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Development Department

FALCON HIGHLANDS FILING NO. 3

TRAFFIC IMPACT STUDY

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:

Challenger Homes
8605 Explorer Drive, Suite 250
Colorado Springs, CO 80920

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.

Scott D. Barnhart, P.E. #37447

March 14, 2022
Date

COLORADO LICENSED SCOTT BARNHART 37447 PROFESSIONAL ENGINEER

Developer's Statement

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

Jim Byers, VP
Challenger Homes
8605 Explorer Drive, Suite 250
Colorado Springs, CO 80920

3/14/22
Date

COLORADO LICENSED SCOTT BARNHART 37447 PROFESSIONAL ENGINEER
March 14, 2022
SKP-21-004

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January 25, 2022

Challenger Homes
8605 Explorer Drive
Suite 250
Colorado Springs, CO 80920
Attention: Mr. Jim Byers

RE: Falcon Highlands Filing No. 3 Traffic Impact Study

Dear Mr. Byers:

Matrix Design Group (Matrix) is pleased to present this traffic impact study (TIS) for the Falcon Highlands Filing No. 3 development. This TIS analyzes the existing roadway network in the vicinity of the project and determines the impact of the additional traffic generated by the proposed development. The full build-out year (2025) and horizon year (2045) conditions were analyzed, with and without the addition of site-generated traffic.

Introduction

The Falcon Highlands Filing No. 3 development, herein referred to as "the site", is a proposed development located in El Paso County, Colorado. The site includes 395 proposed single-family detached houses. The site is bounded by the existing Falcon Highlands Filing No. 2 to the north, Tamlin Road to the east and south, and undeveloped land to the west. See Figure 1 for a vicinity map. The overall development was previously analyzed by LSC in the *Falcon Highlands Filing No. 3 Traffic Impact Analysis*, dated January 5, 2011. Additionally, several individual developments in and surrounding the Baseline development have submitted traffic impact studies. These studies include:

- *Banning Lewis Ranch Villages A – D Master Traffic Impact Study*, 2020
- *Falcon Highlands Taco Bell Traffic Technical Memorandum*, 2018

The proposed land use of the site is shown on the site plan in Figure 2.

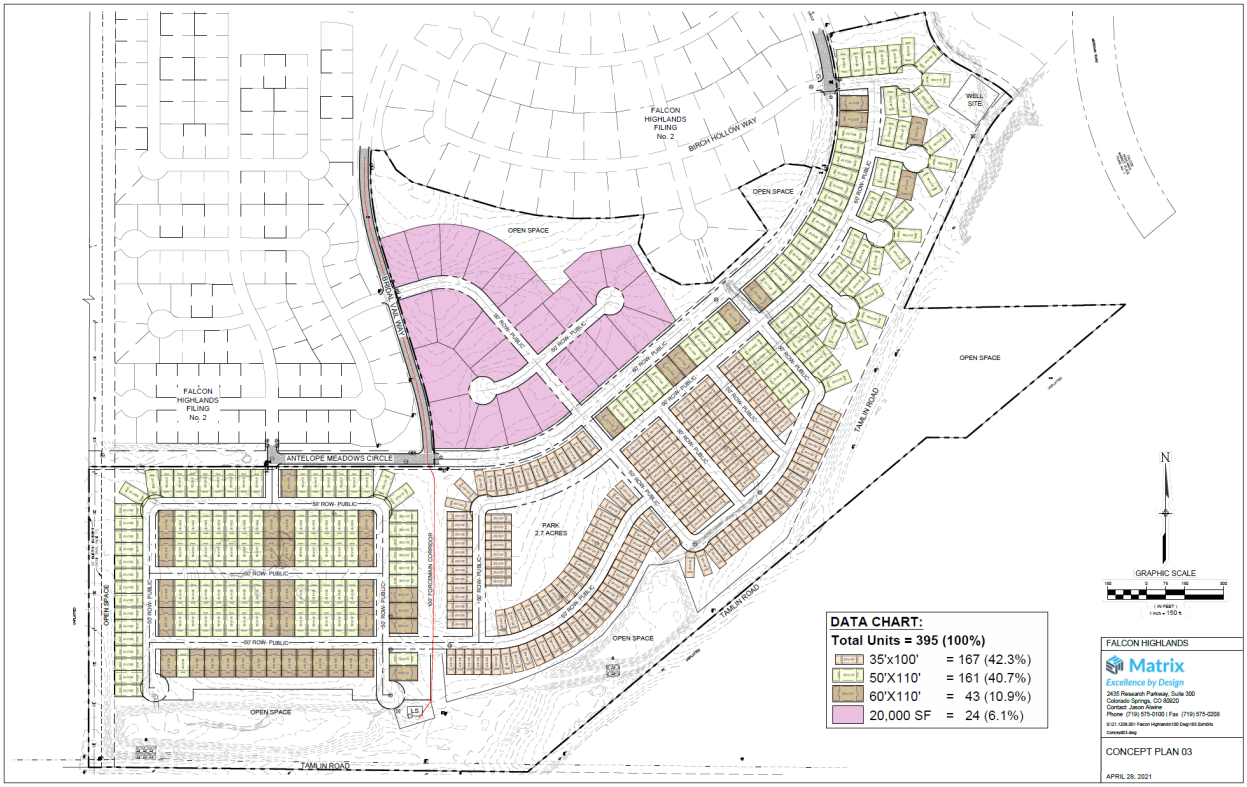
The purpose of this TIS is to analyze the existing conditions within the study area, determine the traffic generated by the site, analyze the build-out year (2025) and horizon year (2045) traffic conditions, and determine the impact of site-generated traffic on the adjacent roadway network. The study area for this TIS includes seven intersections:

- Woodmen Road & Golden Sage Road
- Rolling Thunder Way & Bridal Vail Way
- Rolling Thunder Way & Antelope Meadows Circle (East)
- Rolling Thunder Way & Foxtail Meadow Lane
- Rolling Thunder Way & Meridian Road
- US 24 & Old Meridian Road (see paragraph below)
- US 24 & New Meridian Road

When All Traffic Data recorded traffic volumes at Old Meridian Road & US 24, the intersection was a full-movement signalized intersection. The intersection will become a right-in, right-out intersection by the year 2025. Therefore, Matrix did not analyze the Old Meridian Road & US 24 intersection in both future scenarios (full build-out and horizon). Furthermore, Matrix assumed that for future scenarios, the left-turn, northbound through, and southbound through traffic volumes that would have gone through the Old Meridian Road & US 24 intersection in the future scenarios will travel through the New Meridian Road & US 24 intersection instead.

Figure 1 – Vicinity Map

Figure 2 – Site Plan

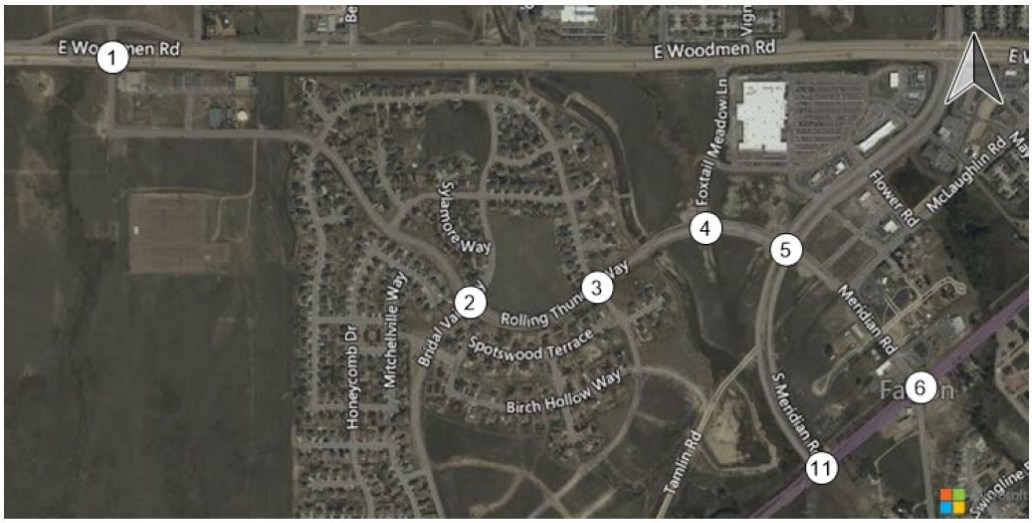


Existing Conditions

Matrix analyzed the existing traffic conditions at the intersections listed above based on the traffic volumes from All Traffic Data, taken May 20 and June 2, 2021. The existing intersection geometry is shown in Figure 3. The existing AM and PM peak hour traffic volumes are shown in Figures 4 and 5, respectively. A summary of how each of the study area intersections currently operate in the AM and PM peak scenarios is shown in Table 1 and Table 2, respectively. As shown in the tables, each of the seven intersections analyzed operate at an acceptable level-of-service (LOS), LOS D or better, during both the AM and PM peak hours.

Matrix assumed that the response to the COVID-19 pandemic did not significantly impact the traffic counts taken. CDOT records ADT counts on US 24 near New Meridian Road, which is close to where ADT counts were taken for this project. Prior to the pandemic, CDOT recorded an AADT of 16,737 in 2019. On May 20, 2021, All Traffic Data recorded an AADT of 18,566. Therefore, for the purposes of this TIS, the traffic volume does not seem to be impacted by the COVID-19 pandemic in this area.

Figure 3 – Existing (2021) Intersection Geometry



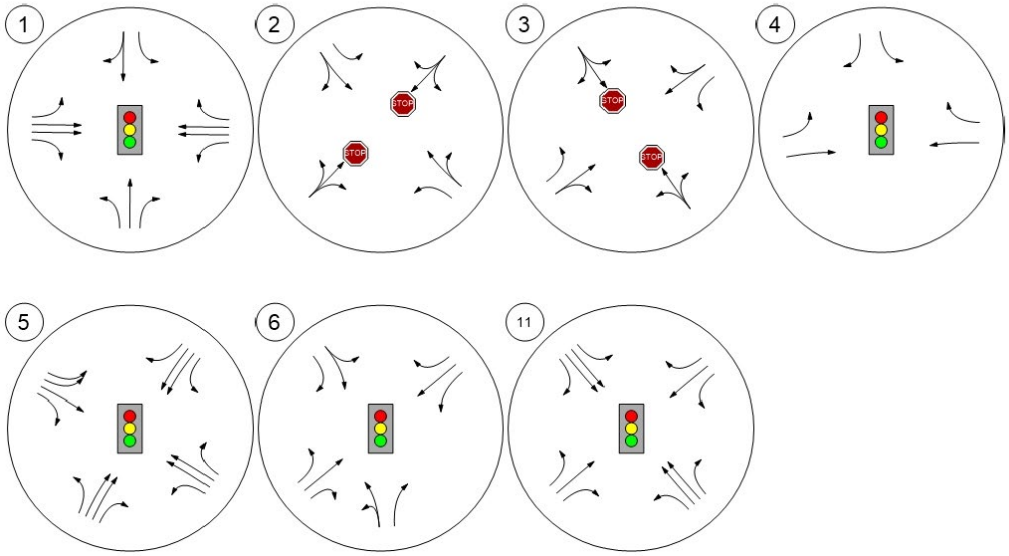
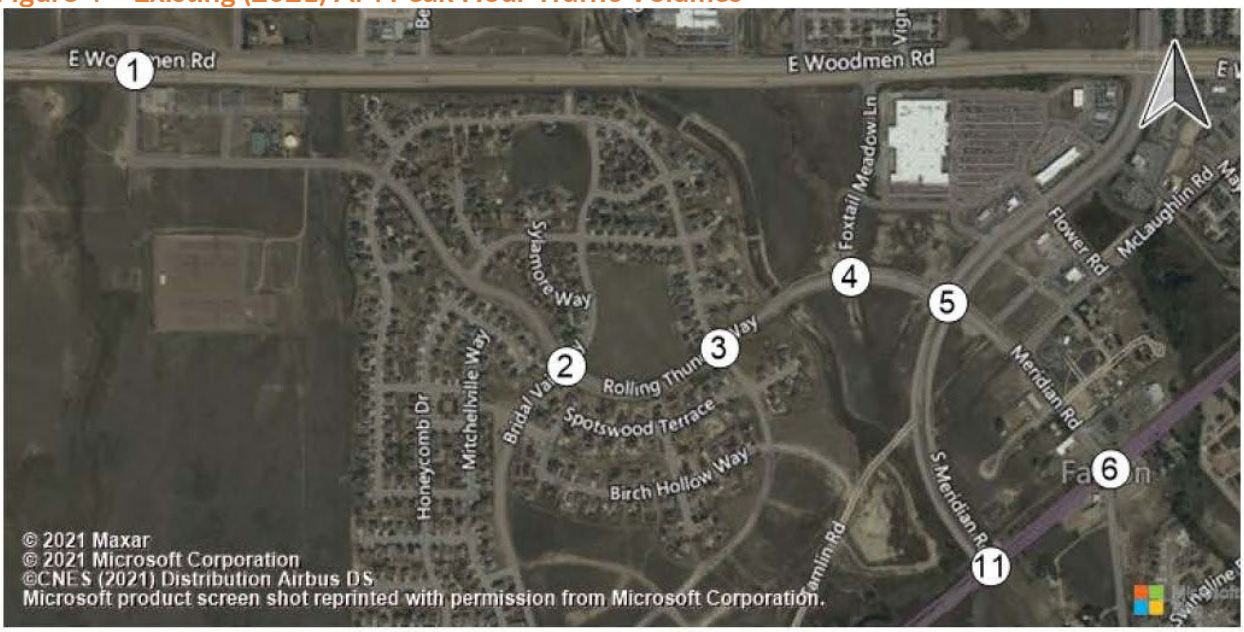


Figure 4 – Existing (2021) AM Peak Hour Traffic Volumes



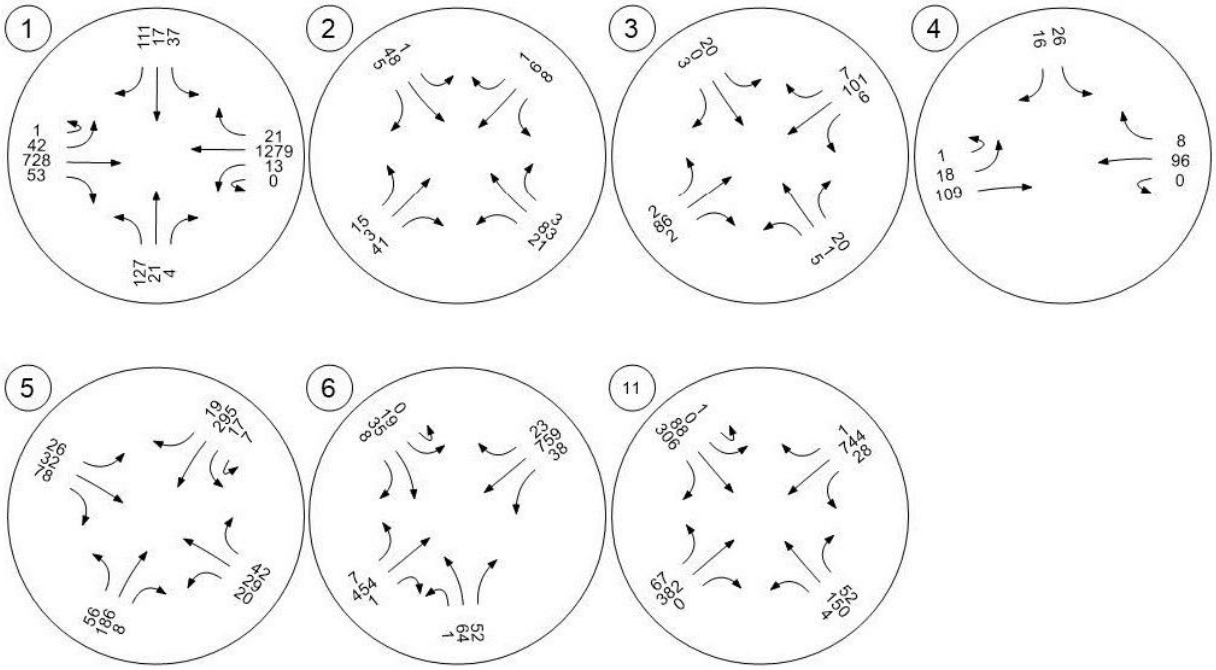


Figure 5 – Existing (2021) PM Peak Hour Traffic Volumes

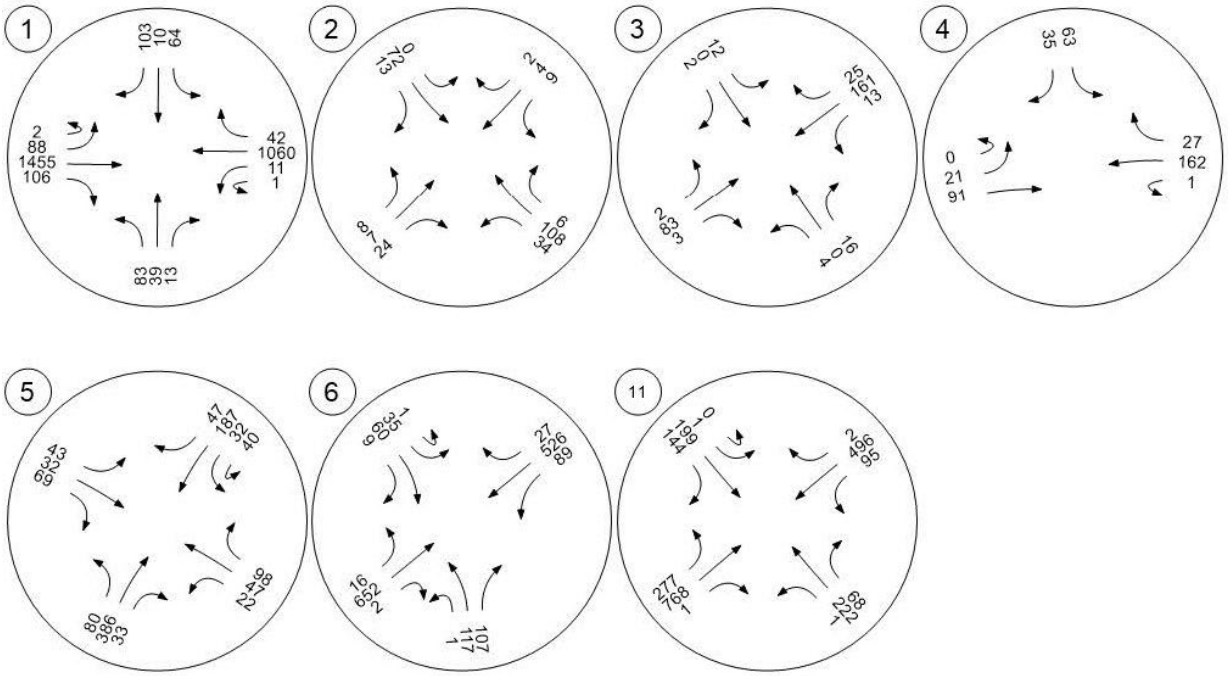


Table 1 – Existing (2021) AM Peak Hour LOS Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	EB Left	0.582	24.0	C
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	NB Thru	0.006	10.6	B
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	NB Thru	0.002	10.7	B
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	SB Left	0.095	5.8	A
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	EB Left	0.204	18.7	B
6	Old Meridian Rd/US 24	Signalized	HCM 6th Edition	WB Thru	0.557	29.5	C
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	WB Thru	0.586	34.0	C

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

Table 2 – Existing (2021) PM Peak Hour LOS Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	WB Left	0.552	25.1	C
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	NB Thru	0.014	11.4	B
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	SB Left	0.024	11.2	B
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	SB Left	0.160	8.9	A
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	EB Left	0.270	22.7	C
6	Old Meridian Rd/US 24	Signalized	HCM 6th Edition	NB Right	0.585	25.9	C
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	EB Thru	0.611	34.4	C

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

Proposed Development

The site includes 395 proposed single-family houses, as shown in Figure 2. The trip generation results for daily trips and both AM and PM peak hours can be found in Appendix B. A summary of the trip generation results is shown in Table 3.

The vehicle trips associated with the site were calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Tenth 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. In most cases, the regression equations are recommended when there are adequate study data points.

Table 3 – Trip Generation Summary

ITE Code	Land Use	Size	Units	Weekday Daily			AM Peak Hour			PM Peak Hour		
				Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting	Total
210	Single-Family Detached Housing	395	Dwelling Units	1840	1840	3680	71	214	285	239	141	380

The site connects to the existing roadway network via Bridal Vail Way and Antelope Meadows Circle. See Figure 6 for the anticipated trip distribution of site-generated traffic. The directional distribution of site-generated traffic was determined by reviewing the existing average daily trips in the vicinity of the site.

The assignment of the new project trips from the site are shown in Figures 7 and 8 for AM and PM peak hour, respectively.

For the purposes of this TIS, Matrix assumed a 3% per year background growth rate. The growth rate is based on the CDOT growth rate along US 24 and Woodmen Road in the vicinity of the site for the year 2019. The CDOT growth rate for 2020 was not used since traffic was impacted by the COVID-19 pandemic, resulting in a negative rate. The growth factor that results from a 3% per year background growth rate for the year 2025 is 1.1255. The growth factor that results from a 3% per year background growth rate for the year 2045 is 2.0328.

Figure 6 – Trip Distribution

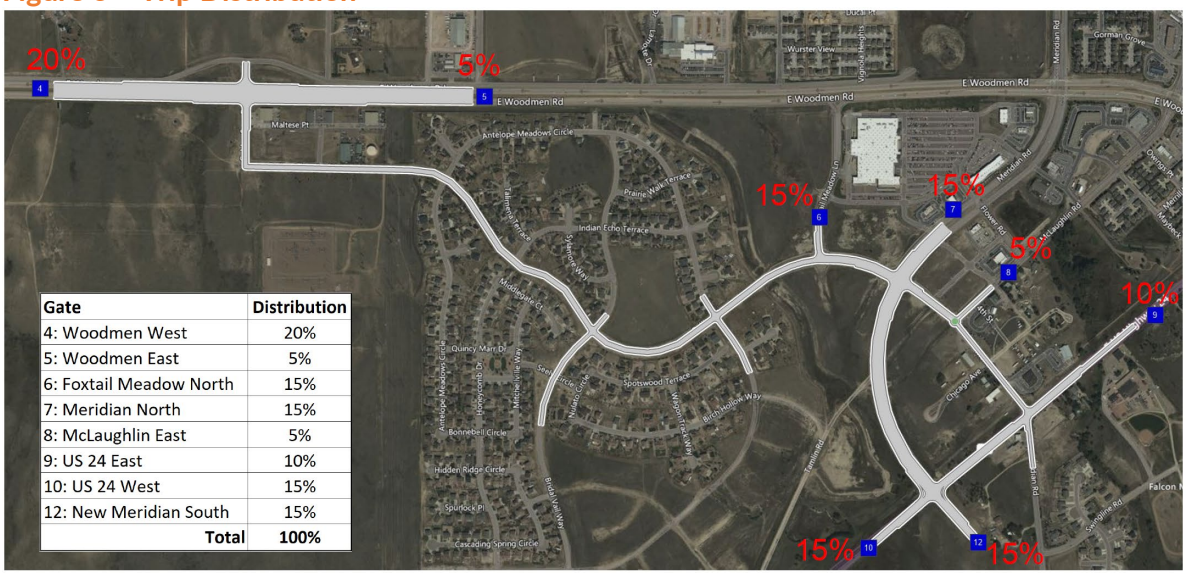
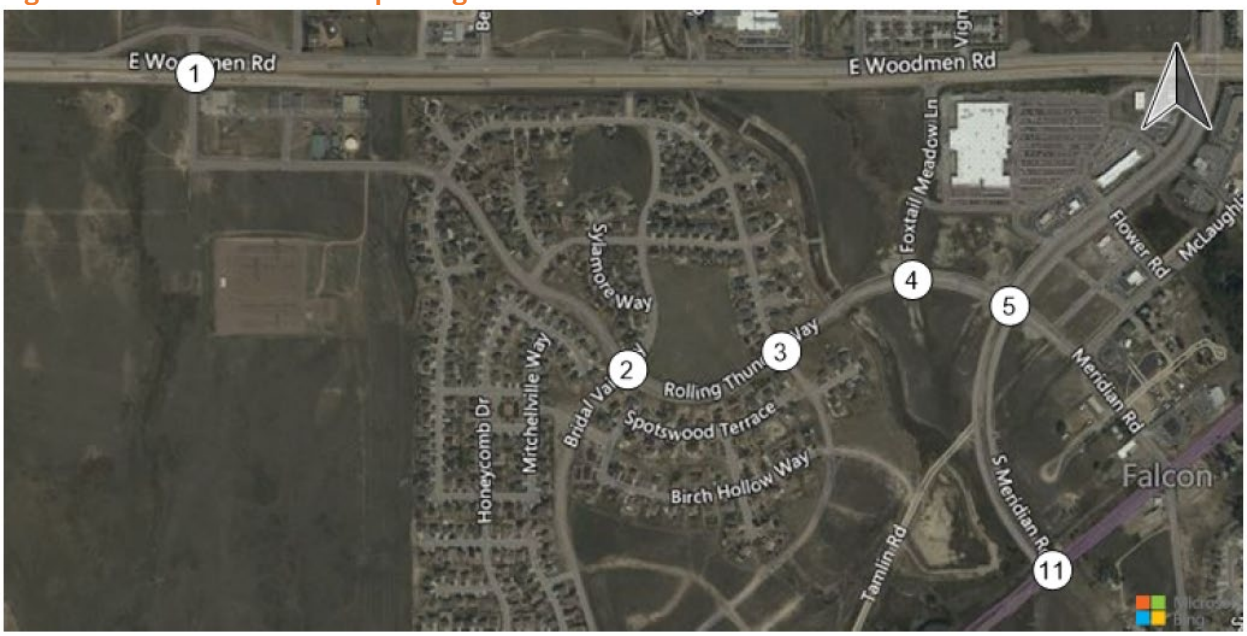


Figure 7 – AM Peak Hour Trip Assignment



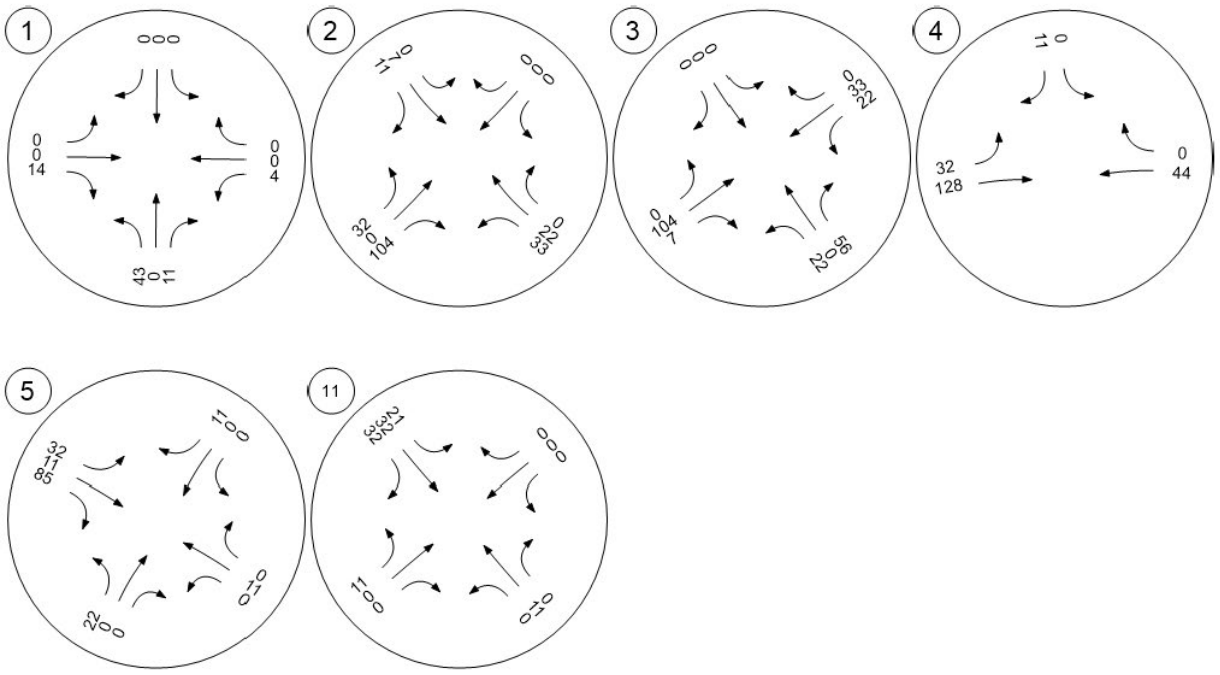
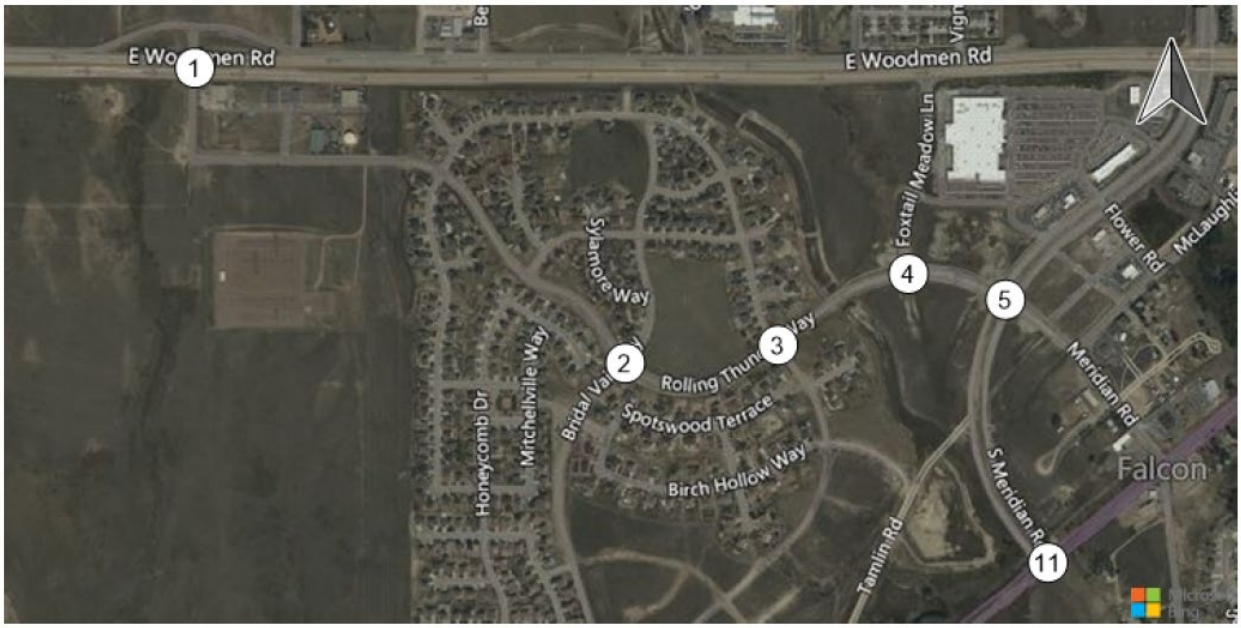
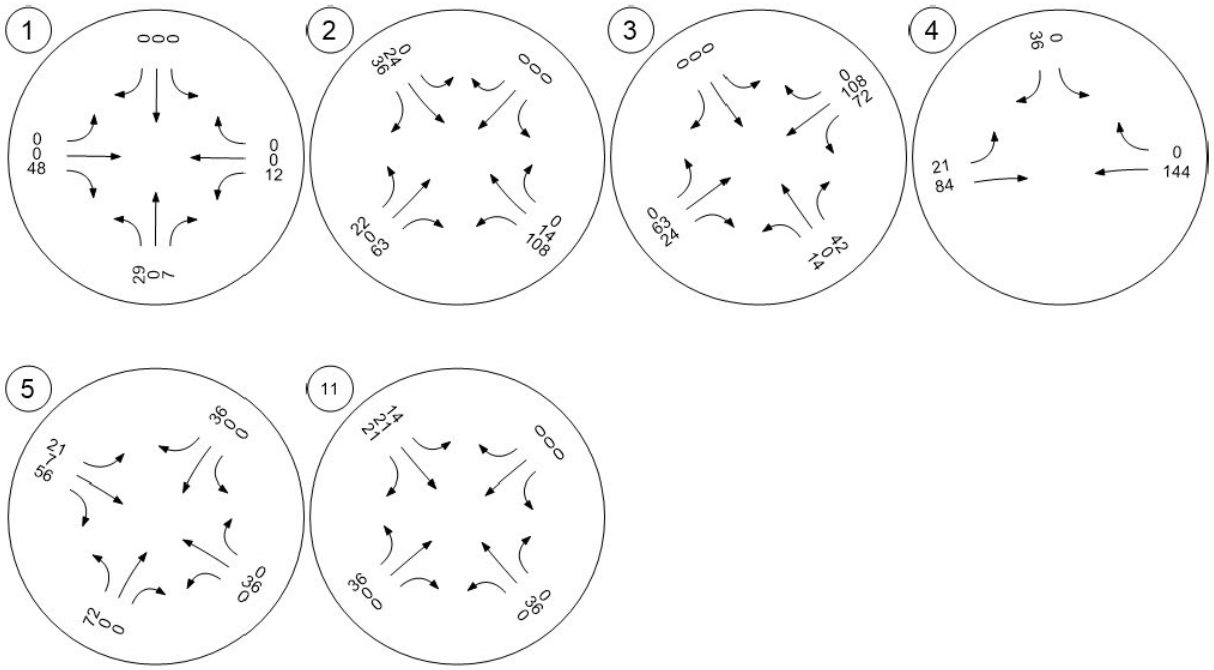


Figure 8 - PM Peak Hour Trip Assignment

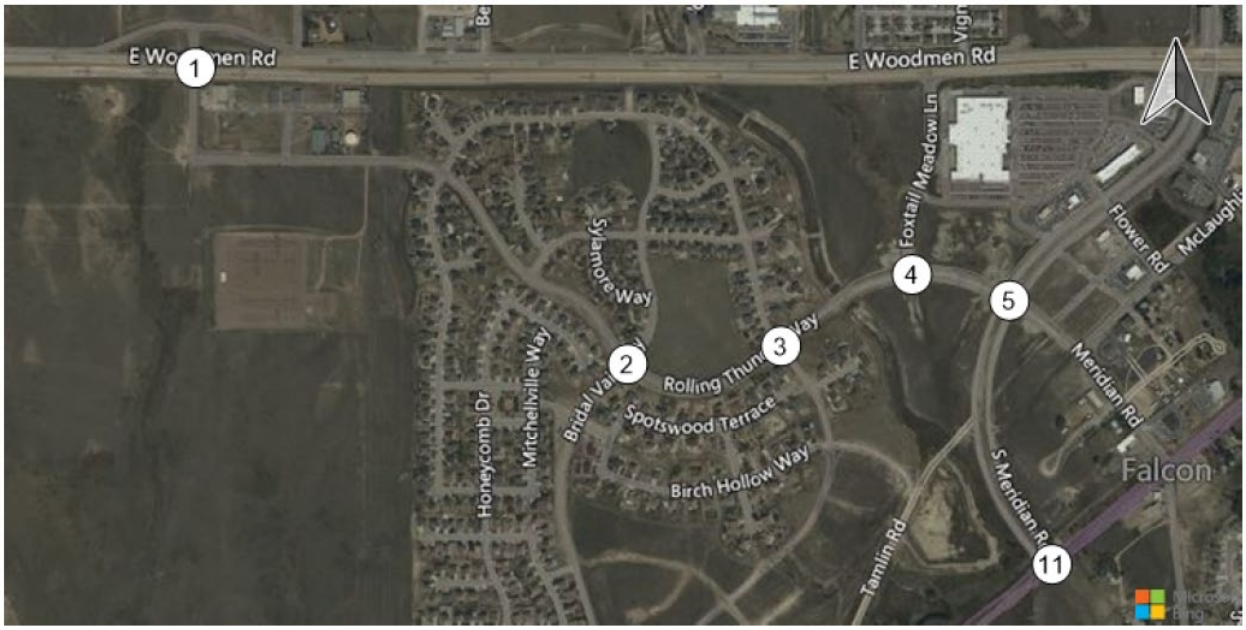


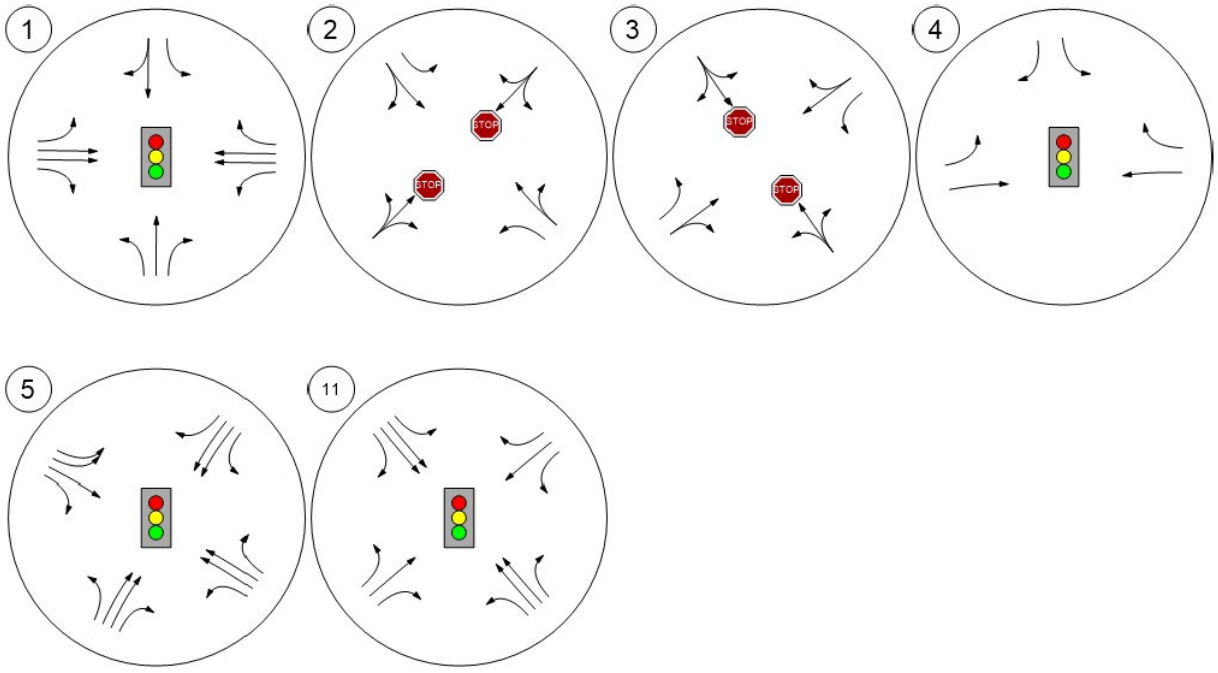


Full Build-Out Conditions (2025) Traffic Analysis

Matrix assumed the site will be fully developed and inhabited by the year 2025. The anticipated intersection geometry is shown in Figure 9. Matrix assumed that the geometries of the six intersections analyzed in the future scenarios will not change from the existing lane geometry shown in Figure 3. As previously stated, the intersection of US 24 and Old Meridian was not analyzed in the future scenarios.

Figure 9 – Full Build-Out (2025) Intersection Geometry





Full Build-Out Conditions (2025) Background Traffic Analysis

The anticipated AM and PM peak hour counts in the background scenarios are shown in Figures 10 and 11, respectively. A summary of the anticipated intersection performance during the background AM and PM peak scenarios is shown in Tables 4 and 5, respectively. As shown in the tables, each of the six intersections analyzed are anticipated to operate at an acceptable level-of-service (LOS), LOS D or better, during both the AM and PM peak hours.

Figure 10 – Full Build-Out (2025) Background AM Peak Hour Traffic Volumes

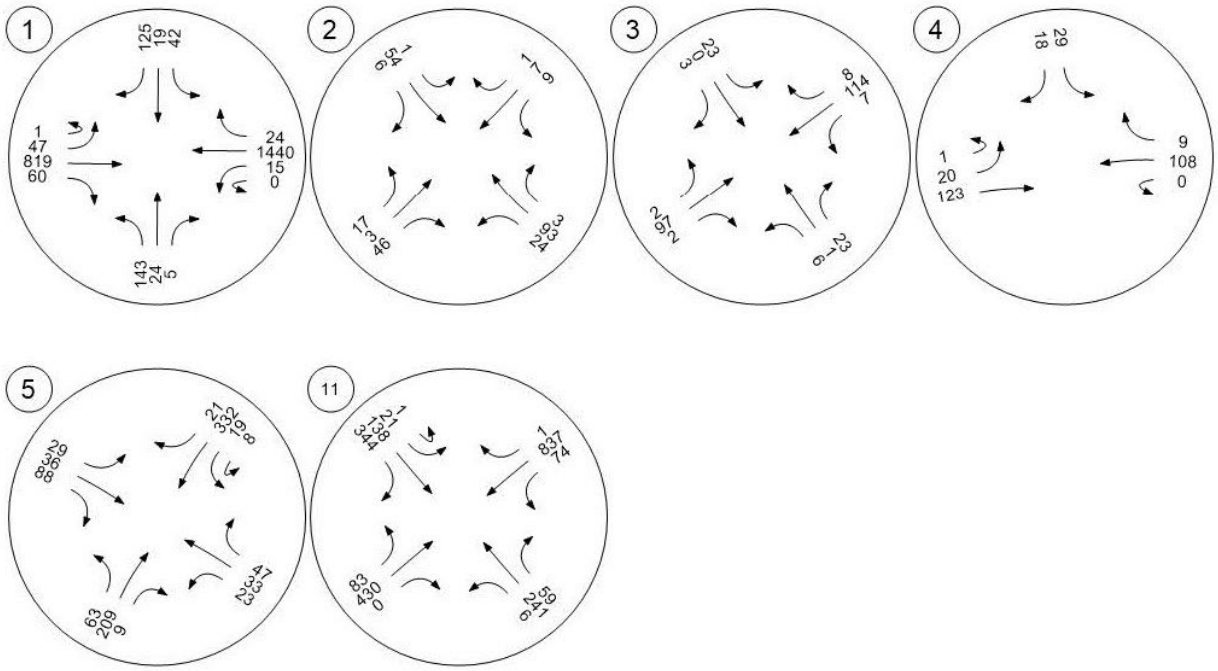
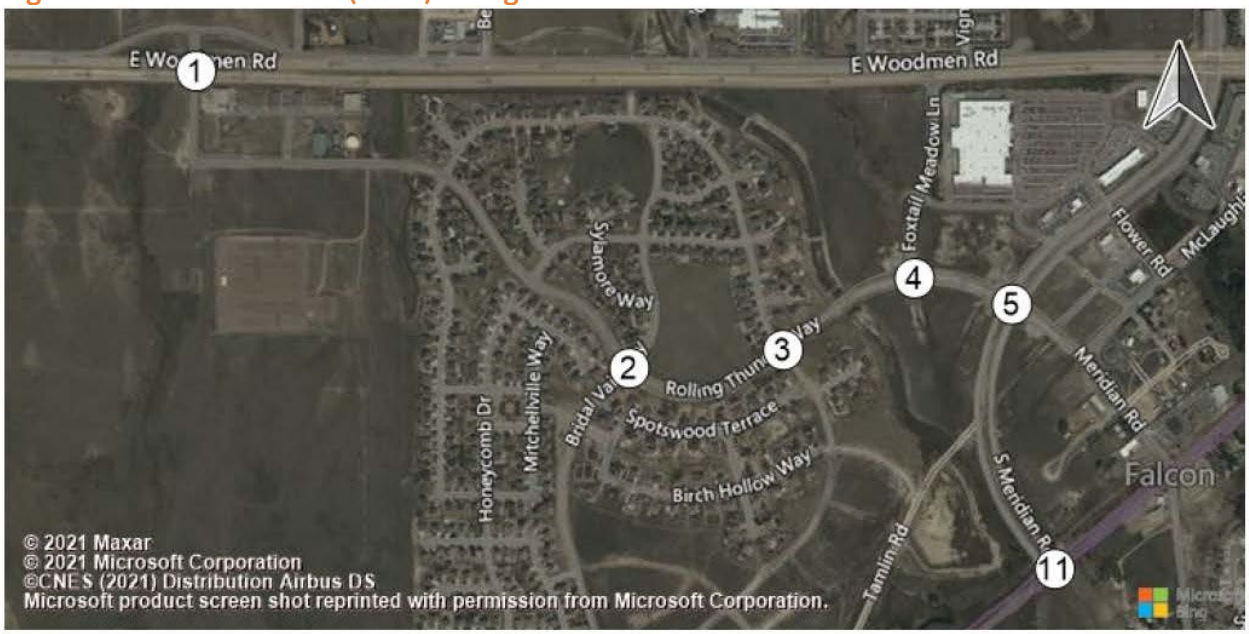


Figure 11 – Full Build-Out (2025) Background PM Peak Hour Traffic Volumes



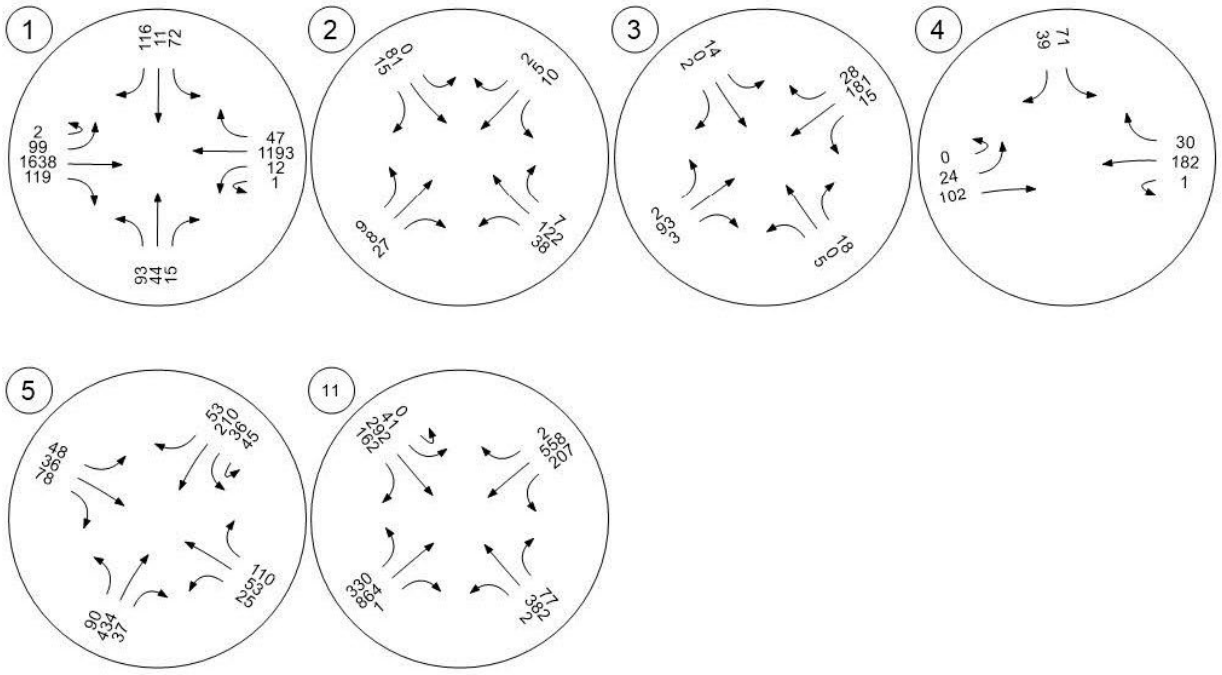


Table 4 – Full Build-Out (2025) Background AM Peak Hour LOS Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	EB Left	0.658	24.2	C
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	NB Thru	0.006	10.9	B
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	NB Thru	0.002	10.9	B
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	SB Left	0.107	5.7	A
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	EB Left	0.230	19.1	B
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	WB Thru	0.696	35.6	D

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 – Full Build-Out (2025) Background PM Peak Hour LOS Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	WB Left	0.620	25.2	C
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	NB Thru	0.016	11.8	B
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	SB Left	0.029	11.7	B
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	SB Left	0.180	8.9	A
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	EB Left	0.301	22.4	C
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	WB Left	0.773	39.3	D

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.

