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Engineering Review

10/11/2020 9:21:01 PM
dsdrice
JeffRice@elpasoco.com
(719) 520-7877
EPC Planning & Community Development Department

See comment letter also.

Bent Grass West
Traffic Impact Analysis
(LSC #204420)
July 23, 2020

Traffic Engineer's Statement

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

COLORADO LICENSED
JEFFREY C. HODSDON
31684
7-28-20
PROFESSIONAL ENGINEER

Developer's Statement

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

7/28/20
Date

Bent Grass West

Traffic Impact Analysis

Prepared for:
Jim Byers
VP of Community Development
Challenger Homes
8605 Explorer Dr, Suite 250
Colorado Springs, CO 80920

JULY 23, 2020

LSC Transportation Consultants, Inc.
Contacts: Kirstin D. Ferrin, P.E. & Jeffrey C. Hodsdon, P.E.

LSC #204420

CONTENTS

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July 23, 2020

Jim Byers
VP of Community Development
Challenger Homes
8605 Explorer Dr, Suite 250
Colorado Springs, CO 80920

RE: Bent Grass West
El Paso County, Colorado
Traffic Impact Analysis
LSC #204420

Dear Jim:

LSC Transportation Consultants, Inc. has prepared this traffic impact analysis for the Bent Grass West residential development. The site is located about one-half mile west of the intersection of Meridian Road and Bent Grass Meadows Drive in El Paso County, Colorado. Figure 1 shows the site location.

LSC has completed the following studies in the vicinity of the site:

- *Bent Grass Subdivision PUD Traffic Impact Analysis* -- October 6, 2006
- *Bent Grass East Commercial – Preliminary Plan* -- January 25, 2013
- *Bent Grass East Commercial – Report Supplement #2* -- March 14, 2013
- *Bent Grass Subdivision Filing 1 Updated Traffic Impact Analysis* -- July 14, 2014
- *Bent Grass East Commercial Filing No. 2 Updated Traffic Impact Analysis* -- July 17, 2014
- *Falcon Dental East Commercial Filing No. 2A* -- March 7, 2016
- *Bent Grass Meadows Drive/Meridian Road Traffic Signal Warrant Analysis* -- October 2, 2017
- *Bent Grass East Commercial/Bent Grass Meadows Drive & Meridian Road Transportation Memorandum* March -- 21, 2019
- *Falcon Marketplace Traffic Impact Analysis* -- October 23, 2017 (September 5, 2018 Revision)
- *Bent Grass Residential Filing No. 2 Traffic Impact Analysis* April 17, 2020

REPORT CONTENTS

The report contains the following:

- The existing roadway and traffic conditions in the site's vicinity, including the roadway widths, surface conditions, lane geometries, traffic controls, and posted speed limits, etc.;
- The existing traffic volumes on the study-area roadways;
- The projected average weekday and peak-hour vehicle-trips to be generated by the site at buildout;
- The assignment of the projected additional site-generated traffic volumes to the study area roadways and intersections;
- The projected short-term and long-term total traffic volumes on the study-area roadway network;
- The projected levels of service at the intersections of Meridian Road/Bent Grass Meadows Drive, Woodmen frontage road/Bent Grass Meadows Drive, and Woodmen Road/Golden Sage Drive and at the site access points to Bent Grass Meadows Drive; and
- Recommendations for roadway improvements and phasing of these improvements

LAND USE

Land Use

Figure 2 shows the existing, currently proposed, and future land uses in the vicinity of the site. These include 104 existing single-family homes that are part of the Bent Grass Residential Filing No 1, 178 lots for single family homes that are part of Bent Grass Residential Filing No. 2 currently under review, and the Bent Grass East Commercial development. The Bent Grass East Commercial development is partially developed with a veterinary clinic, a gas station with convenience store, and a dental clinic. Bent Grass West is planned to include 260 lots for single family homes.

Access

Bent Grass Meadows Drive is planned to be completed between the existing sections located north of the Woodmen frontage road and west of Meridian, as part of Bent Grass Residential Filing No. 2. Four full-movement access points are proposed to the new section of Bent Grass Meadows Drive. Figure 2 shows the location of the proposed access points.

Address deviations for intersection spacing.

Sight Distance

Figure 3 shows a sight distance analysis at the proposed access points to Bent Grass Meadows Drive. Based on a design speed of 40 miles per hour (mph) on Bent Grass Meadows Drive and the criteria contained in Table 2-21 of the ECM, the required intersection sight distance at the proposed site access points is 445 feet. The required stopping sight distance from ECM Table 2-17 is also shown in the figure. The required intersection sight distance and stopping sight distance

can be met at both intersections, if the areas between the sight distance lines and the curb line have low-level landscaping and are kept free of other obstructions (such as monument signs and parking areas) that would restrict the drivers' line of sight. Landscaping should be low — about 18 inches or lower in height — to the east of the passenger vehicle lines of sight shown. Please refer to ECM Sections 2.3.6.G.1 and 2.

EXISTING ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The roadways in the study area are identified below, followed by a brief description of each. Figure 1 shows the roadway system. Copies of the *2016 El Paso County Major Transportation Corridors Plan (MTCP), 2040 Roadway Plan,* and *2016 MTCP 2060 Corridor Preservation Plan* with the site location identified on each of them have been attached to this report.

Meridian Road is shown on the *El Paso County 2040 Major Transportation Corridors Plan* and the *Preserved Corridor Network Plan* as a four-lane Principal Arterial. Meridian Road was recently expanded from two lanes to four lanes between Woodmen Road and Rolling Thunder and may soon be connected to US Highway 24 (US Hwy 24). The posted speed limit is 55 miles per hour (mph).

Bent Grass Meadows Drive is a Non-Residential Collector that currently extends north from the Woodmen North frontage road for about 2,000 feet and west from Meridian Road for about one-half mile. Bent Grass Meadows Drive will be extended further west and then curve south to connect to the existing section north of the Woodmen frontage road, as part of the Bent Grass Residential Filing No. 2 development currently under review. The Bent Grass Meadows Drive/ Meridian Road intersection is planned to be signalized in the short-term future once warrants for signalization are satisfied. This is anticipated to occur with development of that filing.

Woodmen Road is shown on the *El Paso County 2040 Major Transportation Corridors Plan* and the *Preserved Corridor Network Plan* as a four-lane Expressway in the vicinity of the site. The posted speed limit on Woodmen Road in the vicinity of Golden Sage Road is 55 mph.

Woodmen Frontage Road is a paved two-lane frontage road along the north side of Woodmen Road. The Woodmen frontage road extends from just west of Meridian Road to its current terminus west of Golden Sage Road. The posted speed limit on the Woodmen frontage road is 30 mph.

Existing Traffic Conditions

Figure 4 shows the existing morning and afternoon peak-hour traffic volumes at the intersections of Meridian Road/Bent Grass Meadows Drive, Woodmen frontage road/Bent Grass Meadows Drive, and Woodmen Road/Golden Sage Road. The traffic volumes are from traffic counts conducted in September 2018, May 2019, and January 2020. The traffic count reports are attached.

Existing Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A represents control delay of less than 10 seconds for unsignalized and signalized intersections. LOS F represents control delay of more than 50 seconds for unsignalized intersections and more than 80 seconds for signalized intersections. Table 1 shows the level of service delay ranges.

Table 1: Intersection Levels of Service Delay Ranges

	Signalized Intersections	Unsignalized Intersections
Level of Service	Average Control Delay (seconds per vehicle)	Average Control Delay (seconds per vehicle)(1)
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more

(1) For unsignalized intersections, if V/C ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.

The intersections of Meridian Road/Bent Grass Meadows Drive and Woodmen frontage road/Bent Grass Meadows Drive were analyzed to determine the existing levels of service based on the unsignalized method of analysis procedures found in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. The intersection of Woodmen Road/Golden Sage Drive was analyzed using Synchro. Figure 3 shows the level of service analysis results. The level of service reports are attached.

The eastbound left-turn movement at the stop sign-controlled intersection of Meridian/Bent Grass Meadows is currently operating at LOS F during the morning peak hour and LOS E during the afternoon peak hour. The eastbound right-turn movement is currently operating at LOS D during the morning peak hour and LOS B during the afternoon peak hour.

All movements at the intersections of the Woodmen frontage road/Bent Grass Meadows Drive and the Woodmen frontage road/Golden Sage Road are currently operating at LOS B or better during the peak hours.

All movements at the signal-controlled intersection of Woodmen/Golden Sage are currently operating at LOS D or better during the peak hours.

Change all names to Falcon Meadows at Bent Grass.

BACKGROUND TRAFFIC

Background traffic is the traffic estimated to be on the roadways without the Bent Grass West traffic. The short-term (Year 2021) background traffic volumes are shown in Figure 5. The background traffic volumes are based on the existing traffic volumes shown in Figure 3, with a portion of the volumes assumed to be rerouted with the construction of Bent Grass Meadows Drive between the existing sections located north of the Woodmen frontage road and west of Meridian Road. The short-term background traffic volumes also include additional traffic projected to be generated by buildout of Bent Grass Residential Filing No. 2, buildout of the initial phase of Banning Lewis Ranch North, **buildout of the Bent Grass East Commercial** development, and **buildout of Falcon Marketplace** located northwest of the intersection of Woodmen Road/Meridian Road. As buildout of these projects has been assumed, these short-term volumes may be conservative if commercial buildout takes several years to occur. The short-term background traffic volumes also assume a right-in-only access to Woodmen Road just west of Meridian Road. Through traffic on Meridian Road was assumed to grow based on two percent growth per year.

Figure 6 shows the projected 2040 background traffic volumes. These volumes were estimated by LSC, based on previous work completed in the area by LSC, including other Bent Grass Meadows developments, the Falcon Marketplace, and *the Banning Lewis Ranch North - Traffic Impact Study* prepared by SM Rocha, LLC, dated August 2019. The 2040 background traffic volumes assume buildout of the area north of Woodmen Road and west of Meridian Road. Appendix Table 1 shows the trip generation estimates for all existing and future land uses assumed to be built out in this area by 2040.

TRIP GENERATION

Estimates of the vehicle-trips generated by Bent Grass West have been made using the nationally published trip generation rates found in *Trip Generation, 10th Edition* by the Institute of Transportation Engineers (ITE). The results of the trip generation estimate are shown in Table 2.

Bent Grass West can be expected to generate about 2,454 vehicle-trips on the average weekday, with about half entering and half exiting in a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 48 vehicles would enter, and 144 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 and 6:15 p.m., about 162 vehicles would enter, and 95 vehicles would exit the site.

TRIP DISTRIBUTION AND ASSIGNMENT

The estimated directional distribution of the site-generated traffic volumes on the adjacent roadways is an important factor in determining the site's traffic impacts. Figure 7 shows the directional distribution estimates for the site-generated traffic. The estimates have been based on the following factors: the land use proposed for the site and its location; the existing and planned street and roadway system in the vicinity; and the existing/projected traffic volumes.

Trips with destination and/or origins within the area bound by Woodmen Road on the south and Meridian Road on the east have been assigned separately. In the short term, a portion of the trips generated by Bent Grass West are estimated to travel to and from Bent Grass East Commercial development located on the southwest corner of Meridian Road and Bent Grass Meadows Drive. In the future, an additional portion of the trips by Bent Grass West are estimated to travel to and from the future elementary school located just east of the site, to and from the future retail development planned on the northwest corner of Meridian Road and Bent Grass Meadows Drive, and to and from the Falcon Marketplace to be located on the northwest corner of Woodmen Road and Meridian Road. Appendix Tables 1 and 2 show the internal trip assumptions and calculations.

When the external trip distribution percentages (from Figure 7) are applied to the trip generation estimates (from Table 2), the resulting site-generated traffic volumes can be determined. Figure 8 shows the short-term site-generated traffic-volume estimates. The short-term site-generated traffic volumes assume Bent Grass Meadows Drive has been constructed between Meridian Road and the Woodmen frontage road.

Figure 9 shows the long-term site-generated traffic volumes. The long-term site-generated traffic volumes assume buildout of the areas north of Woodmen Road and west of Meridian Road.

TOTAL TRAFFIC

Figure 10 shows the projected short-term total traffic volumes at the site access points and key area intersections. The short-term total traffic volumes are the sum of the short-term background traffic volumes from Figure 5 plus the short-term site-generated traffic volumes from Figure 8.

Figure 11 shows the projected 2040 total traffic volumes at the site access points and key area intersections. The 2040 total traffic volumes are the sum of the 2040 background traffic volumes from Figure 6 plus the long-term site-generated traffic volumes from Figure 9.

PROJECTED LEVELS OF SERVICE

The site access points, and key area intersections were analyzed to determine the projected levels of service, based on the unsignalized method of analysis procedures found in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board or using Synchro. Figures 5, 6, 10, and 11 show the level of service analysis results. The level of service technical reports are attached.

Meridian/Bent Grass Meadows

The intersection of Meridian/Bent Grass Meadows is currently two-way, stop sign-controlled. It is our understanding that this intersection will be required to be converted to traffic-signal control in the short-term future. As a signal-controlled intersection, all movements are projected to operate at LOS D or better during the peak hours, based on both short-term and 2040 total traffic volumes.

Woodmen/Golden Sage

The shared southbound right-turn and through lane at the intersection of Woodmen/Golden Sage is projected to operate at LOS E during the afternoon peak hour, based on the projected short-term total traffic volumes. These movements are projected to operate at LOS D or better if a separate southbound right-turn lane is constructed. All other movements at this intersection are projected to operate at LOS D or better during the peak hours, based on the projected short-term total and 2040 total traffic volumes. The analysis assumes the addition of protected/permitted phasing for the eastbound and westbound left-turn movements in the short-term.

Woodmen North Frontage Road/Falcon Market Place (Proposed Roundabout)

The future intersection of Woodmen North Frontage Road/Falcon Market Place (Proposed Roundabout) has been included in the long-term analysis. Note: The southeast leg of this intersection is the right-in connection from westbound Woodmen Road. The analysis indicates LOS A, as shown in Figure 11.

Woodmen North Frontage Road/Golden Sage

The intersection of the Woodmen North Frontage Road/Golden Sage is currently stop sign-controlled. All movements at this intersection are projected to operate at LOS D or better during the peak hours, based on the projected short-term total traffic volumes. By 2040, the westbound approach is projected to operate at LOS F during the afternoon peak hour. All movements are projected to operate at LOS C or better, if this intersection is converted to either traffic-signal control or reconstructed as a modern roundabout. Due to right-of-way and spacing constraints, the signal is most likely the primary future option. Table 3 shows a comparison of the level of service for each of the options. Due to the short spacing between the frontage road and Woodmen Road and the high volume of northbound right-turning vehicles at this intersection, LSC recommends a dual northbound right-turn to allow for better utilization of the dual eastbound left-turn lanes at the intersection of Woodmen/Golden Sage.

Possible Alternative to a Traffic Signal: A Modern Roundabout Intersection

<u>Advantages</u>

- The delay for all movements is projected to be lower with a modern roundabout than with traffic signal control.
- Generally, modern roundabouts have safety advantages over signal-controlled intersections. This is because crashes tend to be lower speed, there are fewer conflict points, and the types (angle) of crashes tend to be those which generally result in less severe accidents. Granted, conventional T-intersections have significantly fewer conflict points than four-leg conventional intersections.

- A roundabout may be more aesthetically appealing than a traditional signal-controlled intersection and may have generally lower traffic noise levels.
- Long-term operation and maintenance cost is likely to be lower with a roundabout than a traffic signal.

Disadvantages

- A roundabout could potentially require additional right-of-way and construction costs than a traffic signal. The required right-of-way may not be available.
- Due to the proximity to Woodmen Road, southbound queues extending from the signal at Woodmen Road have the potential to back into the circulating lanes of a roundabout.

Woodmen Frontage Road/Bent Grass Meadows

All movements at the stop sign-controlled intersection of the Woodmen frontage road/Bent Grass Meadows are projected to operate at LOS C or better during the peak hours, based on the projected short-term and 2040 total traffic volumes.

Site Access Points

The full-movement site access points to Bent Grass Meadows Drive are projected to operate at LOS B or better for all movements as stop sign-controlled intersections, based on the short-term and 2040 total traffic volumes.

SUBDIVISION STREET CLASSIFICATIONS

Figure 12 shows the recommended street classifications for the streets in the vicinity of the site.

PEDESTRIAN & BICYCLE FACILITIES

- Woodmen & Meridian are shown as proposed bike routes on the *MTCP Non-Motorized Plan*. Also shown is a proposed secondary regional trail west of the site.
- Bent Grass Meadows Drive is sufficiently wide for bicycles with the paved shoulder.
- There are developing pedestrian connections along the north side of the Woodmen North Frontage Road, Bent Grass Meadows Drive, and Meridian Park Drive. Other area sections of sidewalk/trail connections are being added as development occurs.
- Sidewalks will be added along Bent Grass Meadows Drive with the connection south to the north terminus of the existing section, adjacent to the School District 49 headquarters.
- The subdivision streets will all have sidewalks to connect to the sidewalk along Bent Grass Meadows Drive

DEVIATION REQUESTS

A deviation to the criteria contained in the *El Paso County Engineering Criteria Manual* (ECM) will be needed for the spacing of the proposed access points to Bent Grass Meadows Drive. The deviation is needed to provide two access points for the lots south of Bent Grass Meadows Drive while maximizing the available sight distance on the inside of the curve. Kittrick Place and Henzlee Place have been designed as offset "T" intersections with the offset direction that results in no overlap for the required approaching left-turn lanes.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

- Bent Grass West can be expected to generate about 2,454 vehicle-trips on the average weekday, with about half entering and half exiting in a 24-hour period. During the morning peak hour, about 48 vehicles would enter, and 144 vehicles would exit the site. During the afternoon peak hour, about 162 additional vehicles would enter, and 95 vehicles would exit the site.

Level of Service

- The eastbound left-turn movement at the stop sign-controlled intersection of Meridian/ Bent Grass Meadows is currently operating at LOS F during the morning peak hour and LOS E during the afternoon peak hour. If signalized, all movements are projected to operate at LOS D or better during the peak hours, based on the projected short-term and 2040 total traffic volumes.
- The shared southbound right-turn and through lane at the intersection of Woodmen/Golden Sage is projected to operate at LOS E during the afternoon peak hour, based on the projected short-term total traffic volumes. These movements are projected to operate at LOS D or better if a separate southbound right-turn lane is constructed. All other movements at this intersection are projected to operate at LOS D or better during the peak hours, based on the projected short-term and 2040 total traffic volumes.
- All movements at the stop sign-controlled intersection of the Woodmen frontage road/ Golden Sage are projected to operate at LOS D or better during the peak hours, based on the projected short-term total traffic volumes. By 2040, alternate intersection control, such as a traffic signal or a modern roundabout, will likely be needed to maintain an acceptable level of service for this intersection.
- The intersection of the Woodmen frontage road/Bent Grass Meadows and the site access points to Bent Grass Meadows are projected to operate at LOS C or better for all movements during the peak hours as stop sign-controlled intersections, based on the projected short-term and 2040 total traffic volumes.

Roadway Improvements

- Table 4 identifies the future roadway improvements that will be needed in the vicinity of the site. Table 5 also gives a recommended trigger for when each improvement will be needed.
- Table 5 shows the percentage of the projected 2040 total traffic due to Bent Grass West. These percentages could be used to determine the pro-rata share of the cost of intersection improvements.
- Regarding the future eastbound left-turn signal phase at Woodmen/Golden Sage: prior to the opening of the Bent Grass Meadows Boulevard to the public, signal modification plans should be prepared, and coordination with EPC DPW (and possibly the City of Colorado Springs) will be a necessary step(s) toward future implementation of this left-turn phase. Steps should be taken such that the phase can be implemented shortly after it has been determined that it should be implemented. This determination would be made by monitoring the traffic volumes and operations once the Bent Grass Meadows Drive connection is opened to traffic to determine if the phase should be added at that time.

* * * * *

Please contact me if you have any questions regarding this report.

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

By: Jeffrey C. Hodsdon, P.E.
Principal

JCH:KDF:jas

Enclosures: Tables 2-5
Appendix Tables 1 and 2
Figures 1-11
MTCP Maps
Traffic Count Reports
Level of Service Reports

Tables

TRANSPORTATION
CONSULTANTS, INC.

Table 2
Trip Generation Estimate
Bent Grass West

Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates [1]					Total Trips Generated				
			Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour	
				In	Out	In	Out		In	Out	In	Out
210	Single-Family Detached Housing	260 DU [2]	9.44	0.19	0.56	0.62	0.37	2,454	48	144	162	95

Notes:
(1) Source: "*Trip Generation, 10th Edition, 2017*" by the Institute of Transportation Engineers (ITE)
(2) DU = dwelling unit

Source: LSC Transportation Consultants, Inc.

Jul-20

Table 3
Level of Service Comparison
Golden Sage Drive/Woodmen frontage road

		2040 Total Traffic									
		AM Peak					PM Peak				
				Northbound					Northbound		
Scenario		**Eastbound**	**Westbound**	**Left**	**Right**	**Overall**	**Eastbound**	**Westbound**	**Left**	**Right**	**Overall**
Stop-Sign Control	**Delay**	7.3	23.1	Free	Free	- - -	9.1	57.7	Free	Free	- - -
	LOS	A	C				A	F			
Modern Roundabout	**Delay**	5.5	6.1	3.2	Free	3.5	5.8	7.3	4	Free	3.8
	LOS	A	A	A		A	A	A	A		A
Traffic Signal Control With Single Northbound Right-Turn Lane	**Delay**	3.8	5.8	21.8	6.1	7.0	4.7	7.6	23.1	6.7	8.7
	LOS	A	A	C	A	A	A	A	C	A	A
Traffic Signal Control With Dual Northbound Right-Turn Lane[(1)]	**Delay**	3.9	6.4	13.5	6.3	7.8	5.4	10.6	20.2	6.9	11.7
	LOS	A	A	B	A	A	A	B	C	A	B

Note:
(1) Dual northbound right-turn lanes will allow for better utilization of the dual eastbound left-turn lanes at the intersection of Golden Sage/Woodmen

Source: LSC Transportation Consultants, Inc. Jul-20

Table 4
Roadway System Improvements
Bent Grass West

	Description		Trigger	Timing	Reponsiblity
			Meridian Road/Bent Grass Meadows Road		
A	Signalize Meridian/Bent Grass Meadows	Remove existing stop-sign and replace with traffic signal control.	When warrant(s) are met -- 2 of the 3 conditions of the "Crash Experience" warrant are currently met. The current number of reported crashes (susceptible to correction with a signal) exceeds the threshold as do the associated traffic volume thresholds.	With opening of the approved expansion of the veterinary clinic or Once El Paso County determines that the remaining condition within the Crash Experience Warrant has been met (determines that alternatives have failed to reduce crash frequency) and determines that a signal should be installed.	Bent Grass Metro District
B	Right-turn acceleration lane on Meridian at Bent Grass Meadows	ECM criteria indicates the acceleration lane would need to be 960 feet long plus a 222-foot taper based on the design speed of 60 mph. Note that Owl Lane is located approximately 925 feet south of Bent Grass Meadows Drive. Therefore, the lane would be a continuous acceleration/deceleration lane between Bent Grass Meadows Drive and Owl Lane.	ECM criteria has been exceeded. A deviation was previously approved waiving this requirement with the development of Bent Grass Residential Filing 1 and Bent Grass East Commercial Filing 2A. Additional development will either require the submittal and approval of a new deviation or construction of this improvement. (Notes: The installation of the traffic signal will regularly stop southbound traffic allowing eastbound right turns to enter southbound Meridian Road without an acceleration lane. The LOS analysis indicates significant improvement of the LOS with the signal. The crash data does not indicate a safety issue with the current eastbound right movement without the accel lane. Several costly improvements may be needed to build the accel lane -- including burying the overhead power lines south to Owl Place, reconstructing the ditch section along the west side of Meridian Road, and reworking the radius at Meridian Road. This intersection is similar to the Meridian/Woodmen Hills, Meridian/Stapleton, and Meridian/Londonderry intersections to the north in that **[or "to the extent that"]** southbound right acceleration lanes have not been added. If the County ultimately wants a raised right-turn island on this southwest corner of the Bent Grass Meadows/Meridian Road intersection in conjunction with an accel lane, this would likely need to be accomplished later with the overall widening of Bent Grass Meadows just west of Meridian Road.	Accel lane construction or a deviation -- with any development beyond the approved expansion of the veterinary clinic and expansion of parking for the dental clinic.	Bent Grass Metro District
			Bent Grass Meadows Dr		
C	Construct Bent Grass Meadows Drive between the existing sections located north of the Woodmen frontage road and west of Meridian Road	Construct Bent Grass Meadows Drive as a Non-Residential Collector	With any development west of Bent Grass Residential Filing No. 1	With Bent Grass Residential Filing No. 2	Bent Grass Metro District
D	Restrict westbound left-turn at 7-Eleven access	Remove the striping for the left-turn bay at the 7-Eleven access, restripe for two sets of dual yellow lines as shown in Figure 9. If trigger for closure of westbound left-in is reached prior to the trigger for access closure, install No Left Turn signs and reflective, plastic delineators within the painted center median across the 7-Eleven access.	When westbound left-turn queue exceeds the length of the existing lane.	'With 50% percent development of the remaining vacant parcels within Bent Grass East Commercial beyond the approved expansion of the veterinary clinic and expansion of parking for the dental clinic. **or** With the completion of Bent Grass Meadows Dr between the Woodmen frontage road and Meridian Road	Bent Grass Metro District
E	Close 7-Eleven Access	Remove the existing curb cut.	When the eastbound right-turn queue approaching Meridian Road blocks the access **and/or** if motorists exiting from the 7-Eleven access and turning into the eastbound left-turn lane approaching Meridian Road regularly impede/block the adjacent eastbound right-turn lane approaching Meridian Road.	With 50% percent development of the remaining vacant parcels within Bent Grass East Commercial beyond the approved expansion of the veterinary clinic and expansion of parking for the dental clinic. **or** With the completion of Bent Grass Meadows Dr between the Woodmen frontage road and Meridian Road	Bent Grass Metro District
			Woodmen frontage road/Bent Grass Meadows Dr		
F	Eastbound left-turn lane on Woodmen frontage road approaching Bent Grass Meadows Dr.	ECM criteria indicates the left-turn lane would need to be 315 feet long (155 feet of deceleration length plus 160 feet of storage length) plus a 160-foot taper based on the design speed of 40 mph.	When the eastbound left-turn volume exceeds 25 vehicles per hour	With the completion of Bent Grass Meadows Dr between the Woodmen frontage road and Meridian Road	Bent Grass Metro District*
			Woodmen/Golden Sage		
G	Add protected/permitted phasing for left-turn movements	Prepare a traffic signal modification plan and furnish/install new traffic signal heads for protected-permissive phasing and other necessary hardware, software needed to implement this phase; modify existing signal timing plan.	If/when needed to maintain acceptable level of service/traffic operations and/or to control vehicle queues. .	--Prior to the opening of the Bent Grass Meadows Boulevard to the public, signal modification plans should be prepared, and coordination with EPC DPW (and possibly the City of Colorado Springs) will be a necessary step(s) toward future implementation of this left turn phase. Steps should be taken such that the phase can be implemented shortly after it has been determined that it should be implemented. This determination would be made by monitoring the traffic volumes and operations once Bent Grass Meadows Drive connection is opened to traffic to determine if the phase should be added at that time.	Bent Grass Metro District* - pro-rata share (based on total traffic volumes) of the cost of the improvement.(1) Note: Other potential responsibility for participation: In addition to the yet-to-be developed properties within the Bent Grass Metro District service area and the Falcon Marketplace development, other future developers of currently vacant lane within the "travel shed" of the north leg (and potentially the south leg) of the Golden Sage/Woodmen and Golden Sage/Woodmen N. Frontage Road intersection may also be assigned as responsible participants in future or completed (if a cost recovery agreement is put in place) traffic/roadway improvements.
H	Lengthening of the current eastbound single left-turn deceleration lane on Woodmen approaching Golden Sage Road	Provide a 240-foot transition taper (20:1 taper ratio), 290 feet of deceleration distance plus sufficient vehicle stacking distance. CURRENT: 175-foot taper plus a 465-foot left-turn lane which translates to a 175-foot taper, 290-foot deceleration distance, and 175 feet of stacking distance. SHORT TERM: Adequate stacking is available in the current turn lane - calculated queue length 204 feet. LONG TERM: Lengthen single left-turn lane and/or future implementation of dual left-turn lanes (if capacity needs dictate). If a dual left is implemented in the future, consideration will need to be given to the configuration on Golden Sage and at the Golden Sage/Woodmen Frontage Road intersection to receive the dual left-turn movement.	The estimated "trigger" of 40 PM peak hour eastbound left turns above the estimated short term total volume (from Figure 16a of the TIS) approximately translates to and additional 589 directional ADT for residential trips making this turning movement (based on the ITE single family trip ratio). This estimated threshold may be reached with a combination of site-generated trips and background trips.	AS NEEDED TO MAINTAIN ADEQUATE LEVEL OF SERVICE AND VEHICLE STACKING DISTANCE ." This is estimated to be when the eastbound left turn turning volume reaches approximately 200 vehicles per hour during the PM peak. This translates to about 40 vehicles per hour over the estimated short term total volume from Figure 16a of the Falcon Marketplace TIS. Note: Short term total volumes assume the Meridian extension to Highway 24 to be open.	Bent Grass Metro District*- pro-rata share (based on total traffic volumes) of the cost of the improvement.(1) Note: Other potential responsibility for participation: In addition to the yet-to-be developed properties within the Bent Grass Metro District service area and the Falcon Marketplace development, other future developers of currently vacant lane within the "travel shed" of the north leg (and potentially the south leg) of the Golden Sage/Woodmen and Golden Sage/Woodmen N. Frontage Road intersection may also be assigned as responsible participants in future or completed (if a cost recovery agreement is put in place) traffic/roadway improvements.
I	Southbound exclusive right-turn lane on Golden Sage Road approaching Woodmen Road	A continuous right-turn lane within the 150 feet between the Woodmen Frontage Road and Woodmen Road	The estimated "trigger" of 5-30 AM peak hour southbound right turns above the estimated short term total volume (from Figure 16a of the Falcon Marketplace TIS) approximately translates to an additional 85-510 directional ADT for residential trips making this turning movement (based on the ITE single family trip ratio). This estimated threshold may be reached with a combination of site-generated trips and background trips.	AS NEEDED TO MAINTAIN ADEQUATE LEVEL OF SERVICE AND VEHICLE STACKING DISTANCE ." A preliminary trigger could be a southbound right turn volume of about 150-175 vehicles per hour. This translates to about 5 to 30 vehicles per hour over the projected short term volume from Figure 16a of the Falcon Marketplace TIS. This may be conservative due to the westbound right turn acceleration lane on Woodmen Road. Additional study may indicate a higher threshold based on empirical data collection and analysis.	Bent Grass Metro District - pro-rata share (based on total traffic volumes) of the cost of the improvement. (1)Note: Other potential responsibility for participation: In addition to the yet-to-be developed properties within the Bent Grass Metro District service area and the Falcon Marketplace development, other future developers of currently vacant lane within the "travel shed" of the north leg (and potentially the south leg) of the Golden Sage/Woodmen and Golden Sage/Woodmen N. Frontage Road intersection may also be assigned as responsible participants in future or completed (if a cost recovery agreement is put in place) traffic/roadway improvements
J	Signalization of Golden Sage Road/Woodmen Frontage Road or reconstruction as a modern roundabout; Future additional laneage may be necessary at this intersection to accommodate vehicle queues and for traffic operations.	Remove existing stop-signs and replace with traffic signal control or reconstruct as modern roundabout	If/when needed to maintain acceptable level of service/traffic operations and/or to control vehicle queues. Fair-share participation by the development or the district on behalf of the district members.	If/when needed to maintain acceptable level of service/traffic operations and/or to control vehicle queues.	Bent Grass Metro District* - pro-rata share (based on total traffic volumes) of the cost of the improvement. (1)Note: Other potential responsibility for participation: In addition to the yet-to-be developed properties within the Bent Grass Metro District service area and the Falcon Marketplace development, other future developers of currently vacant lane within the "travel shed" of the north leg (and potentially the south leg) of the Golden Sage/Woodmen and Golden Sage/Woodmen N. Frontage Road intersection may also be assigned as responsible participants in future or completed (if a cost recovery agreement is put in place) traffic/roadway improvements.
Notes:	*Note: It is our understanding that the specifics of the district participation will need to be included in the SIA/revised development agreement to be completed and finalized prior to the development of lots beyond the initial 49 lots. If for some reason the District is unable or unwilling to participate, or if determination by the district is delayed, the applicant would be responsible. In this case, an escrow agreement between the applicant and the County would be prepared and finalized). We understand that staff would like for that the applicant to understand the estimated/approximate costs associated with their fair share of future improvements at Golden Sage/Woodmen. LSC will provide preliminary fair share cost estimates utilizing available information from the Falcon Marketplace SIA. This will be provided by March 31st to the applicant and staff.				

