movement LOS		C	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	1.31	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	32.86	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.75		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.57					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 20: Access 2 / Carriage Meadows Dr/Firesteel Dr

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.136

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Access 2			Firesteel Dr		
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	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	235.00	235.00	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			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Access 2			Firesteel Dr		
Base Volume Input [veh/h]	0	109	5	10	127	0	0	0	0	3	0	5
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	111	93	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	109	5	10	127	111	93	0	0	3	0	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	27	1	3	32	28	23	0	0	1	0	1
Total Analysis Volume [veh/h]	0	109	5	10	127	111	93	0	0	3	0	5
Pedestrian Volume [ped/h]	0			0			0			0		

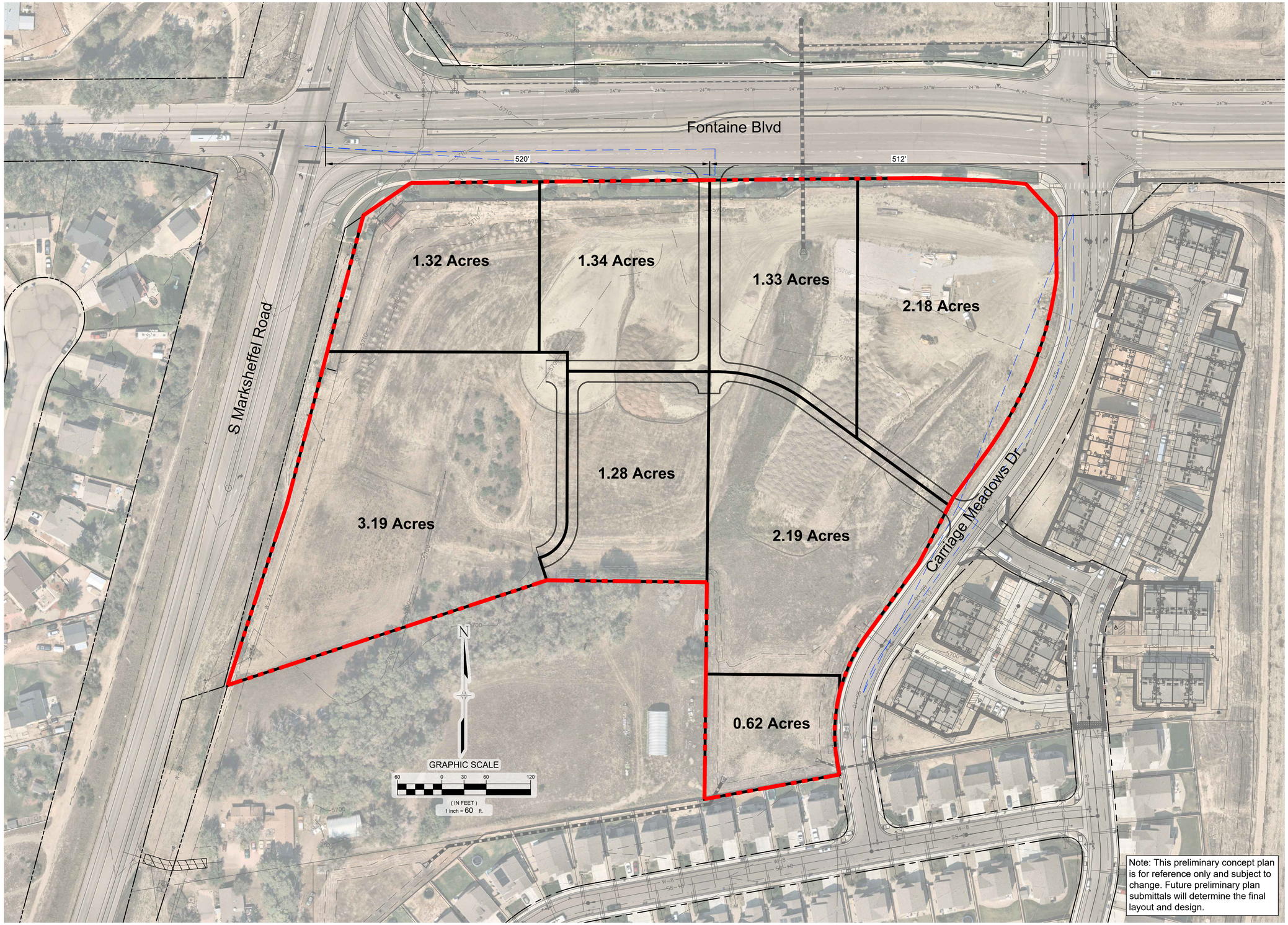
Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.71	0.00	0.00	7.45	0.00	0.00	11.10	10.63	8.90	10.72	11.52	8.87
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.02	0.02	0.00	0.47	0.00	0.00	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.42	0.42	0.00	11.74	0.00	0.00	0.76	0.76	0.76
d_A, Approach Delay [s/veh]	0.00			0.30			11.10			9.56		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	2.56											
Intersection LOS	B											

LORSON RANCH COMMERCIAL
CONCEPT DRAWING



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APPROVAL:

VICINITY MAP:

PROJECT:

LORSON RANCH COMMERCIAL
CONCEPT DRAWING

EL PASO COUNTY, COLORADO
JUNE 03, 2022

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO:	22.1129.022
DRAWN BY:	RAF
CHECKED BY:	JRA
APPROVED BY:	JRA

SHEET TITLE:

CONCEPT
DRAWING

CP01

SHEET 01 OF 01

PCD FILE NO.:

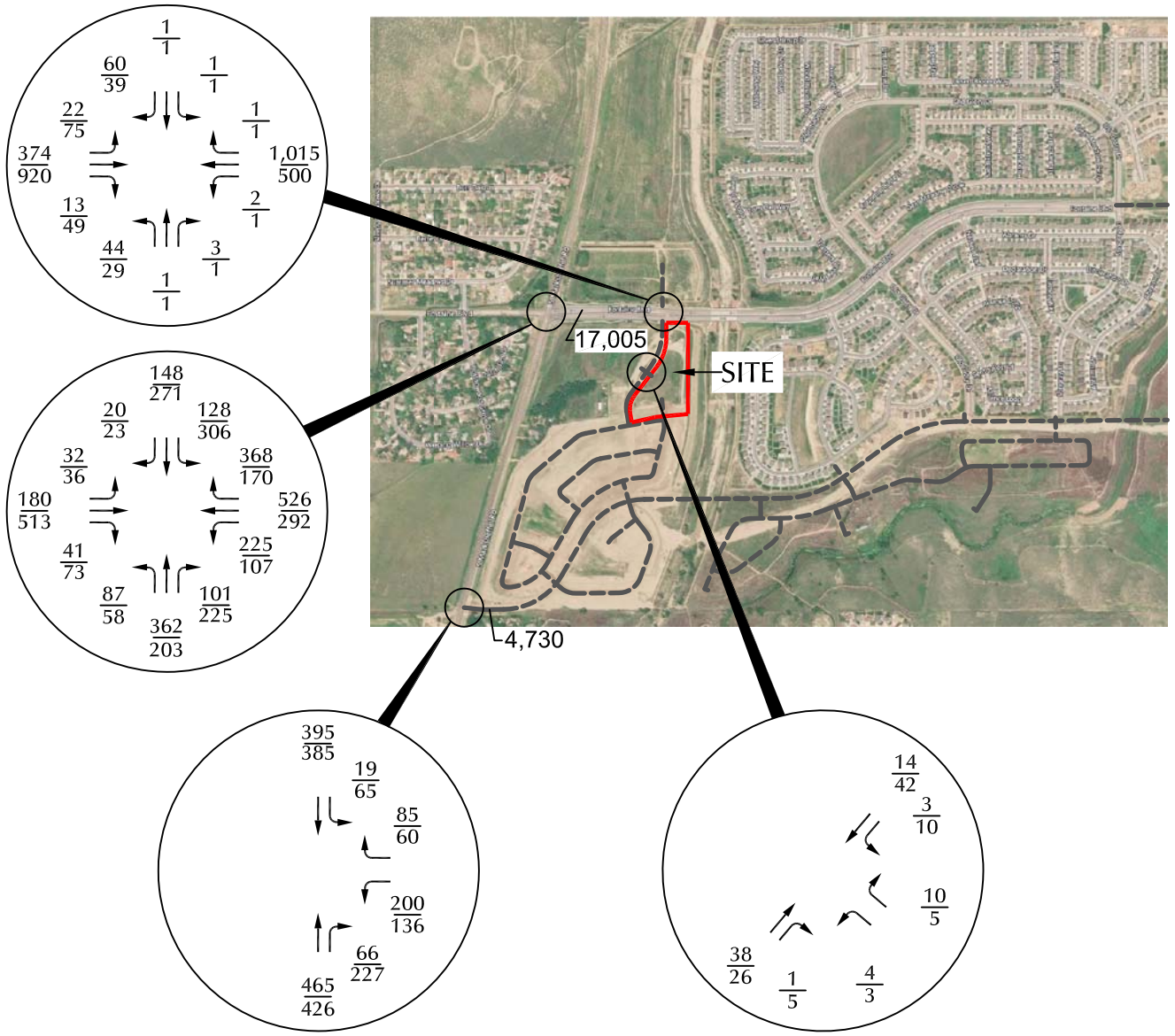


Figure 10a

Short-Term Total Traffic

Carriage Meadows South Multi-Family (LSC #184720)

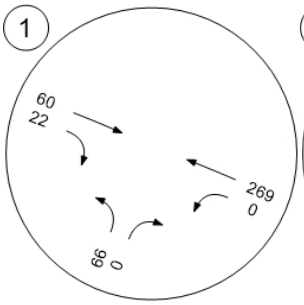
LEGEND:

XX/XX = AM Weekday Peak-Hour Traffic (vehicles per hour) / PM Weekday Peak-Hour Traffic (vehicles per hour)

X,XXX= Average Daily Traffic (vehicles per day) (Estimates by LSC)

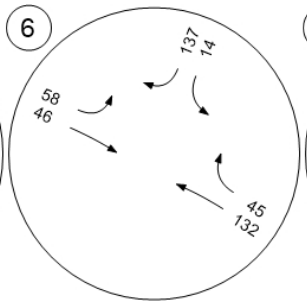
Figure 15. Build Out Total Traffic Volumes (AM Peak Hour)

Lorson Bl/Elk Hills Dr.