Full Build-Out Conditions (2025) Total Traffic Analysis

The anticipated AM and PM peak hour counts in the total (background and site-generated) traffic scenarios are shown in Figures 12 and 13, respectively. A summary of how each intersection operates in the AM and PM peaks is shown in Tables 6 and 7, respectively. As shown in the tables, each of the six intersections analyzed are anticipated to operate at an acceptable level-of-service (LOS) during both the AM and PM peak hours.

Figure 12 – Full Build-Out (2025) Total AM Peak Hour Traffic Volumes

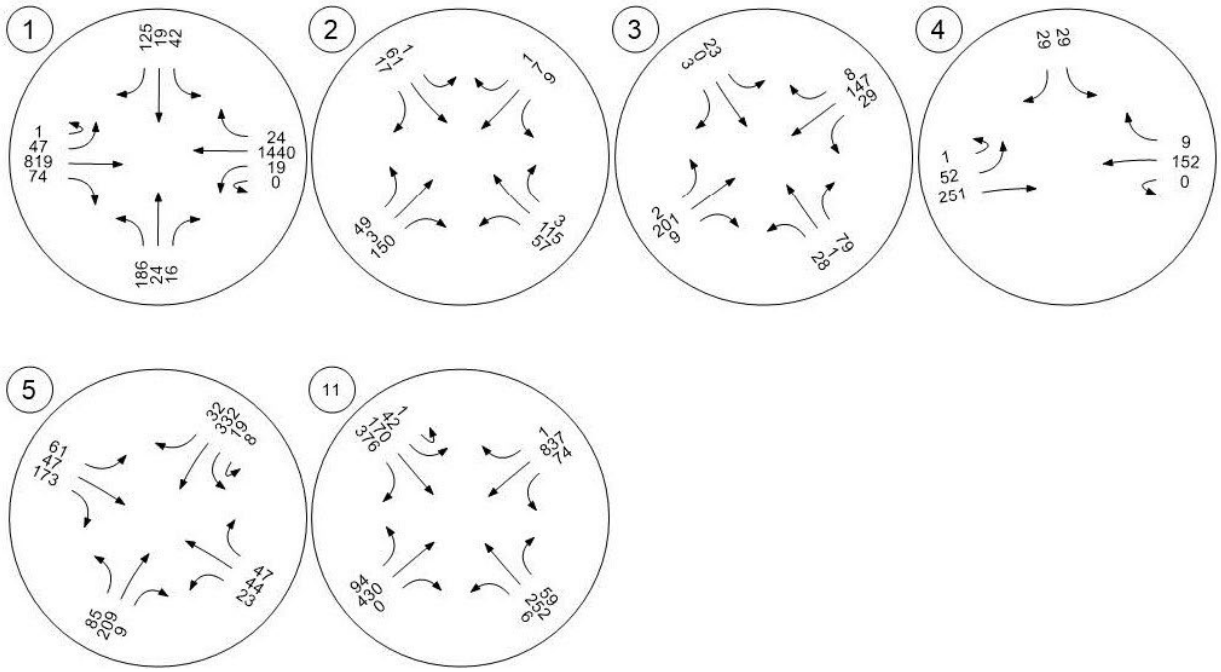
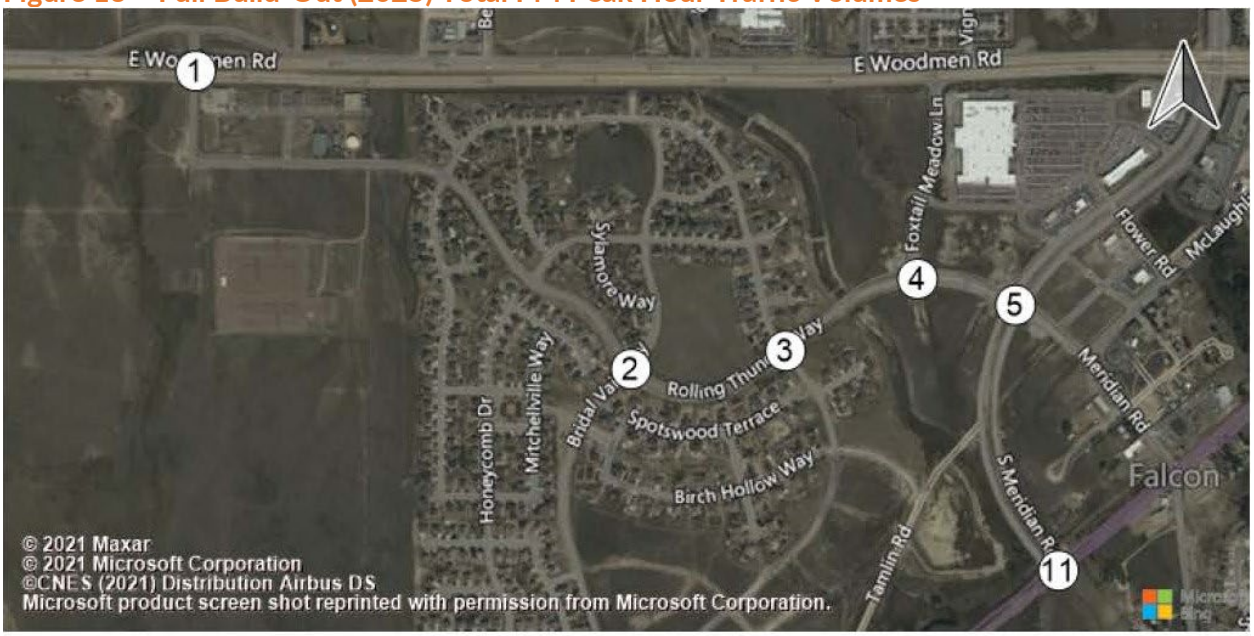


Figure 13 – Full Build-Out (2025) Total PM Peak Hour Traffic Volumes



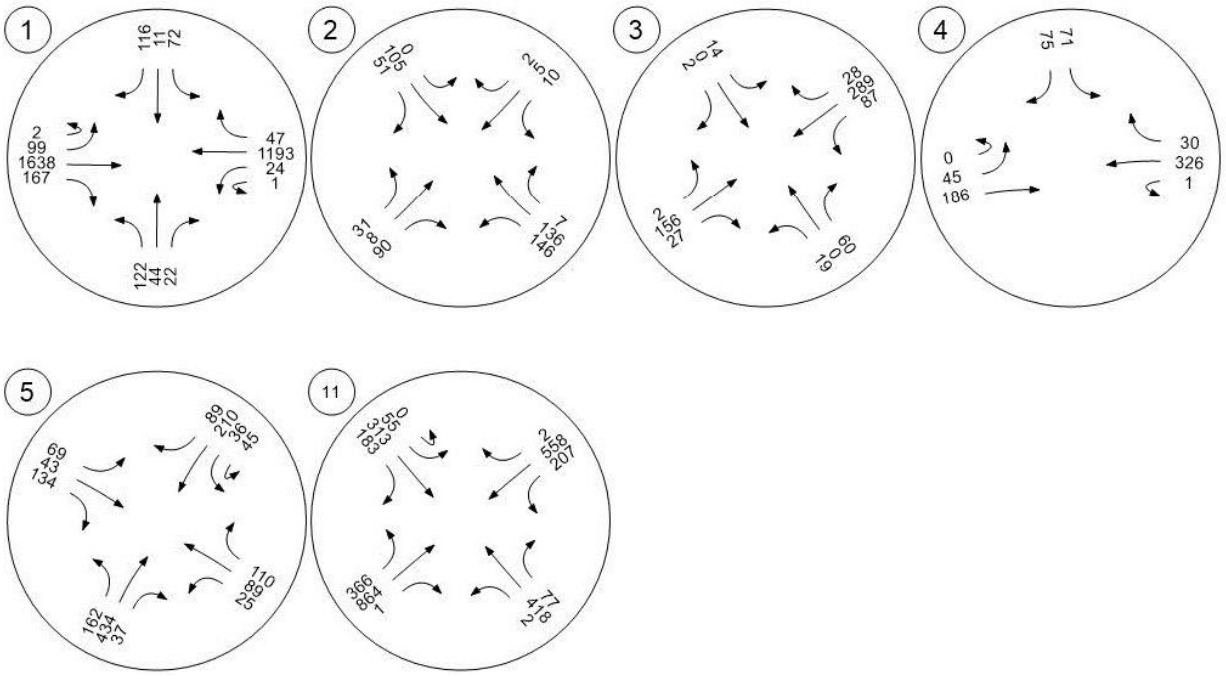


Table 6 – Full Build-Out (2025) Total AM Peak Hour LOS Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	EB Left	0.705	25.7	C
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	SB Left	0.026	13.9	B
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	SB Left	0.069	14.9	B
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	SB Right	0.199	4.8	A
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	EB Left	0.311	19.3	B
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	WB Thru	0.685	35.4	D

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 – Full Build-Out (2025) Total PM Peak Hour LOS Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	WB Left	0.651	25.5	C
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	SB Left	0.045	19.2	C
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	SB Left	0.061	19.6	C
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	SB Right	0.290	8.0	A
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	EB Left	0.312	22.6	C
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	NB Thru	0.795	42.4	D

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.

The length of turn lanes required to accommodate the full build-out (2025) traffic was analyzed at each intersection. Table 8 shows the turn lanes that did not have adequate storage to meet El Paso County's minimum or the 95% queue length, or both. The Engineering Criteria Manual, specifically Figure 2-27 and Table 2-30, was used to determine the minimum storage lengths for both signalized and stop-controlled intersections, respectively. The 95% queue lengths were given by PTV Vistro. Table 8 shows that the turning movements that do not have adequate storage in the 2025 scenario would be inadequate regardless of the site-generated traffic, except for the westbound left turn at Rolling Thunder Way and Bridal Vail Way. Matrix recommends extending the storage length of the westbound left turn lane to 150 feet to meet the County's requirement. Note that additional storage length recommendations are included to accommodate the horizon (2045) traffic, as discussed later in this TIS.

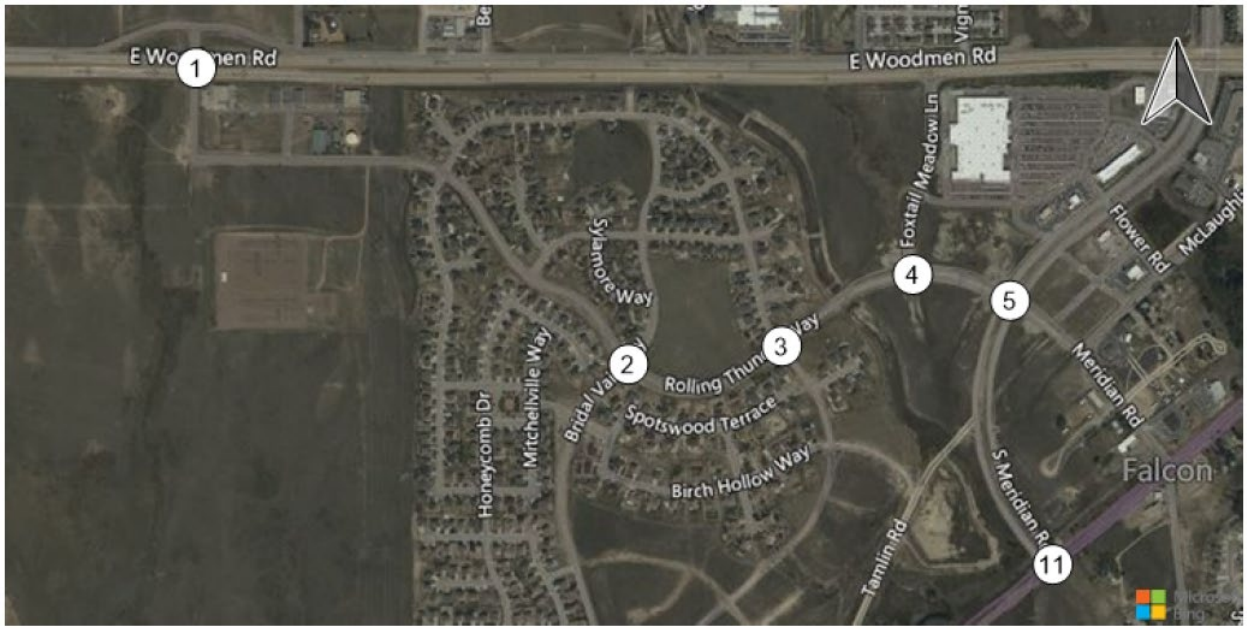
Table 8 – Full Build-Out (2025) Inadequate Turn Lane Lengths

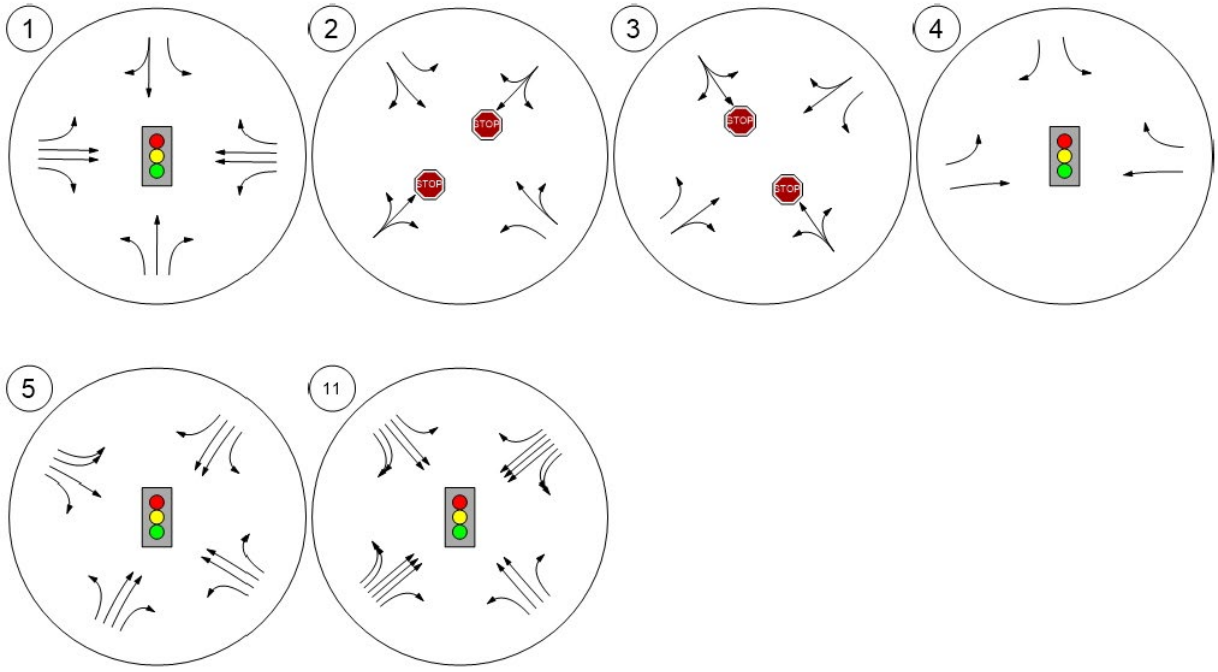
		Turn Lane Length [ft]				
			2025 Background		2025 Total	
Intersection	Turning Movement	Existing	95% Queue	Min per EPC ECM	95% Queue	Min per EPC ECM
Woodmen Road & Golden Sage Road	NBL	150	261 (AM)	200	314 (AM)	250
Rolling Thunder Way & Bridal Vail Way	WBL	100	2 (PM)	50	11 (PM)	150

Horizon (2045) Traffic Analysis

Matrix analyzed the traffic conditions for the horizon scenario, year 2045. The anticipated intersection geometry (without mitigation) is shown in Figure 14. The *Final Planning & Environmental Linkages (PEL) Report – US 24 Planning & Environmental Linkages Study* by CDOT, dated March 2018, was used to assume future lane geometries along the US 24 corridor.

Figure 14 – Horizon (2045) Intersection Geometry (Without Mitigation)





Horizon (2045) Background Traffic Analysis

The projected traffic volumes during the 2045 AM and PM background peak hours are shown in Figures 15 and 16, respectively. A summary of how the study area intersections will operate (without mitigation) during the 2045 AM and PM background peak hours are shown in Tables 9 and 10, respectively. As shown in the tables, five of the six intersections analyzed are anticipated to operate at an acceptable level-of-service (LOS) during both the AM and PM peak hours. The intersection of Woodmen Road and Golden Sage Road is anticipated to have a LOS of F in both the AM and PM peak hours with the existing intersection geometry. To mitigate the failing LOS, the lane geometry of Woodmen Road is anticipated to include eight through lanes (four in each direction), as shown in the anticipated intersection geometry (with mitigation) in Figure 17. The LOS summary for the intersection of Woodmen Road and Golden Sage Road (with mitigation) is shown for AM and PM peak hours in Tables 11 and 12, respectively.

The following traffic signal phasing was assumed at the intersection of Woodmen Road and Golden Sage Road:

- Unmitigated
    - Eastbound protected left-turn phasing
- Mitigated
    - Eastbound protected left-turn phasing
    - Westbound protected left-turn phasing

The phasing for both eastbound and westbound left-turns in the mitigated scenario must be protected, due to the four opposing through lanes. Refer to Figure 4-16 in the *NCHRP Report 812 Signal Timing Manual Second Edition*, produced in cooperation with the USDOT and the FHWA.

Figure 15 – Horizon (2045) Background AM Peak Hour Traffic Volumes

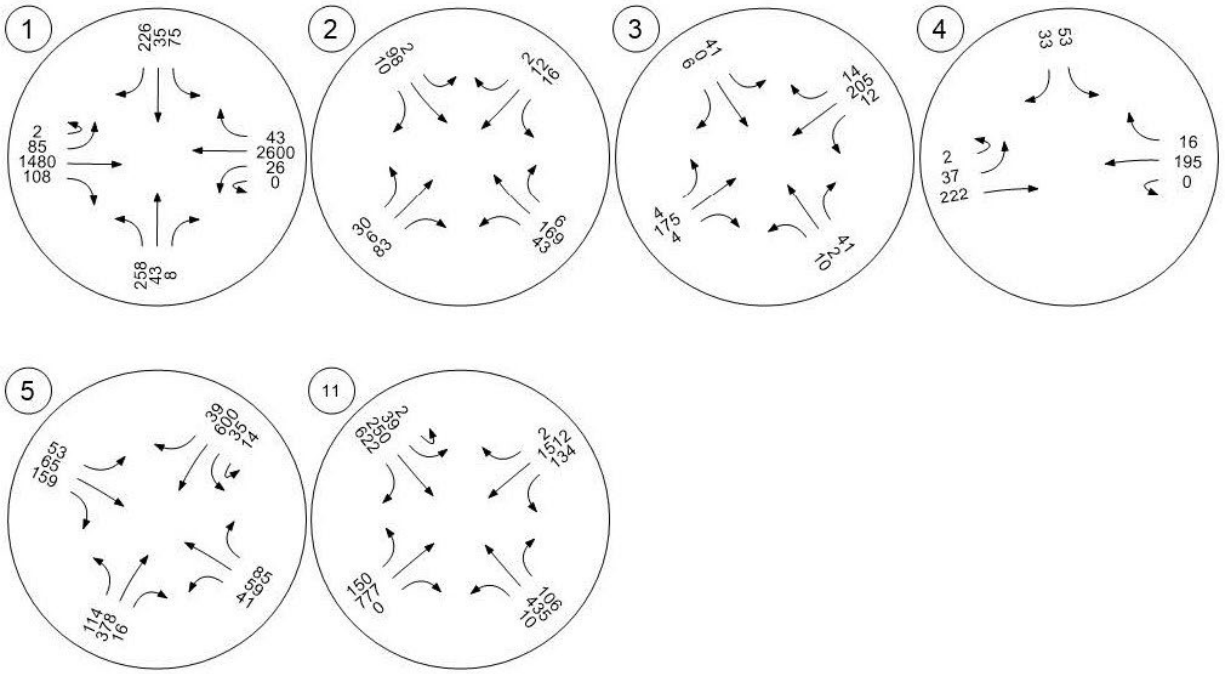
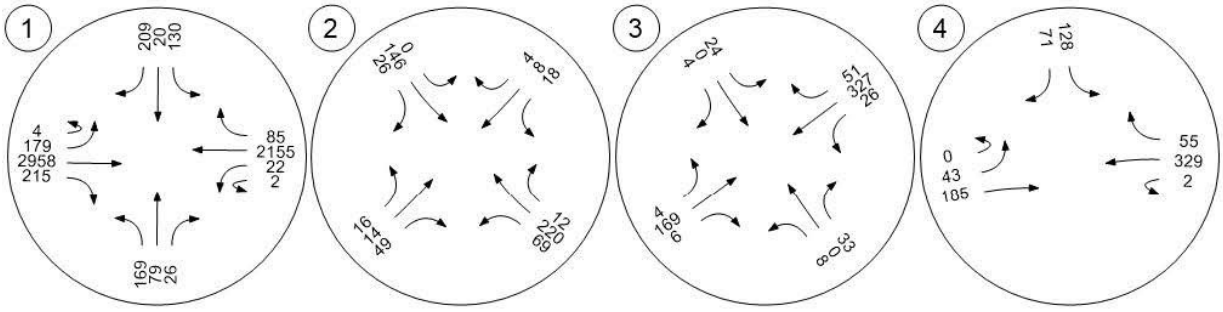


Figure 16 – Horizon (2045) Background PM Peak Hour Traffic Volumes



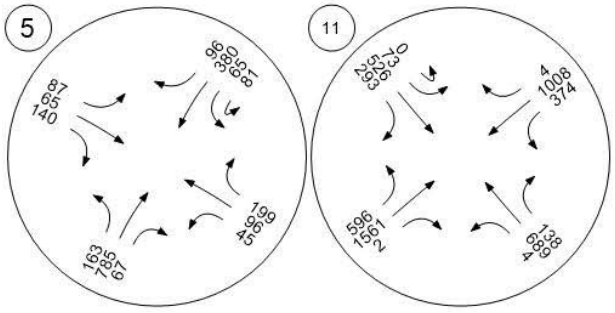


Table 9 – Horizon (2045) Background AM Peak Hour LOS Summary (Without Mitigation)

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	EB Left	1.185	166.9	F
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	SB Left	0.036	13.1	B
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	SB Left	0.090	13.3	B
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	SB Left	0.174	6.1	A
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	EB Left	0.366	18.1	B
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	NB Thru	0.537	22.8	C

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

Table 10 – Horizon (2045) Background PM Peak Hour LOS Summary (Without Mitigation)

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	EB Thru	1.151	205.0	F
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	SB Left	0.051	15.4	C
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	SB Left	0.067	15.4	C
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	EB Left	0.291	11.1	B
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	WB Right	0.491	20.7	C
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	SB Thru	0.685	30.0	C

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

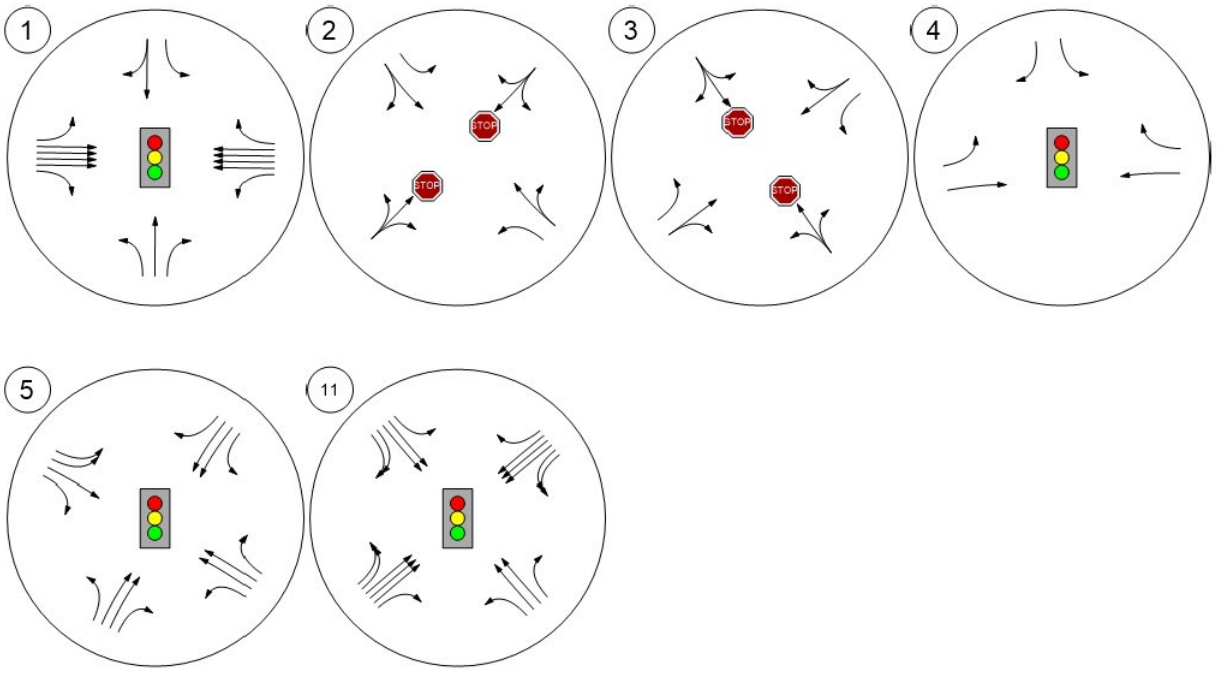
Table 11 – Horizon (2045) Background AM Peak Hour LOS Summary (With Mitigation)

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	EB Left	0.778	36.4	D

Table 12 – Horizon (2045) Background PM Peak Hour LOS Summary (With Mitigation)

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	WB Left	0.699	34.3	C

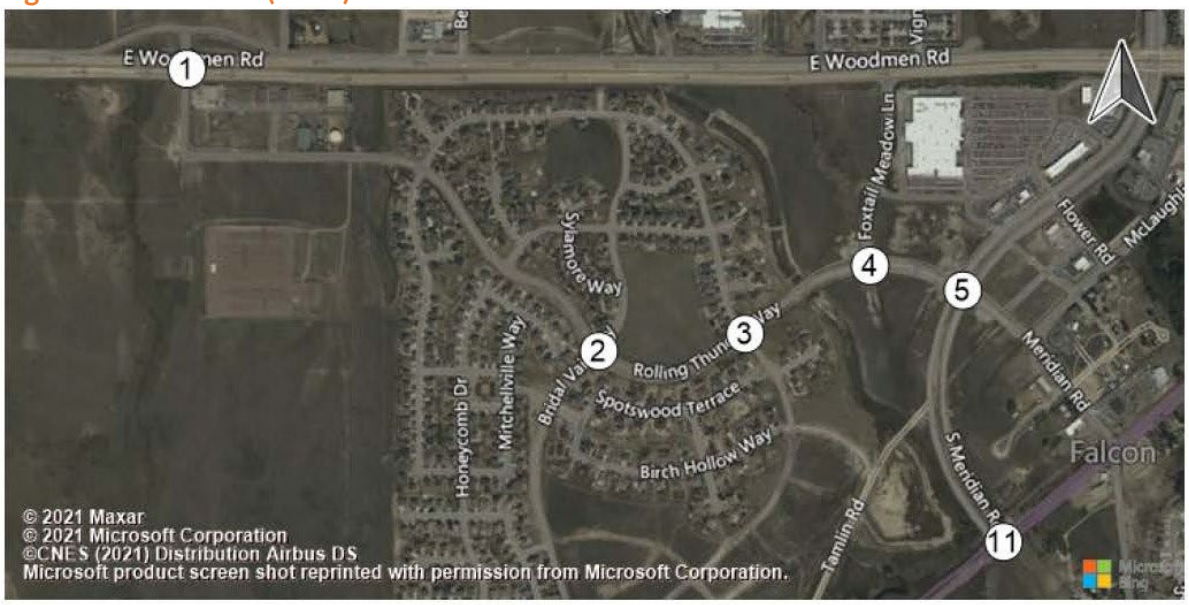
Figure 17 – Horizon (2045) Intersection Geometry (With Mitigation)



Horizon (2045) Total Traffic Analysis

The projected traffic volumes during the 2045 AM and PM total (background and site-generated) traffic scenarios are shown in Figures 18 and 19, respectively. A summary of how the study area intersections will operate (without mitigation) during the AM and PM peaks is shown in Tables 13 and 14, respectively. As previously discussed, Woodmen Road is anticipated to have eight through lanes (mitigation) at the intersection with Golden Sage Road. Tables 15 and 16 give the LOS summary (with mitigation) for the intersection of Woodmen Road and Golden Sage Road, respectively. As shown in the tables, each of the six intersections analyzed are anticipated to operate at an acceptable level-of-service (LOS) during both the AM and PM peak hours, assuming the mitigated scenario.

Figure 18 – Horizon (2045) Total AM Peak Hour Traffic Volumes



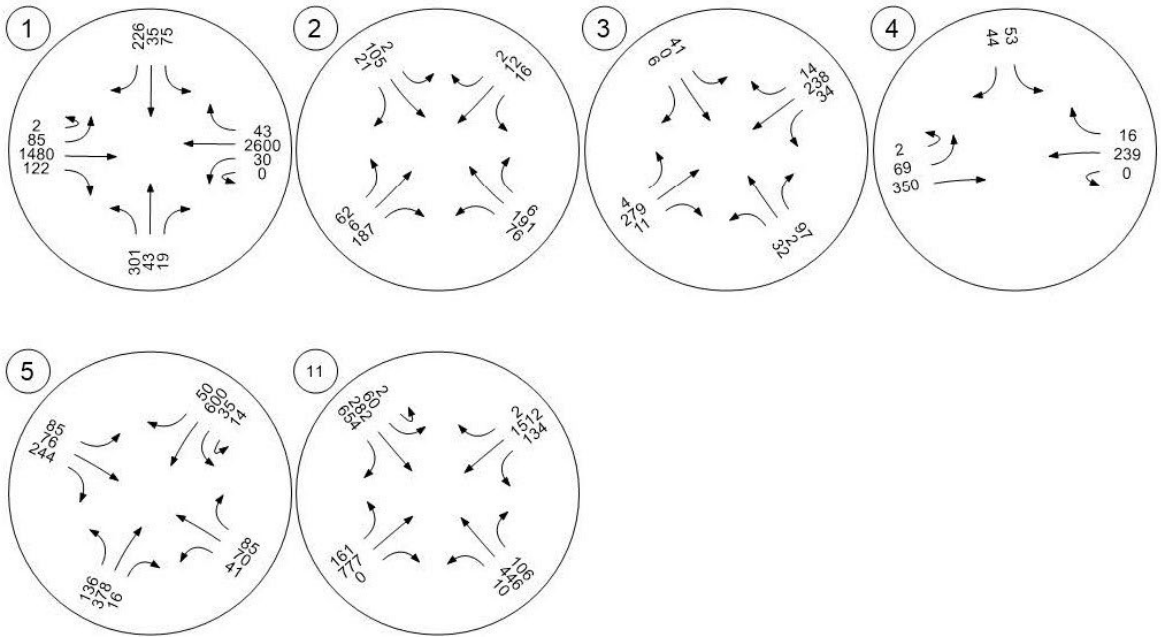


Figure 19 – Horizon (2045) Total PM Peak Hour Traffic

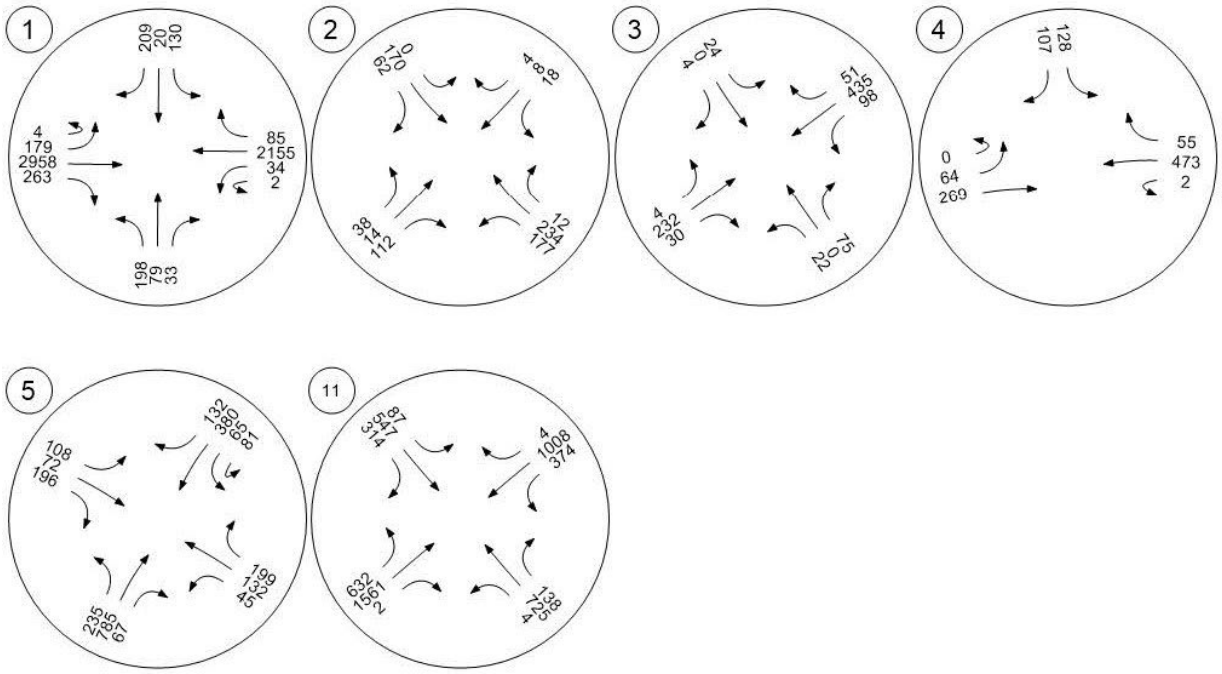


Table 13 – Horizon (2045) Total AM Peak Hour LOS Summary (Without Mitigation)

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	NB Left	1.230	180.6	F
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	SB Left	0.054	17.4	C
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	SB Left	0.143	18.9	C
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	EB Left	0.254	11.0	B
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	EB Left	0.424	16.7	B
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	NB Thru	0.552	24.2	C

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

Table 14 – Horizon (2045) Total PM Peak Hour LOS Summary (Without Mitigation)

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	EB Thru	1.175	188.8	F
2	Rolling Thunder Way/Bridal Vail Way	Two-way stop	HCM 6th Edition	SB Left	0.100	26.6	D
3	Rolling Thunder Way/Antelope Meadows Circle (E)	Two-way stop	HCM 6th Edition	SB Left	0.134	27.1	D
4	Rolling Thunder Way/Foxtail Meadow Ln	Signalized	HCM 6th Edition	SB Left	0.381	11.3	B
5	Rolling Thunder Way/Meridian Rd	Signalized	HCM 6th Edition	WB Right	0.498	21.2	C
11	New Meridian Rd/US 24	Signalized	HCM 6th Edition	EB Left	0.708	33.6	C

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

Table 15 – Horizon (2045) Total AM Peak Hour LOS Summary (With Mitigation)

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	NB Left	0.824	44.6	D

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 16 – Horizon (2045) Total PM Peak Hour LOS Summary (With Mitigation)

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Woodmen Rd/Golden Sage Rd	Signalized	HCM 6th Edition	WB Left	0.736	35.9	D

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.

Conclusion and Recommendations

The length of turn lanes required to accommodate the full build-out (2045) traffic was analyzed at each intersection. Table 17 shows the turn lanes that did not have adequate storage to meet El Paso County's minimum or the 95% queue length, or both. The Engineering Criteria Manual, specifically Figure 2-27 and Table 2-30, was used to determine the minimum storage lengths for both signalized and stop-controlled intersections, respectively. The 95% queue lengths were given by PTV Vistro. Matrix recommends that the development should be responsible for increasing the storage length by the difference in between the minimum required total and background storage lengths, as shown in the far right column in Table 17. Since the southbound approach of Golden Sage Road to Woodmen Road is only about 120 feet, Matrix recommends double southbound left turn lanes on Golden Sage Road. Note that these recommendations assume a 3% growth rate, which may overestimate the horizon (2045) traffic volumes for some movements. El Paso County should continue to monitor these intersections to determine improvements needed based on updated traffic counts.

Table 17 – Horizon (2045) Inadequate Turn Lane Lengths

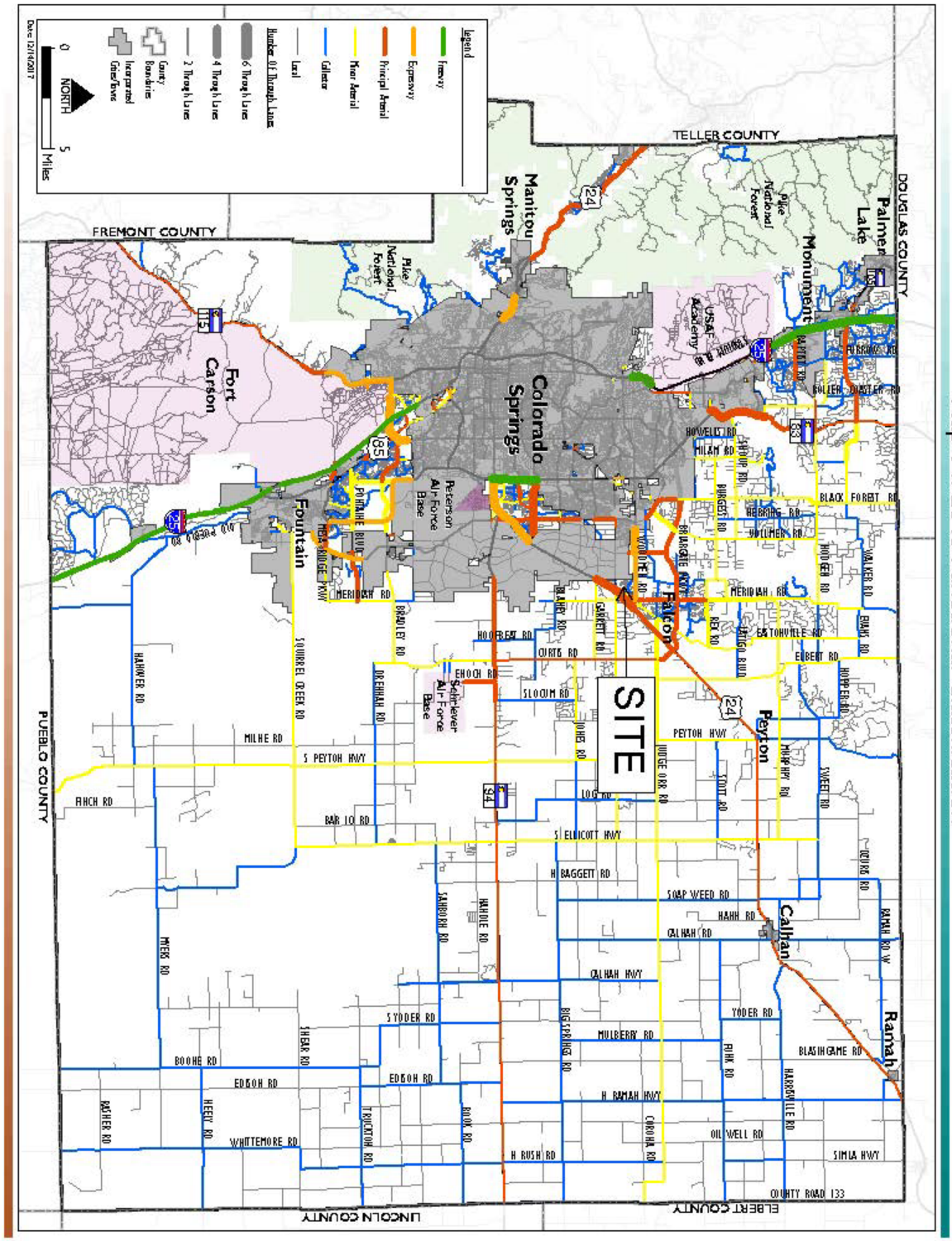
		Turn Lane Length [ft]					
			2045 Background		2045 Total		Development
Intersection	Turning Movement	Existing	95% Queue	Min per EPC ECM	95% Queue	Min per EPC ECM	Responsibility
Woodmen Road & Golden Sage Road	NBL	150	429 (AM)	330	524 (AM)	380	50
(assumed mitigated scenario)	SBL	120	204 (PM)	180	184 (PM)	190	10
Rolling Thunder Way & Meridian Road	WBR	120	171 (PM)	130	171 (PM)	130	n/a
Rolling Thunder Way & Bridal Vail Way	WBL	100	4 (PM)	100	12 (PM)	150	50

Since the addition of site-generated traffic to the adjacent roadway system does not warrant offsite roadway improvements, then additional connections to the future Dublin Boulevard extension would not have any impacts to the roadway system.

The site will provide at least one pedestrian access to the future Rock Island Trail extension. The future Rock Island Trail is anticipated to be between Tamlin Road and US 24 in the vicinity of the site and will not be routed through the site. The site will provide pedestrian access to the existing pedestrian facilities to the north of the site, allowing for a pedestrian route to the anticipated elementary school at the northeast corner of Rolling Thunder Way and Bridal Vail Way.

The project area conforms to El Paso County's 2040 Roadway Plan, as shown in Figure 20. The Plan anticipates Woodmen Road will be an expressway, Highway 24 will be a principal arterial, and Rolling Thunder Way will be a collector. As previously discussed in this study, Woodmen Road is anticipated to have 8 through-lanes by the year 2045 for the Woodmen Road and Golden Sage Road intersection to operate at an acceptable LOS (LOS D or better).

Figure 20 – 2040 Roadway Plan



The applicant is required to pay a road impact fee 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 18 below, calculated using 395 single-family dwelling units. 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 18 – Road Impact Fee Schedule

Full Fee		5 Mill PID		10 Mill PID	
Per DU	Upfront Cost	Per DU	Upfront Cost	Per DU	Upfront Cost
$ 3,830	$ 1,512,850	$ 2,527	$ 998,165	$ 1,221	$ 482,295

If you have any questions, please feel free to contact me at Scott.Barnhart@matrixdesigngroup.com or at (719) 575-0100. Thank you.

