Prepared for CEI

Traffic Impact Analysis

March 30, 2023

Walmart Store #4335 Fuel Station

Falcon, Colorado

Interim Review Only
Not intended for permit or construction
Engineer: Thomas Duncan, P.E.
P.E. Serial No. 0044552
Date: March 30, 2023

WPM Project Number: T04-22006-05

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EXECUTIVE SUMMARY

As requested by CEI, Walter P Moore conducted a traffic impact analysis for the proposed Fuel Station at Walmart Store #4335 in Falcon, Colorado. The proposed development will develop on parking lot removing certain parking spaces and has E Woodmen Rd to the north and Meridian Rd to the east. The purpose of the study was to determine the potential impacts on traffic operations in the area related to the proposed development. Transportation and site improvements to mitigate impacts were investigated, if necessary.

Study Area

The following four intersections in the study area were analyzed as part of the Traffic Impact Analysis:

1. Woodmen Rd and Foxtail Meadow Ln (Uncontrolled: Right In – Right Out).
2. Meridian Rd and Woodmen Rd (Signalized).
3. Meridian Rd and WM Drive (Uncontrolled)
4. Foxtail Meadow Ln and Meridian Market View (Two-way Stop).
5. Foxtail Meadow Ln and Rolling Thunder Way (Signalized).
6. Rolling Thunder Way and Meridian Rd (Signalized).
7. Meridian Market View and Meridian Rd (Uncontrolled: Right In – Right Out).

Analysis

Intersection operations were analyzed using *Synchro 11.0*. Capacity analyses were performed for:

- Existing conditions (2023) – using collected 2023 counts and signal timings.
- Proposed conditions (2023) – which include the site-generated traffic for the proposed development.

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Summary

In this study, traffic conditions for the year 2023 were analyzed with the addition of trips generated from the proposed fuel station. The existing and proposed year are same, and no background projects were identified in the analysis. Therefore, the proposed volumes were calculated by adding site generated traffic to the existing volumes for the purpose of the analysis. The level of service from *Synchro 11.0* were used as Measures of Effectiveness (MOE) to determine the need for potential mitigation measures. Following is a summary of the study:

- The proposed site will include a fuel station having 16 fueling locations.
- Based on the level of service comparisons, all intersections performed at an acceptable level of service. Therefore, no mitigations are required.

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INTRODUCTION

As requested by CEI, Walter P Moore conducted a traffic impact analysis for the proposed Fuel Station at Walmart Store #4335 in Falcon, Colorado. The proposed fuel station will be developed within the existing campus and would replace some existing parking spaces. It will be connected to Meridian Rd (to the east) and Foxtail Meadow Rd (to the west) via Meridian Market View.

The purpose of the study was to determine the potential impacts to traffic operations in the area related to the proposed development. Transportation and site improvements to mitigate impacts were investigated, if necessary.

AREA CONDITIONS

The site is bordered by Woodmen Rd to the north, Meridian Rd to the east and Walmart Supercenter parking to the west. The proposed development of the site is described under the heading “PLANNED DEVELOPMENT.” The proposed site location is shown in **Figure 1.**

ROADWAYS

The primary roadways in the study area are described in the following paragraphs.

Woodmen Road is a four lane east-west expressway with turn lanes at major intersections in the study area. It ends at the intersection with US Hwy 24.

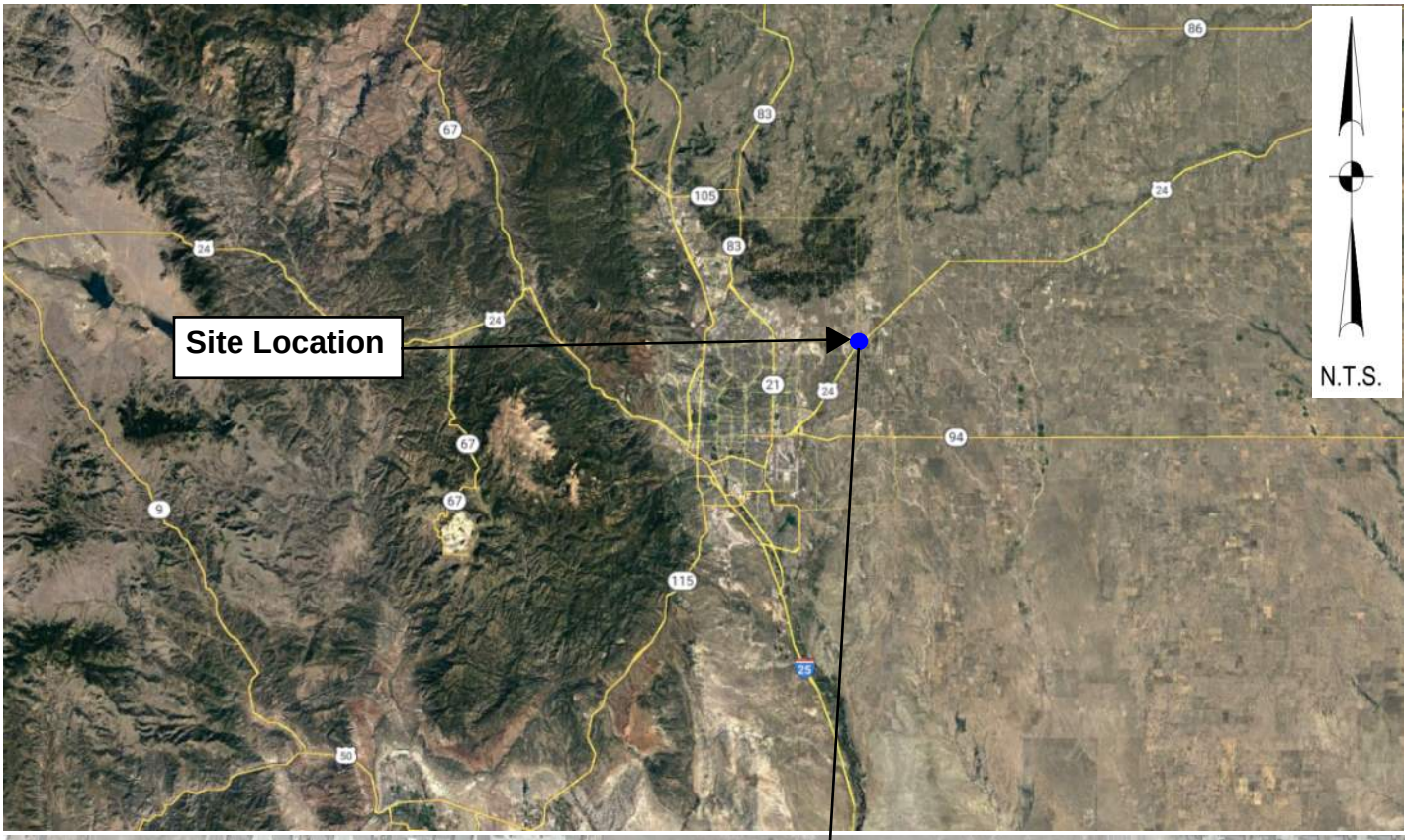
Posted speed limit: 45 mph

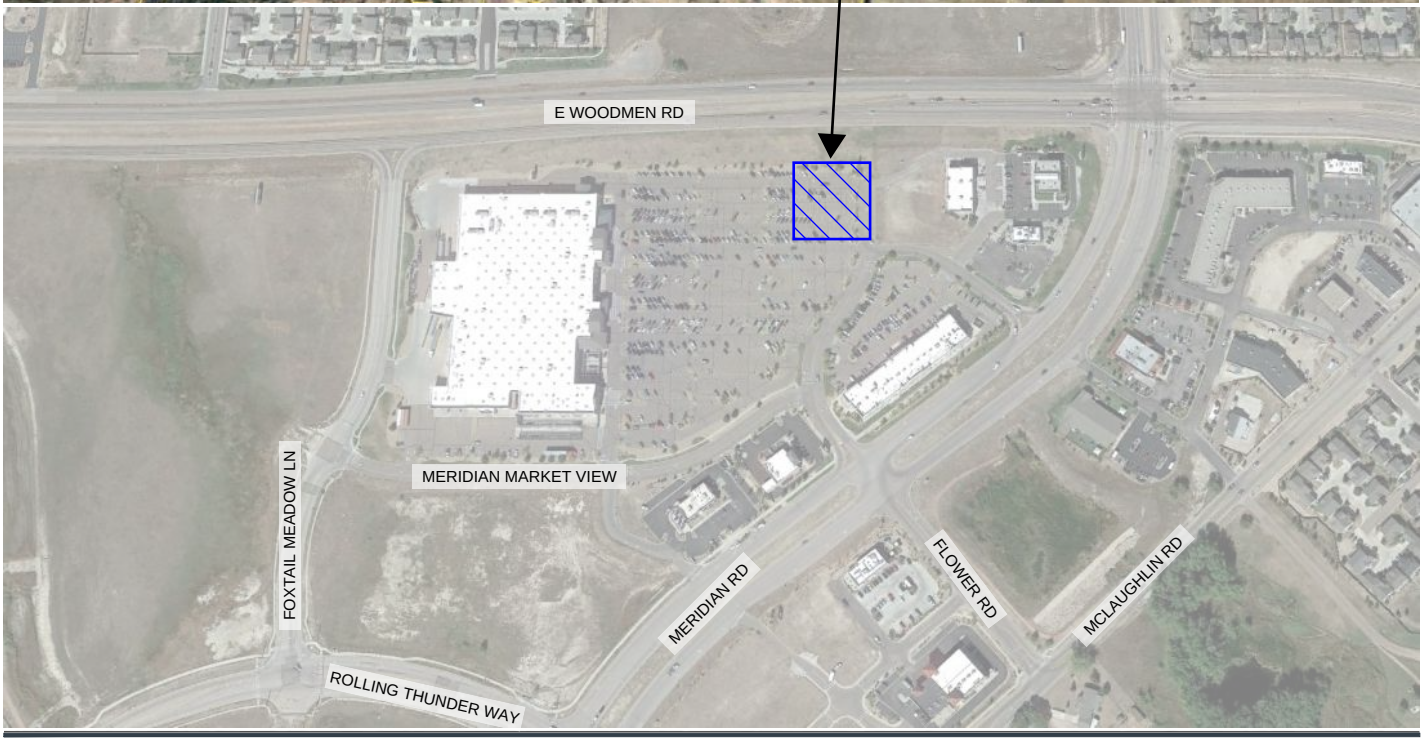
Bus route and stops: No

Meridian Road is a four lane north-south principal arterial.

Posted speed limit: 35 mph

Bus route and stops: No





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SITE LOCATION MAP

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Rolling Thunder Way is a two lane east-west collector road with turn lanes at intersection in the study area.

Posted speed limit: 35 mph

Bus route and stops: No

Foxtail Meadow Ln is a two lane north-south collector road with turn lanes at intersection in the study area.

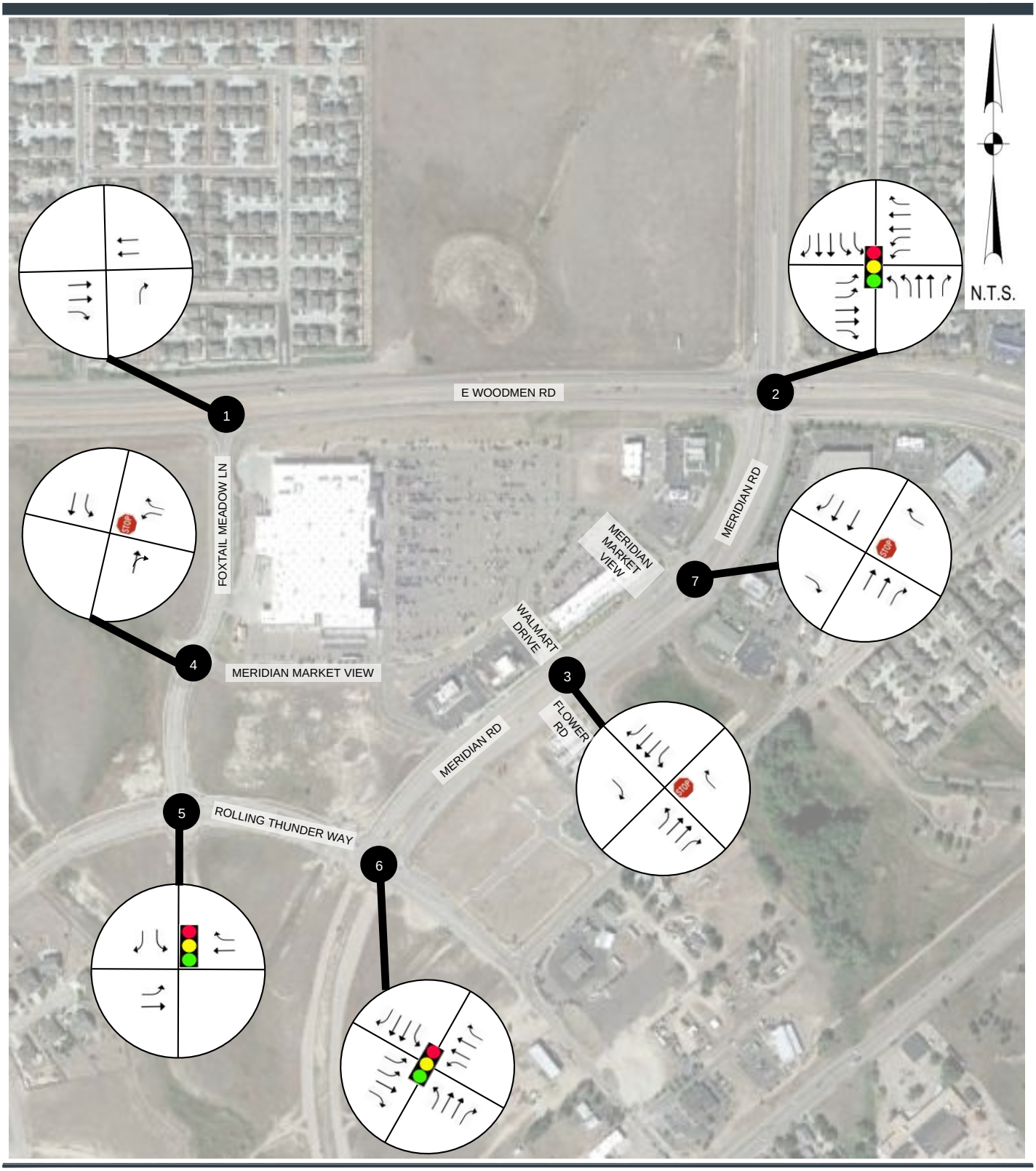
Posted speed limit: 30 mph

Bus route and stops: No

INTERSECTIONS

There are seven existing intersections that were analyzed as part of this study. The existing lane configurations can be seen in **Figure 2**. The intersections include:

1. Woodmen Rd and Foxtail Meadow Ln
    - Traffic Control: Uncontrolled (Right In – Right Out)
    - Pedestrian Crossing: N.A.
2. Meridian Rd and Woodmen Rd
    - Traffic Control: Signalized
    - Pedestrian Crossing: All approach directions
3. Meridian Rd and Walmart Drive/Flower Rd
    - Traffic Control: Two Way Stop Controlled (Right In – Right Out)
Southbound right turn is free
Northbound right turn is stop controlled
    - Pedestrian Crossing: Southbound approach (Walmart Drive)
4. Foxtail Meadow Ln and Meridian Market View
    - Traffic Control: Two Way Stop Controlled
    - Pedestrian Crossing: Westbound approach (Meridian Market View)



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EXISITNG LANE CONFIGURATION

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5. Foxtail Meadow Ln and Rolling Thunder Way
    - Traffic Control: Signalized
    - Pedestrian Crossing: All approach directions
6. Rolling Thunder Way and Meridian Rd
    - Traffic Control: Signalized
    - Pedestrian Crossing: All approach directions
7. Meridian Market View and Meridian Rd
    - Traffic Control: Uncontrolled (Right In – Right Out)
    - Pedestrian Crossing: N.A.

PEDESTRIAN CONNECTIVITY

The following pedestrian destinations were identified within and near the study area, as shown in **Table 1**. The proposed fuel station is not connected to any pedestrian facilities within the study area.

Table 1: Pedestrian Destinations in Study Area

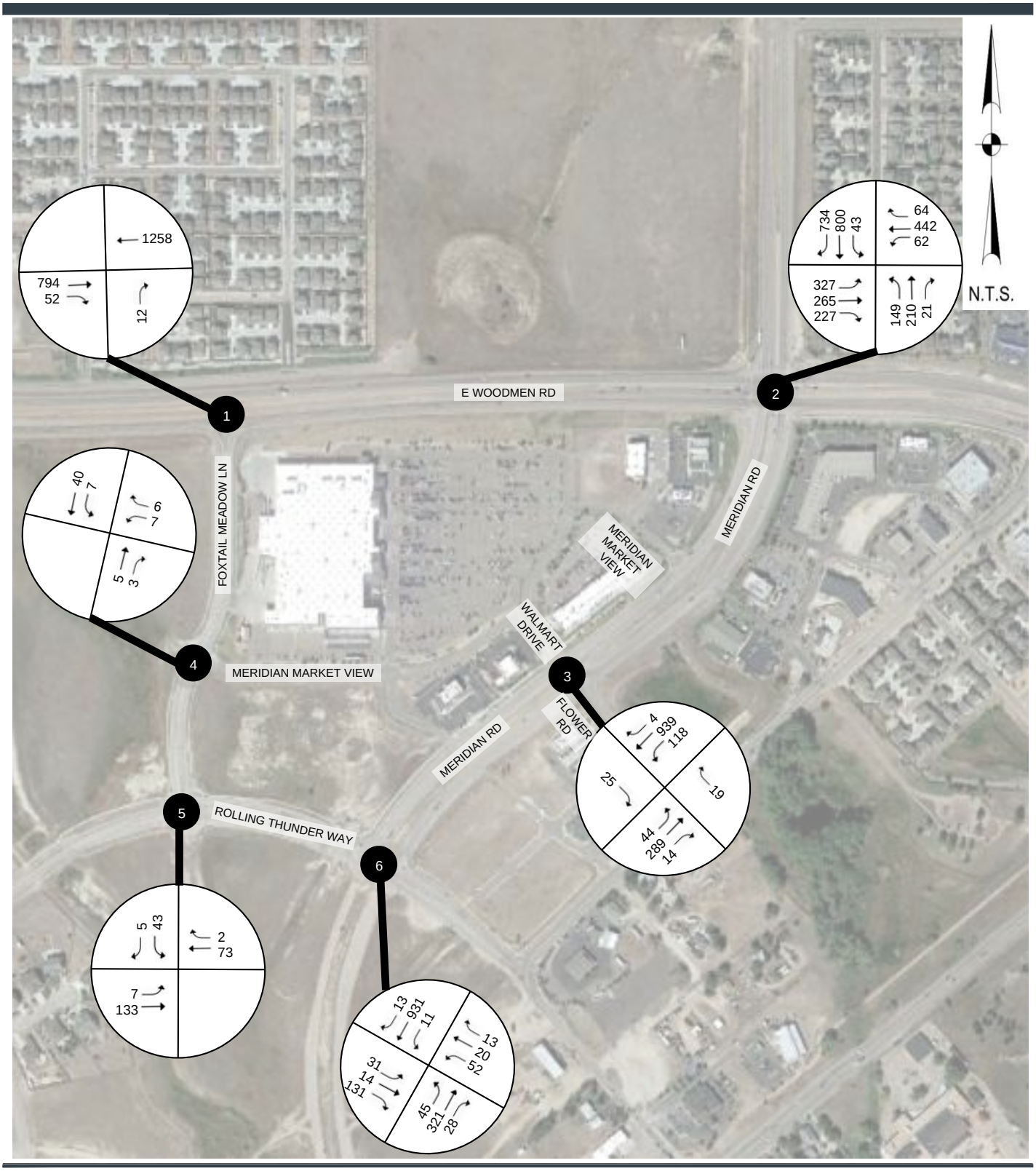
Sr. No.	Name	Land Use Type	Distance from Project
1	Walmart Supercenter	Commercial	400 ft. west
2	Restaurants	Commercial	150 ft. southeast