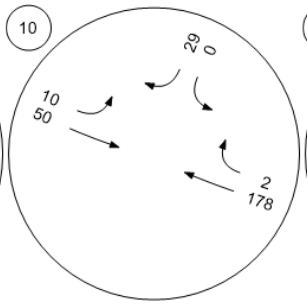
Lorson Bl/Kingston Peak Pl

Lorson Bl/Walleye Dr



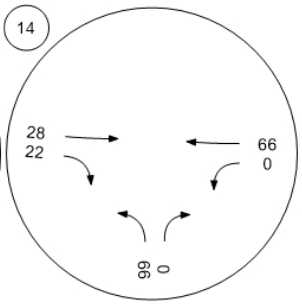
Fontaine Bl/Walleye Dr

Lorson Bl/Split Mountain Dr

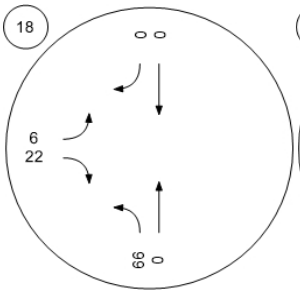


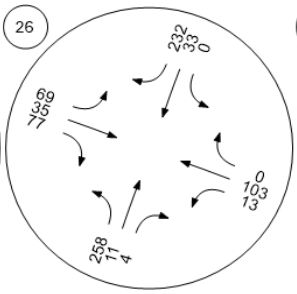
Marksheffel Road/Fontaine Bl

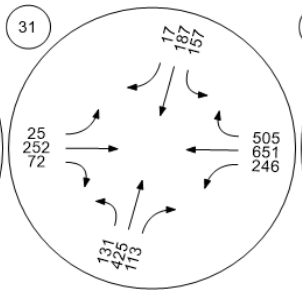
Lorson Bl/Tin Mountain Trail

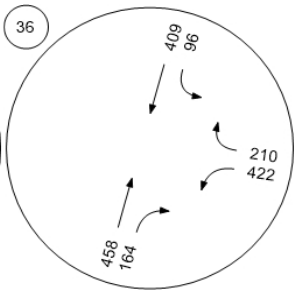


Marksheffel Rd/Lorson Bl









Lorson Bl/Trappe Dr

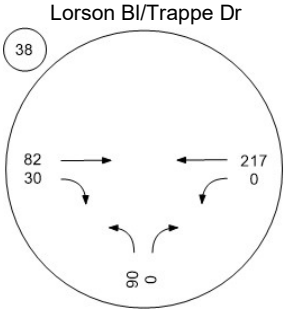


Figure 16. Build Out Total Traffic Volumes (PM Peak Hour)

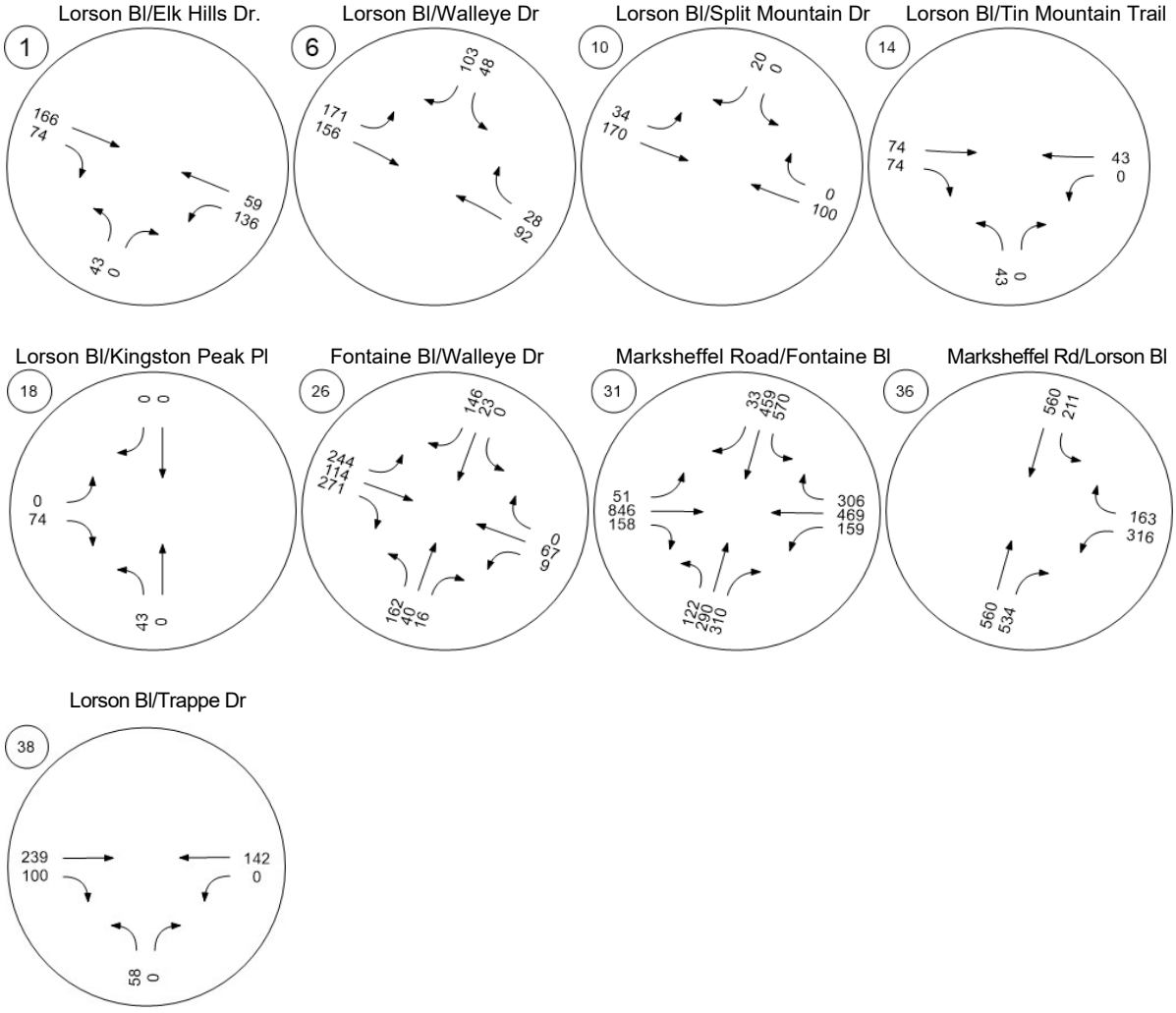


Figure 13. Build Out Total Traffic Volumes (AM Peak Hour)

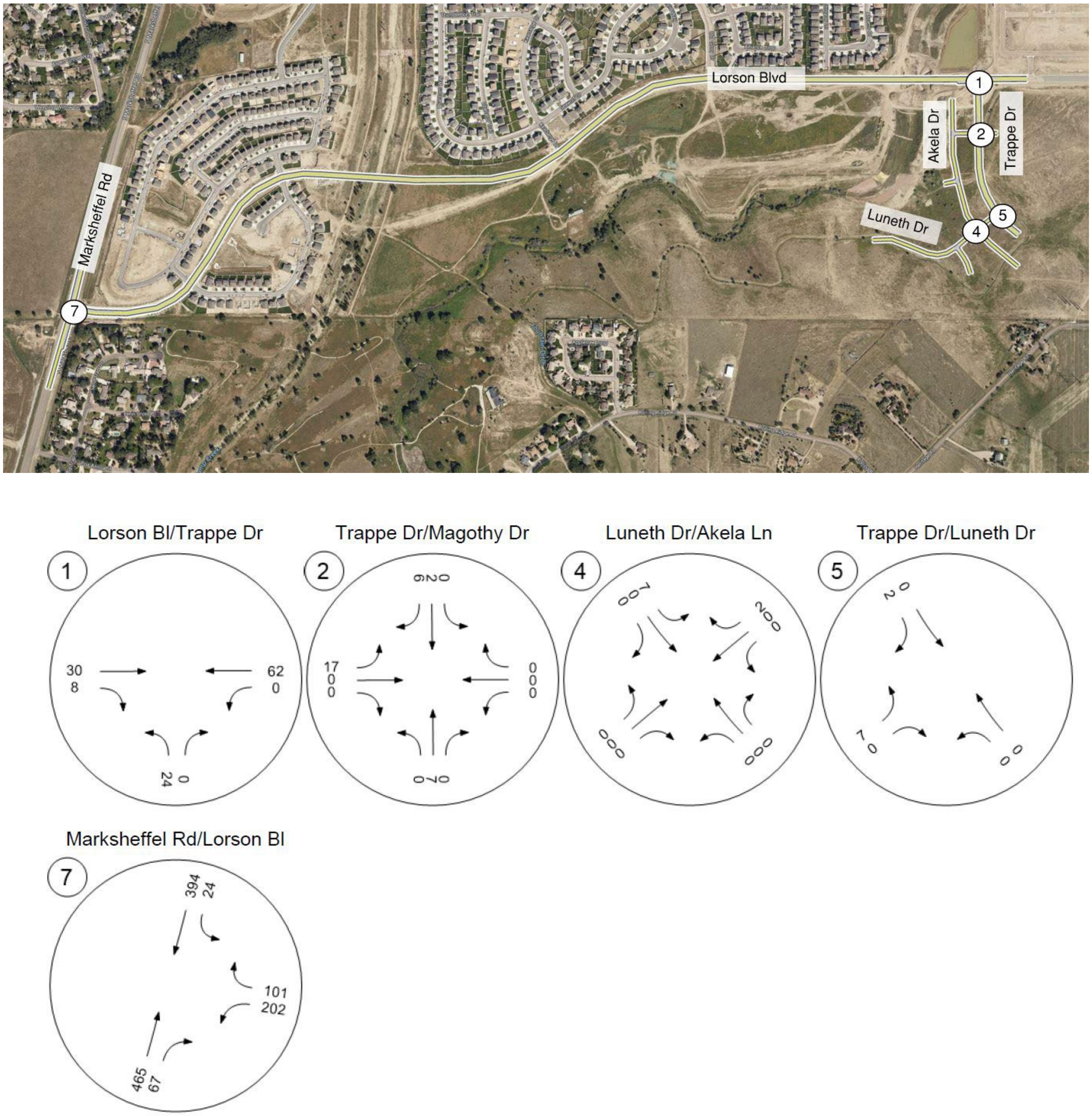
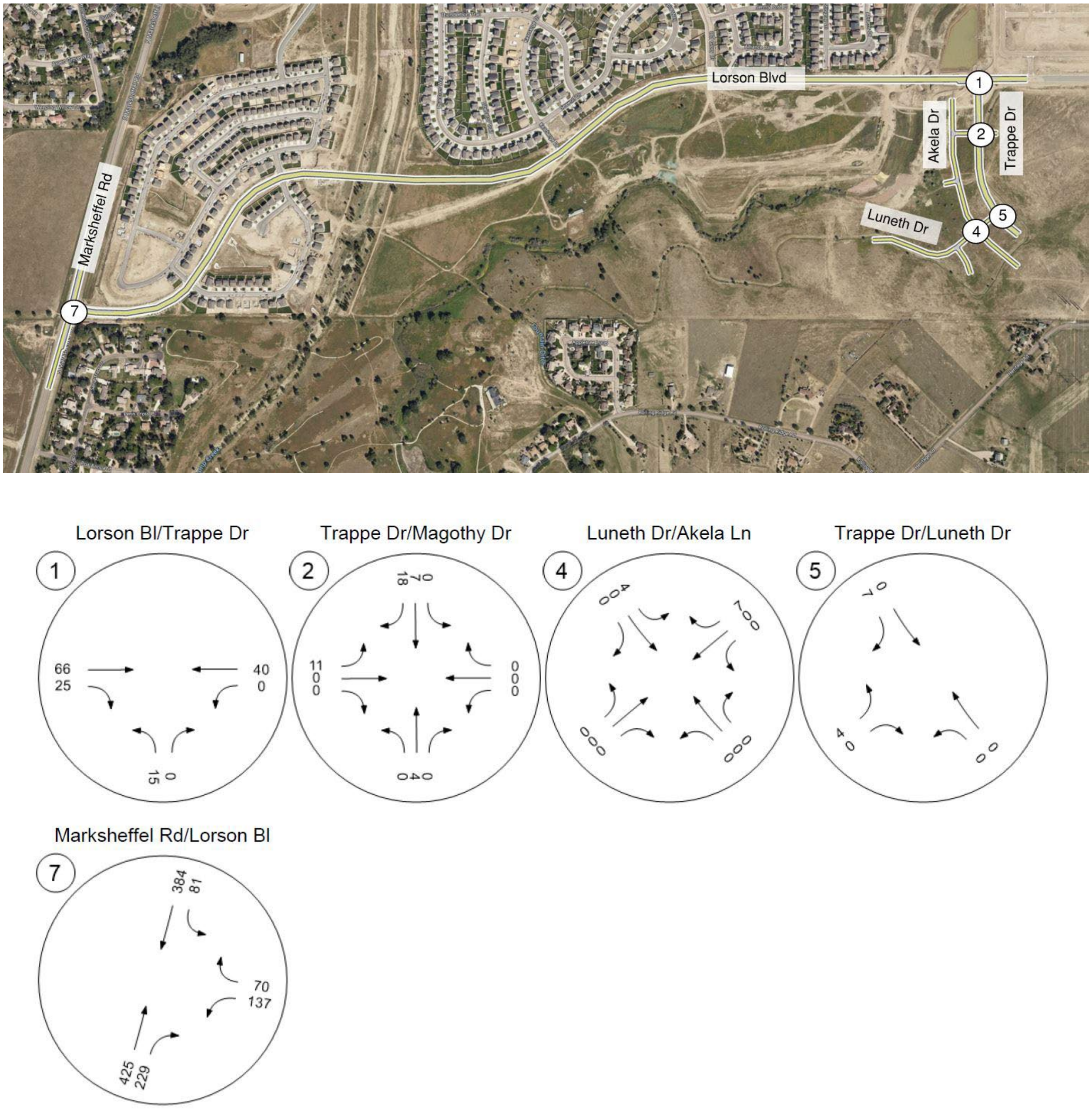


Figure 14. Build Out Total Traffic Volumes (PM Peak Hour)



Assumed intersection configurations for the project intersections are shown in Figure 15.