Sincerely,

Scott D. Barnhart, P.E., PTOE
Senior Associate of Transportation Services

Appendix A

Existing Traffic Counts

All Traffic Data Services

www.alltrafficdata.net

Date Start: 20-May-21
Site Code: 7
Station ID: 7
ROLLING THUNDER WAY W.O. BRIDAL VAIL WAY

Start Time	20-May-21 Thu	EB	WB							Total
12:00 AM		0	4							4
01:00		1	2							3
02:00		3	1							4
03:00		1	2							3
04:00		7	6							13
05:00		14	25							39
06:00		37	67							104
07:00		**62**	**111**							**173**
08:00		55	90							145
09:00		45	69							114
10:00		35	60							95
11:00		62	79							141
12:00 PM		59	102							161
01:00		54	87							141
02:00		67	85							152
03:00		75	115							190
04:00		72	117							189
05:00		**89**	**121**							**210**
06:00		76	99							175
07:00		47	71							118
08:00		33	31							64
09:00		21	29							50
10:00		11	13							24
11:00		7	11							18
Total		933	1397							2330
Percent		40.0%	60.0%							
AM Peak	-	07:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	62	111	-	-	-	-	-	-	173
PM Peak	-	17:00	17:00	-	-	-	-	-	-	17:00
Vol.	-	89	121	-	-	-	-	-	-	210
Grand Total		933	1397							2330
Percent		40.0%	60.0%							
ADT		ADT 2,330		AADT 2,330						

All Traffic Data Services

www.alltrafficdata.net

Date Start: 20-May-21
Site Code: 8
Station ID: 8
ROLLING THUNDER WAY E.O. ANTELOPE MEADOW

Start Time	20-May-21 Thu	EB	WB							Total
12:00 AM		0	4							4
01:00		3	2							5
02:00		2	2							4
03:00		3	3							6
04:00		6	5							11
05:00		14	34							48
06:00		58	83							141
07:00		**128**	**124**							**252**
08:00		119	95							214
09:00		66	74							140
10:00		42	63							105
11:00		68	87							155
12:00 PM		62	102							164
01:00		57	100							157
02:00		77	82							159
03:00		103	139							242
04:00		100	**194**							294
05:00		**130**	177							**307**
06:00		106	123							229
07:00		51	69							120
08:00		30	27							57
09:00		26	26							52
10:00		10	15							25
11:00		8	10							18
Total		1269	1640							2909
Percent		43.6%	56.4%							
AM Peak	-	07:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	128	124	-	-	-	-	-	-	252
PM Peak	-	17:00	16:00	-	-	-	-	-	-	17:00
Vol.	-	130	194	-	-	-	-	-	-	307
Grand Total		1269	1640							2909
Percent		43.6%	56.4%							
ADT		ADT 2,909		AADT 2,909						

All Traffic Data Services

www.alltrafficdata.net

Date Start: 20-May-21
Site Code: 9
Station ID: 9
MERIDIAN RD N.O. ROLLING THUNDER WAY

Start Time	20-May-21 Thu	NB	SB							Total
12:00 AM		8	12							20
01:00		2	0							2
02:00		3	2							5
03:00		6	3							9
04:00		14	11							25
05:00		30	77							107
06:00		133	264							397
07:00		269	**351**							**620**
08:00		207	187							394
09:00		188	214							402
10:00		227	202							429
11:00		**270**	270							540
12:00 PM		253	248							501
01:00		262	236							498
02:00		352	265							617
03:00		416	280							696
04:00		502	269							771
05:00		**515**	**311**							**826**
06:00		323	282							605
07:00		202	178							380
08:00		113	113							226
09:00		74	73							147
10:00		39	41							80
11:00		17	24							41
Total		4425	3913							8338
Percent		53.1%	46.9%							
AM Peak	-	11:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	270	351	-	-	-	-	-	-	620
PM Peak	-	17:00	17:00	-	-	-	-	-	-	17:00
Vol.	-	515	311	-	-	-	-	-	-	826
Grand Total		4425	3913							8338
Percent		53.1%	46.9%							
ADT		ADT 8,338		AADT 8,338						

All Traffic Data Services

www.alltrafficdata.net

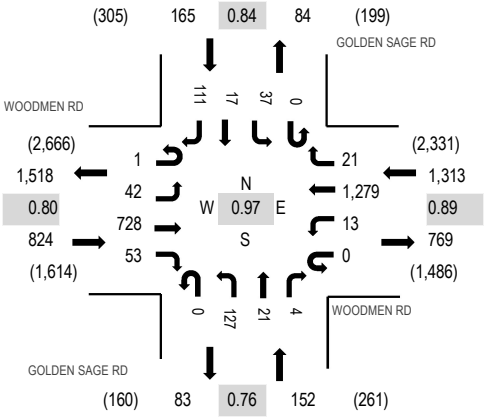
Date Start: 20-May-21
Site Code: 10
Station ID: 10
US 24 W.O. MERIDIAN RD

Start Time	20-May-21 Thu	EB	WB							Total
12:00 AM		58	36							94
01:00		34	24							58
02:00		24	24							48
03:00		31	43							74
04:00		57	108							165
05:00		122	429							551
06:00		376	842							1218
07:00		500	**977**							**1477**
08:00		**573**	693							1266
09:00		470	629							1099
10:00		490	506							996
11:00		520	592							1112
12:00 PM		506	537							1043
01:00		573	500							1073
02:00		643	488							1131
03:00		606	495							1101
04:00		573	676							1249
05:00		595	566							1161
06:00		**655**	**699**							**1354**
07:00		473	408							881
08:00		354	265							619
09:00		218	160							378
10:00		154	97							251
11:00		112	55							167
Total		8717	9849							18566
Percent		47.0%	53.0%							
AM Peak	-	08:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	573	977	-	-	-	-	-	-	1477
PM Peak	-	18:00	18:00	-	-	-	-	-	-	18:00
Vol.	-	655	699	-	-	-	-	-	-	1354
Grand Total		8717	9849							18566
Percent		47.0%	53.0%							
ADT		ADT 18,566		AADT 18,566						

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

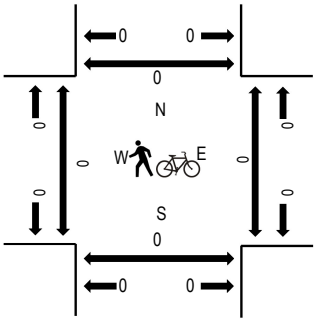
Location: 1 GOLDEN SAGE RD & WOODMEN RD AM
Date: Thursday, May 20, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	WOODMEN RD Eastbound				WOODMEN RD Westbound				GOLDEN SAGE RD Northbound				GOLDEN SAGE RD 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	1	4	159	9	0	2	325	4	0	29	6	2	0	7	10	27	585	2,454	0	0	0	0
7:15 AM	0	8	152	9	0	6	358	6	0	43	6	1	0	6	4	26	625	2,368	0	0	0	0
7:30 AM	0	17	177	9	0	3	311	8	0	31	5	0	0	11	2	36	610	2,267	0	0	0	0
7:45 AM	0	13	240	26	0	2	285	3	0	24	4	1	0	13	1	22	634	2,231	0	0	0	0
8:00 AM	0	12	174	26	0	5	235	6	0	13	4	0	0	8	1	15	499	2,057	0	0	0	0
8:15 AM	1	22	169	12	1	1	242	10	0	24	10	1	0	8	2	21	524		0	0	0	0
8:30 AM	0	10	164	12	1	0	307	9	0	20	4	4	0	16	3	24	574		0	0	0	0
8:45 AM	0	16	159	13	0	1	193	7	0	23	5	1	0	11	1	30	460		0	0	0	0
Count Total	2	102	1,394	116	2	20	2,256	53	0	207	44	10	0	80	24	201	4,511		0	0	0	0
Peak Hour	1	42	728	53	0	13	1,279	21	0	127	21	4	0	37	17	111	2,454		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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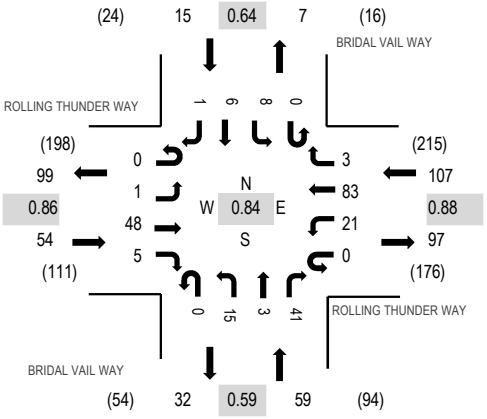
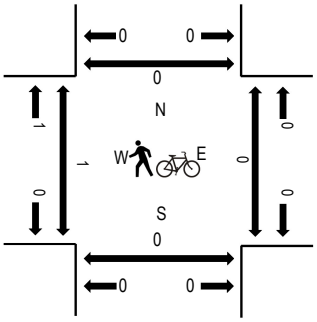
Location: 2 BRIDAL VAIL WAY & ROLLING THUNDER WAY AM
Date: Thursday, May 20, 2021
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	ROLLING THUNDER WAY Eastbound				ROLLING THUNDER WAY Westbound				BRIDAL VAIL WAY Northbound				BRIDAL VAIL WAY 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	13	0	0	4	24	0	0	3	0	9	0	0	0	0	55	233	0	0	0	0
7:15 AM	0	0	11	1	0	2	29	1	0	6	1	18	0	0	1	0	70	235	1	0	0	0
7:30 AM	0	0	12	0	0	5	19	0	0	3	1	8	0	1	0	0	49	215	0	0	0	0
7:45 AM	0	0	13	2	0	9	18	1	0	3	1	6	0	2	4	0	59	219	0	0	0	0
8:00 AM	0	1	12	2	0	5	17	1	0	3	0	9	0	5	1	1	57	211	0	0	0	0
8:15 AM	0	0	12	2	0	1	21	1	0	2	1	9	0	0	1	0	50		0	0	0	0
8:30 AM	0	0	17	1	0	7	18	2	0	1	1	2	0	1	1	2	53		0	0	0	0
8:45 AM	0	0	9	1	0	3	26	1	0	1	1	5	0	2	1	1	51		0	0	0	1
Count Total	0	3	99	9	0	36	172	7	0	22	6	66	0	11	9	4	444		1	0	0	1
Peak Hour	0	1	48	5	0	21	83	3	0	15	3	41	0	8	6	1	235		1	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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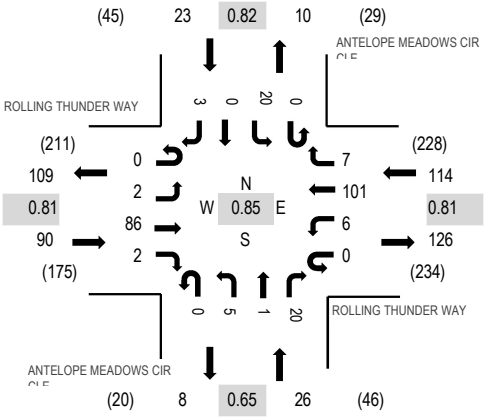
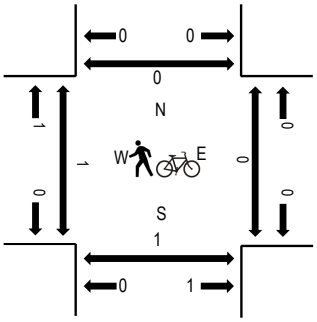
Location: 3 ANTELOPE MEADOWS CIRCLE & ROLLING THUNDER WAY AM
Date: Thursday, May 20, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	ROLLING THUNDER WAY Eastbound				ROLLING THUNDER WAY Westbound				ANTELOPE MEADOWS CIRCLE Northbound				ANTELOPE MEADOWS CIRCLE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	1	21	0	0	1	23	1	0	1	0	9	0	6	0	1	64	253	0	0	1	0
7:15 AM	0	0	29	0	0	1	28	1	0	2	0	7	0	5	0	1	74	250	0	0	0	0
7:30 AM	0	0	21	0	0	3	24	1	0	0	0	3	0	6	0	0	58	230	1	0	0	0
7:45 AM	0	1	15	2	0	1	26	4	0	2	1	1	0	3	0	1	57	235	0	0	0	0
8:00 AM	0	0	24	2	0	1	18	3	0	3	0	4	0	4	0	2	61	241	0	0	0	0
8:15 AM	0	0	21	1	0	0	19	4	0	2	0	4	0	2	0	1	54		0	0	0	0
8:30 AM	0	0	20	1	0	5	24	6	0	2	0	0	0	4	0	1	63		0	0	0	0
8:45 AM	0	0	16	0	0	2	26	6	0	3	0	2	0	7	0	1	63		0	0	0	0
Count Total	0	2	167	6	0	14	188	26	0	15	1	30	0	37	0	8	494		1	0	1	0
Peak Hour	0	2	86	2	0	6	101	7	0	5	1	20	0	20	0	3	253		1	0	1	0

ALL TRAFFIC DATA SERVICES
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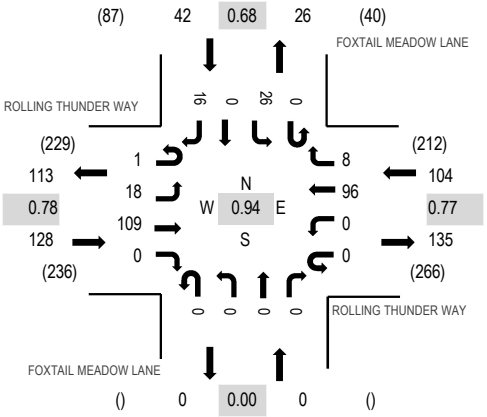
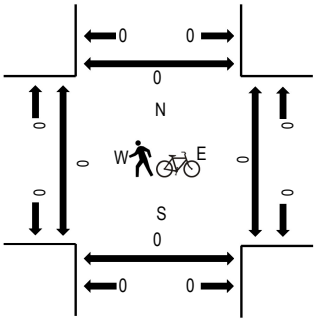
Location: 4 FOXTAIL MEADOW LANE & ROLLING THUNDER WAY AM
Date: Thursday, May 20, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	ROLLING THUNDER WAY Eastbound				ROLLING THUNDER WAY Westbound				FOXTAIL MEADOW LANE Northbound				FOXTAIL MEADOW LANE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	1	7	29	0	0	0	24	0	0	0	0	0	0	5	0	5	71	274	0	0	0	0
7:15 AM	0	7	34	0	0	0	20	3	0	0	0	0	0	4	0	5	73	261	0	0	0	0
7:30 AM	0	1	29	0	0	0	28	1	0	0	0	0	0	9	0	3	71	261	0	0	0	0
7:45 AM	0	3	17	0	0	0	24	4	0	0	0	0	0	8	0	3	59	256	0	0	0	0
8:00 AM	0	2	29	0	0	0	16	0	0	0	0	0	0	5	0	6	58	261	0	0	0	0
8:15 AM	0	1	26	0	0	0	23	3	0	0	0	0	0	17	0	3	73		0	0	0	0
8:30 AM	0	3	21	0	0	0	32	3	0	0	0	0	0	5	0	2	66		0	0	0	0
8:45 AM	0	1	25	0	1	0	29	1	0	0	0	0	0	2	0	5	64		0	0	0	4
Count Total	1	25	210	0	1	0	196	15	0	0	0	0	0	55	0	32	535		0	0	0	4
Peak Hour	1	18	109	0	0	0	96	8	0	0	0	0	0	26	0	16	274		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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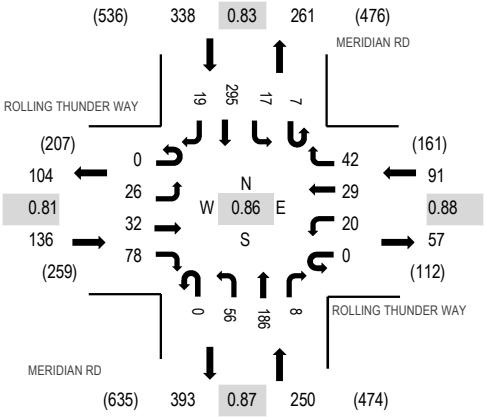
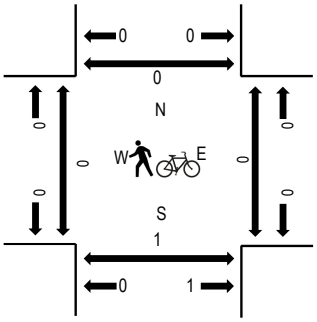
Location: 5 MERIDIAN RD & ROLLING THUNDER WAY AM
Date: Thursday, May 20, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	ROLLING THUNDER WAY Eastbound				ROLLING THUNDER WAY Westbound				MERIDIAN RD Northbound				MERIDIAN RD 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	6	11	17	0	3	9	5	0	12	47	0	1	7	74	3	195	815	0	0	0	0
7:15 AM	0	12	4	22	0	5	6	15	0	16	49	2	4	5	64	2	206	770	0	0	0	0
7:30 AM	0	5	8	26	0	9	5	11	0	20	49	3	0	4	91	7	238	741	0	0	0	0
7:45 AM	0	3	9	13	0	3	9	11	0	8	41	3	2	1	66	7	176	667	0	0	0	0
8:00 AM	0	8	7	18	0	1	6	11	0	7	33	2	0	5	49	3	150	615	0	0	1	0
8:15 AM	0	6	7	30	0	3	4	11	0	18	46	6	0	3	39	4	177		0	0	0	0
8:30 AM	0	6	7	13	0	2	11	5	0	18	45	5	1	5	40	6	164		0	0	0	0
8:45 AM	0	3	4	14	0	2	5	9	0	15	27	2	4	2	31	6	124		0	0	0	0
Count Total	0	49	57	153	0	28	55	78	0	114	337	23	12	32	454	38	1,430		0	0	1	0
Peak Hour	0	26	32	78	0	20	29	42	0	56	186	8	7	17	295	19	815		0	0	0	0

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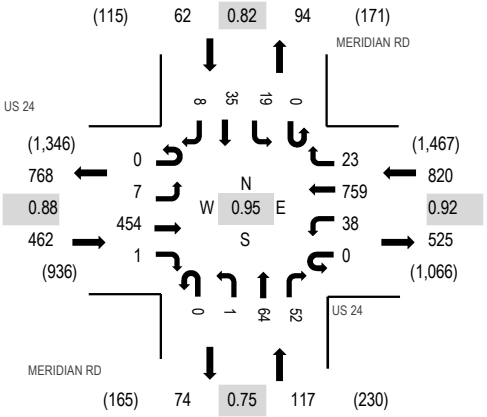
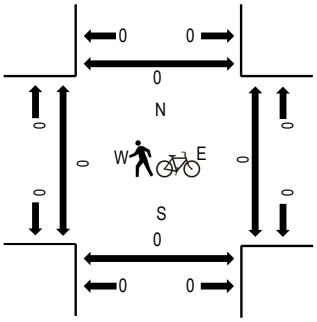
Location: 6 MERIDIAN RD & US 24 AM
Date: Thursday, May 20, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	US 24 Eastbound				US 24 Westbound				MERIDIAN RD Northbound				MERIDIAN RD 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	108	0	0	8	205	7	0	1	10	8	0	7	8	3	365	1,461	0	0	0	0
7:15 AM	0	3	99	1	0	7	212	4	0	0	23	19	0	3	7	1	379	1,385	0	0	0	0
7:30 AM	0	1	119	0	0	9	198	6	0	0	19	14	0	5	11	3	385	1,371	0	0	0	0
7:45 AM	0	3	128	0	0	14	144	6	0	0	12	11	0	4	9	1	332	1,324	0	0	0	0
8:00 AM	0	2	102	0	0	11	129	5	0	0	11	17	0	4	6	2	289	1,287	0	0	0	0
8:15 AM	0	8	134	0	0	15	155	4	0	0	15	17	0	7	8	2	365		0	0	0	0
8:30 AM	0	4	110	1	0	21	145	6	0	1	7	25	0	6	9	3	338		0	0	0	0
8:45 AM	0	3	109	1	0	15	140	1	0	1	11	8	0	2	4	0	295		0	0	0	0
Count Total	0	24	909	3	0	100	1,328	39	0	3	108	119	0	38	62	15	2,748		0	0	0	0
Peak Hour	0	7	454	1	0	38	759	23	0	1	64	52	0	19	35	8	1,461		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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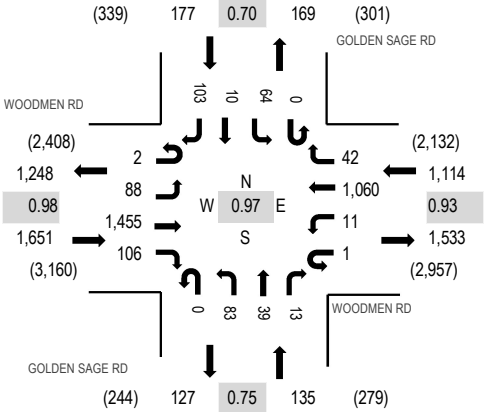
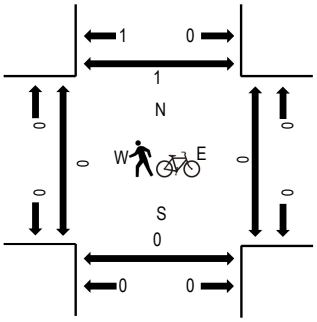
Location: 1 GOLDEN SAGE RD & WOODMEN RD PM
Date: Thursday, May 20, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	WOODMEN RD Eastbound				WOODMEN RD Westbound				GOLDEN SAGE RD Northbound				GOLDEN SAGE RD 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	25	354	35	0	6	260	11	0	20	12	2	0	21	2	19	767	3,077	0	0	0	0
4:15 PM	1	24	352	30	0	3	269	9	0	31	12	7	0	12	3	23	776	3,033	0	0	0	0
4:30 PM	1	22	375	12	1	1	285	12	0	14	9	4	0	20	3	33	792	2,989	0	0	0	0
4:45 PM	0	17	374	29	0	1	246	10	0	18	6	0	0	11	2	28	742	2,926	0	0	0	0
5:00 PM	0	13	334	20	0	3	267	9	0	31	3	1	0	13	7	22	723	2,833	0	0	0	0
5:15 PM	0	19	363	25	2	2	228	10	0	34	6	8	0	12	6	17	732		0	0	0	0
5:30 PM	0	20	342	16	0	1	247	8	0	25	2	3	0	27	13	25	729		0	0	0	0
5:45 PM	0	26	309	22	1	1	230	9	0	22	7	2	0	7	1	12	649		0	0	0	0
Count Total	2	166	2,803	189	4	18	2,032	78	0	195	57	27	0	123	37	179	5,910		0	0	0	0
Peak Hour	2	88	1,455	106	1	11	1,060	42	0	83	39	13	0	64	10	103	3,077		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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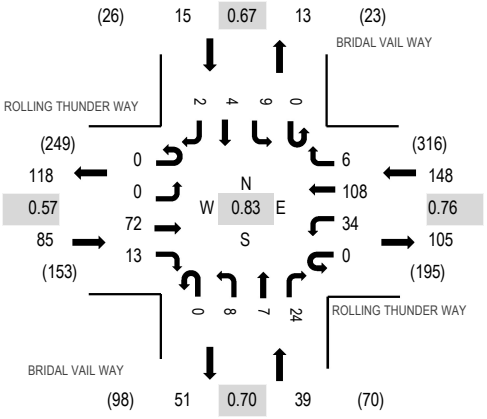
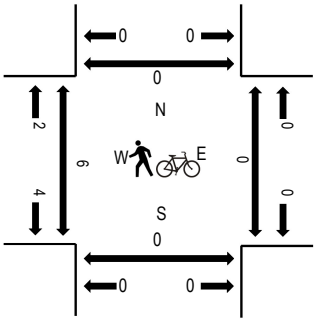
Location: 2 BRIDAL VAIL WAY & ROLLING THUNDER WAY PM
Date: Thursday, May 20, 2021
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



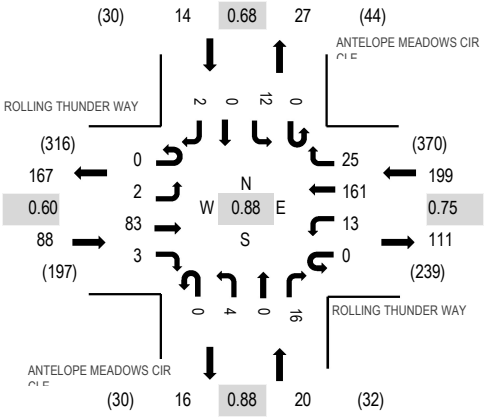
Traffic Counts

Interval Start Time	ROLLING THUNDER WAY Eastbound				ROLLING THUNDER WAY Westbound				BRIDAL VAIL WAY Northbound				BRIDAL VAIL WAY 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	14	2	0	10	35	1	0	3	3	6	0	1	2	1	78	284	0	0	0	0
4:15 PM	0	0	22	3	0	12	38	1	0	0	2	4	0	2	1	0	85	282	0	0	0	1
4:30 PM	0	0	18	1	0	11	21	1	0	0	0	7	0	2	0	1	62	263	0	0	0	0
4:45 PM	0	0	10	3	0	6	22	0	0	5	2	5	0	4	1	1	59	287	0	0	0	0
5:00 PM	0	0	9	4	0	12	40	3	0	1	1	3	0	0	2	1	76	281	0	0	0	0
5:15 PM	0	0	20	2	0	5	27	2	0	1	1	6	0	2	0	0	66		0	0	0	0
5:30 PM	0	0	33	4	0	11	19	1	0	1	3	10	0	3	1	0	86		0	0	0	0
5:45 PM	0	0	8	0	0	5	31	2	0	1	0	5	0	1	0	0	53		0	0	0	0
Count Total	0	0	134	19	0	72	233	11	0	12	12	46	0	15	7	4	565		0	0	0	1
Peak Hour	0	0	72	13	0	34	108	6	0	8	7	24	0	9	4	2	287		0	0	0	0

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

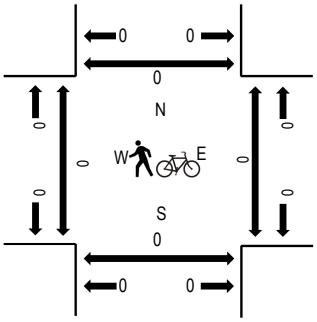
Location: 3 ANTELOPE MEADOWS CIRCLE & ROLLING THUNDER WAY PM
Date: Thursday, May 20, 2021
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	ROLLING THUNDER WAY Eastbound				ROLLING THUNDER WAY Westbound				ANTELOPE MEADOWS CIRCLE Northbound				ANTELOPE MEADOWS CIRCLE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	20	2	0	1	46	7	0	0	0	4	0	3	0	1	84	314	0	0	1	0
4:15 PM	0	1	23	2	0	2	48	1	0	2	0	4	0	3	0	1	87	321	0	0	0	0
4:30 PM	0	1	25	0	0	4	32	9	0	0	0	5	0	1	0	0	77	312	0	0	0	0
4:45 PM	0	0	20	1	0	2	27	8	0	1	0	5	0	2	0	0	66	315	0	0	0	0
5:00 PM	0	0	15	0	0	5	54	7	0	1	0	2	0	6	0	1	91	315	0	0	0	0
5:15 PM	0	0	26	1	0	7	30	5	0	1	0	3	0	4	0	1	78		1	1	0	0
5:30 PM	0	0	44	1	0	0	31	3	0	0	0	0	0	1	0	0	80		0	0	0	0
5:45 PM	0	0	15	0	0	2	37	2	0	1	0	3	0	5	0	1	66		0	0	0	0
Count Total	0	2	188	7	0	23	305	42	0	6	0	26	0	25	0	5	629		1	1	1	0
Peak Hour	0	2	83	3	0	13	161	25	0	4	0	16	0	12	0	2	321		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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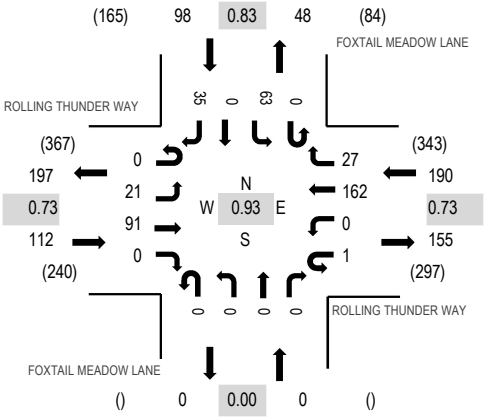
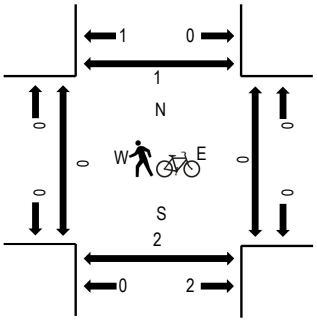
Location: 4 FOXTAIL MEADOW LANE & ROLLING THUNDER WAY PM
Date: Thursday, May 20, 2021
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	ROLLING THUNDER WAY Eastbound				ROLLING THUNDER WAY Westbound				FOXTAIL MEADOW LANE Northbound				FOXTAIL MEADOW LANE 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	4	23	0	0	0	43	3	0	0	0	0	0	11	0	9	93	390	0	0	0	0
4:15 PM	0	5	23	0	0	0	45	6	0	0	0	0	0	22	0	6	107	400	0	0	0	0
4:30 PM	0	9	23	0	0	0	34	6	0	0	0	0	0	20	0	11	103	381	0	0	0	0
4:45 PM	0	3	26	0	0	0	27	7	0	0	0	0	0	14	0	10	87	363	0	0	0	0
5:00 PM	0	4	19	0	1	0	56	8	0	0	0	0	0	7	0	8	103	358	0	0	0	0
5:15 PM	0	6	27	0	0	0	38	4	0	0	0	0	0	8	0	5	88		0	0	0	0
5:30 PM	0	8	36	0	0	0	28	1	0	0	0	0	0	7	0	5	85		0	0	0	0
5:45 PM	0	4	20	0	0	0	30	6	0	0	0	0	0	10	0	12	82		0	0	0	0
Count Total	0	43	197	0	1	0	301	41	0	0	0	0	0	99	0	66	748		0	0	0	0
Peak Hour	0	21	91	0	1	0	162	27	0	0	0	0	0	63	0	35	400		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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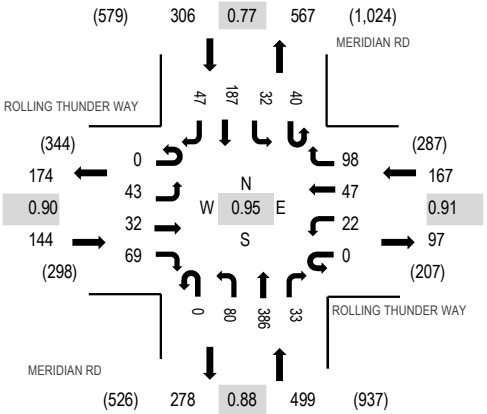
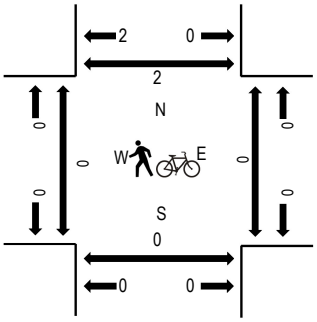
Location: 5 MERIDIAN RD & ROLLING THUNDER WAY PM
Date: Thursday, May 20, 2021
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	ROLLING THUNDER WAY Eastbound				ROLLING THUNDER WAY Westbound				MERIDIAN RD Northbound				MERIDIAN RD 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	6	13	14	0	0	8	23	0	23	79	6	4	10	43	12	241	1,044	0	0	0	2
4:15 PM	0	14	8	23	0	5	13	13	0	26	71	5	7	10	48	12	255	1,097	0	0	0	0
4:30 PM	0	12	17	15	0	1	15	16	0	19	101	6	4	6	40	6	258	1,114	0	0	0	0
4:45 PM	0	11	12	17	0	3	11	27	0	20	114	11	7	10	40	7	290	1,116	0	0	0	0
5:00 PM	0	10	2	15	0	9	14	23	0	32	96	9	14	5	49	16	294	1,057	0	0	0	0
5:15 PM	0	15	9	11	0	4	11	22	0	14	81	4	10	12	63	16	272		0	0	0	0
5:30 PM	0	7	9	26	0	6	11	26	0	14	95	9	9	5	35	8	260		0	0	0	0
5:45 PM	0	8	11	13	0	3	9	14	0	16	79	7	6	11	43	11	231		0	0	0	0
Count Total	0	83	81	134	0	31	92	164	0	164	716	57	61	69	361	88	2,101		0	0	0	2
Peak Hour	0	43	32	69	0	22	47	98	0	80	386	33	40	32	187	47	1,116		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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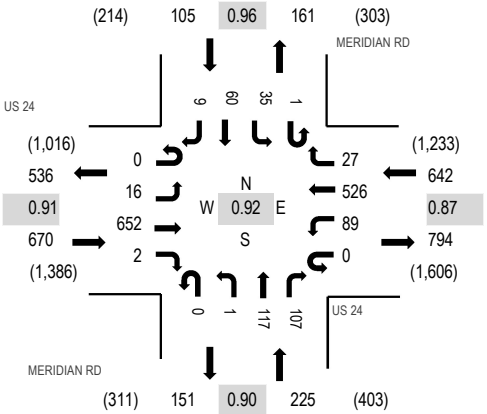
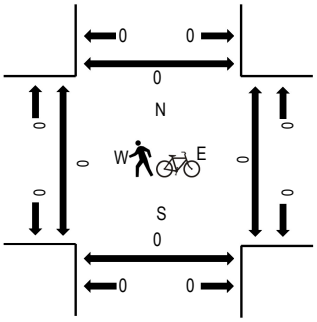
Location: 6 MERIDIAN RD & US 24 PM
Date: Thursday, May 20, 2021
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	US 24 Eastbound				US 24 Westbound				MERIDIAN RD Northbound				MERIDIAN RD 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	6	168	1	0	23	141	4	0	0	25	18	0	9	20	2	417	1,614	0	0	0	0
4:15 PM	0	3	147	1	0	31	124	9	0	0	24	22	0	7	17	3	388	1,642	0	0	0	0
4:30 PM	0	3	173	0	0	18	140	4	0	1	29	32	0	10	17	3	430	1,639	0	0	0	0
4:45 PM	0	4	159	1	0	19	103	9	0	0	28	25	0	11	19	1	379	1,613	0	0	0	0
5:00 PM	0	6	173	0	0	21	159	5	0	0	36	28	1	7	7	2	445	1,622	0	0	0	0
5:15 PM	0	6	156	0	0	24	116	6	0	0	25	27	0	8	15	2	385		0	0	0	0
5:30 PM	0	2	179	1	0	26	108	9	0	0	32	23	0	8	14	2	404		0	0	0	0
5:45 PM	0	4	193	0	0	19	107	8	0	0	15	13	0	10	17	2	388		0	0	0	0
Count Total	0	34	1,348	4	0	181	998	54	0	1	214	188	1	70	126	17	3,236		0	0	0	0
Peak Hour	0	16	652	2	0	89	526	27	0	1	117	107	1	35	60	9	1,642		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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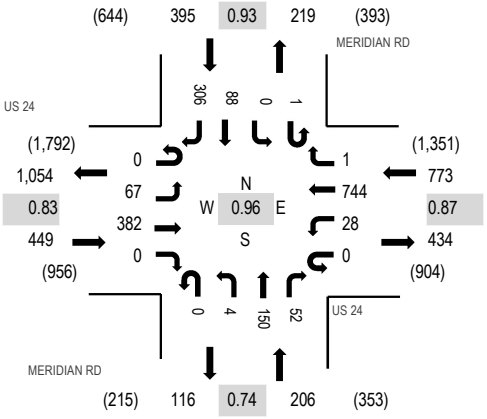
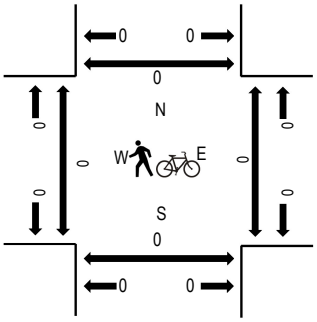
Location: 1 MERIDIAN RD & US 24 AM
Date: Wednesday, June 2, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	US 24 Eastbound				US 24 Westbound				MERIDIAN RD Northbound				MERIDIAN RD 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	15	87	0	0	6	193	0	0	1	30	5	0	0	18	77	432	1,823	0	0	0	0
7:15 AM	0	13	93	0	0	7	180	1	0	0	42	12	1	0	19	86	454	1,764	0	0	0	0
7:30 AM	0	16	101	0	0	9	213	0	0	2	28	15	0	0	20	73	477	1,691	0	0	0	0
7:45 AM	0	23	101	0	0	6	158	0	0	1	50	20	0	0	31	70	460	1,583	0	0	0	0
8:00 AM	0	14	93	0	0	4	144	0	0	3	26	11	0	0	22	56	373	1,481	0	0	0	0
8:15 AM	0	21	95	1	0	3	155	0	0	1	32	11	0	0	14	48	381		0	0	0	0
8:30 AM	0	20	111	0	0	12	126	0	0	0	23	13	0	0	25	39	369		0	0	0	0
8:45 AM	0	22	126	4	0	8	126	0	0	1	16	10	0	0	6	39	358		0	0	0	0
Count Total	0	144	807	5	0	55	1,295	1	0	9	247	97	1	0	155	488	3,304		0	0	0	0
Peak Hour	0	67	382	0	0	28	744	1	0	4	150	52	1	0	88	306	1,823		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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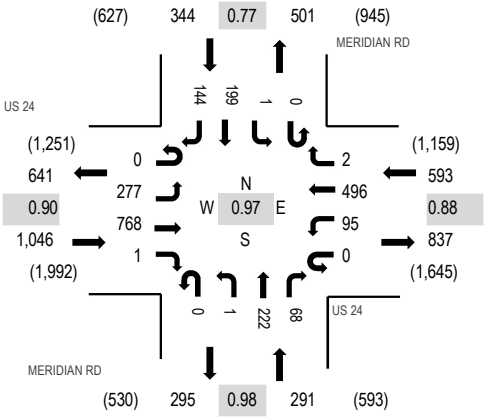
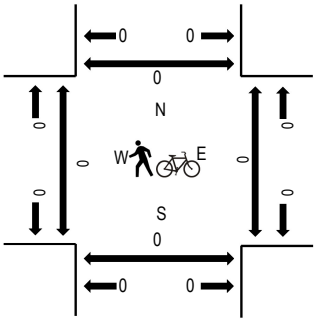
Location: 1 MERIDIAN RD & US 24 PM
Date: Wednesday, June 2, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	US 24 Eastbound				US 24 Westbound				MERIDIAN RD Northbound				MERIDIAN RD 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	45	177	0	0	6	133	0	0	1	56	19	0	3	27	41	508	2,097	0	0	0	0
4:15 PM	0	62	200	0	0	20	129	1	0	0	40	18	0	0	30	24	524	2,174	0	0	0	0
4:30 PM	0	50	178	0	0	23	109	1	0	1	69	14	0	2	47	24	518	2,217	0	0	0	0
4:45 PM	0	56	177	1	0	28	116	0	0	1	64	19	0	1	53	31	547	2,259	0	0	0	0
5:00 PM	0	81	207	1	0	21	113	0	0	0	62	21	0	0	44	35	585	2,274	0	0	0	0
5:15 PM	0	57	181	0	0	30	139	0	0	0	66	20	0	0	40	34	567		0	0	0	0
5:30 PM	0	76	200	0	0	15	130	1	0	1	42	15	0	1	46	33	560		0	0	0	0
5:45 PM	0	63	180	0	0	29	114	1	0	0	52	12	0	0	69	42	562		0	0	0	0
Count Total	0	490	1,500	2	0	172	983	4	0	4	451	138	0	7	356	264	4,371		0	0	0	0
Peak Hour	0	277	768	1	0	95	496	2	0	1	222	68	0	1	199	144	2,274		0	0	0	0

Appendix B

Trip Generation Calculations

PROJECT DETAILS

Project Name:	Falcon Highlands Filing No. 3	Type of Project:	
Project No:		City:	
Country:		Built-up Area(Sq.ft):	
Analyst Name:	Scott Barnhart	Clients Name:	
Date:	5/19/2021	ZIP/Postal Code:	
State/Province:		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	Daily	1	1	0		1840	1840	3680
Scenario - 2	AM Peak Hour	1	1	0		71	214	285
Scenario - 3	PM Peak Hour	1	1	0		239	141	380

Scenario - 1

Scenario Name: Daily
Dev. phase: 1
Analyst Note:
Warning:

User Group:
No. of Years to Project Traffic : 0

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit	Total
					Rate/Equation	Split%	Split%	
210 - Single-Family Detached Housing	General Urban/Suburban	Dwelling Units	395	Weekday	Best Fit (LOG)	1840	1840	3680
Data Source: Trip Gen Manual, 10th Ed					Ln(T) =0.92Ln(X) + 2.71	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 (%)
210 - Single-Family Detached Housing	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
210 - Single-Family Detached Housing	1840	1840	0	0	1840	1840
	3680		0		3680	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
210 - Single-Family Detached Housing	Residential

BALANCED PERSON TRIPS:

INTERNAL PERSON TRIPS:
210 - Single-Family Detached Housing

Internal Person Trips From	Entry	Exit	Total
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:
210 - Single-Family Detached Housing

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	1840	1840	3680
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
210 - Single-Family Detached Housing	1840	1840	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
210 - Single-Family Detached Housing	1840	1840	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
210 - Single-Family Detached Housing	1840	1840	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
210 - Single-Family Detached Housing	1840	1840	3680

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	1840	1840	3680
Internal Vehicle Trips	0	0	0
External Vehicle Trips	1840	1840	3680
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	1840	1840	3680

Scenario - 2

Scenario Name: AM Peak Hour
Dev. phase: 1
User Group:
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
210 - Single-Family Detached Housing	General Urban/Suburban	Dwelling Units	395	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LIN)	71	214	285
Data Source: Trip Gen Manual, 10th Ed					T = 0.71(X) + 4.80	25%	75%	

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 (%)
210 - Single-Family Detached Housing	100	100	1	1	25	75

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
210 - Single-Family Detached Housing	71	214	0	0	71	214
	285		0		285	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
210 - Single-Family Detached Housing	Residential

BALANCED PERSON TRIPS:

INTERNAL PERSON TRIPS:
210 - Single-Family Detached Housing

Internal Person Trips From	Entry	Exit	Total
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:
210 - Single-Family Detached Housing

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	71	214	285
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
210 - Single-Family Detached Housing	71	214	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
210 - Single-Family Detached Housing	71	214	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
210 - Single-Family Detached Housing	71	214	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
210 - Single-Family Detached Housing	71	214	285

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	71	214	285
Internal Vehicle Trips	0	0	0
External Vehicle Trips	71	214	285
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	71	214	285

Scenario - 3

Scenario Name: PM Peak Hour
Dev. phase: 1
User Group:
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
210 - Single-Family Detached Housing	General Urban/Suburban	Dwelling Units	395	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	239	141	380
Data Source: Trip Gen Manual, 10th Ed					Ln(T) =0.96Ln(X) + 0.20	63%	37%	

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 (%)
210 - Single-Family Detached Housing	100	100	1	1	63	37

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
210 - Single-Family Detached Housing	239	141	0	0	239	141
	380		0		380	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
210 - Single-Family Detached Housing	Residential

BALANCED PERSON TRIPS:

INTERNAL PERSON TRIPS:
210 - Single-Family Detached Housing

Internal Person Trips From	Entry	Exit	Total
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:
210 - Single-Family Detached Housing

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	239	141	380
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
210 - Single-Family Detached Housing	239	141	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
210 - Single-Family Detached Housing	239	141	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
210 - Single-Family Detached Housing	239	141	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
210 - Single-Family Detached Housing	239	141	380

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	239	141	380
Internal Vehicle Trips	0	0	0
External Vehicle Trips	239	141	380
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	239	141	380

Appendix C

Existing (2021) LOS Reports

Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.582

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	127	21	4	37	17	111	1	42	728	53	0	13	1279	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	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	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	127	21	4	37	17	111	1	42	728	53	0	13	1279	21
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.85	0.85	0.85	0.85	0.85	0.89	0.89	0.89
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	37	6	1	11	5	33	0	12	214	16	0	4	359	6
Total Analysis Volume [veh/h]	149	25	5	44	20	131	1	49	856	62	0	15	1437	24
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	130
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	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Signal Group	0	6	0	0	2	0	0	0	8	0	0	0	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	10	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	30	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	0	77	0	0	0	77	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No				No				No	
Maximum Recall		No			No				No				No	
Pedestrian Recall		No			No				No				No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	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
g_i, Effective Green Time [s]	51	51	51	51	51	71	71	71	71	71	71
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.39	0.55	0.55	0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.13	0.01	0.00	0.04	0.10	0.15	0.27	0.04	0.03	0.45	0.02
s, saturation flow rate [veh/h]	1112	1683	1431	1241	1518	327	3204	1431	548	3204	1431
c, Capacity [veh/h]	394	655	556	506	590	112	1761	786	260	1761	786
d1, Uniform Delay [s]	36.35	24.63	24.35	27.38	26.95	52.58	18.00	13.79	26.29	23.92	13.42
k, delay calibration	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
d2, Incremental Delay [s]	2.76	0.11	0.03	0.34	1.04	2.79	0.21	0.04	0.09	0.97	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.04	0.01	0.09	0.26	0.45	0.49	0.08	0.06	0.82	0.03
d, Delay for Lane Group [s/veh]	39.11	24.74	24.38	27.71	27.99	55.37	18.21	13.83	26.38	24.89	13.43
Lane Group LOS	D	C	C	C	C	E	B	B	C	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.09	0.50	0.10	0.97	3.39	1.61	7.20	0.80	0.29	16.19	0.30
50th-Percentile Queue Length [ft/ln]	102.28	12.52	2.49	24.16	84.71	40.33	180.02	20.07	7.35	404.63	7.56
95th-Percentile Queue Length [veh/ln]	7.36	0.90	0.18	1.74	6.10	2.90	11.60	1.44	0.53	22.78	0.54
95th-Percentile Queue Length [ft/ln]	184.10	22.54	4.48	43.48	152.48	72.60	290.04	36.12	13.22	569.57	13.60

Movement, Approach, & Intersection Results

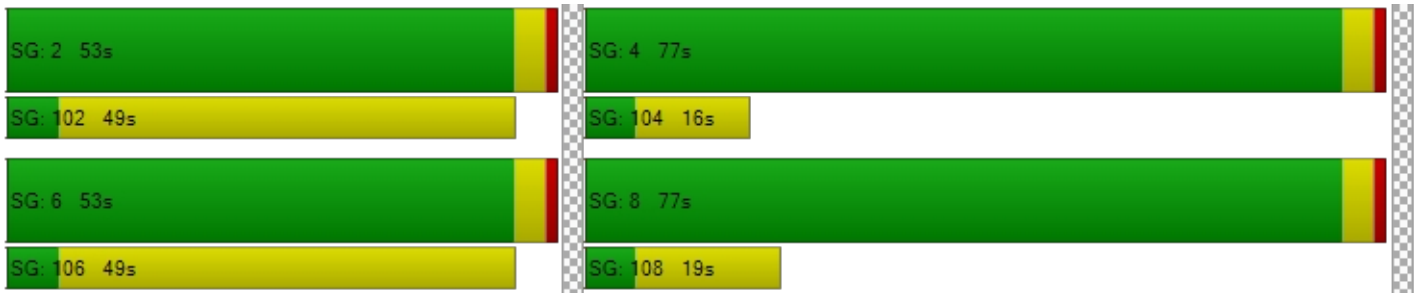
d_M, Delay for Movement [s/veh]	39.11	24.74	24.38	27.71	27.99	27.99	55.3	55.3	18.2	13.8	26.3	26.3	24.8	13.4
Movement LOS	D	C	C	C	C	C	E	E	B	B	C	C	C	B
d_A, Approach Delay [s/veh]	36.69			27.93			19.85				24.72			
Approach LOS	D			C			B				C			
d_I, Intersection Delay [s/veh]	24.03													
Intersection LOS	C													
Intersection V/C	0.582													

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]	56.31	56.31	56.31	56.31
l_p,int, Pedestrian LOS Score for Intersection	2.250	2.125	3.582	3.305
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]	754	754	1123	1123
d_b, Bicycle Delay [s]	25.23	25.23	12.50	12.50
l_b,int, Bicycle LOS Score for Intersection	1.855	1.881	2.318	2.777
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 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	15	3	41	8	6	1	1	48	5	21	83	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
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]	15	3	41	8	6	1	1	48	5	21	83	3
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8600	0.8600	0.8600	0.8800	0.8800	0.8800
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	1	12	2	2	0	0	14	1	6	24	1
Total Analysis Volume [veh/h]	18	4	48	9	7	1	1	56	6	24	94	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	10.25	10.64	8.92	10.44	10.44	8.88	7.41	0.00	0.00	7.37	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.25	0.08	0.08	0.08	0.00	0.00	0.00	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.34	6.34	6.34	1.89	1.89	1.89	0.05	0.00	0.00	1.19	0.00	0.00
d_A, Approach Delay [s/veh]	9.36			10.35			0.12			1.46		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	3.75											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	5	1	20	20	0	3	2	86	2	6	101	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]	5	1	20	20	0	3	2	86	2	6	101	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	6	6	0	1	1	25	1	2	30	2
Total Analysis Volume [veh/h]	6	1	24	24	0	4	2	101	2	7	119	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.27	10.68	8.93	10.54	10.72	9.09	7.47	0.00	0.00	7.43	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.11	0.12	0.12	0.12	0.00	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.74	2.74	2.74	3.10	3.10	3.10	0.10	0.00	0.00	0.35	0.00	0.00
d_A, Approach Delay [s/veh]	9.24			10.33			0.14			0.39		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	2.16											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	5.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.095