VOLUMES

Turning movement counts for the AM and PM peaks were collected on January 10, 2023, from 7:00 AM - 9:00 AM and 4:00 PM - 6:00 PM for the intersections in the study area. The analysis showed that the AM peak hour occurred from 7:00-8:00 AM and the PM peak hour from 4:15-5:15 PM for the weekday traffic. The daily traffic volumes were also collected on the same day along with turning movement counts. The daily traffic volumes were collected at the following locations:

i. Woodmen Rd EB between Foxtail Meadow and Meridian
ii. Woodmen Rd WB between Foxtail Meadow and Meridian

Figures 3 and **4** illustrate the existing AM peak and PM peak hour volumes, respectively at each intersection. The collected traffic counts can be found under **TAB ONE.**



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EXISTING AM PEAK VOLUME 2023

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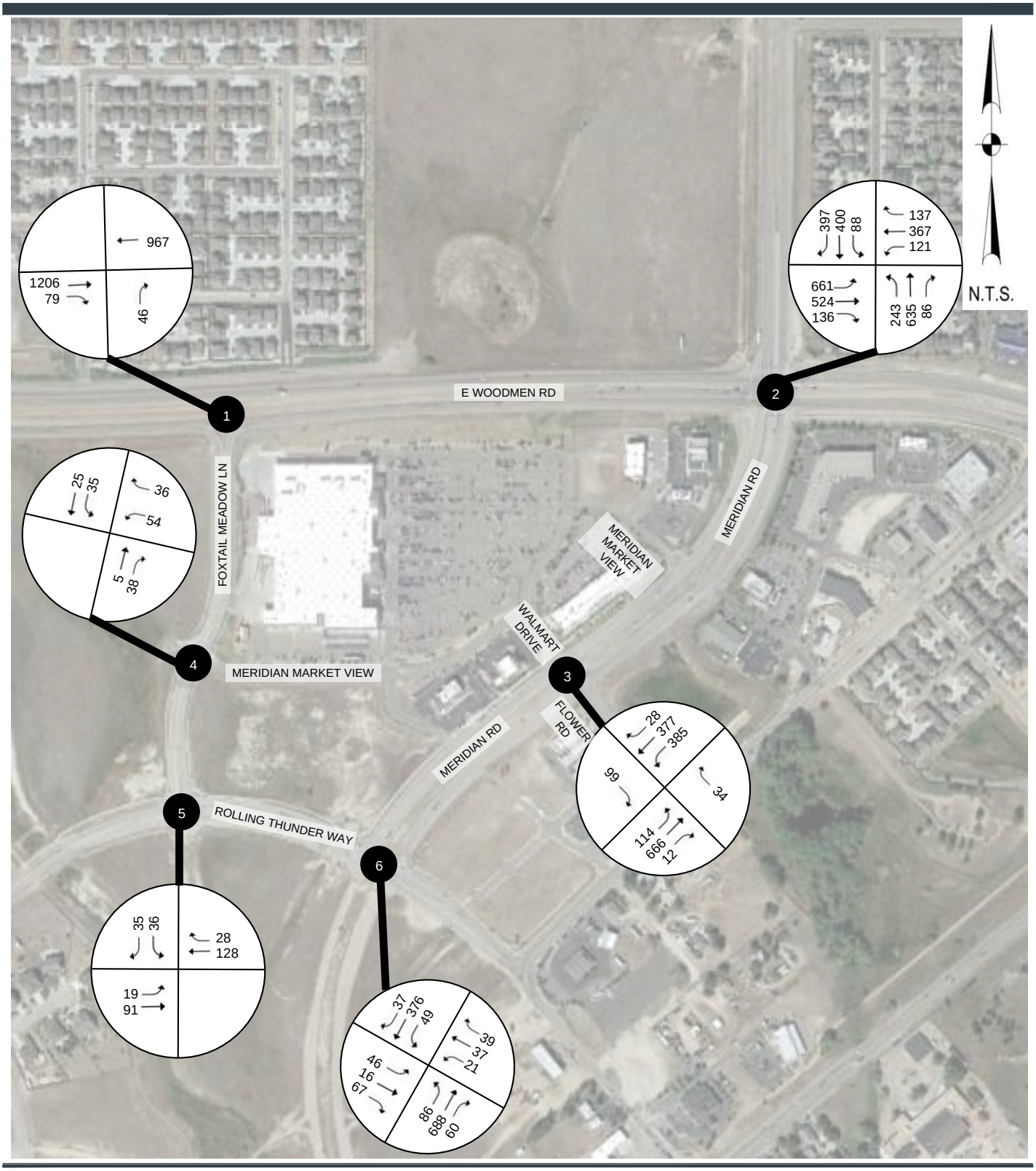

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EXISTING PM PEAK VOLUME 2023

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BACKGROUND DEVELOPMENTS

The known development plans that cover the study area were reviewed to determine any conflicts or relevant recommendations. Based on discussions with El Paso County representatives, no study was identified as part of background development for the analysis.

PLANNED DEVELOPMENT

SITE DEVELOPMENT

The proposed development is a fuel station and is anticipated to be completed in the year 2023. This fuel station will have a total of 16 fueling locations. The proposed site layout can be seen in **Figure 5**.

APPROPRIATENESS OF ACCESS LOCATION

Access to the site will be provided by the following existing driveway:

- Meridian Market View (Uncontrolled: Right In – Right Out)- Existing intersection on Foxtail Meadow Lane and Meridian Rd.
- Walmart Drive (Two way stop controlled)- Existing full access driveway on Flower Rd and Meridian Rd.

SITE CIRCULATION AND PARKING

The traffic would enter and exit from the south and north dwy. of the fuel station from the Meridian Market View. The location of the south and north driveways can be seen in **Image 1**. The proposed fuel station site includes ample drive isles allowing enough maneuvering space for fuel trucks and other vehicles. Fuel truck site circulation diagrams are shown in **Figure 6**.

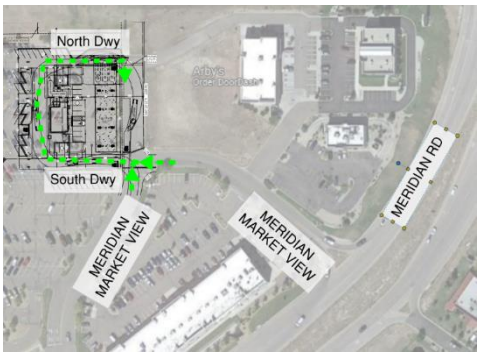
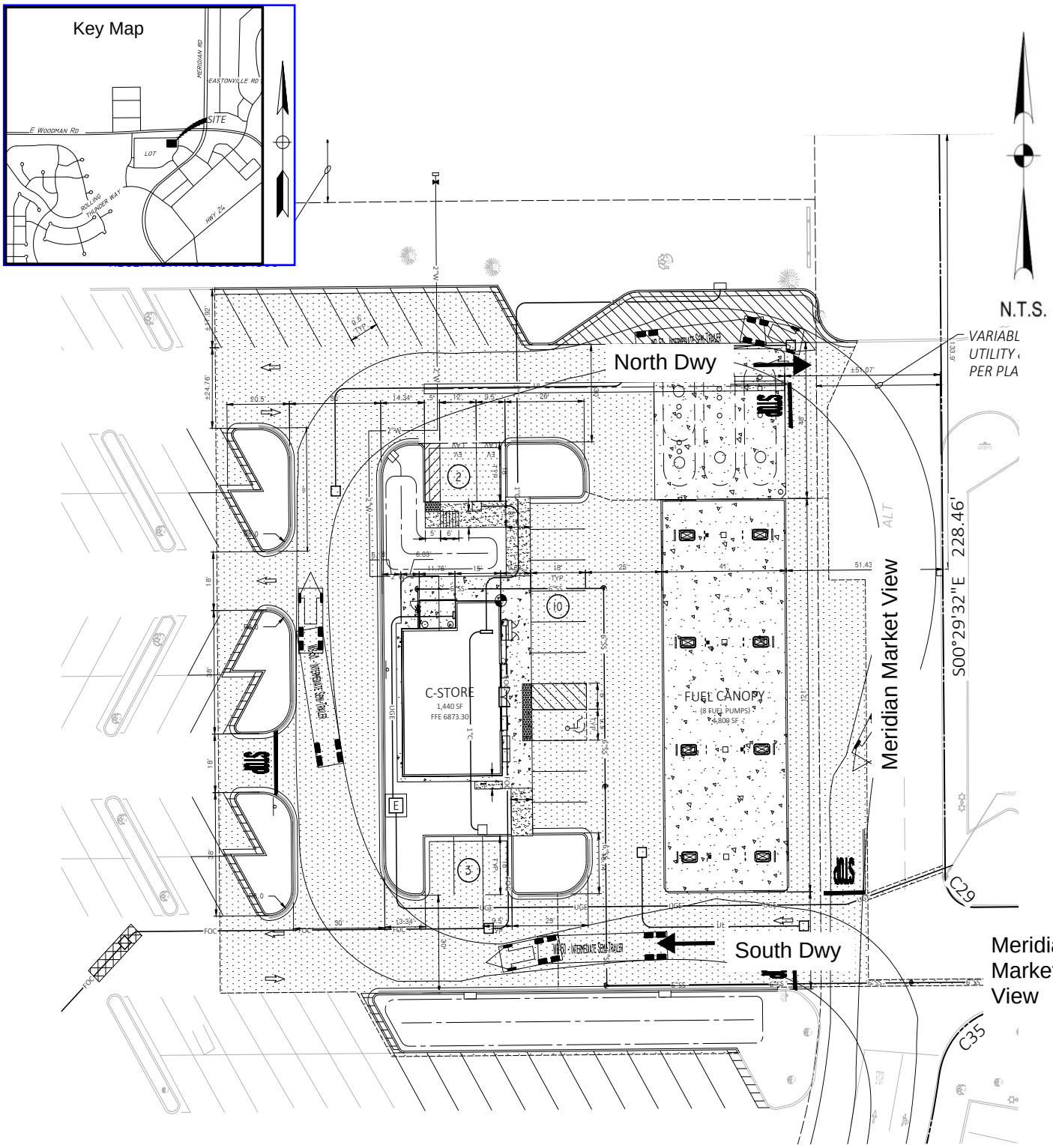


Image 1: Driveway Location



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PROPOSED SITE LAYOUT

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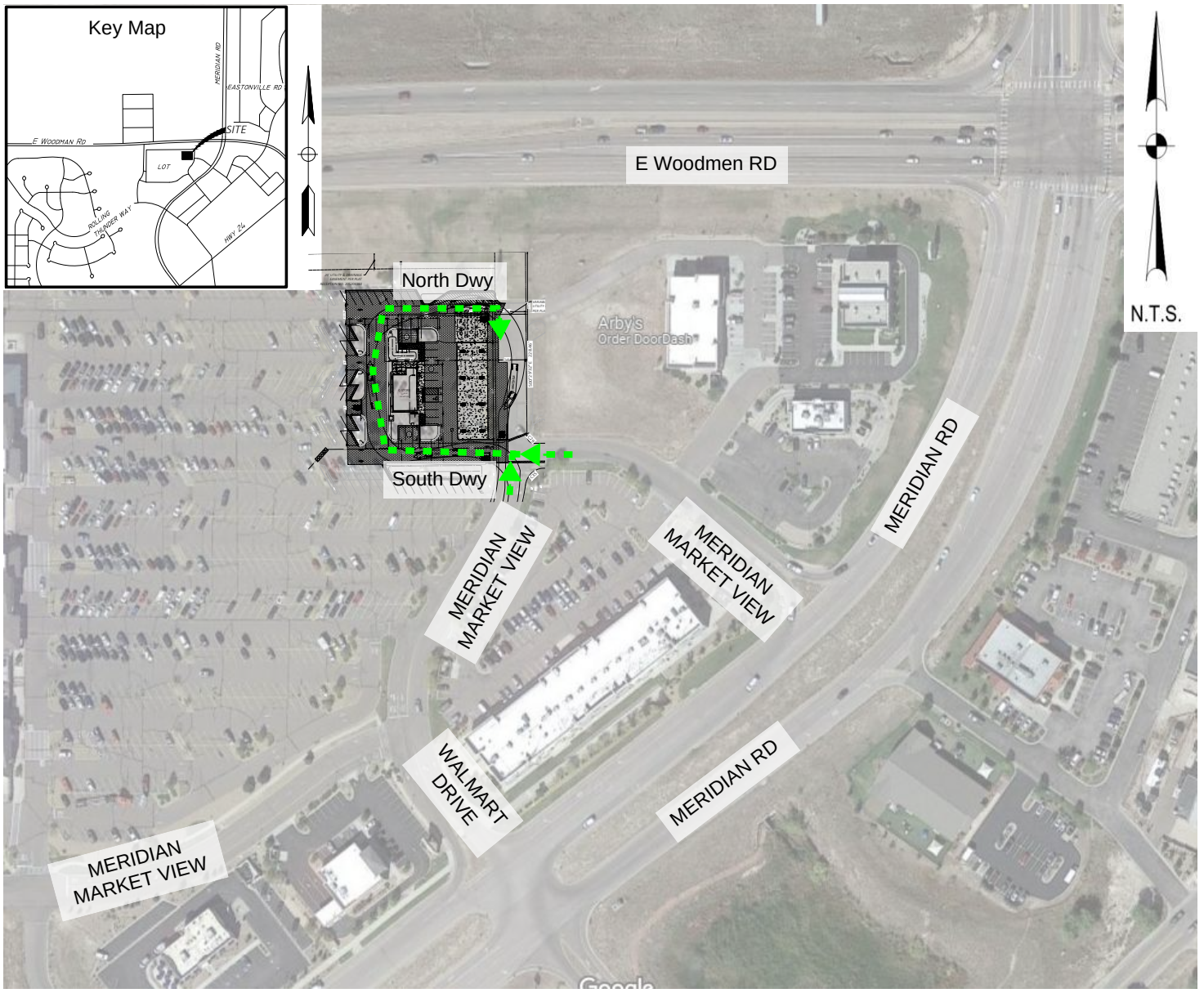

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SITE CIRCULATION PLAN

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COMPLIANCE WITH ACCESS CONTROL POLICIES

The entry/exit points that provide access to the proposed fuel station are on Meridian Market View which is an access road that connects proposed development to the east on Meridian Rd and to the west on the Foxtail Meadow Ln. The proposed development will maintain the current control type for the access points.

STUDY METHODOLOGY

TRAFFIC SCENARIOS

The following traffic scenarios were analyzed for the AM and PM peak hour in this study:

- **Existing Conditions 2023**- Analysis of the existing traffic conditions using the existing 2023 counts, existing signal timings and site observations.
- **Proposed Conditions 2023-** Analysis of existing traffic volumes with the added site generated trips from the proposed development.

TRAFFIC SIGNAL TIMING ASSUMPTIONS

Meridian Rd and Woodmen Rd, Foxtail Meadow Ln and Rolling Thunder Way and Rolling Thunder Way and Meridian Rd are the three signalized intersections in the study area. The signal timing data for these intersections was not available, hence reasonable assumptions were made to develop the existing signal timings. The signal phases for all the movements were assumed based on NEMA standard phasing and phases 2 and 6 were assigned to the major road movements. The split timings were optimized in proportion with the existing traffic volumes.

GROWTH RATE

To project any future traffic conditions, the existing traffic counts can be forecasted for the future scenarios using a growth rate. Based on discussions with the El Paso County representatives, a growth rate of 2.0% was approved. However, the existing and proposed year is same and therefore, the growth rate is not applicable for the study.

PROJECTED CONDITIONS

TRIP GENERATION

To complete a Traffic Impact Analysis for the proposed development, the number of trips expected to be generated by the planned facilities must be determined. The number of trips generated by the development during average weekday peak hours is based on the land use type and size of the development. Standard rates for fuel stations (Land Use 944 – Service - Gasoline/Gas Station) from the Institute of Transportation Engineers (ITE) publication, *Trip Generation, 11th edition,* were used to determine the amount of traffic generated by the development. The average rate was used to estimate trips generated during AM and PM Peak Hour in accordance with the El Paso County TIA guidelines. The average trip generation rates for the proposed land uses together with the directional distribution are presented in **Table 2**.

Table 2: Trip Generation Equations

ITE Land Use		Weekday		AM Peak Hour		PM Peak Hour	
Service Gasoline/ Gas Station (944)	Regression Equation/ Average Rate	172.01		10.28		13.91	
	Directional Distribution	Enter	Exit	Enter	Exit	Enter	Exit
		50%	50%	50%	50%	50%	50%

PASS-BY TRIP REDUCTION

Not all trips to the Fuel Station (Land Use – 944) travel directly to and from that destination (primary trips); some trips may be as a result of passing by or deliberately diverting to the gas station while travelling to another destination such as the existing Walmart store, Auto Zone, and other similar commercial developments near proposed development. These trips are called pass-by trips and should be reduced from the newly generated trips. Therefore, to account for the pass-by trip reduction the ITE *Trip Generation Manual 11thd Edition* was utilized. The handbook provides a methodology that estimates the pass-by trips for different land uses and is provided in **Image 1** and **Image 2**.