ID	Intersection	2025 Total AM	2025 Total PM	SUMSite AM	SUM Site PM	Existing AM	Exsiting PM	Fairshare AM	Fairshare PM	share(Weighted Average)
3	Carriage Meadows Dr/Fontaine Bl	1901	3800	**211**	294	1347	1332	38%	12%	21%

Appendix E – Horizon Conditions Analyses

Entire appendix - update peak hour factors to be in conformance with ECM Section B.3.1.B.

Develop and apply appropriate yellow+all-red times for proposed signals; update y+ar times for the Marksheffel / Fontaine intersection if necessary based on future year geometric changes.

Evaluate progression in accordance with ECM requirements.

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.467

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	73	625	145	193	300	55	75	289	132	268	726	553
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	73	0	0	28	0	0	66	0	0	277
Total Hourly Volume [veh/h]	73	625	72	193	300	27	75	289	66	268	726	276
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	156	18	48	75	7	19	72	17	67	182	69
Total Analysis Volume [veh/h]	73	625	72	193	300	27	75	289	66	268	726	276
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Protect	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	36	0	12	39	0	9	23	0	9	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	45	35	35	6	37	37	27	18	18	27	19	19
g / C, Green / Cycle	0.57	0.44	0.44	0.08	0.47	0.47	0.33	0.22	0.22	0.33	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.06	0.18	0.05	0.06	0.08	0.02	0.09	0.06	0.04	0.11	0.20	0.17
s, saturation flow rate [veh/h]	1150	3560	1589	3459	3560	1589	842	5094	1589	2380	3560	1589
c, Capacity [veh/h]	742	1557	695	277	1661	742	300	1120	349	860	824	368
d1, Uniform Delay [s]	7.89	15.38	13.28	35.90	12.45	11.60	20.53	25.85	25.44	19.47	29.73	28.64
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	0.06	0.77	0.30	3.15	0.24	0.09	0.43	0.12	0.26	0.20	3.30	3.10
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	0.10	0.40	0.10	0.70	0.18	0.04	0.25	0.26	0.19	0.31	0.88	0.75
d, Delay for Lane Group [s/veh]	7.95	16.15	13.58	39.05	12.69	11.69	20.96	25.97	25.70	19.67	33.03	31.74
Lane Group LOS	A	B	B	D	B	B	C	C	C	B	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.44	3.39	0.70	1.80	1.34	0.23	0.92	1.42	0.97	1.66	6.53	4.82
50th-Percentile Queue Length [ft/ln]	11.00	84.80	17.48	45.05	33.56	5.87	22.92	35.44	24.31	41.46	163.31	120.61
95th-Percentile Queue Length [veh/ln]	0.79	6.11	1.26	3.24	2.42	0.42	1.65	2.55	1.75	2.99	10.72	8.43
95th-Percentile Queue Length [ft/ln]	19.79	152.64	31.47	81.08	60.41	10.56	41.25	63.78	43.76	74.63	268.10	210.66

Movement, Approach, & Intersection Results

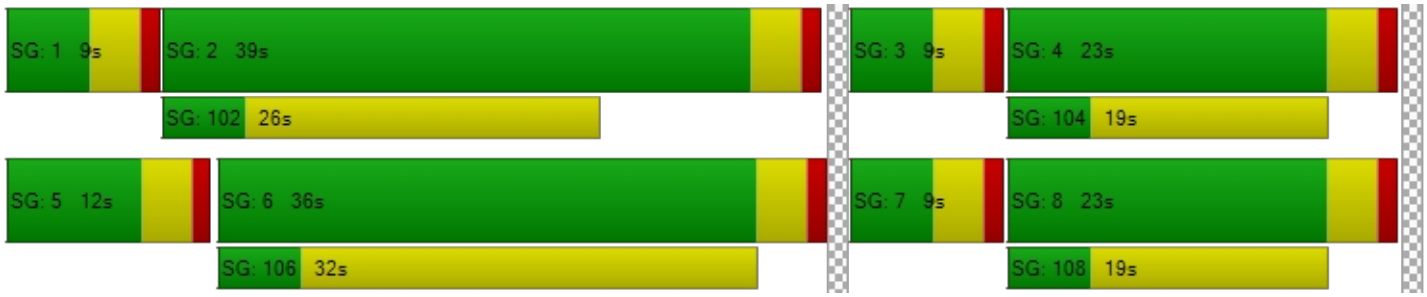
d_M, Delay for Movement [s/veh]	7.95	16.15	13.58	39.05	12.69	11.69	20.96	25.97	25.70	19.67	33.03	31.74
Movement LOS	A	B	B	D	B	B	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	15.13			22.42			25.05			29.93		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.11											
Intersection LOS	C											
Intersection V/C	0.467											

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]	31.53	31.53	31.53	31.53
l_p,int, Pedestrian LOS Score for Intersection	3.106	3.117	3.017	3.513
Crosswalk LOS	C	C	C	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	799	874	475	475
d_b, Bicycle Delay [s]	14.42	12.68	23.28	23.28
l_b,int, Bicycle LOS Score for Intersection	2.255	2.012	1.832	2.836
Bicycle LOS	B	B	A	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl/Corvallis

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Corvallis			Lorson Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	250.00	400.00	100.00	100.00	100.00	100.00	100.00	250.00	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	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Corvallis			Lorson Bl		
Base Volume Input [veh/h]	157	714	131	40	999	23	49	18	69	408	11	167
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	66	0	0	12	0	0	35	0	0	84
Total Hourly Volume [veh/h]	157	714	65	40	999	11	49	18	34	408	11	83
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	179	16	10	250	3	12	5	9	102	3	21
Total Analysis Volume [veh/h]	157	714	65	40	999	11	49	18	34	408	11	83
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	11	30	0	15	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	10	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	5	43	43	3	41	41	3	7	11	15
g / C, Green / Cycle	0.06	0.54	0.54	0.04	0.51	0.51	0.04	0.09	0.14	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.22	0.05	0.02	0.31	0.01	0.02	0.03	0.13	0.06
s, saturation flow rate [veh/h]	3113	3204	1431	1603	3204	1431	3113	1509	3113	1456
c, Capacity [veh/h]	198	1720	768	62	1639	732	134	132	430	266
d1, Uniform Delay [s]	37.04	11.08	9.02	38.03	13.90	9.64	37.32	34.60	34.29	28.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.03	0.74	0.22	10.93	1.70	0.04	1.66	1.91	11.35	0.80
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.79	0.42	0.08	0.65	0.61	0.02	0.37	0.39	0.95	0.35
d, Delay for Lane Group [s/veh]	44.07	11.82	9.24	48.96	15.60	9.68	38.98	36.51	45.64	29.47
Lane Group LOS	D	B	A	D	B	A	D	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.58	3.05	0.47	0.90	5.33	0.08	0.49	1.01	4.45	1.58
50th-Percentile Queue Length [ft/ln]	39.61	76.24	11.80	22.51	133.37	2.08	12.24	25.23	111.28	39.39
95th-Percentile Queue Length [veh/ln]	2.85	5.49	0.85	1.62	9.12	0.15	0.88	1.82	7.91	2.84
95th-Percentile Queue Length [ft/ln]	71.30	137.23	21.24	40.52	228.06	3.74	22.03	45.42	197.79	70.90

Movement, Approach, & Intersection Results

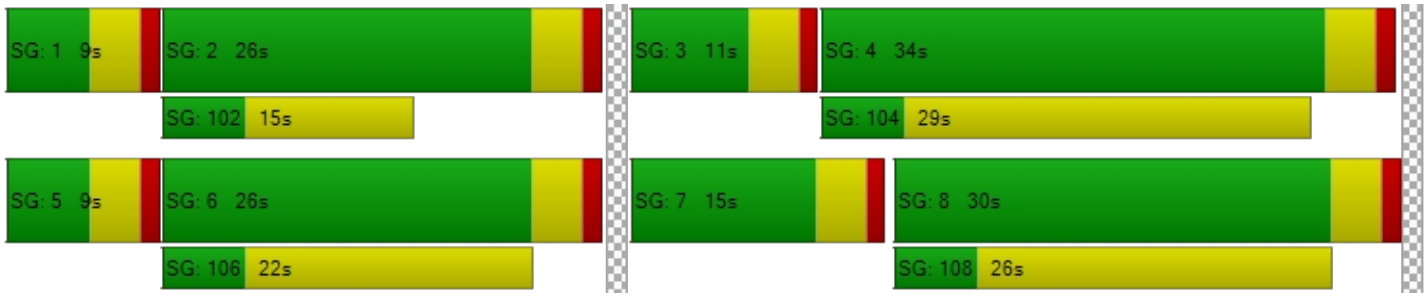
d_M, Delay for Movement [s/veh]	44.07	11.82	9.24	48.96	15.60	9.68	38.98	36.51	36.51	45.64	29.47	29.47
Movement LOS	D	B	A	D	B	A	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	17.05			16.81			37.71			42.61		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.71											
Intersection LOS	C											
Intersection V/C	0.528											

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]	31.56	31.56	31.56	31.56
l_p,int, Pedestrian LOS Score for Intersection	3.316	3.115	2.409	2.467
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	549	549	649	749
d_b, Bicycle Delay [s]	21.08	21.08	18.27	15.67
l_b,int, Bicycle LOS Score for Intersection	2.386	2.436	1.784	2.527
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Signalized	Delay (sec / veh):	5.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.480

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	46	20	37	17	20	35	25	570	32	34	1262	8
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	19	0	0	18	0	0	16	0	0	4
Total Hourly Volume [veh/h]	46	20	18	17	20	17	25	570	16	34	1262	4
Peak Hour Factor	1.0000	1.0000	1.0000	0.7000	1.0000	0.7000	0.8400	0.8400	1.0000	1.0000	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]	12	5	5	6	5	6	7	170	4	9	354	1
Total Analysis Volume [veh/h]	46	20	18	24	20	24	30	679	16	34	1418	4
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	84	35	0	84	35	0	84	45	0	84	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	25	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	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	2.00
g_i, Effective Green Time [s]	8	8	8	8	8	8	63	63	63	63	63	63
g / C, Green / Cycle	0.11	0.11	0.11	0.11	0.11	0.11	0.79	0.79	0.79	0.79	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.04	0.01	0.01	0.02	0.01	0.02	0.09	0.21	0.01	0.05	0.44	0.00
s, saturation flow rate [veh/h]	1226	1683	1431	1232	1683	1431	339	3204	1431	675	3204	1431
c, Capacity [veh/h]	181	179	153	182	179	153	291	2542	1135	565	2542	1135
d1, Uniform Delay [s]	35.58	32.29	32.31	34.92	32.29	32.45	7.30	2.17	1.73	3.67	3.06	1.71
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00
d2, Incremental Delay [s]	0.73	0.27	0.34	0.32	0.27	0.48	0.71	0.26	0.02	0.20	0.89	0.01
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	0.25	0.11	0.12	0.13	0.11	0.16	0.10	0.27	0.01	0.06	0.56	0.00
d, Delay for Lane Group [s/veh]	36.30	32.56	32.65	35.25	32.56	32.93	8.01	2.42	1.75	3.88	3.95	1.72
Lane Group LOS	D	C	C	D	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.89	0.36	0.33	0.45	0.36	0.44	0.24	0.53	0.02	0.14	1.61	0.01
50th-Percentile Queue Length [ft/ln]	22.32	9.04	8.20	11.37	9.04	11.00	5.95	13.21	0.59	3.47	40.13	0.15
95th-Percentile Queue Length [veh/ln]	1.61	0.65	0.59	0.82	0.65	0.79	0.43	0.95	0.04	0.25	2.89	0.01
95th-Percentile Queue Length [ft/ln]	40.17	16.28	14.76	20.47	16.28	19.80	10.71	23.78	1.06	6.25	72.23	0.26