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	26	16	1	18	109	0	96	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	16	1	18	109	0	96	8
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	5	0	5	32	0	28	2
Total Analysis Volume [veh/h]	31	19	1	21	128	0	113	9
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	20	0	0	0	40	0	40	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No				No		No	
l1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
l2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	49	49	49	49
g / C, Green / Cycle	0.05	0.05	0.82	0.82	0.82	0.82
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.02	0.08	0.07	0.01
s, saturation flow rate [veh/h]	1603	1431	1142	1683	1683	1431
c, Capacity [veh/h]	78	70	995	1376	1436	1170
d1, Uniform Delay [s]	27.68	27.51	1.68	1.08	1.07	1.00
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.20	2.05	0.04	0.13	0.11	0.01
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	0.39	0.27	0.02	0.09	0.08	0.01
d, Delay for Lane Group [s/veh]	30.88	29.57	1.72	1.21	1.18	1.02
Lane Group LOS	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.47	0.29	0.03	0.05	0.04	0.00
50th-Percentile Queue Length [ft/ln]	11.83	7.14	0.77	1.28	1.07	0.10
95th-Percentile Queue Length [veh/ln]	0.85	0.51	0.06	0.09	0.08	0.01
95th-Percentile Queue Length [ft/ln]	21.29	12.85	1.38	2.31	1.92	0.17

Movement, Approach, & Intersection Results

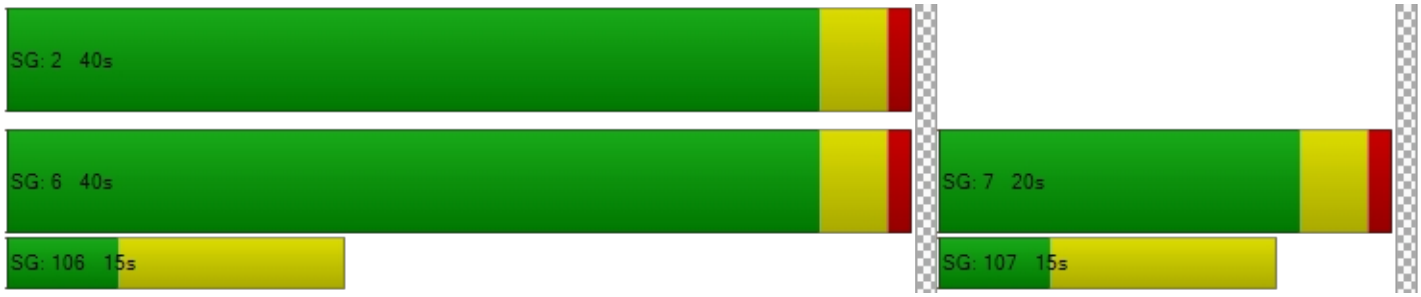
d_M, Delay for Movement [s/veh]	30.88	29.57	1.72	1.72	1.21	1.18	1.18	1.02
Movement LOS	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.38		1.29			1.16		
Approach LOS	C		A			A		
d_I, Intersection Delay [s/veh]	5.76							
Intersection LOS	A							
Intersection V/C	0.095							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	1.983	2.059	2.027
Crosswalk LOS	A	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]	533	1200	1200
d_b, Bicycle Delay [s]	16.14	4.81	4.81
l_b,int, Bicycle LOS Score for Intersection	1.560	1.772	1.761
Bicycle LOS	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.204

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Base Volume Input [veh/h]	56	186	8	7	17	295	19	26	32	78	20	29	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	0
Site-Generated Trips [veh/h]	0	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	0
Pass-by Trips [veh/h]	0	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	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	186	8	7	17	295	19	26	32	78	20	29	42
Peak Hour Factor	0.8700	0.8700	0.8700	0.85	0.85	0.85	0.85	0.8500	0.8500	0.8500	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	53	2	2	5	87	6	8	9	23	6	8	12
Total Analysis Volume [veh/h]	64	214	9	8	20	347	22	31	38	92	23	33	48
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	32	0	0	11	30	0	64	17	0	11	17	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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	0.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	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	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	11	11	17	10	10	0	35	35	35	35	35
g / C, Green / Cycle	0.09	0.19	0.19	0.29	0.17	0.17	0.00	0.58	0.58	0.58	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.04	0.07	0.01	0.02	0.11	0.02	0.02	0.02	0.06	0.02	0.01	0.03
s, saturation flow rate [veh/h]	1422	3204	1431	1170	3204	1431	1376	1683	1431	1134	3204	1431
c, Capacity [veh/h]	280	610	272	455	535	239	120	971	825	722	1848	825
d1, Uniform Delay [s]	15.80	21.13	19.84	15.52	23.41	21.20	30.08	5.51	5.76	6.74	5.44	5.57
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]	0.41	0.34	0.05	0.06	1.33	0.17	5.18	0.08	0.27	0.08	0.02	0.13
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	0.23	0.35	0.03	0.06	0.65	0.09	0.26	0.04	0.11	0.03	0.02	0.06
d, Delay for Lane Group [s/veh]	16.22	21.47	19.89	15.58	24.75	21.37	35.26	5.59	6.03	6.83	5.46	5.71
Lane Group LOS	B	C	B	B	C	C	D	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.62	1.22	0.10	0.26	2.20	0.25	0.30	0.17	0.45	0.13	0.07	0.24
50th-Percentile Queue Length [ft/ln]	15.39	30.55	2.45	6.42	55.00	6.31	7.53	4.33	11.24	3.30	1.85	5.94
95th-Percentile Queue Length [veh/ln]	1.11	2.20	0.18	0.46	3.96	0.45	0.54	0.31	0.81	0.24	0.13	0.43
95th-Percentile Queue Length [ft/ln]	27.71	55.00	4.41	11.55	99.00	11.35	13.56	7.80	20.23	5.94	3.33	10.69

Movement, Approach, & Intersection Results

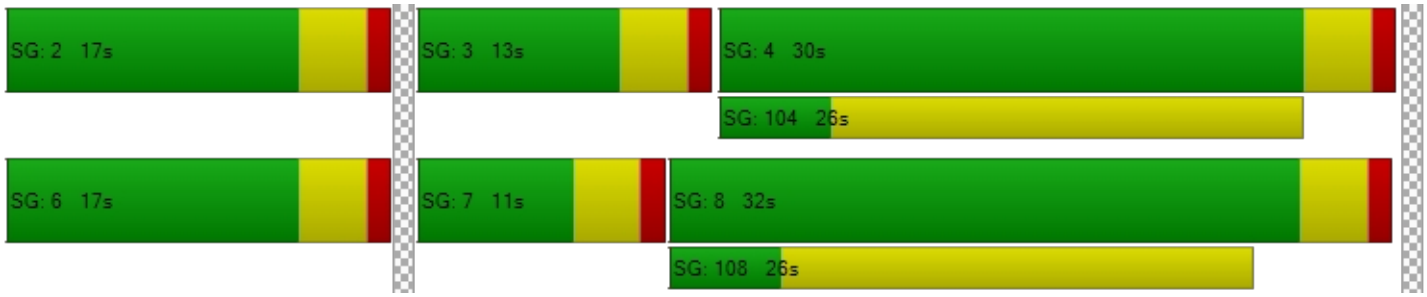
d_M, Delay for Movement [s/veh]	16.22	21.47	19.89	15.5	15.5	24.7	21.3	35.26	5.59	6.03	6.83	5.46	5.71
Movement LOS	B	C	B	B	B	C	C	D	A	A	A	A	A
d_A, Approach Delay [s/veh]	20.25			23.91				11.55			5.88		
Approach LOS	C			C				B			A		
d_I, Intersection Delay [s/veh]	18.73												
Intersection LOS	B												
Intersection V/C	0.204												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.489	2.323
Crosswalk LOS	F	F	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]	932	865	433	433
d_b, Bicycle Delay [s]	8.57	9.67	18.45	18.45
l_b,int, Bicycle LOS Score for Intersection	1.796	1.871	1.825	1.645
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Old Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	29.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name	Old Meridian Rd			Old Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	13.00	13.00	13.00	14.00	14.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.	100.	100.	50.0	400.00	100.00	100.00	550.00	100.00	550.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00
Speed [mph]	40.00			30.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			No				No			No		

Volumes

Name	Old Meridian Rd			Old Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	1	64	52	0	19	35	8	7	454	1	38	759	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	0
Site-Generated Trips [veh/h]	0	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	0
Pass-by Trips [veh/h]	0	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	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	64	52	0	19	35	8	7	454	1	38	759	23
Peak Hour Factor	0.8500	0.8500	0.8500	0.85	0.85	0.85	0.85	0.8800	0.8800	0.8800	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	19	15	0	6	10	2	2	129	0	10	206	6
Total Analysis Volume [veh/h]	1	75	61	0	22	41	9	8	516	1	41	825	25
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	0
Local Bus Stopping Rate [/h]	0	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	Split	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	14	0	0	0	14	0	9	32	0	20	43	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No				No		No	No		No	No	
Maximum Recall		No				No		No	No		No	No	
Pedestrian Recall		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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
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	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12	12	44	37	37	44	40	40
g / C, Green / Cycle	0.15	0.15	0.15	0.15	0.55	0.47	0.47	0.55	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.05	0.04	0.04	0.01	0.01	0.29	0.00	0.04	0.47	0.02
s, saturation flow rate [veh/h]	1682	1431	1654	1431	676	1750	1488	923	1750	1431
c, Capacity [veh/h]	249	212	245	212	225	816	694	442	864	706
d1, Uniform Delay [s]	30.46	30.38	30.23	29.27	16.69	16.18	11.42	10.65	19.44	10.46
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.29	0.11	0.11	0.37	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]	3.15	3.41	2.53	0.38	0.06	2.21	0.00	0.09	17.66	0.02
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	0.31	0.29	0.26	0.04	0.04	0.63	0.00	0.09	0.96	0.04
d, Delay for Lane Group [s/veh]	33.61	33.79	32.77	29.64	16.75	18.39	11.42	10.74	37.10	10.48
Lane Group LOS	C	C	C	C	B	B	B	B	D	B
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.46	1.19	1.22	0.17	0.05	6.24	0.01	0.26	15.54	0.19
50th-Percentile Queue Length [ft/ln]	36.50	29.87	30.60	4.19	1.28	156.04	0.20	6.47	388.46	4.71
95th-Percentile Queue Length [veh/ln]	2.63	2.15	2.20	0.30	0.09	10.34	0.01	0.47	22.00	0.34
95th-Percentile Queue Length [ft/ln]	65.71	53.77	55.08	7.54	2.31	258.48	0.36	11.65	550.08	8.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.61	33.61	33.79	32.7	32.7	32.7	29.6	16.75	18.39	11.42	10.74	37.10	10.48
Movement LOS	C	C	C	C	C	C	C	B	B	B	B	D	B
d_A, Approach Delay [s/veh]	33.69			32.38				18.35			35.14		
Approach LOS	C			C				B			D		
d_I, Intersection Delay [s/veh]	29.47												
Intersection LOS	C												
Intersection V/C	0.557												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	250	250	700	974
d_b, Bicycle Delay [s]	30.65	30.65	16.92	10.53
l_b,int, Bicycle LOS Score for Intersection	1.786	1.642	2.426	3.030
Bicycle LOS	A	A	B	C

Sequence

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

Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	34.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	390.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			Yes				No			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	4	150	52	1	0	88	306	67	382	0	28	744	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	0
Site-Generated Trips [veh/h]	0	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	0
Pass-by Trips [veh/h]	0	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	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	150	52	1	0	88	306	67	382	0	28	744	1
Peak Hour Factor	0.8500	0.8500	0.8500	0.85	0.93	0.93	0.93	0.8500	0.8500	0.8500	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	44	15	0	0	24	82	20	112	0	8	214	0
Total Analysis Volume [veh/h]	5	176	61	1	0	95	329	79	449	0	32	855	1
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	0
Local Bus Stopping Rate [/h]	0	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]	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	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	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	0	9	26	0	9	56	0	9	56	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	32	27	32	27	60	53	53	60	52	52
g / C, Green / Cycle	0.32	0.27	0.32	0.27	0.60	0.53	0.53	0.60	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.00	0.05	0.00	0.03	0.11	0.27	0.00	0.04	0.51	0.00
s, saturation flow rate [veh/h]	1207	3204	1122	3204	690	1683	1431	909	1683	1431
c, Capacity [veh/h]	469	882	423	866	228	898	764	498	873	742
d1, Uniform Delay [s]	23.43	27.79	23.42	27.45	22.34	14.82	0.00	9.76	23.52	11.58
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.45	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]	0.01	0.51	0.01	0.26	0.90	0.43	0.00	0.05	24.14	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
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	0.01	0.20	0.00	0.11	0.35	0.50	0.00	0.06	0.98	0.00
d, Delay for Lane Group [s/veh]	23.44	28.29	23.43	27.70	23.24	15.25	0.00	9.82	47.67	11.58
Lane Group LOS	C	C	C	C	C	B	A	A	D	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.08	1.65	0.02	0.87	0.64	5.57	0.00	0.24	22.07	0.01
50th-Percentile Queue Length [ft/ln]	2.02	41.21	0.43	21.79	15.94	139.14	0.00	5.89	551.71	0.24
95th-Percentile Queue Length [veh/ln]	0.15	2.97	0.03	1.57	1.15	9.43	0.00	0.42	29.77	0.02
95th-Percentile Queue Length [ft/ln]	3.64	74.18	0.77	39.22	28.69	235.86	0.00	10.59	744.32	0.43

Movement, Approach, & Intersection Results

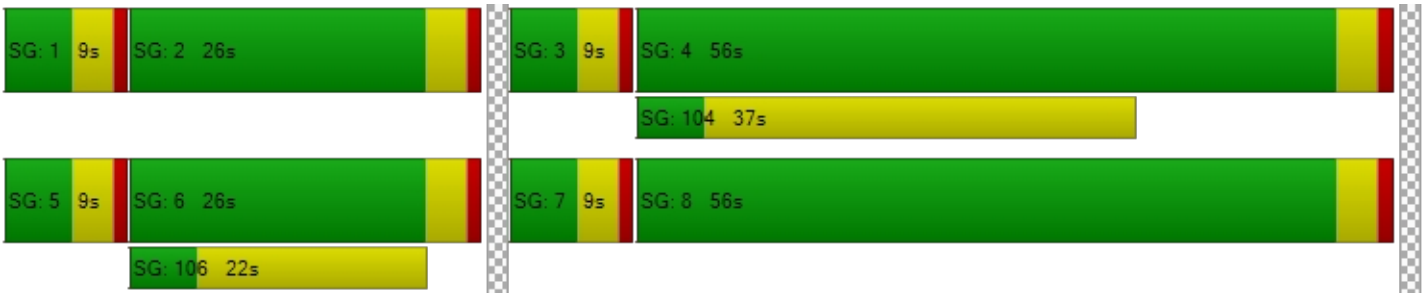
d_M, Delay for Movement [s/veh]	23.44	28.29	0.00	23.4	23.4	27.7	0.00	23.24	15.25	0.00	9.82	47.67	11.58
Movement LOS	C	C		C	C	C		C	B	A	A	D	B
d_A, Approach Delay [s/veh]	28.16			27.66				16.44			46.26		
Approach LOS	C			C				B			D		
d_I, Intersection Delay [s/veh]	33.97												
Intersection LOS	C												
Intersection V/C	0.586												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	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]	0.00	41.41	0.00	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.587	0.000	2.785
Crosswalk LOS	F	B	F	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]	440	440	1040	1040
d_b, Bicycle Delay [s]	30.42	30.42	11.52	11.52
l_b,int, Bicycle LOS Score for Intersection	1.709	1.639	2.431	3.025
Bicycle LOS	A	A	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	25.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.552

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	83	39	13	64	10	103	2	88	1455	106	1	11	1060	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	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	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	39	13	64	10	103	2	88	1455	106	1	11	1060	42
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.85	0.98	0.98	0.98	0.85	0.93	0.93	0.93
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	24	11	4	19	3	30	1	22	371	27	0	3	285	11
Total Analysis Volume [veh/h]	98	46	15	75	12	121	2	90	1485	108	1	12	1140	45
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	0	0
Local Bus Stopping Rate [/h]	0	0	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	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Signal Group	0	6	0	0	2	0	0	0	8	0	0	0	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	10	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	30	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	0	67	0	0	0	67	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No				No				No	
Maximum Recall		No			No				No				No	
Pedestrian Recall		No			No				No				No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	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
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	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
g_i, Effective Green Time [s]	49	49	49	49	49	63	63	63	63	63	63
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.41	0.52	0.52	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.09	0.03	0.01	0.06	0.09	0.22	0.46	0.08	0.05	0.36	0.03
s, saturation flow rate [veh/h]	1131	1683	1431	1207	1508	425	3204	1431	288	3204	1431
c, Capacity [veh/h]	443	691	587	517	619	161	1676	748	85	1676	748
d1, Uniform Delay [s]	28.69	21.43	21.06	24.67	22.86	44.54	25.43	14.76	52.27	21.18	14.09
k, delay calibration	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
d2, Incremental Delay [s]	1.15	0.19	0.08	0.59	0.79	3.18	1.75	0.09	0.82	0.49	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.07	0.03	0.15	0.21	0.57	0.89	0.14	0.15	0.68	0.06
d, Delay for Lane Group [s/veh]	29.84	21.61	21.14	25.26	23.65	47.71	27.18	14.85	53.09	21.67	14.12
Lane Group LOS	C	C	C	C	C	D	C	B	D	C	B
Critical Lane Group	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.17	0.82	0.26	1.51	2.58	2.66	16.86	1.41	0.38	10.63	0.56
50th-Percentile Queue Length [ft/ln]	54.24	20.43	6.59	37.71	64.49	66.38	421.44	35.17	9.47	265.82	13.98
95th-Percentile Queue Length [veh/ln]	3.91	1.47	0.47	2.71	4.64	4.78	23.59	2.53	0.68	15.98	1.01
95th-Percentile Queue Length [ft/ln]	97.64	36.77	11.86	67.87	116.08	119.49	589.77	63.31	17.04	399.51	25.17

Movement, Approach, & Intersection Results

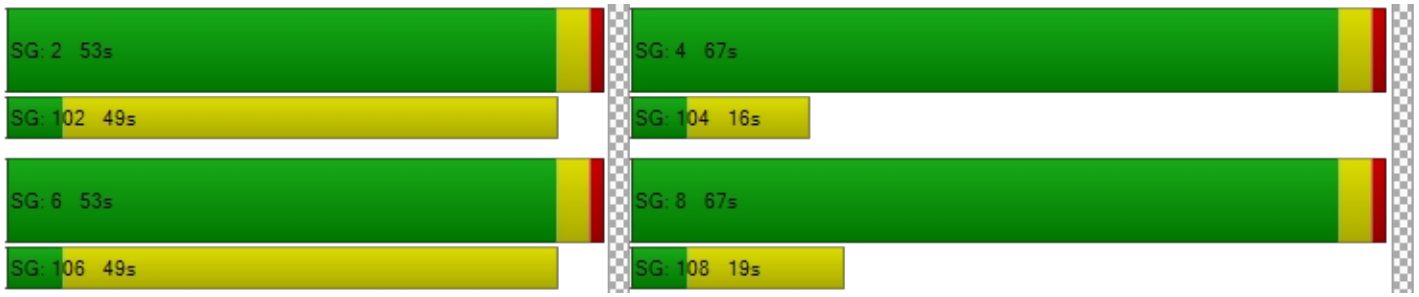
d_M, Delay for Movement [s/veh]	29.84	21.61	21.14	25.26	23.65	23.65	47.7	47.7	27.1	14.8	53.0	53.0	21.6	14.1
Movement LOS	C	C	C	C	C	C	D	D	C	B	D	D	C	B
d_A, Approach Delay [s/veh]	26.64			24.23			27.51				21.73			
Approach LOS	C			C			C				C			
d_I, Intersection Delay [s/veh]	25.13													
Intersection LOS	C													
Intersection V/C	0.552													

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]	51.31	51.31	51.31	51.31
l_p,int, Pedestrian LOS Score for Intersection	2.248	2.213	3.657	3.442
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]	817	817	1050	1050
d_b, Bicycle Delay [s]	20.98	20.98	13.52	13.52
l_b,int, Bicycle LOS Score for Intersection	1.822	1.903	2.875	2.547
Bicycle LOS	A	A	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	8	7	24	9	4	2	0	72	13	34	108	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
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]	8	7	24	9	4	2	0	72	13	34	108	6
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	7	3	1	1	0	21	4	10	32	2
Total Analysis Volume [veh/h]	9	8	28	11	5	2	0	85	15	40	127	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	11.01	11.37	9.01	11.23	11.30	9.09	7.48	0.00	0.00	7.48	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.18	0.18	0.18	0.09	0.09	0.09	0.00	0.00	0.00	0.08	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.52	4.52	4.52	2.25	2.25	2.25	0.00	0.00	0.00	2.06	0.00	0.00
d_A, Approach Delay [s/veh]	9.83			11.01			0.00			1.72		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	2.79											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	4	0	16	12	0	2	2	83	3	13	161	25
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]	4	0	16	12	0	2	2	83	3	13	161	25
Peak Hour Factor	0.8800	0.8800	0.8800	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	5	4	0	1	1	24	1	4	47	7
Total Analysis Volume [veh/h]	5	0	18	14	0	2	2	98	4	15	189	29
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	11.03	11.48	8.89	11.25	11.41	9.46	7.67	0.00	0.00	7.44	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.08	0.08	0.08	0.08	0.00	0.00	0.00	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.08	2.08	2.08	2.01	2.01	2.01	0.11	0.00	0.00	0.76	0.00	0.00
d_A, Approach Delay [s/veh]	9.35			11.02			0.15			0.48		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	1.38											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.160

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	63	35	0	21	91	1	162	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	35	0	21	91	1	162	27
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	10	0	6	27	0	48	8
Total Analysis Volume [veh/h]	74	41	0	25	107	1	191	32
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	20	0	0	0	40	0	40	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	48	48	48	48
g / C, Green / Cycle	0.07	0.07	0.79	0.79	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.05	0.03	0.02	0.06	0.11	0.02
s, saturation flow rate [veh/h]	1603	1431	1042	1683	1683	1431
c, Capacity [veh/h]	117	104	879	1336	1396	1136
d1, Uniform Delay [s]	27.05	26.57	2.27	1.36	1.44	1.30
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.59	2.40	0.06	0.12	0.21	0.05
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	0.63	0.39	0.03	0.08	0.14	0.03
d, Delay for Lane Group [s/veh]	32.64	28.97	2.33	1.48	1.64	1.35
Lane Group LOS	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.14	0.59	0.05	0.08	0.15	0.02
50th-Percentile Queue Length [ft/ln]	28.50	14.78	1.27	1.98	3.68	0.62
95th-Percentile Queue Length [veh/ln]	2.05	1.06	0.09	0.14	0.26	0.04
95th-Percentile Queue Length [ft/ln]	51.31	26.61	2.28	3.56	6.62	1.11

Movement, Approach, & Intersection Results

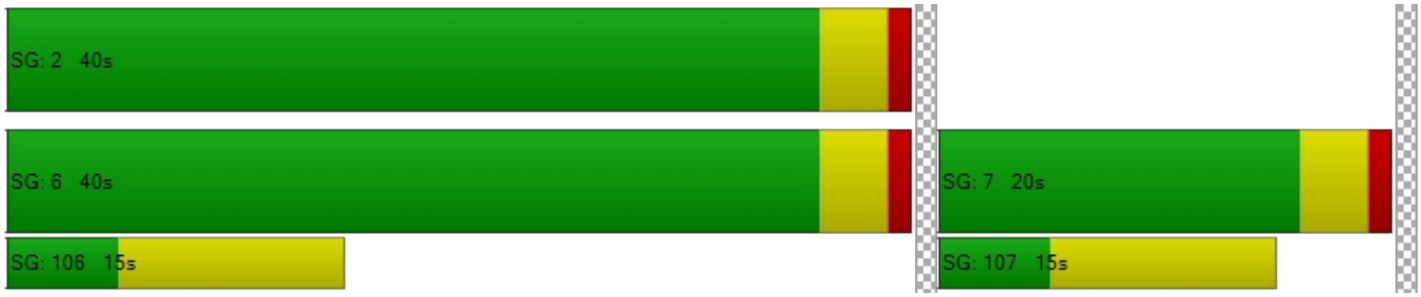
d_M, Delay for Movement [s/veh]	32.64	28.97	2.33	2.33	1.48	1.64	1.64	1.35
Movement LOS	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	31.33		1.64			1.60		
Approach LOS	C		A			A		
d_I, Intersection Delay [s/veh]	8.87							
Intersection LOS	A							
Intersection V/C	0.160							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.022	2.094	2.076
Crosswalk LOS	B	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]	533	1200	1200
d_b, Bicycle Delay [s]	16.14	4.81	4.81
l_b,int, Bicycle LOS Score for Intersection	1.560	1.736	1.929
Bicycle LOS	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.270

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	80	386	33	40	32	187	47	43	32	69	22	47	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	0
Site-Generated Trips [veh/h]	0	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	0
Pass-by Trips [veh/h]	0	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	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	386	33	40	32	187	47	43	32	69	22	47	98
Peak Hour Factor	0.8800	0.8800	0.8800	0.85	0.85	0.85	0.85	0.9000	0.9000	0.9000	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	110	9	12	9	55	14	12	9	19	6	13	27
Total Analysis Volume [veh/h]	91	439	38	47	38	220	55	48	36	77	24	52	108
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	31	0	0	12	30	0	11	18	0	9	16	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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]	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	2.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	21	12	12	21	12	12	3	36	36	42	34	34
g / C, Green / Cycle	0.29	0.18	0.18	0.29	0.18	0.18	0.04	0.51	0.51	0.59	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.08	0.14	0.03	0.08	0.07	0.04	0.02	0.02	0.05	0.02	0.02	0.08
s, saturation flow rate [veh/h]	1179	3204	1431	1057	3204	1431	3113	1683	1431	1195	3204	1431
c, Capacity [veh/h]	440	572	255	355	566	253	141	851	723	836	1566	699
d1, Uniform Delay [s]	18.63	27.47	24.35	19.07	25.57	24.77	32.52	8.78	9.08	5.97	9.33	9.93
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	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]	0.23	2.20	0.27	0.34	0.44	0.43	1.42	0.09	0.30	0.01	0.04	0.47
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	0.77	0.15	0.24	0.39	0.22	0.34	0.04	0.11	0.03	0.03	0.15
d, Delay for Lane Group [s/veh]	18.86	29.66	24.62	19.41	26.01	25.19	33.93	8.87	9.38	5.99	9.37	10.40
Lane Group LOS	B	C	C	B	C	C	C	A	A	A	A	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.06	3.46	0.52	0.99	1.56	0.77	0.41	0.26	0.59	0.13	0.19	0.91
50th-Percentile Queue Length [ft/ln]	26.40	86.45	13.07	24.76	39.08	19.26	10.14	6.51	14.67	3.16	4.86	22.81
95th-Percentile Queue Length [veh/ln]	1.90	6.22	0.94	1.78	2.81	1.39	0.73	0.47	1.06	0.23	0.35	1.64
95th-Percentile Queue Length [ft/ln]	47.52	155.60	23.53	44.56	70.35	34.67	18.26	11.72	26.40	5.68	8.75	41.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.86	29.66	24.62	19.4	19.4	26.0	25.1	33.93	8.87	9.38	5.99	9.37	10.40
Movement LOS	B	C	C	B	B	C	C	C	A	A	A	A	B
d_A, Approach Delay [s/veh]	27.59			24.32				16.58			9.53		
Approach LOS	C			C				B			A		
d_I, Intersection Delay [s/veh]	22.67												
Intersection LOS	C												
Intersection V/C	0.270												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.64	26.64
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.536	2.371
Crosswalk LOS	F	F	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]	770	741	399	342
d_b, Bicycle Delay [s]	13.26	13.88	22.46	24.09
l_b,int, Bicycle LOS Score for Intersection	2.028	1.825	1.825	1.711
Bicycle LOS	B	A	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 6: Old Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	25.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.585

Intersection Setup

Name	Old Meridian Rd			Old Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	13.00	13.00	13.00	14.00	14.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.	100.	100.	50.0	400.00	100.00	100.00	550.00	100.00	550.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00
Speed [mph]	40.00			30.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			No				No			No		

Volumes

Name	Old Meridian Rd			Old Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	1	117	107	1	35	60	9	16	652	2	89	526	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	0
Site-Generated Trips [veh/h]	0	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	0
Pass-by Trips [veh/h]	0	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	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	117	107	1	35	60	9	16	652	2	89	526	27
Peak Hour Factor	0.9000	0.9000	0.9000	0.85	0.96	0.96	0.96	0.9100	0.9100	0.9100	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	33	30	0	9	16	2	4	179	1	26	151	8
Total Analysis Volume [veh/h]	1	130	119	1	36	63	9	18	716	2	102	605	31
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	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	Split	Split	Split	Split	Split	Split	Split	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	6	0	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	23	0	0	0	14	0	9	14	0	9	14	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No				No		No	No		No	No	
Maximum Recall		No				No		No	No		No	No	
Pedestrian Recall		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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	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
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	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	7	7	35	26	26	35	29	29
g / C, Green / Cycle	0.11	0.11	0.11	0.11	0.57	0.44	0.44	0.57	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.06	0.01	0.02	0.41	0.00	0.12	0.35	0.02
s, saturation flow rate [veh/h]	1682	1431	1652	1431	831	1750	1488	861	1750	1431
c, Capacity [veh/h]	189	161	186	161	450	770	654	404	851	696
d1, Uniform Delay [s]	25.69	25.84	25.22	23.84	7.81	15.97	9.45	11.10	12.13	8.11
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.32	0.11	0.11	0.23	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]	18.88	26.06	10.75	0.66	0.04	13.77	0.00	0.32	2.30	0.03
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	0.69	0.74	0.54	0.06	0.04	0.93	0.00	0.25	0.71	0.04
d, Delay for Lane Group [s/veh]	44.57	51.90	35.96	24.51	7.84	29.74	9.45	11.42	14.43	8.14
Lane Group LOS	D	D	D	C	A	C	A	B	B	A
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.62	2.65	1.82	0.14	0.06	9.41	0.01	0.37	4.76	0.15
50th-Percentile Queue Length [ft/ln]	65.52	66.31	45.58	3.44	1.51	235.31	0.28	9.27	119.04	3.74
95th-Percentile Queue Length [veh/ln]	4.72	4.77	3.28	0.25	0.11	14.44	0.02	0.67	8.34	0.27
95th-Percentile Queue Length [ft/ln]	117.93	119.35	82.04	6.19	2.72	361.10	0.50	16.69	208.50	6.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.57	44.57	51.90	35.9	35.9	35.9	24.5	7.84	29.74	9.45	11.42	14.43	8.14
Movement LOS	D	D	D	D	D	D	C	A	C	A	B	B	A
d_A, Approach Delay [s/veh]	48.06			35.02				29.15			13.75		
Approach LOS	D			D				C			B		
d_I, Intersection Delay [s/veh]	25.88												
Intersection LOS	C												
Intersection V/C	0.585												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
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]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	633	333	333	333
d_b, Bicycle Delay [s]	14.04	20.87	20.87	20.87
l_b,int, Bicycle LOS Score for Intersection	1.972	1.680	2.774	2.777
Bicycle LOS	A	A	C	C

Sequence

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

Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	34.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.611

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	390.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			Yes				No			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	1	222	68	0	1	199	144	277	768	1	95	496	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	0
Site-Generated Trips [veh/h]	0	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	0
Pass-by Trips [veh/h]	0	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	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	222	68	0	1	199	144	277	768	1	95	496	2
Peak Hour Factor	0.9800	0.9800	0.9800	0.85	0.85	0.85	0.85	0.9000	0.9000	0.9000	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	57	17	0	0	59	42	77	213	0	27	141	1
Total Analysis Volume [veh/h]	1	227	69	0	1	234	169	308	853	1	108	564	2
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	0
Local Bus Stopping Rate [/h]	0	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]	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	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	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	0	9	26	0	24	56	0	9	41	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	27	31	27	61	52	52	61	45	45
g / C, Green / Cycle	0.31	0.27	0.31	0.27	0.61	0.52	0.52	0.61	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.00	0.07	0.00	0.07	0.32	0.51	0.00	0.16	0.34	0.00
s, saturation flow rate [veh/h]	1070	3204	1077	3204	954	1683	1431	695	1683	1431
c, Capacity [veh/h]	383	874	387	874	464	872	741	236	751	639
d1, Uniform Delay [s]	23.69	28.47	23.68	28.54	16.51	23.52	11.61	22.38	23.05	15.35
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.45	0.11	0.11	0.28	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]	0.00	0.72	0.01	0.75	7.30	23.99	0.00	1.38	3.85	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
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	0.00	0.26	0.00	0.27	0.66	0.98	0.00	0.46	0.75	0.00
d, Delay for Lane Group [s/veh]	23.70	29.19	23.70	29.29	23.81	47.51	11.61	23.76	26.90	15.35
Lane Group LOS	C	C	C	C	C	D	B	C	C	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.02	2.18	0.02	2.25	3.58	22.00	0.01	0.89	10.43	0.02
50th-Percentile Queue Length [ft/ln]	0.41	54.39	0.43	56.22	89.53	549.96	0.24	22.32	260.64	0.58
95th-Percentile Queue Length [veh/ln]	0.03	3.92	0.03	4.05	6.45	29.69	0.02	1.61	15.72	0.04
95th-Percentile Queue Length [ft/ln]	0.73	97.90	0.78	101.19	161.15	742.26	0.43	40.17	393.03	1.04

Movement, Approach, & Intersection Results

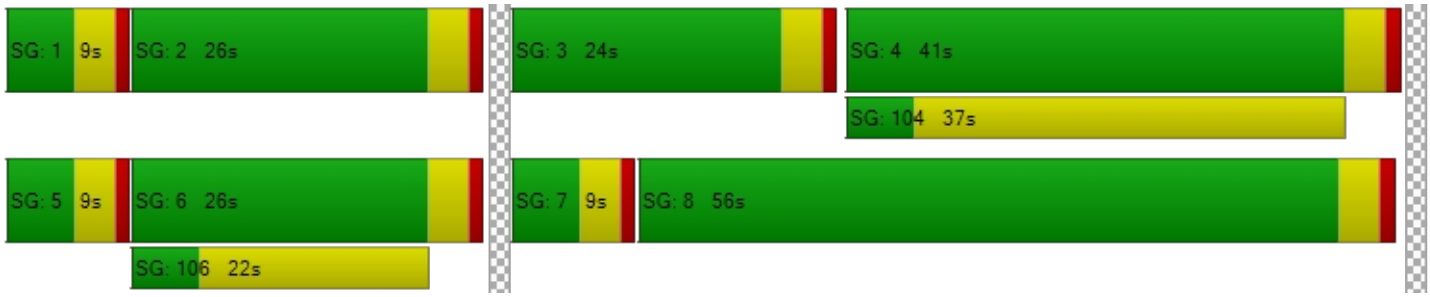
d_M, Delay for Movement [s/veh]	23.70	29.19	0.00	23.7	23.7	29.2	0.00	23.81	47.51	11.61	23.76	26.90	15.35
Movement LOS	C	C		C	C	C		C	D	B	C	C	B
d_A, Approach Delay [s/veh]	29.17			29.26				41.20			26.37		
Approach LOS	C			C				D			C		
d_I, Intersection Delay [s/veh]	34.44												
Intersection LOS	C												
Intersection V/C	0.611												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	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]	0.00	41.41	0.00	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.811	0.000	2.853
Crosswalk LOS	F	C	F	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]	440	440	1040	740
d_b, Bicycle Delay [s]	30.42	30.42	11.52	19.85
l_b,int, Bicycle LOS Score for Intersection	1.748	1.753	3.477	2.672
Bicycle LOS	A	A	C	B

Sequence

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



Appendix D

Full Build-Out (2025) LOS Reports

Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	127	21	4	37	17	111	1	42	728	53	0	13	1279	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
In-Process Volume [veh/h]	0	0	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	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	24	5	42	19	125	1	47	819	60	0	15	1440	24
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.85	0.85	0.85	0.85	0.85	0.89	0.89	0.89
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	42	7	1	12	6	37	0	14	241	18	0	4	404	7
Total Analysis Volume [veh/h]	168	28	6	49	22	147	1	55	964	71	0	17	1618	27
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	150
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	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Signal Group	0	6	0	0	2	0	0	0	8	0	0	0	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	10	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	30	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	0	97	0	0	0	97	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No				No				No	
Maximum Recall		No			No				No				No	
Pedestrian Recall		No			No				No				No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	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
g_i, Effective Green Time [s]	49	49	49	49	49	93	93	93	93	93	93
g / C, Green / Cycle	0.33	0.33	0.33	0.33	0.33	0.62	0.62	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.15	0.02	0.00	0.04	0.11	0.20	0.30	0.05	0.03	0.50	0.02
s, saturation flow rate [veh/h]	1094	1683	1431	1237	1517	274	3204	1431	490	3204	1431
c, Capacity [veh/h]	302	551	468	425	497	106	1985	886	263	1985	886
d1, Uniform Delay [s]	52.24	34.51	34.08	37.76	38.19	58.59	15.55	11.44	24.50	21.95	11.08
k, delay calibration	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
d2, Incremental Delay [s]	7.21	0.17	0.05	0.55	1.86	4.04	0.18	0.04	0.10	0.86	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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.05	0.01	0.12	0.34	0.53	0.49	0.08	0.06	0.82	0.03
d, Delay for Lane Group [s/veh]	59.44	34.68	34.13	38.31	40.04	62.62	15.73	11.47	24.60	22.81	11.09
Lane Group LOS	E	C	C	D	D	E	B	B	C	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.34	0.74	0.16	1.40	5.04	2.15	8.20	0.89	0.35	19.56	0.33
50th-Percentile Queue Length [ft/ln]	158.49	18.42	3.92	34.92	126.02	53.68	205.11	22.32	8.71	489.06	8.22
95th-Percentile Queue Length [veh/ln]	10.47	1.33	0.28	2.51	8.72	3.86	12.90	1.61	0.63	26.82	0.59
95th-Percentile Queue Length [ft/ln]	261.73	33.15	7.05	62.86	218.07	96.62	322.54	40.18	15.68	670.39	14.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.44	34.68	34.13	38.31	40.04	40.04	62.6	62.6	15.7	11.4	24.6	24.6	22.8	11.0
Movement LOS	E	C	C	D	D	D	E	E	B	B	C	C	C	B
d_A, Approach Delay [s/veh]	55.26			39.65			17.86				22.64			
Approach LOS	E			D			B				C			
d_I, Intersection Delay [s/veh]	24.24													
Intersection LOS	C													
Intersection V/C	0.658													

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]	66.27	66.27	66.27	66.27
l_p,int, Pedestrian LOS Score for Intersection	2.269	2.152	3.710	3.398
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]	653	653	1240	1240
d_b, Bicycle Delay [s]	34.00	34.00	10.83	10.83
l_b,int, Bicycle LOS Score for Intersection	1.893	1.919	2.414	2.931
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 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	15	3	41	8	6	1	1	48	5	21	83	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
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]	17	3	46	9	7	1	1	54	6	24	93	3
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8600	0.8600	0.8600	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	1	14	3	2	0	0	16	2	7	26	1
Total Analysis Volume [veh/h]	20	4	54	11	8	1	1	63	7	27	106	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	10.52	10.88	9.01	10.76	10.67	8.97	7.43	0.00	0.00	7.39	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.29	0.29	0.29	0.09	0.09	0.09	0.00	0.00	0.00	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	7.28	7.28	7.28	2.34	2.34	2.34	0.05	0.00	0.00	1.35	0.00	0.00
d_A, Approach Delay [s/veh]	9.49			10.63			0.10			1.47		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	3.80											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	5	1	20	20	0	3	2	86	2	6	101	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	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	1	23	23	0	3	2	97	2	7	114	8
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	7	7	0	1	1	29	1	2	34	2
Total Analysis Volume [veh/h]	7	1	27	27	0	4	2	114	2	8	134	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	10.55	10.93	9.02	10.88	10.99	9.22	7.50	0.00	0.00	7.46	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.15	0.15	0.15	0.00	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.19	3.19	3.19	3.65	3.65	3.65	0.10	0.00	0.00	0.41	0.00	0.00
d_A, Approach Delay [s/veh]	9.38			10.66			0.13			0.40		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	2.19											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	5.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.107

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	26	16	1	18	109	0	96	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	18	1	20	123	0	108	9
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	5	0	6	36	0	32	3
Total Analysis Volume [veh/h]	34	21	1	24	145	0	127	11
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	20	0	0	0	40	0	40	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	49	49	49	49
g / C, Green / Cycle	0.05	0.05	0.82	0.82	0.82	0.82
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.02	0.09	0.08	0.01
s, saturation flow rate [veh/h]	1603	1431	1126	1683	1683	1431
c, Capacity [veh/h]	83	74	976	1371	1431	1166
d1, Uniform Delay [s]	27.57	27.39	1.76	1.13	1.11	1.04
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.20	2.06	0.05	0.16	0.12	0.01
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	0.41	0.28	0.03	0.11	0.09	0.01
d, Delay for Lane Group [s/veh]	30.77	29.44	1.81	1.28	1.23	1.05
Lane Group LOS	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.52	0.31	0.04	0.06	0.05	0.00
50th-Percentile Queue Length [ft/ln]	12.89	7.83	0.91	1.48	1.22	0.12
95th-Percentile Queue Length [veh/ln]	0.93	0.56	0.07	0.11	0.09	0.01
95th-Percentile Queue Length [ft/ln]	23.19	14.10	1.63	2.66	2.19	0.21

Movement, Approach, & Intersection Results

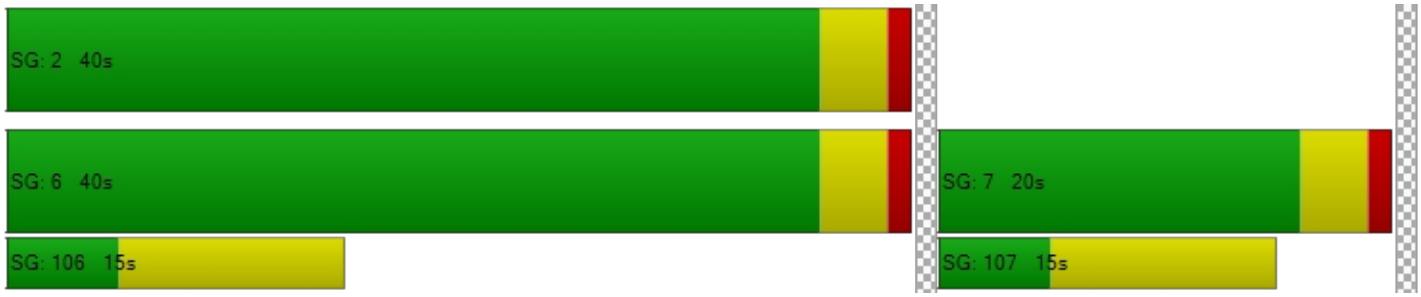
d_M, Delay for Movement [s/veh]	30.77	29.44	1.81	1.81	1.28	1.23	1.23	1.05
Movement LOS	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.26		1.36			1.22		
Approach LOS	C		A			A		
d_I, Intersection Delay [s/veh]	5.69							
Intersection LOS	A							
Intersection V/C	0.107							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	1.991	2.077	2.041
Crosswalk LOS	A	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]	533	1200	1200
d_b, Bicycle Delay [s]	16.14	4.81	4.81
l_b,int, Bicycle LOS Score for Intersection	1.560	1.801	1.787
Bicycle LOS	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.230

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Base Volume Input [veh/h]	56	186	8	7	17	295	19	26	32	78	20	29	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	209	9	8	19	332	21	29	36	88	23	33	47
Peak Hour Factor	0.8700	0.8700	0.8700	0.85	0.85	0.85	0.85	0.8500	0.8500	0.8500	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	60	3	2	6	98	6	9	11	26	7	9	13
Total Analysis Volume [veh/h]	72	240	10	9	22	391	25	34	42	104	26	38	53
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	36	0	0	10	30	0	51	14	0	10	14	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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	0.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	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	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	12	12	18	10	10	0	34	34	34	34	34
g / C, Green / Cycle	0.09	0.19	0.19	0.29	0.17	0.17	0.00	0.57	0.57	0.57	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.05	0.07	0.01	0.03	0.12	0.02	0.03	0.02	0.07	0.02	0.01	0.04
s, saturation flow rate [veh/h]	1412	3204	1431	1154	3204	1431	1277	1683	1431	1118	3204	1431
c, Capacity [veh/h]	284	616	275	451	537	240	120	963	819	705	1835	819
d1, Uniform Delay [s]	15.69	21.22	19.77	15.38	23.73	21.21	30.08	5.64	5.93	6.97	5.56	5.71
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]	0.47	0.40	0.05	0.06	1.90	0.19	5.86	0.09	0.32	0.10	0.02	0.15
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	0.39	0.04	0.07	0.73	0.10	0.28	0.04	0.13	0.04	0.02	0.06
d, Delay for Lane Group [s/veh]	16.16	21.62	19.82	15.44	25.64	21.40	35.94	5.72	6.25	7.07	5.58	5.86
Lane Group LOS	B	C	B	B	C	C	D	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.69	1.38	0.11	0.28	2.54	0.29	0.33	0.20	0.52	0.15	0.09	0.27
50th-Percentile Queue Length [ft/ln]	17.29	34.52	2.72	7.07	63.61	7.18	8.36	4.88	13.04	3.83	2.16	6.68
95th-Percentile Queue Length [veh/ln]	1.25	2.49	0.20	0.51	4.58	0.52	0.60	0.35	0.94	0.28	0.16	0.48
95th-Percentile Queue Length [ft/ln]	31.13	62.14	4.89	12.72	114.51	12.92	15.06	8.78	23.47	6.89	3.90	12.03