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	944
Land Use	Gasoline/Service Station
Setting	General Urban/Suburban
Time Period	Weekday AM Peak Period
# Data Sites	12
Average Pass-By Rate	63%

Pass-By Characteristics for Individual Sites

Vehicle Fueling Positions	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
6	Maryland	1992	21	67	14	19	33	900	25
6	Maryland	1992	21	43	28	29	57	870	25
8	Maryland	1992	46	87	13	0	13	2235	25
8	Maryland	1992	35	78	9	13	22	7080	25
8	Kentucky	1993	61	60	15	25	40	4000	2
8	Kentucky	1993	48	68	13	19	32	1307	2
8	Kentucky	1993	—	56	22	22	44	1211	2
8	Maryland	1992	36	47	14	39	53	3095	25
8	Maryland	1992	46	75	0	25	25	3770	25
10	Kentucky	1993	47	67	11	22	33	1105	2
10	Kentucky	1993	—	46	42	12	54	1211	2
12	Maryland	1992	36	61	8	31	39	3480	25

Image 2: Pass-by trips Reduction AM Peak

Vehicle Pass-By Rates by Land Use									
Source: ITE *Trip Generation Manual*, 11th Edition									
Land Use Code	944								
Land Use	Gasoline/Service Station								
Setting	General Urban/Suburban								
Time Period	Weekday PM Peak Period								
# Data Sites	17								
Average Pass-By Rate	57%								
	Pass-By Characteristics for Individual Sites								
	State or	Survey	#	Pass-By	Non-Pass-By Trips			Adj Street Peak	
Vehicle Fueling Positions	Province	Year	Interviews	Trip (%)	Primary (%)	Diverted (%)	Total (%)	Hour Volume	Source
6	Maryland	1992	18	61	6	33	39	2510	25
6	Maryland	1992	26	58	11	31	42	1020	25
8	Maryland	1992	47	62	23	15	38	2635	25
8	Kentucky	1993	83	52	8	40	48	4965	2
8	Kentucky	1993	60	53	20	27	47	1491	2
8	Kentucky	1993	—	72	7	21	28	2657	2
8	Maryland	1992	36	67	14	19	33	3095	25
8	Maryland	1992	46	46	11	43	54	3770	25
8	Maryland	1992	35	54	3	43	46	7080	25
10	Kentucky	1993	—	57	19	24	43	1812	2
10	Kentucky	1993	—	55	16	29	45	2657	2
12	Maryland	1992	52	38	10	52	62	3835	25
12	Pennsylvania	2009	—	66	—	—	34	—	19
12	Pennsylvania	2009	—	51	—	—	49	—	19
12	Pennsylvania	2009	—	40	—	—	60	—	19
12	Pennsylvania	2009	—	61	—	—	39	—	19
12	New Jersey	2009	—	73	—	—	27	—	19

Image 3: Pass-by trips Reduction PM Peak

Once calculated, the pass-by trips are then subtracted from the trip generation. Since ITE does not have data for 16 vehicle fueling positions, the average pass by rates were considered. It was estimated that the number of pass-by trips was 102 for the AM peak hour and 125 for the PM peak hour. **Table 3** shows a summary of the trips generated by the proposed development in the study area after the pass-by trip reduction.

Table 3: Trip Generation Volumes

Trip Generation Land Use	Size[1]	Unit	A.M. Peak			P.M. Peak		
			Total	Enter	Exit	Total	Enter	Exit
PROPOSED 2023								
Service Gasoline/ Gas Station (944)	16	No. of Fueling Positions	**62**	31	31	**98**	49	49

[1]Information Provided by Owner

TRIP DISTRIBUTION

After determining the number of trips generated by the proposed development, the trips were distributed among roadways accessing the site using a combination of existing and expected travel patterns. This process involves examining the roadways and the expected travel patterns between the site and other trip ends, based on available routes in the study area. All traffic assignments were made over the most reasonable routes for each direction. Based on the traffic patterns, the following assumptions were made:

- For the inbound traffic in AM peak, 72% of traffic would come from north on Meridian Rd, 25% from south of which 21% comes from northbound through movement and 4% comes from eastbound left movement at Rolling Thunder Way and Meridian Rd intersection. The remaining 3% will come on Meridian Market View from Foxtail Meadow Ln.
- For the inbound traffic in PM peaks, 43% of traffic would come from north on Meridian Rd, 54% from south of which 45% comes from northbound through traffic, 4% from eastbound left and 5% from westbound right at Rolling Thunder Way and Meridian Rd intersection respectively. The remaining 3% will come on Meridian Market View from Foxtail Meadow Ln.
- Among the driveways, the split for inbound for AM traffic would be as follows:
    - Meridian Market View and Meridian Rd (Right – In, Right – Out): 72%.
    - WM Drive and Meridian Rd (Uncontrolled): 25%.
    - Meridian Market View and Foxtail Meadow Ln (Two way stop): 3%.
- Among the driveways, the split for inbound for PM traffic would be as follows:
    - Meridian Market View and Meridian Rd (Right – In, Right – Out): 43%.
    - WM Drive and Meridian Rd (Uncontrolled): 54%.
    - Meridian Market View and Foxtail Meadow Ln (Two way stop): 3%.
- For the outbound traffic in AM peak, 28% exits towards north of which 18% exits towards northbound on Meridian Rd & 10% exits towards northbound left on Woodmen Rd respectively. The remaining 72% exit southbound through Meridian Rd.
- For the outbound traffic in PM peak, 66% exit towards north of which 43% would exit towards Meridian Rd northbound through, 15% towards northbound left, & 8% towards

northbound right on Woodmen Rd respectively. The remaining 34% exit towards south of which 25% exit towards southbound through, 5% exit towards southbound left & 4% would exit towards southbound right on Rolling Thunder Way respectively.

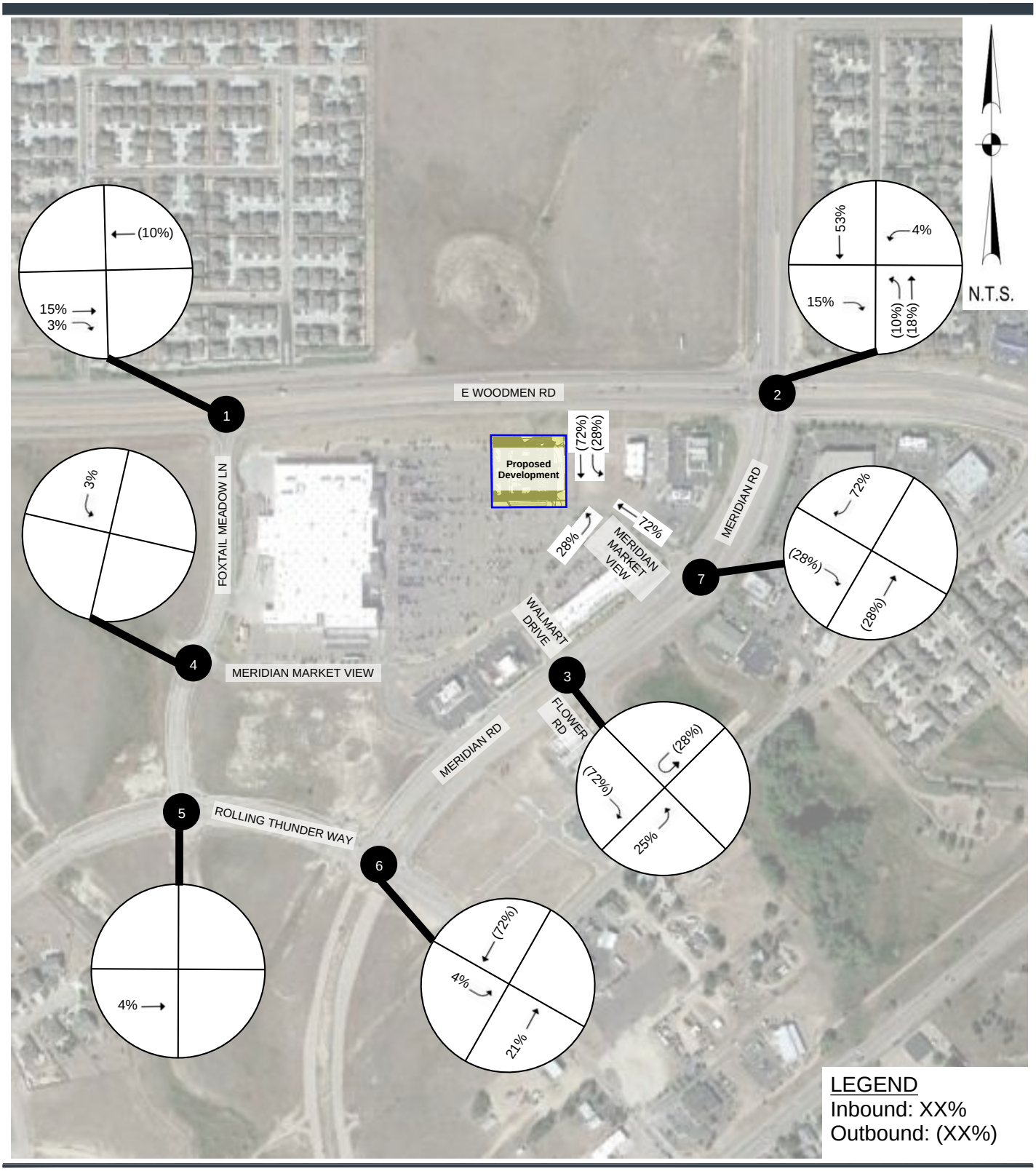
- Among the driveways, the split for outbound for AM traffic would be as follows:
    - Meridian Market View and Meridian Rd (Right – In, Right – Out): 28%.
    - WM Drive and Meridian Rd (Uncontrolled): 72%.
- Among the driveways, the split for outbound for PM traffic would be as follows:
    - Meridian Market View and Meridian Rd (Right – In, Right – Out): 57%.
    - WM Drive and Meridian Rd (Uncontrolled): 43%.

Figure 7 and **Figure 8** illustrate the proposed trip distribution for the AM peak hour and PM peak hour of the development. **Figures 9** and **10** show the site generated trips for the AM peak hour and PM peak hour of the development, respectively.

TRAFFIC ANALYSIS

After developing the projected turning movement volumes for the AM peak hour and PM peak hour, capacity analyses were performed for existing conditions, and proposed conditions. Intersection operations were analyzed using *Synchro 11.0,* software developed to automate procedures found in the *Highway Capacity Manual*. Results of the existing and proposed conditions analyses were compared to determine the impact of the proposed development on the surrounding roadways.

Results of the capacity analyses are reported in standard level of service (LOS) format, with the most favorable conditions being designated as LOS A and the poorest conditions indicated by LOS F. Intersection level of service is based on the average delay that each vehicle encounters at a given intersection. The level of service criteria for signalized intersections, along with a brief description of the conditions experienced for each level of service grade, can be seen in **Table 4**. The level of service criteria for unsignalized intersections can be seen in **Table 5**.



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PROPOSED TRIP DISTRIBUTION AM PEAK HOUR

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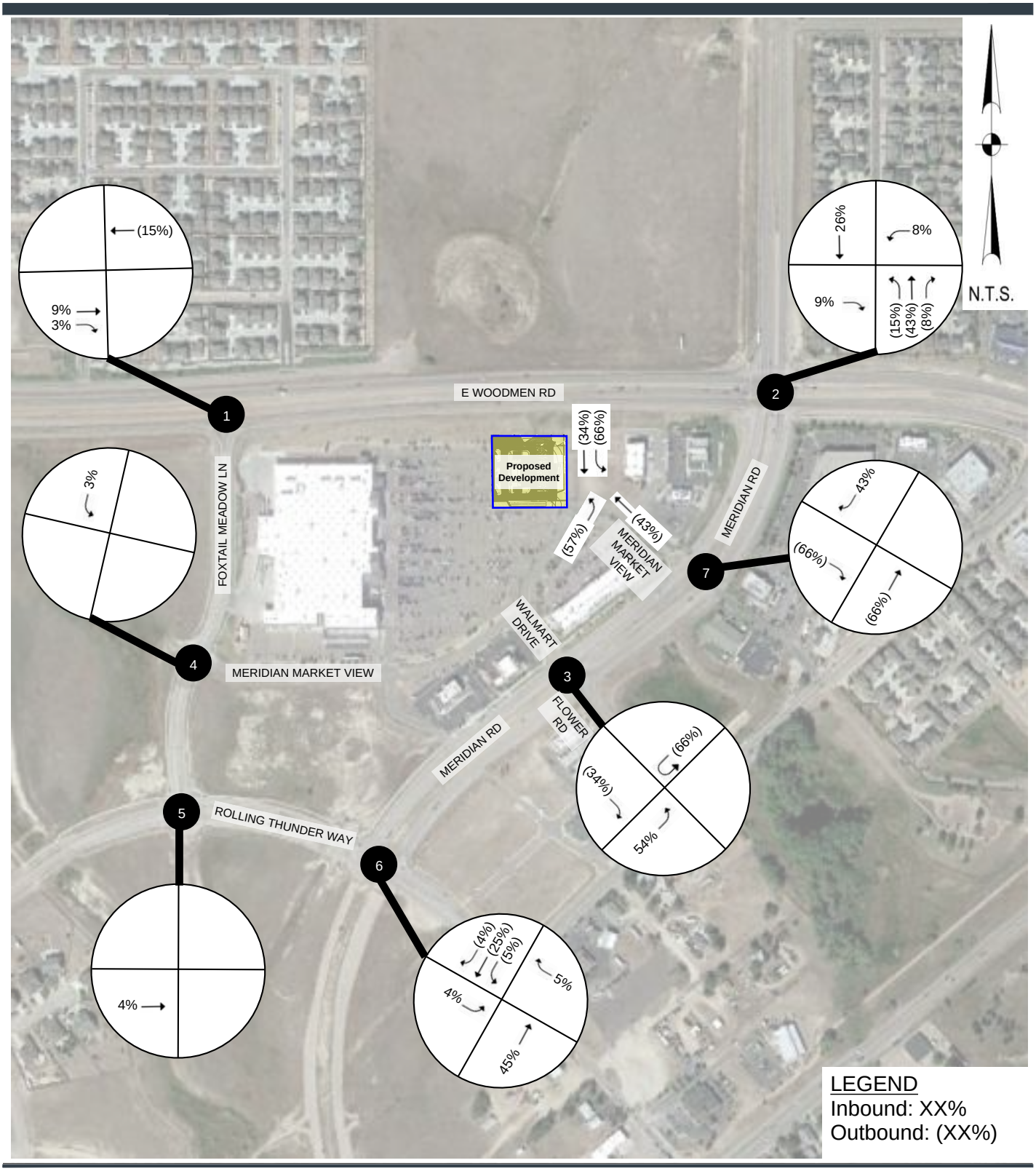

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PROPSOED TRIP DISTRIBUTION PM PEAK HOUR

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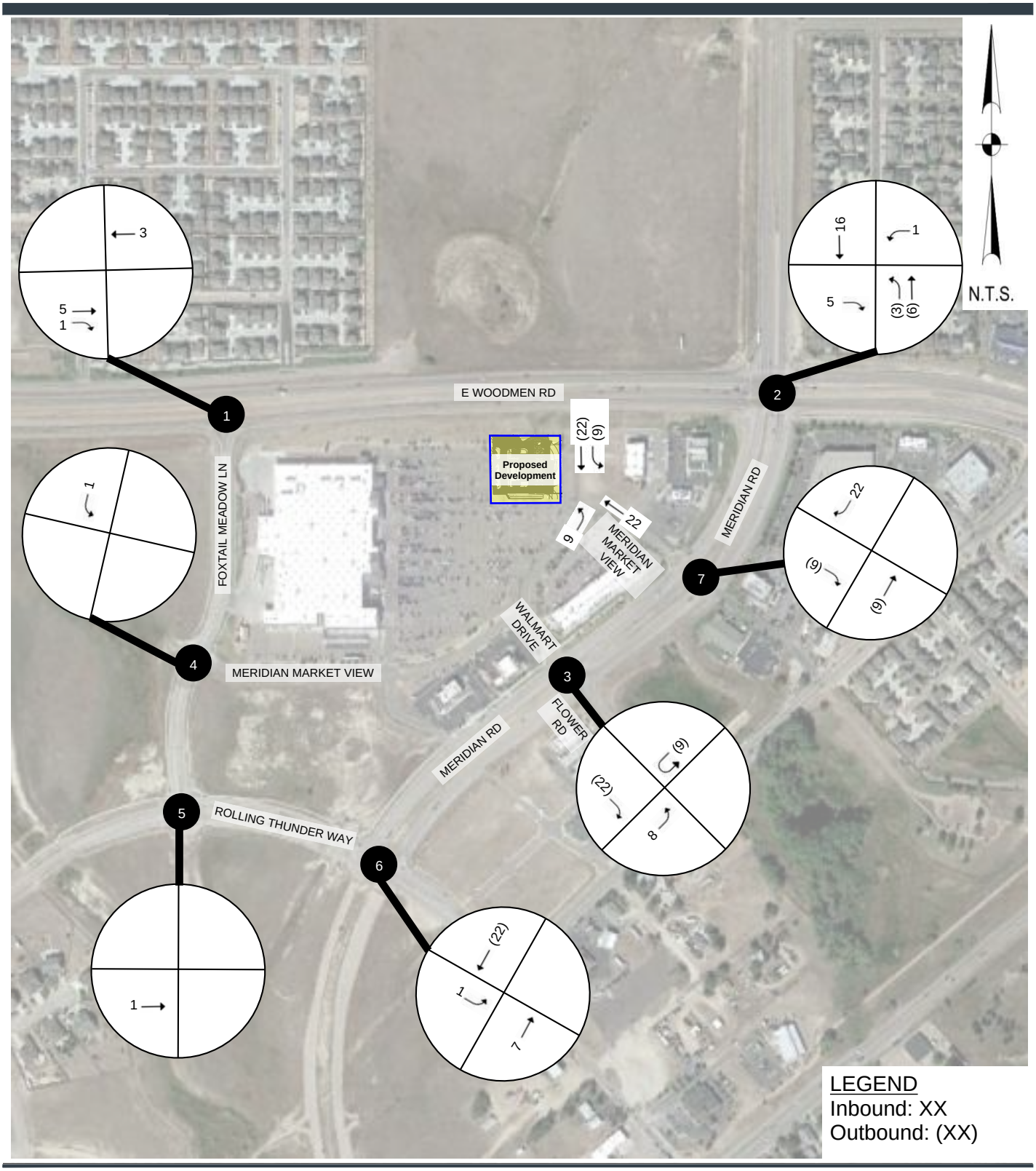

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SITE GENERATED TRIPS AM PEAK HOUR