Movement, Approach, & Intersection Results

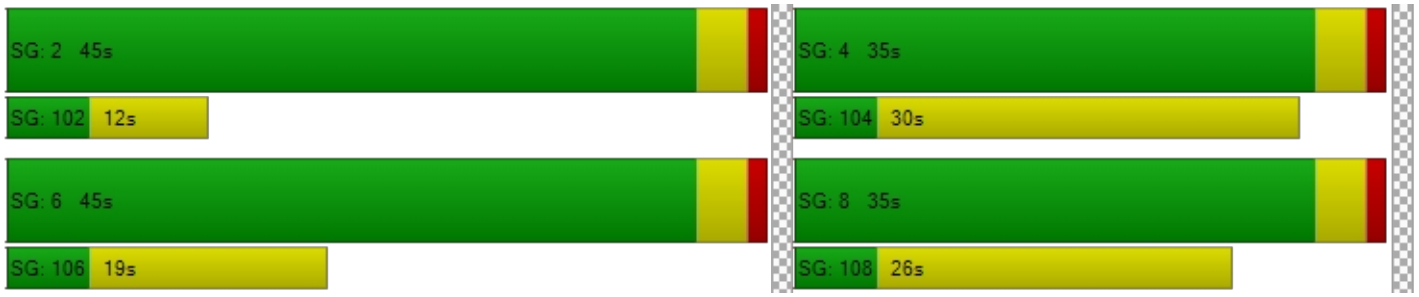
d_M, Delay for Movement [s/veh]	36.30	32.56	32.65	35.25	32.56	32.93	8.01	2.42	1.75	3.88	3.95	1.72
Movement LOS	D	C	C	D	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	34.63			33.64			2.64			3.94		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	5.51											
Intersection LOS	A											
Intersection V/C	0.480											

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]	31.49	31.49	31.49	31.49
l_p,int, Pedestrian LOS Score for Intersection	2.241	2.224	3.147	3.025
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	775	775	1025	1025
d_b, Bicycle Delay [s]	15.00	15.00	9.50	9.50
l_b,int, Bicycle LOS Score for Intersection	1.730	1.702	2.171	2.764
Bicycle LOS	A	A	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 20: Carriage Meadows Dr/Firesteel Dr

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Base Volume Input [veh/h]	93	1	3	83	4	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	1	3	83	4	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	0	1	21	1	3
Total Analysis Volume [veh/h]	93	1	3	83	4	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.40	0.00	9.53	8.80
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.13	0.13	1.17	1.17
d_A, Approach Delay [s/veh]	0.00		0.26		9.01	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	105	410	432	710	651	93	107	969	177	244	553	414
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	216	0	0	47	0	0	89	0	0	207
Total Hourly Volume [veh/h]	105	410	216	710	651	46	107	969	88	244	553	207
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	103	54	178	163	12	27	242	22	61	138	52
Total Analysis Volume [veh/h]	105	410	216	710	651	46	107	969	88	244	553	207
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Protect	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	36	0	29	56	0	9	26	0	9	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	62	35	35	23	53	53	30	21	21	30	21	21
g / C, Green / Cycle	0.62	0.35	0.35	0.23	0.53	0.53	0.30	0.21	0.21	0.30	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.14	0.21	0.18	0.03	0.11	0.19	0.06	0.15	0.16	0.13
s, saturation flow rate [veh/h]	861	3560	1589	3459	3560	1589	956	5094	1589	1602	3560	1589
c, Capacity [veh/h]	566	1251	559	787	1893	845	289	1073	335	427	750	335
d1, Uniform Delay [s]	8.30	23.78	24.35	37.55	13.43	11.30	27.35	38.48	32.98	28.59	36.89	35.82
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	0.16	0.70	2.02	4.15	0.50	0.12	0.79	3.14	0.41	1.20	1.44	1.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.19	0.33	0.39	0.90	0.34	0.05	0.37	0.90	0.26	0.57	0.74	0.62
d, Delay for Lane Group [s/veh]	8.45	24.48	26.36	41.69	13.93	11.43	28.14	41.61	33.40	29.79	38.32	37.68
Lane Group LOS	A	C	C	D	B	B	C	D	C	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.76	3.37	3.82	8.24	3.72	0.46	1.87	7.63	1.75	2.15	6.15	4.54
50th-Percentile Queue Length [ft/ln]	18.97	84.21	95.40	206.11	93.00	11.39	46.66	190.69	43.68	53.76	153.83	113.45
95th-Percentile Queue Length [veh/ln]	1.37	6.06	6.87	12.95	6.70	0.82	3.36	12.16	3.14	3.87	10.22	8.03
95th-Percentile Queue Length [ft/ln]	34.15	151.57	171.72	323.83	167.39	20.50	83.98	303.92	78.62	96.76	255.54	200.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.45	24.48	26.36	41.69	13.93	11.43	28.14	41.61	33.40	29.79	38.32	37.68
Movement LOS	A	C	C	D	B	B	C	D	C	C	D	D
d_A, Approach Delay [s/veh]	22.73			27.86			39.75			36.12		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.13											
Intersection LOS	C											
Intersection V/C	0.586											

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]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	3.449	3.312	3.228	3.634
Crosswalk LOS	C	C	C	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	1040	440	440
d_b, Bicycle Delay [s]	23.13	11.53	30.43	30.43
I_b,int, Bicycle LOS Score for Intersection	2.341	2.759	2.249	2.559
Bicycle LOS	B	C	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl/Corvallis Rd

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.434

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Corvallis Rd			Lorson Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	250.00	400.00	100.00	100.00	100.00	100.00	100.00	250.00	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	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Corvallis Rd			Lorson Bl		
Base Volume Input [veh/h]	159	742	465	140	610	34	47	15	41	287	20	115
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	233	0	0	17	0	0	21	0	0	58
Total Hourly Volume [veh/h]	159	742	232	140	610	17	47	15	20	287	20	57
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	186	58	35	153	4	12	4	5	72	5	14
Total Analysis Volume [veh/h]	159	742	232	140	610	17	47	15	20	287	20	57
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	26	0	12	20	0	9	30	0	12	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	10	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	6	43	43	8	44	44	3	5	8	10
g / C, Green / Cycle	0.08	0.53	0.53	0.10	0.56	0.56	0.04	0.07	0.10	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.23	0.16	0.09	0.19	0.01	0.02	0.02	0.09	0.05
s, saturation flow rate [veh/h]	3113	3204	1431	1603	3204	1431	3113	1529	3113	1489
c, Capacity [veh/h]	239	1697	758	162	1774	792	131	106	314	191
d1, Uniform Delay [s]	36.02	11.55	10.59	35.53	9.87	8.09	37.37	35.55	35.72	32.16
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.16	0.82	1.05	12.87	0.53	0.05	1.65	1.80	10.45	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.66	0.44	0.31	0.87	0.34	0.02	0.36	0.33	0.91	0.40
d, Delay for Lane Group [s/veh]	39.18	12.37	11.64	48.40	10.40	8.14	39.01	37.35	46.17	33.54
Lane Group LOS	D	B	B	D	B	A	D	D	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.49	3.29	2.00	3.03	2.34	0.11	0.47	0.69	3.13	1.40
50th-Percentile Queue Length [ft/ln]	37.26	82.29	49.92	75.79	58.61	2.80	11.75	17.30	78.20	34.92
95th-Percentile Queue Length [veh/ln]	2.68	5.92	3.59	5.46	4.22	0.20	0.85	1.25	5.63	2.51
95th-Percentile Queue Length [ft/ln]	67.07	148.12	89.86	136.42	105.50	5.04	21.16	31.14	140.76	62.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.18	12.37	11.64	48.40	10.40	8.14	39.01	37.35	37.35	46.17	33.54	33.54
Movement LOS	D	B	B	D	B	A	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	15.98			17.29			38.30			43.50		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	21.46											
Intersection LOS	C											
Intersection V/C	0.434											

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]	31.56	31.56	31.56	31.56
l_p,int, Pedestrian LOS Score for Intersection	3.509	3.045	2.387	2.506
Crosswalk LOS	D	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	549	399	649	724
d_b, Bicycle Delay [s]	21.08	25.65	18.27	16.30
l_b,int, Bicycle LOS Score for Intersection	2.687	2.206	1.730	2.256
Bicycle LOS	B	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Signalized	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.684

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	73	20	58	27	20	56	112	1892	107	53	1999	12
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	29	0	0	28	0	0	54	0	0	6
Total Hourly Volume [veh/h]	73	20	29	27	20	28	112	1892	53	53	1999	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	5	7	7	5	7	28	473	13	13	500	2
Total Analysis Volume [veh/h]	73	20	29	27	20	28	112	1892	53	53	1999	6
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	94	46	0	94	46	0	94	44	0	94	44	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	33	0	0	37	0	0	24	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	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	2.00
g_i, Effective Green Time [s]	10	10	10	10	10	10	72	72	72	72	72	72
g / C, Green / Cycle	0.11	0.11	0.11	0.11	0.11	0.11	0.80	0.80	0.80	0.80	0.80	0.80
(v / s)_i Volume / Saturation Flow Rate	0.06	0.01	0.02	0.02	0.01	0.02	0.58	0.59	0.04	0.26	0.62	0.00
s, saturation flow rate [veh/h]	1221	1683	1431	1220	1683	1431	193	3204	1431	204	3204	1431
c, Capacity [veh/h]	174	180	153	174	180	153	165	2577	1150	179	2577	1150
d1, Uniform Delay [s]	40.74	36.29	36.60	39.17	36.29	36.58	29.89	4.21	1.79	16.13	4.58	1.73
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00
d2, Incremental Delay [s]	1.60	0.27	0.59	0.41	0.27	0.57	20.16	1.90	0.08	4.17	2.36	0.01
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	0.42	0.11	0.19	0.16	0.11	0.18	0.68	0.73	0.05	0.30	0.78	0.01
d, Delay for Lane Group [s/veh]	42.34	36.56	37.20	39.58	36.56	37.15	50.05	6.11	1.87	20.30	6.95	1.74
Lane Group LOS	D	D	D	D	D	D	D	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.66	0.41	0.61	0.58	0.41	0.58	3.32	3.80	0.10	0.88	4.43	0.01
50th-Percentile Queue Length [ft/ln]	41.50	10.27	15.16	14.57	10.27	14.62	83.11	94.96	2.46	21.88	110.81	0.27
95th-Percentile Queue Length [veh/ln]	2.99	0.74	1.09	1.05	0.74	1.05	5.98	6.84	0.18	1.58	7.89	0.02
95th-Percentile Queue Length [ft/ln]	74.71	18.49	27.29	26.22	18.49	26.32	149.59	170.92	4.43	39.38	197.13	0.48