Movement, Approach, & Intersection Results

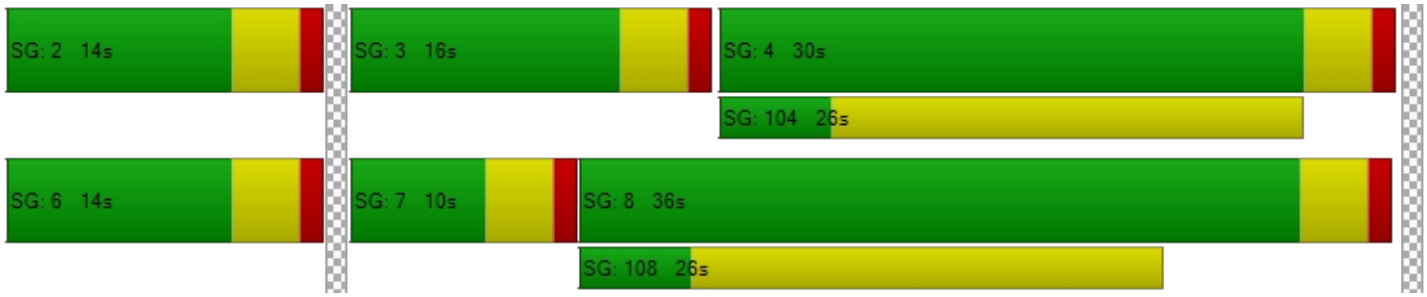
d_M, Delay for Movement [s/veh]	16.16	21.62	19.82	15.4	15.4	25.6	21.4	35.94	5.72	6.25	7.07	5.58	5.86
Movement LOS	B	C	B	B	B	C	C	D	A	A	A	A	A
d_A, Approach Delay [s/veh]	20.34			24.69				11.74			6.04		
Approach LOS	C			C				B			A		
d_I, Intersection Delay [s/veh]	19.14												
Intersection LOS	B												
Intersection V/C	0.230												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.496	2.328
Crosswalk LOS	F	F	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]	1065	865	333	333
d_b, Bicycle Delay [s]	6.56	9.67	20.87	20.87
l_b,int, Bicycle LOS Score for Intersection	1.825	1.910	1.857	1.656
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	35.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	800.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			Yes				No			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	5	214	52	1	19	123	306	74	382	0	66	744	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	241	59	1	21	138	344	83	430	0	74	837	1
Peak Hour Factor	0.8500	0.8500	0.8500	0.85	0.93	0.93	0.93	0.8500	0.8500	0.8500	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	71	17	0	6	37	92	24	126	0	21	241	0
Total Analysis Volume [veh/h]	7	284	69	1	23	148	370	98	506	0	85	962	1
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	26	0	0	9	16	0	9	69	0	16	76	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	33	26	33	28	79	70	70	79	70	70
g / C, Green / Cycle	0.28	0.22	0.28	0.23	0.66	0.58	0.58	0.66	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.01	0.09	0.02	0.05	0.16	0.30	0.00	0.10	0.57	0.00
s, saturation flow rate [veh/h]	1160	3204	1074	3204	618	1683	1431	872	1683	1431
c, Capacity [veh/h]	376	706	318	752	196	983	836	503	981	834
d1, Uniform Delay [s]	31.58	40.01	32.14	36.84	28.73	14.84	0.00	9.99	24.34	10.43
k, delay calibration	0.11	0.50	0.50	0.50	0.18	0.11	0.11	0.11	0.44	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]	0.02	1.70	0.46	0.59	3.29	0.42	0.00	0.16	22.64	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
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	0.02	0.40	0.08	0.20	0.50	0.51	0.00	0.17	0.98	0.00
d, Delay for Lane Group [s/veh]	31.60	41.71	32.60	37.43	32.02	15.26	0.00	10.14	46.98	10.44
Lane Group LOS	C	D	C	D	C	B	A	B	D	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.15	3.73	0.55	1.80	0.95	7.24	0.00	0.69	28.34	0.01
50th-Percentile Queue Length [ft/ln]	3.74	93.28	13.81	44.98	23.85	180.89	0.00	17.21	708.53	0.25
95th-Percentile Queue Length [veh/ln]	0.27	6.72	0.99	3.24	1.72	11.65	0.00	1.24	37.07	0.02
95th-Percentile Queue Length [ft/ln]	6.74	167.91	24.86	80.96	42.94	291.18	0.00	30.97	926.80	0.45

Movement, Approach, & Intersection Results

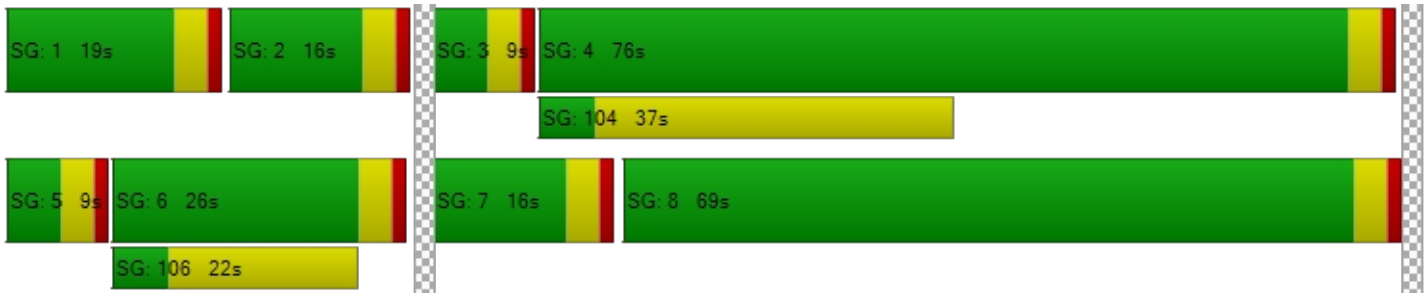
d_M, Delay for Movement [s/veh]	31.60	41.71	0.00	32.6	32.6	37.4	0.00	32.02	15.26	0.00	10.14	46.98	10.44
Movement LOS	C	D		C	C	D		C	B	A	B	D	B
d_A, Approach Delay [s/veh]	41.47			36.75				17.98			43.96		
Approach LOS	D			D				B			D		
d_I, Intersection Delay [s/veh]	35.61												
Intersection LOS	D												
Intersection V/C	0.696												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	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]	0.00	51.34	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.665	0.000	2.887
Crosswalk LOS	F	B	F	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]	367	200	1083	1200
d_b, Bicycle Delay [s]	40.02	48.60	12.60	9.60
l_b,int, Bicycle LOS Score for Intersection	1.800	1.683	2.556	3.289
Bicycle LOS	A	A	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.620

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	83	39	13	64	10	103	2	88	1455	106	1	11	1060	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
In-Process Volume [veh/h]	0	0	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	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	44	15	72	11	116	2	99	1638	119	1	12	1193	47
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.85	0.98	0.98	0.98	0.85	0.93	0.93	0.93
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	27	13	4	21	3	34	1	25	418	30	0	3	321	13
Total Analysis Volume [veh/h]	109	52	18	85	13	136	2	101	1671	121	1	13	1283	51
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	140
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	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Signal Group	0	6	0	0	2	0	0	0	8	0	0	0	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	10	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	30	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	0	87	0	0	0	87	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No				No				No	
Maximum Recall		No			No				No				No	
Pedestrian Recall		No			No				No				No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	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
g_i, Effective Green Time [s]	49	49	49	49	49	83	83	83	83	83	83
g / C, Green / Cycle	0.35	0.35	0.35	0.35	0.35	0.59	0.59	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.10	0.03	0.01	0.07	0.10	0.28	0.52	0.08	0.06	0.40	0.04
s, saturation flow rate [veh/h]	1114	1683	1431	1197	1507	369	3204	1431	237	3204	1431
c, Capacity [veh/h]	352	592	503	434	530	160	1894	846	80	1894	846
d1, Uniform Delay [s]	41.34	30.33	29.76	34.88	32.61	48.18	24.43	12.77	57.42	19.50	12.12
k, delay calibration	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
d2, Incremental Delay [s]	2.28	0.29	0.13	1.01	1.32	4.23	1.50	0.08	1.02	0.43	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.09	0.04	0.20	0.28	0.64	0.88	0.14	0.17	0.68	0.06
d, Delay for Lane Group [s/veh]	43.61	30.62	29.90	35.89	33.94	52.41	25.93	12.85	58.44	19.93	12.15
Lane Group LOS	D	C	C	D	C	D	C	B	E	B	B
Critical Lane Group	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	3.28	1.23	0.42	2.28	3.89	3.53	21.11	1.59	0.47	12.81	0.63
50th-Percentile Queue Length [ft/ln]	81.92	30.84	10.53	56.98	97.13	88.15	527.77	39.66	11.78	320.20	15.86
95th-Percentile Queue Length [veh/ln]	5.90	2.22	0.76	4.10	6.99	6.35	28.65	2.86	0.85	18.68	1.14
95th-Percentile Queue Length [ft/ln]	147.45	55.51	18.96	102.56	174.83	158.66	716.16	71.39	21.20	466.93	28.55

Movement, Approach, & Intersection Results

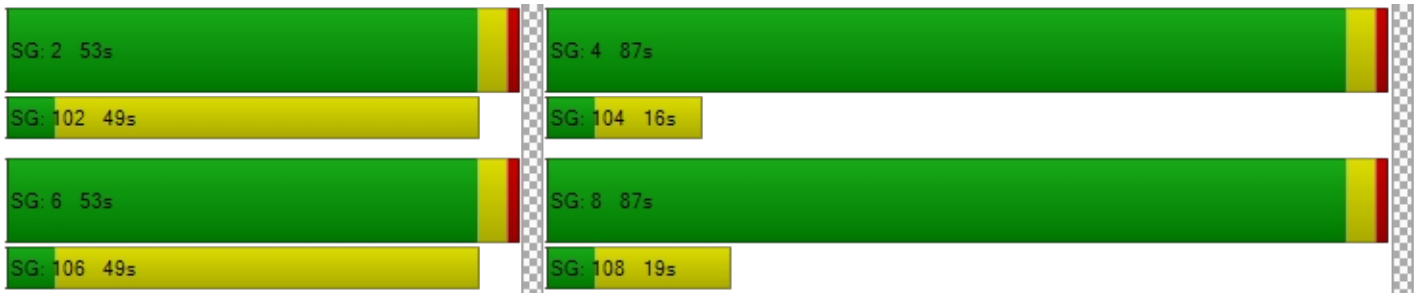
d_M, Delay for Movement [s/veh]	43.61	30.62	29.90	35.89	33.94	33.94	52.4	52.4	25.9	12.8	58.4	58.4	19.9	12.1
Movement LOS	D	C	C	D	C	C	D	D	C	B	E	E	B	B
d_A, Approach Delay [s/veh]	38.46			34.65			26.53				20.04			
Approach LOS	D			C			C				C			
d_I, Intersection Delay [s/veh]	25.24													
Intersection LOS	C													
Intersection V/C	0.620													

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]	61.25	61.25	61.25	61.25
l_p,int, Pedestrian LOS Score for Intersection	2.266	2.251	3.792	3.554
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]	700	700	1186	1186
d_b, Bicycle Delay [s]	29.54	29.54	11.58	11.58
l_b,int, Bicycle LOS Score for Intersection	1.855	1.946	3.040	2.671
Bicycle LOS	A	A	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	8	7	24	9	4	2	0	72	13	34	108	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
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
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]	9	8	27	10	5	2	0	81	15	38	122	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	8	3	1	1	0	24	4	11	36	2
Total Analysis Volume [veh/h]	11	9	32	12	6	2	0	95	18	45	144	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.02	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	11.47	11.78	9.13	11.73	11.70	9.23	7.52	0.00	0.00	7.51	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.22	0.22	0.11	0.11	0.11	0.00	0.00	0.00	0.09	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.50	5.50	5.50	2.69	2.69	2.69	0.00	0.00	0.00	2.36	0.00	0.00
d_A, Approach Delay [s/veh]	10.09			11.47			0.00			1.72		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	2.86											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	11.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	4	0	16	12	0	2	2	83	3	13	161	25
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	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
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]	5	0	18	14	0	2	2	93	3	15	181	28
Peak Hour Factor	0.8800	0.8800	0.8800	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	5	4	0	1	1	27	1	4	53	8
Total Analysis Volume [veh/h]	6	0	20	16	0	2	2	109	4	18	213	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	11.47	11.90	8.96	11.74	11.83	9.65	7.73	0.00	0.00	7.47	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.46	2.46	2.46	2.44	2.44	2.44	0.11	0.00	0.00	0.93	0.00	0.00
d_A, Approach Delay [s/veh]	9.54			11.51			0.13			0.51		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	1.43											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.180

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	63	35	0	21	91	1	162	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	39	0	24	102	1	182	30
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	11	0	7	30	0	54	9
Total Analysis Volume [veh/h]	84	46	0	28	120	1	214	35
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	41	0	0	0	19	0	19	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No				No		No	
l1, Start-Up Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
l2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	47	47	47	47
g / C, Green / Cycle	0.08	0.08	0.79	0.79	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.05	0.03	0.03	0.07	0.13	0.02
s, saturation flow rate [veh/h]	1603	1431	1017	1683	1683	1431
c, Capacity [veh/h]	131	117	840	1322	1381	1123
d1, Uniform Delay [s]	26.73	26.17	2.64	1.49	1.59	1.42
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.18	2.15	0.07	0.14	0.24	0.05
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	0.64	0.39	0.03	0.09	0.16	0.03
d, Delay for Lane Group [s/veh]	31.91	28.32	2.71	1.63	1.83	1.47
Lane Group LOS	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.27	0.65	0.07	0.11	0.20	0.03
50th-Percentile Queue Length [ft/ln]	31.80	16.27	1.69	2.70	5.07	0.80
95th-Percentile Queue Length [veh/ln]	2.29	1.17	0.12	0.19	0.36	0.06
95th-Percentile Queue Length [ft/ln]	57.24	29.29	3.04	4.85	9.12	1.45

Movement, Approach, & Intersection Results

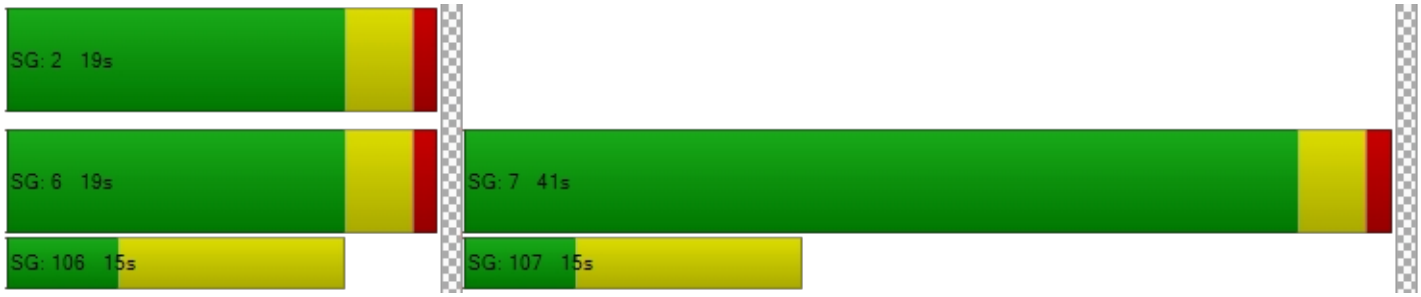
d_M, Delay for Movement [s/veh]	31.91	28.32	2.71	2.71	1.63	1.83	1.83	1.47
Movement LOS	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.64		1.83			1.78		
Approach LOS	C		A			A		
d_I, Intersection Delay [s/veh]	8.90							
Intersection LOS	A							
Intersection V/C	0.180							

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]	21.69	21.69	21.69
l_p,int, Pedestrian LOS Score for Intersection	2.034	2.115	2.094
Crosswalk LOS	B	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]	1233	500	500
d_b, Bicycle Delay [s]	4.42	16.89	16.89
l_b,int, Bicycle LOS Score for Intersection	1.560	1.758	1.972
Bicycle LOS	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.301

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	80	386	33	40	32	187	47	43	32	69	22	47	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	434	37	45	36	210	53	48	36	78	25	53	110
Peak Hour Factor	0.8800	0.8800	0.8800	0.85	0.85	0.85	0.85	0.9000	0.9000	0.9000	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	123	11	13	11	62	16	13	10	22	7	15	30
Total Analysis Volume [veh/h]	102	493	42	53	42	247	62	53	40	87	27	58	121
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	0	11	32	0	15	20	0	9	14	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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]	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	2.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	22	14	14	22	13	13	3	34	34	40	33	33
g / C, Green / Cycle	0.31	0.20	0.20	0.31	0.19	0.19	0.05	0.48	0.48	0.57	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.09	0.15	0.03	0.09	0.08	0.04	0.02	0.02	0.06	0.02	0.02	0.08
s, saturation flow rate [veh/h]	1156	3204	1431	1019	3204	1431	3113	1683	1431	1186	3204	1431
c, Capacity [veh/h]	452	629	281	357	616	275	149	811	690	804	1491	666
d1, Uniform Delay [s]	17.72	26.82	23.38	18.31	24.83	23.95	32.40	9.65	10.03	6.61	10.23	10.97
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	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]	0.25	2.20	0.24	0.39	0.42	0.41	1.43	0.12	0.38	0.02	0.05	0.60
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	0.23	0.78	0.15	0.27	0.40	0.23	0.36	0.05	0.13	0.03	0.04	0.18
d, Delay for Lane Group [s/veh]	17.97	29.02	23.63	18.70	25.25	24.36	33.83	9.77	10.41	6.63	10.27	11.57
Lane Group LOS	B	C	C	B	C	C	C	A	B	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.15	3.85	0.56	1.07	1.73	0.85	0.45	0.31	0.71	0.15	0.23	1.10
50th-Percentile Queue Length [ft/ln]	28.69	96.29	14.07	26.85	43.19	21.26	11.16	7.75	17.86	3.84	5.78	27.51
95th-Percentile Queue Length [veh/ln]	2.07	6.93	1.01	1.93	3.11	1.53	0.80	0.56	1.29	0.28	0.42	1.98
95th-Percentile Queue Length [ft/ln]	51.65	173.33	25.32	48.33	77.74	38.28	20.08	13.95	32.15	6.92	10.40	49.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.97	29.02	23.63	18.7	18.7	25.2	24.3	33.83	9.77	10.41	6.63	10.27	11.57
Movement LOS	B	C	C	B	B	C	C	C	A	B	A	B	B
d_A, Approach Delay [s/veh]	26.89			23.57				17.16			10.56		
Approach LOS	C			C				B			B		
d_I, Intersection Delay [s/veh]	22.37												
Intersection LOS	C												
Intersection V/C	0.301												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.64	26.64
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.550	2.383
Crosswalk LOS	F	F	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]	741	799	456	285
d_b, Bicycle Delay [s]	13.88	12.65	20.89	25.78
l_b,int, Bicycle LOS Score for Intersection	2.085	1.858	1.857	1.730
Bicycle LOS	B	A	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 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	39.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.773

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	800.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			Yes				No			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	2	339	68	0	36	259	144	293	768	1	184	496	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	382	77	0	41	292	162	330	864	1	207	558	2
Peak Hour Factor	0.9800	0.9800	0.9800	0.85	0.85	0.85	0.85	0.9000	0.9000	0.9000	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	97	20	0	12	86	48	92	240	0	59	159	1
Total Analysis Volume [veh/h]	2	390	79	0	48	344	191	367	960	1	235	634	2
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	0
Local Bus Stopping Rate [/h]	0	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]	130
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	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	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	0	9	26	0	13	82	0	13	82	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	23	31	27	91	78	78	91	78	78
g / C, Green / Cycle	0.24	0.18	0.24	0.21	0.70	0.60	0.60	0.70	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.00	0.12	0.05	0.11	0.45	0.57	0.00	0.36	0.38	0.00
s, saturation flow rate [veh/h]	983	3204	1034	3204	820	1683	1431	656	1683	1431
c, Capacity [veh/h]	230	566	229	660	476	1008	857	255	1008	857
d1, Uniform Delay [s]	38.21	50.17	39.61	45.92	17.00	24.32	10.45	42.43	16.76	10.46
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.44	0.11	0.17	0.20	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]	0.01	6.72	2.07	2.93	11.42	17.39	0.00	18.71	1.18	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
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	0.01	0.69	0.21	0.52	0.77	0.95	0.00	0.92	0.63	0.00
d, Delay for Lane Group [s/veh]	38.22	56.89	41.68	48.85	28.42	41.71	10.45	61.14	17.94	10.46
Lane Group LOS	D	E	D	D	C	D	B	E	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.05	6.44	1.34	5.20	4.76	28.20	0.01	3.21	10.95	0.02
50th-Percentile Queue Length [ft/ln]	1.24	161.06	33.45	129.94	119.04	705.05	0.26	80.14	273.73	0.53
95th-Percentile Queue Length [veh/ln]	0.09	10.61	2.41	8.94	8.34	36.91	0.02	5.77	16.38	0.04
95th-Percentile Queue Length [ft/ln]	2.24	265.13	60.21	223.42	208.51	922.78	0.48	144.25	409.39	0.95

Movement, Approach, & Intersection Results

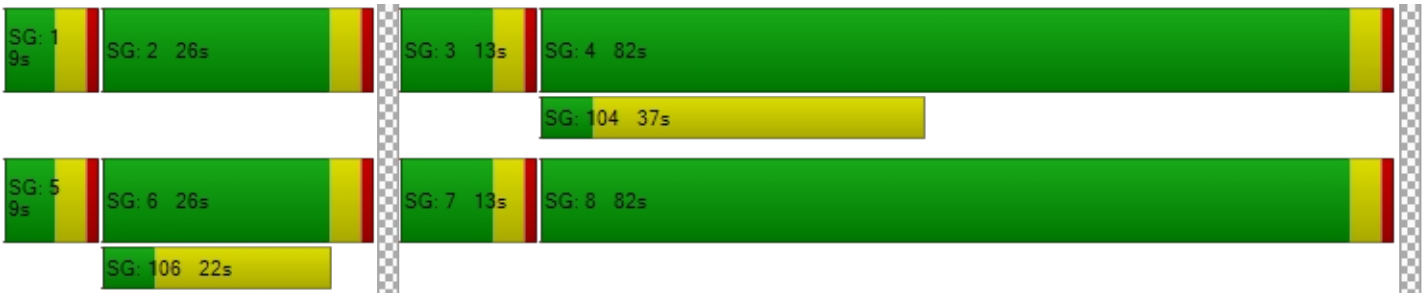
d_M, Delay for Movement [s/veh]	38.22	56.89	0.00	41.6	41.6	48.8	0.00	28.42	41.71	10.45	61.14	17.94	10.46
Movement LOS	D	E		D	D	D		C	D	B	E	B	B
d_A, Approach Delay [s/veh]	56.79			47.97				38.02			29.58		
Approach LOS	E			D				D			C		
d_I, Intersection Delay [s/veh]	39.33												
Intersection LOS	D												
Intersection V/C	0.773												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	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]	0.00	56.31	0.00	56.31
l_p,int, Pedestrian LOS Score for Intersection	0.000	3.024	0.000	3.004
Crosswalk LOS	F	C	F	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]	338	338	1200	1200
d_b, Bicycle Delay [s]	44.86	44.86	10.40	10.40
l_b,int, Bicycle LOS Score for Intersection	1.883	1.843	3.751	2.997
Bicycle LOS	A	A	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.705

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	127	21	4	37	17	111	1	42	728	53	0	13	1279	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	0	11	0	0	0	0	0	0	14	0	4	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	24	16	42	19	125	1	47	819	74	0	19	1440	24
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.85	0.85	0.85	0.85	0.85	0.89	0.89	0.89
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	55	7	5	12	6	37	0	14	241	22	0	5	404	7
Total Analysis Volume [veh/h]	219	28	19	49	22	147	1	55	964	87	0	21	1618	27
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	140
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	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Signal Group	0	6	0	0	2	0	0	0	8	0	0	0	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	10	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	30	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	0	87	0	0	0	87	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No				No				No	
Maximum Recall		No			No				No				No	
Pedestrian Recall		No			No				No				No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	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
g_i, Effective Green Time [s]	49	49	49	49	49	83	83	83	83	83	83
g / C, Green / Cycle	0.35	0.35	0.35	0.35	0.35	0.59	0.59	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.20	0.02	0.01	0.04	0.11	0.20	0.30	0.06	0.04	0.50	0.02
s, saturation flow rate [veh/h]	1094	1683	1431	1222	1517	274	3204	1431	483	3204	1431
c, Capacity [veh/h]	334	590	502	452	532	94	1897	847	244	1897	847
d1, Uniform Delay [s]	48.17	29.99	29.89	32.94	33.19	61.82	16.67	12.41	26.54	23.54	11.88
k, delay calibration	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
d2, Incremental Delay [s]	9.68	0.15	0.14	0.48	1.56	5.96	0.21	0.05	0.15	1.17	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.05	0.04	0.11	0.32	0.60	0.51	0.10	0.09	0.85	0.03
d, Delay for Lane Group [s/veh]	57.85	30.15	30.03	33.43	34.76	67.77	16.88	12.46	26.69	24.70	11.89
Lane Group LOS	E	C	C	C	C	E	B	B	C	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.95	0.66	0.45	1.25	4.49	2.11	8.21	1.11	0.44	19.64	0.33
50th-Percentile Queue Length [ft/ln]	198.75	16.39	11.15	31.21	112.17	52.69	205.26	27.70	10.89	490.93	8.23
95th-Percentile Queue Length [veh/ln]	12.57	1.18	0.80	2.25	7.96	3.79	12.91	1.99	0.78	26.90	0.59
95th-Percentile Queue Length [ft/ln]	314.35	29.50	20.08	56.18	199.02	94.85	322.74	49.86	19.61	672.62	14.81

Movement, Approach, & Intersection Results

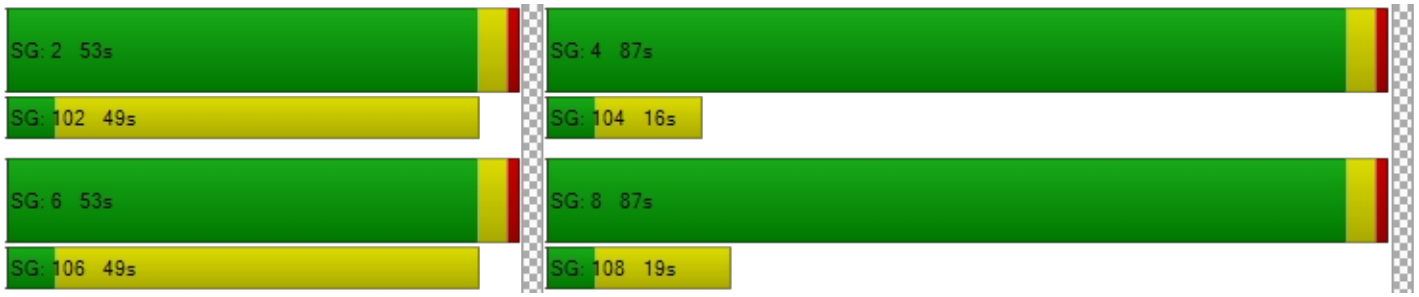
d_M, Delay for Movement [s/veh]	57.85	30.15	30.03	33.43	34.76	34.76	67.7	67.7	16.8	12.4	26.6	26.6	24.7	11.8
Movement LOS	E	C	C	C	C	C	E	E	B	B	C	C	C	B
d_A, Approach Delay [s/veh]	52.95			34.46			19.10				24.52			
Approach LOS	D			C			B				C			
d_I, Intersection Delay [s/veh]	25.67													
Intersection LOS	C													
Intersection V/C	0.705													

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]	61.29	61.29	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersection	2.296	2.149	3.797	3.405
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]	700	700	1186	1186
d_b, Bicycle Delay [s]	29.57	29.57	11.60	11.60
l_b,int, Bicycle LOS Score for Intersection	1.999	1.919	2.428	2.934
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 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	15	3	41	8	6	1	1	48	5	21	83	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	32	0	104	0	0	0	0	7	11	33	22	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]	49	3	150	9	7	1	1	61	17	57	115	3
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8600	0.8600	0.8600	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	1	44	3	2	0	0	18	5	16	33	1
Total Analysis Volume [veh/h]	58	4	176	11	8	1	1	71	20	65	131	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.18	0.03	0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	12.98	13.28	10.42	13.93	11.94	9.26	7.48	0.00	0.00	7.50	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.19	1.19	1.19	0.13	0.13	0.13	0.00	0.00	0.00	0.14	0.00	0.00
95th-Percentile Queue Length [ft/ln]	29.78	29.78	29.78	3.28	3.28	3.28	0.05	0.00	0.00	3.39	0.00	0.00
d_A, Approach Delay [s/veh]	11.09			12.90			0.08			2.45		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	6.18											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.069

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	5	1	20	20	0	3	2	86	2	6	101	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	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	56	0	0	0	0	104	7	22	33	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]	28	1	79	23	0	3	2	201	9	29	147	8
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	0	23	7	0	1	1	59	3	9	43	2
Total Analysis Volume [veh/h]	33	1	93	27	0	4	2	236	11	34	173	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.12	0.07	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	13.83	14.02	10.75	14.86	13.47	9.84	7.59	0.00	0.00	7.80	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.69	0.69	0.69	0.24	0.24	0.24	0.00	0.00	0.00	0.08	0.00	0.00
95th-Percentile Queue Length [ft/ln]	17.24	17.24	17.24	5.92	5.92	5.92	0.11	0.00	0.00	1.98	0.00	0.00
d_A, Approach Delay [s/veh]	11.58			14.21			0.06			1.23		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.52											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	4.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.199

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	26	16	1	18	109	0	96	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	32	128	0	44	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	29	1	52	251	0	152	9
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	9	0	15	74	0	45	3
Total Analysis Volume [veh/h]	34	34	1	61	295	0	179	11
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	20	0	0	0	40	0	40	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	49	49	49	49
g / C, Green / Cycle	0.06	0.06	0.81	0.81	0.81	0.81
(v / s)_i Volume / Saturation Flow Rate	0.02	0.02	0.06	0.18	0.11	0.01
s, saturation flow rate [veh/h]	1603	1431	1074	1683	1683	1431
c, Capacity [veh/h]	93	83	921	1361	1421	1156
d1, Uniform Delay [s]	27.19	27.26	2.05	1.34	1.23	1.11
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.36	3.17	0.14	0.37	0.18	0.01
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	0.36	0.41	0.07	0.22	0.13	0.01
d, Delay for Lane Group [s/veh]	29.55	30.43	2.19	1.70	1.42	1.13
Lane Group LOS	C	C	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.50	0.51	0.11	0.16	0.09	0.01
50th-Percentile Queue Length [ft/ln]	12.48	12.81	2.72	4.07	2.15	0.14
95th-Percentile Queue Length [veh/ln]	0.90	0.92	0.20	0.29	0.15	0.01
95th-Percentile Queue Length [ft/ln]	22.46	23.06	4.89	7.33	3.86	0.25

Movement, Approach, & Intersection Results

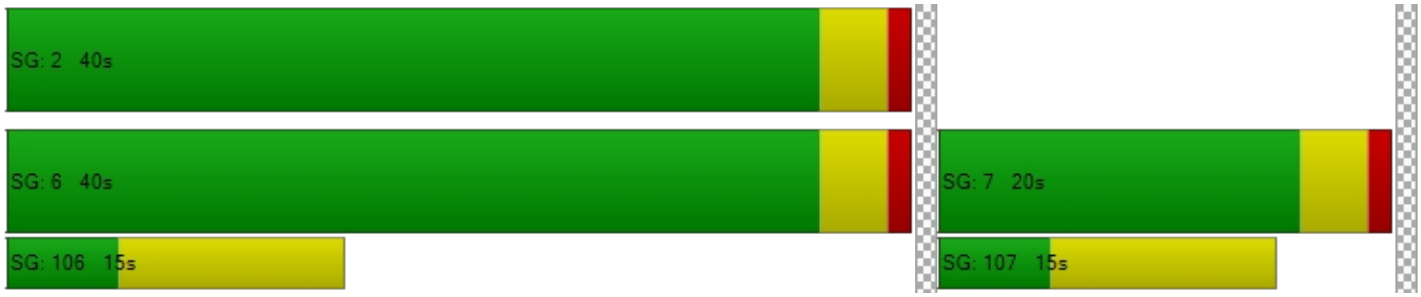
d_M, Delay for Movement [s/veh]	29.55	30.43	2.19	2.19	1.70	1.42	1.42	1.13
Movement LOS	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	29.99		1.79			1.40		
Approach LOS	C		A			A		
d_I, Intersection Delay [s/veh]	4.79							
Intersection LOS	A							
Intersection V/C	0.199							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.062	2.225	2.118
Crosswalk LOS	B	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]	533	1200	1200
d_b, Bicycle Delay [s]	16.14	4.81	4.81
l_b,int, Bicycle LOS Score for Intersection	1.560	2.048	1.873
Bicycle LOS	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.311

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Base Volume Input [veh/h]	56	186	8	7	17	295	19	26	32	78	20	29	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	0	0	0	0	11	32	11	85	0	11	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	209	9	8	19	332	32	61	47	173	23	44	47
Peak Hour Factor	0.8700	0.8700	0.8700	0.85	0.85	0.85	0.85	0.8500	0.8500	0.8500	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	60	3	2	6	98	9	18	14	51	7	13	13
Total Analysis Volume [veh/h]	98	240	10	9	22	391	38	72	55	204	26	50	53
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	36	0	0	10	30	0	55	14	0	10	14	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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	0.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	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	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	12	12	18	10	10	0	34	34	34	34	34
g / C, Green / Cycle	0.10	0.20	0.20	0.30	0.17	0.17	0.00	0.57	0.57	0.57	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.07	0.07	0.01	0.03	0.12	0.03	0.06	0.03	0.14	0.03	0.02	0.04
s, saturation flow rate [veh/h]	1363	3204	1431	1150	3204	1431	1263	1683	1431	1008	3204	1431
c, Capacity [veh/h]	284	644	288	461	538	240	120	949	806	635	1806	806
d1, Uniform Delay [s]	15.58	20.76	19.34	15.00	23.73	21.40	30.08	5.92	6.68	7.37	5.82	5.95
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]	0.72	0.36	0.05	0.06	1.90	0.30	20.40	0.12	0.75	0.12	0.03	0.16
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	0.35	0.37	0.03	0.07	0.73	0.16	0.60	0.06	0.25	0.04	0.03	0.07
d, Delay for Lane Group [s/veh]	16.31	21.12	19.39	15.06	25.63	21.71	50.48	6.04	7.43	7.49	5.85	6.10
Lane Group LOS	B	C	B	B	C	C	D	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.95	1.36	0.11	0.28	2.54	0.44	0.86	0.27	1.16	0.16	0.12	0.28
50th-Percentile Queue Length [ft/ln]	23.71	33.98	2.67	6.94	63.60	11.04	21.43	6.67	28.90	4.03	2.96	6.90
95th-Percentile Queue Length [veh/ln]	1.71	2.45	0.19	0.50	4.58	0.79	1.54	0.48	2.08	0.29	0.21	0.50
95th-Percentile Queue Length [ft/ln]	42.68	61.17	4.81	12.50	114.49	19.87	38.58	12.00	52.02	7.26	5.32	12.42

Movement, Approach, & Intersection Results

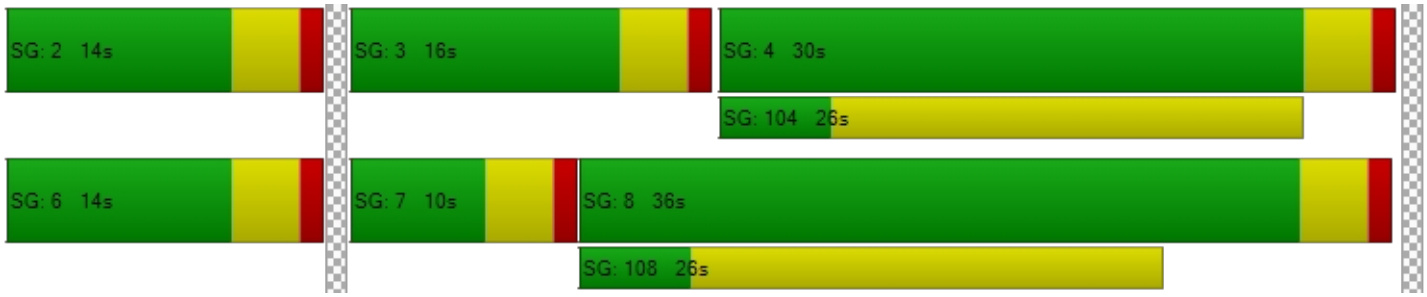
d_M, Delay for Movement [s/veh]	16.31	21.12	19.39	15.0	15.0	25.6	21.7	50.48	6.04	7.43	7.49	5.85	6.10
Movement LOS	B	C	B	B	B	C	C	D	A	A	A	A	A
d_A, Approach Delay [s/veh]	19.71			24.59				16.56			6.28		
Approach LOS	B			C				B			A		
d_I, Intersection Delay [s/veh]	19.29												
Intersection LOS	B												
Intersection V/C	0.311												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.536	2.333
Crosswalk LOS	F	F	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]	1065	865	333	333
d_b, Bicycle Delay [s]	6.56	9.67	20.87	20.87
l_b,int, Bicycle LOS Score for Intersection	1.847	1.921	2.106	1.666
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	35.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.685

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	800.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			Yes				No			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	5	214	52	1	19	123	306	74	382	0	66	744	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	21	32	32	11	0	0	0	0	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	252	59	1	42	170	376	94	430	0	74	837	1
Peak Hour Factor	0.8500	0.8500	0.8500	0.85	0.93	0.93	0.93	0.8500	0.8500	0.8500	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	74	17	0	11	46	101	28	126	0	21	241	0
Total Analysis Volume [veh/h]	7	296	69	1	45	183	404	111	506	0	85	962	1
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	0
Local Bus Stopping Rate [/h]	0	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]	130
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	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	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	0	9	26	0	9	26	0	69	86	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	37	29	37	32	85	76	76	85	76	76
g / C, Green / Cycle	0.28	0.22	0.28	0.24	0.65	0.59	0.59	0.65	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.01	0.09	0.05	0.06	0.07	0.30	0.00	0.10	0.57	0.00
s, saturation flow rate [veh/h]	919	3204	859	3204	1498	1683	1431	867	1683	1431
c, Capacity [veh/h]	366	709	278	782	995	989	840	486	986	838
d1, Uniform Delay [s]	33.63	43.42	34.65	39.41	10.33	15.81	0.00	11.14	26.01	11.15
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.41	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]	0.02	1.81	1.28	0.15	0.23	0.41	0.00	0.17	20.70	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
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	0.02	0.42	0.17	0.23	0.11	0.51	0.00	0.17	0.98	0.00
d, Delay for Lane Group [s/veh]	33.65	45.23	35.93	39.56	10.56	16.23	0.00	11.31	46.71	11.15
Lane Group LOS	C	D	D	D	B	B	A	B	D	B
Critical Lane Group	No	Yes	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.16	4.25	1.18	2.36	1.07	7.99	0.00	0.78	30.26	0.01
50th-Percentile Queue Length [ft/ln]	4.05	106.30	29.41	59.05	26.77	199.85	0.00	19.54	756.60	0.28
95th-Percentile Queue Length [veh/ln]	0.29	7.63	2.12	4.25	1.93	12.63	0.00	1.41	39.29	0.02
95th-Percentile Queue Length [ft/ln]	7.29	190.85	52.93	106.29	48.19	315.77	0.00	35.17	982.16	0.50

Movement, Approach, & Intersection Results

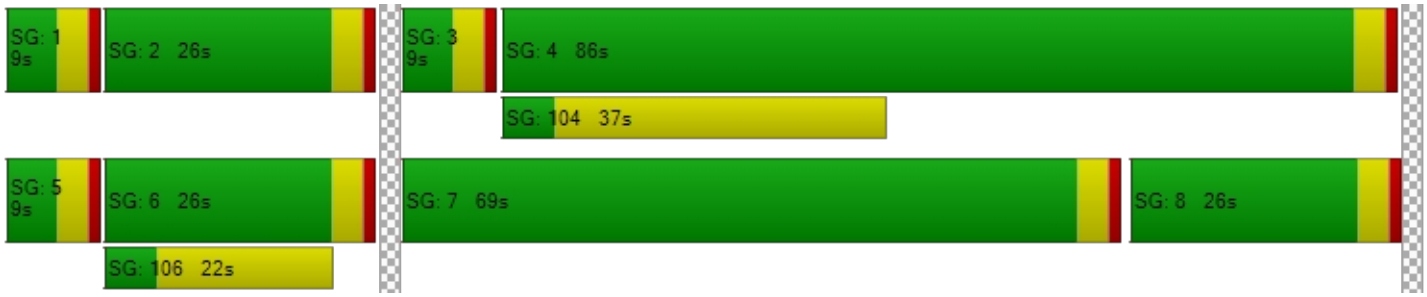
d_M, Delay for Movement [s/veh]	33.65	45.23	0.00	35.9	35.9	39.5	0.00	10.56	16.23	0.00	11.31	46.71	11.15
Movement LOS	C	D		D	D	D		B	B	A	B	D	B
d_A, Approach Delay [s/veh]	44.96			38.83				15.21			43.80		
Approach LOS	D			D				B			D		
d_I, Intersection Delay [s/veh]	35.41												
Intersection LOS	D												
Intersection V/C	0.685												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	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]	0.00	56.31	0.00	56.31
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.671	0.000	2.906
Crosswalk LOS	F	B	F	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]	338	338	338	1262
d_b, Bicycle Delay [s]	44.86	44.86	44.86	8.86
l_b,int, Bicycle LOS Score for Intersection	1.810	1.711	2.578	3.289
Bicycle LOS	A	A	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	25.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	83	39	13	64	10	103	2	88	1455	106	1	11	1060	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	29	0	7	0	0	0	0	0	0	48	0	12	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	44	22	72	11	116	2	99	1638	167	1	24	1193	47
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.85	0.98	0.98	0.98	0.85	0.93	0.93	0.93
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	36	13	6	21	3	34	1	25	418	43	0	6	321	13
Total Analysis Volume [veh/h]	144	52	26	85	13	136	2	101	1671	170	1	26	1283	51
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	140
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	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Signal Group	0	6	0	0	2	0	0	0	8	0	0	0	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	10	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	30	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	0	87	0	0	0	87	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No				No				No	
Maximum Recall		No			No				No				No	
Pedestrian Recall		No			No				No				No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	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
g_i, Effective Green Time [s]	49	49	49	49	49	83	83	83	83	83	83
g / C, Green / Cycle	0.35	0.35	0.35	0.35	0.35	0.59	0.59	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.13	0.03	0.02	0.07	0.10	0.28	0.52	0.12	0.12	0.40	0.04
s, saturation flow rate [veh/h]	1114	1683	1431	1189	1507	369	3204	1431	226	3204	1431
c, Capacity [veh/h]	349	590	502	429	529	162	1897	847	80	1897	847
d1, Uniform Delay [s]	43.13	30.43	30.04	35.12	32.73	47.51	24.33	13.21	60.54	19.42	12.07
k, delay calibration	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
d2, Incremental Delay [s]	3.56	0.29	0.20	1.04	1.33	4.06	1.47	0.12	2.44	0.43	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.09	0.05	0.20	0.28	0.63	0.88	0.20	0.34	0.68	0.06
d, Delay for Lane Group [s/veh]	46.69	30.73	30.23	36.15	34.06	51.58	25.80	13.33	62.98	19.84	12.10
Lane Group LOS	D	C	C	D	C	D	C	B	E	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	4.54	1.24	0.61	2.29	3.89	3.49	21.03	2.31	0.97	12.76	0.63
50th-Percentile Queue Length [ft/ln]	113.61	30.91	15.34	57.26	97.36	87.32	525.81	57.71	24.28	319.06	15.81
95th-Percentile Queue Length [veh/ln]	8.04	2.23	1.10	4.12	7.01	6.29	28.55	4.15	1.75	18.62	1.14
95th-Percentile Queue Length [ft/ln]	201.01	55.65	27.62	103.07	175.25	157.17	713.84	103.87	43.70	465.53	28.45

Movement, Approach, & Intersection Results

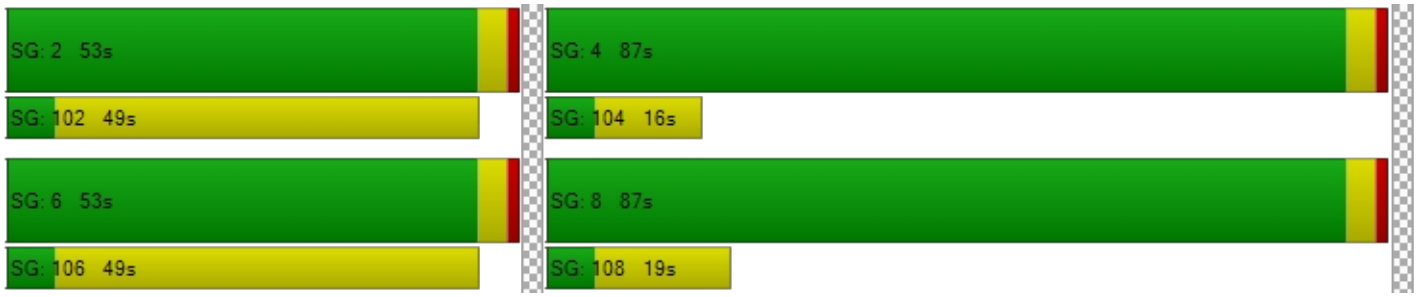
d_M, Delay for Movement [s/veh]	46.69	30.73	30.23	36.15	34.06	34.06	51.5	51.5	25.8	13.3	62.9	62.9	19.8	12.1
Movement LOS	D	C	C	D	C	C	D	D	C	B	E	E	B	B
d_A, Approach Delay [s/veh]	41.02			34.82			26.08				20.41			
Approach LOS	D			C			C				C			
d_I, Intersection Delay [s/veh]	25.45													
Intersection LOS	C													
Intersection V/C	0.651													

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]	61.27	61.27	61.27	61.27
l_p,int, Pedestrian LOS Score for Intersection	2.314	2.251	3.863	3.578
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]	700	700	1186	1186
d_b, Bicycle Delay [s]	29.56	29.56	11.59	11.59
l_b,int, Bicycle LOS Score for Intersection	1.926	1.946	3.080	2.682
Bicycle LOS	A	A	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	19.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.045

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	8	7	24	9	4	2	0	72	13	34	108	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
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	63	0	0	0	0	24	36	108	14	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]	31	8	90	10	5	2	0	105	51	146	136	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
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	2	26	3	1	1	0	31	15	43	40	2
Total Analysis Volume [veh/h]	36	9	106	12	6	2	0	124	60	172	160	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.03	0.12	0.04	0.02	0.00	0.00	0.00	0.00	0.12	0.00	0.00
d_M, Delay for Movement [s/veh]	17.89	17.86	11.09	19.24	17.01	9.92	7.55	0.00	0.00	7.95	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.00	1.00	1.00	0.21	0.21	0.21	0.00	0.00	0.00	0.42	0.00	0.00
95th-Percentile Queue Length [ft/ln]	25.11	25.11	25.11	5.24	5.24	5.24	0.00	0.00	0.00	10.55	0.00	0.00
d_A, Approach Delay [s/veh]	13.12			17.64			0.00			4.02		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	5.33											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.061