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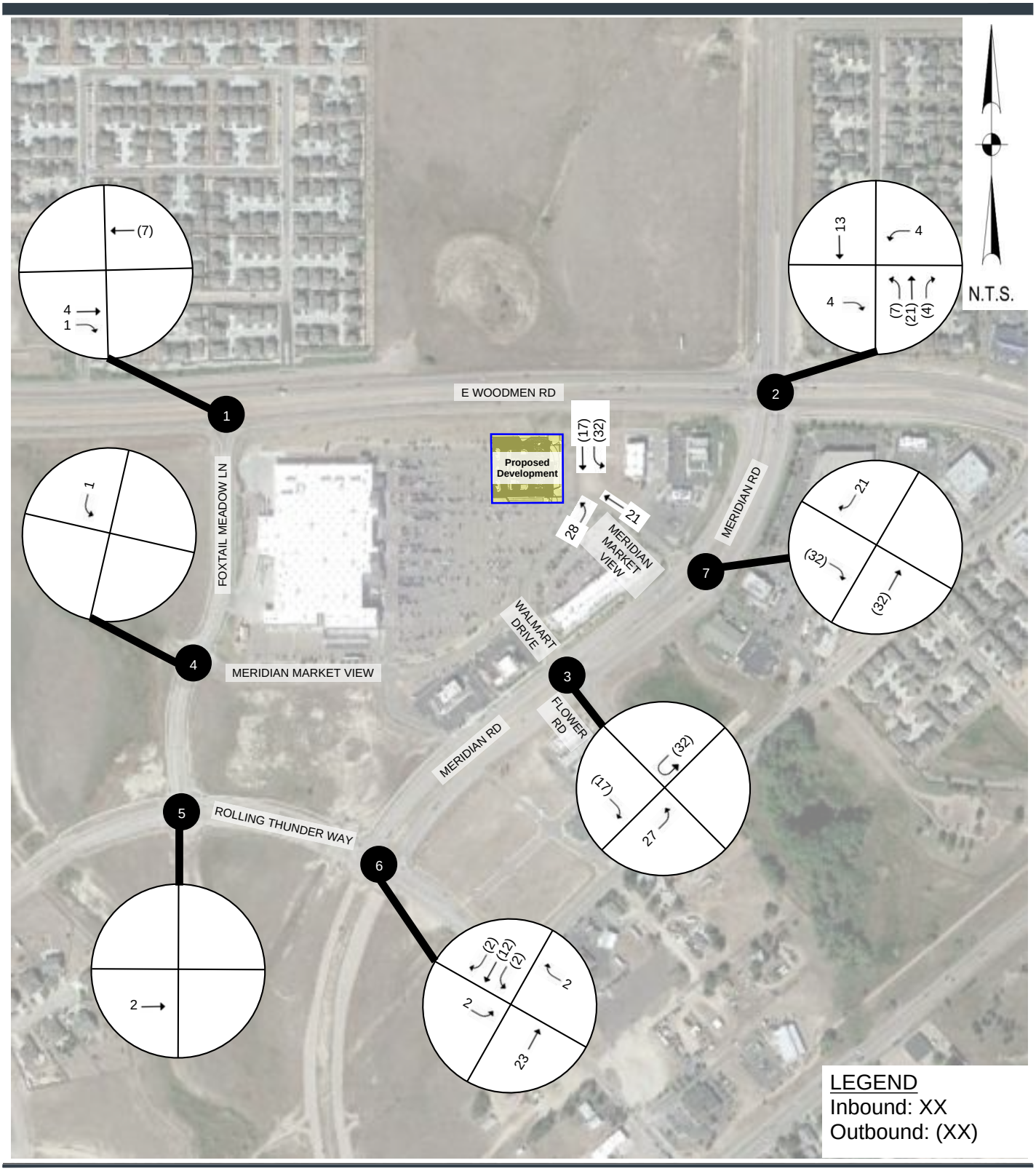

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SITE GENERATED TRIPS PM PEAK HOUR

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Table 4: Level of Service Criteria for Signalized Intersections

Level of Service	Stopped Delay (seconds/vehicle)	Description
A	≤ 10	At a single intersection most vehicles do not stop at all. When linked with other signals, vehicles progress through intersections without stopping.
B	> 10 and ≤ 20	At a single intersection some vehicles stop before getting a green signal. When linked with other signals, some cars may have to stop but most progress through the intersection without stopping.
C	> 20 and ≤ 35	At a single intersection, a significant number of vehicles must stop and wait for a green signal. Some vehicles may have to wait through one full signal cycle before being able to move through the intersection.
D	> 35 and ≤ 55	At this level, congestion is noticeable. Many vehicles have to stop while waiting for a green signal. A noticeable number of vehicles have to wait through one full cycle before being able to continue through the intersection.
E	> 55 and ≤ 80	At this level, almost all vehicles have to wait through one or more full signal cycles before moving through the intersection. When linked with other signals, progression is slow.
F	> 80	At this level, the number of vehicles entering the intersection exceeds its capacity. Vehicles have to wait through multiple full signal cycles before moving through the intersection.

Table 5: Level of Service Criteria for Unsignalized Intersections

Level of Service	Avg. Total Delay (seconds/vehicle)	Description
A	≤ 10	At most, one vehicle is waiting to move through the intersection when the driver reaches the stop sign. Most often, the driver pulls up to the stop sign and is immediately free to proceed through the intersection.
B	> 10 and ≤ 15	When the driver reaches the intersection, one or two vehicles are in front of him. Once those vehicles proceed through the intersection, the driver is able to continue without opposition.
C	> 15 and ≤ 25	At this level, several vehicles may be in front of the driver at a two-way stop-controlled intersection. At an all-way stop-controlled intersection, there may be two or more vehicles at each approach that the driver has to wait for before getting his turn.
D	> 25 and ≤ 35	At this level, there are at least four vehicles in front of the driver and several vehicles at the other approaches. Also, for two-way stop-controlled conditions, the volume of traffic on the uncontrolled street may be high.
E	> 35 and ≤ 50	When the driver reaches the intersection, there are between five and eight vehicles in front of him and many vehicles at the other approaches that must also proceed through the intersection before the driver may continue.
F	> 50	At this level, the driver must wait for eight to ten cars at his approach to move through the intersection along with at least five vehicles at the other approaches. This level can also occur at two-way stop-controlled intersections when the uncontrolled street has such a high volume that no gaps are available in the traffic stream for the vehicles at the cross street to continue.

Transportation agencies generally consider operations at or above LOS C to be acceptable. In more dense areas, operations at or above LOS D may also be considered acceptable during peak traffic hours.

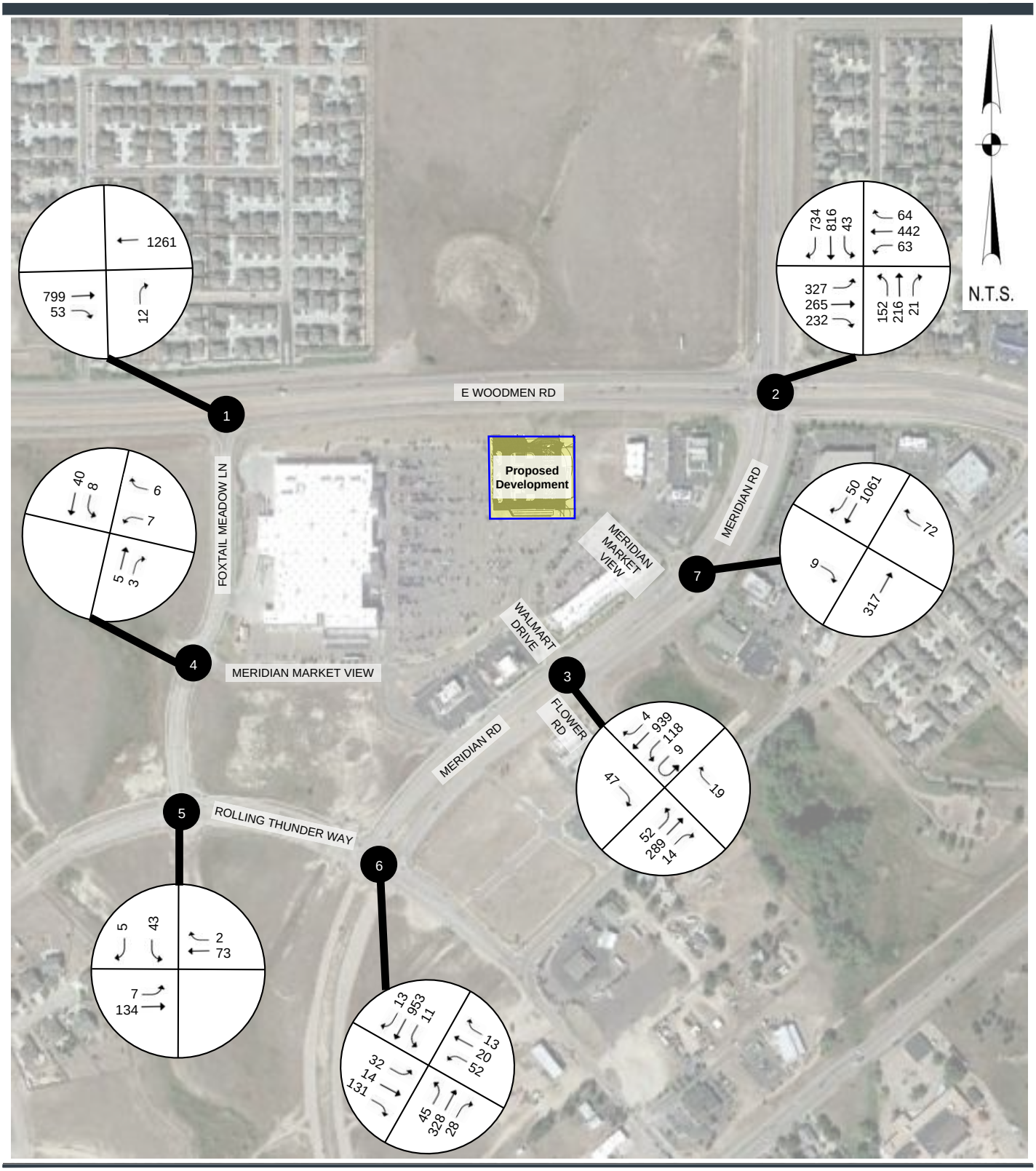
EXISTING CONDITIONS (2023)

For the analysis of existing conditions, existing traffic count data along with traffic signal timings based on reasonable assumptions were used. Existing AM peak hour and PM peak hour volumes can be seen in **Figures 3** and **4**. Existing conditions capacity analyses can be found under **TAB TWO**.

PROPOSED CONDITIONS (2023)

For the analysis of the proposed conditions, the proposed traffic volumes along with current traffic signal timings used in Existing conditions were used. The proposed AM peak hour and PM peak hour volumes can be seen in **Figures 11** and **12**. Proposed conditions capacity analyses can be found under **TAB THREE**.

A comparison of existing, and proposed AM peak hour and PM peak hour level of service and delay can be found in **Table 6** and **Table 7**.



Project Name:

WALMART STORE #4335-543 FUEL STATION TIA

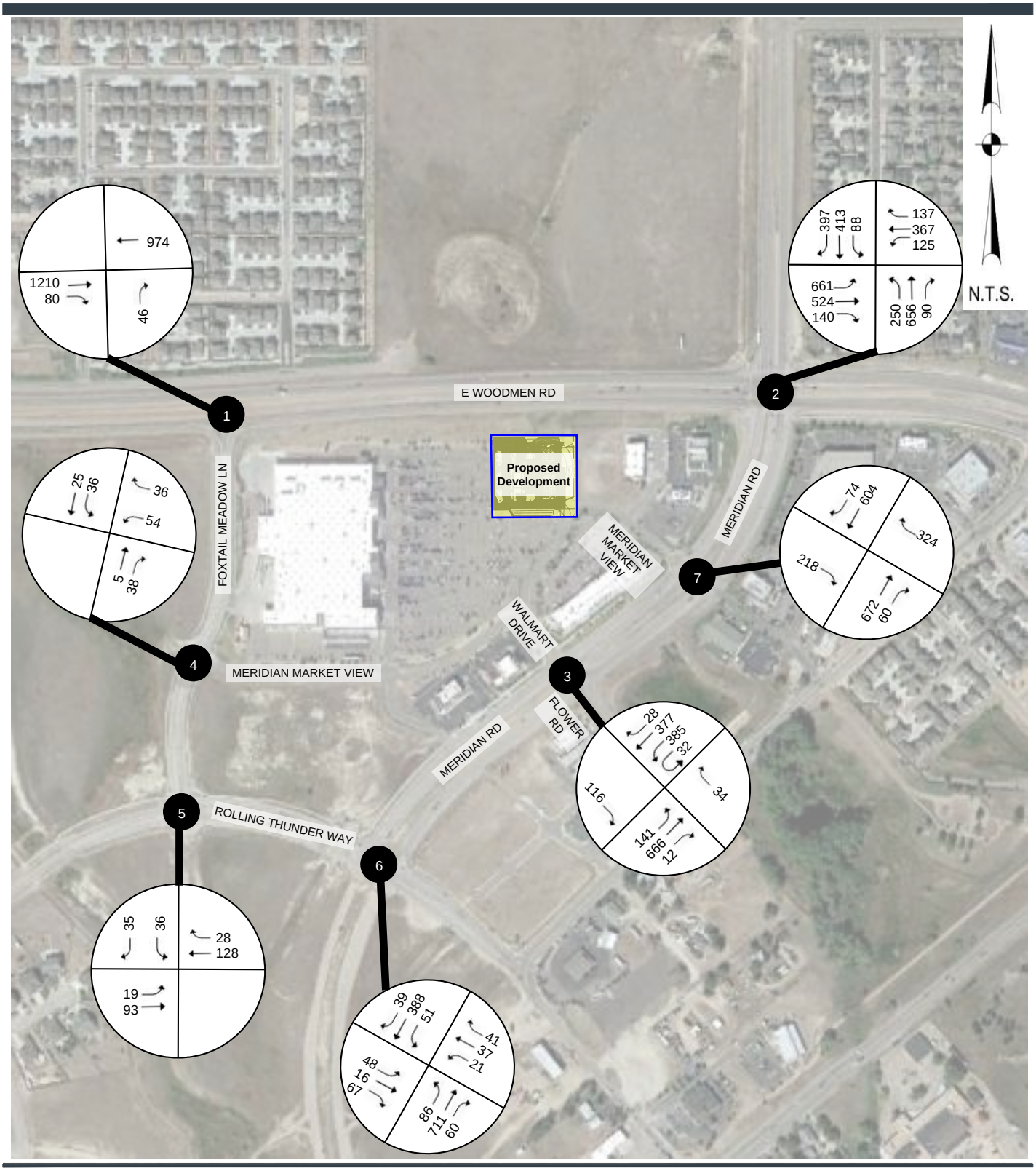
Sheet Title:

PROPOSED AM PEAK VOLUME 2023

Walter P Moore and Associates, Inc.
1301 McKinney, Suite 1100
Houston, Texas 77010

713.630.7300

WPMA P.N.:	Designed by:	Figure No.
T04-22006-05	TD	11
Date:	Drawn by:	
March 2023	JB	



Project Name:

WALMART STORE #4335-543 FUEL STATION TIA

Sheet Title:

PROPOSED PM PEAK VOLUME 2023

Walter P Moore and Associates, Inc.
1301 McKinney, Suite 1100
Houston, Texas 77010

713.630.7300

WPMA P.N.:	Designed by:	Figure No.
T04-22006-05	TD	12
Date:	Drawn by:	
March 2023	JB	

Table 6: Level of Service Comparison – AM Peak Hour

S. No.	Intersection Name	Type of Intersection	Existing AM 2023		Proposed AM 2023	
			Intersection LOS	Intersection delay (sec/veh)	Intersection LOS	Intersection delay (sec/veh)
1	Woodmen Rd and Foxtail Meadow Ln*	Uncontrolled	A	0.4	A	0.4
2	Meridian Rd and Woodmen Rd**	Signalized	D	44.4	D	44.3
3	Meridian Rd and WM Drive**	Two-way stop	A	1.1	A	1.2
4	Foxtail Meadow Ln and Meridian Market View**	Two-way stop	A	2.4	A	2.5
5	Foxtail Meadow Ln and Rolling Thunder Way**	Signalized	A	7.7	A	7.6
6	Rolling Thunder Way and Meridian Rd**	Signalized	C	24.5	C	25.0
7	Meridian Market View and Meridian Rd*	Uncontrolled	A	0.33	A	0.39

Legend:

LOS A, B, C or D
LOS E
LOS F
* Intersection Capacity Utilization (ICU Delay)
** HCM Delay

Table 7: Level of Service Comparison - PM Peak Hour

S. No.	Intersection Name	Type of Intersection	Existing PM 2023		Proposed PM 2023	
			Intersection LOS	Intersection delay (sec/veh)	Intersection LOS	Intersection delay (sec/veh)
1	Woodmen Rd and Foxtail Meadow Ln*	Uncontrolled	A	0.43	A	0.43
2	Meridian Rd and Woodmen Rd**	Signalized	D	49.1	D	49.6
3	Meridian Rd and WM Drive**	Two-way stop	A	3.9	A	4.3
4	Foxtail Meadow Ln and Meridian Market View**	Two-way stop	A	5.7	A	5.7
5	Foxtail Meadow Ln and Rolling Thunder Way**	Signalized	A	8.0	A	8.0
6	Rolling Thunder Way and Meridian Rd**	Signalized	C	21.1	C	21.4
7	Meridian Market View and Meridian Rd*	Uncontrolled	A	0.44	A	0.45

Legend:

LOS A, B, C or D
LOS E
LOS F
* Intersection Capacity Utilization (ICU Delay)
** HCM Delay

LEVEL OF SERVICE COMPARISON

The following is a summary of findings at the study intersections based on the analysis conducted as part of this traffic impact analysis:

AM Peak Hour

- The signalized intersections perform at the accepted level of service LOS D or better in all the scenarios.
- All unsignalized intersections stay at the same level of service LOS A in all the scenarios.

PM Peak Hour

- The signalized intersections perform at the accepted level of service LOS D or better in all the scenarios.
- All unsignalized intersections stay at the same level of service LOS A in all the scenarios.

QUEUE ANALYSIS

Following the level of service comparison, a queue length analysis was performed for the turning movements at the study intersections. The queue analysis does not show a significant increase in the 95th percentile length of the intersections and therefore no additional turn lane is required nor there is any need to increase length of any existing turn lanes. The details of the 95th percentile queue lengths and existing turn length at the intersections of AM peak hour and PM peak hour can be found in **TAB FOUR**.

MITIGATION ANALYSIS

Based on the level of service comparisons, all intersections perform at an acceptable level of service in both the scenarios. Therefore, no mitigations are required.

CONCLUSIONS AND RECOMMENDATIONS

As requested by CEI, Walter P Moore conducted a traffic impact analysis for the proposed fuel station at the Walmart Store #4335-543 in Falcon, CO. The purpose of the study was to determine the potential impacts to traffic operations in the area related to the proposed development. Transportation and site improvements to mitigate impacts were investigated, if necessary. The following is a summary of the study:

- The proposed site will include a fuel station having 16 fueling locations.
- Based on the level of service comparisons, all intersections will perform at an acceptable level of service after the development is built. Therefore, no mitigations are required.

REFERENCES

1. *Trip Generation Manual, 11th Edition.* Institute of Transportation Engineers.
2. *Highway Capacity Manual, 6th Edition*. Transportation Research Board.