Movement, Approach, & Intersection Results

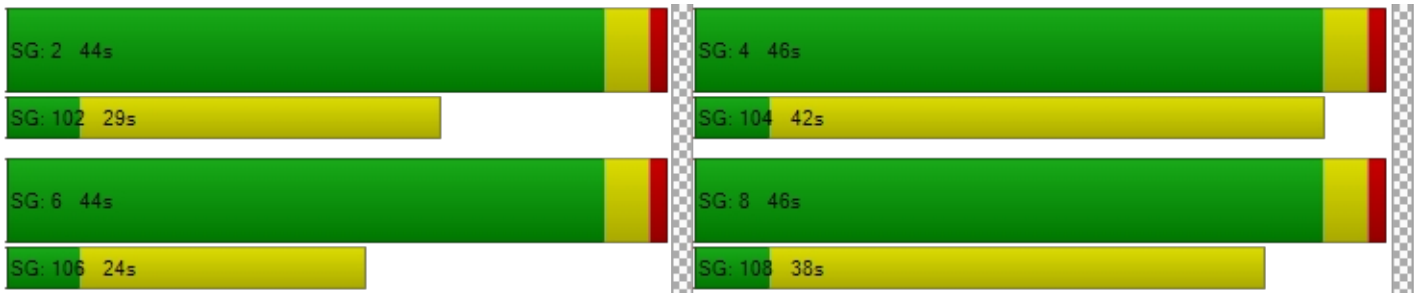
d_M, Delay for Movement [s/veh]	42.34	36.56	37.20	39.58	36.56	37.15	50.05	6.11	1.87	20.30	6.95	1.74
Movement LOS	D	D	D	D	D	D	D	A	A	C	A	A
d_A, Approach Delay [s/veh]	40.17			37.87			8.39			7.27		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.27											
Intersection LOS	A											
Intersection V/C	0.684											

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]	36.43	36.43	36.43	36.43
l_p,int, Pedestrian LOS Score for Intersection	2.316	2.382	3.662	3.486
Crosswalk LOS	B	B	D	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	934	934	889	889
d_b, Bicycle Delay [s]	12.78	12.78	13.87	13.87
l_b,int, Bicycle LOS Score for Intersection	1.809	1.730	3.301	3.262
Bicycle LOS	A	A	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 20: Carriage Meadows Dr/Firesteel Dr

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Carriage Meadows Dr		Carriage Meadows Dr		Firesteel Dr	
Base Volume Input [veh/h]	146	5	10	170	3	5
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]	146	5	10	170	3	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	1	3	43	1	1
Total Analysis Volume [veh/h]	146	5	10	170	3	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.53	0.00	10.57	9.05
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.02	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.42	0.42	0.77	0.77
d_A, Approach Delay [s/veh]	0.00		0.42		9.62	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.45					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	73	625	145	193	300	55	75	289	132	268	726	553
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	47	40	0	0	0	25	0	33	18	29
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	96	0	0	28	0	0	66	0	0	291
Total Hourly Volume [veh/h]	73	625	96	233	300	27	75	314	66	301	744	291
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	156	24	58	75	7	19	79	17	75	186	73
Total Analysis Volume [veh/h]	73	625	96	233	300	27	75	314	66	301	744	291
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Protect	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	36	0	12	39	0	9	23	0	9	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	45	34	34	7	37	37	27	18	18	27	19	19
g / C, Green / Cycle	0.56	0.42	0.42	0.09	0.46	0.46	0.34	0.23	0.23	0.34	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.06	0.18	0.06	0.07	0.08	0.02	0.09	0.06	0.04	0.13	0.21	0.18
s, saturation flow rate [veh/h]	1150	3560	1589	3459	3560	1589	824	5094	1589	2341	3560	1589
c, Capacity [veh/h]	735	1501	670	315	1646	735	300	1143	357	857	841	375
d1, Uniform Delay [s]	8.06	16.24	14.25	35.45	12.64	11.77	20.33	25.65	25.12	19.41	29.52	28.59
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	0.06	0.85	0.45	3.39	0.24	0.09	0.43	0.13	0.25	0.25	3.34	3.46
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	0.10	0.42	0.14	0.74	0.18	0.04	0.25	0.27	0.18	0.35	0.88	0.78
d, Delay for Lane Group [s/veh]	8.12	17.09	14.70	38.83	12.88	11.86	20.77	25.78	25.36	19.65	32.86	32.04
Lane Group LOS	A	B	B	D	B	B	C	C	C	B	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.45	3.53	0.99	2.17	1.36	0.24	0.91	1.54	0.97	1.87	6.69	5.13
50th-Percentile Queue Length [ft/ln]	11.17	88.25	24.68	54.26	33.91	5.93	22.74	38.43	24.13	46.70	167.27	128.32
95th-Percentile Queue Length [veh/ln]	0.80	6.35	1.78	3.91	2.44	0.43	1.64	2.77	1.74	3.36	10.93	8.85
95th-Percentile Queue Length [ft/ln]	20.10	158.86	44.42	97.66	61.04	10.67	40.93	69.17	43.43	84.07	273.32	221.21

Movement, Approach, & Intersection Results

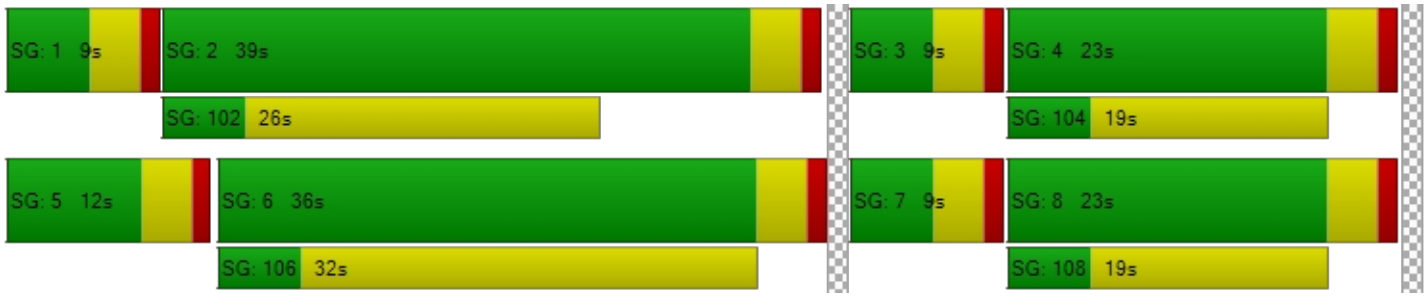
d_M, Delay for Movement [s/veh]	8.12	17.09	14.70	38.83	12.88	11.86	20.77	25.78	25.36	19.65	32.86	32.04
Movement LOS	A	B	B	D	B	B	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	15.98			23.63			24.90			29.71		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.46											
Intersection LOS	C											
Intersection V/C	0.483											

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]	31.52	31.52	31.52	31.52
l_p,int, Pedestrian LOS Score for Intersection	3.176	3.135	3.025	3.568
Crosswalk LOS	C	C	C	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	875	475	475
d_b, Bicycle Delay [s]	14.41	12.67	23.27	23.27
l_b,int, Bicycle LOS Score for Intersection	2.294	2.045	1.846	2.902
Bicycle LOS	B	B	A	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl/Corvallis Rd

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.538

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Corvallis Rd			Lorson Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	250.00	400.00	100.00	100.00	100.00	100.00	100.00	250.00	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	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Corvallis Rd			Lorson Bl		
Base Volume Input [veh/h]	157	714	131	40	999	23	49	18	69	408	11	167
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	47	0	0	33	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	66	0	0	12	0	0	35	0	0	84
Total Hourly Volume [veh/h]	157	761	65	40	1032	11	49	18	34	408	11	83
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	190	16	10	258	3	12	5	9	102	3	21
Total Analysis Volume [veh/h]	157	761	65	40	1032	11	49	18	34	408	11	83
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	26	0	9	26	0	11	30	0	15	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	10	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	5	43	43	3	41	41	3	7	11	15
g / C, Green / Cycle	0.06	0.54	0.54	0.04	0.51	0.51	0.04	0.09	0.14	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.24	0.05	0.02	0.32	0.01	0.02	0.03	0.13	0.06
s, saturation flow rate [veh/h]	3113	3204	1431	1603	3204	1431	3113	1509	3113	1456
c, Capacity [veh/h]	198	1720	768	62	1639	732	134	132	430	266
d1, Uniform Delay [s]	37.04	11.29	9.02	38.03	14.11	9.64	37.32	34.60	34.29	28.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.03	0.83	0.22	10.93	1.85	0.04	1.66	1.91	11.35	0.80
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.79	0.44	0.08	0.65	0.63	0.02	0.37	0.39	0.95	0.35
d, Delay for Lane Group [s/veh]	44.07	12.12	9.24	48.96	15.96	9.68	38.98	36.51	45.64	29.47
Lane Group LOS	D	B	A	D	B	A	D	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.58	3.32	0.47	0.90	5.61	0.08	0.49	1.01	4.45	1.58
50th-Percentile Queue Length [ft/ln]	39.61	82.96	11.80	22.51	140.24	2.08	12.24	25.23	111.28	39.39
95th-Percentile Queue Length [veh/ln]	2.85	5.97	0.85	1.62	9.49	0.15	0.88	1.82	7.91	2.84
95th-Percentile Queue Length [ft/ln]	71.30	149.33	21.24	40.52	237.35	3.74	22.03	45.42	197.79	70.90

Movement, Approach, & Intersection Results

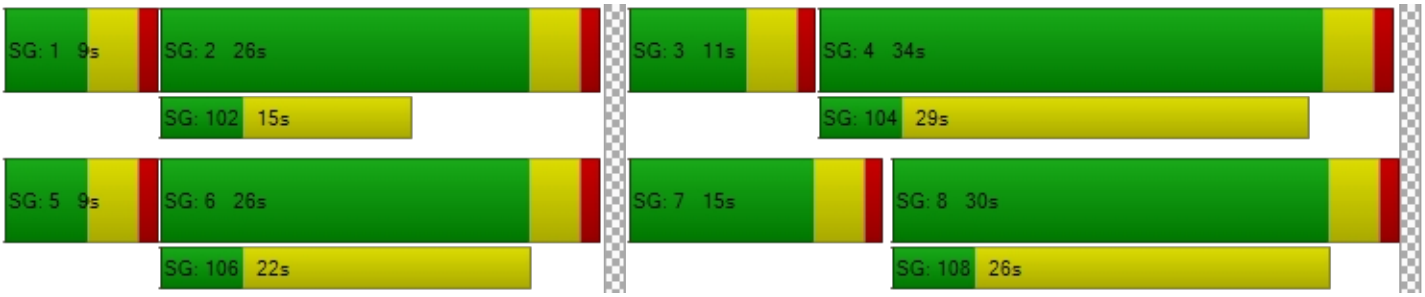
d_M, Delay for Movement [s/veh]	44.07	12.12	9.24	48.96	15.96	9.68	38.98	36.51	36.51	45.64	29.47	29.47
Movement LOS	D	B	A	D	B	A	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	17.03			17.11			37.71			42.61		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.66											
Intersection LOS	C											
Intersection V/C	0.538											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [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]	31.56	31.56	31.56	31.56
l_p,int, Pedestrian LOS Score for Intersection	3.337	3.136	2.409	2.467
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	549	549	649	749
d_b, Bicycle Delay [s]	21.08	21.08	18.27	15.67
l_b,int, Bicycle LOS Score for Intersection	2.425	2.463	1.784	2.527
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	46	20	37	17	20	35	25	570	32	34	1262	8
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]	40	0	16	0	0	0	0	16	56	43	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	27	0	0	18	0	0	44	0	0	4
Total Hourly Volume [veh/h]	86	20	26	17	20	17	25	586	44	77	1262	4
Peak Hour Factor	1.0000	1.0000	1.0000	0.7000	1.0000	0.7000	0.8400	0.8400	1.0000	1.0000	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]	22	5	7	6	5	6	7	174	11	19	354	1
Total Analysis Volume [veh/h]	86	20	26	24	20	24	30	698	44	77	1418	4
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	74	35	0	74	35	0	74	35	0	74	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	25	0	0	7	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	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	2.00
g_i, Effective Green Time [s]	9	9	9	9	9	9	53	53	53	53	53	53
g / C, Green / Cycle	0.13	0.13	0.13	0.13	0.13	0.13	0.75	0.75	0.75	0.75	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.07	0.01	0.02	0.02	0.01	0.02	0.09	0.22	0.03	0.12	0.44	0.00
s, saturation flow rate [veh/h]	1226	1683	1431	1224	1683	1431	339	3204	1431	646	3204	1431
c, Capacity [veh/h]	228	226	192	228	226	192	274	2408	1075	516	2408	1075
d1, Uniform Delay [s]	30.33	26.55	26.72	28.76	26.55	26.68	9.44	2.76	2.23	5.14	3.88	2.17
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00
d2, Incremental Delay [s]	1.03	0.17	0.32	0.20	0.17	0.29	0.81	0.30	0.07	0.61	1.06	0.01
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	0.38	0.09	0.14	0.11	0.09	0.13	0.11	0.29	0.04	0.15	0.59	0.00
d, Delay for Lane Group [s/veh]	31.35	26.71	27.03	28.96	26.71	26.97	10.24	3.07	2.30	5.75	4.94	2.17
Lane Group LOS	C	C	C	C	C	C	B	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.44	0.30	0.39	0.38	0.30	0.36	0.26	0.66	0.08	0.38	1.94	0.01
50th-Percentile Queue Length [ft/ln]	35.89	7.45	9.82	9.39	7.45	9.05	6.51	16.42	1.94	9.62	48.44	0.17
95th-Percentile Queue Length [veh/ln]	2.58	0.54	0.71	0.68	0.54	0.65	0.47	1.18	0.14	0.69	3.49	0.01
95th-Percentile Queue Length [ft/ln]	64.60	13.40	17.68	16.89	13.40	16.29	11.72	29.56	3.50	17.32	87.20	0.31