(1) See Table 5 for pro-rata percentage calculations

Source: LSC Transportation Consultants, Inc. (3-18-2020 w/formatting only 4-19-2020)

Table 5

Prorata Share Contribution Calculations

Bent Grass Residential West

Item	Improvement Description and Estimated Cost			AM	PM	AM + PM
G	Add protected/permitted phasing at Woodmen/Golden Sage		Site-Generated Traffic[1] (vehicles per hour)	16	75	91
			2040 Total Traffic[1] (vehicles per hour)	318	446	764
			%	5.03%	16.82%	11.91%
	Estimated Improvement Cost:	**$ 33,750**	Estimated Fair-Share Portion for this project based on calculated AM + PM percentage:			**$ 4,020**
H	Lengthening of the current eastbound single left-turn deceleration lane on Woodmen approaching Golden Sage Road		Site-Generated Traffic[1] (vehicles per hour)	16	75	91
			2040 Total Traffic[1] (vehicles per hour)	318	446	764
			%	5.03%	16.82%	11.91%
	Estimated Improvement Cost:	**$ 200,000**	Estimated Fair-Share Portion for this project based on calculated AM + PM percentage:			**$ 23,822**
I	Southbound exclusive right-turn lane on Golden Sage Road approaching Woodmen Road		Site-Generated Traffic[2] (vehicles per hour)	55	43	98
			2040 Total Traffic[2] (vehicles per hour)	391	390	781
			%	14.07%	11.03%	12.55%
	Estimated Improvement Cost:	**$ 100,000**	Estimated Fair-Share Portion for this project based on calculated AM + PM percentage:			**$ 12,548**
J	Signalization of Golden Sage Road/Woodmen Frontage Road or reconstruction as a modern roundabout; Future additional laneage may be necessary at this intersection to accommodate vehicle queues and for traffic operations.		Site-Generated Traffic[3] (vehicles per hour)	72	121	193
			2040 Total Traffic[3] (vehicles per hour)	977	1181	2158
			%	7.37%	10.25%	8.94%
	Estimated Improvement Cost:	**$ 350,000**	Estimated Fair-Share Portion for this project based on calculated AM + PM percentage:			**$ 31,302**

Notes:
(1) Eastbound left-turn volume at the intersection of Woodmen/Golden Sage
(2) Southbound right-turn volume at the intersection of Woodmen/Golden Sage
(3) Sum of all traffic volumes at the intersection of Golden Sage/Woodmen frontage road

Source: LSC Transportation Consultants, Inc. 5/26/2020

Appendix Tables

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Appendix Table 1
Bent Grass West
Study Area Buildout Trip Generation Estimate

TAZ	Name	Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates [1]					Total Future Trips Generated					TAZ Internal Trips	Total Future Trips Internal to The TAZ					Total Future Trips Internal to The Study Area					Pass-By Trips [2]	New Future External Trips Generated
					Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour			Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour			Average New Weekday Traffic
						In	Out	In	Out		In	Out	In	Out			In	Out	In	Out		In	Out	In	Out		
	Bent Grass Residential Fil 2 South	210	Single-Family Detached Housing	121 DU[3]	9.44	0.19	0.56	0.62	0.37	1,142	22	67	75	44	0%	0	0	0	0	0	151	7	17	7	5	0%	991
	Bent Grass Residential Fil 2 North	210	Single-Family Detached Housing	58 DU	9.44	0.19	0.56	0.62	0.37	548	11	32	36	21	0%	0	0	0	0	0	72	4	8	4	2	0%	476
1	Bent Grass West	210	Single-Family Detached Housing	15 DU	9.44	0.19	0.56	0.62	0.37	142	3	8	9	5	0%	0	0	0	0	0	19	1	2	0	0	0%	123
	Bent Grass West	210	Single-Family Detached Housing	70 DU	9.44	0.19	0.56	0.62	0.37	661	13	39	44	26	0%	0	0	0	0	0	87	5	10	4	3	0%	574
	Bent Grass West	210	Single-Family Detached Housing	93 DU	9.44	0.19	0.56	0.62	0.37	878	17	52	58	34	0%	0	0	0	0	0	116	6	13	5	3	0%	762
2	Bent Grass School	520	Elementary School	500 Students	1.89	0.36	0.31	0.08	0.09	945	181	154	41	44	0%	0	0	0	0	0	473	91	39	10	22	0%	472
		210	Single-Family Detached Housing	54 DU	9.44	0.19	0.56	0.62	0.37	510	10	30	34	20	0%	0	0	0	0	0	67	4	8	3	2	0%	443
3	Single Family/Retail/Office	820	Shopping Center	11.5 KSF[4]	83.44	2.93	1.80	3.40	3.69	960	34	21	39	42	2%	19	1	0	1	1	10	0	0	0	0	34%	614
		710	General Office Building	17 KSF	10.74	1.15	0.19	0.19	0.98	183	20	3	3	17	8%	19	0	1	1	1	2	0	0	0	0	0%	162
		820	Shopping Center	24.4 KSF	83.44	2.93	1.80	3.40	3.69	2,036	72	44	83	90	2%	41	1	1	2	2	20	1	0	1	1	34%	1,303
4	Retail/Office	710	General Office Building	50 KSF	10.74	1.15	0.19	0.19	0.98	537	57	9	9	49	8%	41	1	1	2	2	5	0	0	0	0	0%	491
5	Bent Grass Residential Filing 1	210	Single-Family Detached Housing	0 DU	9.44	0.19	0.56	0.62	0.37	0	0	0	0	0	0%	0	0	0	0	0	0	0	0	0	0	0%	0
	Bent Grass East Commercial Existing	---	Gas Station/Vet Clinic/Dental Clinic	------	---	---	---	---	---	0	0	0	0	0	5%	0	0	0	0	0	0	0	0	0	0	50%	0
		640	Animal Hospital/Veterinary Clinic	4.171 KSF	21.50	2.72	1.34	1.89	2.83	90	11	6	8	12	5%	5	1	0	0	1	1	0	0	0	0	0%	84
6	Bent Grass East Commercial Future	932	High-Turnover Sit-Down Restaurant	4.8 KSF	112.18	5.47	4.47	6.06	3.71	538	26	21	29	18	5%	27	1	1	1	1	5	0	0	0	0	43%	288
		930	Fast Casual Restaurant	5 KSF	315.17	1.39	0.68	7.77	6.36	1,576	7	3	39	32	5%	79	0	0	2	2	16	0	0	1	1	43%	844
		770	Business Park	10.8 KSF	76.88	1.29	0.23	0.48	1.36	830	14	2	5	15	5%	42	1	0	0	1	8	0	0	0	0	0%	780
		820	Shopping Center	42 KSF	79.40	2.55	1.57	3.27	3.54	3,329	107	66	137	149	5%	166	5	3	7	7	33	1	1	1	1	34%	2,066
7	Bent Grass Industrial (5301000017)	110	General Light Industrial	54 KSF	4.96	0.62	0.08	0.08	0.55	268	33	5	4	30	0%	0	0	0	0	0	0	0	0	0	0	0%	268
8	Bent Grass West	210	Single-Family Detached Housing	82 DU	9.44	0.19	0.56	0.62	0.37	774	15	46	51	30	0%	0	0	0	0	0	102	5	11	4	3	0%	672
9	Falcon Mini-Storage	151	Mini-Warehouse	3.74 Storage Units (100s)	—	—	—	—	—	0	0	0	0	0	0%	0	0	0	0	0	0	0	0	0	0	0%	0
10	Man Cave at Bentgrass	---	RV/Vehicle Storage	0.65 Occupied Spaces (100s)	20.00	2.28	1.37	1.98	2.81	13	1	1	1	2	0%	0	0	0	0	0	0	0	0	0	0	0%	13
		151	Mini-Warehouse	1.04 Storage Units (100s)	17.96	0.71	0.68	0.98	0.98	19	1	1	1	1	0%	0	0	0	0	0	0	0	0	0	0	0%	19
11	Mountain View Electric	—	Mountain View Electric	— —	—	—	—	—	—	0	0	0	0	0	0%	0	0	0	0	0	0	0	0	0	0	0%	0
		110	General Light Industrial	218 KSF	4.96	0.62	0.08	0.08	0.55	1,081	134	18	18	119	0%	0	0	0	0	0	0	0	0	0	0	0%	1,081
		820	Shopping Center	318 KSF	41.52	0.61	0.37	1.93	2.09	13,203	193	118	614	665	0%	0	0	0	0	0	132	3	2	6	6	20%	10,457
12	Owl Lane Redevelopment	210	Single-Family Detached Housing	140 DU	9.44	0.19	0.56	0.62	0.37	1,322	26	78	87	51	0%	0	0	0	0	0	174	9	20	8	5	0%	1,148
		220	Multifamily Housing Low-Rise	120 DU	7.32	0.11	0.35	0.35	0.21	878	13	43	42	25	0%	0	0	0	0	0	116	6	13	5	3	0%	762
13	Falcon School District 49	—	Administration Office/Bus Barn	— —	—	—	—	—	—	0	0	0	0	0	0%	0	0	0	0	0	0	0	0	0	0	0%	0
14	Latigo (5301002007)	140	Manufacturing	29.34 Acres	33.92	3.95	0.44	1.95	2.59	995	116	13	57	76	0%	0	0	0	0	0	0	0	0	0	0	0%	995
15	Courtyards at Woodmen Hills West	210	Single-Family Detached Housing	0 DU	9.44	0.19	0.56	0.62	0.37	0	0	0	0	0	0%	0	0	0	0	0	0	0	0	0	0	0%	0
		866	Pet Supply Superstore[5]	15 KSF	38.24	0.53	0.33	1.69	1.69	574	8	5	25	25		54	1	2	3	2	6	0	0	0	0	10%	463
		850	Supermarket	123 KSF	78.26	2.11	1.29	3.76	3.62	9,626	259	159	463	445		909	17	26	48	37	96	2	2	4	4	36%	5517
		944	Gasoline/Service Station	18 VFP[6]	168.56	6.20	5.96	6.94	6.94	3,034	112	107	125	125		286	5	8	15	12	30	1	0	1	1	56%	1196
		934	Fast-Food Restaurant with Drive-Through Window[7]	2.5 KSF	496.12	0.42	0.39	16.98	15.67	1,240	1	1	42	39		380	0	0	12	17	12	0	0	1	1	50%	424
		820	Shopping Center	5 KSF	55.14	0.77	0.47	2.36	2.51	276	4	2	12	13		26	1	0	1	1	3	0	0	0	0	34%	163
16	Falcon Marketplace	848	Tire Store	7.72 KSF	24.87	1.82	1.07	1.78	2.37	192	14	8	14	18	(8)	18	0	1	1	1	2	0	0	0	0	28%	124
		934	Fast-Food Restaurant with Drive-Through Window	3.5 KSF	496.12	23.16	22.26	16.98	15.67	1,736	81	78	59	55		532	26	12	17	24	17	0	0	1	1	50%	593
		934	Fast-Food Restaurant with Drive-Through Window[7]	2.5 KSF	496.12	0.42	0.39	16.98	15.67	1,240	1	1	42	39		380	0	0	12	17	12	0	0	1	1	50%	424
		610	Clinic	7.8 KSF	31.45	2.19	2.19	2.12	3.06	245	17	17	17	24		40	3	16	10	5	2	0	0	0	0	0%	203
		820	Shopping Center	8 KSF	55.14	0.77	0.47	2.36	2.51	441	6	4	19	20		42	1	1	2	2	4	0	0	0	0	34%	261
		937	Coffee/Donut Shop With Drive-Through Window	1.3 KSF	818.58	51.30	49.28	21.40	21.40	1,064	67	64	28	28		326	21	10	9	12	11	0	0	0	0	89%	80
	TOTAL									**53,126**	**1,707**	**1,326**	**2,370**	**2,448**		**3,432**	**86**	**83**	**146**	**148**	**1,804**	**146**	**146**	**67**	**65**		**35,336**

Notes:
(1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)
(2) Source: "Trip Generation Handbook - An ITE Proposed Recommended Practice, Third Edition" by ITE
(3) DU = dwelling unit
(4) KSF = thousand square feet
(5) Daily and morning peak-hour trip generation rates for Pet Supply Superstore are estimates by LSC
(6) VFP = vehicle fueling position
(7) The AM peak-hour trip generation rates have been reduced by LSC as the proposed fast-food restaurant does not serve breakfast
(8) Based on the NCHRP 684 Internal Trip Capture Estimate Tool

Source: LSC Transportation Consultants, Inc. July 2020

Appendix Table 2
Bent Grass Residential Fil No. 2
Buildout Internal Trip Estimate

Land Use	Raw ITE Trip Generation (Individual Driveway Trips)						Percent Internal Trips					Total Internal Trips				
	Daily	AM Peak Hour		PM Peak Hour			Daily	AM Peak Hour		PM Peak Hour		Daily	AM Peak Hour		PM Peak Hour	
		In	Out	In	Out			In	Out	In	Out		In	Out	In	Out
Single-Family Detached Housing	5,977	117	352	394	231											
Multifamily Housing (Low-Rise)	878	13	43	42	25											
						School	7%	30%	23%	5%	4%	473	39	91	22	10
						Other	6%	5%	3%	4%	7%	430	7	11	19	18
	6,855	**130**	**395**	**436**	**256**	**Total**	13%	35%	26%	9%	11%	**903**	**46**	**102**	**41**	**28**
Elementary School	945	181	154	41	44		50%	50%	25%	25%	50%	473	91	39	10	22
Retail/Office	42,950	1,111	739	1,812	1,920		1%	1%	1%	1%	1%	430	11	7	18	19
Industrial/Manufacturing	2,376	285	38	81	228		0%	0%	0%	0%	0%	0	0	0	0	0
TOTAL Non-Residential	**46,271**	**1,577**	**931**	**1,934**	**2,192**							**903**	**102**	**46**	**28**	**41**
TOTAL	**53,126**	**1,707**	**1,326**	**2,370**	**2,448**							**1,806**	**148**	**148**	**69**	**69**

Notes:

Figures

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Approximate Scale
Scale: 1"= 1,200'

Figure 1

Vicinity Map

Bent Grass West (LSC #204420)

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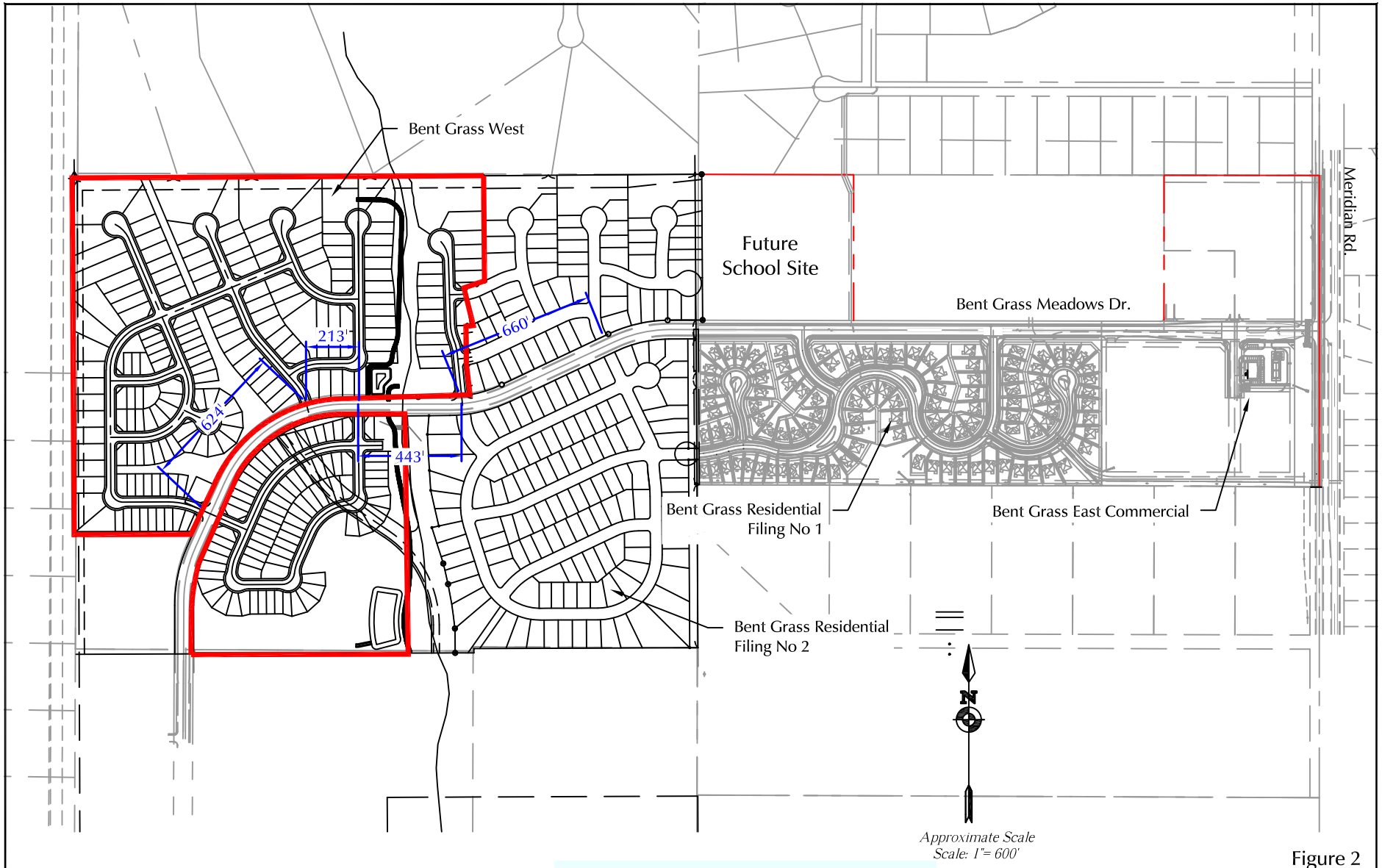

Label road names - Lemon Grass, Berwyn, Lynch, Kittrick, Rowena, Hanzlee, Sea Oats, Avena...

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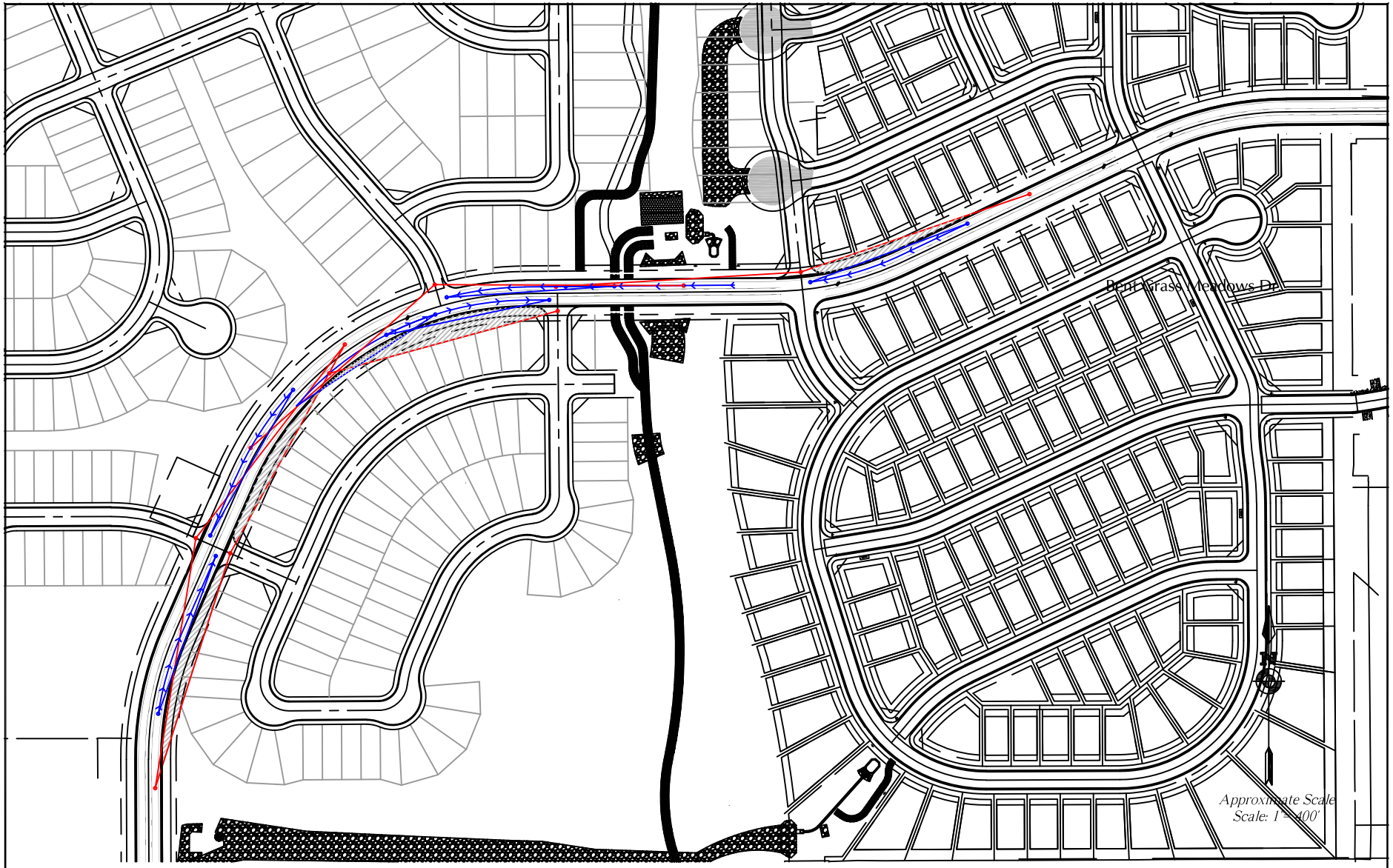
Figure 2

Site Plan

Bent Grass West (LSC #204420)



LEGEND:

= ECM Required Intersection Sight Distance (445' based on design speed of 40mph from Table 2-21)

= ECM Required Stopping Sight Distance Travel Path (305' based on design speed of 40mph from Table 2-17)

= Stopping Sight Distance Sight Line

= Area must be kept clear of obstructions to intersection distance line of sight.