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	4	0	16	12	0	2	2	83	3	13	161	25
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	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	42	0	0	0	0	63	24	72	108	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	0	60	14	0	2	2	156	27	87	289	28
Peak Hour Factor	0.8800	0.8800	0.8800	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	17	4	0	1	1	46	8	26	85	8
Total Analysis Volume [veh/h]	22	0	68	16	0	2	2	184	32	102	340	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
d_M, Delay for Movement [s/veh]	18.12	18.07	10.40	19.56	17.81	11.10	8.04	0.00	0.00	7.88	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.54	0.54	0.54	0.20	0.20	0.20	0.01	0.00	0.00	0.24	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.55	13.55	13.55	5.08	5.08	5.08	0.13	0.00	0.00	6.10	0.00	0.00
d_A, Approach Delay [s/veh]	12.29			18.62			0.07			1.69		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	2.82											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	8.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.290

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	63	35	0	21	91	1	162	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	0	21	84	0	144	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	75	0	45	186	1	326	30
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	22	0	13	55	0	96	9
Total Analysis Volume [veh/h]	84	88	0	53	219	1	384	35
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	41	0	0	0	19	0	19	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	46	46	46	46
g / C, Green / Cycle	0.09	0.09	0.77	0.77	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.05	0.06	0.06	0.13	0.23	0.02
s, saturation flow rate [veh/h]	1603	1431	871	1683	1683	1431
c, Capacity [veh/h]	154	138	689	1297	1357	1102
d1, Uniform Delay [s]	25.89	26.14	3.83	1.82	2.05	1.62
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.98	4.87	0.22	0.28	0.52	0.05
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	0.55	0.64	0.08	0.17	0.28	0.03
d, Delay for Lane Group [s/veh]	28.87	31.02	4.04	2.10	2.57	1.67
Lane Group LOS	C	C	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.19	1.31	0.19	0.28	0.54	0.04
50th-Percentile Queue Length [ft/ln]	29.74	32.74	4.76	6.91	13.61	1.03
95th-Percentile Queue Length [veh/ln]	2.14	2.36	0.34	0.50	0.98	0.07
95th-Percentile Queue Length [ft/ln]	53.54	58.94	8.58	12.43	24.49	1.86

Movement, Approach, & Intersection Results

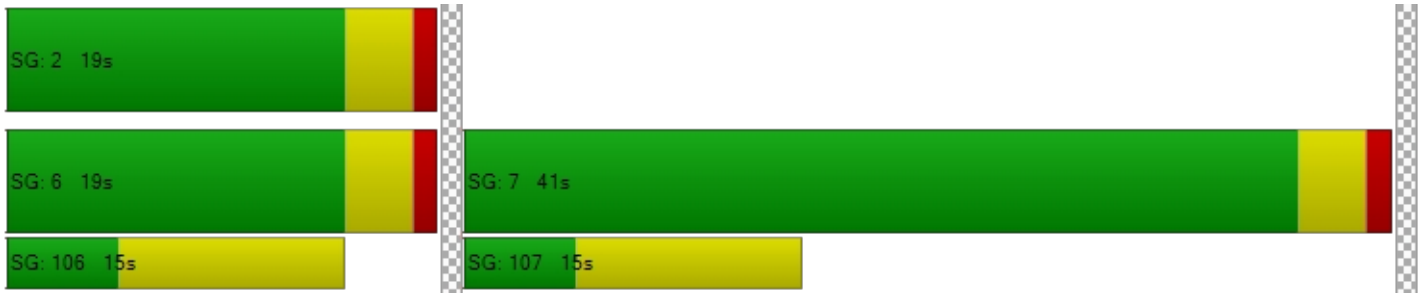
d_M, Delay for Movement [s/veh]	28.87	31.02	4.04	4.04	2.10	2.57	2.57	1.67
Movement LOS	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	29.97		2.48			2.50		
Approach LOS	C		A			A		
d_I, Intersection Delay [s/veh]	7.96							
Intersection LOS	A							
Intersection V/C	0.290							

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]	21.69	21.69	21.69
l_p,int, Pedestrian LOS Score for Intersection	2.095	2.278	2.196
Crosswalk LOS	B	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]	1233	500	500
d_b, Bicycle Delay [s]	4.42	16.89	16.89
l_b,int, Bicycle LOS Score for Intersection	1.560	1.921	2.253
Bicycle LOS	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.312

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	80	386	33	40	32	187	47	43	32	69	22	47	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	72	0	0	0	0	0	36	21	7	56	0	36	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	162	434	37	45	36	210	89	69	43	134	25	89	110
Peak Hour Factor	0.8800	0.8800	0.8800	0.85	0.85	0.85	0.85	0.9000	0.9000	0.9000	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	123	11	13	11	62	26	19	12	37	7	24	30
Total Analysis Volume [veh/h]	184	493	42	53	42	247	105	77	48	149	27	98	121
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	37	0	0	9	30	0	10	15	0	9	14	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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]	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	2.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	22	14	14	22	10	10	4	34	34	40	32	32
g / C, Green / Cycle	0.32	0.20	0.20	0.32	0.14	0.14	0.06	0.48	0.48	0.57	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.15	0.15	0.03	0.09	0.08	0.07	0.02	0.03	0.10	0.02	0.03	0.08
s, saturation flow rate [veh/h]	1235	3204	1431	1016	3204	1431	3113	1683	1431	1123	3204	1431
c, Capacity [veh/h]	481	640	286	361	464	207	178	807	686	762	1452	648
d1, Uniform Delay [s]	18.61	26.59	23.18	18.13	27.84	27.73	32.01	9.81	10.63	6.71	10.84	11.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	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]	0.50	2.00	0.23	0.38	0.95	1.91	1.65	0.14	0.73	0.02	0.09	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	0.38	0.77	0.15	0.26	0.53	0.51	0.43	0.06	0.22	0.04	0.07	0.19
d, Delay for Lane Group [s/veh]	19.11	28.59	23.41	18.51	28.79	29.64	33.66	9.95	11.36	6.72	10.93	12.11
Lane Group LOS	B	C	C	B	C	C	C	A	B	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.18	3.82	0.56	1.07	1.88	1.65	0.64	0.38	1.30	0.16	0.41	1.14
50th-Percentile Queue Length [ft/ln]	54.62	95.44	13.98	26.69	46.92	41.19	16.09	9.43	32.54	3.89	10.22	28.40
95th-Percentile Queue Length [veh/ln]	3.93	6.87	1.01	1.92	3.38	2.97	1.16	0.68	2.34	0.28	0.74	2.04
95th-Percentile Queue Length [ft/ln]	98.31	171.79	25.17	48.04	84.46	74.15	28.97	16.97	58.56	7.00	18.39	51.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.11	28.59	23.41	18.5	18.5	28.7	29.6	33.66	9.95	11.36	6.72	10.93	12.11
Movement LOS	B	C	C	B	B	C	C	C	A	B	A	B	B
d_A, Approach Delay [s/veh]	25.86			26.80				17.38			11.05		
Approach LOS	C			C				B			B		
d_I, Intersection Delay [s/veh]	22.57												
Intersection LOS	C												
Intersection V/C	0.312												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.64	26.64
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.612	2.393
Crosswalk LOS	F	F	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]	941	741	314	285
d_b, Bicycle Delay [s]	9.83	13.88	24.93	25.78
l_b,int, Bicycle LOS Score for Intersection	2.153	1.894	2.012	1.763
Bicycle LOS	B	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	42.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	800.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			Yes				No			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	2	339	68	0	36	259	144	293	768	1	184	496	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	1.1255	1.1255	1.1255	1.12	1.12	1.12	1.12	1.1255	1.1255	1.1255	1.1255	1.1255	1.1255
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	0	0	14	21	21	36	0	0	0	0	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	418	77	0	55	313	183	366	864	1	207	558	2
Peak Hour Factor	0.9800	0.9800	0.9800	0.85	0.85	0.85	0.85	0.9000	0.9000	0.9000	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	107	20	0	16	92	54	102	240	0	59	159	1
Total Analysis Volume [veh/h]	2	427	79	0	65	368	215	407	960	1	235	634	2
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	0
Local Bus Stopping Rate [/h]	0	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]	150
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	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	27	0	0	9	24	0	22	100	0	14	92	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	41	32	41	37	101	87	87	101	80	80
g / C, Green / Cycle	0.27	0.21	0.27	0.24	0.67	0.58	0.58	0.67	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.00	0.13	0.06	0.11	0.47	0.57	0.00	0.36	0.38	0.00
s, saturation flow rate [veh/h]	962	3204	1019	3204	868	1683	1431	645	1683	1431
c, Capacity [veh/h]	197	523	194	621	504	1061	901	263	983	835
d1, Uniform Delay [s]	45.99	60.59	48.31	55.06	20.49	23.88	10.27	43.29	20.84	13.01
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.40	0.11	0.19	0.20	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]	0.02	13.21	4.60	4.12	13.02	10.43	0.00	16.13	1.35	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
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	0.01	0.82	0.33	0.59	0.81	0.91	0.00	0.89	0.65	0.00
d, Delay for Lane Group [s/veh]	46.01	73.80	52.91	59.18	33.52	34.32	10.27	59.42	22.20	13.01
Lane Group LOS	D	E	D	E	C	C	B	E	C	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	8.27	2.09	6.26	7.05	33.17	0.01	3.82	15.95	0.03
50th-Percentile Queue Length [ft/ln]	1.39	206.74	52.23	156.48	176.22	829.26	0.34	95.43	398.68	0.77
95th-Percentile Queue Length [veh/ln]	0.10	12.99	3.76	10.36	11.40	42.62	0.02	6.87	22.50	0.06
95th-Percentile Queue Length [ft/ln]	2.50	324.64	94.01	259.05	285.08	1065.3	0.61	171.77	562.40	1.39

Movement, Approach, & Intersection Results

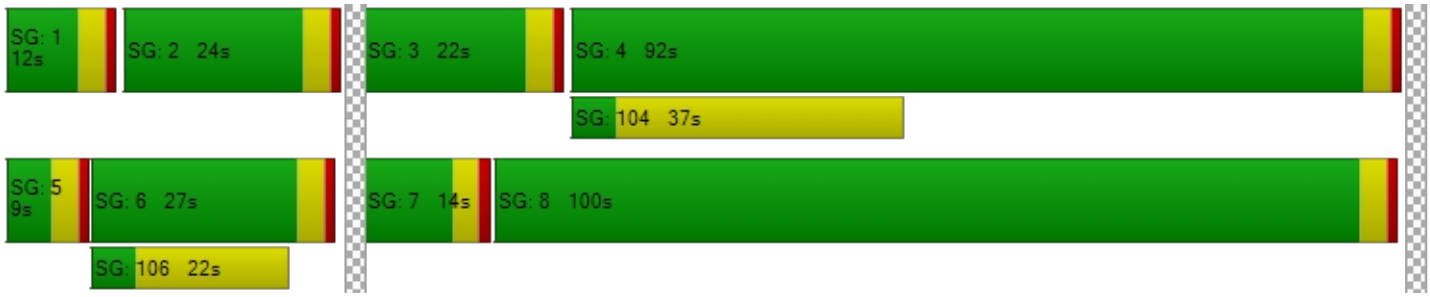
d_M, Delay for Movement [s/veh]	46.01	73.80	0.00	52.9	52.9	59.1	0.00	33.52	34.32	10.27	59.42	22.20	13.01
Movement LOS	D	E		D	D	E		C	C	B	E	C	B
d_A, Approach Delay [s/veh]	73.67			58.24				34.06			32.22		
Approach LOS	E			E				C			C		
d_I, Intersection Delay [s/veh]	42.40												
Intersection LOS	D												
Intersection V/C	0.795												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	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]	0.00	66.27	0.00	66.27
l_p,int, Pedestrian LOS Score for Intersection	0.000	3.058	0.000	3.024
Crosswalk LOS	F	C	F	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]	307	267	1280	1173
d_b, Bicycle Delay [s]	53.76	56.33	9.72	12.81
l_b,int, Bicycle LOS Score for Intersection	1.914	1.863	3.817	2.997
Bicycle LOS	A	A	D	C

Sequence

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



Appendix E

Horizon (2045) LOS Reports

Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	166.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.185

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	127	21	4	37	17	111	1	42	728	53	0	13	1279	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
In-Process Volume [veh/h]	0	0	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	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	258	43	8	75	35	226	2	85	1480	108	0	26	2600	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	68	11	2	20	9	59	1	22	389	28	0	7	684	11
Total Analysis Volume [veh/h]	272	45	8	79	37	238	2	89	1558	114	0	27	2737	45
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	170
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	Perm	Prote	Perm	Perm	Perm	Perm	Perm	Perm
Signal Group	0	6	0	0	2	0	0	3	8	0	0	0	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	10	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	30	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	58	0	0	58	0	0	11	112	0	0	0	101	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No	No				No	
Maximum Recall		No			No			No	No				No	
Pedestrian Recall		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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	170	170	170	170	170	170	170	170	170	170	170
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	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
g_i, Effective Green Time [s]	54	54	54	54	54	7	108	108	97	97	97
g / C, Green / Cycle	0.32	0.32	0.32	0.32	0.32	0.04	0.63	0.63	0.57	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.27	0.03	0.01	0.06	0.18	0.06	0.49	0.08	0.10	0.85	0.03
s, saturation flow rate [veh/h]	994	1683	1431	1216	1518	1603	3204	1431	267	3204	1431
c, Capacity [veh/h]	201	537	456	396	484	66	2032	907	97	1825	815
d1, Uniform Delay [s]	74.27	40.53	39.67	45.71	48.17	81.50	22.14	12.36	59.86	36.60	16.27
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.29	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
d2, Incremental Delay [s]	187.37	0.31	0.07	1.13	4.77	189.73	0.63	0.06	1.54	226.68	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.35	0.08	0.02	0.20	0.57	1.38	0.77	0.13	0.28	1.50	0.06
d, Delay for Lane Group [s/veh]	261.64	40.84	39.74	46.84	52.94	271.23	22.77	12.42	61.40	263.28	16.30
Lane Group LOS	F	D	D	D	D	F	C	B	E	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	19.35	1.39	0.24	2.71	10.49	6.32	20.23	1.65	1.05	91.96	0.76
50th-Percentile Queue Length [ft/ln]	483.70	34.76	6.07	67.80	262.13	157.96	505.82	41.35	26.21	2298.9	19.07
95th-Percentile Queue Length [veh/ln]	31.09	2.50	0.44	4.88	15.80	11.23	27.61	2.98	1.89	140.30	1.37
95th-Percentile Queue Length [ft/ln]	777.20	62.57	10.93	122.04	394.89	280.80	690.24	74.44	47.19	3507.6	34.33

Movement, Approach, & Intersection Results

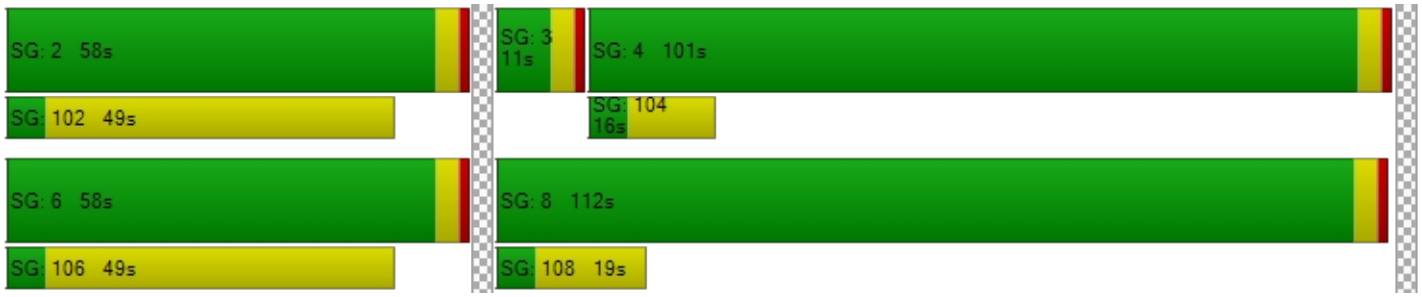
d_M, Delay for Movement [s/veh]	261.64	40.84	39.74	46.84	52.94	52.94	271.	271.	22.7	12.4	61.4	61.4	263.	16.3
Movement LOS	F	D	D	D	D	D	F	F	C	B	E	E	F	B
d_A, Approach Delay [s/veh]	225.61			51.58			34.92				257.38			
Approach LOS	F			D			C				F			
d_I, Intersection Delay [s/veh]	166.85													
Intersection LOS	F													
Intersection V/C	1.185													

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]	76.24	76.24	76.24	76.24
l_p,int, Pedestrian LOS Score for Intersection	2.344	2.145	4.291	3.913
Crosswalk LOS	B	B	E	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]	635	635	1271	1141
d_b, Bicycle Delay [s]	39.58	39.58	11.31	15.67
l_b,int, Bicycle LOS Score for Intersection	2.096	2.144	2.941	3.877
Bicycle LOS	B	B	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	15	3	41	8	6	1	1	48	5	21	83	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
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	6	83	16	12	2	2	98	10	43	169	6
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	2	22	4	3	1	1	26	3	11	44	2
Total Analysis Volume [veh/h]	32	6	87	17	13	2	2	103	11	45	178	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.09	0.04	0.02	0.00	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	12.54	12.69	9.71	13.13	12.29	9.66	7.59	0.00	0.00	7.52	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.58	0.58	0.58	0.20	0.20	0.20	0.00	0.00	0.00	0.09	0.00	0.00
95th-Percentile Queue Length [ft/ln]	14.43	14.43	14.43	5.03	5.03	5.03	0.11	0.00	0.00	2.36	0.00	0.00
d_A, Approach Delay [s/veh]	10.58			12.57			0.13			1.48		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.14											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.090

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	5	1	20	20	0	3	2	86	2	6	101	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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
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]	10	2	41	41	0	6	4	175	4	12	205	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	11	11	0	2	1	46	1	3	54	4
Total Analysis Volume [veh/h]	11	2	43	43	0	6	4	184	4	13	216	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.05	0.09	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	12.41	12.63	9.60	13.35	12.96	10.19	7.70	0.00	0.00	7.62	0.00	0.00
Movement LOS	B	B	A	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.24	0.32	0.32	0.32	0.01	0.00	0.00	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.12	6.12	6.12	8.08	8.08	8.08	0.23	0.00	0.00	0.71	0.00	0.00
d_A, Approach Delay [s/veh]	10.26			12.96			0.16			0.41		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	2.48											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.174

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	26	16	1	18	109	0	96	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	33	2	37	222	0	195	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	9	1	10	58	0	51	4
Total Analysis Volume [veh/h]	56	35	2	39	234	0	205	17
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	20	0	0	0	40	0	40	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	48	48	48	48
g / C, Green / Cycle	0.07	0.07	0.80	0.80	0.80	0.80
(v / s)_i Volume / Saturation Flow Rate	0.03	0.02	0.04	0.14	0.12	0.01
s, saturation flow rate [veh/h]	1603	1431	1043	1683	1683	1431
c, Capacity [veh/h]	107	96	884	1346	1406	1144
d1, Uniform Delay [s]	27.09	26.79	2.23	1.40	1.37	1.22
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.91	2.33	0.10	0.28	0.22	0.02
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	0.52	0.37	0.05	0.17	0.15	0.01
d, Delay for Lane Group [s/veh]	31.00	29.13	2.33	1.68	1.59	1.24
Lane Group LOS	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.84	0.51	0.08	0.16	0.13	0.01
50th-Percentile Queue Length [ft/ln]	20.98	12.72	2.03	4.06	3.36	0.28
95th-Percentile Queue Length [veh/ln]	1.51	0.92	0.15	0.29	0.24	0.02
95th-Percentile Queue Length [ft/ln]	37.77	22.90	3.65	7.31	6.05	0.50

Movement, Approach, & Intersection Results

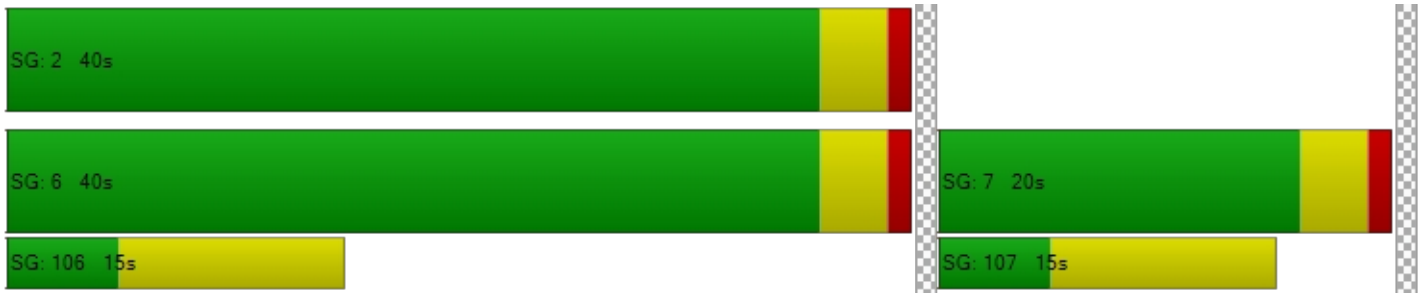
d_M, Delay for Movement [s/veh]	31.00	29.13	2.33	2.33	1.68	1.59	1.59	1.24
Movement LOS	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.28		1.77			1.56		
Approach LOS	C		A			A		
d_I, Intersection Delay [s/veh]	6.10							
Intersection LOS	A							
Intersection V/C	0.174							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.035	2.174	2.115
Crosswalk LOS	B	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]	533	1200	1200
d_b, Bicycle Delay [s]	16.14	4.81	4.81
l_b,int, Bicycle LOS Score for Intersection	1.560	1.949	1.926
Bicycle LOS	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.366

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Base Volume Input [veh/h]	56	186	8	7	17	295	19	26	32	78	20	29	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	378	16	14	35	600	39	53	65	159	41	59	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	99	4	4	9	158	10	14	17	42	11	16	22
Total Analysis Volume [veh/h]	120	398	17	15	37	632	41	56	68	167	43	62	89
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	36	0	0	10	30	0	52	14	0	10	14	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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	0.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	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	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	16	16	23	15	15	0	29	29	29	29	29
g / C, Green / Cycle	0.11	0.27	0.27	0.39	0.25	0.25	0.00	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.09	0.12	0.01	0.05	0.20	0.03	0.07	0.04	0.12	0.04	0.02	0.06
s, saturation flow rate [veh/h]	1396	3204	1431	1031	3204	1431	829	1683	1431	1031	3204	1431
c, Capacity [veh/h]	307	874	390	487	796	355	120	803	683	551	1530	683
d1, Uniform Delay [s]	12.13	18.17	16.10	11.90	21.17	17.50	30.08	8.56	9.30	10.61	8.38	8.76
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]	0.81	0.37	0.05	0.10	1.85	0.14	12.57	0.21	0.85	0.28	0.05	0.39
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	0.39	0.46	0.04	0.11	0.79	0.12	0.47	0.08	0.24	0.08	0.04	0.13
d, Delay for Lane Group [s/veh]	12.94	18.54	16.15	11.99	23.02	17.64	42.65	8.77	10.15	10.89	8.43	9.16
Lane Group LOS	B	B	B	B	C	B	D	A	B	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.99	2.10	0.16	0.39	3.92	0.41	0.62	0.44	1.22	0.35	0.19	0.63
50th-Percentile Queue Length [ft/ln]	24.75	52.46	4.01	9.86	98.09	10.32	15.42	11.06	30.46	8.68	4.86	15.67
95th-Percentile Queue Length [veh/ln]	1.78	3.78	0.29	0.71	7.06	0.74	1.11	0.80	2.19	0.63	0.35	1.13
95th-Percentile Queue Length [ft/ln]	44.55	94.43	7.22	17.75	176.56	18.58	27.75	19.91	54.83	15.63	8.75	28.21

Movement, Approach, & Intersection Results

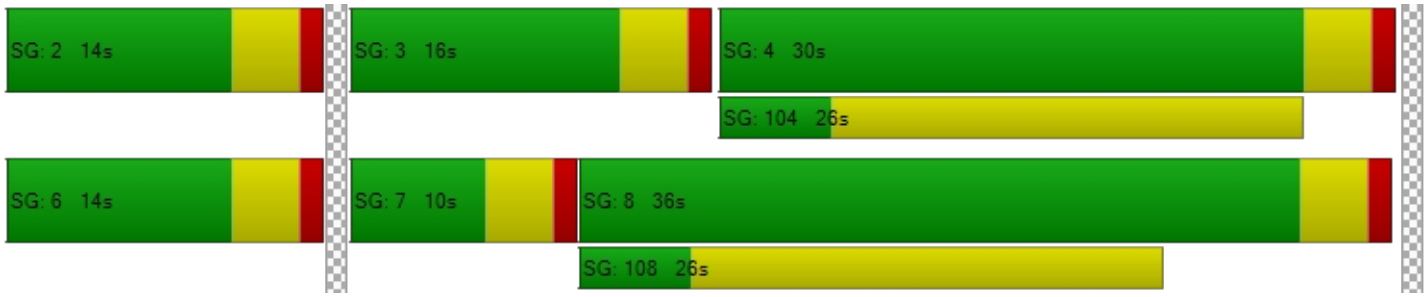
d_M, Delay for Movement [s/veh]	12.94	18.54	16.15	11.9	11.9	23.0	17.6	42.65	8.77	10.15	10.89	8.43	9.16
Movement LOS	B	B	B	B	B	C	B	D	A	B	B	A	A
d_A, Approach Delay [s/veh]	17.21			21.93				16.08			9.31		
Approach LOS	B			C				B			A		
d_I, Intersection Delay [s/veh]	18.10												
Intersection LOS	B												
Intersection V/C	0.366												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.535	2.365
Crosswalk LOS	F	F	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]	1065	865	333	333
d_b, Bicycle Delay [s]	6.56	9.67	20.87	20.87
l_b,int, Bicycle LOS Score for Intersection	2.001	2.127	2.040	1.720
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	2	0	1	2	0	1
Entry Pocket Length [ft]	350.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	800.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	Yes			Yes				Yes			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	5	214	52	1	19	123	306	74	382	0	66	744	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	435	106	2	39	250	622	150	777	0	134	1512	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	114	28	1	10	66	164	39	204	0	35	398	1
Total Analysis Volume [veh/h]	11	458	112	2	41	263	655	158	818	0	141	1592	2
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	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	0	9	26	0	10	45	0	10	45	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	36	29	36	31	46	37	37	46	37	37
g / C, Green / Cycle	0.40	0.32	0.40	0.34	0.51	0.41	0.41	0.51	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.01	0.14	0.05	0.08	0.17	0.18	0.00	0.10	0.35	0.00
s, saturation flow rate [veh/h]	1059	3204	954	3204	950	4584	1431	1463	4584	1431
c, Capacity [veh/h]	488	1029	408	1103	449	1873	584	730	1870	584
d1, Uniform Delay [s]	16.30	24.25	17.06	21.12	18.14	19.20	0.00	12.43	24.22	15.83
k, delay calibration	0.11	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
d2, Incremental Delay [s]	0.02	1.40	0.52	0.51	0.47	0.16	0.00	0.13	1.17	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
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	0.02	0.45	0.11	0.24	0.35	0.44	0.00	0.19	0.85	0.00
d, Delay for Lane Group [s/veh]	16.31	25.64	17.58	21.63	18.61	19.36	0.00	12.56	25.39	15.83
Lane Group LOS	B	C	B	C	B	B	A	B	C	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	3.90	0.58	1.98	0.72	3.60	0.00	0.63	8.97	0.02
50th-Percentile Queue Length [ft/ln]	3.34	97.62	14.53	49.54	17.99	90.03	0.00	15.63	224.19	0.55
95th-Percentile Queue Length [veh/ln]	0.24	7.03	1.05	3.57	1.29	6.48	0.00	1.13	13.88	0.04
95th-Percentile Queue Length [ft/ln]	6.01	175.72	26.15	89.17	32.37	162.05	0.00	28.14	346.96	0.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.31	25.64	0.00	17.5	17.5	21.6	0.00	18.61	19.36	0.00	12.56	25.39	15.83
Movement LOS	B	C		B	B	C		B	B	A	B	C	B
d_A, Approach Delay [s/veh]	25.42			21.06				19.24			24.33		
Approach LOS	C			C				B			C		
d_I, Intersection Delay [s/veh]	22.77												
Intersection LOS	C												
Intersection V/C	0.537												

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]	36.49	36.49	36.49	36.49
l_p,int, Pedestrian LOS Score for Intersection	2.706	2.863	3.435	3.453
Crosswalk LOS	B	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]	488	488	910	910
d_b, Bicycle Delay [s]	25.73	25.73	13.37	13.37
l_b,int, Bicycle LOS Score for Intersection	1.947	1.778	2.096	2.514
Bicycle LOS	A	A	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 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	205.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.151

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	83	39	13	64	10	103	2	88	1455	106	1	11	1060	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
In-Process Volume [veh/h]	0	0	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	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	169	79	26	130	20	209	4	179	2958	215	2	22	2155	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	44	21	7	34	5	55	1	47	778	57	1	6	567	22
Total Analysis Volume [veh/h]	178	83	27	137	21	220	4	188	3114	226	2	23	2268	89
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	180
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	Perm	Prote	Perm	Perm	Perm	Prot	Perm	Perm
Signal Group	0	6	0	0	2	0	0	3	8	0	0	7	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	10	0	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	30	0	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	45	118	0	0	9	82	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No	No			No	No	
Maximum Recall		No			No			No	No			No	No	
Pedestrian Recall		No			No			No	No			No	No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	180	180	180	180	180	180	180	180	180	180	180
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	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	0.00	2.00	2.00
g_i, Effective Green Time [s]	49	49	49	49	49	24	116	116	123	95	95
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.27	0.13	0.64	0.64	0.68	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.17	0.05	0.02	0.12	0.16	0.12	0.97	0.16	0.21	0.71	0.06
s, saturation flow rate [veh/h]	1025	1683	1431	1155	1507	1603	3204	1431	121	3204	1431
c, Capacity [veh/h]	164	456	388	296	409	210	2058	919	108	1702	760
d1, Uniform Delay [s]	81.71	50.26	48.70	61.81	56.88	77.17	32.19	13.68	47.47	42.19	21.10
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.30	0.11	0.11	0.23	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
d2, Incremental Delay [s]	94.18	0.87	0.35	5.12	6.12	14.45	232.51	0.14	1.08	151.67	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.08	0.18	0.07	0.46	0.59	0.91	1.51	0.25	0.23	1.33	0.12
d, Delay for Lane Group [s/veh]	175.88	51.14	49.05	66.93	63.00	91.62	264.70	13.82	48.55	193.86	21.16
Lane Group LOS	F	D	D	E	E	F	F	B	D	F	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	12.00	3.02	0.95	6.02	10.31	9.44	106.37	3.76	0.33	71.13	1.86
50th-Percentile Queue Length [ft/ln]	300.04	75.46	23.85	150.43	257.84	236.00	2659.1	94.03	8.29	1778.1	46.50
95th-Percentile Queue Length [veh/ln]	18.49	5.43	1.72	10.04	15.58	14.48	163.12	6.77	0.60	103.91	3.35
95th-Percentile Queue Length [ft/ln]	462.30	135.83	42.92	251.00	389.50	361.97	4078.1	169.25	14.91	2597.6	83.69

Movement, Approach, & Intersection Results

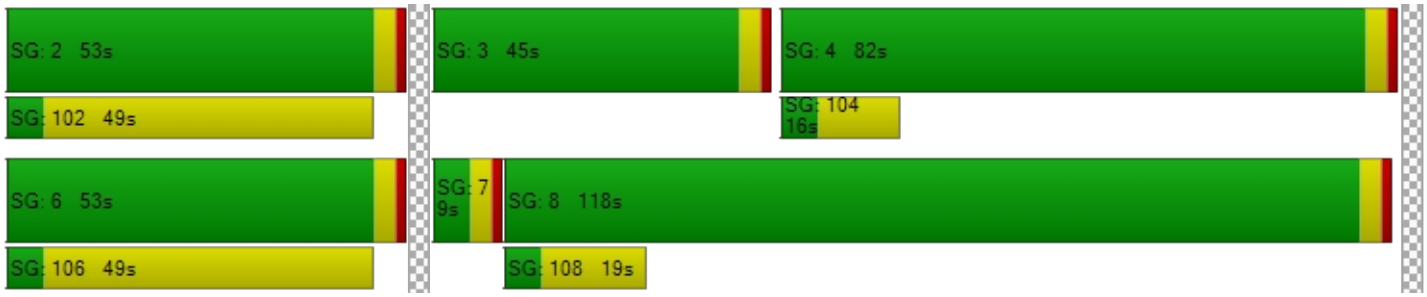
d_M, Delay for Movement [s/veh]	175.88	51.14	49.05	66.93	63.00	63.00	91.6	91.6	264.	13.8	48.5	48.5	193.	21.1
Movement LOS	F	D	D	E	E	E	F	F	F	B	D	D	F	C
d_A, Approach Delay [s/veh]	128.04			64.42			239.24				185.88			
Approach LOS	F			E			F				F			
d_I, Intersection Delay [s/veh]	205.01													
Intersection LOS	F													
Intersection V/C	1.151													

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]	81.21	81.21	81.21	81.21
l_p,int, Pedestrian LOS Score for Intersection	2.347	2.214	4.463	4.291
Crosswalk LOS	B	B	E	E
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	545	545	1267	867
d_b, Bicycle Delay [s]	47.65	47.65	12.09	28.88
l_b,int, Bicycle LOS Score for Intersection	2.035	2.183	4.318	3.523
Bicycle LOS	B	B	E	D

Sequence

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



Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.051

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	8	7	24	9	4	2	0	72	13	34	108	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
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
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	14	49	18	8	4	0	146	26	69	220	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	4	13	5	2	1	0	38	7	18	58	3
Total Analysis Volume [veh/h]	17	15	52	19	8	4	0	154	27	73	232	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.04	0.06	0.05	0.02	0.00	0.00	0.00	0.00	0.05	0.00	0.00
d_M, Delay for Movement [s/veh]	14.61	14.60	10.03	15.43	14.47	10.22	7.73	0.00	0.00	7.72	0.00	0.00
Movement LOS	B	B	B	C	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.47	0.47	0.47	0.24	0.24	0.24	0.00	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	11.77	11.77	11.77	6.11	6.11	6.11	0.00	0.00	0.00	4.14	0.00	0.00
d_A, Approach Delay [s/veh]	11.77			14.51			0.00			1.77		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.26											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	4	0	16	12	0	2	2	83	3	13	161	25
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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
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]	8	0	33	24	0	4	4	169	6	26	327	51
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	9	6	0	1	1	44	2	7	86	13
Total Analysis Volume [veh/h]	8	0	35	25	0	4	4	178	6	27	344	54
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.04	0.07	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	14.48	14.71	9.51	15.43	14.80	11.05	8.11	0.00	0.00	7.64	0.00	0.00
Movement LOS	B	B	A	C	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.19	0.19	0.19	0.24	0.24	0.24	0.01	0.00	0.00	0.06	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.86	4.86	4.86	5.91	5.91	5.91	0.26	0.00	0.00	1.48	0.00	0.00
d_A, Approach Delay [s/veh]	10.43			14.83			0.17			0.49		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	1.63											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.291

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	63	35	0	21	91	1	162	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	71	0	43	185	2	329	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	19	0	11	49	1	87	14
Total Analysis Volume [veh/h]	135	75	0	45	195	2	346	58
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Fixed time
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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	26	0	0	0	34	0	34	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	30	30	30	30
g / C, Green / Cycle	0.37	0.37	0.50	0.50	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.08	0.05	0.05	0.12	0.21	0.04
s, saturation flow rate [veh/h]	1603	1431	883	1683	1682	1431
c, Capacity [veh/h]	588	525	417	841	901	715
d1, Uniform Delay [s]	13.14	12.70	13.92	8.48	9.46	7.82
k, delay calibration	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
d2, Incremental Delay [s]	0.91	0.57	0.52	0.64	1.25	0.22
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	0.23	0.14	0.11	0.23	0.39	0.08
d, Delay for Lane Group [s/veh]	14.05	13.27	14.45	9.13	10.71	8.04
Lane Group LOS	B	B	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.25	0.67	0.44	1.30	2.60	0.36
50th-Percentile Queue Length [ft/ln]	31.15	16.81	10.94	32.56	65.11	9.00
95th-Percentile Queue Length [veh/ln]	2.24	1.21	0.79	2.34	4.69	0.65
95th-Percentile Queue Length [ft/ln]	56.08	30.26	19.68	58.61	117.19	16.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.05	13.27	14.45	14.45	9.13	10.71	10.71	8.04
Movement LOS	B	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	13.77		10.12			10.32		
Approach LOS	B		B			B		
d_I, Intersection Delay [s/veh]	11.11							
Intersection LOS	B							
Intersection V/C	0.291							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.104	2.236	2.203
Crosswalk LOS	B	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]	733	1000	1000
d_b, Bicycle Delay [s]	12.03	7.50	7.50
l_b,int, Bicycle LOS Score for Intersection	1.560	1.881	2.230
Bicycle LOS	A	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.491

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	80	386	33	40	32	187	47	43	32	69	22	47	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	163	785	67	81	65	380	96	87	65	140	45	96	199
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	207	18	21	17	100	25	23	17	37	12	25	52
Total Analysis Volume [veh/h]	172	826	71	85	68	400	101	92	68	147	47	101	209
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	0
Local Bus Stopping Rate [/h]	0	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	Fixed time
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	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	0	9	30	0	11	22	0	9	20	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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]	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	2.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	35	26	26	35	26	26	7	18	18	27	16	16
g / C, Green / Cycle	0.50	0.37	0.37	0.50	0.37	0.37	0.10	0.26	0.26	0.39	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.18	0.26	0.05	0.20	0.12	0.07	0.03	0.04	0.10	0.04	0.03	0.15
s, saturation flow rate [veh/h]	966	3204	1431	767	3204	1431	3113	1683	1431	1193	3204	1431
c, Capacity [veh/h]	559	1190	531	410	1190	531	311	433	368	576	732	327
d1, Uniform Delay [s]	10.16	18.63	14.55	11.97	15.80	14.88	29.21	20.13	21.53	13.64	21.51	24.39
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	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]	1.42	3.35	0.52	2.58	0.76	0.79	2.41	0.77	3.22	0.28	0.39	9.23
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	0.31	0.69	0.13	0.37	0.34	0.19	0.30	0.16	0.40	0.08	0.14	0.64
d, Delay for Lane Group [s/veh]	11.58	21.98	15.07	14.55	16.56	15.67	31.62	20.90	24.74	13.92	21.90	33.62
Lane Group LOS	B	C	B	B	B	B	C	C	C	B	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.49	5.62	0.76	1.41	2.21	1.11	0.79	0.90	2.19	0.48	0.67	3.80
50th-Percentile Queue Length [ft/ln]	37.37	140.59	18.94	35.32	55.21	27.68	19.65	22.40	54.64	12.08	16.79	95.09
95th-Percentile Queue Length [veh/ln]	2.69	9.51	1.36	2.54	3.98	1.99	1.42	1.61	3.93	0.87	1.21	6.85
95th-Percentile Queue Length [ft/ln]	67.27	237.81	34.10	63.58	99.38	49.83	35.38	40.33	98.36	21.74	30.23	171.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.58	21.98	15.07	14.5	14.5	16.5	15.6	31.62	20.90	24.74	13.92	21.90	33.62
Movement LOS	B	C	B	B	B	B	B	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	19.85			15.96				25.95			27.71		
Approach LOS	B			B				C			C		
d_I, Intersection Delay [s/veh]	20.74												
Intersection LOS	C												
Intersection V/C	0.491												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.669	2.486
Crosswalk LOS	F	F	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]	743	743	514	457
d_b, Bicycle Delay [s]	13.83	13.83	19.31	20.83
l_b,int, Bicycle LOS Score for Intersection	2.442	2.043	2.066	1.854
Bicycle LOS	B	B	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	30.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.685

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	2	0	1	2	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	800.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	Yes			Yes				Yes			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	2	339	68	0	36	259	144	293	768	1	184	496	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	689	138	0	73	526	293	596	1561	2	374	1008	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	181	36	0	19	138	77	157	411	1	98	265	1
Total Analysis Volume [veh/h]	4	725	145	0	77	554	308	627	1643	2	394	1061	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	0
Local Bus Stopping Rate [/h]	0	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	Fixed time
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	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	27	0	0	9	22	0	13	45	0	9	41	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	32	23	32	18	50	41	41	50	37	37
g / C, Green / Cycle	0.36	0.26	0.36	0.20	0.56	0.46	0.46	0.56	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.00	0.23	0.09	0.17	0.45	0.36	0.00	0.44	0.23	0.00
s, saturation flow rate [veh/h]	1082	3204	863	3204	1407	4584	1431	893	4584	1431
c, Capacity [veh/h]	372	819	280	641	767	2088	652	484	1885	588
d1, Uniform Delay [s]	20.00	32.23	22.05	34.82	15.23	20.79	13.36	18.62	20.30	15.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	13.46	2.43	14.48	9.45	3.08	0.01	14.01	1.22	0.02
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	0.01	0.89	0.28	0.86	0.82	0.79	0.00	0.81	0.56	0.01
d, Delay for Lane Group [s/veh]	20.05	45.69	24.47	49.29	24.68	23.87	13.37	32.63	21.53	15.67
Lane Group LOS	C	D	C	D	C	C	B	C	C	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	8.79	1.24	6.94	3.79	8.78	0.02	2.54	5.14	0.05
50th-Percentile Queue Length [ft/ln]	1.44	219.82	31.00	173.62	94.75	219.54	0.52	63.51	128.44	1.16
95th-Percentile Queue Length [veh/ln]	0.10	13.66	2.23	11.27	6.82	13.64	0.04	4.57	8.86	0.08
95th-Percentile Queue Length [ft/ln]	2.59	341.40	55.80	281.66	170.55	341.04	0.93	114.32	221.38	2.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.05	45.69	0.00	24.4	24.4	49.2	0.00	24.68	23.87	13.37	32.63	21.53	15.67
Movement LOS	C	D		C	C	D		C	C	B	C	C	B
d_A, Approach Delay [s/veh]	45.55			46.27				24.08			24.51		
Approach LOS	D			D				C			C		
d_I, Intersection Delay [s/veh]	30.03												
Intersection LOS	C												
Intersection V/C	0.685												

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	3.040	3.335	3.515	3.567
Crosswalk LOS	C	C	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]	511	400	911	822
d_b, Bicycle Delay [s]	24.94	28.80	13.34	15.61
l_b,int, Bicycle LOS Score for Intersection	2.161	2.017	2.809	2.362
Bicycle LOS	B	B	C	B

Sequence

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

Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	180.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.230

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	450.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	127	21	4	37	17	111	1	42	728	53	0	13	1279	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	0	11	0	0	0	0	0	0	14	0	4	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	301	43	19	75	35	226	2	85	1480	122	0	30	2600	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	79	11	5	20	9	59	1	22	389	32	0	8	684	11
Total Analysis Volume [veh/h]	317	45	20	79	37	238	2	89	1558	128	0	32	2737	45
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	160
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	Perm	Prote	Perm	Perm	Perm	Perm	Perm	Perm
Signal Group	0	6	0	0	2	0	0	3	8	0	0	0	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	10	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	30	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	57	0	0	57	0	0	11	103	0	0	0	92	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No	No				No	
Maximum Recall		No			No			No	No				No	
Pedestrian Recall		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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	160	160	160	160	160	160	160	160	160	160	160
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	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
g_i, Effective Green Time [s]	53	53	53	53	53	7	99	99	88	88	88
g / C, Green / Cycle	0.33	0.33	0.33	0.33	0.33	0.04	0.62	0.62	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.32	0.03	0.01	0.07	0.18	0.06	0.49	0.09	0.12	0.85	0.03
s, saturation flow rate [veh/h]	994	1683	1431	1203	1518	1603	3204	1431	263	3204	1431
c, Capacity [veh/h]	220	559	476	411	505	70	1979	883	89	1759	785
d1, Uniform Delay [s]	68.80	36.63	36.16	41.44	43.54	76.50	22.77	12.85	63.19	36.09	16.81
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.31	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
d2, Incremental Delay [s]	222.76	0.28	0.17	1.04	4.18	154.87	0.72	0.07	2.44	252.11	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.44	0.08	0.04	0.19	0.54	1.30	0.79	0.14	0.36	1.56	0.06
d, Delay for Lane Group [s/veh]	291.57	36.91	36.32	42.48	47.72	231.37	23.49	12.92	65.62	288.20	16.84
Lane Group LOS	F	D	D	D	D	F	C	B	E	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	22.69	1.27	0.56	2.49	9.59	5.84	19.83	1.84	1.26	92.77	0.75
50th-Percentile Queue Length [ft/ln]	567.23	31.82	14.03	62.29	239.76	145.96	495.82	45.97	31.54	2319.3	18.76
95th-Percentile Queue Length [veh/ln]	36.75	2.29	1.01	4.48	14.67	10.43	27.14	3.31	2.27	143.10	1.35
95th-Percentile Queue Length [ft/ln]	918.81	57.28	25.25	112.12	366.73	260.79	678.41	82.74	56.76	3577.5	33.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	291.57	36.91	36.32	42.48	47.72	47.72	231.	231.	23.4	12.9	65.6	65.6	288.	16.8
Movement LOS	F	D	D	D	D	D	F	F	C	B	E	E	F	B
d_A, Approach Delay [s/veh]	248.20			46.55			33.38				281.33			
Approach LOS	F			D			C				F			
d_I, Intersection Delay [s/veh]	180.64													
Intersection LOS	F													
Intersection V/C	1.230													

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]	71.25	71.25	71.25	71.25
l_p,int, Pedestrian LOS Score for Intersection	2.370	2.142	4.368	3.922
Crosswalk LOS	B	B	E	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]	663	663	1238	1100
d_b, Bicycle Delay [s]	35.78	35.78	11.63	16.20
l_b,int, Bicycle LOS Score for Intersection	2.190	2.144	2.952	3.881
Bicycle LOS	B	B	C	D

Sequence

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

Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.054

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	15	3	41	8	6	1	1	48	5	21	83	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	32	0	104	0	0	0	0	7	11	33	22	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]	62	6	187	16	12	2	2	105	21	76	191	6
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	2	49	4	3	1	1	28	6	20	50	2
Total Analysis Volume [veh/h]	65	6	197	17	13	2	2	111	22	80	201	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.01	0.21	0.05	0.03	0.00	0.00	0.00	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	15.86	15.88	11.75	17.44	13.99	10.21	7.64	0.00	0.00	7.62	0.00	0.00
Movement LOS	C	C	B	C	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.71	1.71	1.71	0.28	0.28	0.28	0.00	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	42.68	42.68	42.68	7.01	7.01	7.01	0.11	0.00	0.00	4.37	0.00	0.00
d_A, Approach Delay [s/veh]	12.84			15.59			0.11			2.13		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	6.32											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.143