Movement, Approach, & Intersection Results

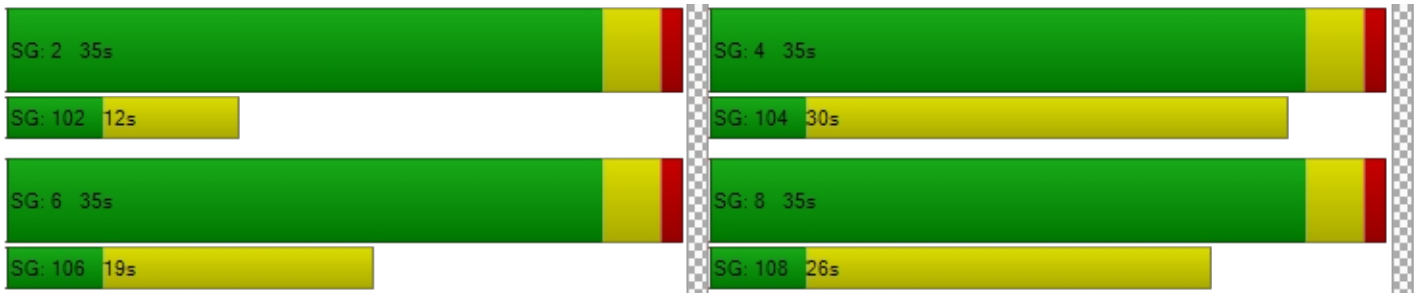
d_M, Delay for Movement [s/veh]	31.35	26.71	27.03	28.96	26.71	26.97	10.24	3.07	2.30	5.75	4.94	2.17
Movement LOS	C	C	C	C	C	C	B	A	A	A	A	A
d_A, Approach Delay [s/veh]	29.80			27.60			3.30			4.97		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	6.40											
Intersection LOS	A											
Intersection V/C	0.513											

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]	26.57	26.57	26.57	26.57
l_p,int, Pedestrian LOS Score for Intersection	2.338	2.217	3.261	3.037
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	886	886	886	886
d_b, Bicycle Delay [s]	10.86	10.86	10.86	10.86
l_b,int, Bicycle LOS Score for Intersection	1.822	1.702	2.233	2.800
Bicycle LOS	A	A	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 10: Fontaine Blvd/Access 1

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.086

Intersection Setup

Name	Aceess 1		Fontaine Bl		Fontaine Bl	
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	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Aceess 1		Fontaine Bl		Fontaine Bl	
Base Volume Input [veh/h]	0	0	627	0	0	1343
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	56	56	56	0	80
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	56	683	56	0	1423
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	14	171	14	0	356
Total Analysis Volume [veh/h]	0	56	683	56	0	1423
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	0.09	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	11.02	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.28	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	6.99	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.02		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.28					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 20: Access 2 / Carriage Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.073

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Access 2			Firesteel Dr		
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	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	235.00	235.00	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			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Access 2			Firesteel Dr		
Base Volume Input [veh/h]	0	93	1	3	83	0	0	0	0	4	0	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	99	56	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	93	1	3	83	99	56	0	0	4	0	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	23	0	1	21	25	14	0	0	1	0	3
Total Analysis Volume [veh/h]	0	93	1	3	83	99	56	0	0	4	0	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.01	0.00	0.01
d_M, Delay for Movement [s/veh]	7.58	0.00	0.00	7.40	0.00	0.00	10.09	10.07	8.69	10.06	10.82	8.80
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.00	0.24	0.00	0.00	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.13	0.13	0.00	5.92	0.00	0.00	1.21	1.21	1.21
d_A, Approach Delay [s/veh]	0.00			0.12			10.09			9.16		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	2.05											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 1: Marksheffel Road/Fontaine Blvd

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	460.00	100.00	460.00	390.00	100.00	390.00	260.00	100.00	40.00	430.00	100.00	440.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
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	49.21
Speed [mph]	55.00			55.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	105	410	432	710	651	93	107	969	177	244	553	414
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	52	45	0	0	0	28	0	55	30	48
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	242	0	0	47	0	0	89	0	0	231
Total Hourly Volume [veh/h]	105	410	242	755	651	46	107	997	88	299	583	231
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	103	61	189	163	12	27	249	22	75	146	58
Total Analysis Volume [veh/h]	105	410	242	755	651	46	107	997	88	299	583	231
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Protect	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	29	53	0	11	26	0	9	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	62	34	34	24	53	53	31	21	21	31	20	20
g / C, Green / Cycle	0.62	0.34	0.34	0.24	0.53	0.53	0.30	0.21	0.21	0.30	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.15	0.22	0.18	0.03	0.11	0.20	0.06	0.19	0.16	0.15
s, saturation flow rate [veh/h]	861	3560	1589	3459	3560	1589	970	5094	1589	1575	3560	1589
c, Capacity [veh/h]	562	1202	536	824	1880	839	294	1091	340	424	720	322
d1, Uniform Delay [s]	8.45	24.81	25.90	37.13	13.63	11.47	27.31	38.41	32.70	28.97	38.06	37.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	0.16	0.77	2.73	4.61	0.51	0.12	0.75	3.48	0.40	2.16	2.23	3.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.19	0.34	0.45	0.92	0.35	0.05	0.36	0.91	0.26	0.71	0.81	0.72
d, Delay for Lane Group [s/veh]	8.61	25.59	28.63	41.74	14.13	11.59	28.06	41.89	33.10	31.14	40.29	40.25
Lane Group LOS	A	C	C	D	B	B	C	D	C	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.77	3.47	4.52	8.81	3.76	0.46	1.85	7.89	1.74	2.70	6.70	5.29
50th-Percentile Queue Length [ft/ln]	19.24	86.64	112.94	220.18	93.96	11.51	46.35	197.29	43.44	67.60	167.40	132.20
95th-Percentile Queue Length [veh/ln]	1.39	6.24	8.00	13.67	6.76	0.83	3.34	12.50	3.13	4.87	10.94	9.06
95th-Percentile Queue Length [ft/ln]	34.63	155.95	200.08	341.86	169.12	20.71	83.42	312.47	78.19	121.67	273.50	226.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.61	25.59	28.63	41.74	14.13	11.59	28.06	41.89	33.10	31.14	40.29	40.25
Movement LOS	A	C	C	D	B	B	C	D	C	C	D	D
d_A, Approach Delay [s/veh]	24.20			28.41			40.00			37.82		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.08											
Intersection LOS	C											
Intersection V/C	0.632											

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]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.537	3.334	3.240	3.715
Crosswalk LOS	D	C	C	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	980	440	400
d_b, Bicycle Delay [s]	23.13	13.01	30.43	32.01
l_b,int, Bicycle LOS Score for Intersection	2.384	2.796	2.264	2.668
Bicycle LOS	B	C	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 2: Marksheffel Rd/Lorson Bl/Corvallis

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.450

Intersection Setup

Name	Marksheffel Rd			Marksheffel Rd			Corvallis			Lorson Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	250.00	400.00	100.00	100.00	100.00	100.00	100.00	250.00	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	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Marksheffel Rd			Marksheffel Rd			Corvallis			Lorson Bl		
Base Volume Input [veh/h]	159	742	465	140	610	34	47	15	41	287	20	115
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	52	0	0	55	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	233	0	0	17	0	0	21	0	0	58
Total Hourly Volume [veh/h]	159	794	232	140	665	17	47	15	20	287	20	57
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	199	58	35	166	4	12	4	5	72	5	14
Total Analysis Volume [veh/h]	159	794	232	140	665	17	47	15	20	287	20	57
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	26	0	12	21	0	9	30	0	12	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	10	0	0	21	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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
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
g_i, Effective Green Time [s]	6	43	43	8	44	44	3	5	8	10
g / C, Green / Cycle	0.08	0.53	0.53	0.10	0.56	0.56	0.04	0.07	0.10	0.13
(v / s)_i Volume / Saturation Flow Rate	0.05	0.25	0.16	0.09	0.21	0.01	0.02	0.02	0.09	0.05
s, saturation flow rate [veh/h]	3113	3204	1431	1603	3204	1431	3113	1529	3113	1489
c, Capacity [veh/h]	239	1697	758	162	1775	792	131	106	314	191
d1, Uniform Delay [s]	36.04	11.80	10.59	35.53	10.08	8.08	37.37	35.55	35.72	32.16
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.19	0.93	1.05	12.87	0.61	0.05	1.65	1.80	10.45	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.67	0.47	0.31	0.87	0.37	0.02	0.36	0.33	0.91	0.40
d, Delay for Lane Group [s/veh]	39.23	12.73	11.64	48.40	10.68	8.13	39.01	37.35	46.17	33.54
Lane Group LOS	D	B	B	D	B	A	D	D	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.49	3.61	2.00	3.03	2.61	0.11	0.47	0.69	3.13	1.40
50th-Percentile Queue Length [ft/ln]	37.29	90.14	49.92	75.79	65.32	2.80	11.75	17.30	78.20	34.92
95th-Percentile Queue Length [veh/ln]	2.69	6.49	3.59	5.46	4.70	0.20	0.85	1.25	5.63	2.51
95th-Percentile Queue Length [ft/ln]	67.13	162.25	89.86	136.42	117.58	5.04	21.16	31.14	140.76	62.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.23	12.73	11.64	48.40	10.68	8.13	39.01	37.35	37.35	46.17	33.54	33.54
Movement LOS	D	B	B	D	B	A	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	16.07			17.06			38.30			43.50		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	21.21											
Intersection LOS	C											
Intersection V/C	0.450											

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]	31.56	31.56	31.56	31.56
l_p,int, Pedestrian LOS Score for Intersection	3.537	3.072	2.387	2.506
Crosswalk LOS	D	C	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	549	424	649	724
d_b, Bicycle Delay [s]	21.08	24.86	18.27	16.30
l_b,int, Bicycle LOS Score for Intersection	2.729	2.252	1.730	2.256
Bicycle LOS	B	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 3: Fontaine BL/Carriage Meadows Dr