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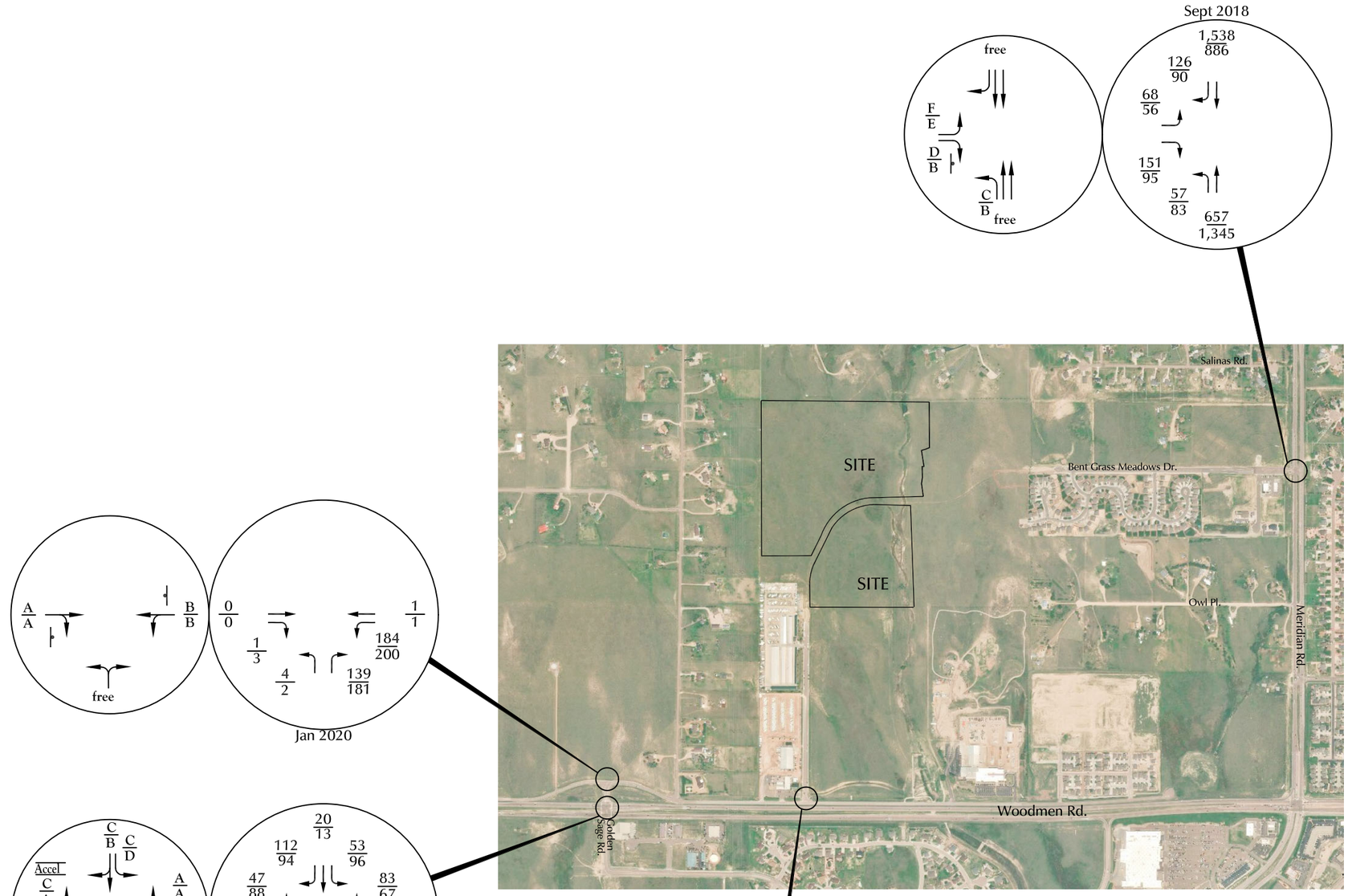
Figure 3

Sight Distance

Bent Grass West (LSC #204420)



LEGEND:

= Stop Sign

= Traffic Signal

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

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

$\frac{C}{C}$ = $\frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$

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

* Sufficient width for separate SB left- and right-turn lanes

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Figure 4

Existing Traffic, Lane Geometry, Traffic Control and Level of Service

Bent Grass West (LSC #204420)

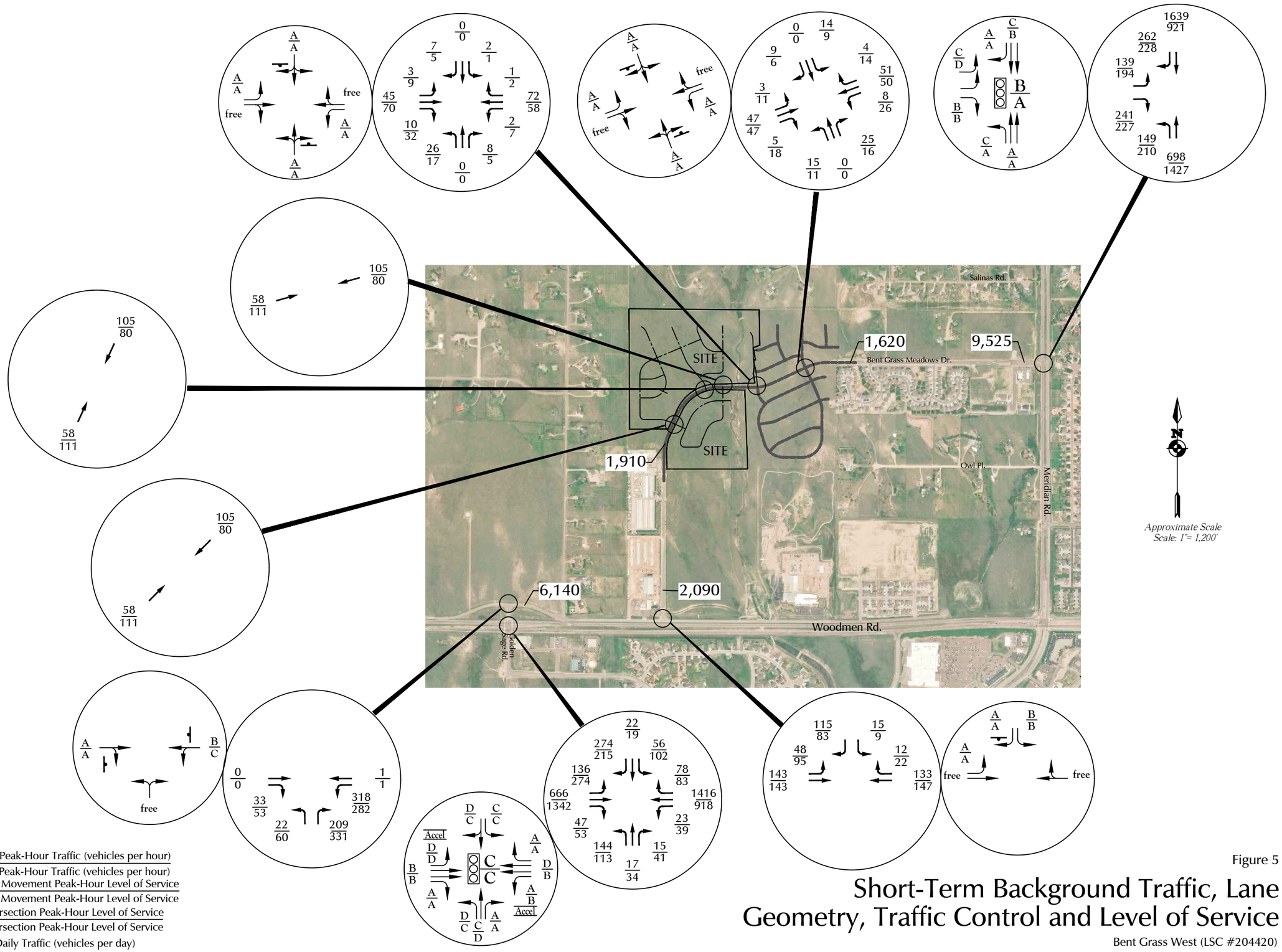
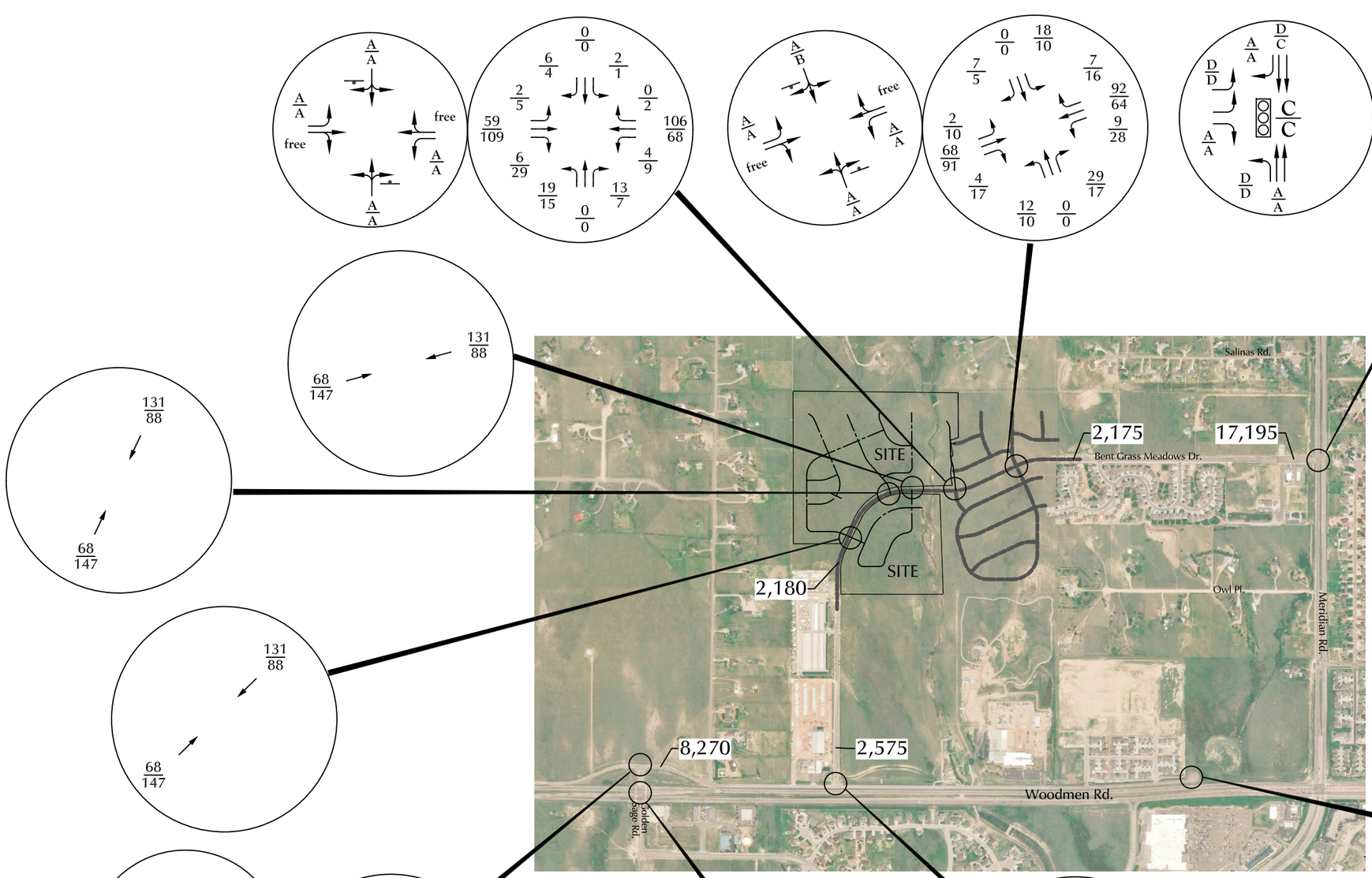


Figure 5

Short-Term Background Traffic, Lane Geometry, Traffic Control and Level of Service

Bent Grass West (LSC #204420)



N

Approximate Scale
Scale: 1"= 1,200'

LEGEND:

= Stop Sign

= Traffic Signal = Modern Roundabout

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

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

$\frac{C}{C}$ = $\frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$

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

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Figure 6

2040 Background Traffic, Lane Geometry, Traffic Control and Level of Service

Bent Grass West (LSC #204420)

N

Approximate Scale
Scale: 1"= 1,200'

LEGEND:

XX% = Percent Directional Distribution

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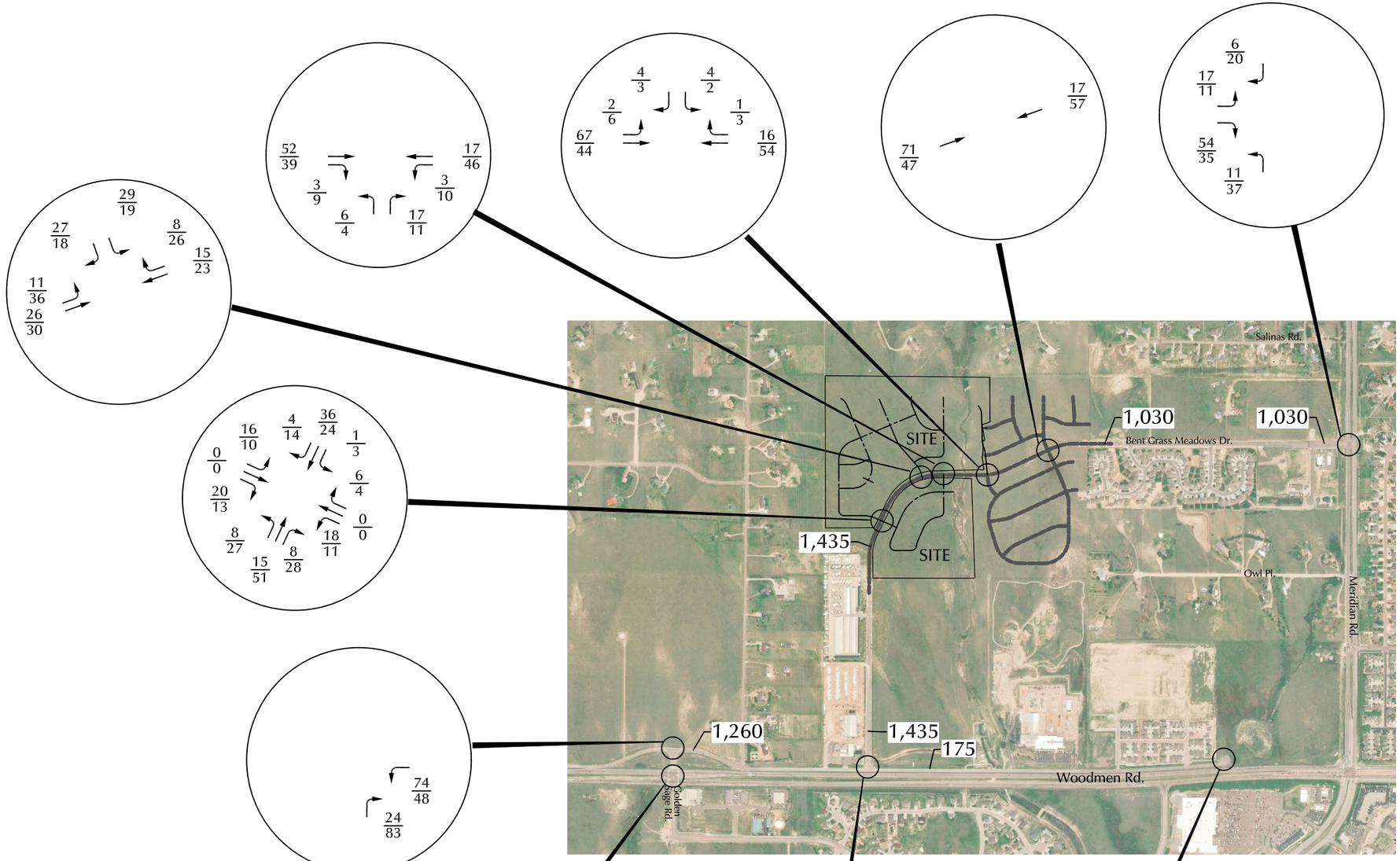
Figure 7

Directional Distribution of Site-Generated Traffic

Bent Grass West (LSC #204420)



LEGEND:

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

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

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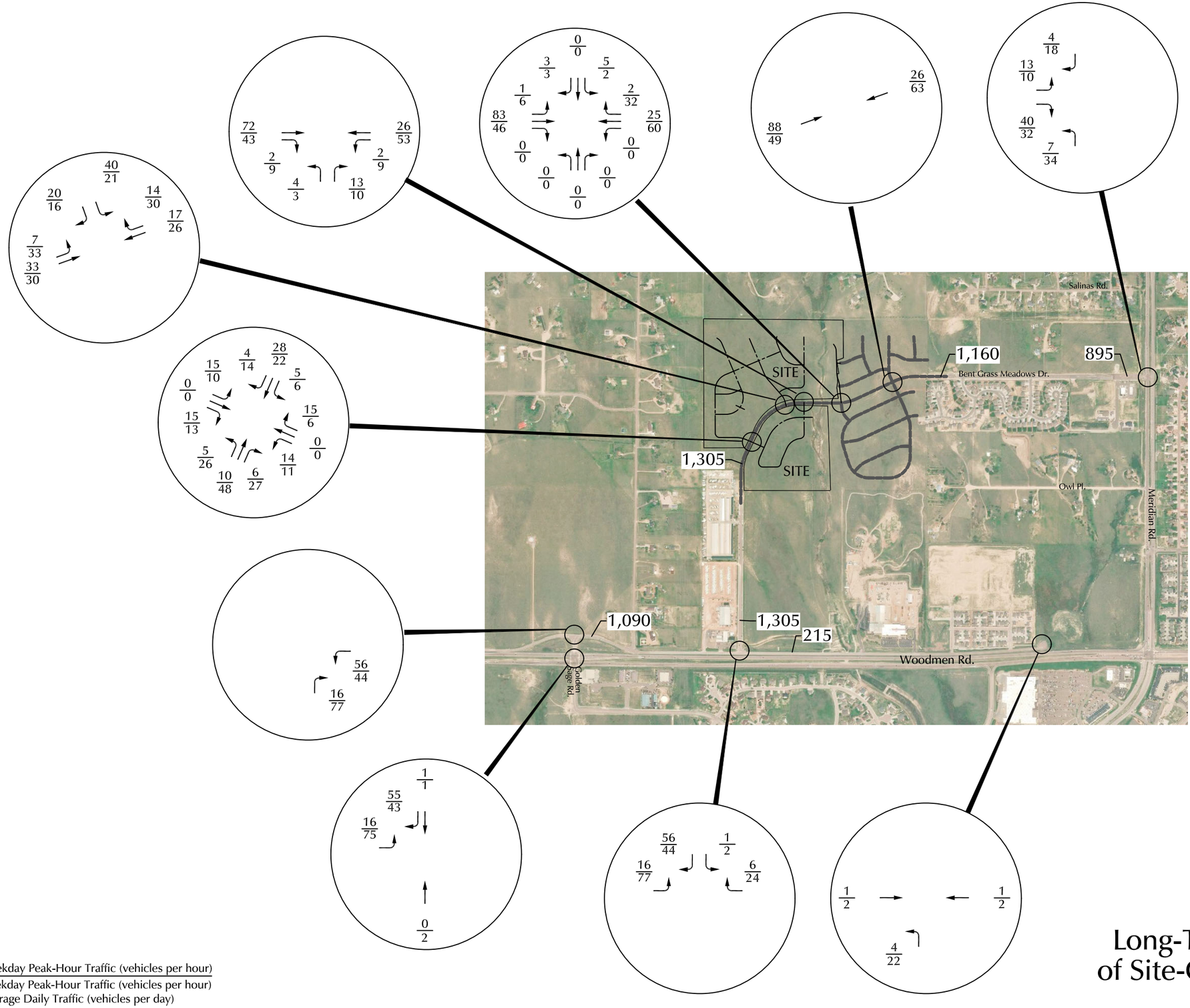
Figure 8

Short-Term Assignment of Site-Generated Traffic

Bent Grass West (LSC #204420)



LEGEND:

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

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

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Figure 9

Long-Term Assignment of Site-Generated Traffic

Bent Grass West (LSC #204420)

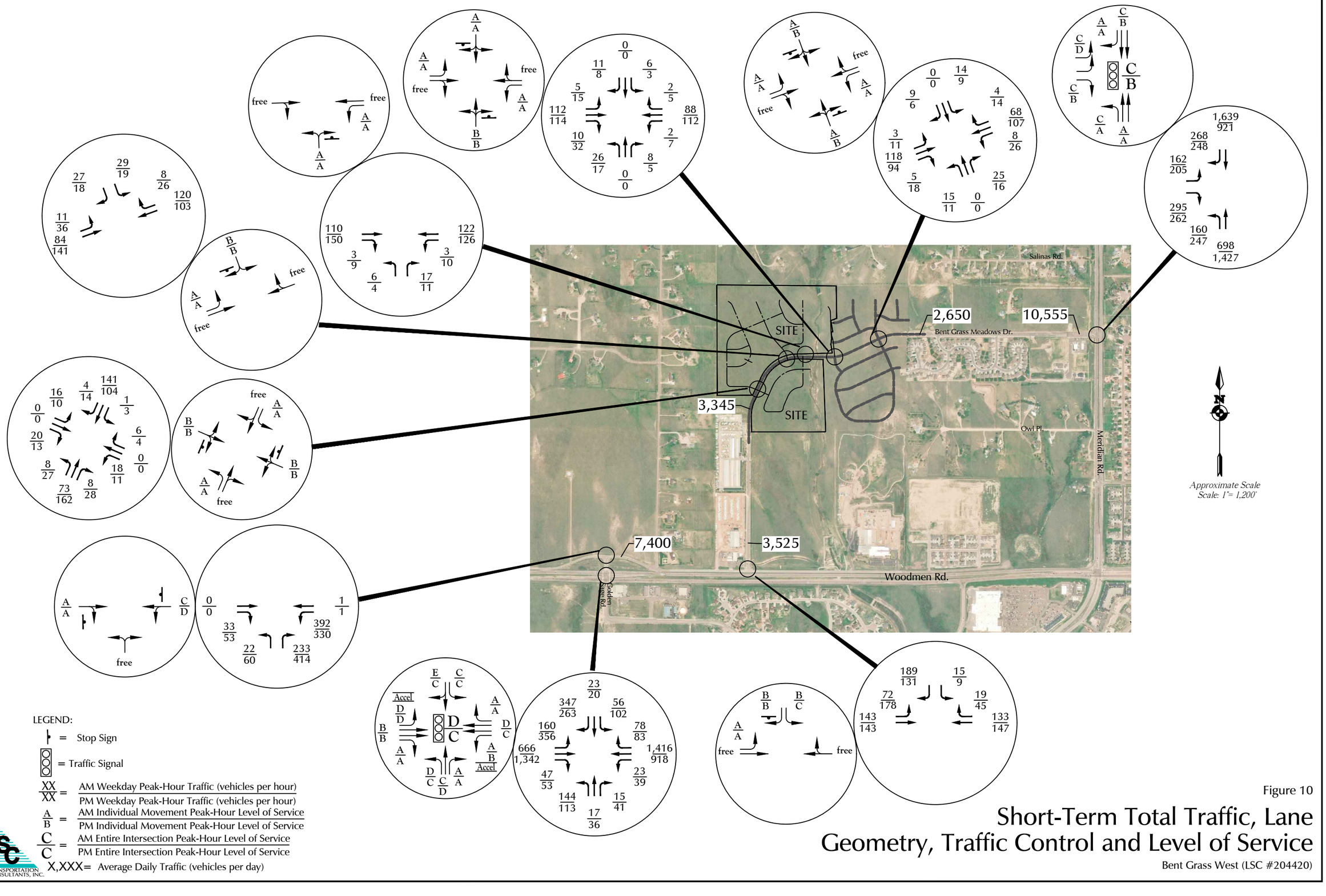
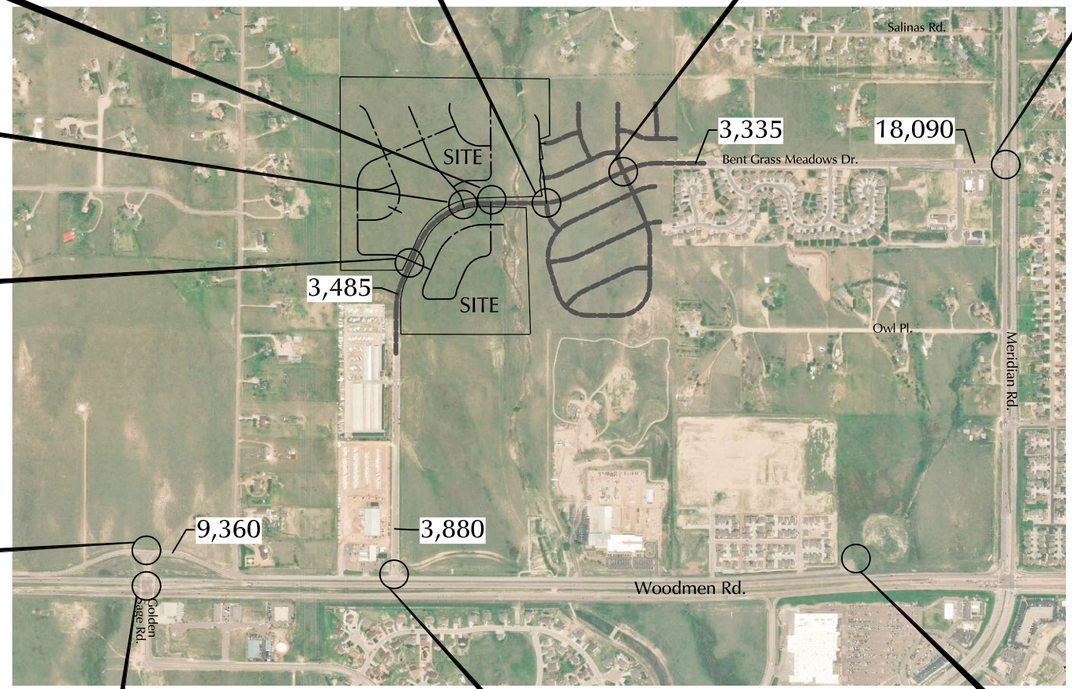
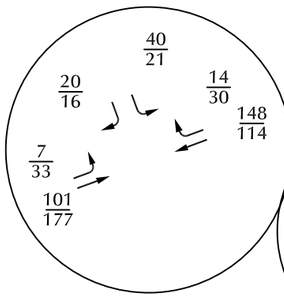


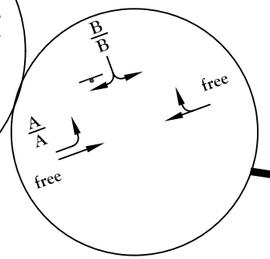
Figure 10

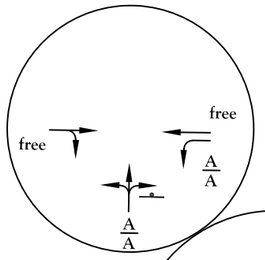
Short-Term Total Traffic, Lane Geometry, Traffic Control and Level of Service

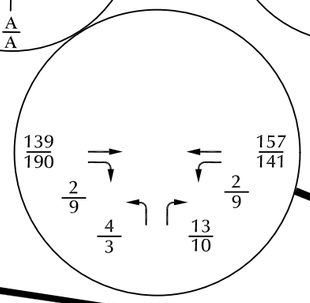
Bent Grass West (LSC #204420)

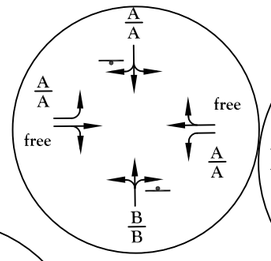


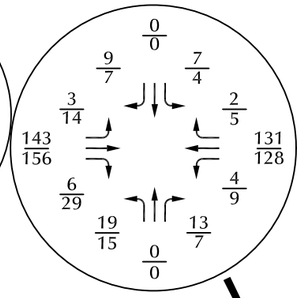


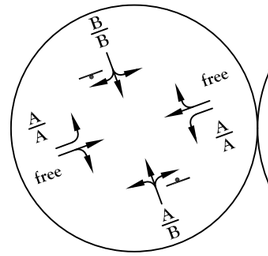


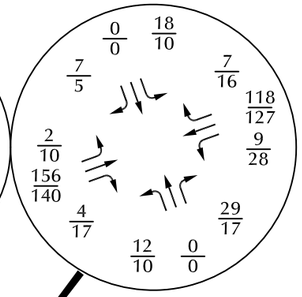


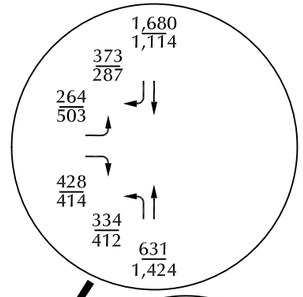


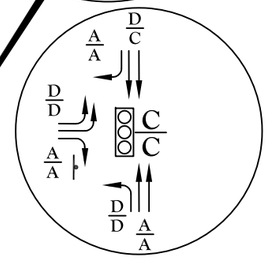


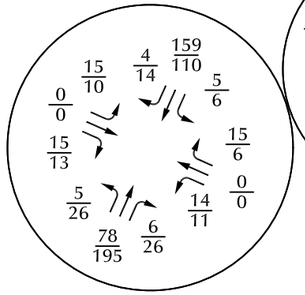


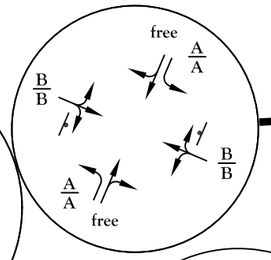


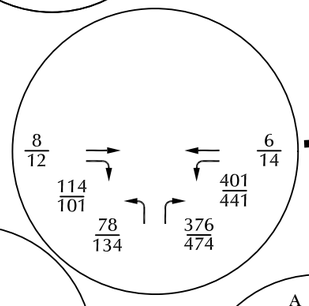


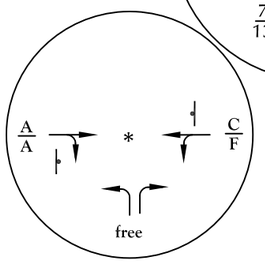


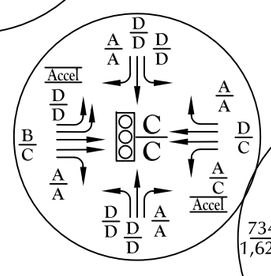


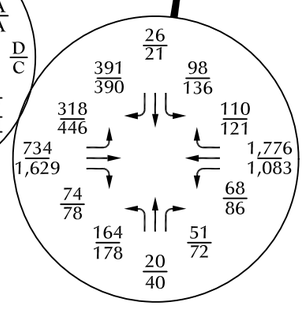


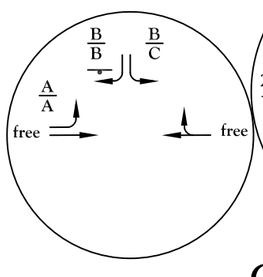


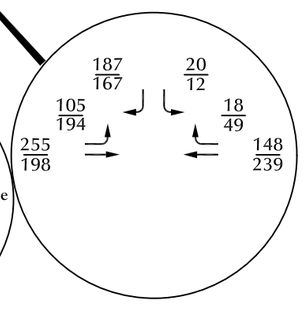


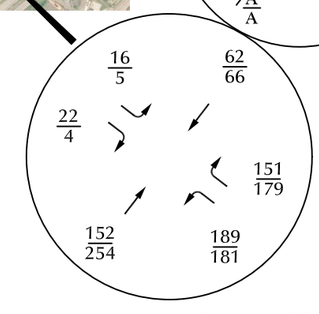


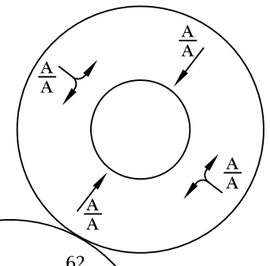












Approximate Scale
Scale: 1"= 1,200'

* See Table 3 for analysis of additional traffic control options

LEGEND:

= Stop Sign

= Traffic Signal

= Modern Roundabout

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

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

$\frac{C}{C}$ = $\frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$

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

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Figure 11

Year 2040 Total Traffic, Lane Geometry, Traffic Control and Level of Service

Bent Grass West (LSC #204420)