Tab One

Existing Traffic Volumes 2023

Count Location: 1. Woodmen Rd at Foxtail Meadow
Count Date: Tuesday, January 10, 2023
Weather Conditions:
Road Surface Condition:
Names of Counters: Ridgeview Data Collection

A.M. PEAK PERIOD

Time	Eastbound Woodmen Road					Westbound S Chambers Rd					Northbound S Parker Rd					Southbound S Parker Rd					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00		201	12			0	351				0		2								**566**
7:15		200	8			0	352				0		2								**562**
7:30		182	12			0	311				0		7								**512**
7:45		211	20			0	244				0		1								**476**
8:00		188	17			0	205				0		2								**412**
8:15		166	21			0	147				0		2								**336**
8:30		191	14			0	215				0		2								**422**
8:45		156	10			0	135				0		4								**305**

P.M. PEAK PERIOD

Time	Eastbound Woodmen Road					Westbound S Chambers Rd					Northbound S Parker Rd					Southbound S Parker Rd					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:00		296	38		0	0	306				0		9								**649**
16:15		285	29		0	0	217				0		13								**544**
16:30		291	18		0	0	267				0		12								**588**
16:45		329	19		0	0	222				0		5								**575**
17:00		301	13		0	0	261				0		16								**591**
17:15		342	14		0	0	224				0		8								**588**
17:30		337	21		0	0	206				0		6								**570**
17:45		295	18		0	0	180				0		12								**505**

A.M. Peak Hour		
7:00	-	8:00

P.M. Peak Hour		
16:15	-	17:15

A.M. Peak Hour	Eastbound Woodmen Road					Westbound S Chambers Rd					Northbound S Parker Rd					Southbound S Parker Rd					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00	0	201	12	0	0	0	351	0	0	0	0	0	2	0	0	0	0	0	0	0	566
7:15	0	200	8	0	0	0	352	0	0	0	0	0	2	0	0	0	0	0	0	0	562
7:30	0	182	12	0	0	0	311	0	0	0	0	0	7	0	0	0	0	0	0	0	512
7:45	0	211	20	0	0	0	244	0	0	0	0	0	1	0	0	0	0	0	0	0	476
TOTAL	**0**	**794**	**52**	**0**	**0**	**0**	**1258**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2116**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

P.M. Peak Hour	Eastbound Woodmen Road					Westbound S Chambers Rd					Northbound S Parker Rd					Southbound S Parker Rd					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:15	0	285	29	0	0	0	217	0	0	0	0	0	13	0	0	0	0	0	0	0	544
16:30	0	291	18	0	0	0	267	0	0	0	0	0	12	0	0	0	0	0	0	0	588
16:45	0	329	19	0	0	0	222	0	0	0	0	0	5	0	0	0	0	0	0	0	575
17:00	0	301	13	0	0	0	261	0	0	0	0	0	16	0	0	0	0	0	0	0	591
TOTAL	**0**	**1206**	**79**	**0**	**0**	**0**	**967**	**0**	**0**	**0**	**0**	**0**	**46**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2298**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

Count Location: 2. Meridian Road at Woodmen Road
Count Date: Tuesday, January 10, 2023
Weather Conditions:
Road Surface Condition:
Names of Counters: Ridgeview Data Collection

A.M. PEAK PERIOD

Time	Eastbound Woodmen Road					Westbound Woodmen Road					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00	95	67	51			10	115	8			36	32	6			5	224	210			**859**
7:15	81	61	63			14	125	17			39	50	10			7	214	222			**903**
7:30	72	64	51			16	107	22			39	59	2			14	200	178			**824**
7:45	79	73	62			22	95	17			35	69	3			17	162	124			**758**
8:00	92	70	39			23	69	19			32	71	6			14	140	121			**696**
8:15	70	46	30			15	115	17			52	78	9			14	140	107			**693**
8:30	91	78	34			15	80	9			33	53	4			13	133	111			**654**
8:45	80	57	23			11	46	18			22	68	5			13	92	79			**514**

P.M. PEAK PERIOD

Time	Eastbound Woodmen Road					Westbound Woodmen Road					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:00	156	134	37			30	88	30		0	53	165	28		0	21	138	117			**997**
16:15	174	152	38			35	89	32		0	52	123	20		0	27	101	91			**934**
16:30	132	116	36			33	99	38		0	64	168	20		0	19	99	113			**937**
16:45	209	137	40			30	87	39		0	56	160	25		0	22	95	83			**983**
17:00	146	119	22			23	92	28		0	71	184	21		0	20	105	110			**941**
17:15	189	127	29			34	90	37		0	49	166	31		0	32	94	97			**975**
17:30	161	122	49			25	78	31		0	42	149	17		1	32	111	84			**901**
17:45	167	96	30			33	63	32		1	43	155	23		0	29	84	85			**840**

A.M. Peak Hour
7:00 - 8:00

P.M. Peak Hour
16:15 - 17:15

A.M. Peak Hour	Eastbound Woodmen Road					Westbound Woodmen Road					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00	95	67	51	0	0	10	115	8	0	0	36	32	6	0	0	5	224	210	0	0	859
7:15	81	61	63	0	0	14	125	17	0	0	39	50	10	0	0	7	214	222	0	0	903
7:30	72	64	51	0	0	16	107	22	0	0	39	59	2	0	0	14	200	178	0	0	824
7:45	79	73	62	0	0	22	95	17	0	0	35	69	3	0	0	17	162	124	0	0	758
TOTAL	**327**	**265**	**227**	**0**	**0**	**62**	**442**	**64**	**0**	**0**	**149**	**210**	**21**	**0**	**0**	**43**	**800**	**734**	**0**	**0**	**3344**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

P.M. Peak Hour	Eastbound Woodmen Road					Westbound Woodmen Road					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:15	174	152	38	0	0	35	89	32	0	0	52	123	20	0	0	27	101	91	0	0	934
16:30	132	116	36	0	0	33	99	38	0	0	64	168	20	0	0	19	99	113	0	0	937
16:45	209	137	40	0	0	30	87	39	0	0	56	160	25	0	0	22	95	83	0	0	983
17:00	146	119	22	0	0	23	92	28	0	0	71	184	21	0	0	20	105	110	0	0	941
TOTAL	**661**	**524**	**136**	**0**	**0**	**121**	**367**	**137**	**0**	**0**	**243**	**635**	**86**	**0**	**0**	**88**	**400**	**397**	**0**	**0**	**3795**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

Count Location: 3. Meridian RD at WM Drive
Count Date: Tuesday, January 10, 2023
Weather Conditions:
Road Surface Condition:
Names of Counters: Ridgeview Data Collection

A.M. PEAK PERIOD

Time	Eastbound Flower Road					Westbound Flower Road					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00	0	0	7			0	0	1			11	65	1			21	266	0			**372**
7:15	0	0	5			0	0	4			9	84	3			22	248	0			**375**
7:30	0	0	5			0	0	8			10	76	5			29	238	2			**373**
7:45	0	0	8			1	0	6			14	64	5			46	187	2			**333**
8:00	0	0	7			1	0	10			8	89	4			35	158	5			**317**
8:15	0	0	5			0	0	9			13	91	0			49	133	4			**304**
8:30	0	0	9			0	0	8			22	60	3			37	128	2			**269**
8:45	0	0	11			0	0	8			19	65	4			42	88	4			**241**

P.M. PEAK PERIOD

Time	Eastbound Flower Road					Westbound Flower Road					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:00	0	0	22			0	0	7			38	152	8		0	99	122	5		1	**453**
16:15	0	0	17			0	0	7			27	151	4		0	99	96	6		0	**407**
16:30	0	0	30			0	0	12			27	149	5		1	89	100	10		0	**422**
16:45	0	0	21			0	0	6			26	177	2		0	97	97	6		1	**432**
17:00	0	0	31			0	0	9			34	189	1		0	100	84	6		1	**454**
17:15	0	0	25			0	0	8			42	154	6		0	116	90	5		0	**446**
17:30	0	0	17			0	0	10			19	153	3		0	90	100	5		0	**397**
17:45	0	0	16			0	0	9			31	134	4		0	106	77	8		1	**385**

A.M. Peak Hour		
7:00	-	8:00

P.M. Peak Hour		
16:15	-	17:15

A.M. Peak Hour	Eastbound Flower Road					Westbound Flower Road					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00	0	0	7	0	0	0	0	1	0	0	11	65	1	0	0	21	266	0	0	0	372
7:15	0	0	5	0	0	0	0	4	0	0	9	84	3	0	0	22	248	0	0	0	375
7:30	0	0	5	0	0	0	0	8	0	0	10	76	5	0	0	29	238	2	0	0	373
7:45	0	0	8	0	0	1	0	6	0	0	14	64	5	0	0	46	187	2	0	0	333
TOTAL	**0**	**0**	**25**	**0**	**0**	**1**	**0**	**19**	**0**	**0**	**44**	**289**	**14**	**0**	**0**	**118**	**939**	**4**	**0**	**0**	**1453**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

P.M. Peak Hour	Eastbound Flower Road					Westbound Flower Road					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:15	0	0	17	0	0	0	0	7	0	0	27	151	4	0	0	99	96	6	0	0	407
16:30	0	0	30	0	0	0	0	12	0	0	27	149	5	0	1	89	100	10	0	0	422
16:45	0	0	21	0	0	0	0	6	0	0	26	177	2	0	0	97	97	6	0	1	432
17:00	0	0	31	0	0	0	0	9	0	0	34	189	1	0	0	100	84	6	0	1	454
TOTAL	**0**	**0**	**99**	**0**	**0**	**0**	**0**	**34**	**0**	**0**	**114**	**666**	**12**	**0**	**1**	**385**	**377**	**28**	**0**	**2**	**1715**
Ped Conflicts	2		1			1		2			1		1			2		2			**6**

Count Location: 4. Foxtail Meadow at Meridian Market
Count Date: Tuesday, January 10, 2023
Weather Conditions:
Road Surface Condition:
Names of Counters: Ridgeview Data Collection

A.M. PEAK PERIOD

Time	Eastbound					Westbound Meridian Market View					Northbound Foxtail Meadow Lane					Southbound Foxtail Meadow Lane					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00						0		2				0	1			1	9				**13**
7:15						3		1				1	1			1	8				**15**
7:30						2		2				3	0			1	10				**18**
7:45						2		1				1	1			4	13				**22**
8:00						0		1				0	2			3	15				**21**
8:15						3		2				0	2			5	15				**27**
8:30						4		2				1	2			6	8				**23**
8:45						7		2				2	1			1	8				**21**

P.M. PEAK PERIOD

Time	Eastbound 0					Westbound Meridian Market View					Northbound Foxtail Meadow Lane					Southbound Foxtail Meadow Lane					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:00						14		4				4	13			20	11				**66**
16:15						15		9				2	12			14	7				**59**
16:30						13		8				2	5			9	7				**44**
16:45						12		4				0	12			6	7				**41**
17:00						14		15				1	9			6	4				**49**
17:15						12		6				1	13			1	10				**43**
17:30						7		6				1	9			8	8				**39**
17:45						8		8				1	10			8	5				**40**

A.M. Peak Hour		
7:00	-	8:00

P.M. Peak Hour		
16:15	-	17:15

A.M. Peak Hour	Eastbound 0					Westbound Meridian Market View					Northbound Foxtail Meadow Lane					Southbound Foxtail Meadow Lane					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	1	9	0	0	0	13
7:15	0	0	0	0	0	3	0	1	0	0	0	1	1	0	0	1	8	0	0	0	15
7:30	0	0	0	0	0	2	0	2	0	0	0	3	0	0	0	1	10	0	0	0	18
7:45	0	0	0	0	0	2	0	1	0	0	0	1	1	0	0	4	13	0	0	0	22
TOTAL	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**6**	**0**	**0**	**0**	**5**	**3**	**0**	**0**	**7**	**40**	**0**	**0**	**0**	**68**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

P.M. Peak Hour	Eastbound 0					Westbound Meridian Market View					Northbound Foxtail Meadow Lane					Southbound Foxtail Meadow Lane					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:15	0	0	0	0	0	15	0	9	0	0	0	2	12	0	0	14	7	0	0	0	59
16:30	0	0	0	0	0	13	0	8	0	0	0	2	5	0	0	9	7	0	0	0	44
16:45	0	0	0	0	0	12	0	4	0	0	0	0	12	0	0	6	7	0	0	0	41
17:00	0	0	0	0	0	14	0	15	0	0	0	1	9	0	0	6	4	0	0	0	49
TOTAL	**0**	**0**	**0**	**0**	**0**	**54**	**0**	**36**	**0**	**0**	**0**	**5**	**38**	**0**	**0**	**35**	**25**	**0**	**0**	**0**	**193**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

Count Location:	5. Foxtail Meadow at Rolling Thunder
Count Date:	Tuesday, January 10, 2023
Weather Conditions:	
Road Surface Condition:	
Names of Counters:	Ridgeview Data Collection

A.M. PEAK PERIOD

Time	Eastbound Rolling Thunder Way					Westbound Rolling Thunder Way					Northbound					Southbound Foxtail Meadow Lane					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00	0	36					10	1								9		0			**56**
7:15	2	38					16	0								9		2			**67**
7:30	3	36					23	1								9		3			**75**
7:45	2	23					24	0								16		0			**65**
8:00	0	34					15	2								15		0			**66**
8:15	2	34					17	0								14		3			**70**
8:30	2	29					24	1								10		3			**69**
8:45	2	19					11	1								7		8			**48**

P.M. PEAK PERIOD

Time	Eastbound Rolling Thunder Way					Westbound Rolling Thunder Way					Northbound 0					Southbound Foxtail Meadow Lane					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:00	10	25			0		43	7		0						14		7		0	**106**
16:15	6	23			0		32	2		2						5		8		1	**76**
16:30	5	15			0		32	13		0						12		15		0	**92**
16:45	2	28			1		35	5		0						8		8		0	**86**
17:00	6	25			0		29	8		0						11		4		0	**83**
17:15	9	33			0		30	14		0						19		5		1	**110**
17:30	6	23			0		32	6		0						11		4		0	**82**
17:45	6	16			0		25	7		0						14		11		0	**79**

A.M. Peak Hour		
7:30	-	8:30

P.M. Peak Hour		
16:15	-	17:15

A.M. Peak Hour	Eastbound Rolling Thunder Way					Westbound Rolling Thunder Way					Northbound 0					Southbound Foxtail Meadow Lane					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:30	3	36	0	0	0	0	23	1	0	0	0	0	0	0	0	9	0	3	0	0	75
7:45	2	23	0	0	0	0	24	0	0	0	0	0	0	0	0	16	0	0	0	0	65
8:00	0	34	0	0	0	0	15	2	0	0	0	0	0	0	0	15	0	0	0	0	66
8:15	2	34	0	0	0	0	17	0	0	0	0	0	0	0	0	14	0	3	0	0	70
TOTAL	**7**	**127**	**0**	**0**	**0**	**0**	**79**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**54**	**0**	**6**	**0**	**0**	**276**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

P.M. Peak Hour	Eastbound Rolling Thunder Way					Westbound Rolling Thunder Way					Northbound 0					Southbound Foxtail Meadow Lane					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:15	6	23	0	0	0	0	32	2	0	2	0	0	0	0	0	5	0	8	0	1	76
16:30	5	15	0	0	0	0	32	13	0	0	0	0	0	0	0	12	0	15	0	0	92
16:45	2	28	0	0	1	0	35	5	0	0	0	0	0	0	0	8	0	8	0	0	86
17:00	6	25	0	0	0	0	29	8	0	0	0	0	0	0	0	11	0	4	0	0	83
TOTAL	**19**	**91**	**0**	**0**	**1**	**0**	**128**	**28**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**36**	**0**	**35**	**0**	**1**	**337**
Ped Conflicts	2		1			2		3			1		2			3		2			**8**

Count Location:	6. Rolling Thunder at Meridian Rd
Count Date:	Tuesday, January 10, 2023
Weather Conditions:	
Road Surface Condition:	
Names of Counters:	Ridgeview Data Collection

A.M. PEAK PERIOD

Time	Eastbound Rolling Thunder Way					Westbound Rolling Thunder Way					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00	10	4	28			8	5	2			5	64	6			1	258	1			**392**
7:15	9	3	36			14	1	3			13	87	4			3	247	2			**422**
7:30	10	4	33			21	5	1			15	90	10			2	211	5			**407**
7:45	2	3	34			9	9	7			12	80	8			5	215	5			**389**
8:00	6	6	35			6	3	2			9	89	5			4	134	4			**303**
8:15	4	1	45			4	3	5			12	95	8			3	150	2			**332**
8:30	2	3	35			2	6	5			16	78	11			8	124	3			**293**
8:45	5	3	17			2	3	8			5	73	10			7	93	4			**230**

P.M. PEAK PERIOD

Time	Eastbound Rolling Thunder Way					Westbound Rolling Thunder Way					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:00	9	5	23			7	6	12			24	172	18			13	120	19			**428**
16:15	14	3	14			9	7	11			16	155	13			9	85	12			**348**
16:30	7	3	17			3	9	7			26	161	13			18	110	9			**383**
16:45	13	6	15			3	10	7			23	188	18			9	93	7			**392**
17:00	12	4	21			6	11	14			21	184	16			13	88	9			**399**
17:15	11	15	23			3	13	12			19	172	11			13	89	8			**389**
17:30	8	11	18			4	11	7			15	148	8			13	91	13			**347**
17:45	7	3	20			4	5	9			18	152	7			6	74	8			**313**

A.M. Peak Hour		
7:00	-	8:00

P.M. Peak Hour		
16:15	-	17:15

A.M. Peak Hour	Eastbound Rolling Thunder Way					Westbound Rolling Thunder Way					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
7:00	10	4	28	0	0	8	5	2	0	0	5	64	6	0	0	1	258	1	0	0	392
7:15	9	3	36	0	0	14	1	3	0	0	13	87	4	0	0	3	247	2	0	0	422
7:30	10	4	33	0	0	21	5	1	0	0	15	90	10	0	0	2	211	5	0	0	407
7:45	2	3	34	0	0	9	9	7	0	0	12	80	8	0	0	5	215	5	0	0	389
TOTAL	**31**	**14**	**131**	**0**	**0**	**52**	**20**	**13**	**0**	**0**	**45**	**321**	**28**	**0**	**0**	**11**	**931**	**13**	**0**	**0**	**1610**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

P.M. Peak Hour	Eastbound Rolling Thunder Way					Westbound Rolling Thunder Way					Northbound Meridian Road					Southbound Meridian Road					Vehicle Total
	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	Left	Thru	Right	U	Peds	
16:15	14	3	14	0	0	9	7	11	0	0	16	155	13	0	0	9	85	12	0	0	348
16:30	7	3	17	0	0	3	9	7	0	0	26	161	13	0	0	18	110	9	0	0	383
16:45	13	6	15	0	0	3	10	7	0	0	23	188	18	0	0	9	93	7	0	0	392
17:00	12	4	21	0	0	6	11	14	0	0	21	184	16	0	0	13	88	9	0	0	399
TOTAL	**46**	**16**	**67**	**0**	**0**	**21**	**37**	**39**	**0**	**0**	**86**	**688**	**60**	**0**	**0**	**49**	**376**	**37**	**0**	**0**	**1522**
Ped Conflicts	0		0			0		0			0		0			0		0			**0**

Tab Two

Existing Conditions Capacity Analysis (2023)