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	500.00	100.00	610.00	520.00	100.00	320.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Fontaine Bl			Fontaine Bl		
Base Volume Input [veh/h]	73	20	58	27	20	56	112	1892	107	53	1999	12
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]	67	0	26	0	0	0	0	26	63	48	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	42	0	0	28	0	0	85	0	0	6
Total Hourly Volume [veh/h]	140	20	42	27	20	28	112	1918	85	101	1999	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	5	11	7	5	7	28	480	21	25	500	2
Total Analysis Volume [veh/h]	140	20	42	27	20	28	112	1918	85	101	1999	6
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 major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	94	46	0	94	46	0	94	44	0	94	44	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	33	0	0	37	0	0	24	0	0	19	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	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	2.00
g_i, Effective Green Time [s]	16	16	16	16	16	16	66	66	66	66	66	66
g / C, Green / Cycle	0.17	0.17	0.17	0.17	0.17	0.17	0.74	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.11	0.01	0.03	0.02	0.01	0.02	0.58	0.60	0.06	0.52	0.62	0.00
s, saturation flow rate [veh/h]	1221	1683	1431	1206	1683	1431	193	3204	1431	193	3204	1431
c, Capacity [veh/h]	248	293	249	246	293	249	137	2362	1055	145	2362	1055
d1, Uniform Delay [s]	37.77	31.06	31.62	34.21	31.06	31.31	38.28	7.74	3.30	35.23	8.26	3.12
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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	1.00
d2, Incremental Delay [s]	2.00	0.10	0.32	0.19	0.10	0.20	39.95	3.17	0.15	24.16	3.97	0.01
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	0.56	0.07	0.17	0.11	0.07	0.11	0.82	0.81	0.08	0.70	0.85	0.01
d, Delay for Lane Group [s/veh]	39.77	31.16	31.94	34.40	31.16	31.51	78.22	10.91	3.45	59.39	12.23	3.13
Lane Group LOS	D	C	C	C	C	C	E	B	A	E	B	A
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.12	0.37	0.80	0.53	0.37	0.53	3.92	8.24	0.32	3.14	9.31	0.02
50th-Percentile Queue Length [ft/ln]	78.10	9.30	20.00	13.37	9.30	13.18	97.94	205.98	7.90	78.45	232.70	0.53
95th-Percentile Queue Length [veh/ln]	5.62	0.67	1.44	0.96	0.67	0.95	7.05	12.95	0.57	5.65	14.31	0.04
95th-Percentile Queue Length [ft/ln]	140.58	16.73	36.00	24.07	16.73	23.72	176.29	323.66	14.23	141.21	357.79	0.95

Movement, Approach, & Intersection Results

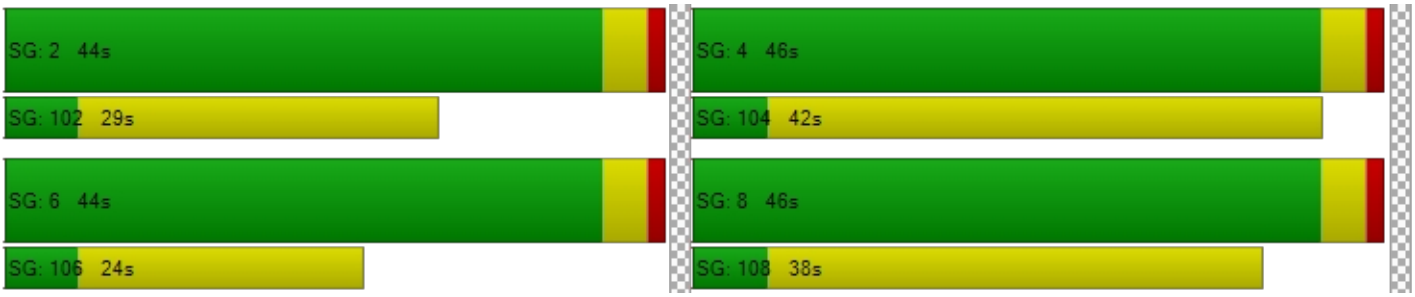
d_M, Delay for Movement [s/veh]	39.77	31.16	31.94	34.40	31.16	31.51	78.22	10.91	3.45	59.39	12.23	3.13
Movement LOS	D	C	C	C	C	C	E	B	A	E	B	A
d_A, Approach Delay [s/veh]	37.29			32.46			14.18			14.46		
Approach LOS	D			C			B			B		
d_I, Intersection Delay [s/veh]	15.65											
Intersection LOS	B											
Intersection V/C	0.738											

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]	36.44	36.44	36.44	36.44
l_p,int, Pedestrian LOS Score for Intersection	2.445	2.382	3.834	3.511
Crosswalk LOS	B	B	D	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	934	934	889	889
d_b, Bicycle Delay [s]	12.79	12.79	13.88	13.88
l_b,int, Bicycle LOS Score for Intersection	1.962	1.730	3.375	3.302
Bicycle LOS	A	A	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 10: Fontaine Blvd/Access 1

Control Type:	Two-way stop	Delay (sec / veh):	34.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

Intersection Setup

Name	Aceess 1		Fontaine Bl		Fontaine Bl	
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	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Aceess 1		Fontaine Bl		Fontaine Bl	
Base Volume Input [veh/h]	0	0	2111	0	0	2128
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	93	63	63	0	133
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	93	2174	63	0	2261
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	23	544	16	0	565
Total Analysis Volume [veh/h]	0	93	2174	63	0	2261
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	0.44	0.02	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	34.80	0.00	0.00	0.00	0.00
Movement LOS		D	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	2.07	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	51.75	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	34.80		0.00		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.71					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 20: Access 2 / Carriage Meadows Dr

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.154

Intersection Setup

Name	Carriage Meadows Dr			Carriage Meadows Dr			Access 2			Firesteel Dr		
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	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	235.00	235.00	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			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carriage Meadows Dr			Carriage Meadows Dr			Access 2			Firesteel Dr		
Base Volume Input [veh/h]	0	146	5	10	170	0	0	0	0	3	0	5
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	111	93	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	146	5	10	170	111	93	0	0	3	0	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	37	1	3	43	28	23	0	0	1	0	1
Total Analysis Volume [veh/h]	0	146	5	10	170	111	93	0	0	3	0	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.15	0.00	0.00	0.01	0.00	0.01
d_M, Delay for Movement [s/veh]	7.81	0.00	0.00	7.53	0.00	0.00	12.03	11.25	9.12	11.47	12.24	9.06
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.02	0.02	0.00	0.54	0.00	0.00	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.42	0.42	0.00	13.51	0.00	0.00	0.83	0.83	0.83
d_A, Approach Delay [s/veh]	0.00			0.26			12.03			9.96		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	2.35											
Intersection LOS	B											

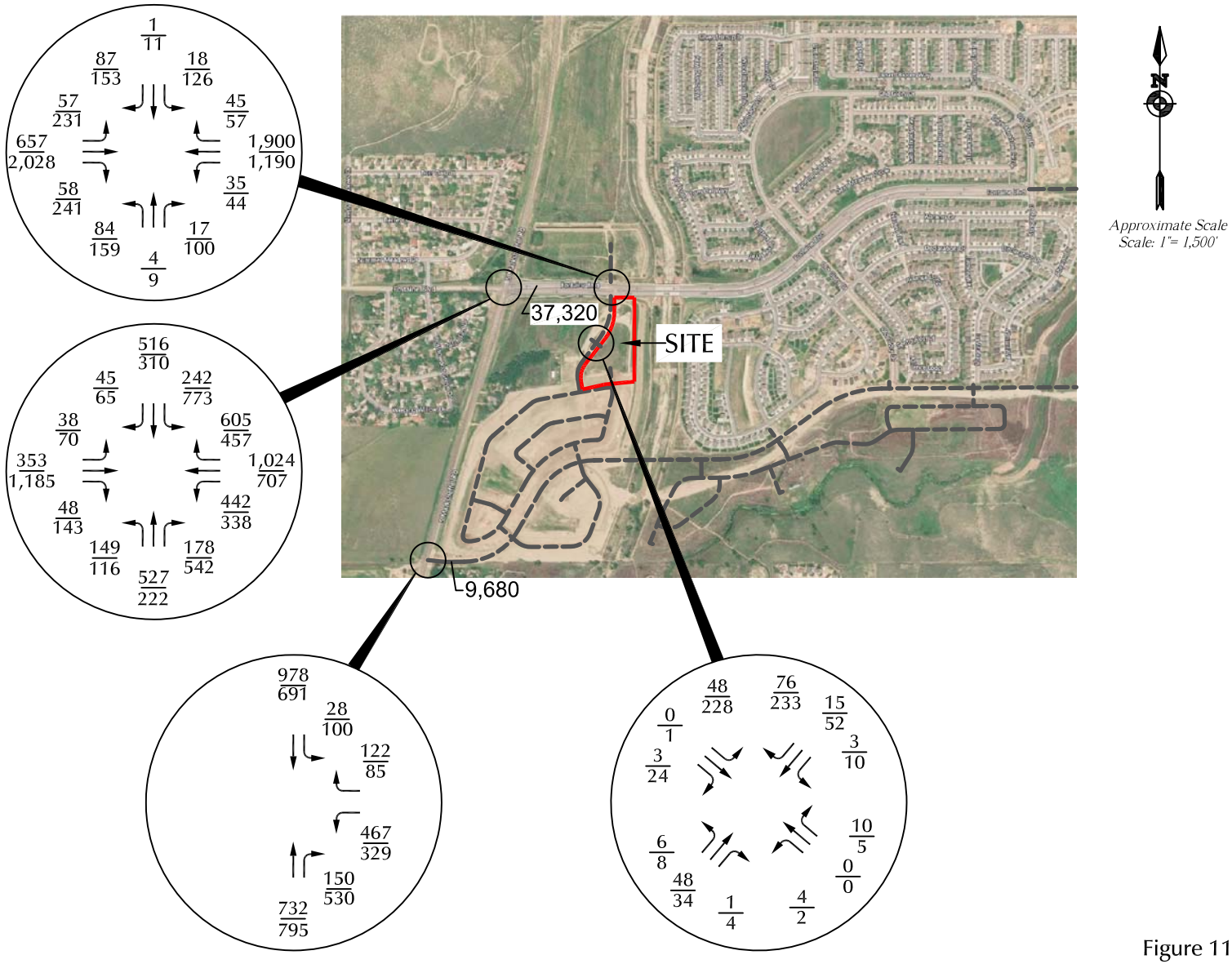


Figure 11a

Year 2040 Total Traffic

Carriage Meadows South Multi-Family (LSC #184720)

LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

X,XXX= Average Daily Traffic (vehicles per day) (Estimates by LSC)

Figure 23. Horizon Total Traffic Volumes (AM Peak Hour)