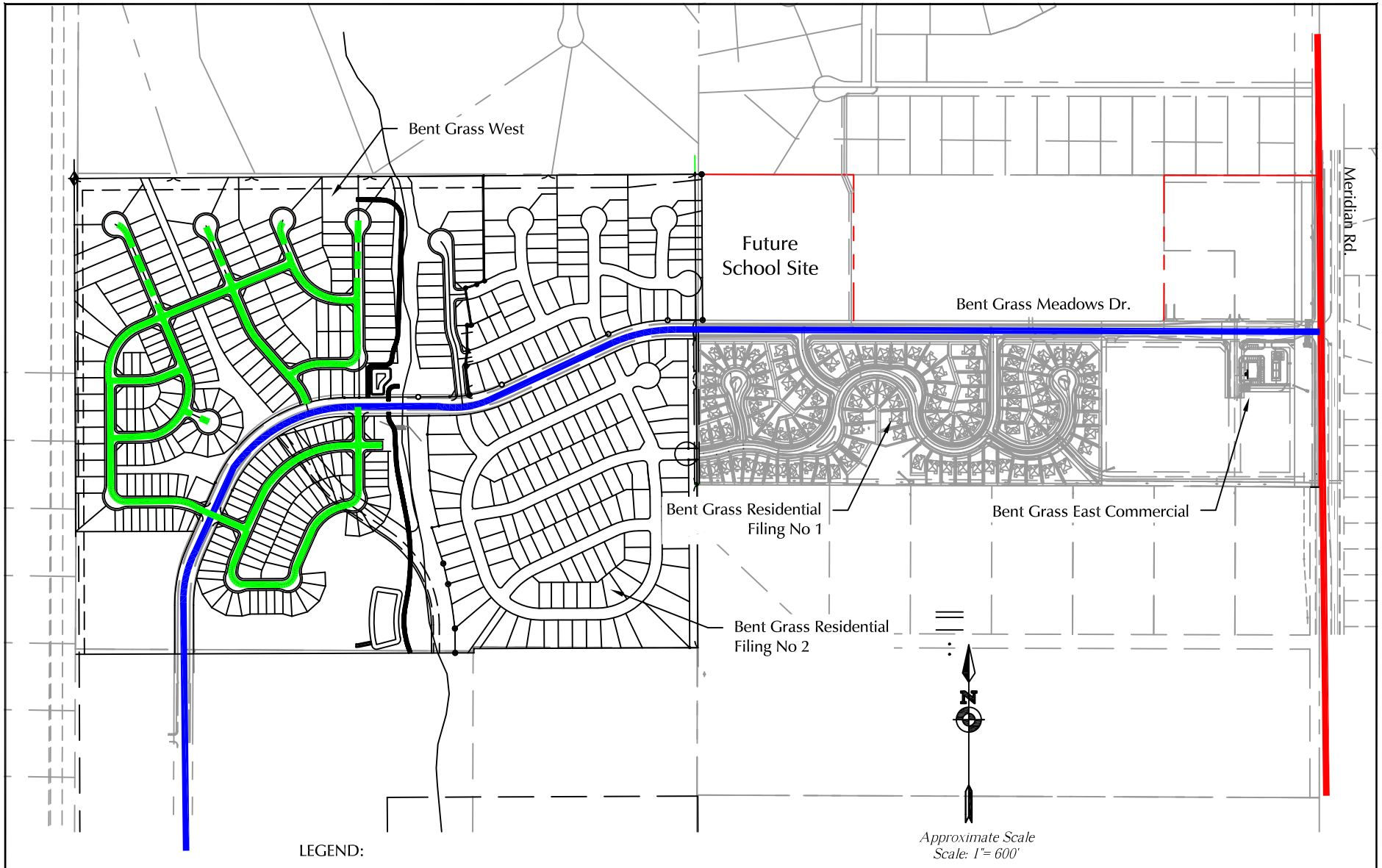

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Figure 12

Recommended Classifcations

Bent Grass West (LSC #204420)

Traffic Counts

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545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Meridian Rd - Bent Grass Meadows Dr AM 9-18
Site Code : 154561
Start Date : 9/12/2018
Page No : 1

Groups Printed- Unshifted

	Meridian Rd Southbound				Westbound				Meridian Rd Northbound				Bent Grass Meadows Dr Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
06:30	0	286	26	0	0	0	0	0	10	71	0	0	7	0	32	0	432
06:45	0	319	36	1	0	0	0	0	15	137	0	0	10	0	38	0	556
Total	0	605	62	1	0	0	0	0	25	208	0	0	17	0	70	0	988
07:00	0	426	24	0	0	0	0	0	9	121	0	0	13	0	37	0	630
07:15	0	443	29	0	0	0	0	0	13	195	0	0	16	0	41	0	737
07:30	0	372	33	0	0	0	0	0	19	179	0	0	17	0	30	0	650
07:45	0	297	40	0	0	0	0	0	16	162	0	0	22	0	43	0	580
Total	0	1538	126	0	0	0	0	0	57	657	0	0	68	0	151	0	2597
08:00	0	256	19	0	0	0	0	0	21	154	0	0	17	0	21	0	488
08:15	0	284	25	0	0	0	0	0	10	136	0	0	21	0	27	0	503
Grand Total	0	2683	232	1	0	0	0	0	113	1155	0	0	123	0	269	0	4576
Apprch %	0	92	8	0	0	0	0	0	8.9	91.1	0	0	31.4	0	68.6	0	
Total %	0	58.6	5.1	0	0	0	0	0	2.5	25.2	0	0	2.7	0	5.9	0	

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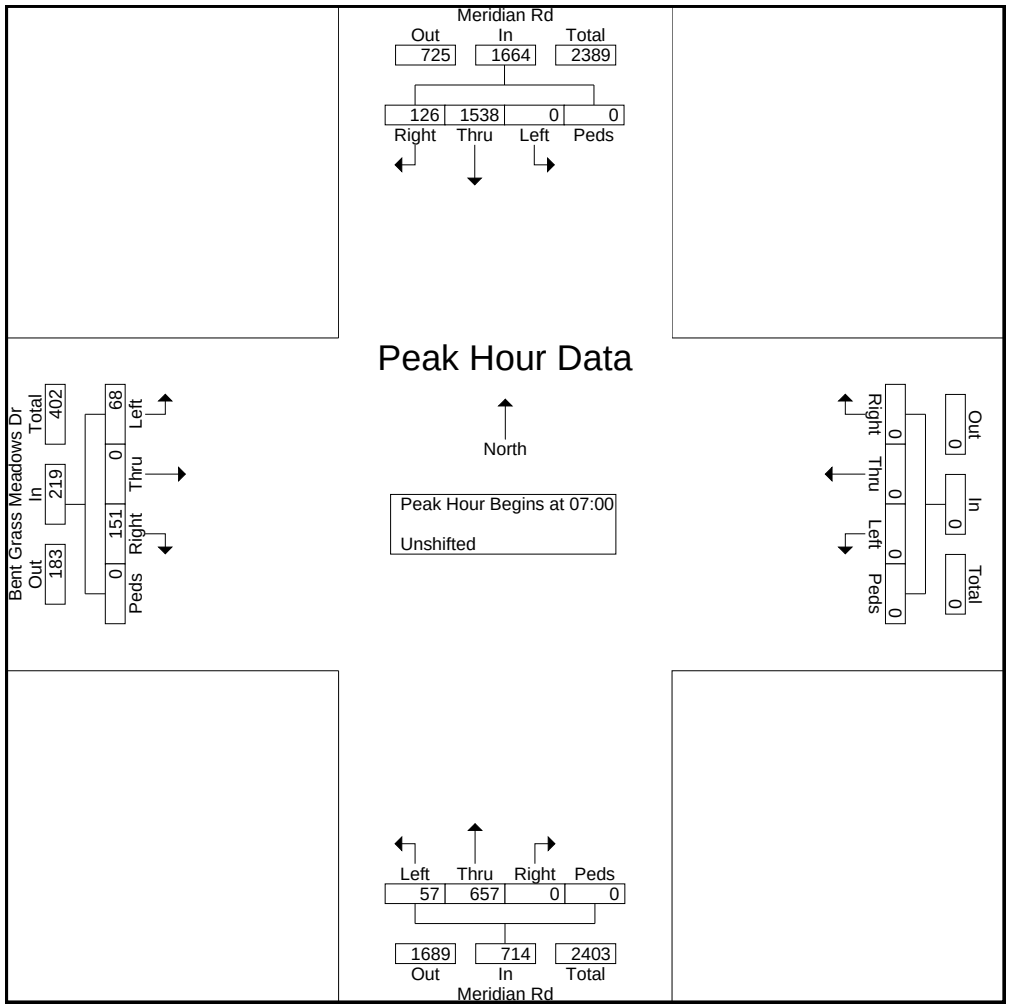
File Name : Meridian Rd - Bent Grass Meadows Dr AM 9-18
Site Code : 154561
Start Date : 9/12/2018
Page No : 2

	Meridian Rd Southbound					Westbound					Meridian Rd Northbound					Bent Grass Meadows Dr Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	426	24	0	450	0	0	0	0	0	9	121	0	0	130	13	0	37	0	50	630
07:15	0	**443**	29	0	**472**	0	0	0	0	0	13	**195**	0	0	**208**	16	0	41	0	57	**737**
07:30	0	372	33	0	405	0	0	0	0	0	**19**	179	0	0	198	17	0	30	0	47	650
07:45	0	297	**40**	0	337	0	0	0	0	0	16	162	0	0	178	**22**	0	**43**	0	**65**	580
Total Volume	0	1538	126	0	1664	0	0	0	0	0	57	657	0	0	714	68	0	151	0	219	2597
% App. Total	0	92.4	7.6	0		0	0	0	0		8	92	0	0		31.1	0	68.9	0		
PHF	.000	.868	.788	.000	.881	.000	.000	.000	.000	.000	.750	.842	.000	.000	.858	.773	.000	.878	.000	.842	.881



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File Name : Meridian Rd - Bent Grass Meadows PM 9-18
Site Code : 154561
Start Date : 9/12/2018
Page No : 1

Groups Printed- Unshifted

	Meridian Rd Southbound				Westbound				Meridian Rd Northbound				Bent Grass Meadows Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
16:15	0	192	21	0	0	0	0	0	20	295	0	0	15	0	25	0	568
16:30	0	213	19	0	0	0	0	0	22	344	0	0	12	0	15	0	625
16:45	0	197	19	0	0	0	0	0	19	332	0	0	20	0	23	0	610
Total	0	602	59	0	0	0	0	0	61	971	0	0	47	0	63	0	1803
17:00	0	223	27	0	0	0	0	0	16	347	0	0	11	0	25	0	649
17:15	0	214	19	0	0	0	0	0	25	348	0	0	16	0	28	0	650
17:30	0	252	25	0	0	0	0	0	23	318	0	0	9	0	19	0	646
17:45	0	179	27	0	0	0	0	0	19	328	0	0	15	0	22	0	590
Total	0	868	98	0	0	0	0	0	83	1341	0	0	51	0	94	0	2535
18:00	0	169	25	0	0	0	0	0	18	321	0	0	11	0	28	0	572
Grand Total	0	1639	182	0	0	0	0	0	162	2633	0	0	109	0	185	0	4910
Apprch %	0	90	10	0	0	0	0	0	5.8	94.2	0	0	37.1	0	62.9	0	
Total %	0	33.4	3.7	0	0	0	0	0	3.3	53.6	0	0	2.2	0	3.8	0	

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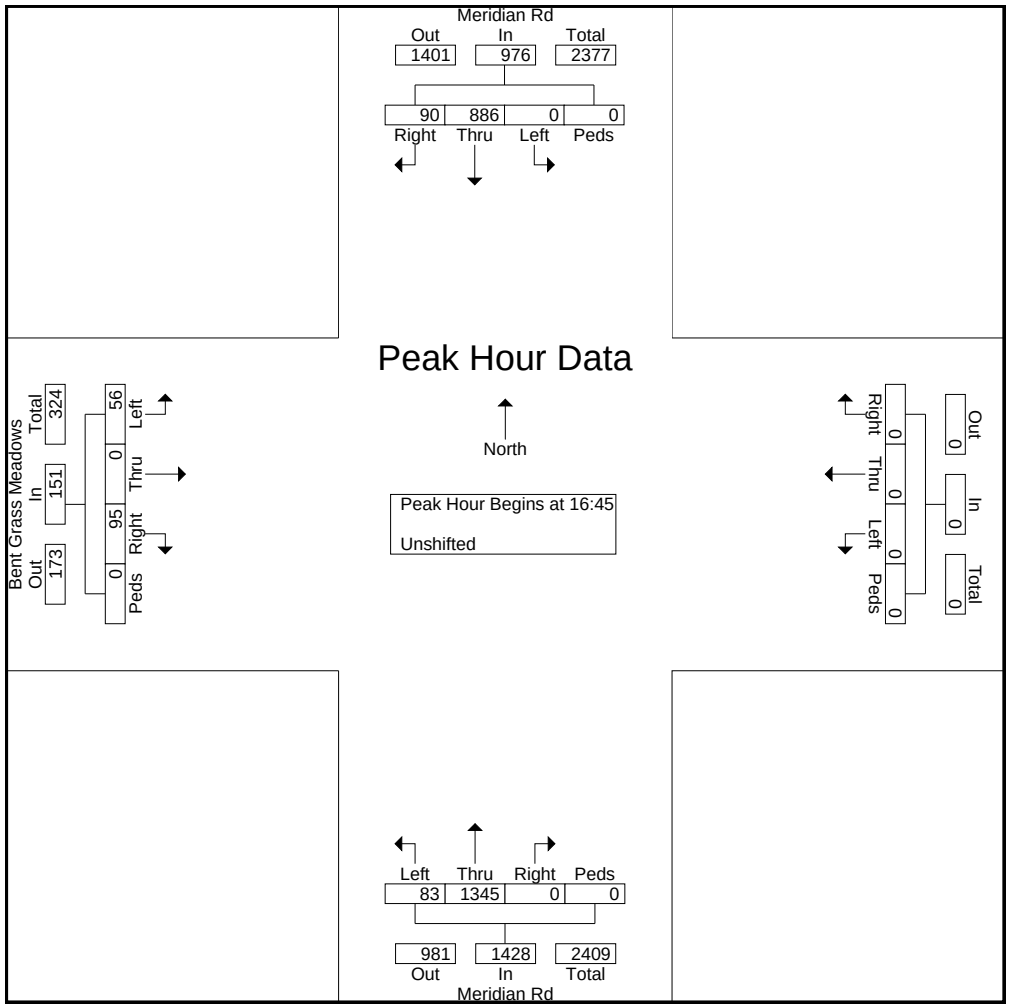
File Name : Meridian Rd - Bent Grass Meadows PM 9-18
Site Code : 154561
Start Date : 9/12/2018

	Meridian Rd Southbound					Westbound					Meridian Rd Northbound					Bent Grass Meadows Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:15 to 18:00 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	197	19	0	216	0	0	0	0	0	19	332	0	0	351	**20**	0	23	0	43	610
17:00	0	223	**27**	0	250	0	0	0	0	0	16	347	0	0	363	11	0	25	0	36	649
17:15	0	214	19	0	233	0	0	0	0	0	**25**	**348**	0	0	**373**	16	0	**28**	0	**44**	**650**
17:30	0	**252**	25	0	**277**	0	0	0	0	0	23	318	0	0	341	9	0	19	0	28	646
Total Volume	0	886	90	0	976	0	0	0	0	0	83	1345	0	0	1428	56	0	95	0	151	2555
% App. Total	0	90.8	9.2	0		0	0	0	0		5.8	94.2	0	0		37.1	0	62.9	0		
PHF	.000	.879	.833	.000	.881	.000	.000	.000	.000	.000	.830	.966	.000	.000	.957	.700	.000	.848	.000	.858	.983



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719-633-2868

File Name
Site Code
Start Date
Page #

Provide date

Groups Printed- Unshifted

	Bent Grass Meadows Southbound					Woodmen Frontage Rd Westbound					Northbound					Woodmen Frontage Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
06:30 AM	1	0	20	0	21	0	14	0	0	14	0	0	0	0	0	0	37	0	0	37	72
06:45 AM	0	0	6	0	6	0	15	0	0	15	0	0	0	0	0	1	49	0	0	50	71
Total	1	0	26	0	27	0	29	0	0	29	0	0	0	0	0	1	86	0	0	87	143
07:00 AM	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	14	0	0	14	38
07:15 AM	0	0	2	0	2	0	33	0	0	33	0	0	0	0	0	4	16	0	0	20	55
07:30 AM	0	0	3	0	3	0	24	0	0	24	0	0	0	0	0	2	6	0	0	8	35
07:45 AM	0	0	2	0	2	0	23	0	0	23	0	0	0	0	0	0	8	0	0	8	33
Total	0	0	7	0	7	0	104	0	0	104	0	0	0	0	0	6	44	0	0	50	161
08:00 AM	0	0	1	0	1	0	12	0	0	12	0	0	0	0	0	2	9	0	0	11	24
08:15 AM	0	0	13	0	13	0	14	0	0	14	0	0	0	0	0	0	11	0	0	11	38

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File Name
Site Code
Start Date
Page #

Groups Printed- Unshifted

	Bent Grass Meadows Southbound					Woodmen Frontage Rd Westbound					Northbound					Woodmen Frontage Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
04:00 PM	0	0	2	0	2	0	13	0	0	13	0	0	0	0	0	3	14	0	0	17	32
04:15 PM	0	0	4	0	4	0	11	0	0	11	0	0	0	0	0	1	21	0	0	22	37
04:30 PM	0	0	20	0	20	0	10	0	0	10	0	0	0	0	0	3	16	0	0	19	49
04:45 PM	0	0	12	0	12	0	10	1	0	11	0	0	0	0	0	2	24	0	0	26	49
Total	0	0	38	0	38	0	44	1	0	45	0	0	0	0	0	9	75	0	0	84	167
05:00 PM	0	0	7	0	7	0	10	0	0	10	0	0	0	0	0	0	18	0	0	18	35
05:15 PM	0	0	3	0	3	0	17	0	0	17	0	0	0	0	0	3	17	0	0	20	40
05:30 PM	0	0	2	0	2	0	83	1	0	84	0	0	0	0	0	3	17	0	0	20	106
05:45 PM	0	0	3	0	3	0	25	0	0	25	0	0	0	0	0	1	16	0	0	17	45
Total	0	0	15	0	15	0	135	1	0	136	0	0	0	0	0	7	68	0	0	75	226

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545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : Golden Sage Rd - Woodmen Rd AM 1-20
Site Code : 00194460
Start Date : 1/21/2020
Page No : 1

Groups Printed- Unshifted

	Golden Sage Rd Southbound					Woodmen Rd Westbound					Golden Sage Rd Northbound					Woodmen Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
06:30 AM	5	1	25	0	31	0	195	48	1	244	20	2	0	0	22	10	107	0	0	117	414
06:45 AM	12	5	28	0	45	4	355	30	0	389	24	4	0	0	28	14	151	9	0	174	636
Total	17	6	53	0	76	4	550	78	1	633	44	6	0	0	50	24	258	9	0	291	1050
07:00 AM	17	7	29	0	53	2	340	25	0	367	42	2	1	0	45	13	158	13	0	184	649
07:15 AM	8	4	30	0	42	3	424	16	0	443	44	3	1	0	48	12	171	11	0	194	727
07:30 AM	16	4	25	1	46	6	356	12	0	374	29	4	1	0	34	8	181	11	0	200	654
07:45 AM	7	1	7	0	15	2	293	17	0	312	13	5	0	0	18	16	209	20	0	245	590
Total	48	16	91	1	156	13	1413	70	0	1496	128	14	3	0	145	49	719	55	0	823	2620
08:00 AM	9	1	14	0	24	3	239	12	1	255	18	0	0	0	18	16	165	13	1	195	492
08:15 AM	13	2	12	0	27	2	267	19	1	289	18	3	2	0	23	28	142	6	1	177	516
Grand Total	87	25	170	1	283	22	2469	179	3	2673	208	23	5	0	236	117	1284	83	2	1486	4678
Apprch %	30.7	8.8	60.1	0.4		0.8	92.4	6.7	0.1		88.1	9.7	2.1	0		7.9	86.4	5.6	0.1		
Total %	1.9	0.5	3.6	0	6	0.5	52.8	3.8	0.1	57.1	4.4	0.5	0.1	0	5	2.5	27.4	1.8	0	31.8	

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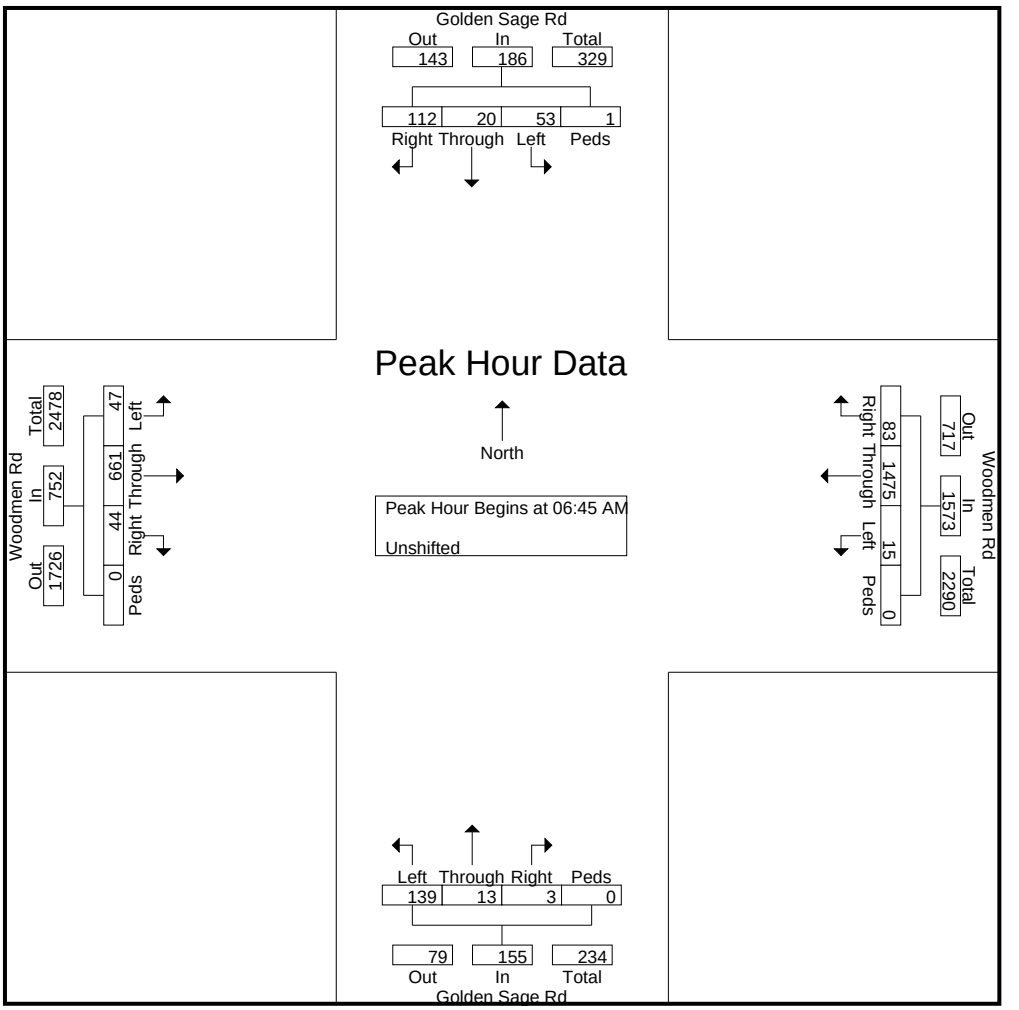
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Golden Sage Rd - Woodmen Rd AM 1-20
Site Code : 00194460
Start Date : 1/21/2020
Page No : 2

	Golden Sage Rd Southbound					Woodmen Rd Westbound					Golden Sage Rd Northbound					Woodmen Rd Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	Int. Total
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 6:45:00 AM																					
6:45:00 AM	12	5	28	0	45	4	355	**30**	0	389	24	**4**	0	0	28	**14**	151	9	0	174	636
7:00:00 AM	**17**	**7**	29	0	**53**	2	340	25	0	367	42	2	**1**	0	45	13	158	**13**	0	184	649
7:15:00 AM	8	4	**30**	0	42	3	**424**	16	0	**443**	**44**	3	1	0	**48**	12	171	11	0	194	**727**
7:30:00 AM	16	4	25	**1**	46	**6**	356	12	0	374	29	4	1	0	34	8	**181**	11	0	**200**	654
Total Volume	53	20	112	1	186	15	1475	83	0	1573	139	13	3	0	155	47	661	44	0	752	2666
% App. Total	28.5	10.8	60.2	0.5		1	93.8	5.3	0		89.7	8.4	1.9	0		6.2	87.9	5.9	0		
PHF	.779	.714	.933	.250	.877	.625	.870	.692	.000	.888	.790	.813	.750	.000	.807	.839	.913	.846	.000	.940	.917



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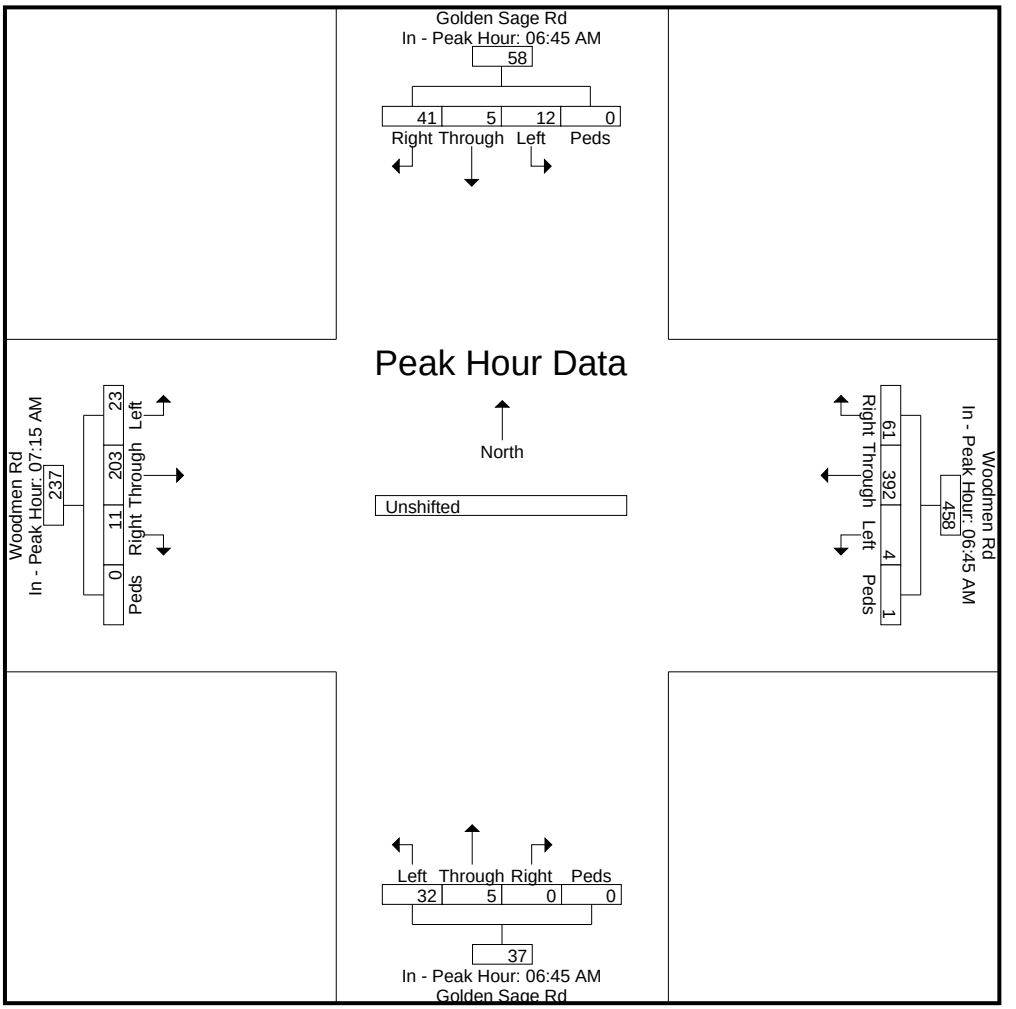
719-633-2868

File Name : Golden Sage Rd - Woodmen Rd AM 1-20
Site Code : 00194460
Start Date : 1/21/2020

	Golden Sage Rd Southbound					Woodmen Rd Westbound					Golden Sage Rd Northbound					Woodmen Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	6:45:00 AM					6:45:00 AM					6:45:00 AM					7:15:00 AM					
+0 mins.	12	5	28	0	45	4	355	**30**	0	389	24	**4**	0	0	28	12	171	11	0	194	
+5 mins.	**17**	**7**	29	0	**53**	2	340	25	0	367	42	2	**1**	0	45	8	181	11	0	200	
+10 mins.	8	4	**30**	0	42	3	**424**	16	0	**443**	**44**	3	1	0	**48**	**16**	**209**	**20**	0	**245**	
+15 mins.	16	4	25	**1**	46	**6**	356	12	0	374	29	4	1	0	34	16	165	13	**1**	195	
Total Volume	53	20	112	1	186	15	1475	83	0	1573	139	13	3	0	155	52	726	55	1	834	
% App. Total	28.5	10.8	60.2	0.5		1	93.8	5.3	0		89.7	8.4	1.9	0		6.2	87.1	6.6	0.1		
PHF	.779	.714	.933	.250	.877	.625	.870	.692	.000	.888	.790	.813	.750	.000	.807	.813	.868	.688	.250	.851	



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545 E Pikes Peak Ave, Suite 210
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719-633-2868

File Name : Golden Sage Rd - Woodmen Rd PM 1-20
Site Code : 00194460
Start Date : 1/21/2020
Page No : 1