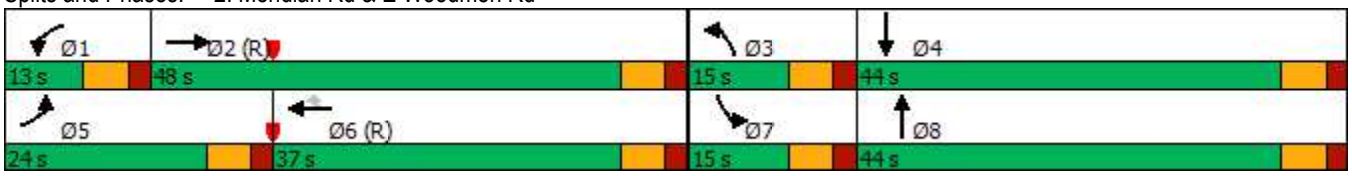
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	794	52	0	1258	0	12
Future Volume (vph)	794	52	0	1258	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	15%			0%	0%	
Storage Length (ft)		545	0		0	0
Storage Lanes		1	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected						
Satd. Flow (prot)	3274	1465	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3274	1465	0	3539	0	1611
Link Speed (mph)	55			45	30	
Link Distance (ft)	878			970	879	
Travel Time (s)	10.9			14.7	20.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	854	56	0	1353	0	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	854	56	0	1353	0	13
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	62			62	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	16		16	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.1%		ICU Level of Service A	
Analysis Period (min) 15			

Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	13	48	15	44	24	37	15	44
Maximum Split (%)	10.8%	40.0%	12.5%	36.7%	20.0%	30.8%	12.5%	36.7%
Minimum Split (s)	13	36	13	36	13	36	13	36
Yellow Time (s)	4	4	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	5	7	5	7	5	7	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		5		5		5		5
Flash Dont Walk (s)		25		25		25		25
Dual Entry	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	96	109	37	52	96	0	37	52
End Time (s)	109	37	52	96	0	37	52	96
Yield/Force Off (s)	103	31	46	90	114	31	46	90
Yield/Force Off 170(s)	103	6	46	65	114	6	46	65
Local Start Time (s)	96	109	37	52	96	0	37	52
Local Yield (s)	103	31	46	90	114	31	46	90
Local Yield 170(s)	103	6	46	65	114	6	46	65

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	100
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	

Splits and Phases: 2: Meridian Rd & E Woodmen Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	327	265	227	62	442	64	149	210	21	43	800	734
Future Volume (veh/h)	327	265	227	62	442	64	149	210	21	43	800	734
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	352	285	0	67	475	0	160	226	0	46	860	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	1450		180	1208		216	1001		202	986	
Arrive On Green	0.12	0.41	0.00	0.05	0.34	0.00	0.06	0.28	0.00	0.06	0.28	0.00
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	352	285	0	67	475	0	160	226	0	46	860	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	12.0	6.2	0.0	2.2	12.2	0.0	5.5	5.9	0.0	1.5	27.7	0.0
Cycle Q Clear(g_c), s	12.0	6.2	0.0	2.2	12.2	0.0	5.5	5.9	0.0	1.5	27.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	1450		180	1208		216	1001		202	986	
V/C Ratio(X)	0.85	0.20		0.37	0.39		0.74	0.23		0.23	0.87	
Avail Cap(c_a), veh/h	518	1450		202	1208		259	1125		259	1125	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.7	22.9	0.0	55.0	30.2	0.0	55.3	33.1	0.0	53.9	41.3	0.0
Incr Delay (d2), s/veh	10.5	0.3	0.0	1.3	1.0	0.0	8.9	0.1	0.0	0.6	7.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	2.6	0.0	1.0	5.2	0.0	2.6	2.5	0.0	0.7	12.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	23.2	0.0	56.3	31.1	0.0	64.2	33.2	0.0	54.5	48.3	0.0
LnGrp LOS	E	C		E	C		E	C		D	D	
Approach Vol, veh/h		637			542			386			906	
Approach Delay, s/veh		44.7			34.2			46.0			48.6	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	55.0	13.5	39.3	20.4	46.8	13.0	39.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	7.0	42.0	9.0	38.0	18.0	31.0	9.0	38.0
Max Q Clear Time (g_c+I1), s	4.2	8.2	7.5	29.7	14.0	14.2	3.5	7.9
Green Ext Time (p_c), s	0.0	1.0	0.1	3.6	0.4	1.6	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	44.1
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1.1

Movement	SBL	SBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Traffic Vol, veh/h	0	25	0	0	44	289	14	118	939	4
Future Vol, veh/h	0	25	0	0	44	289	14	118	939	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	Free	-	-	-	-	None	-	-	None
Storage Length	-	0	-	0	215	-	215	245	-	0
Veh in Median Storage, #	1	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	26	0	0	45	298	14	122	968	4

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	-	149	972	0	0	312	0	0	
Stage 1	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	
Critical Hdwy	-	6.94	4.14	-	-	4.14	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	
Follow-up Hdwy	-	3.32	2.22	-	-	2.22	-	-	
Pot Cap-1 Maneuver	0	871	705	-	-	1245	-	-	
Stage 1	0	-	-	-	-	-	-	-	
Stage 2	0	-	-	-	-	-	-	-	
Platoon blocked, %				-	-		-	-	
Mov Cap-1 Maneuver	-	871	705	-	-	1245	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	

Approach	NW	NE	SW
HCM Control Delay, s	9.2	1.3	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SWL	SWT	SWR
Capacity (veh/h)	705	-	-	871	1245	-	-
HCM Lane V/C Ratio	0.064	-	-	0.022	0.098	-	-
HCM Control Delay (s)	10.5	-	-	9.2	8.2	-	-
HCM Lane LOS	B	-	-	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.3	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	6	5	3	7	40
Future Vol, veh/h	7	6	5	3	7	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	8	6	4	9	52

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	78	8	0	0	10	0
Stage 1	8	-	-	-	-	-
Stage 2	70	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	925	1074	-	-	1610	-
Stage 1	1015	-	-	-	-	-
Stage 2	953	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	919	1074	-	-	1610	-
Mov Cap-2 Maneuver	919	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	947	-	-	-	-	-

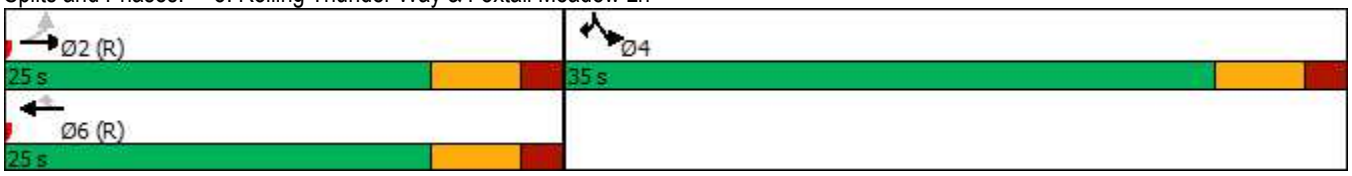
Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.1
HCM LOS	A		

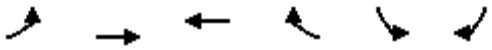
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	919	1074	1610	-
HCM Lane V/C Ratio	-	-	0.01	0.007	0.006	-
HCM Control Delay (s)	-	-	9	8.4	7.2	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Phase Number	2	4	6
Movement	EBTL	SBL	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	C-Max	None	C-Max
Maximum Split (s)	25	35	25
Maximum Split (%)	41.7%	58.3%	41.7%
Minimum Split (s)	11	31.5	20
Yellow Time (s)	4	4	4
All-Red Time (s)	2	2	2
Minimum Initial (s)	5	5	5
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)			5
Flash Dont Walk (s)			9
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	0	25	0
End Time (s)	25	0	25
Yield/Force Off (s)	19	54	19
Yield/Force Off 170(s)	19	54	10
Local Start Time (s)	0	25	0
Local Yield (s)	19	54	19
Local Yield 170(s)	19	54	10

Intersection Summary	
Cycle Length	60
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	

Splits and Phases: 5: Rolling Thunder Way & Foxtail Meadow Ln

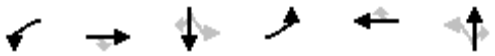




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	133	73	2	43	5
Future Volume (veh/h)	7	133	73	2	43	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	145	79	2	47	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1096	1406	1406	1191	86	77
Arrive On Green	0.75	0.75	0.75	0.75	0.05	0.05
Sat Flow, veh/h	1317	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	8	145	79	2	47	5
Grp Sat Flow(s),veh/h/ln	1317	1870	1870	1585	1781	1585
Q Serve(g_s), s	0.1	1.3	0.7	0.0	1.5	0.2
Cycle Q Clear(g_c), s	0.8	1.3	0.7	0.0	1.5	0.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1096	1406	1406	1191	86	77
V/C Ratio(X)	0.01	0.10	0.06	0.00	0.55	0.07
Avail Cap(c_a), veh/h	1096	1406	1406	1191	861	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.98	0.98	1.00	1.00
Uniform Delay (d), s/veh	2.0	2.0	1.9	1.9	27.9	27.3
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	5.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.1	0.0	0.8	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.0	2.2	2.0	1.9	33.2	27.6
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		153	81		52	
Approach Delay, s/veh		2.1	2.0		32.7	
Approach LOS		A	A		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		51.1		8.9		51.1
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		19.0		29.0		19.0
Max Q Clear Time (g_c+I1), s		3.3		3.5		2.7
Green Ext Time (p_c), s		0.4		0.1		0.2

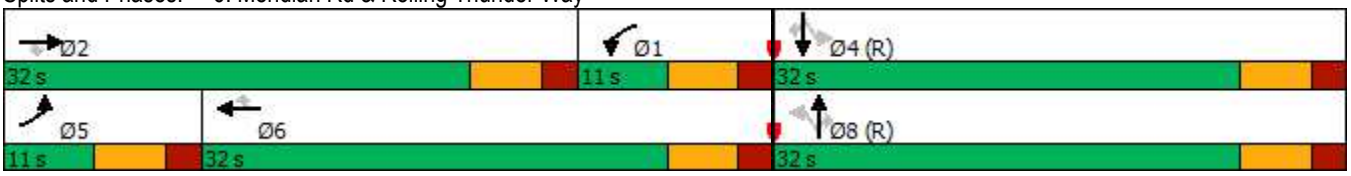
Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

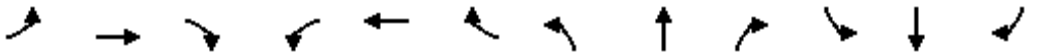


Phase Number	1	2	4	5	6	8
Movement	WBL	EBT	SBTL	EBL	WBT	NBTL
Lead/Lag	Lag	Lead		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	C-Max	None	Max	C-Max
Maximum Split (s)	11	32	32	11	32	32
Maximum Split (%)	14.7%	42.7%	42.7%	14.7%	42.7%	42.7%
Minimum Split (s)	11	32	32	11	32	32
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		21	21		21	21
Dual Entry	Yes	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	21	64	32	64	0	32
End Time (s)	32	21	64	0	32	64
Yield/Force Off (s)	26	15	58	69	26	58
Yield/Force Off 170(s)	26	69	37	69	5	37
Local Start Time (s)	64	32	0	32	43	0
Local Yield (s)	69	58	26	37	69	26
Local Yield 170(s)	69	37	5	37	48	5

Intersection Summary	
Cycle Length	75
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 32 (43%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	

Splits and Phases: 6: Meridian Rd & Rolling Thunder Way





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	14	131	52	20	13	45	321	28	11	931	13
Future Volume (veh/h)	31	14	131	52	20	13	45	321	28	11	931	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	15	138	55	21	14	47	338	29	12	980	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	648	549	110	1333	594	155	1250	558	384	1250	558
Arrive On Green	0.03	0.35	0.35	0.06	0.38	0.38	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	567	3554	1585	1015	3554	1585
Grp Volume(v), veh/h	33	15	138	55	21	14	47	338	29	12	980	14
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	567	1777	1585	1015	1777	1585
Q Serve(g_s), s	0.7	0.4	4.7	2.2	0.3	0.4	6.1	5.1	0.9	0.6	18.5	0.4
Cycle Q Clear(g_c), s	0.7	0.4	4.7	2.2	0.3	0.4	24.6	5.1	0.9	5.8	18.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	648	549	110	1333	594	155	1250	558	384	1250	558
V/C Ratio(X)	0.29	0.02	0.25	0.50	0.02	0.02	0.30	0.27	0.05	0.03	0.78	0.03
Avail Cap(c_a), veh/h	230	648	549	119	1333	594	155	1250	558	384	1250	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	16.1	17.5	34.1	14.7	14.8	32.8	17.4	16.0	19.5	21.8	15.9
Incr Delay (d2), s/veh	1.4	0.1	1.1	3.5	0.0	0.1	4.9	0.5	0.2	0.2	5.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	1.8	1.0	0.1	0.2	1.0	2.0	0.3	0.2	7.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	16.2	18.6	37.6	14.8	14.8	37.7	17.9	16.2	19.6	26.7	16.0
LnGrp LOS	D	B	B	D	B	B	D	B	B	B	C	B
Approach Vol, veh/h		186			90			414			1006	
Approach Delay, s/veh		21.6			28.7			20.1			26.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	32.0		32.4	8.5	34.1		32.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	26.0		26.0	5.0	26.0		26.0				
Max Q Clear Time (g_c+I1), s	4.2	6.7		20.5	2.7	2.4		26.6				
Green Ext Time (p_c), s	0.0	0.4		2.2	0.0	0.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			24.5									
HCM 6th LOS			C									

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	72	0	308	0	0	1061	28
Future Volume (vph)	0	0	0	0	0	72	0	308	0	0	1061	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		130	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.865						0.850
Flt Protected												
Satd. Flow (prot)	0	0	1863	0	0	1611	0	3539	1863	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	0	1863	0	0	1611	0	3539	1863	0	3539	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		228			234			551			701	
Travel Time (s)		5.2			5.3			10.7			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	78	0	335	0	0	1153	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	78	0	335	0	0	1153	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		48			48			48			48	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	62		62	62		62	62		62	62		62
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.7%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1206	79	0	967	0	46
Future Volume (vph)	1206	79	0	967	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	15%			0%	0%	
Storage Length (ft)		545	0		0	0
Storage Lanes		1	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected						
Satd. Flow (prot)	3274	1465	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3274	1465	0	3539	0	1611
Link Speed (mph)	55			45	30	
Link Distance (ft)	878			970	879	
Travel Time (s)	10.9			14.7	20.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1243	81	0	997	0	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1243	81	0	997	0	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	62			62	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	16		16	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	14	54	16	36	31	37	13	39
Maximum Split (%)	11.7%	45.0%	13.3%	30.0%	25.8%	30.8%	10.8%	32.5%
Minimum Split (s)	13	36	13	36	13	36	13	36
Yellow Time (s)	4	4	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	5	7	5	7	5	7	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		5		5		5		5
Flash Dont Walk (s)		25		25		25		25
Dual Entry	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	89	103	37	53	89	0	37	50
End Time (s)	103	37	53	89	0	37	50	89
Yield/Force Off (s)	97	31	47	83	114	31	44	83
Yield/Force Off 170(s)	97	6	47	58	114	6	44	58
Local Start Time (s)	89	103	37	53	89	0	37	50
Local Yield (s)	97	31	47	83	114	31	44	83
Local Yield 170(s)	97	6	47	58	114	6	44	58

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	110
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	

Splits and Phases: 2: Meridian Rd & E Woodmen Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	661	524	136	121	367	137	243	635	86	88	400	397
Future Volume (veh/h)	661	524	136	121	367	137	243	635	86	88	400	397
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	681	540	0	125	378	0	251	655	0	91	412	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	720	1655		198	1119		288	776		202	688	
Arrive On Green	0.21	0.47	0.00	0.06	0.31	0.00	0.08	0.22	0.00	0.06	0.19	0.00
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	681	540	0	125	378	0	251	655	0	91	412	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	23.3	11.5	0.0	4.2	9.8	0.0	8.6	21.2	0.0	3.1	12.7	0.0
Cycle Q Clear(g_c), s	23.3	11.5	0.0	4.2	9.8	0.0	8.6	21.2	0.0	3.1	12.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	720	1655		198	1119		288	776		202	688	
V/C Ratio(X)	0.95	0.33		0.63	0.34		0.87	0.84		0.45	0.60	
Avail Cap(c_a), veh/h	720	1655		230	1119		288	977		202	888	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.8	20.2	0.0	55.3	31.5	0.0	54.4	44.9	0.0	54.6	44.1	0.0
Incr Delay (d2), s/veh	21.3	0.5	0.0	4.3	0.8	0.0	24.0	5.6	0.0	1.6	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	4.7	0.0	1.9	4.2	0.0	4.7	9.8	0.0	1.4	5.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.2	20.7	0.0	59.6	32.3	0.0	78.3	50.5	0.0	56.2	45.0	0.0
LnGrp LOS	E	C		E	C		E	D		E	D	
Approach Vol, veh/h		1221			503			906			503	
Approach Delay, s/veh		47.2			39.1			58.2			47.0	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	61.9	16.0	29.2	31.0	43.8	13.0	32.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	48.0	10.0	30.0	25.0	31.0	7.0	33.0
Max Q Clear Time (g_c+I1), s	6.2	13.5	10.6	14.7	25.3	11.8	5.1	23.2
Green Ext Time (p_c), s	0.0	2.1	0.0	2.3	0.0	1.3	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	49.1
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	3.9

Movement	SBL	SBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Traffic Vol, veh/h	0	99	0	0	114	666	12	385	377	28
Future Vol, veh/h	0	99	0	0	114	666	12	385	377	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	Free	-	-	-	-	None	-	-	None
Storage Length	-	0	-	0	215	-	215	245	-	0
Veh in Median Storage, #	1	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	97	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	105	0	0	121	709	13	410	389	30

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	-	355	419	0	0	722	0	0	
Stage 1	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	
Critical Hdwy	-	6.94	4.14	-	-	4.14	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	
Follow-up Hdwy	-	3.32	2.22	-	-	2.22	-	-	
Pot Cap-1 Maneuver	0	641	1137	-	-	876	-	-	
Stage 1	0	-	-	-	-	-	-	-	
Stage 2	0	-	-	-	-	-	-	-	
Platoon blocked, %				-	-		-	-	
Mov Cap-1 Maneuver	-	641	1137	-	-	876	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	

Approach	NW	NE	SW
HCM Control Delay, s	11	1.2	6.3
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SWL	SWT	SWR
Capacity (veh/h)	1137	-	-	641	876	-	-
HCM Lane V/C Ratio	0.107	-	-	0.056	0.468	-	-
HCM Control Delay (s)	8.5	-	-	11	12.7	-	-
HCM Lane LOS	A	-	-	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.2	2.5	-	-

Intersection	
Int Delay, s/veh	5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	36	5	38	35	25
Future Vol, veh/h	54	36	5	38	35	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	44	6	46	43	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	145	29	0	0	52	0
Stage 1	29	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	847	1046	-	-	1554	-
Stage 1	994	-	-	-	-	-
Stage 2	909	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	823	1046	-	-	1554	-
Mov Cap-2 Maneuver	823	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	884	-	-	-	-	-