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	5	1	20	20	0	3	2	86	2	6	101	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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	56	0	0	0	0	104	7	22	33	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]	32	2	97	41	0	6	4	279	11	34	238	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	1	26	11	0	2	1	73	3	9	63	4
Total Analysis Volume [veh/h]	34	2	102	43	0	6	4	294	12	36	251	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.14	0.14	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	16.45	16.38	11.72	18.92	16.46	11.57	7.78	0.00	0.00	7.95	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.90	0.90	0.90	0.52	0.52	0.52	0.01	0.00	0.00	0.09	0.00	0.00
95th-Percentile Queue Length [ft/ln]	22.54	22.54	22.54	13.10	13.10	13.10	0.23	0.00	0.00	2.21	0.00	0.00
d_A, Approach Delay [s/veh]	12.95			18.02			0.10			0.95		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	3.74											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.254

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	26	16	1	18	109	0	96	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	32	128	0	44	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	44	2	69	350	0	239	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	12	1	18	92	0	63	4
Total Analysis Volume [veh/h]	56	46	2	73	368	0	252	17
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Fixed time
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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	26	0	0	0	34	0	34	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	30	30	30	30
g / C, Green / Cycle	0.37	0.37	0.50	0.50	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.08	0.22	0.15	0.01
s, saturation flow rate [veh/h]	1603	1431	999	1683	1683	1431
c, Capacity [veh/h]	588	525	498	841	901	715
d1, Uniform Delay [s]	12.47	12.43	12.52	9.60	8.82	7.59
k, delay calibration	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
d2, Incremental Delay [s]	0.32	0.33	0.64	1.65	0.77	0.06
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	0.10	0.09	0.15	0.44	0.28	0.02
d, Delay for Lane Group [s/veh]	12.79	12.76	13.16	11.25	9.59	7.65
Lane Group LOS	B	B	B	B	A	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.48	0.40	0.68	2.85	1.74	0.10
50th-Percentile Queue Length [ft/ln]	12.12	10.05	16.90	71.15	43.54	2.55
95th-Percentile Queue Length [veh/ln]	0.87	0.72	1.22	5.12	3.13	0.18
95th-Percentile Queue Length [ft/ln]	21.81	18.08	30.42	128.06	78.36	4.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.79	12.76	13.16	13.16	11.25	9.59	9.59	7.65
Movement LOS	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	12.78		11.57			9.47		
Approach LOS	B		B			A		
d_I, Intersection Delay [s/veh]	11.03							
Intersection LOS	B							
Intersection V/C	0.254							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.100	2.309	2.184
Crosswalk LOS	B	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]	733	1000	1000
d_b, Bicycle Delay [s]	12.03	7.50	7.50
l_b,int, Bicycle LOS Score for Intersection	1.560	2.170	2.003
Bicycle LOS	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Base Volume Input [veh/h]	56	186	8	7	17	295	19	26	32	78	20	29	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	0	0	0	0	11	32	11	85	0	11	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	136	378	16	14	35	600	50	85	76	244	41	70	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	99	4	4	9	158	13	22	20	64	11	18	22
Total Analysis Volume [veh/h]	143	398	17	15	37	632	53	89	80	257	43	74	89
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	0
Local Bus Stopping Rate [/h]	0	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	Fixed time
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	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	0	9	30	0	54	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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	0.00	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	2.00	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	2.00	2.00	2.00
g_i, Effective Green Time [s]	35	26	26	35	26	26	0	17	17	17	17	17
g / C, Green / Cycle	0.58	0.43	0.43	0.58	0.43	0.43	0.00	0.28	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.17	0.12	0.01	0.05	0.20	0.04	0.11	0.05	0.18	0.05	0.02	0.06
s, saturation flow rate [veh/h]	865	3204	1431	1020	3204	1431	820	1683	1431	939	3204	1431
c, Capacity [veh/h]	583	1389	620	698	1389	620	120	477	405	321	908	405
d1, Uniform Delay [s]	6.45	11.00	9.75	5.59	12.00	10.00	30.00	16.18	18.78	19.41	15.77	16.43
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	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]	1.00	0.52	0.08	0.21	1.08	0.27	33.44	0.76	7.37	0.86	0.18	1.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.29	0.03	0.07	0.46	0.09	0.74	0.17	0.63	0.13	0.08	0.22
d, Delay for Lane Group [s/veh]	7.45	11.52	9.83	5.80	13.08	10.28	63.44	16.94	26.15	20.28	15.95	17.68
Lane Group LOS	A	B	A	A	B	B	E	B	C	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.76	1.54	0.12	0.25	2.70	0.40	1.23	0.84	3.60	0.54	0.37	1.00
50th-Percentile Queue Length [ft/ln]	19.10	38.49	3.08	6.16	67.53	9.88	30.85	21.06	89.92	13.43	9.13	25.00
95th-Percentile Queue Length [veh/ln]	1.37	2.77	0.22	0.44	4.86	0.71	2.22	1.52	6.47	0.97	0.66	1.80
95th-Percentile Queue Length [ft/ln]	34.37	69.27	5.54	11.08	121.55	17.79	55.53	37.92	161.85	24.18	16.44	45.00

Movement, Approach, & Intersection Results

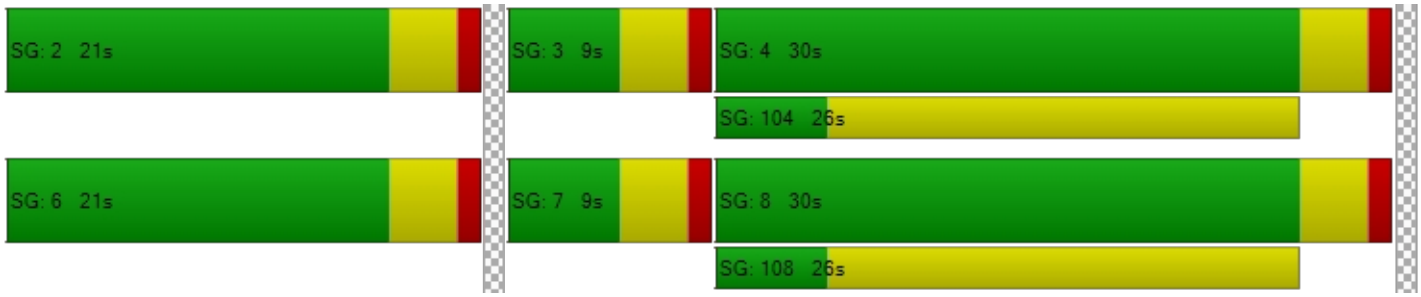
d_M, Delay for Movement [s/veh]	7.45	11.52	9.83	5.80	5.80	13.0	10.2	63.44	16.94	26.15	20.28	15.95	17.68
Movement LOS	A	B	A	A	A	B	B	E	B	C	C	B	B
d_A, Approach Delay [s/veh]	10.43			12.36				32.21			17.60		
Approach LOS	B			B				C			B		
d_I, Intersection Delay [s/veh]	16.75												
Intersection LOS	B												
Intersection V/C	0.424												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.660	2.381
Crosswalk LOS	F	F	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]	867	867	567	567
d_b, Bicycle Delay [s]	9.63	9.63	15.41	15.41
l_b,int, Bicycle LOS Score for Intersection	2.020	2.137	2.263	1.730
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.552

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	2	0	1	2	0	1
Entry Pocket Length [ft]	350.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	800.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	Yes			Yes				Yes			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	5	214	52	1	19	123	306	74	382	0	66	744	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	21	32	32	11	0	0	0	0	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	446	106	2	60	282	654	161	777	0	134	1512	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	117	28	1	16	74	172	42	204	0	35	398	1
Total Analysis Volume [veh/h]	11	469	112	2	63	297	688	169	818	0	141	1592	2
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	0
Local Bus Stopping Rate [/h]	0	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	Fixed time
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	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	0	9	30	0	9	42	0	9	42	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	35	26	35	26	47	38	38	47	38	38
g / C, Green / Cycle	0.39	0.29	0.39	0.29	0.52	0.42	0.42	0.52	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.01	0.15	0.07	0.09	0.18	0.18	0.00	0.10	0.35	0.00
s, saturation flow rate [veh/h]	1100	3204	986	3204	939	4584	1431	1458	4584	1431
c, Capacity [veh/h]	473	926	398	926	468	1936	604	764	1936	604
d1, Uniform Delay [s]	17.16	26.66	18.24	25.08	16.96	18.28	0.00	11.57	23.01	15.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	1.98	0.88	0.92	2.16	0.68	0.00	0.53	4.10	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
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	0.02	0.51	0.16	0.32	0.36	0.42	0.00	0.18	0.82	0.00
d, Delay for Lane Group [s/veh]	17.25	28.64	19.12	26.00	19.12	18.96	0.00	12.10	27.11	15.05
Lane Group LOS	B	C	B	C	B	B	A	B	C	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.15	4.28	0.92	2.52	0.85	3.58	0.00	0.64	9.21	0.02
50th-Percentile Queue Length [ft/ln]	3.67	107.09	23.04	62.96	21.21	89.53	0.00	16.04	230.22	0.56
95th-Percentile Queue Length [veh/ln]	0.26	7.68	1.66	4.53	1.53	6.45	0.00	1.15	14.19	0.04
95th-Percentile Queue Length [ft/ln]	6.60	191.95	41.48	113.32	38.17	161.15	0.00	28.87	354.64	1.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.25	28.64	0.00	19.1	19.1	26.0	0.00	19.12	18.96	0.00	12.10	27.11	15.05
Movement LOS	B	C		B	B	C		B	B	A	B	C	B
d_A, Approach Delay [s/veh]	28.38			24.76				18.99			25.88		
Approach LOS	C			C				B			C		
d_I, Intersection Delay [s/veh]	24.19												
Intersection LOS	C												
Intersection V/C	0.552												

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	2.718	2.894	3.436	3.464
Crosswalk LOS	B	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]	578	578	844	844
d_b, Bicycle Delay [s]	22.76	22.76	15.02	15.02
l_b,int, Bicycle LOS Score for Intersection	1.956	1.806	2.102	2.514
Bicycle LOS	A	A	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 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	188.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.175

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	200.00	120.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	1	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	980.	0.00	0.00	0.00	950.
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	83	39	13	64	10	103	2	88	1455	106	1	11	1060	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	29	0	7	0	0	0	0	0	0	48	0	12	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	198	79	33	130	20	209	4	179	2958	263	2	34	2155	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	52	21	9	34	5	55	1	47	778	69	1	9	567	22
Total Analysis Volume [veh/h]	208	83	35	137	21	220	4	188	3114	277	2	36	2268	89
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	180
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	Perm	Prote	Perm	Perm	Perm	Perm	Perm	Perm
Signal Group	0	6	0	0	2	0	0	3	8	0	0	0	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	10	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	30	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	54	0	0	54	0	0	33	126	0	0	0	93	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No	No				No	
Maximum Recall		No			No			No	No				No	
Pedestrian Recall		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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	180	180	180	180	180	180	180	180	180	180	180
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	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
g_i, Effective Green Time [s]	50	50	50	50	50	23	122	122	95	95	95
g / C, Green / Cycle	0.28	0.28	0.28	0.28	0.28	0.13	0.68	0.68	0.53	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.20	0.05	0.02	0.12	0.16	0.12	0.97	0.19	0.79	0.71	0.06
s, saturation flow rate [veh/h]	1025	1683	1431	1146	1507	1603	3204	1431	48	3204	1431
c, Capacity [veh/h]	171	466	396	301	417	209	2175	971	40	1686	753
d1, Uniform Delay [s]	81.16	49.50	48.23	60.96	56.01	77.31	28.90	11.51	89.96	42.62	21.53
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.24	0.27	0.11	0.50	0.23	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
d2, Incremental Delay [s]	138.86	0.84	0.44	4.90	5.73	27.40	195.73	0.16	127.76	157.11	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.22	0.18	0.09	0.46	0.58	0.92	1.43	0.29	0.95	1.34	0.12
d, Delay for Lane Group [s/veh]	220.01	50.33	48.68	65.86	61.74	104.72	224.63	11.67	217.73	199.72	21.60
Lane Group LOS	F	D	D	E	E	F	F	B	F	F	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	14.61	2.99	1.23	5.97	10.20	10.19	99.94	4.18	3.17	71.83	1.88
50th-Percentile Queue Length [ft/ln]	365.30	74.79	30.83	149.15	255.06	254.87	2498.5	104.61	79.18	1795.8	47.06
95th-Percentile Queue Length [veh/ln]	23.15	5.38	2.22	9.97	15.44	15.43	150.69	7.53	5.70	105.29	3.39
95th-Percentile Queue Length [ft/ln]	578.80	134.61	55.50	249.29	386.02	385.78	3767.2	188.29	142.52	2632.3	84.71

Movement, Approach, & Intersection Results

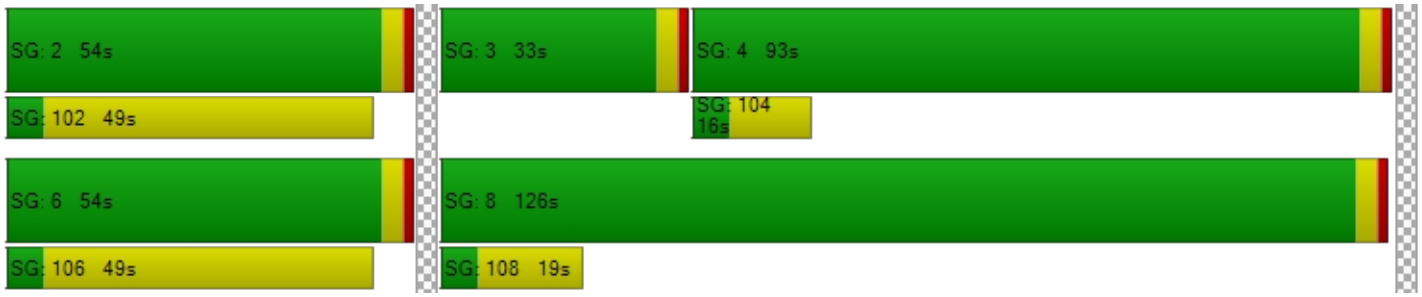
d_M, Delay for Movement [s/veh]	220.01	50.33	48.68	65.86	61.74	61.74	104.	104.	224.	11.6	217.	217.	199.	21.6
Movement LOS	F	D	D	E	E	E	F	F	F	B	F	F	F	C
d_A, Approach Delay [s/veh]	158.42			63.23			201.74				193.39			
Approach LOS	F			E			F				F			
d_I, Intersection Delay [s/veh]	188.80													
Intersection LOS	F													
Intersection V/C	1.175													

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]	81.21	81.21	81.21	81.21
l_p,int, Pedestrian LOS Score for Intersection	2.406	2.214	4.527	4.327
Crosswalk LOS	B	B	E	E
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	556	1356	989
d_b, Bicycle Delay [s]	46.93	46.93	9.33	22.99
l_b,int, Bicycle LOS Score for Intersection	2.098	2.183	4.360	3.534
Bicycle LOS	B	B	E	D

Sequence

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



Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	26.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.100

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	8	7	24	9	4	2	0	72	13	34	108	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
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	63	0	0	0	0	24	36	108	14	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]	38	14	112	18	8	4	0	170	62	177	234	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	4	29	5	2	1	0	45	16	47	62	3
Total Analysis Volume [veh/h]	40	15	118	19	8	4	0	179	65	186	246	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.06	0.14	0.10	0.03	0.01	0.00	0.00	0.00	0.14	0.00	0.00
d_M, Delay for Movement [s/veh]	23.88	23.18	13.59	26.57	21.97	12.11	7.76	0.00	0.00	8.17	0.00	0.00
Movement LOS	C	C	B	D	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.64	1.64	1.64	0.47	0.47	0.47	0.00	0.00	0.00	0.49	0.00	0.00
95th-Percentile Queue Length [ft/ln]	40.98	40.98	40.98	11.74	11.74	11.74	0.00	0.00	0.00	12.24	0.00	0.00
d_A, Approach Delay [s/veh]	16.80			23.51			0.00			3.41		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	5.77											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	27.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.134

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	4	0	16	12	0	2	2	83	3	13	161	25
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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	42	0	0	0	0	63	24	72	108	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]	22	0	75	24	0	4	4	232	30	98	435	51
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	20	6	0	1	1	61	8	26	114	13
Total Analysis Volume [veh/h]	23	0	79	25	0	4	4	244	32	103	458	54
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.10	0.13	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.00
d_M, Delay for Movement [s/veh]	23.30	22.74	11.51	27.08	23.45	14.02	8.43	0.00	0.00	8.04	0.00	0.00
Movement LOS	C	C	B	D	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.77	0.77	0.77	0.48	0.48	0.48	0.01	0.00	0.00	0.26	0.00	0.00
95th-Percentile Queue Length [ft/ln]	19.20	19.20	19.20	12.00	12.00	12.00	0.29	0.00	0.00	6.51	0.00	0.00
d_A, Approach Delay [s/veh]	14.17			25.27			0.12			1.35		
Approach LOS	B			D			A			A		
d_I, Intersection Delay [s/veh]	2.96											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	63	35	0	21	91	1	162	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	0	21	84	0	144	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	107	0	64	269	2	473	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	28	0	17	71	1	124	14
Total Analysis Volume [veh/h]	135	113	0	67	283	2	498	58
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Fixed time
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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	23	0	0	0	37	0	37	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	33	33	33	33
g / C, Green / Cycle	0.32	0.32	0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.09	0.17	0.30	0.04
s, saturation flow rate [veh/h]	1603	1431	767	1683	1682	1431
c, Capacity [veh/h]	508	453	371	926	985	787
d1, Uniform Delay [s]	15.30	15.21	14.91	7.30	8.64	6.33
k, delay calibration	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
d2, Incremental Delay [s]	1.28	1.32	1.07	0.85	1.87	0.18
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	0.27	0.25	0.18	0.31	0.51	0.07
d, Delay for Lane Group [s/veh]	16.58	16.53	15.98	8.16	10.51	6.51
Lane Group LOS	B	B	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.40	1.18	0.71	1.71	3.63	0.31
50th-Percentile Queue Length [ft/ln]	35.02	29.53	17.64	42.82	90.82	7.63
95th-Percentile Queue Length [veh/ln]	2.52	2.13	1.27	3.08	6.54	0.55
95th-Percentile Queue Length [ft/ln]	63.04	53.15	31.76	77.08	163.48	13.73

Movement, Approach, & Intersection Results

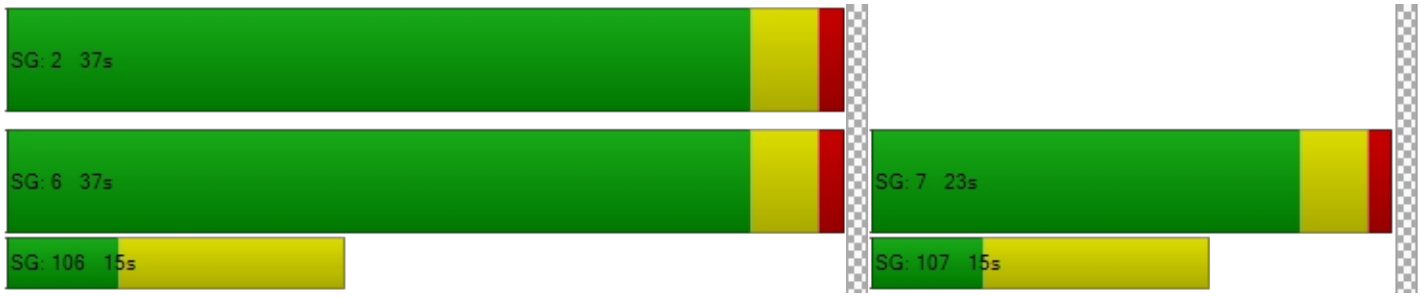
d_M, Delay for Movement [s/veh]	16.58	16.53	15.98	15.98	8.16	10.51	10.51	6.51
Movement LOS	B	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	16.55		9.65			10.09		
Approach LOS	B		A			B		
d_I, Intersection Delay [s/veh]	11.35							
Intersection LOS	B							
Intersection V/C	0.381							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.158	2.381	2.294
Crosswalk LOS	B	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]	633	1100	1100
d_b, Bicycle Delay [s]	14.01	6.08	6.08
l_b,int, Bicycle LOS Score for Intersection	1.560	2.027	2.480
Bicycle LOS	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	120.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	80	386	33	40	32	187	47	43	32	69	22	47	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	72	0	0	0	0	0	36	21	7	56	0	36	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	235	785	67	81	65	380	132	108	72	196	45	132	199
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	207	18	21	17	100	35	28	19	52	12	35	52
Total Analysis Volume [veh/h]	247	826	71	85	68	400	139	114	76	206	47	139	209
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	0
Local Bus Stopping Rate [/h]	0	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	Fixed time
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	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	0	9	30	0	11	22	0	9	20	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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]	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	2.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	35	26	26	35	26	26	7	18	18	27	16	16
g / C, Green / Cycle	0.50	0.37	0.37	0.50	0.37	0.37	0.10	0.26	0.26	0.39	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.26	0.26	0.05	0.20	0.12	0.10	0.04	0.05	0.14	0.04	0.04	0.15
s, saturation flow rate [veh/h]	944	3204	1431	767	3204	1431	3113	1683	1431	1147	3204	1431
c, Capacity [veh/h]	551	1190	531	410	1190	531	311	433	368	556	732	327
d1, Uniform Delay [s]	10.76	18.63	14.55	11.97	15.80	15.32	29.43	20.23	22.56	13.65	21.77	24.39
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	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]	2.63	3.35	0.52	2.58	0.76	1.20	3.30	0.88	6.04	0.30	0.57	9.23
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	0.45	0.69	0.13	0.37	0.34	0.26	0.37	0.18	0.56	0.08	0.19	0.64
d, Delay for Lane Group [s/veh]	13.38	21.98	15.07	14.55	16.56	16.51	32.73	21.11	28.61	13.95	22.35	33.62
Lane Group LOS	B	C	B	B	B	B	C	C	C	B	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.33	5.62	0.76	1.41	2.21	1.58	0.99	1.01	3.35	0.48	0.94	3.80
50th-Percentile Queue Length [ft/ln]	58.32	140.59	18.94	35.32	55.21	39.48	24.85	25.21	83.63	12.12	23.47	95.09
95th-Percentile Queue Length [veh/ln]	4.20	9.51	1.36	2.54	3.98	2.84	1.79	1.82	6.02	0.87	1.69	6.85
95th-Percentile Queue Length [ft/ln]	104.97	237.81	34.10	63.58	99.38	71.07	44.74	45.38	150.53	21.82	42.24	171.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.38	21.98	15.07	14.5	14.5	16.5	16.5	32.73	21.11	28.61	13.95	22.35	33.62
Movement LOS	B	C	B	B	B	B	B	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	19.70			16.11				28.36			27.31		
Approach LOS	B			B				C			C		
d_I, Intersection Delay [s/veh]	21.20												
Intersection LOS	C												
Intersection V/C	0.498												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.757	2.495
Crosswalk LOS	F	F	C	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]	743	743	514	457
d_b, Bicycle Delay [s]	13.83	13.83	19.31	20.83
l_b,int, Bicycle LOS Score for Intersection	2.503	2.074	2.213	1.885
Bicycle LOS	B	B	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	33.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	New Meridian Rd			New Meridian Rd			US 24			US 24		
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	2	2	0	1	2	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.00	100.00	220.00	350.00	100.00	350.00	390.00	100.00	800.00
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]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd			US 24			US 24		
Base Volume Input [veh/h]	2	339	68	36	259	144	293	768	1	184	496	2
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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	0	14	21	21	36	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	725	138	87	547	314	632	1561	2	374	1008	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	191	36	23	144	83	166	411	1	98	265	1
Total Analysis Volume [veh/h]	4	763	145	92	576	331	665	1643	2	394	1061	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]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
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	Unsign	ProtPer	Permis	Unsign	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	35	0	9	35	0	15	44	0	12	41	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	10	0	0	32	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	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	40	31	40	31	52	40	40	52	37	37
g / C, Green / Cycle	0.40	0.31	0.40	0.31	0.52	0.40	0.40	0.52	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.00	0.24	0.11	0.18	0.45	0.36	0.00	0.38	0.23	0.00
s, saturation flow rate [veh/h]	902	3204	803	3204	1473	4584	1431	1028	4584	1431
c, Capacity [veh/h]	351	993	289	993	724	1834	572	491	1696	529
d1, Uniform Delay [s]	19.19	31.24	21.82	29.02	19.52	28.05	18.03	21.52	25.82	19.90
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	5.69	2.89	2.47	18.53	7.31	0.01	13.04	1.75	0.03
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	0.01	0.77	0.32	0.58	0.92	0.90	0.00	0.80	0.63	0.01
d, Delay for Lane Group [s/veh]	19.25	36.94	24.71	31.49	38.05	35.37	18.04	34.56	27.57	19.93
Lane Group LOS	B	D	C	C	D	D	B	C	C	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	8.82	1.55	5.98	5.80	12.04	0.03	2.99	6.48	0.06
50th-Percentile Queue Length [ft/ln]	1.50	220.62	38.87	149.45	145.05	300.89	0.68	74.72	161.95	1.45
95th-Percentile Queue Length [veh/ln]	0.11	13.70	2.80	9.99	9.75	17.73	0.05	5.38	10.65	0.10
95th-Percentile Queue Length [ft/ln]	2.71	342.42	69.97	249.70	243.81	443.13	1.22	134.50	266.31	2.60

Movement, Approach, & Intersection Results

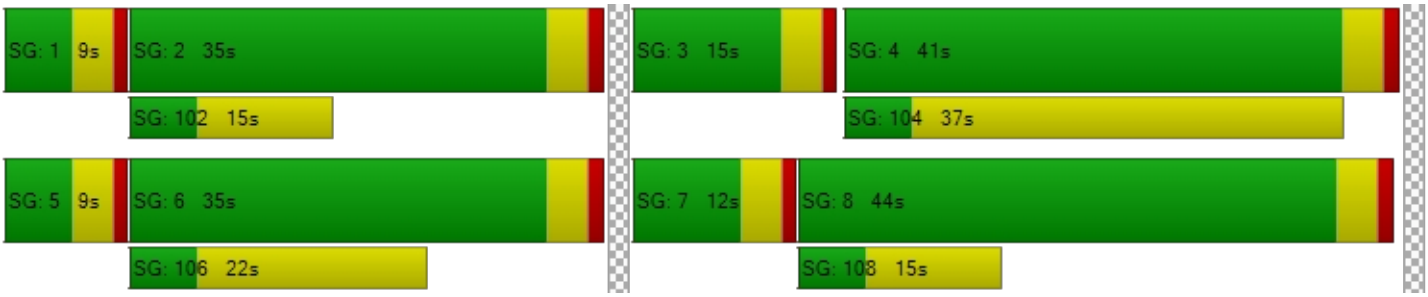
d_M, Delay for Movement [s/veh]	19.25	36.94	0.00	24.71	31.49	0.00	38.05	35.37	18.04	34.56	27.57	19.93
Movement LOS	B	D		C	C		D	D	B	C	C	B
d_A, Approach Delay [s/veh]	36.84			30.56			36.12			29.44		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	33.64											
Intersection LOS	C											
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]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	3.025	3.311	3.578	3.587
Crosswalk LOS	C	C	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]	620	620	800	740
d_b, Bicycle Delay [s]	23.81	23.81	18.00	19.85
I_b,int, Bicycle LOS Score for Intersection	2.192	2.111	2.830	2.362
Bicycle LOS	B	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	36.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.778

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	2	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	380.00	100.00	200.00	95.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	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	0.00	0.00
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	127	21	4	37	17	111	1	42	728	53	0	13	1279	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
In-Process Volume [veh/h]	0	0	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	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	258	43	8	75	35	226	2	85	1480	108	0	26	2600	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	68	11	2	20	9	59	1	22	389	28	0	7	684	11
Total Analysis Volume [veh/h]	272	45	8	79	37	238	2	89	1558	114	0	27	2737	45
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	130
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	Perm	Prote	Perm	Perm	Perm	Prote	Perm	Perm
Signal Group	0	6	0	0	2	0	0	3	8	0	0	7	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	10	0	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	30	0	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	12	68	0	0	9	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No	No			No	No	
Maximum Recall		No			No			No	No			No	No	
Pedestrian Recall		No			No			No	No			No	No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	51	51	51	51	51	8	64	64	3	59	59
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.39	0.06	0.49	0.49	0.02	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.27	0.03	0.01	0.03	0.18	0.06	0.25	0.08	0.02	0.45	0.03
s, saturation flow rate [veh/h]	994	1683	1431	2361	1518	1603	6113	1431	1603	6113	1431
c, Capacity [veh/h]	304	657	559	918	593	99	3015	706	38	2785	652
d1, Uniform Delay [s]	50.17	24.81	24.28	27.08	29.49	60.69	22.40	18.14	62.98	34.88	19.88
k, delay calibration	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
d2, Incremental Delay [s]	30.73	0.20	0.05	0.18	2.60	26.63	0.14	0.11	20.77	4.87	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.07	0.01	0.09	0.46	0.92	0.52	0.16	0.70	0.98	0.07
d, Delay for Lane Group [s/veh]	80.90	25.01	24.33	27.27	32.09	87.32	22.54	18.24	83.76	39.75	19.93
Lane Group LOS	F	C	C	C	C	F	C	B	F	D	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	11.57	0.91	0.16	0.84	6.86	3.61	7.48	1.79	1.08	20.29	0.73
50th-Percentile Queue Length [ft/ln]	289.22	22.79	3.99	21.07	171.43	90.28	187.07	44.68	26.98	507.29	18.34
95th-Percentile Queue Length [veh/ln]	17.15	1.64	0.29	1.52	11.15	6.50	11.97	3.22	1.94	27.68	1.32
95th-Percentile Queue Length [ft/ln]	428.67	41.02	7.18	37.93	278.80	162.51	299.22	80.42	48.56	691.98	33.01

Movement, Approach, & Intersection Results

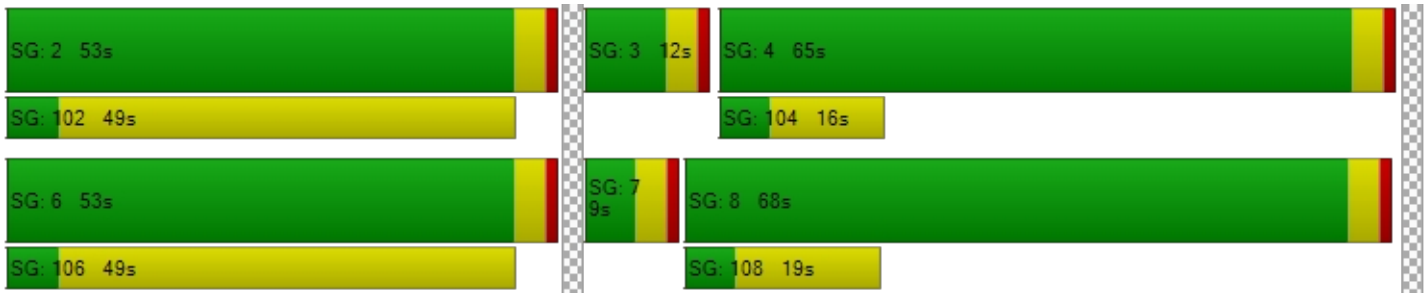
d_M, Delay for Movement [s/veh]	80.90	25.01	24.33	27.27	32.09	32.09	87.3	87.3	22.5	18.2	83.7	83.7	39.7	19.9
Movement LOS	F	C	C	C	C	C	F	F	C	B	F	F	D	B
d_A, Approach Delay [s/veh]	71.77			31.01			25.61				39.85			
Approach LOS	E			C			C				D			
d_I, Intersection Delay [s/veh]	36.45													
Intersection LOS	D													
Intersection V/C	0.778													

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]	56.31	56.31	56.31	56.31
l_p,int, Pedestrian LOS Score for Intersection	2.293	2.280	4.298	3.933
Crosswalk LOS	B	B	E	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]	754	754	985	938
d_b, Bicycle Delay [s]	25.23	25.23	16.75	18.31
l_b,int, Bicycle LOS Score for Intersection	2.096	2.144	2.250	2.718
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	150.00	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			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	15	3	41	8	6	1	1	48	5	21	83	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
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	6	83	16	12	2	2	98	10	43	169	6
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	2	22	4	3	1	1	26	3	11	44	2
Total Analysis Volume [veh/h]	32	6	87	17	13	2	2	103	11	45	178	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.09	0.04	0.02	0.00	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	12.54	12.69	9.71	13.13	12.29	9.66	7.59	0.00	0.00	7.52	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.58	0.58	0.58	0.20	0.20	0.20	0.00	0.00	0.00	0.09	0.00	0.00
95th-Percentile Queue Length [ft/ln]	14.43	14.43	14.43	5.03	5.03	5.03	0.11	0.00	0.00	2.36	0.00	0.00
d_A, Approach Delay [s/veh]	10.58			12.57			0.13			1.48		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.14											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.090

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	5	1	20	20	0	3	2	86	2	6	101	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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
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]	10	2	41	41	0	6	4	175	4	12	205	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	11	11	0	2	1	46	1	3	54	4
Total Analysis Volume [veh/h]	11	2	43	43	0	6	4	184	4	13	216	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.05	0.09	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	12.41	12.63	9.60	13.35	12.96	10.19	7.70	0.00	0.00	7.62	0.00	0.00
Movement LOS	B	B	A	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.24	0.32	0.32	0.32	0.01	0.00	0.00	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.12	6.12	6.12	8.08	8.08	8.08	0.23	0.00	0.00	0.71	0.00	0.00
d_A, Approach Delay [s/veh]	10.26			12.96			0.16			0.41		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	2.48											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.174

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	26	16	1	18	109	0	96	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	33	2	37	222	0	195	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	9	1	10	58	0	51	4
Total Analysis Volume [veh/h]	56	35	2	39	234	0	205	17
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	20	0	0	0	40	0	40	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	48	48	48	48
g / C, Green / Cycle	0.07	0.07	0.80	0.80	0.80	0.80
(v / s)_i Volume / Saturation Flow Rate	0.03	0.02	0.04	0.14	0.12	0.01
s, saturation flow rate [veh/h]	1603	1431	1043	1683	1683	1431
c, Capacity [veh/h]	107	96	884	1346	1406	1144
d1, Uniform Delay [s]	27.09	26.79	2.23	1.40	1.37	1.22
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.91	2.33	0.10	0.28	0.22	0.02
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	0.52	0.37	0.05	0.17	0.15	0.01
d, Delay for Lane Group [s/veh]	31.00	29.13	2.33	1.68	1.59	1.24
Lane Group LOS	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.84	0.51	0.08	0.16	0.13	0.01
50th-Percentile Queue Length [ft/ln]	20.98	12.72	2.03	4.06	3.36	0.28
95th-Percentile Queue Length [veh/ln]	1.51	0.92	0.15	0.29	0.24	0.02
95th-Percentile Queue Length [ft/ln]	37.77	22.90	3.65	7.31	6.05	0.50

Movement, Approach, & Intersection Results

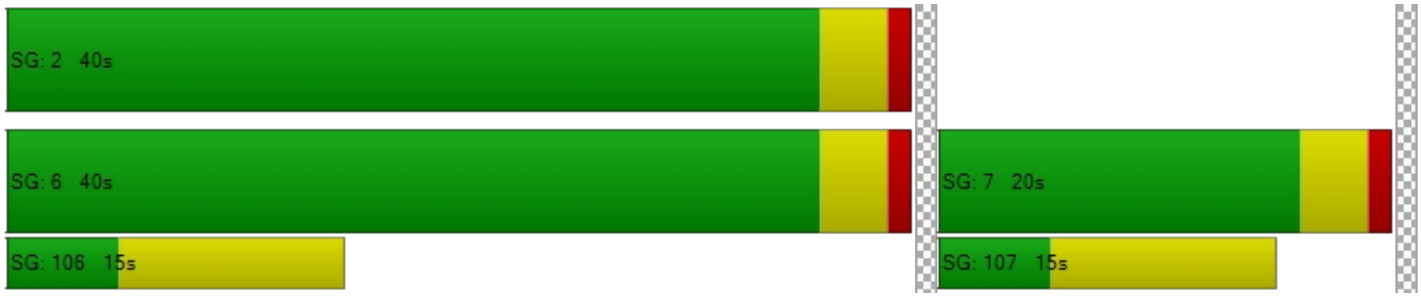
d_M, Delay for Movement [s/veh]	31.00	29.13	2.33	2.33	1.68	1.59	1.59	1.24
Movement LOS	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.28		1.77			1.56		
Approach LOS	C		A			A		
d_I, Intersection Delay [s/veh]	6.10							
Intersection LOS	A							
Intersection V/C	0.174							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.035	2.174	2.115
Crosswalk LOS	B	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]	533	1200	1200
d_b, Bicycle Delay [s]	16.14	4.81	4.81
l_b,int, Bicycle LOS Score for Intersection	1.560	1.949	1.926
Bicycle LOS	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.366

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	130.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Base Volume Input [veh/h]	56	186	8	7	17	295	19	26	32	78	20	29	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	378	16	14	35	600	39	53	65	159	41	59	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	99	4	4	9	158	10	14	17	42	11	16	22
Total Analysis Volume [veh/h]	120	398	17	15	37	632	41	56	68	167	43	62	89
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Permis	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	36	0	0	10	30	0	52	14	0	10	14	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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	0.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	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	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	16	16	23	15	15	0	29	29	29	29	29
g / C, Green / Cycle	0.11	0.27	0.27	0.39	0.25	0.25	0.00	0.48	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.09	0.12	0.01	0.05	0.20	0.03	0.07	0.04	0.12	0.04	0.02	0.06
s, saturation flow rate [veh/h]	1396	3204	1431	1031	3204	1431	829	1683	1431	1031	3204	1431
c, Capacity [veh/h]	307	874	390	487	796	355	120	803	683	551	1530	683
d1, Uniform Delay [s]	12.13	18.17	16.10	11.90	21.17	17.50	30.08	8.56	9.30	10.61	8.38	8.76
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]	0.81	0.37	0.05	0.10	1.85	0.14	12.57	0.21	0.85	0.28	0.05	0.39
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	0.39	0.46	0.04	0.11	0.79	0.12	0.47	0.08	0.24	0.08	0.04	0.13
d, Delay for Lane Group [s/veh]	12.94	18.54	16.15	11.99	23.02	17.64	42.65	8.77	10.15	10.89	8.43	9.16
Lane Group LOS	B	B	B	B	C	B	D	A	B	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.99	2.10	0.16	0.39	3.92	0.41	0.62	0.44	1.22	0.35	0.19	0.63
50th-Percentile Queue Length [ft/ln]	24.75	52.46	4.01	9.86	98.09	10.32	15.42	11.06	30.46	8.68	4.86	15.67
95th-Percentile Queue Length [veh/ln]	1.78	3.78	0.29	0.71	7.06	0.74	1.11	0.80	2.19	0.63	0.35	1.13
95th-Percentile Queue Length [ft/ln]	44.55	94.43	7.22	17.75	176.56	18.58	27.75	19.91	54.83	15.63	8.75	28.21

Movement, Approach, & Intersection Results

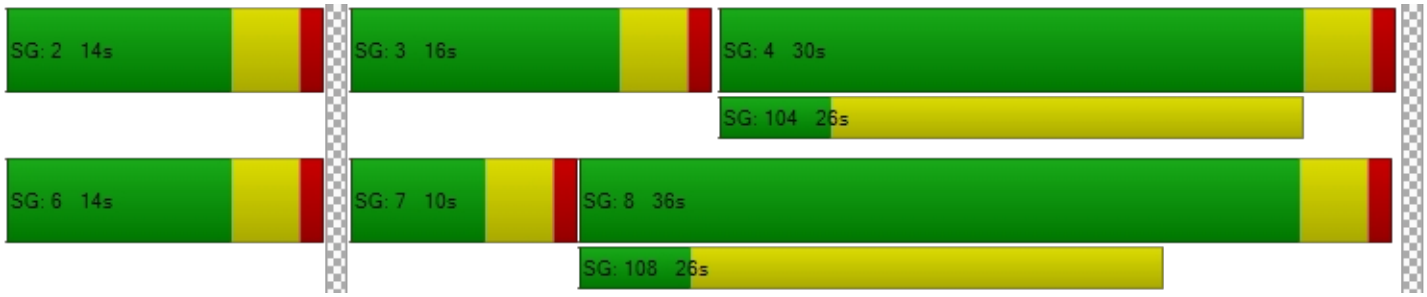
d_M, Delay for Movement [s/veh]	12.94	18.54	16.15	11.9	11.9	23.0	17.6	42.65	8.77	10.15	10.89	8.43	9.16
Movement LOS	B	B	B	B	B	C	B	D	A	B	B	A	A
d_A, Approach Delay [s/veh]	17.21			21.93				16.08			9.31		
Approach LOS	B			C				B			A		
d_I, Intersection Delay [s/veh]	18.10												
Intersection LOS	B												
Intersection V/C	0.366												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.535	2.365
Crosswalk LOS	F	F	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]	1065	865	333	333
d_b, Bicycle Delay [s]	6.56	9.67	20.87	20.87
l_b,int, Bicycle LOS Score for Intersection	2.001	2.127	2.040	1.720
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	2	0	1	2	0	1
Entry Pocket Length [ft]	350.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	800.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	Yes			Yes				Yes			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	5	214	52	1	19	123	306	74	382	0	66	744	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	435	106	2	39	250	622	150	777	0	134	1512	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	114	28	1	10	66	164	39	204	0	35	398	1
Total Analysis Volume [veh/h]	11	458	112	2	41	263	655	158	818	0	141	1592	2
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	0
Local Bus Stopping Rate [/h]	0	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	ProtPer	Permis	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	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	0	9	26	0	10	45	0	10	45	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	36	29	36	31	46	37	37	46	37	37
g / C, Green / Cycle	0.40	0.32	0.40	0.34	0.51	0.41	0.41	0.51	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.01	0.14	0.05	0.08	0.17	0.18	0.00	0.10	0.35	0.00
s, saturation flow rate [veh/h]	1059	3204	954	3204	950	4584	1431	1463	4584	1431
c, Capacity [veh/h]	488	1029	408	1103	449	1873	584	730	1870	584
d1, Uniform Delay [s]	16.30	24.25	17.06	21.12	18.14	19.20	0.00	12.43	24.22	15.83
k, delay calibration	0.11	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
d2, Incremental Delay [s]	0.02	1.40	0.52	0.51	0.47	0.16	0.00	0.13	1.17	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
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	0.02	0.45	0.11	0.24	0.35	0.44	0.00	0.19	0.85	0.00
d, Delay for Lane Group [s/veh]	16.31	25.64	17.58	21.63	18.61	19.36	0.00	12.56	25.39	15.83
Lane Group LOS	B	C	B	C	B	B	A	B	C	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.13	3.90	0.58	1.98	0.72	3.60	0.00	0.63	8.97	0.02
50th-Percentile Queue Length [ft/ln]	3.34	97.62	14.53	49.54	17.99	90.03	0.00	15.63	224.19	0.55
95th-Percentile Queue Length [veh/ln]	0.24	7.03	1.05	3.57	1.29	6.48	0.00	1.13	13.88	0.04
95th-Percentile Queue Length [ft/ln]	6.01	175.72	26.15	89.17	32.37	162.05	0.00	28.14	346.96	0.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.31	25.64	0.00	17.5	17.5	21.6	0.00	18.61	19.36	0.00	12.56	25.39	15.83
Movement LOS	B	C		B	B	C		B	B	A	B	C	B
d_A, Approach Delay [s/veh]	25.42			21.06				19.24			24.33		
Approach LOS	C			C				B			C		
d_I, Intersection Delay [s/veh]	22.77												
Intersection LOS	C												
Intersection V/C	0.537												

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]	36.49	36.49	36.49	36.49
l_p,int, Pedestrian LOS Score for Intersection	2.706	2.863	3.435	3.453
Crosswalk LOS	B	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]	488	488	910	910
d_b, Bicycle Delay [s]	25.73	25.73	13.37	13.37
l_b,int, Bicycle LOS Score for Intersection	1.947	1.778	2.096	2.514
Bicycle LOS	A	A	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 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.699

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	2	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	380.00	100.00	200.00	95.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	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	0.00	0.00
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	83	39	13	64	10	103	2	88	1455	106	1	11	1060	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
In-Process Volume [veh/h]	0	0	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	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	169	79	26	130	20	209	4	179	2958	215	2	22	2155	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	44	21	7	34	5	55	1	47	778	57	1	6	567	22
Total Analysis Volume [veh/h]	178	83	27	137	21	220	4	188	3114	226	2	23	2268	89
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	160
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	Perm	Prote	Perm	Perm	Perm	Prote	Perm	Perm
Signal Group	0	6	0	0	2	0	0	3	8	0	0	7	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	10	0	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	30	0	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	35	97	0	0	10	72	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No	No			No	No	
Maximum Recall		No			No			No	No			No	No	
Pedestrian Recall		No			No			No	No			No	No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	160	160	160	160	160	160	160	160	160	160	160
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	49	49	49	49	49	21	96	96	3	78	78
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.13	0.60	0.60	0.02	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.17	0.05	0.02	0.06	0.16	0.12	0.51	0.16	0.02	0.37	0.06
s, saturation flow rate [veh/h]	1025	1683	1431	2242	1507	1603	6113	1431	1603	6113	1431
c, Capacity [veh/h]	212	514	437	623	460	211	3656	856	35	2983	698
d1, Uniform Delay [s]	67.70	40.57	39.31	46.90	45.90	68.44	26.30	15.32	77.70	33.29	22.33
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.17	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
d2, Incremental Delay [s]	31.12	0.67	0.27	0.81	4.22	19.78	0.61	0.16	24.72	0.41	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.16	0.06	0.22	0.52	0.91	0.85	0.26	0.72	0.76	0.13
d, Delay for Lane Group [s/veh]	98.82	41.24	39.58	47.71	50.12	88.21	26.90	15.48	102.41	33.70	22.41
Lane Group LOS	F	D	D	D	D	F	C	B	F	C	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.17	2.52	0.80	2.26	8.56	8.69	22.08	3.75	1.24	16.97	1.79
50th-Percentile Queue Length [ft/ln]	229.22	62.95	19.91	56.62	214.04	217.29	552.08	93.69	30.97	424.36	44.84
95th-Percentile Queue Length [veh/ln]	14.13	4.53	1.43	4.08	13.36	13.53	29.79	6.75	2.23	23.73	3.23
95th-Percentile Queue Length [ft/ln]	353.37	113.31	35.83	101.92	334.01	338.17	744.75	168.65	55.74	593.28	80.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	98.82	41.24	39.58	47.71	50.12	50.12	88.2	88.2	26.9	15.4	102.	102.	33.7	22.4
Movement LOS	F	D	D	D	D	D	F	F	C	B	F	F	C	C
d_A, Approach Delay [s/veh]	76.67			49.25			29.50				34.00			
Approach LOS	E			D			C				C			
d_I, Intersection Delay [s/veh]	34.33													
Intersection LOS	C													
Intersection V/C	0.699													