Groups Printed- Unshifted

	Golden Sage Rd Southbound					Woodmen Rd Westbound					Golden Sage Rd Northbound					Woodmen Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
04:00 PM	17	2	26	0	45	7	205	16	0	228	23	9	5	0	37	21	272	23	2	318	628
04:15 PM	7	1	22	0	30	5	241	26	0	272	26	5	6	0	37	28	325	12	1	366	705
04:30 PM	21	4	24	0	49	1	241	20	1	263	26	8	4	0	38	24	313	3	1	341	691
04:45 PM	29	3	19	2	53	1	202	24	0	227	16	4	0	0	20	18	341	10	1	370	670
Total	74	10	91	2	177	14	889	86	1	990	91	26	15	0	132	91	1251	48	5	1395	2694
05:00 PM	18	1	27	0	46	2	254	11	2	269	27	7	1	0	35	19	328	11	0	358	708
05:15 PM	7	2	6	0	15	8	192	9	1	210	32	10	12	0	54	23	340	17	0	380	659
05:30 PM	42	7	42	1	92	7	227	23	0	257	30	7	10	0	47	28	336	6	0	370	766
05:45 PM	21	1	18	0	40	1	180	12	1	194	19	5	5	0	29	18	326	9	0	353	616
Total	88	11	93	1	193	18	853	55	4	930	108	29	28	0	165	88	1330	43	0	1461	2749
Grand Total	162	21	184	3	370	32	1742	141	5	1920	199	55	43	0	297	179	2581	91	5	2856	5443
Apprch %	43.8	5.7	49.7	0.8		1.7	90.7	7.3	0.3		67	18.5	14.5	0		6.3	90.4	3.2	0.2		
Total %	3	0.4	3.4	0.1	6.8	0.6	32	2.6	0.1	35.3	3.7	1	0.8	0	5.5	3.3	47.4	1.7	0.1	52.5	

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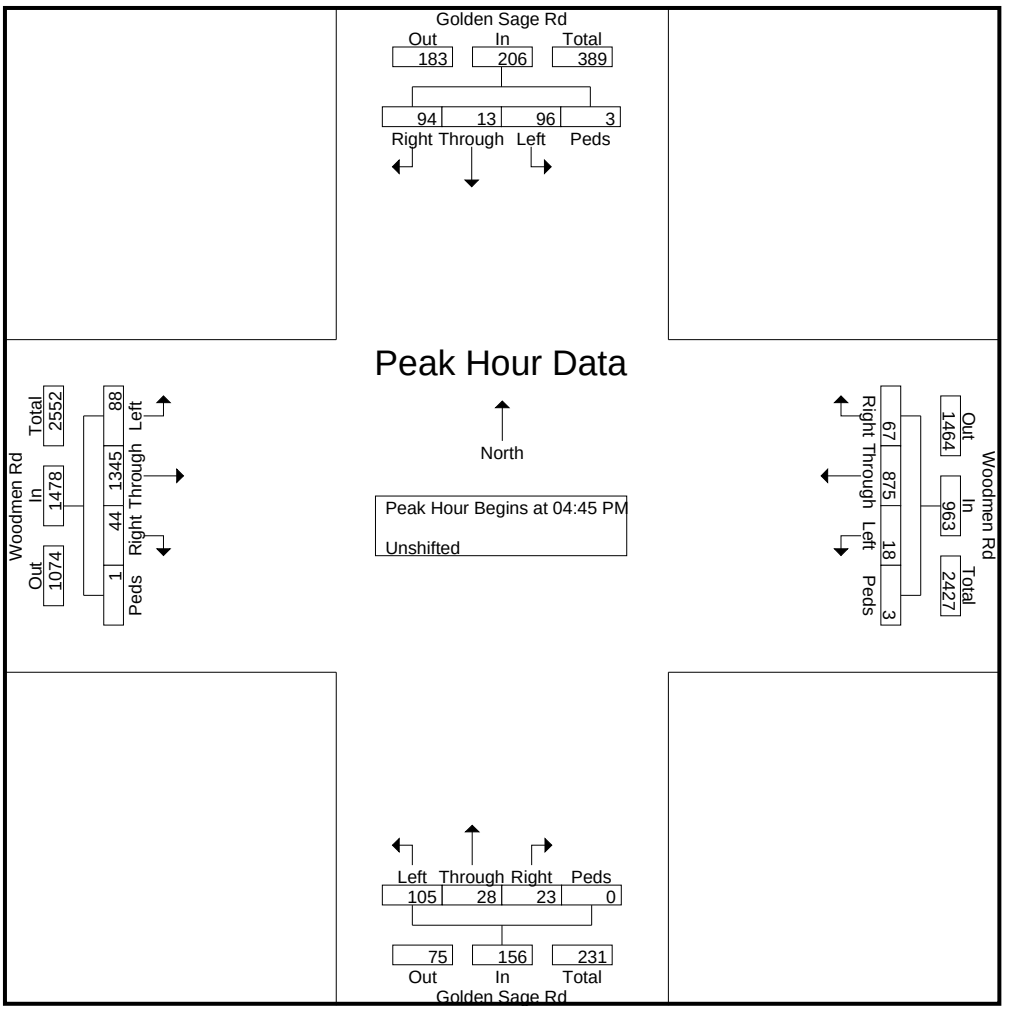
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Golden Sage Rd - Woodmen Rd PM 1-20
Site Code : 00194460
Start Date : 1/21/2020
Page No : 2

	Golden Sage Rd Southbound					Woodmen Rd Westbound					Golden Sage Rd Northbound					Woodmen Rd Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:45:00 PM																					
4:45:00 PM	29	3	19	**2**	53	1	202	**24**	0	227	16	4	0	0	20	18	**341**	10	**1**	370	670
5:00:00 PM	18	1	27	0	46	2	**254**	11	**2**	**269**	27	7	1	0	35	19	328	11	0	358	708
5:15:00 PM	7	2	6	0	15	**8**	192	9	1	210	**32**	**10**	**12**	0	**54**	23	340	**17**	0	**380**	659
5:30:00 PM	**42**	**7**	**42**	1	**92**	7	227	23	0	257	30	7	10	0	47	**28**	336	6	0	370	**766**
Total Volume	96	13	94	3	206	18	875	67	3	963	105	28	23	0	156	88	1345	44	1	1478	2803
% App. Total	46.6	6.3	45.6	1.5		1.9	90.9	7	0.3		67.3	17.9	14.7	0		6	91	3	0.1		
PHF	.571	.464	.560	.375	.560	.563	.861	.698	.375	.895	.820	.700	.479	.000	.722	.786	.986	.647	.250	.972	.915



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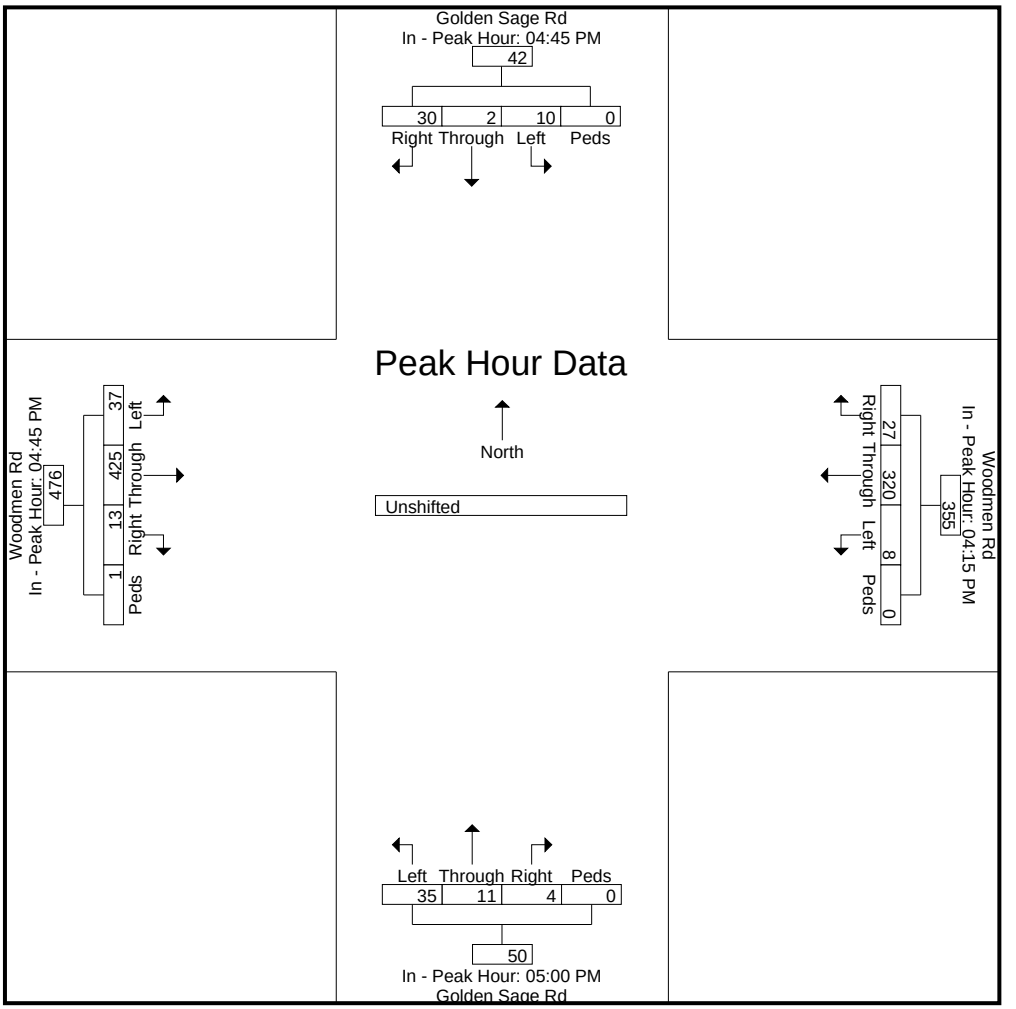
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Golden Sage Rd - Woodmen Rd PM 1-20
Site Code : 00194460
Start Date : 1/21/2020
Page No : 3

	Golden Sage Rd Southbound					Woodmen Rd Westbound					Golden Sage Rd Northbound					Woodmen Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	4:45:00 PM					4:15:00 PM					5:00:00 PM					4:45:00 PM					
+0 mins.	29	3	19	**2**	53	**5**	241	**26**	0	**272**	27	7	1	0	35	18	**341**	10	**1**	370	
+5 mins.	18	1	27	0	46	1	241	20	1	263	**32**	**10**	**12**	0	**54**	19	328	11	0	358	
+10 mins.	7	2	6	0	15	1	202	24	0	227	30	7	10	0	47	23	340	**17**	0	**380**	
+15 mins.	**42**	**7**	**42**	1	**92**	2	**254**	11	**2**	269	19	5	5	0	29	**28**	336	6	0	370	
Total Volume	96	13	94	3	206	9	938	81	3	1031	108	29	28	0	165	88	1345	44	1	1478	
% App. Total	46.6	6.3	45.6	1.5		0.9	91	7.9	0.3		65.5	17.6	17	0		6	91	3	0.1		
PHF	.571	.464	.560	.375	.560	.450	.923	.779	.375	.948	.844	.725	.583	.000	.764	.786	.986	.647	.250	.972	



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545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Golden Sage Rd - Woodmen Frontage Rd AM 1-20
Site Code : 00194460
Start Date : 1/21/2020
Page No : 1

Groups Printed- Bank 1

	Southbound					Woodmen Frontage Rd Westbound					Golden Sage Rd Northbound					Woodmen Frontage Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
06:30 AM	0	0	0	0	0	19	0	0	0	19	0	0	21	0	21	1	0	0	0	1	41
06:45 AM	0	0	2	0	2	41	0	1	0	42	4	0	47	0	51	0	0	0	0	0	95
Total	0	0	2	0	2	60	0	1	0	61	4	0	68	0	72	1	0	0	0	1	136
07:00 AM	0	0	0	0	0	49	1	0	0	50	0	0	19	0	19	0	0	0	0	0	69
07:15 AM	0	0	0	0	0	34	0	0	0	34	0	0	31	0	31	0	0	0	0	0	65
07:30 AM	0	0	0	0	0	45	0	0	0	45	0	0	22	0	22	0	0	1	0	1	68
07:45 AM	0	0	0	0	0	19	0	0	0	19	0	0	36	0	36	0	0	0	0	0	55
Total	0	0	0	0	0	147	1	0	0	148	0	0	108	0	108	0	0	1	0	1	257
08:00 AM	0	0	0	0	0	27	0	0	0	27	0	0	24	0	24	0	0	0	0	0	51
08:15 AM	0	0	0	0	0	26	0	0	0	26	0	0	48	1	49	0	0	1	0	1	76
Grand Total	0	0	2	0	2	260	1	1	0	262	4	0	248	1	253	1	0	2	0	3	520
Apprch %	0	0	100	0		99.2	0.4	0.4	0		1.6	0	98	0.4		33.3	0	66.7	0		
Total %	0	0	0.4	0	0.4	50	0.2	0.2	0	50.4	0.8	0	47.7	0.2	48.7	0.2	0	0.4	0	0.6	

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Colorado Springs, CO 80905
719-633-2868

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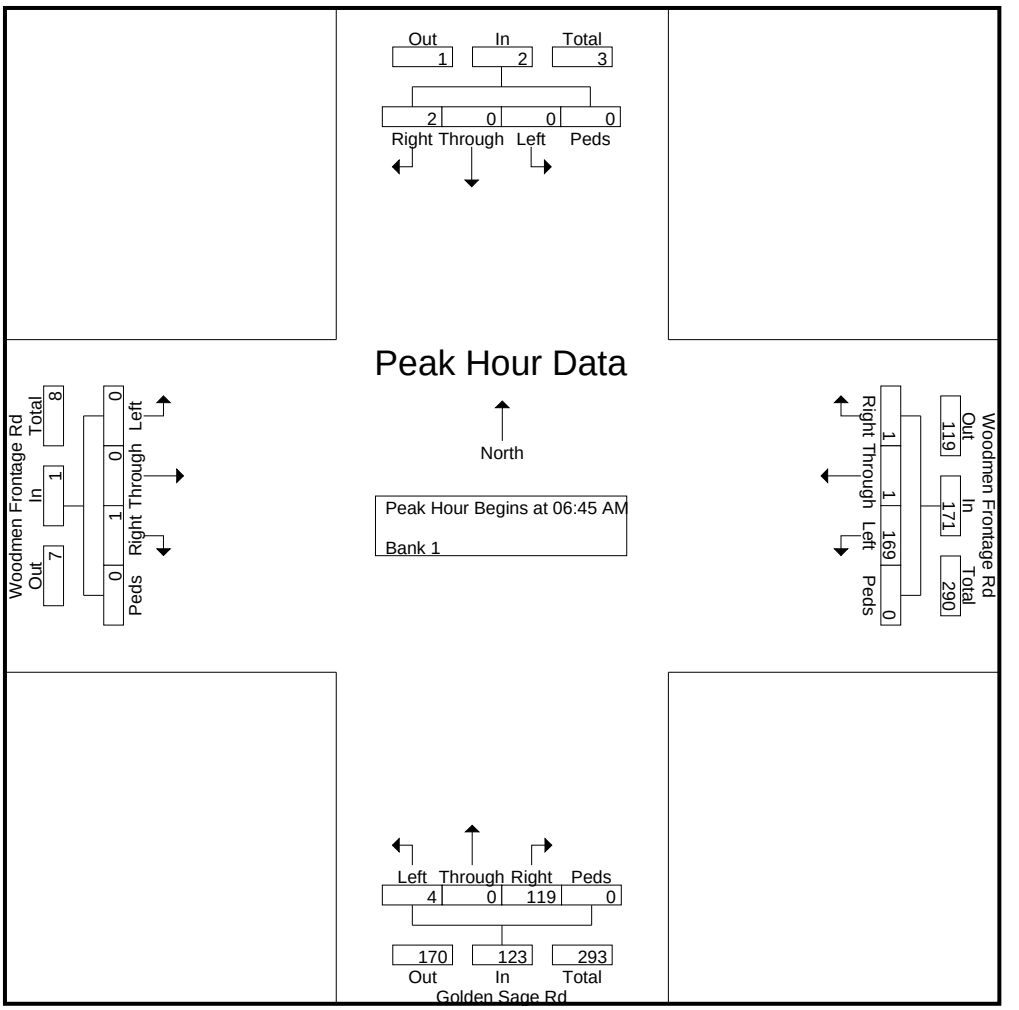
Site Code : 00194460
Start Date : 1/21/2020
Page No : 2

	Southbound					Woodmen Frontage Rd Westbound					Golden Sage Rd Northbound					Woodmen Frontage Rd Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Int. Total**
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 6:45:00 AM																					
6:45:00 AM	0	0	**2**	0	**2**	41	0	**1**	0	42	**4**	0	**47**	0	**51**	0	0	0	0	0	**95**
7:00:00 AM	0	0	0	0	0	**49**	**1**	0	0	**50**	0	0	19	0	19	0	0	0	0	0	69
7:15:00 AM	0	0	0	0	0	34	0	0	0	34	0	0	31	0	31	0	0	0	0	0	65
7:30:00 AM	0	0	0	0	0	45	0	0	0	45	0	0	22	0	22	0	0	**1**	0	**1**	68
Total Volume	0	0	2	0	2	169	1	1	0	171	4	0	119	0	123	0	0	1	0	1	297
% App. Total	0	0	100	0		98.8	0.6	0.6	0		3.3	0	96.7	0		0	0	100	0		
PHF	.000	.000	.250	.000	.250	.862	.250	.250	.000	.855	.250	.000	.633	.000	.603	.000	.000	.250	.000	.250	.782



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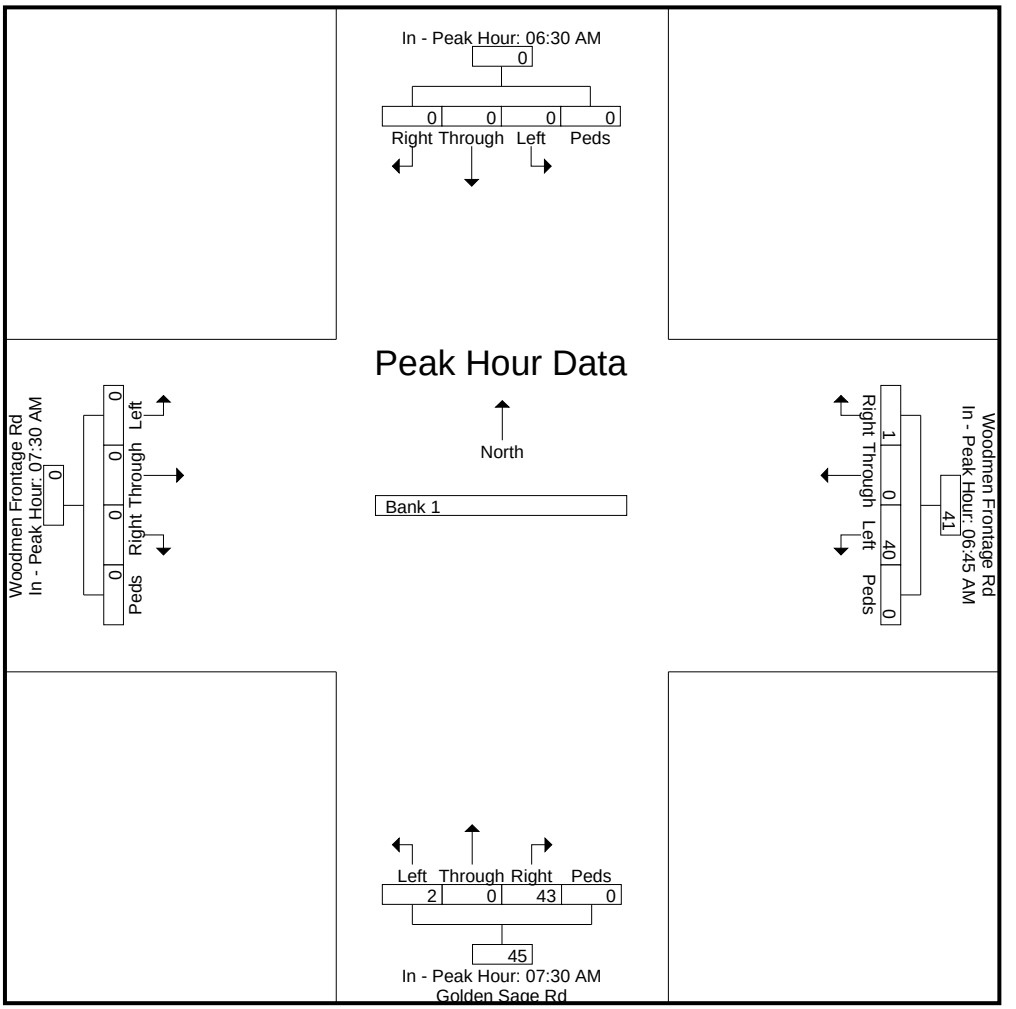
719-633-2868

File Name : Golden Sage Rd - Woodmen Frontage Rd AM 1-20
Site Code : 00194460
Start Date : 1/21/2020
Page No : 3

	Southbound					Woodmen Frontage Rd Westbound					Golden Sage Rd Northbound					Woodmen Frontage Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	6:30:00 AM					6:45:00 AM					7:30:00 AM					7:30:00 AM					
+0 mins.	0	0	0	0	0	41	0	**1**	0	42	0	0	22	0	22	0	0	**1**	0	**1**	
+5 mins.	0	0	**2**	0	**2**	**49**	**1**	0	0	**50**	0	0	36	0	36	0	0	0	0	0	
+10 mins.	0	0	0	0	0	34	0	0	0	34	0	0	24	0	24	0	0	0	0	0	
+15 mins.	0	0	0	0	0	45	0	0	0	45	0	0	**48**	**1**	**49**	0	0	1	0	1	
Total Volume	0	0	2	0	2	169	1	1	0	171	0	0	130	1	131	0	0	2	0	2	
% App. Total	0	0	100	0		98.8	0.6	0.6	0		0	0	99.2	0.8		0	0	100	0		
PHF	.000	.000	.250	.000	.250	.862	.250	.250	.000	.855	.000	.000	.677	.250	.668	.000	.000	.500	.000	.500	



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545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Golden Sage Rd - Woodmen Frontage Rd PM 1-20
Site Code : 00194460
Start Date : 1/21/2020
Page No : 1

Groups Printed- Bank 1

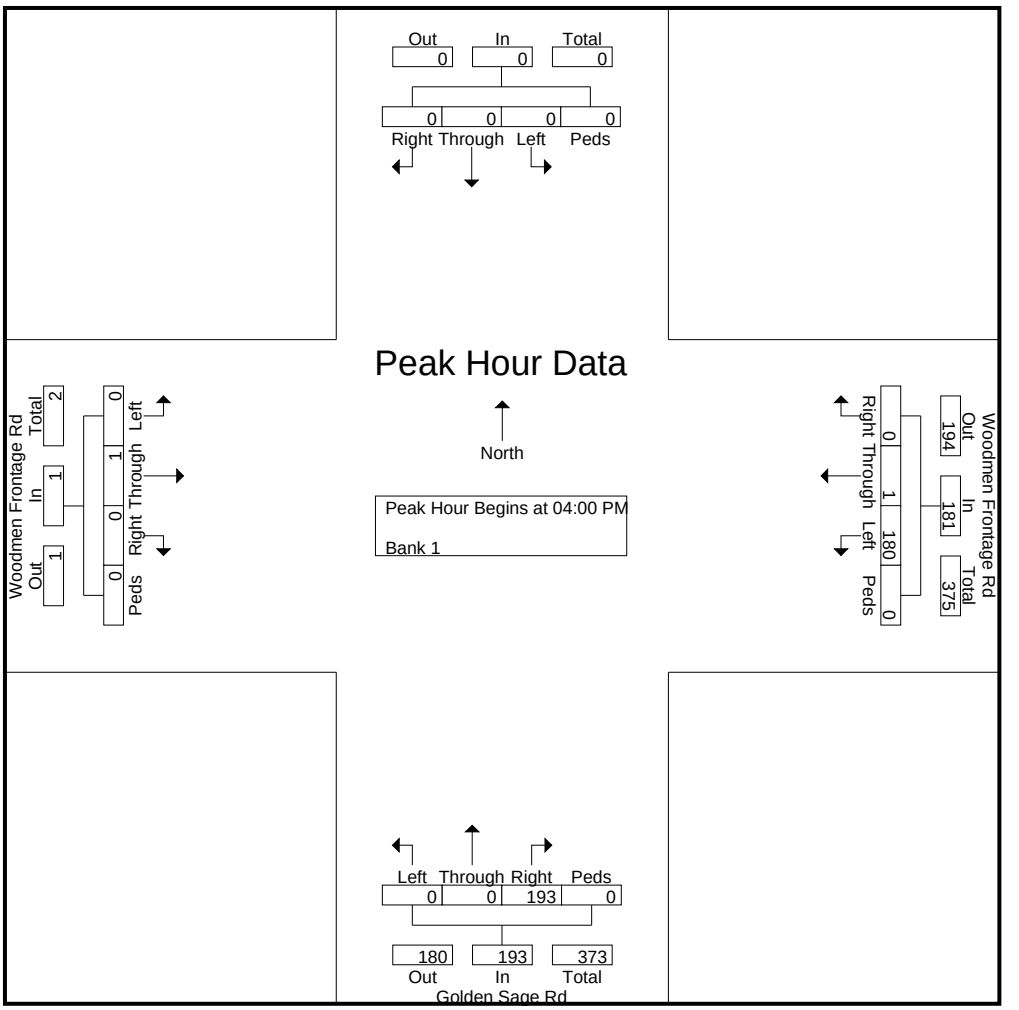
	Southbound					Woodmen Frontage Rd Westbound					Golden Sage Rd Northbound					Woodmen Frontage Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
04:00 PM	0	0	0	0	0	43	1	0	0	44	0	0	45	0	45	0	0	0	0	0	89
04:15 PM	0	0	0	0	0	33	0	0	0	33	0	0	52	0	52	0	1	0	0	1	86
04:30 PM	0	0	0	0	0	44	0	0	0	44	0	0	52	0	52	0	0	0	0	0	96
04:45 PM	0	0	0	0	0	60	0	0	0	60	0	0	44	0	44	0	0	0	0	0	104
Total	0	0	0	0	0	180	1	0	0	181	0	0	193	0	193	0	1	0	0	1	375
05:00 PM	0	0	0	0	0	45	0	0	0	45	0	0	33	0	33	0	0	2	0	2	80
05:15 PM	0	0	0	0	0	13	0	0	0	13	2	0	41	1	44	0	0	1	0	1	58
05:30 PM	0	0	0	0	0	89	0	1	0	90	0	0	35	0	35	0	0	0	0	0	125
05:45 PM	0	0	0	0	0	43	0	1	0	44	0	0	31	0	31	0	0	0	0	0	75
Total	0	0	0	0	0	190	0	2	0	192	2	0	140	1	143	0	0	3	0	3	338
Grand Total	0	0	0	0	0	370	1	2	0	373	2	0	333	1	336	0	1	3	0	4	713
Apprch %	0	0	0	0		99.2	0.3	0.5	0		0.6	0	99.1	0.3		0	25	75	0		
Total %	0	0	0	0	0	51.9	0.1	0.3	0	52.3	0.3	0	46.7	0.1	47.1	0	0.1	0.4	0	0.6	

LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Golden Sage Rd - Woodmen Frontage Rd PM 1-20
Site Code : 00194460
Start Date : 1/21/2020

	Southbound					Woodmen Frontage Rd Westbound					Golden Sage Rd Northbound					Woodmen Frontage Rd Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:00:00 PM																					
4:00:00 PM	0	0	0	0	0	43	**1**	0	0	44	0	0	45	0	45	0	0	0	0	0	89
4:15:00 PM	0	0	0	0	0	33	0	0	0	33	0	0	**52**	0	**52**	0	**1**	0	0	**1**	86
4:30:00 PM	0	0	0	0	0	44	0	0	0	44	0	0	52	0	52	0	0	0	0	0	96
4:45:00 PM	0	0	0	0	0	**60**	0	0	0	**60**	0	0	44	0	44	0	0	0	0	0	**104**
Total Volume	0	0	0	0	0	180	1	0	0	181	0	0	193	0	193	0	1	0	0	1	375
% App. Total	0	0	0	0		99.4	0.6	0	0		0	0	100	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.750	.250	.000	.000	.754	.000	.000	.928	.000	.928	.000	.250	.000	.000	.250	.901

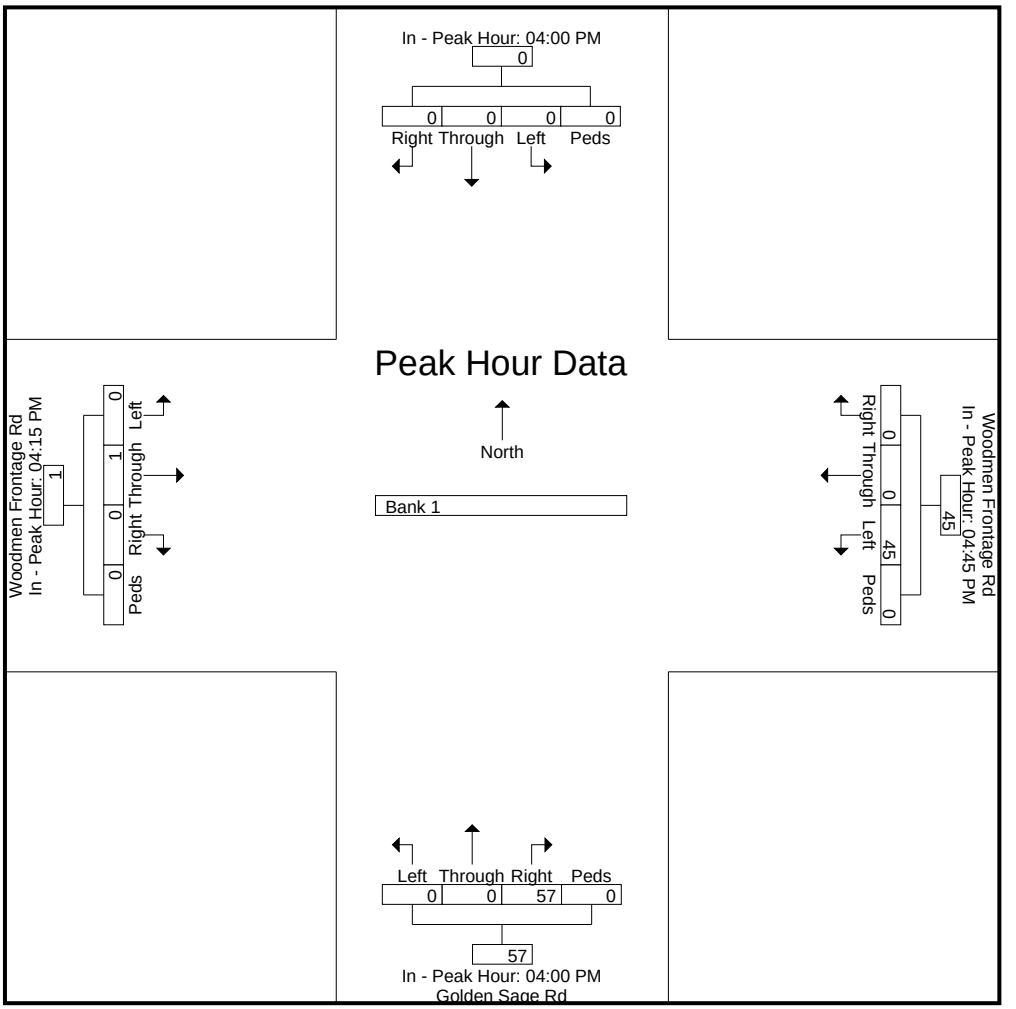


LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Golden Sage Rd - Woodmen Frontage Rd PM 1-20
Site Code : 00194460
Start Date : 1/21/2020
Page No : 3

	Southbound					Woodmen Frontage Rd Westbound					Golden Sage Rd Northbound					Woodmen Frontage Rd Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	Int. Total
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	4:00:00 PM					4:45:00 PM					4:00:00 PM					4:15:00 PM					
+0 mins.	0	0	0	0	0	60	0	0	0	60	0	0	45	0	45	0	**1**	0	0	1	
+5 mins.	0	0	0	0	0	45	0	0	0	45	0	0	**52**	0	**52**	0	0	0	0	0	
+10 mins.	0	0	0	0	0	13	0	0	0	13	0	0	52	0	52	0	0	0	0	0	
+15 mins.	0	0	0	0	0	**89**	0	**1**	0	**90**	0	0	44	0	44	0	0	**2**	0	**2**	
Total Volume	0	0	0	0	0	207	0	1	0	208	0	0	193	0	193	0	1	2	0	3	
% App. Total	0	0	0	0		99.5	0	0.5	0		0	0	100	0		0	33.3	66.7	0		
PHF	.000	.000	.000	.000	.000	.581	.000	.250	.000	.578	.000	.000	.928	.000	.928	.000	.250	.250	.000	.375	



Levels of Service

TRANSPORTATION
CONSULTANTS, INC.