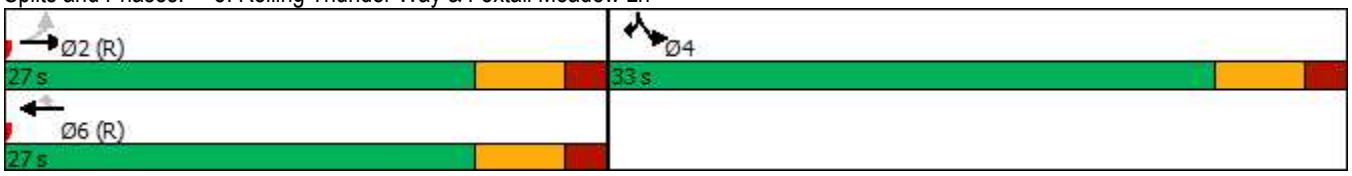
Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	4.3
HCM LOS	A		

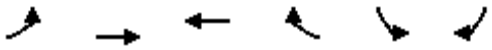
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	823	1046	1554	-
HCM Lane V/C Ratio	-	-	0.08	0.042	0.027	-
HCM Control Delay (s)	-	-	9.8	8.6	7.4	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Phase Number	2	4	6
Movement	EBTL	SBL	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	C-Max	None	C-Max
Maximum Split (s)	27	33	27
Maximum Split (%)	45.0%	55.0%	45.0%
Minimum Split (s)	11	31.5	20
Yellow Time (s)	4	4	4
All-Red Time (s)	2	2	2
Minimum Initial (s)	5	5	5
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)			5
Flash Dont Walk (s)			9
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	0	27	0
End Time (s)	27	0	27
Yield/Force Off (s)	21	54	21
Yield/Force Off 170(s)	21	54	12
Local Start Time (s)	0	27	0
Local Yield (s)	21	54	21
Local Yield 170(s)	21	54	12

Intersection Summary	
Cycle Length	60
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	

Splits and Phases: 5: Rolling Thunder Way & Foxtail Meadow Ln





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	91	128	28	36	35
Future Volume (veh/h)	19	91	128	28	36	35
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	99	139	30	39	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	994	1384	1384	1173	107	95
Arrive On Green	0.74	0.74	0.74	0.74	0.06	0.06
Sat Flow, veh/h	1216	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	21	99	139	30	39	38
Grp Sat Flow(s),veh/h/ln	1216	1870	1870	1585	1781	1585
Q Serve(g_s), s	0.3	0.9	1.3	0.3	1.3	1.4
Cycle Q Clear(g_c), s	1.5	0.9	1.3	0.3	1.3	1.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	994	1384	1384	1173	107	95
V/C Ratio(X)	0.02	0.07	0.10	0.03	0.36	0.40
Avail Cap(c_a), veh/h	994	1384	1384	1173	802	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	1.00	1.00
Uniform Delay (d), s/veh	2.4	2.1	2.2	2.1	27.1	27.1
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	2.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.2	0.1	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.5	2.2	2.3	2.1	29.1	29.8
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		120	169		77	
Approach Delay, s/veh		2.3	2.3		29.5	
Approach LOS		A	A		C	

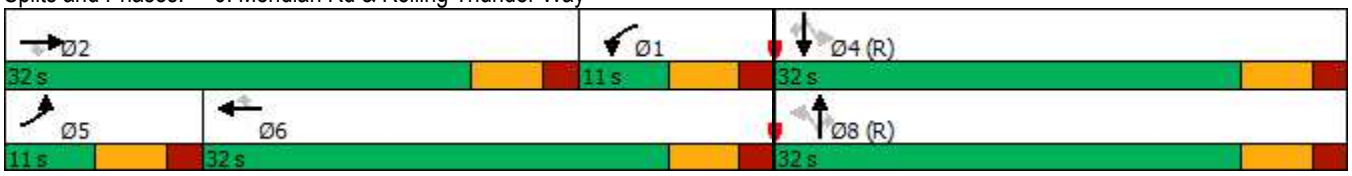
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		50.4		9.6		50.4
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		21.0		27.0		21.0
Max Q Clear Time (g_c+I1), s		3.5		3.4		3.3
Green Ext Time (p_c), s		0.3		0.2		0.4

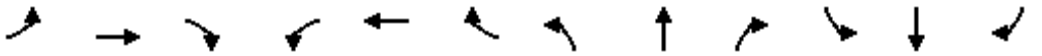
Intersection Summary	
HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Phase Number	1	2	4	5	6	8
Movement	WBL	EBT	SBTL	EBL	WBT	NBTL
Lead/Lag	Lag	Lead		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	C-Max	None	Max	C-Max
Maximum Split (s)	11	32	32	11	32	32
Maximum Split (%)	14.7%	42.7%	42.7%	14.7%	42.7%	42.7%
Minimum Split (s)	11	32	32	11	32	32
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		21	21		21	21
Dual Entry	Yes	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	21	64	32	64	0	32
End Time (s)	32	21	64	0	32	64
Yield/Force Off (s)	26	15	58	69	26	58
Yield/Force Off 170(s)	26	69	37	69	5	37
Local Start Time (s)	64	32	0	32	43	0
Local Yield (s)	69	58	26	37	69	26
Local Yield 170(s)	69	37	5	37	48	5

Intersection Summary	
Cycle Length	75
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 32 (43%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	

Splits and Phases: 6: Meridian Rd & Rolling Thunder Way





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	16	67	21	37	39	86	688	60	49	376	37
Future Volume (veh/h)	46	16	67	21	37	39	86	688	60	49	376	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	17	71	22	39	41	91	724	63	52	396	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	648	549	114	1309	584	352	1242	554	222	1242	554
Arrive On Green	0.04	0.35	0.35	0.06	0.37	0.37	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	954	3554	1585	688	3554	1585
Grp Volume(v), veh/h	48	17	71	22	39	41	91	724	63	52	396	39
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	954	1777	1585	688	1777	1585
Q Serve(g_s), s	1.0	0.4	2.3	0.9	0.5	1.3	5.8	12.5	2.0	5.0	6.1	1.2
Cycle Q Clear(g_c), s	1.0	0.4	2.3	0.9	0.5	1.3	11.9	12.5	2.0	17.5	6.1	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	648	549	114	1309	584	352	1242	554	222	1242	554
V/C Ratio(X)	0.33	0.03	0.13	0.19	0.03	0.07	0.26	0.58	0.11	0.23	0.32	0.07
Avail Cap(c_a), veh/h	230	648	549	119	1309	584	352	1242	554	222	1242	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	16.2	16.8	33.3	15.1	15.4	22.2	19.9	16.5	27.1	17.9	16.3
Incr Delay (d2), s/veh	1.3	0.1	0.5	0.8	0.0	0.2	1.8	2.0	0.4	2.5	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.9	0.4	0.2	0.5	1.4	5.1	0.7	0.9	2.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	16.2	17.2	34.1	15.2	15.6	24.0	21.9	16.9	29.5	18.5	16.5
LnGrp LOS	D	B	B	C	B	B	C	C	B	C	B	B
Approach Vol, veh/h		136			102			878			487	
Approach Delay, s/veh		23.8			19.4			21.8			19.5	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	32.0		32.2	9.2	33.6		32.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	26.0		26.0	5.0	26.0		26.0				
Max Q Clear Time (g_c+I1), s	2.9	4.3		19.5	3.0	3.3		14.5				
Green Ext Time (p_c), s	0.0	0.2		1.2	0.0	0.2		2.9				

Intersection Summary			
HCM 6th Ctrl Delay		21.1	
HCM 6th LOS		C	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	0	186	0	0	324	0	640	60	0	604	53
Future Volume (vph)	0	0	186	0	0	324	0	640	60	0	604	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		130	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	0	1611	0	0	1611	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	0	1611	0	0	1611	0	3539	1583	0	3539	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		228			234			551			701	
Travel Time (s)		5.2			5.3			10.7			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	202	0	0	352	0	696	65	0	657	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	202	0	0	352	0	696	65	0	657	58
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		48			48			48			48	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	62		62	62		62	62		62	62		62
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

Tab Three

Proposed Conditions Capacity Analysis (2023)

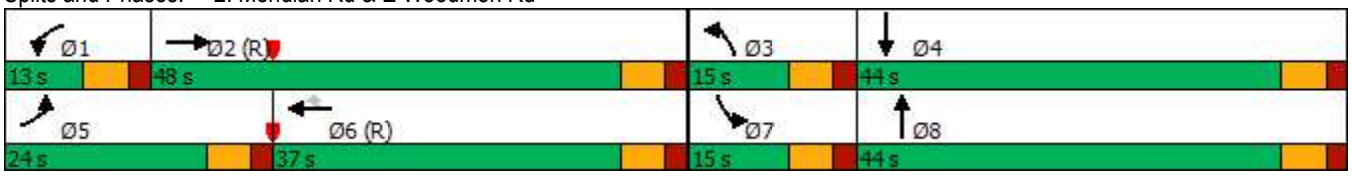
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	799	53	0	1261	0	12
Future Volume (vph)	799	53	0	1261	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	15%			0%	0%	
Storage Length (ft)		545	0		0	0
Storage Lanes		1	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected						
Satd. Flow (prot)	3274	1465	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3274	1465	0	3539	0	1611
Link Speed (mph)	55			45	30	
Link Distance (ft)	878			999	879	
Travel Time (s)	10.9			15.1	20.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	859	57	0	1356	0	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	859	57	0	1356	0	13
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	62			62	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	16		16	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	13	48	15	44	24	37	15	44
Maximum Split (%)	10.8%	40.0%	12.5%	36.7%	20.0%	30.8%	12.5%	36.7%
Minimum Split (s)	13	36	13	36	13	36	13	36
Yellow Time (s)	4	4	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	5	7	5	7	5	7	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		5		5		5		5
Flash Dont Walk (s)		25		25		25		25
Dual Entry	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	96	109	37	52	96	0	37	52
End Time (s)	109	37	52	96	0	37	52	96
Yield/Force Off (s)	103	31	46	90	114	31	46	90
Yield/Force Off 170(s)	103	6	46	65	114	6	46	65
Local Start Time (s)	96	109	37	52	96	0	37	52
Local Yield (s)	103	31	46	90	114	31	46	90
Local Yield 170(s)	103	6	46	65	114	6	46	65

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	100
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	

Splits and Phases: 2: Meridian Rd & E Woodmen Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	327	265	232	63	442	64	152	216	21	43	816	734
Future Volume (veh/h)	327	265	232	63	442	64	152	216	21	43	816	734
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	352	285	0	68	475	0	163	232	0	46	877	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	1432		181	1192		219	1017		202	1000	
Arrive On Green	0.12	0.40	0.00	0.05	0.34	0.00	0.06	0.29	0.00	0.06	0.28	0.00
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	352	285	0	68	475	0	163	232	0	46	877	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	12.0	6.2	0.0	2.3	12.3	0.0	5.6	6.0	0.0	1.5	28.3	0.0
Cycle Q Clear(g_c), s	12.0	6.2	0.0	2.3	12.3	0.0	5.6	6.0	0.0	1.5	28.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	1432		181	1192		219	1017		202	1000	
V/C Ratio(X)	0.85	0.20		0.38	0.40		0.74	0.23		0.23	0.88	
Avail Cap(c_a), veh/h	518	1432		202	1192		259	1125		259	1125	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.7	23.2	0.0	55.0	30.6	0.0	55.2	32.7	0.0	53.9	41.1	0.0
Incr Delay (d2), s/veh	10.5	0.3	0.0	1.3	1.0	0.0	9.3	0.1	0.0	0.6	7.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	2.6	0.0	1.0	5.3	0.0	2.7	2.6	0.0	0.7	13.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	23.6	0.0	56.3	31.6	0.0	64.5	32.8	0.0	54.5	48.6	0.0
LnGrp LOS	E	C		E	C		E	C		D	D	
Approach Vol, veh/h		637			543			395			923	
Approach Delay, s/veh		44.9			34.7			45.9			48.9	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	54.4	13.6	39.8	20.4	46.2	13.0	40.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	7.0	42.0	9.0	38.0	18.0	31.0	9.0	38.0
Max Q Clear Time (g_c+I1), s	4.3	8.2	7.6	30.3	14.0	14.3	3.5	8.0
Green Ext Time (p_c), s	0.0	1.0	0.1	3.5	0.4	1.6	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	44.3
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1.2

Movement	SBL	SBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Traffic Vol, veh/h	0	47	0	0	52	289	14	127	939	4
Future Vol, veh/h	0	47	0	0	52	289	14	127	939	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	Free	-	-	-	-	None	-	-	None
Storage Length	-	0	-	0	215	-	215	245	-	0
Veh in Median Storage, #	1	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	0	0	54	298	14	131	968	4

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	-	149	972	0	0	312	0	0	
Stage 1	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	
Critical Hdwy	-	6.94	4.14	-	-	4.14	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	
Follow-up Hdwy	-	3.32	2.22	-	-	2.22	-	-	
Pot Cap-1 Maneuver	0	871	705	-	-	1245	-	-	
Stage 1	0	-	-	-	-	-	-	-	
Stage 2	0	-	-	-	-	-	-	-	
Platoon blocked, %				-	-		-	-	
Mov Cap-1 Maneuver	-	871	705	-	-	1245	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	

Approach	NW	NE	SW
HCM Control Delay, s	9.2	1.5	1
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SWL	SWT	SWR
Capacity (veh/h)	705	-	-	871	1245	-	-
HCM Lane V/C Ratio	0.076	-	-	0.022	0.105	-	-
HCM Control Delay (s)	10.5	-	-	9.2	8.2	-	-
HCM Lane LOS	B	-	-	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.4	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	6	5	3	8	40
Future Vol, veh/h	7	6	5	3	8	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	8	6	4	10	52

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	80	8	0	0	10	0
Stage 1	8	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	922	1074	-	-	1610	-
Stage 1	1015	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	916	1074	-	-	1610	-
Mov Cap-2 Maneuver	916	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	945	-	-	-	-	-

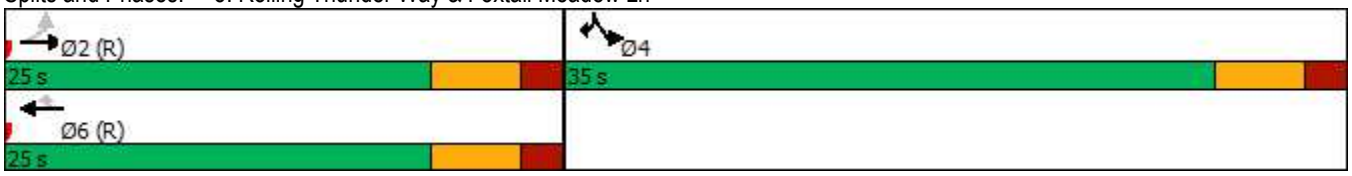
Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.2
HCM LOS	A		

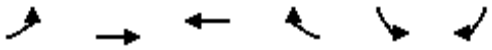
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	916	1074	1610	-
HCM Lane V/C Ratio	-	-	0.01	0.007	0.006	-
HCM Control Delay (s)	-	-	9	8.4	7.3	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Phase Number	2	4	6
Movement	EBTL	SBL	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	C-Max	None	C-Max
Maximum Split (s)	25	35	25
Maximum Split (%)	41.7%	58.3%	41.7%
Minimum Split (s)	11	31.5	20
Yellow Time (s)	4	4	4
All-Red Time (s)	2	2	2
Minimum Initial (s)	5	5	5
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)			5
Flash Dont Walk (s)			9
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	0	25	0
End Time (s)	25	0	25
Yield/Force Off (s)	19	54	19
Yield/Force Off 170(s)	19	54	10
Local Start Time (s)	0	25	0
Local Yield (s)	19	54	19
Local Yield 170(s)	19	54	10

Intersection Summary	
Cycle Length	60
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	

Splits and Phases: 5: Rolling Thunder Way & Foxtail Meadow Ln

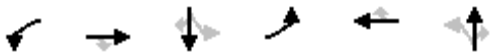




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	134	73	2	43	5
Future Volume (veh/h)	7	134	73	2	43	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	146	79	2	47	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1096	1406	1406	1191	86	77
Arrive On Green	0.75	0.75	0.75	0.75	0.05	0.05
Sat Flow, veh/h	1317	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	8	146	79	2	47	5
Grp Sat Flow(s),veh/h/ln	1317	1870	1870	1585	1781	1585
Q Serve(g_s), s	0.1	1.3	0.7	0.0	1.5	0.2
Cycle Q Clear(g_c), s	0.8	1.3	0.7	0.0	1.5	0.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1096	1406	1406	1191	86	77
V/C Ratio(X)	0.01	0.10	0.06	0.00	0.55	0.07
Avail Cap(c_a), veh/h	1096	1406	1406	1191	861	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.98	0.98	1.00	1.00
Uniform Delay (d), s/veh	2.0	2.0	1.9	1.9	27.9	27.3
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	5.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.1	0.0	0.8	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.0	2.2	2.0	1.9	33.2	27.6
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		154	81		52	
Approach Delay, s/veh		2.1	2.0		32.7	
Approach LOS		A	A		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		51.1		8.9		51.1
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		19.0		29.0		19.0
Max Q Clear Time (g_c+I1), s		3.3		3.5		2.7
Green Ext Time (p_c), s		0.4		0.1		0.2

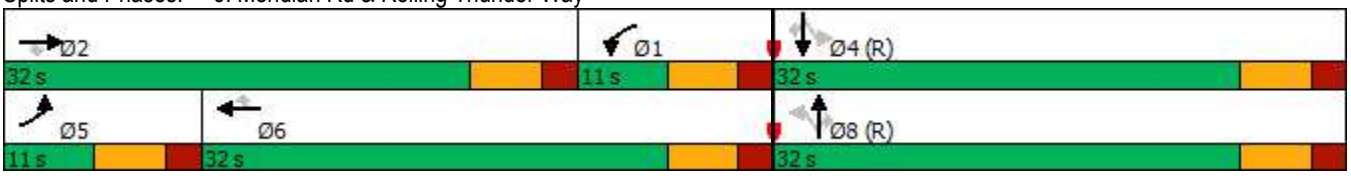
Intersection Summary	
HCM 6th Ctrl Delay	7.6
HCM 6th LOS	A

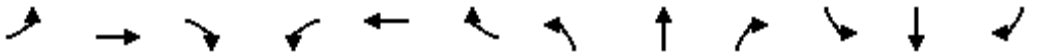


Phase Number	1	2	4	5	6	8
Movement	WBL	EBT	SBTL	EBL	WBT	NBTL
Lead/Lag	Lag	Lead		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	C-Max	None	Max	C-Max
Maximum Split (s)	11	32	32	11	32	32
Maximum Split (%)	14.7%	42.7%	42.7%	14.7%	42.7%	42.7%
Minimum Split (s)	11	32	32	11	32	32
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		21	21		21	21
Dual Entry	Yes	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	21	64	32	64	0	32
End Time (s)	32	21	64	0	32	64
Yield/Force Off (s)	26	15	58	69	26	58
Yield/Force Off 170(s)	26	69	37	69	5	37
Local Start Time (s)	64	32	0	32	43	0
Local Yield (s)	69	58	26	37	69	26
Local Yield 170(s)	69	37	5	37	48	5

Intersection Summary	
Cycle Length	75
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 32 (43%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	