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]	71.20	71.20	71.20	71.20
l_p,int, Pedestrian LOS Score for Intersection	2.318	2.339	4.367	4.221
Crosswalk LOS	B	B	E	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]	613	613	1163	851
d_b, Bicycle Delay [s]	38.45	38.45	13.99	26.40
l_b,int, Bicycle LOS Score for Intersection	2.035	2.183	2.939	2.541
Bicycle LOS	B	B	C	B

Sequence

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

Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.051

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	150.00	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			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	8	7	24	9	4	2	0	72	13	34	108	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
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
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	14	49	18	8	4	0	146	26	69	220	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	4	13	5	2	1	0	38	7	18	58	3
Total Analysis Volume [veh/h]	17	15	52	19	8	4	0	154	27	73	232	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.04	0.06	0.05	0.02	0.00	0.00	0.00	0.00	0.05	0.00	0.00
d_M, Delay for Movement [s/veh]	14.61	14.60	10.03	15.43	14.47	10.22	7.73	0.00	0.00	7.72	0.00	0.00
Movement LOS	B	B	B	C	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.47	0.47	0.47	0.24	0.24	0.24	0.00	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	11.77	11.77	11.77	6.11	6.11	6.11	0.00	0.00	0.00	4.14	0.00	0.00
d_A, Approach Delay [s/veh]	11.77			14.51			0.00			1.77		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.26											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	4	0	16	12	0	2	2	83	3	13	161	25
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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
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]	8	0	33	24	0	4	4	169	6	26	327	51
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	9	6	0	1	1	44	2	7	86	13
Total Analysis Volume [veh/h]	8	0	35	25	0	4	4	178	6	27	344	54
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.04	0.07	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	14.48	14.71	9.51	15.43	14.80	11.05	8.11	0.00	0.00	7.64	0.00	0.00
Movement LOS	B	B	A	C	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.19	0.19	0.19	0.24	0.24	0.24	0.01	0.00	0.00	0.06	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.86	4.86	4.86	5.91	5.91	5.91	0.26	0.00	0.00	1.48	0.00	0.00
d_A, Approach Delay [s/veh]	10.43			14.83			0.17			0.49		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	1.63											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.291

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	63	35	0	21	91	1	162	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	71	0	43	185	2	329	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	19	0	11	49	1	87	14
Total Analysis Volume [veh/h]	135	75	0	45	195	2	346	58
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Fixed time
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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	26	0	0	0	34	0	34	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	30	30	30	30
g / C, Green / Cycle	0.37	0.37	0.50	0.50	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.08	0.05	0.05	0.12	0.21	0.04
s, saturation flow rate [veh/h]	1603	1431	883	1683	1682	1431
c, Capacity [veh/h]	588	525	417	841	901	715
d1, Uniform Delay [s]	13.14	12.70	13.92	8.48	9.46	7.82
k, delay calibration	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
d2, Incremental Delay [s]	0.91	0.57	0.52	0.64	1.25	0.22
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	0.23	0.14	0.11	0.23	0.39	0.08
d, Delay for Lane Group [s/veh]	14.05	13.27	14.45	9.13	10.71	8.04
Lane Group LOS	B	B	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.25	0.67	0.44	1.30	2.60	0.36
50th-Percentile Queue Length [ft/ln]	31.15	16.81	10.94	32.56	65.11	9.00
95th-Percentile Queue Length [veh/ln]	2.24	1.21	0.79	2.34	4.69	0.65
95th-Percentile Queue Length [ft/ln]	56.08	30.26	19.68	58.61	117.19	16.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.05	13.27	14.45	14.45	9.13	10.71	10.71	8.04
Movement LOS	B	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	13.77		10.12			10.32		
Approach LOS	B		B			B		
d_I, Intersection Delay [s/veh]	11.11							
Intersection LOS	B							
Intersection V/C	0.291							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.104	2.236	2.203
Crosswalk LOS	B	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]	733	1000	1000
d_b, Bicycle Delay [s]	12.03	7.50	7.50
l_b,int, Bicycle LOS Score for Intersection	1.560	1.881	2.230
Bicycle LOS	A	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.491

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	130.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	80	386	33	40	32	187	47	43	32	69	22	47	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	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	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	163	785	67	81	65	380	96	87	65	140	45	96	199
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	207	18	21	17	100	25	23	17	37	12	25	52
Total Analysis Volume [veh/h]	172	826	71	85	68	400	101	92	68	147	47	101	209
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	0
Local Bus Stopping Rate [/h]	0	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	Fixed time
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	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	0	9	30	0	11	22	0	9	20	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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]	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	2.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	35	26	26	35	26	26	7	18	18	27	16	16
g / C, Green / Cycle	0.50	0.37	0.37	0.50	0.37	0.37	0.10	0.26	0.26	0.39	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.18	0.26	0.05	0.20	0.12	0.07	0.03	0.04	0.10	0.04	0.03	0.15
s, saturation flow rate [veh/h]	966	3204	1431	767	3204	1431	3113	1683	1431	1193	3204	1431
c, Capacity [veh/h]	559	1190	531	410	1190	531	311	433	368	576	732	327
d1, Uniform Delay [s]	10.16	18.63	14.55	11.97	15.80	14.88	29.21	20.13	21.53	13.64	21.51	24.39
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	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]	1.42	3.35	0.52	2.58	0.76	0.79	2.41	0.77	3.22	0.28	0.39	9.23
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	0.31	0.69	0.13	0.37	0.34	0.19	0.30	0.16	0.40	0.08	0.14	0.64
d, Delay for Lane Group [s/veh]	11.58	21.98	15.07	14.55	16.56	15.67	31.62	20.90	24.74	13.92	21.90	33.62
Lane Group LOS	B	C	B	B	B	B	C	C	C	B	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.49	5.62	0.76	1.41	2.21	1.11	0.79	0.90	2.19	0.48	0.67	3.80
50th-Percentile Queue Length [ft/ln]	37.37	140.59	18.94	35.32	55.21	27.68	19.65	22.40	54.64	12.08	16.79	95.09
95th-Percentile Queue Length [veh/ln]	2.69	9.51	1.36	2.54	3.98	1.99	1.42	1.61	3.93	0.87	1.21	6.85
95th-Percentile Queue Length [ft/ln]	67.27	237.81	34.10	63.58	99.38	49.83	35.38	40.33	98.36	21.74	30.23	171.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.58	21.98	15.07	14.5	14.5	16.5	15.6	31.62	20.90	24.74	13.92	21.90	33.62
Movement LOS	B	C	B	B	B	B	B	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	19.85			15.96				25.95			27.71		
Approach LOS	B			B				C			C		
d_I, Intersection Delay [s/veh]	20.74												
Intersection LOS	C												
Intersection V/C	0.491												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.669	2.486
Crosswalk LOS	F	F	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]	743	743	514	457
d_b, Bicycle Delay [s]	13.83	13.83	19.31	20.83
l_b,int, Bicycle LOS Score for Intersection	2.442	2.043	2.066	1.854
Bicycle LOS	B	B	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	30.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.685

Intersection Setup

Name	New Meridian Rd			New Meridian Rd			US 24			US 24		
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	2	2	0	1	2	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.00	100.00	220.00	350.00	100.00	350.00	390.00	100.00	800.00
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]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd			US 24			US 24		
Base Volume Input [veh/h]	2	339	68	36	259	144	293	768	1	184	496	2
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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	689	138	73	526	293	596	1561	2	374	1008	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	181	36	19	138	77	157	411	1	98	265	1
Total Analysis Volume [veh/h]	4	725	145	77	554	308	627	1643	2	394	1061	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]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
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	Unsign	ProtPer	Permis	Unsign	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]	14	27	0	9	22	0	13	45	0	9	41	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	10	0	0	32	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	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	32	23	32	18	50	41	41	50	37	37
g / C, Green / Cycle	0.36	0.26	0.36	0.20	0.56	0.46	0.46	0.56	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.00	0.23	0.09	0.17	0.45	0.36	0.00	0.44	0.23	0.00
s, saturation flow rate [veh/h]	1082	3204	863	3204	1407	4584	1431	893	4584	1431
c, Capacity [veh/h]	372	819	280	641	767	2088	652	484	1885	588
d1, Uniform Delay [s]	20.00	32.23	22.05	34.82	15.23	20.79	13.36	18.62	20.30	15.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	13.46	2.43	14.48	9.45	3.08	0.01	14.01	1.22	0.02
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	0.01	0.89	0.28	0.86	0.82	0.79	0.00	0.81	0.56	0.01
d, Delay for Lane Group [s/veh]	20.05	45.69	24.47	49.29	24.68	23.87	13.37	32.63	21.53	15.67
Lane Group LOS	C	D	C	D	C	C	B	C	C	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	8.79	1.24	6.94	3.79	8.78	0.02	2.54	5.14	0.05
50th-Percentile Queue Length [ft/ln]	1.44	219.82	31.00	173.62	94.75	219.54	0.52	63.51	128.44	1.16
95th-Percentile Queue Length [veh/ln]	0.10	13.66	2.23	11.27	6.82	13.64	0.04	4.57	8.86	0.08
95th-Percentile Queue Length [ft/ln]	2.59	341.40	55.80	281.66	170.55	341.04	0.93	114.32	221.38	2.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.05	45.69	0.00	24.47	49.29	0.00	24.68	23.87	13.37	32.63	21.53	15.67
Movement LOS	C	D		C	D		C	C	B	C	C	B
d_A, Approach Delay [s/veh]	45.55			46.27			24.08			24.51		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	30.03											
Intersection LOS	C											
Intersection V/C	0.685											

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	3.040	3.305	3.515	3.567
Crosswalk LOS	C	C	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]	511	400	911	822
d_b, Bicycle Delay [s]	24.94	28.80	13.34	15.61
l_b,int, Bicycle LOS Score for Intersection	2.161	2.080	2.809	2.362
Bicycle LOS	B	B	C	B

Sequence

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

Intersection Level Of Service Report
Intersection 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	44.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.824

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd		
Approach	Northbound			Southbound			Eastbound				Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	0	1	0	0	1	1	0	1
Entry Pocket Length [ft]	380.00	100.00	200.00	95.00	100.00	100.00	470.	100.	100.	390.	470.00	100.00	380.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			30.00			55.00				55.00		
Grade [%]	0.00			0.00			0.00				0.00		
Curb Present	No			No			No				No		
Crosswalk	Yes			Yes			Yes				Yes		

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd		
Base Volume Input [veh/h]	127	21	4	37	17	111	1	42	728	53	13	1279	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	0	11	0	0	0	0	0	0	14	4	0	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	301	43	19	75	35	226	2	85	1480	122	30	2600	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	11	5	20	9	59	1	22	389	32	8	684	11
Total Analysis Volume [veh/h]	317	45	20	79	37	238	2	89	1558	128	32	2737	45
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	0
Local Bus Stopping Rate [/h]	0	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]	130
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	Perm	Prote	Perm	Perm	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	0	3	8	0	7	4	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	57	0	0	57	0	0	12	64	0	9	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	11	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	0.0
Rest In Walk		No			No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No	No		No	No	
Maximum Recall		No			No			No	No		No	No	
Pedestrian Recall		No			No			No	No		No	No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	53	53	53	53	53	8	61	61	3	57	57
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.41	0.06	0.47	0.47	0.03	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.32	0.03	0.01	0.03	0.18	0.06	0.25	0.09	0.02	0.45	0.03
s, saturation flow rate [veh/h]	994	1683	1431	2336	1518	1603	6113	1431	1603	6113	1431
c, Capacity [veh/h]	321	689	585	945	621	99	2887	676	42	2672	625
d1, Uniform Delay [s]	50.43	23.32	23.02	25.80	27.72	60.69	24.30	19.88	62.87	36.59	21.27
k, delay calibration	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
d2, Incremental Delay [s]	47.09	0.18	0.11	0.17	2.28	26.63	0.16	0.13	23.66	15.39	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.99	0.07	0.03	0.08	0.44	0.92	0.54	0.19	0.76	1.02	0.07
d, Delay for Lane Group [s/veh]	97.51	23.50	23.13	25.97	30.00	87.32	24.46	20.02	86.53	51.98	21.32
Lane Group LOS	F	C	C	C	C	F	C	C	F	F	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	14.66	0.88	0.39	0.82	6.60	3.61	7.88	2.14	1.29	22.17	0.76
50th-Percentile Queue Length [ft/ln]	366.53	21.97	9.70	20.50	164.98	90.28	196.97	53.39	32.36	554.32	19.12
95th-Percentile Queue Length [veh/ln]	20.94	1.58	0.70	1.48	10.81	6.50	12.48	3.84	2.33	30.44	1.38
95th-Percentile Queue Length [ft/ln]	523.52	39.55	17.46	36.91	270.31	162.51	312.06	96.10	58.24	761.02	34.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	97.51	23.50	23.13	25.97	30.00	30.00	87.3	87.3	24.4	20.0	86.53	51.98	21.32
Movement LOS	F	C	C	C	C	C	F	F	C	C	F	F	C
d_A, Approach Delay [s/veh]	84.90			29.10			27.36				51.88		
Approach LOS	F			C			C				D		
d_I, Intersection Delay [s/veh]	44.55												
Intersection LOS	D												
Intersection V/C	0.824												

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]	56.31	56.31	56.31	56.31
l_p,int, Pedestrian LOS Score for Intersection	2.315	2.280	4.372	3.936
Crosswalk LOS	B	B	E	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]	815	815	923	877
d_b, Bicycle Delay [s]	22.80	22.80	18.85	20.50
l_b,int, Bicycle LOS Score for Intersection	2.190	2.144	2.256	2.720
Bicycle LOS	B	B	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.054

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	150.00	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			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	15	3	41	8	6	1	1	48	5	21	83	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	32	0	104	0	0	0	0	7	11	33	22	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]	62	6	187	16	12	2	2	105	21	76	191	6
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	2	49	4	3	1	1	28	6	20	50	2
Total Analysis Volume [veh/h]	65	6	197	17	13	2	2	111	22	80	201	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.01	0.21	0.05	0.03	0.00	0.00	0.00	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	15.86	15.88	11.75	17.44	13.99	10.21	7.64	0.00	0.00	7.62	0.00	0.00
Movement LOS	C	C	B	C	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.71	1.71	1.71	0.28	0.28	0.28	0.00	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	42.68	42.68	42.68	7.01	7.01	7.01	0.11	0.00	0.00	4.37	0.00	0.00
d_A, Approach Delay [s/veh]	12.84			15.59			0.11			2.13		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	6.32											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.143

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	5	1	20	20	0	3	2	86	2	6	101	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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	56	0	0	0	0	104	7	22	33	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]	32	2	97	41	0	6	4	279	11	34	238	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	1	26	11	0	2	1	73	3	9	63	4
Total Analysis Volume [veh/h]	34	2	102	43	0	6	4	294	12	36	251	15
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.14	0.14	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	16.45	16.38	11.72	18.92	16.46	11.57	7.78	0.00	0.00	7.95	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.90	0.90	0.90	0.52	0.52	0.52	0.01	0.00	0.00	0.09	0.00	0.00
95th-Percentile Queue Length [ft/ln]	22.54	22.54	22.54	13.10	13.10	13.10	0.23	0.00	0.00	2.21	0.00	0.00
d_A, Approach Delay [s/veh]	12.95			18.02			0.10			0.95		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	3.74											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.254

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	26	16	1	18	109	0	96	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	32	128	0	44	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	44	2	69	350	0	239	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	12	1	18	92	0	63	4
Total Analysis Volume [veh/h]	56	46	2	73	368	0	252	17
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Fixed time
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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	26	0	0	0	34	0	34	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	30	30	30	30
g / C, Green / Cycle	0.37	0.37	0.50	0.50	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.08	0.22	0.15	0.01
s, saturation flow rate [veh/h]	1603	1431	999	1683	1683	1431
c, Capacity [veh/h]	588	525	498	841	901	715
d1, Uniform Delay [s]	12.47	12.43	12.52	9.60	8.82	7.59
k, delay calibration	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
d2, Incremental Delay [s]	0.32	0.33	0.64	1.65	0.77	0.06
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	0.10	0.09	0.15	0.44	0.28	0.02
d, Delay for Lane Group [s/veh]	12.79	12.76	13.16	11.25	9.59	7.65
Lane Group LOS	B	B	B	B	A	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.48	0.40	0.68	2.85	1.74	0.10
50th-Percentile Queue Length [ft/ln]	12.12	10.05	16.90	71.15	43.54	2.55
95th-Percentile Queue Length [veh/ln]	0.87	0.72	1.22	5.12	3.13	0.18
95th-Percentile Queue Length [ft/ln]	21.81	18.08	30.42	128.06	78.36	4.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.79	12.76	13.16	13.16	11.25	9.59	9.59	7.65
Movement LOS	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	12.78		11.57			9.47		
Approach LOS	B		B			A		
d_I, Intersection Delay [s/veh]	11.03							
Intersection LOS	B							
Intersection V/C	0.254							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.100	2.309	2.184
Crosswalk LOS	B	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]	733	1000	1000
d_b, Bicycle Delay [s]	12.03	7.50	7.50
l_b,int, Bicycle LOS Score for Intersection	1.560	2.170	2.003
Bicycle LOS	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	130.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Old Meridian Rd		
Base Volume Input [veh/h]	56	186	8	7	17	295	19	26	32	78	20	29	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	0	0	0	0	11	32	11	85	0	11	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	136	378	16	14	35	600	50	85	76	244	41	70	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	99	4	4	9	158	13	22	20	64	11	18	22
Total Analysis Volume [veh/h]	143	398	17	15	37	632	53	89	80	257	43	74	89
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	0
Local Bus Stopping Rate [/h]	0	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	Fixed time
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	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	0	9	30	0	54	21	0	11	21	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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	0.00	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	2.00	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	2.00	2.00	2.00
g_i, Effective Green Time [s]	35	26	26	35	26	26	0	17	17	17	17	17
g / C, Green / Cycle	0.58	0.43	0.43	0.58	0.43	0.43	0.00	0.28	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.17	0.12	0.01	0.05	0.20	0.04	0.11	0.05	0.18	0.05	0.02	0.06
s, saturation flow rate [veh/h]	865	3204	1431	1020	3204	1431	820	1683	1431	939	3204	1431
c, Capacity [veh/h]	583	1389	620	698	1389	620	120	477	405	321	908	405
d1, Uniform Delay [s]	6.45	11.00	9.75	5.59	12.00	10.00	30.00	16.18	18.78	19.41	15.77	16.43
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	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]	1.00	0.52	0.08	0.21	1.08	0.27	33.44	0.76	7.37	0.86	0.18	1.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.29	0.03	0.07	0.46	0.09	0.74	0.17	0.63	0.13	0.08	0.22
d, Delay for Lane Group [s/veh]	7.45	11.52	9.83	5.80	13.08	10.28	63.44	16.94	26.15	20.28	15.95	17.68
Lane Group LOS	A	B	A	A	B	B	E	B	C	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.76	1.54	0.12	0.25	2.70	0.40	1.23	0.84	3.60	0.54	0.37	1.00
50th-Percentile Queue Length [ft/ln]	19.10	38.49	3.08	6.16	67.53	9.88	30.85	21.06	89.92	13.43	9.13	25.00
95th-Percentile Queue Length [veh/ln]	1.37	2.77	0.22	0.44	4.86	0.71	2.22	1.52	6.47	0.97	0.66	1.80
95th-Percentile Queue Length [ft/ln]	34.37	69.27	5.54	11.08	121.55	17.79	55.53	37.92	161.85	24.18	16.44	45.00

Movement, Approach, & Intersection Results

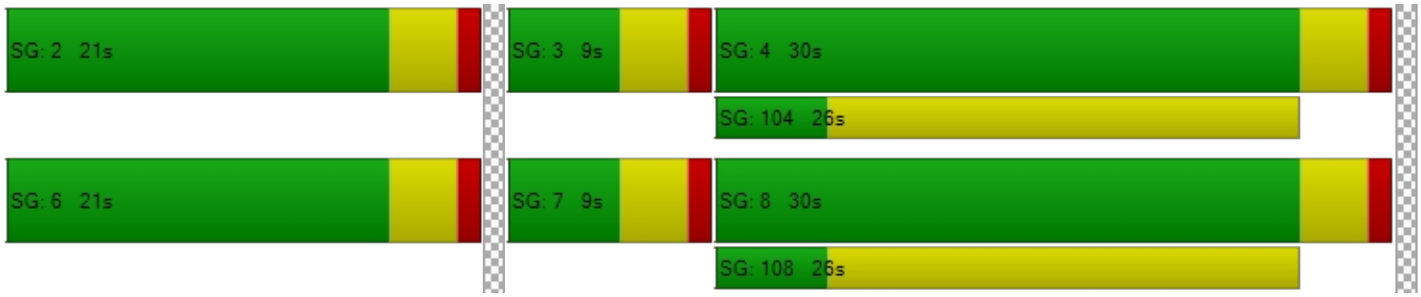
d_M, Delay for Movement [s/veh]	7.45	11.52	9.83	5.80	5.80	13.0	10.2	63.44	16.94	26.15	20.28	15.95	17.68
Movement LOS	A	B	A	A	A	B	B	E	B	C	C	B	B
d_A, Approach Delay [s/veh]	10.43			12.36				32.21			17.60		
Approach LOS	B			B				C			B		
d_I, Intersection Delay [s/veh]	16.75												
Intersection LOS	B												
Intersection V/C	0.424												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.660	2.381
Crosswalk LOS	F	F	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]	867	867	567	567
d_b, Bicycle Delay [s]	9.63	9.63	15.41	15.41
l_b,int, Bicycle LOS Score for Intersection	2.020	2.137	2.263	1.730
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.552

Intersection Setup

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	2	0	1	2	0	1
Entry Pocket Length [ft]	350.00	100.00	343.00	200.	100.	100.	220.	350.00	100.00	350.00	390.00	100.00	800.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				55.00			55.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	Yes			Yes				Yes			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd				US 24			US 24		
Base Volume Input [veh/h]	5	214	52	1	19	123	306	74	382	0	66	744	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	21	32	32	11	0	0	0	0	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	446	106	2	60	282	654	161	777	0	134	1512	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	117	28	1	16	74	172	42	204	0	35	398	1
Total Analysis Volume [veh/h]	11	469	112	2	63	297	688	169	818	0	141	1592	2
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	0
Local Bus Stopping Rate [/h]	0	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	Fixed time
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	Unsign	Perm	Prot	Perm	Unsi	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	1	6	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	0	9	30	0	9	42	0	9	42	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	0	10	0	0	10	0	0	32	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	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	35	26	35	26	47	38	38	47	38	38
g / C, Green / Cycle	0.39	0.29	0.39	0.29	0.52	0.42	0.42	0.52	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.01	0.15	0.07	0.09	0.18	0.18	0.00	0.10	0.35	0.00
s, saturation flow rate [veh/h]	1100	3204	986	3204	939	4584	1431	1458	4584	1431
c, Capacity [veh/h]	473	926	398	926	468	1936	604	764	1936	604
d1, Uniform Delay [s]	17.16	26.66	18.24	25.08	16.96	18.28	0.00	11.57	23.01	15.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	1.98	0.88	0.92	2.16	0.68	0.00	0.53	4.10	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
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	0.02	0.51	0.16	0.32	0.36	0.42	0.00	0.18	0.82	0.00
d, Delay for Lane Group [s/veh]	17.25	28.64	19.12	26.00	19.12	18.96	0.00	12.10	27.11	15.05
Lane Group LOS	B	C	B	C	B	B	A	B	C	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.15	4.28	0.92	2.52	0.85	3.58	0.00	0.64	9.21	0.02
50th-Percentile Queue Length [ft/ln]	3.67	107.09	23.04	62.96	21.21	89.53	0.00	16.04	230.22	0.56
95th-Percentile Queue Length [veh/ln]	0.26	7.68	1.66	4.53	1.53	6.45	0.00	1.15	14.19	0.04
95th-Percentile Queue Length [ft/ln]	6.60	191.95	41.48	113.32	38.17	161.15	0.00	28.87	354.64	1.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.25	28.64	0.00	19.1	19.1	26.0	0.00	19.12	18.96	0.00	12.10	27.11	15.05
Movement LOS	B	C		B	B	C		B	B	A	B	C	B
d_A, Approach Delay [s/veh]	28.38			24.76				18.99			25.88		
Approach LOS	C			C				B			C		
d_I, Intersection Delay [s/veh]	24.19												
Intersection LOS	C												
Intersection V/C	0.552												

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	2.718	2.894	3.436	3.464
Crosswalk LOS	B	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]	578	578	844	844
d_b, Bicycle Delay [s]	22.76	22.76	15.02	15.02
l_b,int, Bicycle LOS Score for Intersection	1.956	1.806	2.102	2.514
Bicycle LOS	A	A	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 1: Woodmen Rd/Golden Sage Rd

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

Intersection Setup

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Approach	Northbound			Southbound			Eastbound				Westbound			
Lane Configuration														
Turning Movement	Left	Thru	Right	Left	Thru	Right	U-tu	Left	Thru	Right	U-tu	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	15.00	15.00	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
No. of Lanes in Entry Pocket	1	0	1	2	0	0	1	0	0	1	1	0	0	1
Entry Pocket Length [ft]	380.00	100.00	200.00	95.00	100.00	100.00	470.	100.	100.	390.	470.	100.	100.	380.
No. of Lanes in Exit Pocket	0	0	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	0.00	0.00
Speed [mph]	35.00			30.00			55.00				55.00			
Grade [%]	0.00			0.00			0.00				0.00			
Curb Present	No			No			No				No			
Crosswalk	Yes			Yes			Yes				Yes			

Volumes

Name	Golden Sage Rd			Golden Sage Rd			Woodmen Rd				Woodmen Rd			
Base Volume Input [veh/h]	83	39	13	64	10	103	2	88	1455	106	1	11	1060	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	29	0	7	0	0	0	0	0	0	48	0	12	0	0
Diverted Trips [veh/h]	0	0	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	0	0
Existing Site Adjustment Volume [veh/h]	0	0	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	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	198	79	33	130	20	209	4	179	2958	263	2	34	2155	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total 15-Minute Volume [veh/h]	52	21	9	34	5	55	1	47	778	69	1	9	567	22
Total Analysis Volume [veh/h]	208	83	35	137	21	220	4	188	3114	277	2	36	2268	89
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	0	0
Local Bus Stopping Rate [/h]	0	0	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]	150
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	Perm	Prote	Perm	Perm	Perm	Prote	Perm	Perm
Signal Group	0	6	0	0	2	0	0	3	8	0	0	7	4	0
Auxiliary Signal Groups														
Lead / Lag	-	-	-	-	-	-	-	Lead	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	10	0	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	30	0	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	28	23	0	0	74	69	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	44	0	0	44	0	0	0	14	0	0	0	11	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	0.0	0.0
Rest In Walk		No			No				No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No	No			No	No	
Maximum Recall		No			No			No	No			No	No	
Pedestrian Recall		No			No			No	No			No	No	
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	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	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	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	L	C	R	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	49	49	49	49	49	20	85	85	4	69	69
g / C, Green / Cycle	0.33	0.33	0.33	0.33	0.33	0.13	0.56	0.56	0.03	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.20	0.05	0.02	0.06	0.16	0.12	0.51	0.19	0.02	0.37	0.06
s, saturation flow rate [veh/h]	1025	1683	1431	2226	1507	1603	6113	1431	1603	6113	1431
c, Capacity [veh/h]	239	549	467	668	492	212	3447	807	48	2822	661
d1, Uniform Delay [s]	62.18	35.80	34.89	41.57	40.51	64.14	29.05	17.67	72.26	34.53	23.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.16	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
d2, Incremental Delay [s]	32.68	0.58	0.31	0.69	3.47	18.05	1.03	0.25	24.70	0.56	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.15	0.08	0.21	0.49	0.91	0.90	0.34	0.79	0.80	0.13
d, Delay for Lane Group [s/veh]	94.86	36.38	35.20	42.27	43.98	82.20	30.08	17.93	96.96	35.09	23.25
Lane Group LOS	F	D	D	D	D	F	C	B	F	D	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	10.18	2.27	0.94	2.05	7.70	8.07	22.69	4.91	1.74	16.71	1.76
50th-Percentile Queue Length [ft/ln]	254.59	56.69	23.39	51.18	192.42	201.73	567.25	122.86	43.62	417.64	44.10
95th-Percentile Queue Length [veh/ln]	15.42	4.08	1.68	3.68	12.25	12.73	30.50	8.55	3.14	23.41	3.18
95th-Percentile Queue Length [ft/ln]	385.43	102.04	42.11	92.12	306.17	318.20	762.55	213.76	78.52	585.22	79.38

Movement, Approach, & Intersection Results

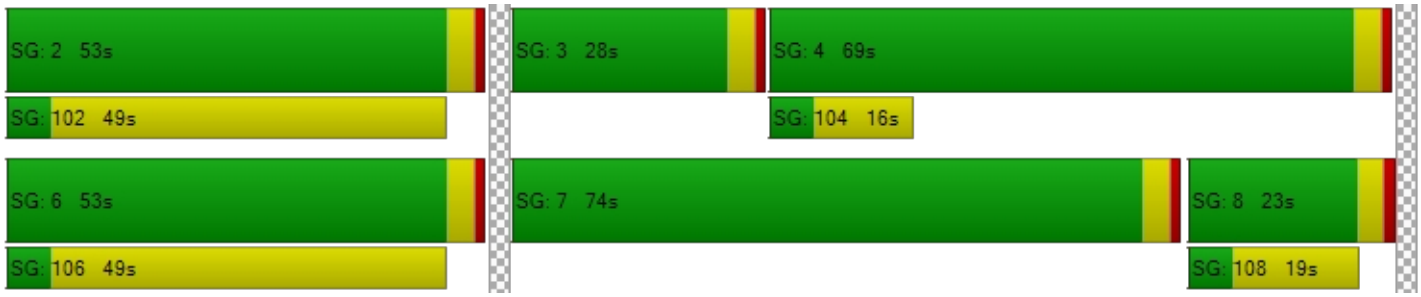
d_M, Delay for Movement [s/veh]	94.86	36.38	35.20	42.27	43.98	43.98	82.2	82.2	30.0	17.9	96.9	96.9	35.0	23.2
Movement LOS	F	D	D	D	D	D	F	F	C	B	F	F	D	C
d_A, Approach Delay [s/veh]	73.57			43.36			31.94				35.63			
Approach LOS	E			D			C				D			
d_I, Intersection Delay [s/veh]	35.94													
Intersection LOS	D													
Intersection V/C	0.736													

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]	66.25	66.25	66.25	66.25
l_p,int, Pedestrian LOS Score for Intersection	2.344	2.336	4.420	4.222
Crosswalk LOS	B	B	E	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]	654	654	253	867
d_b, Bicycle Delay [s]	33.98	33.98	57.18	24.06
l_b,int, Bicycle LOS Score for Intersection	2.098	2.183	2.960	2.547
Bicycle LOS	B	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Rolling Thunder Way/Bridal Vail Way

Control Type:	Two-way stop	Delay (sec / veh):	26.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.100

Intersection Setup

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	14.00	14.00	14.00	14.00	14.00	14.00	10.00	14.00	14.00	10.00	14.00	14.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	150.00	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			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Bridal Vail Way			Bridal Vail Way			Golden Sage Rd			Rolling Thunder Way		
Base Volume Input [veh/h]	8	7	24	9	4	2	0	72	13	34	108	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
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	63	0	0	0	0	24	36	108	14	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]	38	14	112	18	8	4	0	170	62	177	234	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	4	29	5	2	1	0	45	16	47	62	3
Total Analysis Volume [veh/h]	40	15	118	19	8	4	0	179	65	186	246	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.06	0.14	0.10	0.03	0.01	0.00	0.00	0.00	0.14	0.00	0.00
d_M, Delay for Movement [s/veh]	23.88	23.18	13.59	26.57	21.97	12.11	7.76	0.00	0.00	8.17	0.00	0.00
Movement LOS	C	C	B	D	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.64	1.64	1.64	0.47	0.47	0.47	0.00	0.00	0.00	0.49	0.00	0.00
95th-Percentile Queue Length [ft/ln]	40.98	40.98	40.98	11.74	11.74	11.74	0.00	0.00	0.00	12.24	0.00	0.00
d_A, Approach Delay [s/veh]	16.80			23.51			0.00			3.41		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	5.77											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 3: Rolling Thunder Way/Antelope Meadows Circle (E)

Control Type:	Two-way stop	Delay (sec / veh):	27.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.134

Intersection Setup

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	15.00	15.00	15.00	15.00	15.00	15.00	10.00	15.00	15.00	10.00	15.00	15.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Antelop Meadows Cirlce			An Me			Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	4	0	16	12	0	2	2	83	3	13	161	25
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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	42	0	0	0	0	63	24	72	108	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]	22	0	75	24	0	4	4	232	30	98	435	51
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	20	6	0	1	1	61	8	26	114	13
Total Analysis Volume [veh/h]	23	0	79	25	0	4	4	244	32	103	458	54
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.10	0.13	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.00
d_M, Delay for Movement [s/veh]	23.30	22.74	11.51	27.08	23.45	14.02	8.43	0.00	0.00	8.04	0.00	0.00
Movement LOS	C	C	B	D	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.77	0.77	0.77	0.48	0.48	0.48	0.01	0.00	0.00	0.26	0.00	0.00
95th-Percentile Queue Length [ft/ln]	19.20	19.20	19.20	12.00	12.00	12.00	0.29	0.00	0.00	6.51	0.00	0.00
d_A, Approach Delay [s/veh]	14.17			25.27			0.12			1.35		
Approach LOS	B			D			A			A		
d_I, Intersection Delay [s/veh]	2.96											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 4: Rolling Thunder Way/Foxtail Meadow Ln

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

Intersection Setup

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Approach	Southbound		Eastbound			Westbound		
Lane Configuration								
Turning Movement	Left	Right	U-turn	Left	Thru	U-turn	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	170.00	135.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00			35.00		
Grade [%]	0.00		0.00			0.00		
Curb Present	Yes		Yes			Yes		
Crosswalk	Yes		Yes			Yes		

Volumes

Name	Foxtail Meadow Ln		Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	63	35	0	21	91	1	162	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	0	21	84	0	144	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	107	0	64	269	2	473	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	28	0	17	71	1	124	14
Total Analysis Volume [veh/h]	135	113	0	67	283	2	498	58
Presence of On-Street Parking	No	No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	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	Fixed time
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	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv	Permissiv
Signal Group	7	0	0	0	2	0	6	0
Auxiliary Signal Groups								
Lead / Lag	Lead	-	-	-	-	-	-	-
Minimum Green [s]	5	0	0	0	10	0	10	0
Maximum Green [s]	30	0	0	0	30	0	30	0
Amber [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
All red [s]	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0
Split [s]	23	0	0	0	37	0	37	0
Vehicle Extension [s]	3.0	0.0	0.0	0.0	3.0	0.0	3.0	0.0
Walk [s]	5	0	0	0	5	0	5	0
Pedestrian Clearance [s]	10	0	0	0	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	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	0.0	0.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	0.0	0.0	2.0	0.0	2.0	0.0
Minimum Recall	No				No		No	
Maximum Recall	No				No		No	
Pedestrian Recall	No				No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	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	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	33	33	33	33
g / C, Green / Cycle	0.32	0.32	0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.09	0.17	0.30	0.04
s, saturation flow rate [veh/h]	1603	1431	767	1683	1682	1431
c, Capacity [veh/h]	508	453	371	926	985	787
d1, Uniform Delay [s]	15.30	15.21	14.91	7.30	8.64	6.33
k, delay calibration	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
d2, Incremental Delay [s]	1.28	1.32	1.07	0.85	1.87	0.18
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	0.27	0.25	0.18	0.31	0.51	0.07
d, Delay for Lane Group [s/veh]	16.58	16.53	15.98	8.16	10.51	6.51
Lane Group LOS	B	B	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.40	1.18	0.71	1.71	3.63	0.31
50th-Percentile Queue Length [ft/ln]	35.02	29.53	17.64	42.82	90.82	7.63
95th-Percentile Queue Length [veh/ln]	2.52	2.13	1.27	3.08	6.54	0.55
95th-Percentile Queue Length [ft/ln]	63.04	53.15	31.76	77.08	163.48	13.73

Movement, Approach, & Intersection Results

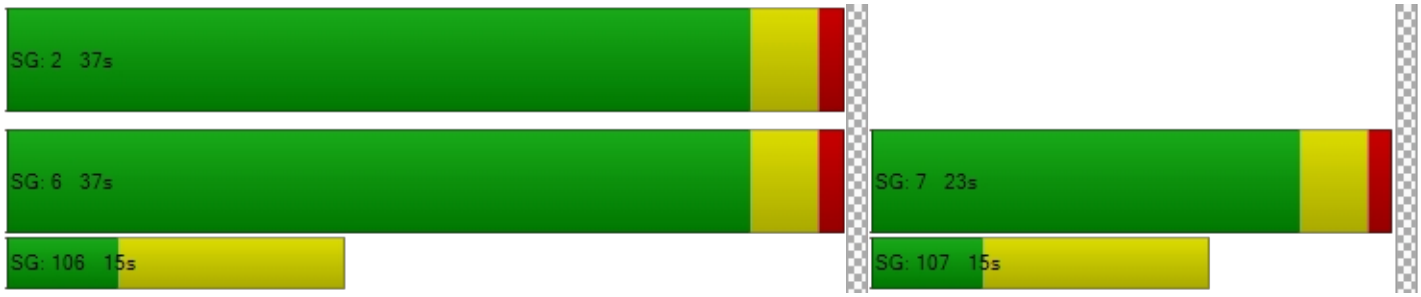
d_M, Delay for Movement [s/veh]	16.58	16.53	15.98	15.98	8.16	10.51	10.51	6.51
Movement LOS	B	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	16.55		9.65			10.09		
Approach LOS	B		A			B		
d_I, Intersection Delay [s/veh]	11.35							
Intersection LOS	B							
Intersection V/C	0.381							

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]	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.158	2.381	2.294
Crosswalk LOS	B	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]	633	1100	1100
d_b, Bicycle Delay [s]	14.01	6.08	6.08
l_b,int, Bicycle LOS Score for Intersection	1.560	2.027	2.480
Bicycle LOS	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: Rolling Thunder Way/Meridian Rd

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

Intersection Setup

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.0	12.0	12.0	12.0	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	2	0	1	1	0	1
Entry Pocket Length [ft]	337.00	100.00	250.00	280.	100.	100.	190.	350.00	100.00	300.00	265.00	100.00	130.00
No. of Lanes in Exit Pocket	0	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	0.00
Speed [mph]	35.00			35.00				35.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	Yes			Yes				Yes			Yes		
Crosswalk	No			No				Yes			Yes		

Volumes

Name	New Meridian Rd			Meridian Rd				Rolling Thunder Way			Rolling Thunder Way		
Base Volume Input [veh/h]	80	386	33	40	32	187	47	43	32	69	22	47	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	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	2.00
Growth Factor	2.0328	2.0328	2.0328	2.03	2.03	2.03	2.03	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	72	0	0	0	0	0	36	21	7	56	0	36	0
Diverted Trips [veh/h]	0	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	0
Existing Site Adjustment Volume [veh/h]	0	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	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	235	785	67	81	65	380	132	108	72	196	45	132	199
Peak Hour Factor	0.9500	0.9500	0.9500	0.95	0.95	0.95	0.95	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.00	1.00	1.00	1.00	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	207	18	21	17	100	35	28	19	52	12	35	52
Total Analysis Volume [veh/h]	247	826	71	85	68	400	139	114	76	206	47	139	209
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	0
Local Bus Stopping Rate [/h]	0	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	Fixed time
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	Perm	Prot	Perm	Perm	Protect	Permis	Permis	ProtPer	Permis	Permis
Signal Group	3	8	0	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	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	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	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	0	9	30	0	11	22	0	9	20	0
Vehicle Extension [s]	3.0	3.0	0.0	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	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	0	21	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	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	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	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	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	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]	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	2.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	35	26	26	35	26	26	7	18	18	27	16	16
g / C, Green / Cycle	0.50	0.37	0.37	0.50	0.37	0.37	0.10	0.26	0.26	0.39	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.26	0.26	0.05	0.20	0.12	0.10	0.04	0.05	0.14	0.04	0.04	0.15
s, saturation flow rate [veh/h]	944	3204	1431	767	3204	1431	3113	1683	1431	1147	3204	1431
c, Capacity [veh/h]	551	1190	531	410	1190	531	311	433	368	556	732	327
d1, Uniform Delay [s]	10.76	18.63	14.55	11.97	15.80	15.32	29.43	20.23	22.56	13.65	21.77	24.39
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	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]	2.63	3.35	0.52	2.58	0.76	1.20	3.30	0.88	6.04	0.30	0.57	9.23
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	0.45	0.69	0.13	0.37	0.34	0.26	0.37	0.18	0.56	0.08	0.19	0.64
d, Delay for Lane Group [s/veh]	13.38	21.98	15.07	14.55	16.56	16.51	32.73	21.11	28.61	13.95	22.35	33.62
Lane Group LOS	B	C	B	B	B	B	C	C	C	B	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.33	5.62	0.76	1.41	2.21	1.58	0.99	1.01	3.35	0.48	0.94	3.80
50th-Percentile Queue Length [ft/ln]	58.32	140.59	18.94	35.32	55.21	39.48	24.85	25.21	83.63	12.12	23.47	95.09
95th-Percentile Queue Length [veh/ln]	4.20	9.51	1.36	2.54	3.98	2.84	1.79	1.82	6.02	0.87	1.69	6.85
95th-Percentile Queue Length [ft/ln]	104.97	237.81	34.10	63.58	99.38	71.07	44.74	45.38	150.53	21.82	42.24	171.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.38	21.98	15.07	14.5	14.5	16.5	16.5	32.73	21.11	28.61	13.95	22.35	33.62
Movement LOS	B	C	B	B	B	B	B	C	C	C	B	C	C
d_A, Approach Delay [s/veh]	19.70			16.11				28.36			27.31		
Approach LOS	B			B				C			C		
d_I, Intersection Delay [s/veh]	21.20												
Intersection LOS	C												
Intersection V/C	0.498												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.757	2.495
Crosswalk LOS	F	F	C	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]	743	743	514	457
d_b, Bicycle Delay [s]	13.83	13.83	19.31	20.83
l_b,int, Bicycle LOS Score for Intersection	2.503	2.074	2.213	1.885
Bicycle LOS	B	B	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 11: New Meridian Rd/US 24

Control Type:	Signalized	Delay (sec / veh):	33.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	New Meridian Rd			New Meridian Rd			US 24			US 24		
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	2	2	0	1	2	0	1
Entry Pocket Length [ft]	406.00	100.00	343.00	200.00	100.00	220.00	350.00	100.00	350.00	390.00	100.00	800.00
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]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	New Meridian Rd			New Meridian Rd			US 24			US 24		
Base Volume Input [veh/h]	2	339	68	36	259	144	293	768	1	184	496	2
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	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328	2.0328
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	0	14	21	21	36	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	725	138	87	547	314	632	1561	2	374	1008	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	191	36	23	144	83	166	411	1	98	265	1
Total Analysis Volume [veh/h]	4	763	145	92	576	331	665	1643	2	394	1061	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]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
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	Unsign	ProtPer	Permis	Unsign	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	35	0	9	35	0	15	44	0	12	41	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	10	0	0	32	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	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	0.00	2.00	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	40	31	40	31	52	40	40	52	37	37
g / C, Green / Cycle	0.40	0.31	0.40	0.31	0.52	0.40	0.40	0.52	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.00	0.24	0.11	0.18	0.45	0.36	0.00	0.38	0.23	0.00
s, saturation flow rate [veh/h]	902	3204	803	3204	1473	4584	1431	1028	4584	1431
c, Capacity [veh/h]	351	993	289	993	724	1834	572	491	1696	529
d1, Uniform Delay [s]	19.19	31.24	21.82	29.02	19.52	28.05	18.03	21.52	25.82	19.90
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	5.69	2.89	2.47	18.53	7.31	0.01	13.04	1.75	0.03
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

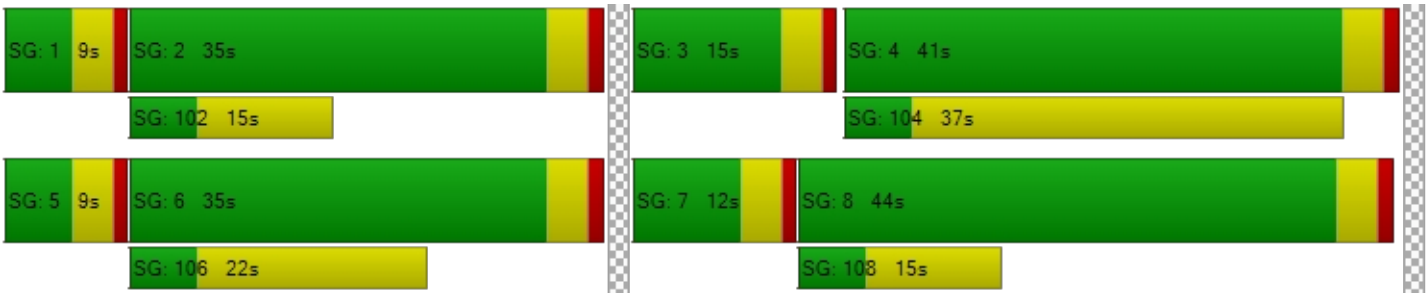
X, volume / capacity	0.01	0.77	0.32	0.58	0.92	0.90	0.00	0.80	0.63	0.01
d, Delay for Lane Group [s/veh]	19.25	36.94	24.71	31.49	38.05	35.37	18.04	34.56	27.57	19.93
Lane Group LOS	B	D	C	C	D	D	B	C	C	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	8.82	1.55	5.98	5.80	12.04	0.03	2.99	6.48	0.06
50th-Percentile Queue Length [ft/ln]	1.50	220.62	38.87	149.45	145.05	300.89	0.68	74.72	161.95	1.45
95th-Percentile Queue Length [veh/ln]	0.11	13.70	2.80	9.99	9.75	17.73	0.05	5.38	10.65	0.10
95th-Percentile Queue Length [ft/ln]	2.71	342.42	69.97	249.70	243.81	443.13	1.22	134.50	266.31	2.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.25	36.94	0.00	24.71	31.49	0.00	38.05	35.37	18.04	34.56	27.57	19.93
Movement LOS	B	D		C	C		D	D	B	C	C	B
d_A, Approach Delay [s/veh]	36.84			30.56			36.12			29.44		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	33.64											
Intersection LOS	C											
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]	41.41	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	3.025	3.311	3.578	3.587
Crosswalk LOS	C	C	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]	620	620	800	740
d_b, Bicycle Delay [s]	23.81	23.81	18.00	19.85
I_b,int, Bicycle LOS Score for Intersection	2.192	2.111	2.830	2.362
Bicycle LOS	B	B	C	B

Sequence

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