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	68	151	57	657	1538	126
Future Vol, veh/h	68	151	57	657	1538	126
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	700	-	-	330
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	86	86	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	157	66	764	1748	143

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2262	874	1891	0	-	0
Stage 1	1748	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 35	293	312	-	-	-
Stage 1	125	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 28	293	312	-	-	-
Mov Cap-2 Maneuver	82	-	-	-	-	-
Stage 1	99	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	68.5	1.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	312	-	82	293	-	-
HCM Lane V/C Ratio	0.212	-	0.864	0.537	-	-
HCM Control Delay (s)	19.6	-	152.4	30.7	-	-
HCM Lane LOS	C	-	F	D	-	-
HCM 95th %tile Q(veh)	0.8	-	4.5	3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	47	661	44	15	1475	83	134	13	3	53	20
Future Volume (vph)	47	661	44	15	1475	83	134	13	3	53	20
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		2			6			8			4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	6	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	21.5	21.5	21.5	21.5	21.5
Total Split (s)	63.0	63.0	63.0	63.0	63.0	63.0	27.0	27.0	27.0	27.0	27.0
Total Split (%)	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.5	5.5	5.5	5.5	5.5
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	Max	Max	Max	Max	Max	Max	None	None	None	None	None
Act Effct Green (s)	56.2	56.2	56.2	56.2	56.2	56.2	16.4	16.4	16.4	16.4	16.4
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.66	0.66	0.19	0.19	0.19	0.19	0.19
v/c Ratio	0.44	0.31	0.05	0.04	0.71	0.09	0.76	0.04	0.01	0.24	0.47
Control Delay	23.6	7.1	2.2	6.6	12.2	1.8	54.1	27.1	0.0	30.7	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	7.1	2.2	6.6	12.2	1.8	54.1	27.1	0.0	30.7	28.9
LOS	C	A	A	A	B	A	D	C	A	C	C
Approach Delay		7.9			11.6			50.6			29.4
Approach LOS		A			B			D			C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 85.1	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 25: Golden Sage & Woodmen

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	184	1	0	4	0	139	0	0	0
Future Vol, veh/h	0	0	1	184	1	0	4	0	139	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	65	65	65	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	222	1	0	6	0	214	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	227	1	121	120	-	1	0	0	214	0	0
Stage 1	-	1	-	119	119	-	-	-	-	-	-	-
Stage 2	-	226	-	2	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	672	1084	854	770	0	1622	-	-	1356	-	-
Stage 1	0	895	-	885	797	0	-	-	-	-	-	-
Stage 2	0	717	-	1021	895	0	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	669	1084	851	767	-	1622	-	-	1356	-	-
Mov Cap-2 Maneuver	-	669	-	851	767	-	-	-	-	-	-	-
Stage 1	-	895	-	881	794	-	-	-	-	-	-	-
Stage 2	-	714	-	1020	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.3	10.7	0.2	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	1084	850	1356	-	-
HCM Lane V/C Ratio	0.004	-	-	0.001	0.262	-	-	-
HCM Control Delay (s)	7.2	0	-	8.3	10.7	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	1.1	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	116	86	0	1	28
Future Vol, veh/h	5	116	86	0	1	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	83	83	35	35
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	141	104	0	3	80

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	104	0	-	0	257	104
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1488	-	-	-	732	951
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	875	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1488	-	-	-	729	951
Mov Cap-2 Maneuver	-	-	-	-	729	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	875	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1488	-	-	-	941
HCM Lane V/C Ratio	0.004	-	-	-	0.088
HCM Control Delay (s)	7.4	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	95	83	1345	886	90
Future Vol, veh/h	56	95	83	1345	886	90
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	700	-	-	330
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	96	96	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	110	86	1401	886	90

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1759	443	976	0	-	0
Stage 1	886	-	-	-	-	-
Stage 2	873	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	76	562	703	-	-	-
Stage 1	363	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	67	562	703	-	-	-
Mov Cap-2 Maneuver	167	-	-	-	-	-
Stage 1	319	-	-	-	-	-
Stage 2	369	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.9	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	703	-	167	562	-	-
HCM Lane V/C Ratio	0.123	-	0.39	0.197	-	-
HCM Control Delay (s)	10.8	-	39.7	13	-	-
HCM Lane LOS	B	-	E	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.7	0.7	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	88	1345	44	18	875	67	105	28	23	96	13
Future Volume (vph)	88	1345	44	18	875	67	105	28	23	96	13
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		2			6			8			4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	6	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	21.5	21.5	21.5	21.5	21.5
Total Split (s)	65.0	65.0	65.0	65.0	65.0	65.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	72.2%	72.2%	72.2%	72.2%	72.2%	72.2%	27.8%	27.8%	27.8%	27.8%	27.8%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-3.0	-3.0	-1.0	-3.0	-3.0	-1.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	4.0	4.0	6.0	4.0	4.0	4.5	5.5	5.5	5.5	5.5
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	Max	Max	Max	Max	Max	Max	None	None	None	None	None
Act Effct Green (s)	58.1	61.1	61.1	59.1	61.1	61.1	16.2	15.2	15.2	15.2	15.2
Actuated g/C Ratio	0.68	0.71	0.71	0.69	0.71	0.71	0.19	0.18	0.18	0.18	0.18
v/c Ratio	0.25	0.58	0.04	0.11	0.37	0.06	0.69	0.10	0.09	0.71	0.45
Control Delay	8.5	7.7	1.6	7.3	5.8	1.4	52.4	29.6	4.7	49.6	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	7.7	1.6	7.3	5.8	1.4	52.4	29.6	4.7	49.6	10.6
LOS	A	A	A	A	A	A	D	C	A	D	B
Approach Delay		7.6			5.5			41.2			29.0
Approach LOS		A			A			D			C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 85.8	
Natural Cycle: 55	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 25: Golden Sage & Woodmen

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	200	1	0	2	0	181	0	0	0
Future Vol, veh/h	0	0	3	200	1	0	2	0	181	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	58	58	58	83	83	83	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	345	2	0	2	0	218	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	223	1	116	114	-	1	0	0	218	0	0
Stage 1	-	1	-	113	113	-	-	-	-	-	-	-
Stage 2	-	222	-	3	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	676	1084	861	776	0	1622	-	-	1352	-	-
Stage 1	0	895	-	892	802	0	-	-	-	-	-	-
Stage 2	0	720	-	1020	895	0	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	675	1084	858	775	-	1622	-	-	1352	-	-
Mov Cap-2 Maneuver	-	675	-	858	775	-	-	-	-	-	-	-
Stage 1	-	895	-	891	801	-	-	-	-	-	-	-
Stage 2	-	719	-	1016	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.3	12	0.1	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	1084	858	1352	-	-
HCM Lane V/C Ratio	0.001	-	-	0.004	0.404	-	-	-
HCM Control Delay (s)	7.2	0	-	8.3	12	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	2	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	76	120	1	0	24
Future Vol, veh/h	8	76	120	1	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	36	36	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	97	333	3	0	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	336	0	-	0	452	335
Stage 1	-	-	-	-	335	-
Stage 2	-	-	-	-	117	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1223	-	-	-	565	707
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1223	-	-	-	560	707
Mov Cap-2 Maneuver	-	-	-	-	560	-
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	908	-

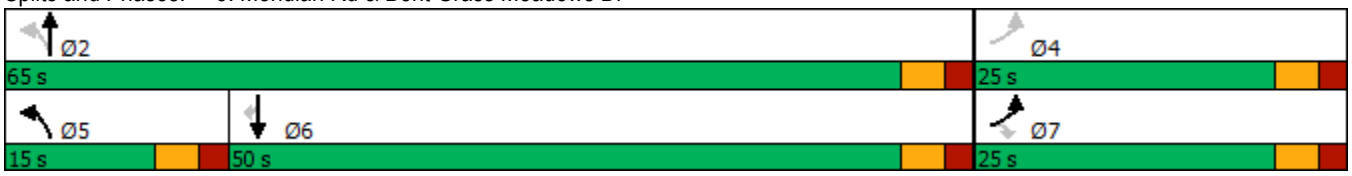
Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1223	-	-	-	707
HCM Lane V/C Ratio	0.008	-	-	-	0.044
HCM Control Delay (s)	8	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4
Lane Configurations							
Traffic Volume (vph)	145	241	149	698	1639	262	
Future Volume (vph)	145	241	149	698	1639	262	
Turn Type	pm+pt	Perm	pm+pt	NA	NA	Perm	
Protected Phases	7		5	2	6		4
Permitted Phases	4	7	2			6	
Detector Phase	7	7	5	2	6	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	10.0	23.0	23.0	23.0	23.0
Total Split (s)	25.0	25.0	15.0	65.0	50.0	50.0	25.0
Total Split (%)	27.8%	27.8%	16.7%	72.2%	55.6%	55.6%	28%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead		Lag	Lag	
Lead-Lag Optimize?			Yes		Yes	Yes	
Recall Mode	None	None	None	Max	Max	Max	None
Act Effct Green (s)	9.9	9.9	60.1	60.1	46.9	46.9	
Actuated g/C Ratio	0.12	0.12	0.75	0.75	0.59	0.59	
v/c Ratio	0.35	0.67	0.63	0.31	0.90	0.28	
Control Delay	34.1	17.9	23.2	3.9	23.5	2.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	34.1	17.9	23.2	3.9	23.5	2.1	
LOS	C	B	C	A	C	A	
Approach Delay	24.0			7.3	20.6		
Approach LOS	C			A	C		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 80.1	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

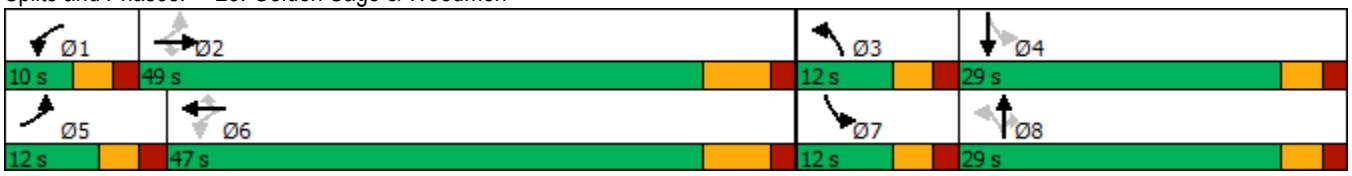
Splits and Phases: 3: Meridian Rd & Bent Grass Meadows Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	136	666	47	23	1416	78	144	17	15	56	22
Future Volume (vph)	136	666	47	23	1416	78	144	17	15	56	22
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Split (s)	10.0	11.0	11.0	10.0	11.0	11.0	10.0	21.0	21.0	10.0	21.0
Total Split (s)	12.0	49.0	49.0	10.0	47.0	47.0	12.0	29.0	29.0	12.0	29.0
Total Split (%)	12.0%	49.0%	49.0%	10.0%	47.0%	47.0%	12.0%	29.0%	29.0%	12.0%	29.0%
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-3.0	-3.0	-1.0	-3.0	-3.0	-1.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	53.0	51.4	51.4	49.2	43.1	43.1	23.8	17.9	17.9	24.7	17.0
Actuated g/C Ratio	0.57	0.55	0.55	0.53	0.46	0.46	0.26	0.19	0.19	0.27	0.18
v/c Ratio	0.71	0.37	0.05	0.06	0.97	0.11	0.80	0.06	0.04	0.17	0.84
Control Delay	36.2	14.3	0.1	10.1	42.7	1.4	53.3	30.9	0.2	23.3	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	14.3	0.1	10.1	42.7	1.4	53.3	30.9	0.2	23.3	40.5
LOS	D	B	A	B	D	A	D	C	A	C	D
Approach Delay		17.1			40.1			46.5			37.7
Approach LOS		B			D			D			D

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 93.2	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 33.7	Intersection LOS: C
Intersection Capacity Utilization 87.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 25: Golden Sage & Woodmen



Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	33	318	1	0	22	0	209	0	0	0
Future Vol, veh/h	0	0	33	318	1	0	22	0	209	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	87	87	87	87	87	87	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	42	366	1	0	25	0	240	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	291	1	192	171	-	1	0	0	240	0	0
Stage 1	-	1	-	170	170	-	-	-	-	-	-	-
Stage 2	-	290	-	22	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	619	1084	768	722	0	1622	-	-	1327	-	-
Stage 1	0	895	-	832	758	0	-	-	-	-	-	-
Stage 2	0	672	-	996	895	0	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	608	1084	728	709	-	1622	-	-	1327	-	-
Mov Cap-2 Maneuver	-	608	-	728	709	-	-	-	-	-	-	-
Stage 1	-	895	-	817	744	-	-	-	-	-	-	-
Stage 2	-	660	-	957	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	14.9	0.7	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	1084	728	1327	-	-
HCM Lane V/C Ratio	0.016	-	-	0.039	0.504	-	-	-
HCM Control Delay (s)	7.3	0	-	8.5	14.9	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	2.9	0	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	143	133	12	15	115
Future Vol, veh/h	48	143	133	12	15	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	155	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	174	160	14	18	139

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	174	0	-	0	459	167
Stage 1	-	-	-	-	167	-
Stage 2	-	-	-	-	292	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1403	-	-	-	560	877
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	758	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1403	-	-	-	536	877
Mov Cap-2 Maneuver	-	-	-	-	536	-
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	758	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1403	-	-	-	536	877
HCM Lane V/C Ratio	0.042	-	-	-	0.034	0.158
HCM Control Delay (s)	7.7	-	-	-	12	9.9
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.6

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	45	10	2	72	1	26	0	8	2	0	7
Future Vol, veh/h	3	45	10	2	72	1	26	0	8	2	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	53	12	2	85	1	31	0	9	2	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	86	0	0	65	0	0	161	157	59	162	163	86
Stage 1	-	-	-	-	-	-	67	67	-	90	90	-
Stage 2	-	-	-	-	-	-	94	90	-	72	73	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1510	-	-	1537	-	-	804	735	1007	803	729	973
Stage 1	-	-	-	-	-	-	943	839	-	917	820	-
Stage 2	-	-	-	-	-	-	913	820	-	938	834	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1510	-	-	1537	-	-	795	732	1007	793	726	973
Mov Cap-2 Maneuver	-	-	-	-	-	-	795	732	-	793	726	-
Stage 1	-	-	-	-	-	-	940	836	-	914	819	-
Stage 2	-	-	-	-	-	-	904	819	-	927	831	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.2	9.5	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	836	1510	-	-	1537	-	-	926
HCM Lane V/C Ratio	0.048	0.002	-	-	0.002	-	-	0.011
HCM Control Delay (s)	9.5	7.4	-	-	7.3	-	-	8.9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	47	5	8	51	4	15	0	25	14	0	9
Future Vol, veh/h	3	47	5	8	51	4	15	0	25	14	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	55	6	9	60	5	18	0	29	16	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	65	0	0	61	0	0	152	149	58	162	150	63
Stage 1	-	-	-	-	-	-	66	66	-	81	81	-
Stage 2	-	-	-	-	-	-	86	83	-	81	69	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1537	-	-	1542	-	-	815	743	1008	803	742	1002
Stage 1	-	-	-	-	-	-	945	840	-	927	828	-
Stage 2	-	-	-	-	-	-	922	826	-	927	837	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1537	-	-	1542	-	-	801	736	1008	775	735	1002
Mov Cap-2 Maneuver	-	-	-	-	-	-	801	736	-	775	735	-
Stage 1	-	-	-	-	-	-	942	837	-	924	823	-
Stage 2	-	-	-	-	-	-	907	821	-	898	834	-

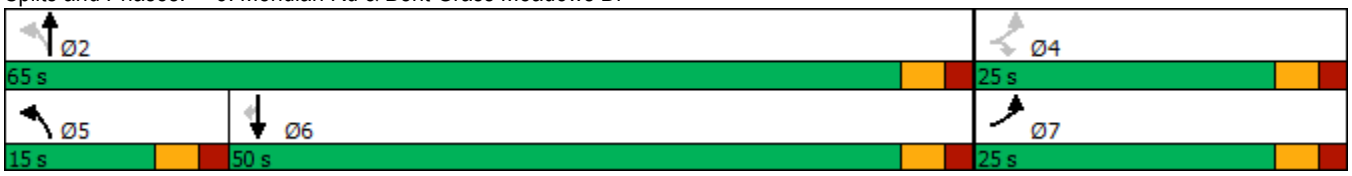
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.9	9.1	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	919	1537	-	-	1542	-	-	850
HCM Lane V/C Ratio	0.051	0.002	-	-	0.006	-	-	0.032
HCM Control Delay (s)	9.1	7.3	-	-	7.3	-	-	9.4
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	194	227	210	1427	921	228
Future Volume (vph)	194	227	210	1427	921	228
Turn Type	pm+pt	Perm	pm+pt	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	7	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	10.0	23.0	23.0	23.0
Total Split (s)	25.0	25.0	15.0	65.0	50.0	50.0
Total Split (%)	27.8%	27.8%	16.7%	72.2%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Max	Max	Max
Act Effct Green (s)	10.6	10.6	60.0	60.0	46.7	46.7
Actuated g/C Ratio	0.13	0.13	0.74	0.74	0.58	0.58
v/c Ratio	0.50	0.61	0.47	0.56	0.45	0.23
Control Delay	36.6	10.9	6.8	5.8	11.0	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	10.9	6.8	5.8	11.0	2.0
LOS	D	B	A	A	B	A
Approach Delay	22.7			5.9	9.2	
Approach LOS	C			A	A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 80.6	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 55.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Meridian Rd & Bent Grass Meadows Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	274	1342	53	39	918	83	113	34	41	102	19
Future Volume (vph)	274	1342	53	39	918	83	113	34	41	102	19
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Split (s)	10.0	11.0	11.0	10.0	11.0	11.0	10.0	21.0	21.0	10.0	21.0
Total Split (s)	13.0	54.0	54.0	10.0	51.0	51.0	15.0	21.0	21.0	15.0	21.0
Total Split (%)	13.0%	54.0%	54.0%	10.0%	51.0%	51.0%	15.0%	21.0%	21.0%	15.0%	21.0%
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-3.0	-3.0	-1.0	-3.0	-3.0	-1.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	58.0	54.4	54.4	53.2	47.1	47.1	22.5	12.9	12.9	19.2	10.1
Actuated g/C Ratio	0.62	0.58	0.58	0.57	0.50	0.50	0.24	0.14	0.14	0.20	0.11
v/c Ratio	0.91	0.71	0.06	0.21	0.55	0.10	0.51	0.16	0.14	0.37	0.76
Control Delay	46.5	18.6	0.1	10.2	18.2	1.3	33.6	38.9	0.8	30.5	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	18.6	0.1	10.2	18.2	1.3	33.6	38.9	0.8	30.5	25.7
LOS	D	B	A	B	B	A	C	D	A	C	C
Approach Delay		22.6			16.6			27.5			27.2
Approach LOS		C			B			C			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 93.7	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 76.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 25: Golden Sage & Woodmen

Intersection	
Int Delay, s/veh	9.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	53	282	1	0	60	0	331	0	0	0
Future Vol, veh/h	0	0	53	282	1	0	60	0	331	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	87	87	87	87	87	87	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	68	324	1	0	69	0	380	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	519	1	363	329	-	1	0	0	380	0	0
Stage 1	-	1	-	328	328	-	-	-	-	-	-	-
Stage 2	-	518	-	35	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	461	1084	593	590	0	1622	-	-	1178	-	-
Stage 1	0	895	-	685	647	0	-	-	-	-	-	-
Stage 2	0	533	-	981	895	0	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	435	1084	531	556	-	1622	-	-	1178	-	-
Mov Cap-2 Maneuver	-	435	-	531	556	-	-	-	-	-	-	-
Stage 1	-	895	-	646	610	-	-	-	-	-	-	-
Stage 2	-	503	-	920	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	21.9	1.1	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	1084	531	1178	-	-
HCM Lane V/C Ratio	0.043	-	-	0.063	0.613	-	-	-
HCM Control Delay (s)	7.3	0	-	8.5	21.9	0	-	-
HCM Lane LOS	A	A	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	4.1	0	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	95	143	147	22	9	83
Future Vol, veh/h	95	143	147	22	9	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	155	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	109	164	177	27	12	106

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	204	0	-	0	573	191
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	382	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1368	-	-	-	481	851
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	690	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1368	-	-	-	443	851
Mov Cap-2 Maneuver	-	-	-	-	443	-
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	690	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1368	-	-	-	443	851
HCM Lane V/C Ratio	0.08	-	-	-	0.026	0.125
HCM Control Delay (s)	7.9	-	-	-	13.3	9.8
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.1	0.4

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	70	32	7	58	2	17	0	5	1	0	5
Future Vol, veh/h	9	70	32	7	58	2	17	0	5	1	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	82	38	8	68	2	20	0	6	1	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	70	0	0	120	0	0	211	209	101	211	227	69
Stage 1	-	-	-	-	-	-	123	123	-	85	85	-
Stage 2	-	-	-	-	-	-	88	86	-	126	142	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1531	-	-	1468	-	-	746	688	954	746	672	994
Stage 1	-	-	-	-	-	-	881	794	-	923	824	-
Stage 2	-	-	-	-	-	-	920	824	-	878	779	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1531	-	-	1468	-	-	735	680	954	734	664	994
Mov Cap-2 Maneuver	-	-	-	-	-	-	735	680	-	734	664	-
Stage 1	-	-	-	-	-	-	875	788	-	917	820	-
Stage 2	-	-	-	-	-	-	910	820	-	866	774	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.8	9.8	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	775	1531	-	-	1468	-	-	939
HCM Lane V/C Ratio	0.033	0.007	-	-	0.006	-	-	0.008
HCM Control Delay (s)	9.8	7.4	-	-	7.5	-	-	8.9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	47	18	26	50	14	11	0	16	9	0	6
Future Vol, veh/h	11	47	18	26	50	14	11	0	16	9	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	55	21	31	59	16	13	0	19	11	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	76	0	0	225	229	66	230	231	67
Stage 1	-	-	-	-	-	-	92	92	-	129	129	-
Stage 2	-	-	-	-	-	-	133	137	-	101	102	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1524	-	-	1523	-	-	730	671	998	725	669	997
Stage 1	-	-	-	-	-	-	915	819	-	875	789	-
Stage 2	-	-	-	-	-	-	870	783	-	905	811	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	1523	-	-	709	652	998	696	650	997
Mov Cap-2 Maneuver	-	-	-	-	-	-	709	652	-	696	650	-
Stage 1	-	-	-	-	-	-	907	812	-	867	773	-
Stage 2	-	-	-	-	-	-	846	767	-	880	804	-

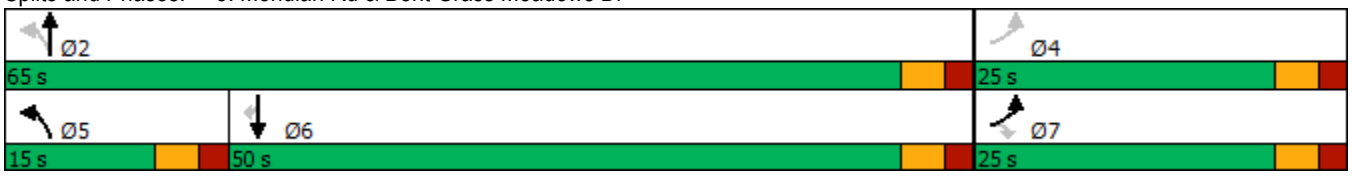
Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	2.1	9.4	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	856	1524	-	-	1523	-	-	792
HCM Lane V/C Ratio	0.037	0.008	-	-	0.02	-	-	0.022
HCM Control Delay (s)	9.4	7.4	-	-	7.4	-	-	9.6
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4
Lane Configurations							
Traffic Volume (vph)	162	295	160	698	1639	268	
Future Volume (vph)	162	295	160	698	1639	268	
Turn Type	pm+pt	Perm	pm+pt	NA	NA	Perm	
Protected Phases	7		5	2	6		4
Permitted Phases	4	7	2			6	
Detector Phase	7	7	5	2	6	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	10.0	23.0	23.0	23.0	23.0
Total Split (s)	25.0	25.0	15.0	65.0	50.0	50.0	25.0
Total Split (%)	27.8%	27.8%	16.7%	72.2%	55.6%	55.6%	28%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag			Lead		Lag	Lag	
Lead-Lag Optimize?			Yes		Yes	Yes	
Recall Mode	None	None	None	Max	Max	Max	None
Act Effct Green (s)	12.1	12.1	60.2	60.2	46.6	46.6	
Actuated g/C Ratio	0.15	0.15	0.73	0.73	0.57	0.57	
v/c Ratio	0.34	0.76	0.68	0.31	0.93	0.30	
Control Delay	32.7	24.5	27.4	4.8	28.2	2.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.7	24.5	27.4	4.8	28.2	2.3	
LOS	C	C	C	A	C	A	
Approach Delay	27.4			9.0	24.5		
Approach LOS	C			A	C		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 82.3	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