Splits and Phases: 6: Meridian Rd & Rolling Thunder Way





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	14	131	52	20	13	45	328	28	11	953	13
Future Volume (veh/h)	32	14	131	52	20	13	45	328	28	11	953	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	15	138	55	21	14	47	345	29	12	1003	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	648	549	110	1331	594	150	1250	557	380	1250	557
Arrive On Green	0.03	0.35	0.35	0.06	0.37	0.37	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	554	3554	1585	1009	3554	1585
Grp Volume(v), veh/h	34	15	138	55	21	14	47	345	29	12	1003	14
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	554	1777	1585	1009	1777	1585
Q Serve(g_s), s	0.7	0.4	4.7	2.2	0.3	0.4	6.3	5.2	0.9	0.6	19.1	0.4
Cycle Q Clear(g_c), s	0.7	0.4	4.7	2.2	0.3	0.4	25.4	5.2	0.9	5.9	19.1	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	117	648	549	110	1331	594	150	1250	557	380	1250	557
V/C Ratio(X)	0.29	0.02	0.25	0.50	0.02	0.02	0.31	0.28	0.05	0.03	0.80	0.03
Avail Cap(c_a), veh/h	230	648	549	119	1331	594	150	1250	557	380	1250	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	16.1	17.5	34.1	14.8	14.8	33.4	17.5	16.1	19.6	22.0	15.9
Incr Delay (d2), s/veh	1.4	0.1	1.1	3.5	0.0	0.1	5.4	0.5	0.2	0.2	5.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	1.8	1.0	0.1	0.2	1.0	2.1	0.3	0.2	8.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	16.2	18.6	37.6	14.8	14.9	38.8	18.0	16.2	19.7	27.5	16.0
LnGrp LOS	D	B	B	D	B	B	D	B	B	B	C	B
Approach Vol, veh/h		187			90			421			1029	
Approach Delay, s/veh		21.7			28.7			20.2			27.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	32.0		32.4	8.5	34.1		32.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	26.0		26.0	5.0	26.0		26.0				
Max Q Clear Time (g_c+I1), s	4.2	6.7		21.1	2.7	2.4		27.4				
Green Ext Time (p_c), s	0.0	0.4		2.1	0.0	0.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			25.0									
HCM 6th LOS			C									

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	0	9	0	0	72	0	317	0	0	1061	50
Future Volume (vph)	0	0	9	0	0	72	0	317	0	0	1061	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		130	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865						0.850
Flt Protected												
Satd. Flow (prot)	0	0	1611	0	0	1611	0	3539	1863	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	0	1611	0	0	1611	0	3539	1863	0	3539	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		228			234			551			701	
Travel Time (s)		5.2			5.3			10.7			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	10	0	0	78	0	345	0	0	1153	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	10	0	0	78	0	345	0	0	1153	54
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		48			48			48			48	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	62		62	62		62	62		62	62		62
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1210	80	0	974	0	46
Future Volume (vph)	1210	80	0	974	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	15%			0%	0%	
Storage Length (ft)		545	0		0	0
Storage Lanes		1	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected						
Satd. Flow (prot)	3274	1465	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3274	1465	0	3539	0	1611
Link Speed (mph)	55			45	30	
Link Distance (ft)	878			999	879	
Travel Time (s)	10.9			15.1	20.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1247	82	0	1004	0	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1247	82	0	1004	0	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	62			62	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.11	1.11	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	16		16	9
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	14	54	16	36	31	37	13	39
Maximum Split (%)	11.7%	45.0%	13.3%	30.0%	25.8%	30.8%	10.8%	32.5%
Minimum Split (s)	13	36	13	36	13	36	13	36
Yellow Time (s)	4	4	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	5	7	5	7	5	7	5
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		5		5		5		5
Flash Dont Walk (s)		25		25		25		25
Dual Entry	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	89	103	37	53	89	0	37	50
End Time (s)	103	37	53	89	0	37	50	89
Yield/Force Off (s)	97	31	47	83	114	31	44	83
Yield/Force Off 170(s)	97	6	47	58	114	6	44	58
Local Start Time (s)	89	103	37	53	89	0	37	50
Local Yield (s)	97	31	47	83	114	31	44	83
Local Yield 170(s)	97	6	47	58	114	6	44	58

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	110
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	

Splits and Phases: 2: Meridian Rd & E Woodmen Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	661	524	140	125	367	137	250	656	90	88	413	397
Future Volume (veh/h)	661	524	140	125	367	137	250	656	90	88	413	397
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	681	540	0	129	378	0	258	676	0	91	426	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	720	1635		199	1100		288	796		202	707	
Arrive On Green	0.21	0.46	0.00	0.06	0.31	0.00	0.08	0.22	0.00	0.06	0.20	0.00
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	681	540	0	129	378	0	258	676	0	91	426	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	23.3	11.6	0.0	4.4	9.9	0.0	8.9	21.9	0.0	3.1	13.1	0.0
Cycle Q Clear(g_c), s	23.3	11.6	0.0	4.4	9.9	0.0	8.9	21.9	0.0	3.1	13.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	720	1635		199	1100		288	796		202	707	
V/C Ratio(X)	0.95	0.33		0.65	0.34		0.90	0.85		0.45	0.60	
Avail Cap(c_a), veh/h	720	1635		230	1100		288	977		202	888	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.8	20.6	0.0	55.4	32.0	0.0	54.5	44.6	0.0	54.6	43.7	0.0
Incr Delay (d2), s/veh	21.3	0.5	0.0	5.0	0.9	0.0	28.1	6.1	0.0	1.6	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	4.7	0.0	2.0	4.2	0.0	4.9	10.2	0.0	1.4	5.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.2	21.2	0.0	60.4	32.9	0.0	82.6	50.7	0.0	56.2	44.6	0.0
LnGrp LOS	E	C		E	C		F	D		E	D	
Approach Vol, veh/h		1221			507			934			517	
Approach Delay, s/veh		47.4			39.9			59.5			46.6	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	61.2	16.0	29.9	31.0	43.1	13.0	32.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	48.0	10.0	30.0	25.0	31.0	7.0	33.0
Max Q Clear Time (g_c+I1), s	6.4	13.6	10.9	15.1	25.3	11.9	5.1	23.9
Green Ext Time (p_c), s	0.0	2.1	0.0	2.3	0.0	1.3	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	49.6
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	4.3

Movement	SBL	SBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Traffic Vol, veh/h	0	116	0	0	141	666	12	417	377	28
Future Vol, veh/h	0	116	0	0	141	666	12	417	377	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	Free	-	-	-	-	None	-	-	None
Storage Length	-	0	-	0	215	-	215	245	-	0
Veh in Median Storage, #	1	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	97	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	123	0	0	150	709	13	444	389	30

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	-	355	419	0	0	722	0	0	
Stage 1	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	
Critical Hdwy	-	6.94	4.14	-	-	4.14	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	
Follow-up Hdwy	-	3.32	2.22	-	-	2.22	-	-	
Pot Cap-1 Maneuver	0	641	1137	-	-	876	-	-	
Stage 1	0	-	-	-	-	-	-	-	
Stage 2	0	-	-	-	-	-	-	-	
Platoon blocked, %				-	-		-	-	
Mov Cap-1 Maneuver	-	641	1137	-	-	876	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	-	-	

Approach	NW	NE	SW
HCM Control Delay, s	11	1.5	6.8
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	SWL	SWT	SWR
Capacity (veh/h)	1137	-	-	641	876	-	-
HCM Lane V/C Ratio	0.132	-	-	0.056	0.506	-	-
HCM Control Delay (s)	8.6	-	-	11	13.2	-	-
HCM Lane LOS	A	-	-	B	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	0.2	2.9	-	-

Intersection	
Int Delay, s/veh	5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	36	5	38	36	25
Future Vol, veh/h	54	36	5	38	36	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	44	6	46	44	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	147	29	0	0	52	0
Stage 1	29	-	-	-	-	-
Stage 2	118	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	845	1046	-	-	1554	-
Stage 1	994	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	821	1046	-	-	1554	-
Mov Cap-2 Maneuver	821	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	882	-	-	-	-	-

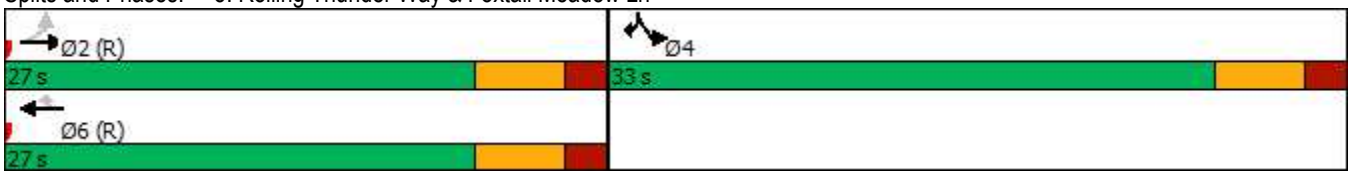
Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	4.4
HCM LOS	A		

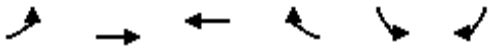
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	821	1046	1554	-
HCM Lane V/C Ratio	-	-	0.08	0.042	0.028	-
HCM Control Delay (s)	-	-	9.8	8.6	7.4	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Phase Number	2	4	6
Movement	EBTL	SBL	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	C-Max	None	C-Max
Maximum Split (s)	27	33	27
Maximum Split (%)	45.0%	55.0%	45.0%
Minimum Split (s)	11	31.5	20
Yellow Time (s)	4	4	4
All-Red Time (s)	2	2	2
Minimum Initial (s)	5	5	5
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)			5
Flash Dont Walk (s)			9
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	0	27	0
End Time (s)	27	0	27
Yield/Force Off (s)	21	54	21
Yield/Force Off 170(s)	21	54	12
Local Start Time (s)	0	27	0
Local Yield (s)	21	54	21
Local Yield 170(s)	21	54	12

Intersection Summary	
Cycle Length	60
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	

Splits and Phases: 5: Rolling Thunder Way & Foxtail Meadow Ln

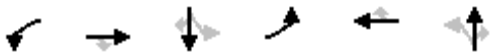




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	93	128	28	36	35
Future Volume (veh/h)	19	93	128	28	36	35
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	101	139	30	39	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	994	1384	1384	1173	107	95
Arrive On Green	0.74	0.74	0.74	0.74	0.06	0.06
Sat Flow, veh/h	1216	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	21	101	139	30	39	38
Grp Sat Flow(s),veh/h/ln	1216	1870	1870	1585	1781	1585
Q Serve(g_s), s	0.3	0.9	1.3	0.3	1.3	1.4
Cycle Q Clear(g_c), s	1.5	0.9	1.3	0.3	1.3	1.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	994	1384	1384	1173	107	95
V/C Ratio(X)	0.02	0.07	0.10	0.03	0.36	0.40
Avail Cap(c_a), veh/h	994	1384	1384	1173	802	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	1.00	1.00
Uniform Delay (d), s/veh	2.4	2.1	2.2	2.1	27.1	27.1
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	2.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.2	0.1	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.5	2.3	2.3	2.1	29.1	29.8
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		122	169		77	
Approach Delay, s/veh		2.3	2.3		29.5	
Approach LOS		A	A		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		50.4		9.6		50.4
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		21.0		27.0		21.0
Max Q Clear Time (g_c+I1), s		3.5		3.4		3.3
Green Ext Time (p_c), s		0.3		0.2		0.4

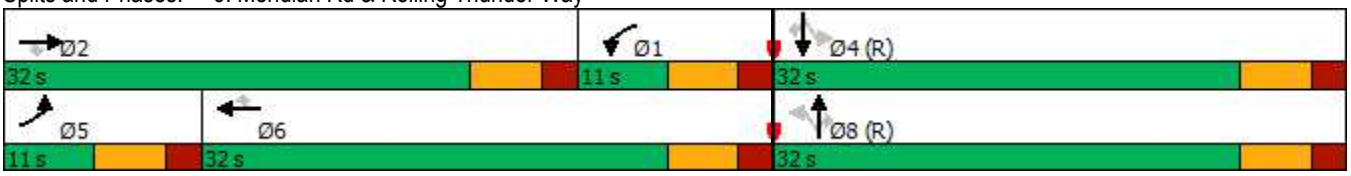
Intersection Summary		
HCM 6th Ctrl Delay	8.0	
HCM 6th LOS	A	

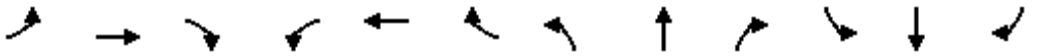


Phase Number	1	2	4	5	6	8
Movement	WBL	EBT	SBTL	EBL	WBT	NBTL
Lead/Lag	Lag	Lead		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	C-Max	None	Max	C-Max
Maximum Split (s)	11	32	32	11	32	32
Maximum Split (%)	14.7%	42.7%	42.7%	14.7%	42.7%	42.7%
Minimum Split (s)	11	32	32	11	32	32
Yellow Time (s)	4	4	4	4	4	4
All-Red Time (s)	2	2	2	2	2	2
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		5	5		5	5
Flash Dont Walk (s)		21	21		21	21
Dual Entry	Yes	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	21	64	32	64	0	32
End Time (s)	32	21	64	0	32	64
Yield/Force Off (s)	26	15	58	69	26	58
Yield/Force Off 170(s)	26	69	37	69	5	37
Local Start Time (s)	64	32	0	32	43	0
Local Yield (s)	69	58	26	37	69	26
Local Yield 170(s)	69	37	5	37	48	5

Intersection Summary	
Cycle Length	75
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 32 (43%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green	

Splits and Phases: 6: Meridian Rd & Rolling Thunder Way





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	16	67	21	37	41	86	711	60	51	388	39
Future Volume (veh/h)	48	16	67	21	37	41	86	711	60	51	388	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	17	71	22	39	43	91	748	63	54	408	41
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	648	549	114	1304	582	345	1241	554	214	1241	554
Arrive On Green	0.04	0.35	0.35	0.06	0.37	0.37	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	3456	1870	1585	1781	3554	1585	941	3554	1585	673	3554	1585
Grp Volume(v), veh/h	51	17	71	22	39	43	91	748	63	54	408	41
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	1777	1585	941	1777	1585	673	1777	1585
Q Serve(g_s), s	1.1	0.4	2.3	0.9	0.5	1.3	5.9	13.0	2.0	5.4	6.3	1.3
Cycle Q Clear(g_c), s	1.1	0.4	2.3	0.9	0.5	1.3	12.2	13.0	2.0	18.4	6.3	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	151	648	549	114	1304	582	345	1241	554	214	1241	554
V/C Ratio(X)	0.34	0.03	0.13	0.19	0.03	0.07	0.26	0.60	0.11	0.25	0.33	0.07
Avail Cap(c_a), veh/h	230	648	549	119	1304	582	345	1241	554	214	1241	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	16.2	16.8	33.3	15.2	15.4	22.4	20.1	16.5	27.7	17.9	16.3
Incr Delay (d2), s/veh	1.3	0.1	0.5	0.8	0.0	0.2	1.9	2.2	0.4	2.8	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.9	0.4	0.2	0.5	1.4	5.3	0.7	1.0	2.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	16.2	17.2	34.1	15.2	15.7	24.3	22.3	17.0	30.5	18.6	16.6
LnGrp LOS	D	B	B	C	B	B	C	C	B	C	B	B
Approach Vol, veh/h		139			104			902			503	
Approach Delay, s/veh		24.0			19.4			22.1			19.7	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	32.0		32.2	9.3	33.5		32.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	26.0		26.0	5.0	26.0		26.0				
Max Q Clear Time (g_c+I1), s	2.9	4.3		20.4	3.1	3.3		15.0				
Green Ext Time (p_c), s	0.0	0.2		1.1	0.0	0.2		3.0				

Intersection Summary			
HCM 6th Ctrl Delay		21.4	
HCM 6th LOS		C	

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	0	218	0	0	324	0	672	60	0	604	74
Future Volume (vph)	0	0	218	0	0	324	0	672	60	0	604	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		130	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	0	1611	0	0	1611	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	0	1611	0	0	1611	0	3539	1583	0	3539	1583
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		228			234			551			701	
Travel Time (s)		5.2			5.3			10.7			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	237	0	0	352	0	730	65	0	657	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	237	0	0	352	0	730	65	0	657	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		48			48			48			48	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	62		62	62		62	62		62	62		62
Sign Control		Free			Free			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

Tab Four

Queue & Turn Lane Analysis

S. No.	Intersection Name	Type of Intersection	Movement	Existing Turn Bay Length	AM		PM		Required Turn Bay Length	New Proposed Turn Bay Length	Remarks
					Existing 95th% Queue	Proposed 95th% Queue	Existing 95th% Queue	Proposed 95th% Queue			
				(ft)	(ft)	(ft)	(ft)	(ft)	Yes/No	(ft)	
1	Woodmen Rd at Foxtail Meadow	Uncontrolled	EBT		-	-	-	-			
			EBR	545	-	-	-	-		N.A.	
			WBT		-	-	-	-			
2	Meridian Rd at Woodmen Rd	Signalized	EBL	490	194	194	403	403	No	N.A.	
			EBT		121	121	208	208			
			EBR		0	0	0	0			
			WBL	195	52	53	85	87	No	N.A.	
			WBT		230	230	182	182			
			WBR		0	0	20	20			
			NBL	455	104	105	182	190	No	N.A.	
			NBT		103	105	316	327			
			NBR		0	0	0	0			
			SBL	460	38	38	66	66	No	N.A.	
			SBT		409	420	201	208			
			SBR		0	0	0	0			
3	Meridian Rd at WM Drive/Flower Rd	Two Way Stop Controlled	EBR		-	-	-	-			
			WBR		-	-	-	-			
			NBL	215	-	-	-	-		N.A.	
			NBT		-	-	-	-			
			NBR	215	-	-	-	-		N.A.	
			SBL	245	-	-	-	-		N.A.	
			SBT		-	-	-	-			
4	Foxtail Meadow Ln at Meridian Market View	Two Way Stop Controlled	WBL		1	1	7	7			
			WBR		1	1	3	3			
			NBT		0	0	0	0			
			NBR		0	0	0	0			
			SBL	325	0	0	2	2	No	N.A.	
			SBT		0	0	0	0			
5	Foxtail Meadow Ln at Rolling Thunder Way	Signalized	EBL	66	5	5	8	8	No	N.A.	
			EBT		35	35	24	25			
			WBT		21	21	32	32			
			WBR		2	2	7	7			
			SBL	165	42	42	37	37	No	N.A.	
			SBR		8	8	23	23			
6	Rolling Thunder Way at Meridian Rd	Signalized	EBL	313	21	22	28	29	No	N.A.	
			EBT		17	17	19	19			
			EBR		38	38	6	6			
			WBL	285	69	69	33	33	No	N.A.	
			WBT		11	11	16	16			
			WBR	105	0	0	0	0	No	N.A.	
			NBL		53	53	69	70			
			NBT		93	95	205	213			
			NBR		0	0	0	0			
			SBL	280	15	15	52	55	No	N.A.	
			SBT		298	307	108	112			
			SBR		0	0	0	0			