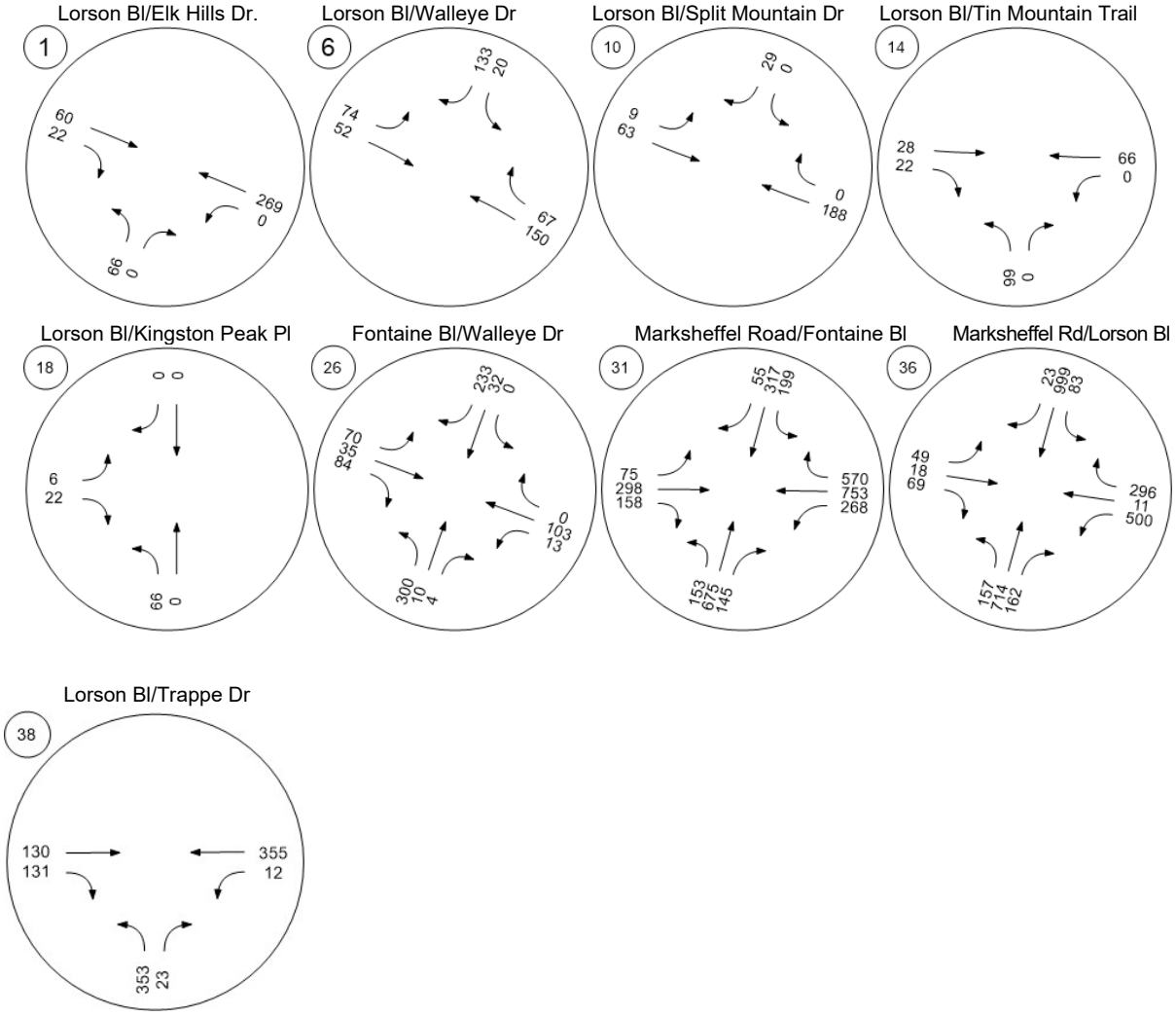
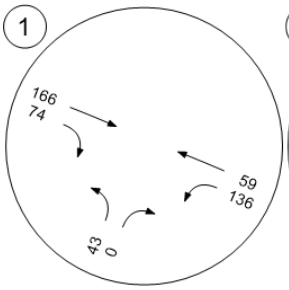
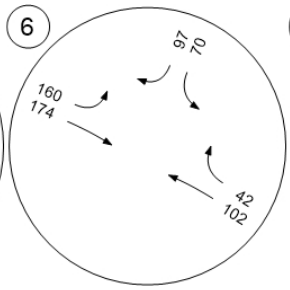


Figure 24. Horizon Total Traffic Volumes (PM Peak Hour)

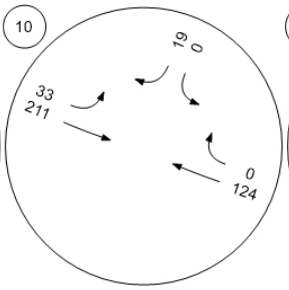
Lorson Bl/Elk Hills Dr.



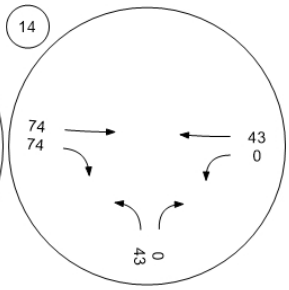
Lorson Bl/Walleye Dr



Lorson Bl/Split Mountain Dr



Lorson Bl/Tin Mountain Trail

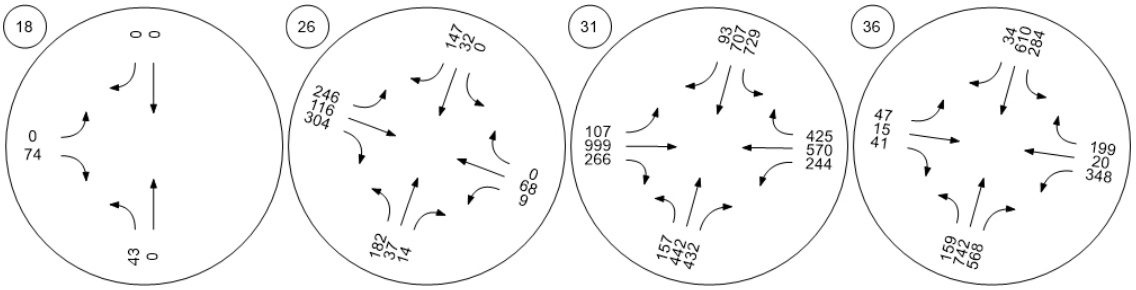


Lorson Bl/Kingston Peak Pl

Fontaine Bl/Walleye Dr

Marksheffel Road/Fontaine Bl

Marksheffel Rd/Lorson Bl



Lorson Bl/Trappe Dr

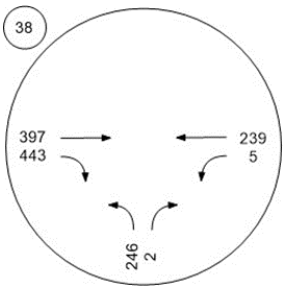


Figure 19. Horizon Total Traffic Volumes (AM Peak Hour)

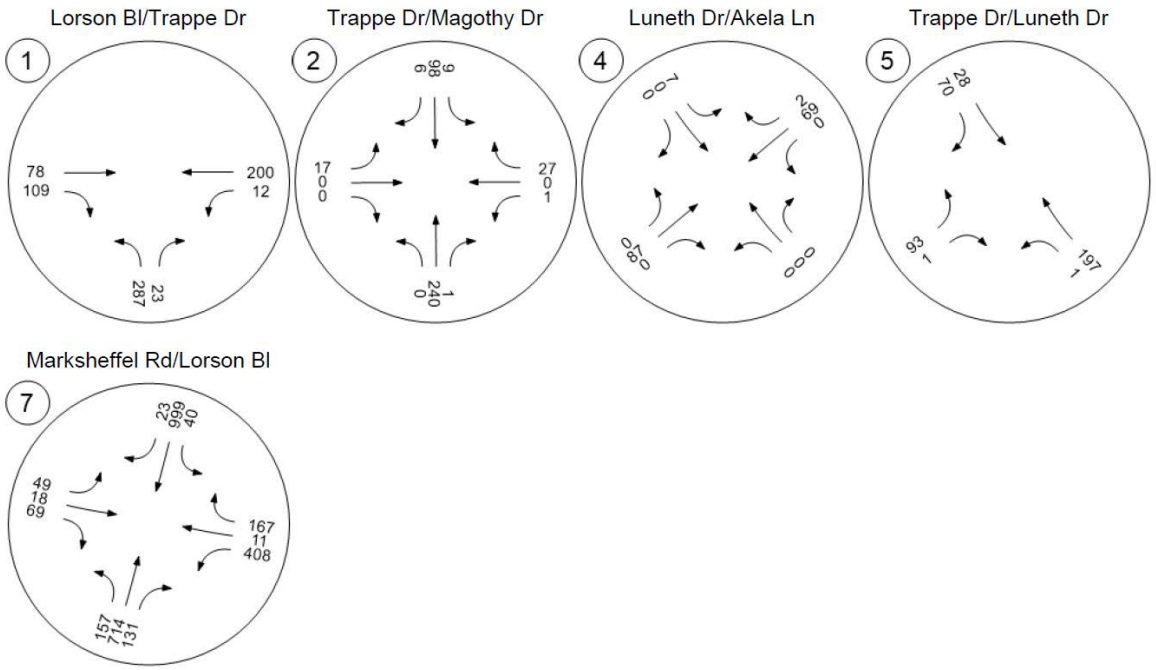


Figure 20. Horizon Total Traffic Volumes (PM Peak Hour)

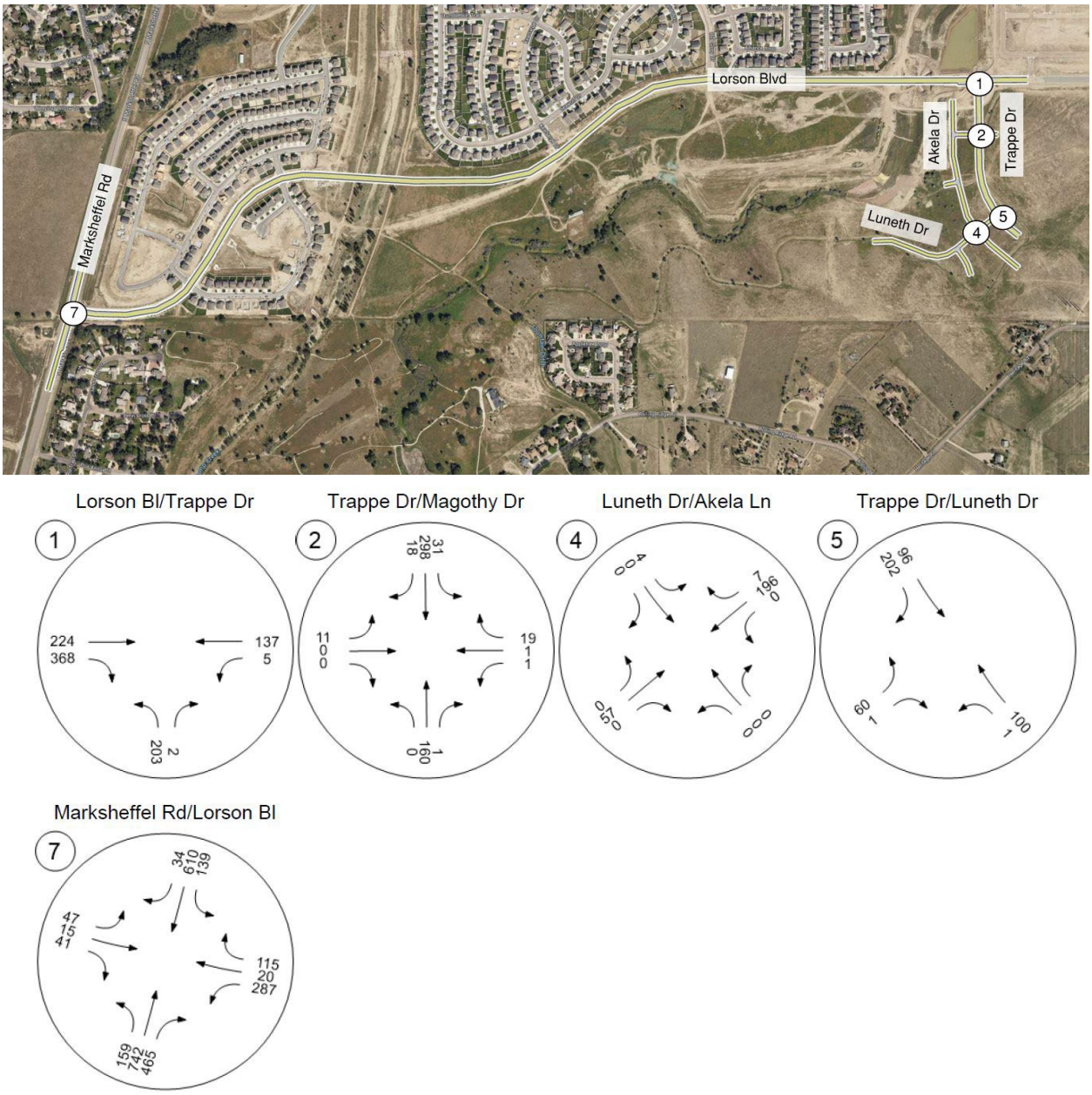


Figure 12 - Horizon Year (2040) Total Traffic with Project