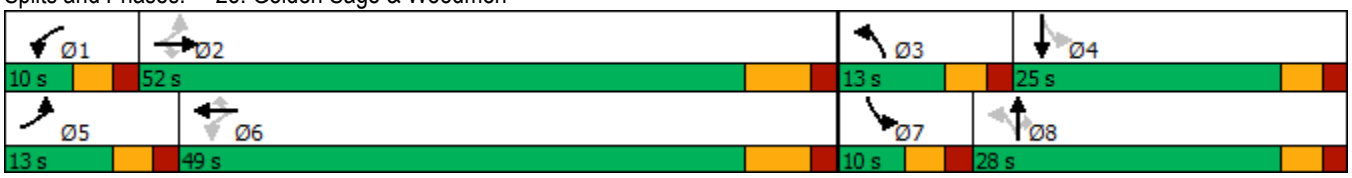
Splits and Phases: 3: Meridian Rd & Bent Grass Meadows Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	160	666	47	23	1416	78	144	17	15	56	23
Future Volume (vph)	160	666	47	23	1416	78	144	17	15	56	23
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Split (s)	10.0	11.0	11.0	10.0	11.0	11.0	10.0	21.0	21.0	10.0	21.0
Total Split (s)	13.0	52.0	52.0	10.0	49.0	49.0	13.0	28.0	28.0	10.0	25.0
Total Split (%)	13.0%	52.0%	52.0%	10.0%	49.0%	49.0%	13.0%	28.0%	28.0%	10.0%	25.0%
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-3.0	-3.0	-1.0	-3.0	-3.0	-1.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	56.2	54.0	54.0	51.0	45.0	45.0	28.4	21.6	21.6	26.6	20.0
Actuated g/C Ratio	0.56	0.54	0.54	0.51	0.45	0.45	0.28	0.22	0.22	0.27	0.20
v/c Ratio	0.82	0.38	0.06	0.07	1.00	0.11	0.79	0.05	0.04	0.16	1.00
Control Delay	49.3	14.8	0.1	9.7	50.7	1.3	53.2	31.4	0.2	24.9	73.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	14.8	0.1	9.7	50.7	1.3	53.2	31.4	0.2	24.9	73.5
LOS	D	B	A	A	D	A	D	C	A	C	E
Approach Delay		20.3			47.6			46.5			67.1
Approach LOS		C			D			D			E

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 42.6	Intersection LOS: D
Intersection Capacity Utilization 93.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 25: Golden Sage & Woodmen



Intersection	
Int Delay, s/veh	11.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	33	392	1	0	22	0	233	0	0	0
Future Vol, veh/h	0	0	33	392	1	0	22	0	233	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	87	87	87	87	87	87	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	42	451	1	0	25	0	268	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	319	1	206	185	-	1	0	0	268	0	0
Stage 1	-	1	-	184	184	-	-	-	-	-	-	-
Stage 2	-	318	-	22	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	598	1084	752	709	0	1622	-	-	1296	-	-
Stage 1	0	895	-	818	747	0	-	-	-	-	-	-
Stage 2	0	654	-	996	895	0	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	587	1084	712	696	-	1622	-	-	1296	-	-
Mov Cap-2 Maneuver	-	587	-	712	696	-	-	-	-	-	-	-
Stage 1	-	895	-	802	733	-	-	-	-	-	-	-
Stage 2	-	642	-	957	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	18.4	0.6	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	1084	712	1296	-	-
HCM Lane V/C Ratio	0.016	-	-	0.039	0.634	-	-	-
HCM Control Delay (s)	7.3	0	-	8.5	18.4	0	-	-
HCM Lane LOS	A	A	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	4.6	0	-	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	72	143	133	19	15	189
Future Vol, veh/h	72	143	133	19	15	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	155	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	174	160	23	18	228

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	183	0	-	0	522	172
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	350	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1392	-	-	-	515	872
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	713	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1392	-	-	-	483	872
Mov Cap-2 Maneuver	-	-	-	-	483	-
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	713	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1392	-	-	-	483	872
HCM Lane V/C Ratio	0.063	-	-	-	0.037	0.261
HCM Control Delay (s)	7.8	-	-	-	12.7	10.6
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1	1

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	0	20	18	0	6	8	73	8	1	141	4
Future Vol, veh/h	16	0	20	18	0	6	8	73	8	1	141	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	0	24	21	0	7	9	86	9	1	166	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	283	284	169	292	282	91	171	0	0	95	0	0
Stage 1	171	171	-	109	109	-	-	-	-	-	-	-
Stage 2	112	113	-	183	173	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	669	625	875	660	627	967	1406	-	-	1499	-	-
Stage 1	831	757	-	896	805	-	-	-	-	-	-	-
Stage 2	893	802	-	819	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	660	621	875	639	623	967	1406	-	-	1499	-	-
Mov Cap-2 Maneuver	660	621	-	639	623	-	-	-	-	-	-	-
Stage 1	826	756	-	891	800	-	-	-	-	-	-	-
Stage 2	881	797	-	796	755	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	10.4	0.7	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	764	698	1499	-	-
HCM Lane V/C Ratio	0.007	-	-	0.055	0.04	0.001	-	-
HCM Control Delay (s)	7.6	-	-	10	10.4	7.4	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	84	120	8	29	27
Future Vol, veh/h	11	84	120	8	29	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	99	141	9	34	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	150	0	-	0	271	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	125	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1431	-	-	-	718	901
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	901	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1431	-	-	-	712	901
Mov Cap-2 Maneuver	-	-	-	-	712	-
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	901	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1431	-	-	-	792
HCM Lane V/C Ratio	0.009	-	-	-	0.083
HCM Control Delay (s)	7.5	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	112	10	2	88	2	26	0	8	6	0	11
Future Vol, veh/h	5	112	10	2	88	2	26	0	8	6	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	132	12	2	104	2	31	0	9	7	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	106	0	0	144	0	0	266	260	138	264	265	105
Stage 1	-	-	-	-	-	-	150	150	-	109	109	-
Stage 2	-	-	-	-	-	-	116	110	-	155	156	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1485	-	-	1438	-	-	687	645	910	689	640	949
Stage 1	-	-	-	-	-	-	853	773	-	896	805	-
Stage 2	-	-	-	-	-	-	889	804	-	847	769	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1485	-	-	1438	-	-	675	642	910	679	637	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	675	642	-	679	637	-
Stage 1	-	-	-	-	-	-	850	770	-	892	804	-
Stage 2	-	-	-	-	-	-	876	803	-	835	766	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	10.3	9.4
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	719	1485	-	-	1438	-	-	832
HCM Lane V/C Ratio	0.056	0.004	-	-	0.002	-	-	0.024
HCM Control Delay (s)	10.3	7.4	-	-	7.5	-	-	9.4
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	118	5	8	68	4	15	0	25	14	0	9
Future Vol, veh/h	3	118	5	8	68	4	15	0	25	14	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	139	6	9	80	5	18	0	29	16	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	85	0	0	145	0	0	256	253	142	266	254	83
Stage 1	-	-	-	-	-	-	150	150	-	101	101	-
Stage 2	-	-	-	-	-	-	106	103	-	165	153	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1512	-	-	1437	-	-	697	650	906	687	650	976
Stage 1	-	-	-	-	-	-	853	773	-	905	811	-
Stage 2	-	-	-	-	-	-	900	810	-	837	771	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1512	-	-	1437	-	-	684	644	906	660	644	976
Mov Cap-2 Maneuver	-	-	-	-	-	-	684	644	-	660	644	-
Stage 1	-	-	-	-	-	-	850	771	-	902	806	-
Stage 2	-	-	-	-	-	-	885	805	-	808	769	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	9.7	9.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	808	1512	-	-	1437	-	-	756
HCM Lane V/C Ratio	0.058	0.002	-	-	0.007	-	-	0.036
HCM Control Delay (s)	9.7	7.4	-	-	7.5	-	-	9.9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	110	3	3	122	6	17
Future Vol, veh/h	110	3	3	122	6	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	129	4	4	144	7	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	133	0	283	131
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	152	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1452	-	707	919
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	876	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1452	-	705	919
Mov Cap-2 Maneuver	-	-	-	-	705	-
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	873	-

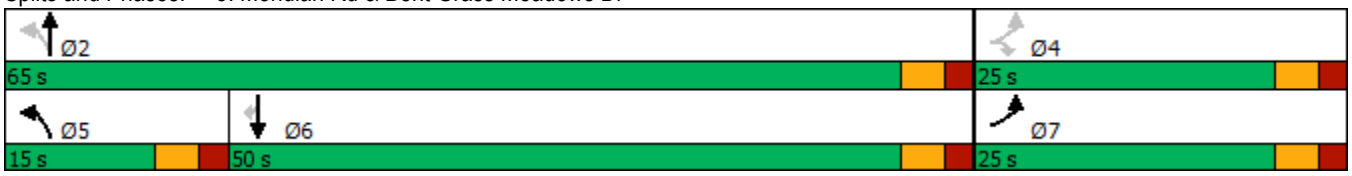
Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	852	-	-	1452	-
HCM Lane V/C Ratio	0.032	-	-	0.002	-
HCM Control Delay (s)	9.4	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	205	262	247	1427	921	248
Future Volume (vph)	205	262	247	1427	921	248
Turn Type	pm+pt	Perm	pm+pt	NA	NA	Perm
Protected Phases	7		5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	7	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	10.0	23.0	23.0	23.0
Total Split (s)	25.0	25.0	15.0	65.0	50.0	50.0
Total Split (%)	27.8%	27.8%	16.7%	72.2%	55.6%	55.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Max	Max	Max
Act Effct Green (s)	11.3	11.3	60.1	60.1	46.4	46.4
Actuated g/C Ratio	0.14	0.14	0.74	0.74	0.57	0.57
v/c Ratio	0.50	0.67	0.56	0.57	0.46	0.25
Control Delay	36.0	13.8	8.5	6.2	11.7	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	13.8	8.5	6.2	11.7	2.1
LOS	D	B	A	A	B	A
Approach Delay	23.5			6.5	9.7	
Approach LOS	C			A	A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.4	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Meridian Rd & Bent Grass Meadows Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	356	1342	53	39	918	83	113	36	41	102	20
Future Volume (vph)	356	1342	53	39	918	83	113	36	41	102	20
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	5	2		1	6		3	8		7	4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	5	2	2	1	6	6	3	8	8	7	4
Switch Phase											
Minimum Initial (s)	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Split (s)	10.0	11.0	11.0	10.0	11.0	11.0	10.0	21.0	21.0	10.0	21.0
Total Split (s)	18.0	54.0	54.0	10.0	46.0	46.0	15.0	21.0	21.0	15.0	21.0
Total Split (%)	18.0%	54.0%	54.0%	10.0%	46.0%	46.0%	15.0%	21.0%	21.0%	15.0%	21.0%
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-3.0	-3.0	-1.0	-3.0	-3.0	-1.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	Max	None	None	None	None	None
Act Effct Green (s)	59.1	54.4	54.4	48.1	42.1	42.1	23.1	13.6	13.6	19.8	10.7
Actuated g/C Ratio	0.63	0.58	0.58	0.51	0.45	0.45	0.24	0.14	0.14	0.21	0.11
v/c Ratio	0.92	0.72	0.06	0.21	0.62	0.11	0.52	0.16	0.12	0.36	0.81
Control Delay	47.9	19.0	0.1	11.2	23.0	0.3	33.5	38.6	0.6	30.1	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.9	19.0	0.1	11.2	23.0	0.3	33.5	38.6	0.6	30.1	27.3
LOS	D	B	A	B	C	A	C	D	A	C	C
Approach Delay		23.8			20.7			27.4			28.0
Approach LOS		C			C			C			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 94.3	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 25: Golden Sage & Woodmen

Intersection	
Int Delay, s/veh	13.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	53	330	1	0	60	0	414	0	0	0
Future Vol, veh/h	0	0	53	330	1	0	60	0	414	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	87	87	87	87	87	87	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	68	379	1	0	69	0	476	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	615	1	411	377	-	1	0	0	476	0	0
Stage 1	-	1	-	376	376	-	-	-	-	-	-	-
Stage 2	-	614	-	35	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	407	1084	551	555	0	1622	-	-	1086	-	-
Stage 1	0	895	-	645	616	0	-	-	-	-	-	-
Stage 2	0	483	-	981	895	0	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	382	1084	492	521	-	1622	-	-	1086	-	-
Mov Cap-2 Maneuver	-	382	-	492	521	-	-	-	-	-	-	-
Stage 1	-	895	-	605	578	-	-	-	-	-	-	-
Stage 2	-	453	-	920	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	33.1	0.9	0
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	1084	492	1086	-	-
HCM Lane V/C Ratio	0.043	-	-	0.063	0.773	-	-	-
HCM Control Delay (s)	7.3	0	-	8.5	33.1	0	-	-
HCM Lane LOS	A	A	-	A	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	6.9	0	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	178	143	147	45	9	131
Future Vol, veh/h	178	143	147	45	9	131
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	155	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	205	164	177	54	12	168

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	231	0	-	0	778	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1337	-	-	-	365	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1337	-	-	-	309	837
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	563	-

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1337	-	-	-	309	837
HCM Lane V/C Ratio	0.153	-	-	-	0.037	0.201
HCM Control Delay (s)	8.2	-	-	-	17.1	10.4
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.1	0.7

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	13	11	0	4	27	162	28	3	104	14
Future Vol, veh/h	10	0	13	11	0	4	27	162	28	3	104	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	15	13	0	5	32	191	33	4	122	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	412	426	130	418	418	208	138	0	0	224	0	0
Stage 1	138	138	-	272	272	-	-	-	-	-	-	-
Stage 2	274	288	-	146	146	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	550	520	920	545	526	832	1446	-	-	1345	-	-
Stage 1	865	782	-	734	685	-	-	-	-	-	-	-
Stage 2	732	674	-	857	776	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	536	507	920	526	513	832	1446	-	-	1345	-	-
Mov Cap-2 Maneuver	536	507	-	526	513	-	-	-	-	-	-	-
Stage 1	846	780	-	718	670	-	-	-	-	-	-	-
Stage 2	712	659	-	840	774	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	11.4	0.9	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1446	-	-	701	583	1345	-	-
HCM Lane V/C Ratio	0.022	-	-	0.039	0.03	0.003	-	-
HCM Control Delay (s)	7.5	-	-	10.3	11.4	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	141	103	26	19	18
Future Vol, veh/h	36	141	103	26	19	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	166	121	31	22	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	152	0	-	0	387	137
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	250	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1429	-	-	-	616	911
Stage 1	-	-	-	-	890	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1429	-	-	-	598	911
Mov Cap-2 Maneuver	-	-	-	-	598	-
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	792	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1429	-	-	-	718
HCM Lane V/C Ratio	0.03	-	-	-	0.061
HCM Control Delay (s)	7.6	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	114	32	7	112	5	17	0	5	3	0	8
Future Vol, veh/h	15	114	32	7	112	5	17	0	5	3	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	134	38	8	132	6	20	0	6	4	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	138	0	0	172	0	0	345	343	153	343	359	135
Stage 1	-	-	-	-	-	-	189	189	-	151	151	-
Stage 2	-	-	-	-	-	-	156	154	-	192	208	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1446	-	-	1405	-	-	609	579	893	611	568	914
Stage 1	-	-	-	-	-	-	813	744	-	851	772	-
Stage 2	-	-	-	-	-	-	846	770	-	810	730	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1446	-	-	1405	-	-	594	569	893	599	558	914
Mov Cap-2 Maneuver	-	-	-	-	-	-	594	569	-	599	558	-
Stage 1	-	-	-	-	-	-	803	735	-	841	767	-
Stage 2	-	-	-	-	-	-	833	765	-	795	721	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.4	10.8	9.6
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	643	1446	-	-	1405	-	-	799
HCM Lane V/C Ratio	0.04	0.012	-	-	0.006	-	-	0.016
HCM Control Delay (s)	10.8	7.5	-	-	7.6	-	-	9.6
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	94	18	26	107	14	11	0	16	9	0	6
Future Vol, veh/h	11	94	18	26	107	14	11	0	16	9	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	111	21	31	126	16	13	0	19	11	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	142	0	0	132	0	0	348	352	122	353	354	134
Stage 1	-	-	-	-	-	-	148	148	-	196	196	-
Stage 2	-	-	-	-	-	-	200	204	-	157	158	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1441	-	-	1453	-	-	607	573	929	602	571	915
Stage 1	-	-	-	-	-	-	855	775	-	806	739	-
Stage 2	-	-	-	-	-	-	802	733	-	845	767	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1441	-	-	1453	-	-	588	556	929	576	554	915
Mov Cap-2 Maneuver	-	-	-	-	-	-	588	556	-	576	554	-
Stage 1	-	-	-	-	-	-	847	768	-	799	723	-
Stage 2	-	-	-	-	-	-	779	718	-	820	760	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	1.3	10	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	751	1441	-	-	1453	-	-	676
HCM Lane V/C Ratio	0.042	0.009	-	-	0.021	-	-	0.026
HCM Control Delay (s)	10	7.5	-	-	7.5	-	-	10.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	150	9	10	126	4	11
Future Vol, veh/h	150	9	10	126	4	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	176	11	12	148	5	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	187	0	354	182
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	172	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1387	-	644	861
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	858	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1387	-	638	861
Mov Cap-2 Maneuver	-	-	-	-	638	-
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	850	-

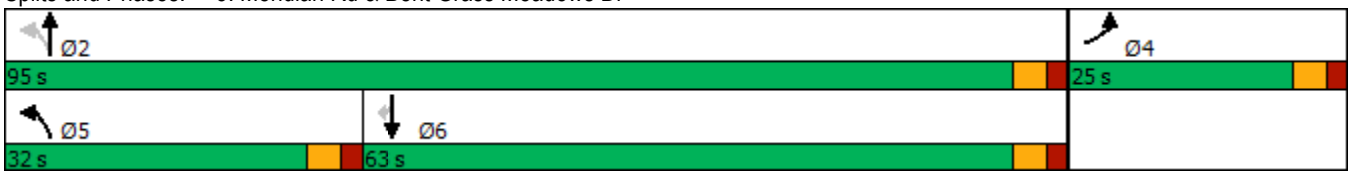
Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	788	-	-	1387	-
HCM Lane V/C Ratio	0.022	-	-	0.008	-
HCM Control Delay (s)	9.7	-	-	7.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	251	388	327	631	1680	369
Future Volume (vph)	251	388	327	631	1680	369
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		Free	2			6
Detector Phase	4		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	25.0		32.0	95.0	63.0	63.0
Total Split (%)	20.8%		26.7%	79.2%	52.5%	52.5%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	Max	Max	Max
Act Effct Green (s)	14.3	114.4	90.1	90.1	62.9	62.9
Actuated g/C Ratio	0.12	1.00	0.79	0.79	0.55	0.55
v/c Ratio	0.64	0.27	0.87	0.25	0.94	0.39
Control Delay	54.6	0.4	53.4	3.6	36.2	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	0.4	53.4	3.6	36.2	4.2
LOS	D	A	D	A	D	A
Approach Delay	21.7			20.6	30.5	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.4	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Meridian Rd & Bent Grass Meadows Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	303	734	76	68	1776	110	164	20	51	98	25	337
Future Volume (vph)	303	734	76	68	1776	110	164	20	51	98	25	337
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6	8		8	4		Free
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.0	12.0	12.0	10.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	
Total Split (s)	21.0	72.0	72.0	10.0	61.0	61.0	23.0	15.0	15.0	23.0	15.0	
Total Split (%)	17.5%	60.0%	60.0%	8.3%	50.8%	50.8%	19.2%	12.5%	12.5%	19.2%	12.5%	
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	
Act Effct Green (s)	15.2	67.1	67.1	63.6	55.6	55.6	24.1	10.3	10.3	17.5	8.1	109.2
Actuated g/C Ratio	0.14	0.61	0.61	0.58	0.51	0.51	0.22	0.09	0.09	0.16	0.07	1.00
v/c Ratio	0.67	0.34	0.08	0.16	1.01	0.13	0.53	0.12	0.18	0.39	0.19	0.22
Control Delay	53.1	12.6	1.2	8.4	51.6	1.5	42.2	48.5	1.3	40.2	53.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	12.6	1.2	8.4	51.6	1.5	42.2	48.5	1.3	40.2	53.6	0.3
LOS	D	B	A	A	D	A	D	D	A	D	D	A
Approach Delay		23.0			47.1			33.8			11.7	
Approach LOS		C			D			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 109.2	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 34.7	Intersection LOS: C
Intersection Capacity Utilization 85.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 25: Golden Sage Rd & Woodmen Rd

Intersection	
Int Delay, s/veh	15.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	8	114	346	6	0	78	0	354	0	0	0
Future Vol, veh/h	0	8	114	346	6	0	78	0	354	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	95	95	95	95	92	95	92	95	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	120	364	6	0	82	0	373	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	165	1	229	165	-	1	0	-	0	0	0
Stage 1	-	1	-	164	164	-	-	-	-	-	-	-
Stage 2	-	164	-	65	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	728	1084	726	728	0	1622	-	0	-	-	-
Stage 1	0	895	-	838	762	0	-	-	0	-	-	-
Stage 2	0	762	-	946	895	0	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	-	691	1084	615	691	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	691	-	615	691	-	-	-	-	-	-	-
Stage 1	-	895	-	795	723	-	-	-	-	-	-	-
Stage 2	-	723	-	833	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.9	19.3	7.3	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	1045	616	-	-	-
HCM Lane V/C Ratio	0.051	-	0.123	0.602	-	-	-
HCM Control Delay (s)	7.3	0	8.9	19.3	0	-	-
HCM Lane LOS	A	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	4	-	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	90	255	148	12	19	132
Future Vol, veh/h	90	255	148	12	19	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	155	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	98	277	161	13	21	143

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	174	0	-	0	641	168
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	473	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1403	-	-	-	439	876
Stage 1	-	-	-	-	862	-
Stage 2	-	-	-	-	627	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1403	-	-	-	408	876
Mov Cap-2 Maneuver	-	-	-	-	408	-
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	627	-

Approach	EB	WB	SB
HCM Control Delay, s	2	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1403	-	-	-	408	876
HCM Lane V/C Ratio	0.07	-	-	-	0.051	0.164
HCM Control Delay (s)	7.8	-	-	-	14.3	9.9
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.6

Intersection	
Intersection Delay, s/veh	5.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	164	66	364	41
Demand Flow Rate, veh/h	167	67	371	41
Vehicles Circulating, veh/h	17	204	184	271
Vehicles Exiting, veh/h	295	351	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.7	3.8	6.4	3.8
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	T	T	LR	LR
Assumed Moves	T	T	LR	LR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	167	67	371	41
Cap Entry Lane, veh/h	1356	1121	1144	1047
Entry HV Adj Factor	0.980	0.980	0.981	1.000
Flow Entry, veh/h	164	66	364	41
Cap Entry, veh/h	1330	1099	1122	1047
V/C Ratio	0.123	0.060	0.324	0.039
Control Delay, s/veh	3.7	3.8	6.4	3.8
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	0

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	59	6	4	106	0	19	0	13	2	0	6
Future Vol, veh/h	2	59	6	4	106	0	19	0	13	2	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	64	7	4	115	0	21	0	14	2	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	115	0	0	71	0	0	199	195	68	202	198	115
Stage 1	-	-	-	-	-	-	72	72	-	123	123	-
Stage 2	-	-	-	-	-	-	127	123	-	79	75	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1474	-	-	1529	-	0	760	700	995	756	698	937
Stage 1	-	-	-	-	-	0	938	835	-	881	794	-
Stage 2	-	-	-	-	-	0	877	794	-	930	833	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1474	-	-	1529	-	-	752	697	995	743	695	937
Mov Cap-2 Maneuver	-	-	-	-	-	-	752	697	-	743	695	-
Stage 1	-	-	-	-	-	-	937	834	-	880	792	-
Stage 2	-	-	-	-	-	-	869	792	-	916	832	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	9.5	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	835	1474	-	-	1529	-	880
HCM Lane V/C Ratio	0.042	0.001	-	-	0.003	-	0.01
HCM Control Delay (s)	9.5	7.4	-	-	7.4	-	9.1
HCM Lane LOS	A	A	-	-	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	0

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	68	4	9	92	7	12	0	29	18	0	7
Future Vol, veh/h	2	68	4	9	92	7	12	0	29	18	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	74	4	10	100	8	13	0	32	20	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	108	0	0	78	0	0	208	208	76	220	206	104
Stage 1	-	-	-	-	-	-	80	80	-	124	124	-
Stage 2	-	-	-	-	-	-	128	128	-	96	82	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1483	-	-	1520	-	-	749	689	985	736	691	951
Stage 1	-	-	-	-	-	-	929	828	-	880	793	-
Stage 2	-	-	-	-	-	-	876	790	-	911	827	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1483	-	-	1520	-	-	739	683	985	708	685	951
Mov Cap-2 Maneuver	-	-	-	-	-	-	739	683	-	708	685	-
Stage 1	-	-	-	-	-	-	928	827	-	879	787	-
Stage 2	-	-	-	-	-	-	863	784	-	881	826	-

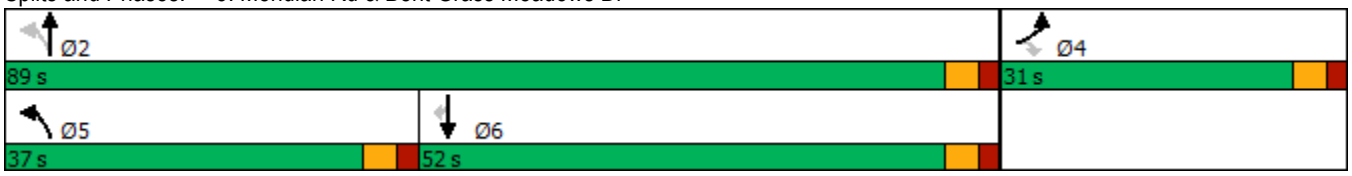
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.6	9.2	9.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	898	1483	-	-	1520	-	-	763
HCM Lane V/C Ratio	0.05	0.001	-	-	0.006	-	-	0.036
HCM Control Delay (s)	9.2	7.4	-	-	7.4	-	-	9.9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	493	382	378	1424	1114	269
Future Volume (vph)	493	382	378	1424	1114	269
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	31.0	31.0	37.0	89.0	52.0	52.0
Total Split (%)	25.8%	25.8%	30.8%	74.2%	43.3%	43.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Max	Max	Max
Act Effct Green (s)	22.6	22.6	84.1	84.1	53.8	53.8
Actuated g/C Ratio	0.19	0.19	0.72	0.72	0.46	0.46
v/c Ratio	0.78	0.64	0.83	0.59	0.72	0.32
Control Delay	53.6	8.9	39.9	9.4	30.4	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	8.9	39.9	9.4	30.4	3.8
LOS	D	A	D	A	C	A
Approach Delay	34.1			15.8	25.2	
Approach LOS	C			B	C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.7	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Meridian Rd & Bent Grass Meadows Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	1629	78	86	1083	121	178	39	72	136	21	360
Future Volume (vph)	395	1629	78	86	1083	121	178	39	72	136	21	360
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6	8		8	4		Free
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.0	12.0	12.0	10.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	
Total Split (s)	23.0	64.0	64.0	10.0	51.0	51.0	31.0	15.0	15.0	31.0	15.0	
Total Split (%)	19.2%	53.3%	53.3%	8.3%	42.5%	42.5%	25.8%	12.5%	12.5%	25.8%	12.5%	
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	
Act Effct Green (s)	17.6	55.6	55.6	49.5	41.1	41.1	24.5	9.4	9.4	17.7	8.0	98.3
Actuated g/C Ratio	0.18	0.57	0.57	0.50	0.42	0.42	0.25	0.10	0.10	0.18	0.08	1.00
v/c Ratio	0.68	0.83	0.09	0.48	0.75	0.17	0.46	0.23	0.25	0.45	0.15	0.24
Control Delay	46.4	24.5	1.5	22.5	28.9	2.6	35.4	48.5	1.9	39.3	49.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	24.5	1.5	22.5	28.9	2.6	35.4	48.5	1.9	39.3	49.4	0.4
LOS	D	C	A	C	C	A	D	D	A	D	D	A
Approach Delay		27.8			25.9			28.8			12.6	
Approach LOS		C			C			C			B	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 98.3		
Natural Cycle: 70		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay: 25.4	Intersection LOS: C	
Intersection Capacity Utilization 78.0%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 25: Golden Sage Rd & Woodmen Rd

Intersection	
Int Delay, s/veh	29.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	12	101	402	14	0	134	0	397	0	0	0
Future Vol, veh/h	0	12	101	402	14	0	134	0	397	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	95	95	95	95	92	95	92	95	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	106	423	15	0	141	0	418	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	283	1	343	283	-	1	0	-	0	0	0
Stage 1	-	1	-	282	282	-	-	-	-	-	-	-
Stage 2	-	282	-	61	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	626	1084	611	626	0	1622	-	0	-	-	-
Stage 1	0	895	-	725	678	0	-	-	0	-	-	-
Stage 2	0	678	-	950	895	0	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	-	572	1084	506	572	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	572	-	506	572	-	-	-	-	-	-	-
Stage 1	-	895	-	662	619	-	-	-	-	-	-	-
Stage 2	-	619	-	845	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	42	7.4	0
HCM LOS	A	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	990	508	-	-	-
HCM Lane V/C Ratio	0.087	-	0.12	0.862	-	-	-
HCM Control Delay (s)	7.4	0	9.1	42	0	-	-
HCM Lane LOS	A	A	A	E	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	9.2	-	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	118	198	239	25	10	124
Future Vol, veh/h	118	198	239	25	10	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	155	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	128	215	260	27	11	135

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	287	0	-	0	745	274
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	471	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1275	-	-	-	382	765
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1275	-	-	-	344	765
Mov Cap-2 Maneuver	-	-	-	-	344	-
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	SB
HCM Control Delay, s	3	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1275	-	-	-	344	765
HCM Lane V/C Ratio	0.101	-	-	-	0.032	0.176
HCM Control Delay (s)	8.1	-	-	-	15.8	10.7
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.1	0.6

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	109	29	9	68	2	15	0	7	1	0	4
Future Vol, veh/h	8	109	29	9	68	2	15	0	7	1	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	118	32	10	74	2	16	0	8	1	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	150	0	0	249	248	134	251	263	75
Stage 1	-	-	-	-	-	-	152	152	-	95	95	-
Stage 2	-	-	-	-	-	-	97	96	-	156	168	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1523	-	-	1431	-	-	705	655	915	702	642	986
Stage 1	-	-	-	-	-	-	850	772	-	912	816	-
Stage 2	-	-	-	-	-	-	910	815	-	846	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1523	-	-	1431	-	-	695	646	915	689	634	986
Mov Cap-2 Maneuver	-	-	-	-	-	-	695	646	-	689	634	-
Stage 1	-	-	-	-	-	-	845	767	-	907	810	-
Stage 2	-	-	-	-	-	-	900	809	-	834	754	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.9	9.9	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	753	1523	-	-	1431	-	-	908
HCM Lane V/C Ratio	0.032	0.006	-	-	0.007	-	-	0.006
HCM Control Delay (s)	9.9	7.4	-	-	7.5	-	-	9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	91	17	28	64	16	10	0	17	10	0	5
Future Vol, veh/h	10	91	17	28	64	16	10	0	17	10	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	99	18	30	70	17	11	0	18	11	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	87	0	0	117	0	0	271	277	108	278	278	79
Stage 1	-	-	-	-	-	-	130	130	-	139	139	-
Stage 2	-	-	-	-	-	-	141	147	-	139	139	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1509	-	-	1471	-	-	682	631	946	674	630	981
Stage 1	-	-	-	-	-	-	874	789	-	864	782	-
Stage 2	-	-	-	-	-	-	862	775	-	864	782	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1509	-	-	1471	-	-	664	614	946	647	613	981
Mov Cap-2 Maneuver	-	-	-	-	-	-	664	614	-	647	613	-
Stage 1	-	-	-	-	-	-	868	783	-	858	766	-
Stage 2	-	-	-	-	-	-	840	760	-	841	777	-

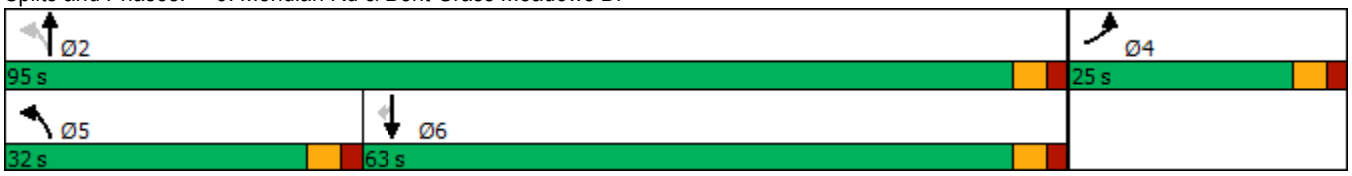
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	1.9	9.6	10
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	817	1509	-	-	1471	-	-	730
HCM Lane V/C Ratio	0.036	0.007	-	-	0.021	-	-	0.022
HCM Control Delay (s)	9.6	7.4	-	-	7.5	-	-	10
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	264	428	334	631	1680	373
Future Volume (vph)	264	428	334	631	1680	373
Turn Type	Prot	Free	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		Free	2			6
Detector Phase	4		5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0		10.0	10.0	10.0	10.0
Total Split (s)	25.0		32.0	95.0	63.0	63.0
Total Split (%)	20.8%		26.7%	79.2%	52.5%	52.5%
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	Max	Max	Max
Act Effct Green (s)	14.8	114.9	90.1	90.1	62.4	62.4
Actuated g/C Ratio	0.13	1.00	0.78	0.78	0.54	0.54
v/c Ratio	0.65	0.29	0.88	0.25	0.95	0.40
Control Delay	54.7	0.5	54.9	3.8	38.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.7	0.5	54.9	3.8	38.2	4.3
LOS	D	A	D	A	D	A
Approach Delay	21.2			21.5	32.1	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.9	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 85.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Meridian Rd & Bent Grass Meadows Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	318	734	76	68	1776	110	164	20	51	98	26	391
Future Volume (vph)	318	734	76	68	1776	110	164	20	51	98	26	391
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6	8		8	4		Free
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.0	12.0	12.0	10.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	
Total Split (s)	21.0	72.0	72.0	10.0	61.0	61.0	23.0	15.0	15.0	23.0	15.0	
Total Split (%)	17.5%	60.0%	60.0%	8.3%	50.8%	50.8%	19.2%	12.5%	12.5%	19.2%	12.5%	
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	
Act Effct Green (s)	15.4	67.3	67.3	63.6	55.5	55.5	24.2	10.4	10.4	17.6	8.2	109.4
Actuated g/C Ratio	0.14	0.62	0.62	0.58	0.51	0.51	0.22	0.10	0.10	0.16	0.07	1.00
v/c Ratio	0.69	0.34	0.08	0.16	1.01	0.13	0.53	0.12	0.18	0.39	0.19	0.26
Control Delay	54.1	12.6	1.2	8.4	52.5	1.5	42.2	48.5	1.3	40.2	53.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	12.6	1.2	8.4	52.5	1.5	42.2	48.5	1.3	40.2	53.7	0.4
LOS	D	B	A	A	D	A	D	D	A	D	D	A
Approach Delay		23.7			47.9			33.8			10.6	
Approach LOS		C			D			C			B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 109.4	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 34.8	Intersection LOS: C
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 25: Golden Sage Rd & Woodmen Rd

Intersection	
Int Delay, s/veh	18.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	8	114	401	6	0	78	0	370	0	0	0
Future Vol, veh/h	0	8	114	401	6	0	78	0	370	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	95	95	95	95	92	95	92	95	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	120	422	6	0	82	0	389	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	165	1	229	165	-	1	0	-	0	0	0
Stage 1	-	1	-	164	164	-	-	-	-	-	-	-
Stage 2	-	164	-	65	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	728	1084	726	728	0	1622	-	0	-	-	-
Stage 1	0	895	-	838	762	0	-	-	0	-	-	-
Stage 2	0	762	-	946	895	0	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	-	691	1084	615	691	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	691	-	615	691	-	-	-	-	-	-	-
Stage 1	-	895	-	795	723	-	-	-	-	-	-	-
Stage 2	-	723	-	833	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.9	23.1	7.3	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	1045	616	-	-	-
HCM Lane V/C Ratio	0.051	-	0.123	0.695	-	-	-
HCM Control Delay (s)	7.3	0	8.9	23.1	0	-	-
HCM Lane LOS	A	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	5.5	-	-	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	105	255	148	18	20	187
Future Vol, veh/h	105	255	148	18	20	187
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	155	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	114	277	161	20	22	203

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	181	0	-	0	676	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	505	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1394	-	-	-	419	873
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	606	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1394	-	-	-	385	873
Mov Cap-2 Maneuver	-	-	-	-	385	-
Stage 1	-	-	-	-	789	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1394	-	-	-	385	873
HCM Lane V/C Ratio	0.082	-	-	-	0.056	0.233
HCM Control Delay (s)	7.8	-	-	-	14.9	10.4
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.2	0.9

Intersection	
Intersection Delay, s/veh	5.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	165	67	369	41
Demand Flow Rate, veh/h	168	68	376	41
Vehicles Circulating, veh/h	17	209	185	277
Vehicles Exiting, veh/h	301	352	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.7	3.8	6.4	3.8
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	T	T	LR	LR
Assumed Moves	T	T	LR	LR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	168	68	376	41
Cap Entry Lane, veh/h	1356	1115	1143	1040
Entry HV Adj Factor	0.980	0.980	0.981	1.000
Flow Entry, veh/h	165	67	369	41
Cap Entry, veh/h	1330	1093	1121	1040
V/C Ratio	0.124	0.061	0.329	0.039
Control Delay, s/veh	3.7	3.8	6.4	3.8
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	0

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	15	14	0	15	5	78	6	5	159	4
Future Vol, veh/h	15	0	15	14	0	15	5	78	6	5	159	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	16	15	0	16	5	85	7	5	173	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	292	287	175	292	286	89	177	0	0	92	0	0
Stage 1	185	185	-	99	99	-	-	-	-	-	-	-
Stage 2	107	102	-	193	187	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	660	623	868	660	623	969	1399	-	-	1503	-	-
Stage 1	817	747	-	907	813	-	-	-	-	-	-	-
Stage 2	898	811	-	809	745	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	645	619	868	644	619	969	1399	-	-	1503	-	-
Mov Cap-2 Maneuver	645	619	-	644	619	-	-	-	-	-	-	-
Stage 1	814	745	-	903	810	-	-	-	-	-	-	-
Stage 2	880	808	-	791	743	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	9.8	0.4	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1399	-	-	740	779	1503	-	-
HCM Lane V/C Ratio	0.004	-	-	0.044	0.04	0.004	-	-
HCM Control Delay (s)	7.6	-	-	10.1	9.8	7.4	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	101	148	14	40	20
Future Vol, veh/h	7	101	148	14	40	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	110	161	15	43	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	176	0	-	0	295	169
Stage 1	-	-	-	-	169	-
Stage 2	-	-	-	-	126	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1400	-	-	-	696	875
Stage 1	-	-	-	-	861	-
Stage 2	-	-	-	-	900	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1400	-	-	-	692	875
Mov Cap-2 Maneuver	-	-	-	-	692	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	900	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1400	-	-	-	744
HCM Lane V/C Ratio	0.005	-	-	-	0.088
HCM Control Delay (s)	7.6	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	143	6	4	131	2	19	0	13	7	0	9
Future Vol, veh/h	3	143	6	4	131	2	19	0	13	7	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	155	7	4	142	2	21	0	14	8	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	144	0	0	162	0	0	321	317	159	323	319	143
Stage 1	-	-	-	-	-	-	165	165	-	151	151	-
Stage 2	-	-	-	-	-	-	156	152	-	172	168	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1438	-	-	1417	-	-	632	599	886	630	598	905
Stage 1	-	-	-	-	-	-	837	762	-	851	772	-
Stage 2	-	-	-	-	-	-	846	772	-	830	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1438	-	-	1417	-	-	623	596	886	617	595	905
Mov Cap-2 Maneuver	-	-	-	-	-	-	623	596	-	617	595	-
Stage 1	-	-	-	-	-	-	835	760	-	849	770	-
Stage 2	-	-	-	-	-	-	834	770	-	815	757	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	10.3	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	708	1438	-	-	1417	-	-	752
HCM Lane V/C Ratio	0.049	0.002	-	-	0.003	-	-	0.023
HCM Control Delay (s)	10.3	7.5	-	-	7.5	-	-	9.9
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	156	4	9	118	7	12	0	29	18	0	7
Future Vol, veh/h	2	156	4	9	118	7	12	0	29	18	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	170	4	10	128	8	13	0	32	20	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	136	0	0	174	0	0	332	332	172	344	330	132
Stage 1	-	-	-	-	-	-	176	176	-	152	152	-
Stage 2	-	-	-	-	-	-	156	156	-	192	178	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1448	-	-	1403	-	-	621	588	872	610	589	917
Stage 1	-	-	-	-	-	-	826	753	-	850	772	-
Stage 2	-	-	-	-	-	-	846	769	-	810	752	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1448	-	-	1403	-	-	612	583	872	584	584	917
Mov Cap-2 Maneuver	-	-	-	-	-	-	612	583	-	584	584	-
Stage 1	-	-	-	-	-	-	825	752	-	849	767	-
Stage 2	-	-	-	-	-	-	833	764	-	780	751	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	9.9	10.8
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	776	1448	-	-	1403	-	-	650
HCM Lane V/C Ratio	0.057	0.002	-	-	0.007	-	-	0.042
HCM Control Delay (s)	9.9	7.5	-	-	7.6	-	-	10.8
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	139	2	2	157	4	13
Future Vol, veh/h	139	2	2	157	4	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	2	2	171	4	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	153	0	327	152
Stage 1	-	-	-	-	152	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1428	-	667	894
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	855	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1428	-	666	894
Mov Cap-2 Maneuver	-	-	-	-	666	-
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	854	-

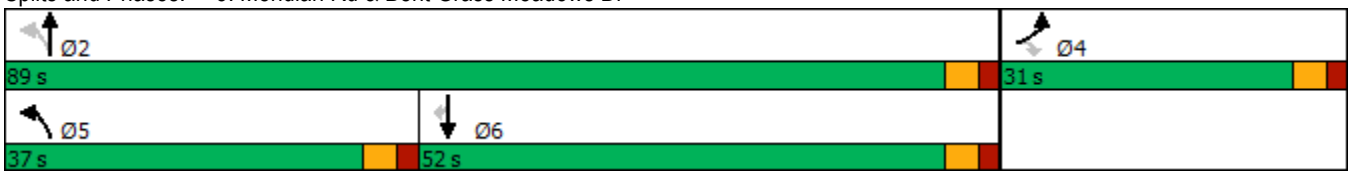
Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	827	-	-	1428	-
HCM Lane V/C Ratio	0.022	-	-	0.002	-
HCM Control Delay (s)	9.5	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	503	414	412	1424	1114	287
Future Volume (vph)	503	414	412	1424	1114	287
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0
Total Split (s)	31.0	31.0	37.0	89.0	52.0	52.0
Total Split (%)	25.8%	25.8%	30.8%	74.2%	43.3%	43.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Max	Max	Max
Act Effct Green (s)	22.8	22.8	84.1	84.1	51.8	51.8
Actuated g/C Ratio	0.20	0.20	0.72	0.72	0.44	0.44
v/c Ratio	0.79	0.66	0.87	0.59	0.75	0.35
Control Delay	54.0	9.1	46.1	9.5	32.5	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	9.1	46.1	9.5	32.5	3.9
LOS	D	A	D	A	C	A
Approach Delay	33.7			17.7	26.7	
Approach LOS	C			B	C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116.9	
Natural Cycle: 65	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Meridian Rd & Bent Grass Meadows Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	446	1629	78	86	1083	121	178	40	72	136	21	390
Future Volume (vph)	446	1629	78	86	1083	121	178	40	72	136	21	390
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6	8		8	4		Free
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.0	12.0	12.0	10.0	12.0	12.0	10.0	10.0	10.0	10.0	10.0	
Total Split (s)	23.0	64.0	64.0	10.0	51.0	51.0	31.0	15.0	15.0	31.0	15.0	
Total Split (%)	19.2%	53.3%	53.3%	8.3%	42.5%	42.5%	25.8%	12.5%	12.5%	25.8%	12.5%	
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	
Act Effct Green (s)	18.6	55.9	55.9	48.8	40.5	40.5	24.5	9.4	9.4	17.7	8.0	98.5
Actuated g/C Ratio	0.19	0.57	0.57	0.50	0.41	0.41	0.25	0.10	0.10	0.18	0.08	1.00
v/c Ratio	0.72	0.83	0.09	0.48	0.76	0.17	0.46	0.24	0.25	0.45	0.15	0.26
Control Delay	47.6	24.4	1.5	22.6	29.7	2.6	35.4	48.7	1.9	39.3	49.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	24.4	1.5	22.6	29.7	2.6	35.4	48.7	1.9	39.3	49.5	0.4
LOS	D	C	A	C	C	A	D	D	A	D	D	A
Approach Delay		28.5			26.6			28.9			11.9	
Approach LOS		C			C			C			B	

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 98.5		
Natural Cycle: 70		
Control Type: Semi Act-Uncoord		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay: 25.8	Intersection LOS: C	
Intersection Capacity Utilization 78.0%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 25: Golden Sage Rd & Woodmen Rd

Intersection	
Int Delay, s/veh	40.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	12	101	446	14	0	134	0	474	0	0	0
Future Vol, veh/h	0	12	101	446	14	0	134	0	474	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	95	95	95	95	92	95	92	95	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	106	469	15	0	141	0	499	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	283	1	343	283	-	1	0	-	0	0	0
Stage 1	-	1	-	282	282	-	-	-	-	-	-	-
Stage 2	-	282	-	61	1	-	-	-	-	-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	626	1084	611	626	0	1622	-	0	-	-	-
Stage 1	0	895	-	725	678	0	-	-	0	-	-	-
Stage 2	0	678	-	950	895	0	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	-	572	1084	506	572	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	572	-	506	572	-	-	-	-	-	-	-
Stage 1	-	895	-	662	619	-	-	-	-	-	-	-
Stage 2	-	619	-	845	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	57.7	7.4	0
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	990	508	-	-	-
HCM Lane V/C Ratio	0.087	-	0.12	0.953	-	-	-
HCM Control Delay (s)	7.4	0	9.1	57.7	0	-	-
HCM Lane LOS	A	A	A	F	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	12.1	-	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	194	198	239	49	12	167
Future Vol, veh/h	194	198	239	49	12	167
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	155	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	215	260	53	13	182

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	313	0	-	0	924	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	637	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1247	-	-	-	299	752
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1247	-	-	-	248	752
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	527	-

Approach	EB	WB	SB
HCM Control Delay, s	4.2	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1247	-	-	-	248	752
HCM Lane V/C Ratio	0.169	-	-	-	0.053	0.241
HCM Control Delay (s)	8.5	-	-	-	20.3	11.3
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.6	-	-	-	0.2	0.9

Intersection	
Intersection Delay, s/veh	6.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	276	72	392	9
Demand Flow Rate, veh/h	282	73	400	9
Vehicles Circulating, veh/h	5	201	287	274
Vehicles Exiting, veh/h	278	486	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.4	3.8	7.8	3.5
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	T	T	LR	LR
Assumed Moves	T	T	LR	LR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	282	73	400	9
Cap Entry Lane, veh/h	1373	1124	1030	1043
Entry HV Adj Factor	0.980	0.980	0.980	1.000
Flow Entry, veh/h	276	72	392	9
Cap Entry, veh/h	1346	1102	1009	1043
V/C Ratio	0.205	0.065	0.388	0.009
Control Delay, s/veh	4.4	3.8	7.8	3.5
LOS	A	A	A	A
95th %tile Queue, veh	1	0	2	0

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	13	11	0	6	26	195	27	6	110	14
Future Vol, veh/h	10	0	13	11	0	6	26	195	27	6	110	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	14	12	0	7	28	212	29	7	120	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	428	439	128	432	432	227	135	0	0	241	0	0
Stage 1	142	142	-	283	283	-	-	-	-	-	-	-
Stage 2	286	297	-	149	149	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	537	512	922	534	516	812	1449	-	-	1326	-	-
Stage 1	861	779	-	724	677	-	-	-	-	-	-	-
Stage 2	721	668	-	854	774	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	523	500	922	516	504	812	1449	-	-	1326	-	-
Mov Cap-2 Maneuver	523	500	-	516	504	-	-	-	-	-	-	-
Stage 1	845	775	-	710	664	-	-	-	-	-	-	-
Stage 2	701	655	-	836	770	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	11.3	0.8	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1449	-	-	692	592	1326	-	-
HCM Lane V/C Ratio	0.02	-	-	0.036	0.031	0.005	-	-
HCM Control Delay (s)	7.5	-	-	10.4	11.3	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	177	114	30	21	16
Future Vol, veh/h	33	177	114	30	21	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	155	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	192	124	33	23	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	157	0	-	0	405	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	264	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1423	-	-	-	602	907
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	780	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1423	-	-	-	587	907
Mov Cap-2 Maneuver	-	-	-	-	587	-
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	780	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1423	-	-	-	693
HCM Lane V/C Ratio	0.025	-	-	-	0.058
HCM Control Delay (s)	7.6	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	156	29	9	128	5	15	0	7	4	0	7
Future Vol, veh/h	14	156	29	9	128	5	15	0	7	4	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	170	32	10	139	5	16	0	8	4	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	144	0	0	202	0	0	382	380	186	382	394	142
Stage 1	-	-	-	-	-	-	216	216	-	162	162	-
Stage 2	-	-	-	-	-	-	166	164	-	220	232	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1438	-	-	1370	-	-	576	552	856	576	542	906
Stage 1	-	-	-	-	-	-	786	724	-	840	764	-
Stage 2	-	-	-	-	-	-	836	762	-	782	713	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1438	-	-	1370	-	-	563	543	856	563	533	906
Mov Cap-2 Maneuver	-	-	-	-	-	-	563	543	-	563	533	-
Stage 1	-	-	-	-	-	-	778	717	-	832	759	-
Stage 2	-	-	-	-	-	-	823	757	-	767	706	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.5	10.9	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	632	1438	-	-	1370	-	-	742
HCM Lane V/C Ratio	0.038	0.011	-	-	0.007	-	-	0.016
HCM Control Delay (s)	10.9	7.5	-	-	7.6	-	-	9.9
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	140	17	28	127	16	10	0	17	10	0	5
Future Vol, veh/h	10	140	17	28	127	16	10	0	17	10	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	155	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	152	18	30	138	17	11	0	18	11	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	155	0	0	170	0	0	392	398	161	399	399	147
Stage 1	-	-	-	-	-	-	183	183	-	207	207	-
Stage 2	-	-	-	-	-	-	209	215	-	192	192	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1425	-	-	1407	-	-	567	540	884	561	539	900
Stage 1	-	-	-	-	-	-	819	748	-	795	731	-
Stage 2	-	-	-	-	-	-	793	725	-	810	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1425	-	-	1407	-	-	551	524	884	537	523	900
Mov Cap-2 Maneuver	-	-	-	-	-	-	551	524	-	537	523	-
Stage 1	-	-	-	-	-	-	812	742	-	789	716	-
Stage 2	-	-	-	-	-	-	771	710	-	787	736	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	1.2	10.2	11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	722	1425	-	-	1407	-	-	620
HCM Lane V/C Ratio	0.041	0.008	-	-	0.022	-	-	0.026
HCM Control Delay (s)	10.2	7.5	-	-	7.6	-	-	11
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	190	9	9	141	3	10
Future Vol, veh/h	190	9	9	141	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	207	10	10	153	3	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	217	0	385	212
Stage 1	-	-	-	-	212	-
Stage 2	-	-	-	-	173	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1353	-	618	828
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	857	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1353	-	614	828
Mov Cap-2 Maneuver	-	-	-	-	614	-
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	851	-

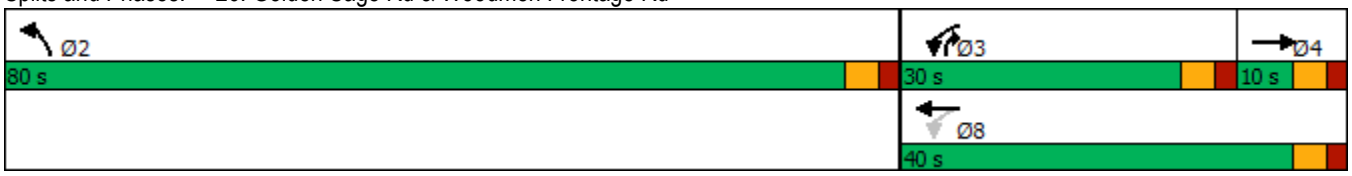
Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	766	-	-	1353	-
HCM Lane V/C Ratio	0.018	-	-	0.007	-
HCM Control Delay (s)	9.8	-	-	7.7	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	8	401	6	78	370
Future Volume (vph)	8	401	6	78	370
Turn Type	NA	pm+pt	NA	Prot	Over
Protected Phases	4	3	8	2	3
Permitted Phases		8			
Detector Phase	4	3	8	2	3
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0
Total Split (s)	10.0	30.0	40.0	80.0	30.0
Total Split (%)	8.3%	25.0%	33.3%	66.7%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Recall Mode	None	None	None	Min	None
Act Effct Green (s)	20.3		36.0	9.4	13.9
Actuated g/C Ratio	0.38		0.67	0.18	0.26
v/c Ratio	0.19		0.49	0.57	0.41
Control Delay	3.9		6.4	13.5	6.3
Queue Delay	0.0		0.0	0.0	0.0
Total Delay	3.9		6.4	13.5	6.3
LOS	A		A	B	A
Approach Delay	3.9		6.4	10.0	
Approach LOS	A		A	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 53.5	
Natural Cycle: 45	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 7.8	Intersection LOS: A
Intersection Capacity Utilization 51.9%	ICU Level of Service A
Analysis Period (min) 15	

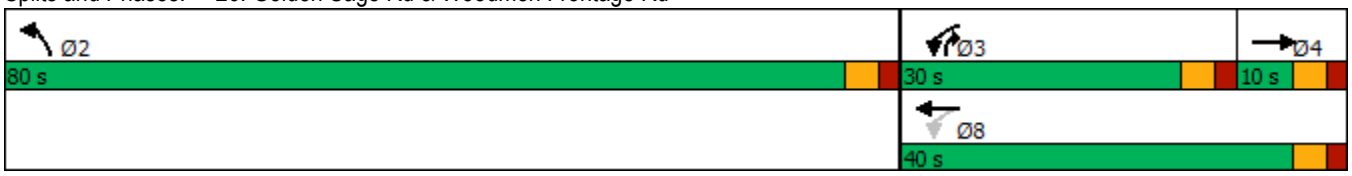
Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	8	401	6	78	370
Future Volume (vph)	8	401	6	78	370
Turn Type	NA	pm+pt	NA	Prot	Over
Protected Phases	4	3	8	2	3
Permitted Phases		8			
Detector Phase	4	3	8	2	3
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0
Total Split (s)	10.0	30.0	40.0	80.0	30.0
Total Split (%)	8.3%	25.0%	33.3%	66.7%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Recall Mode	None	None	None	Min	None
Act Effct Green (s)	20.1		36.0	8.8	14.0
Actuated g/C Ratio	0.38		0.68	0.17	0.27
v/c Ratio	0.18		0.49	0.28	0.55
Control Delay	3.8		5.8	21.8	6.1
Queue Delay	0.0		0.0	0.0	0.0
Total Delay	3.8		5.8	21.8	6.1
LOS	A		A	C	A
Approach Delay	3.8		5.8	8.9	
Approach LOS	A		A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 52.8	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 44.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



Intersection	
Intersection Delay, s/veh	3.5
Intersection LOS	A

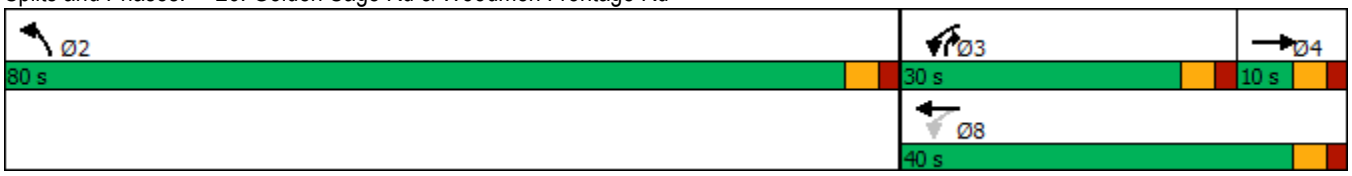
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	128	428	471
Demand Flow Rate, veh/h	130	436	481
Vehicles Circulating, veh/h	430	84	8
Vehicles Exiting, veh/h	90	8	552
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.5	6.1	0.6
Approach LOS	A	A	A

Lane	Left	Left	Left	Bypass
Designated Moves	TR	LT	L	R
Assumed Moves	TR	LT	L	R
RT Channelized				Free
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	397
Entry Flow, veh/h	130	436	84	1938
Cap Entry Lane, veh/h	890	1267	1369	0.980
Entry HV Adj Factor	0.983	0.981	0.976	389
Flow Entry, veh/h	128	428	82	1900
Cap Entry, veh/h	875	1243	1336	0.205
V/C Ratio	0.146	0.344	0.061	0.0
Control Delay, s/veh	5.5	6.1	3.2	A
LOS	A	A	A	1
95th %tile Queue, veh	1	2	0	

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	12	446	14	134	474
Future Volume (vph)	12	446	14	134	474
Turn Type	NA	pm+pt	NA	Prot	Over
Protected Phases	4	3	8	2	3
Permitted Phases		8			
Detector Phase	4	3	8	2	3
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0
Total Split (s)	10.0	30.0	40.0	80.0	30.0
Total Split (%)	8.3%	25.0%	33.3%	66.7%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Recall Mode	None	None	None	Min	None
Act Effct Green (s)	19.8		36.1	14.2	14.5
Actuated g/C Ratio	0.34		0.62	0.24	0.25
v/c Ratio	0.19		0.60	0.67	0.52
Control Delay	5.4		10.6	20.2	6.9
Queue Delay	0.0		0.0	0.0	0.0
Total Delay	5.4		10.6	20.2	6.9
LOS	A		B	C	A
Approach Delay	5.4		10.6	13.7	
Approach LOS	A		B	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 58.4	
Natural Cycle: 45	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	

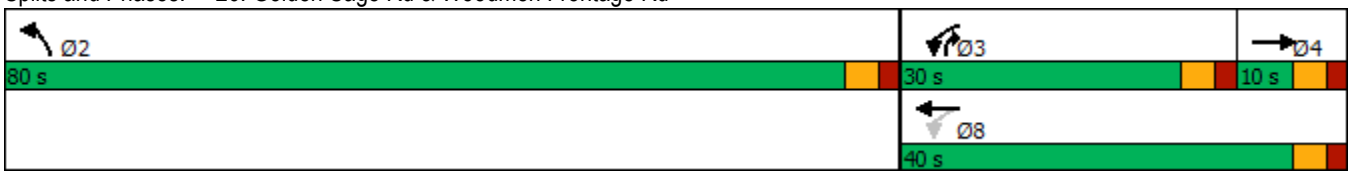
Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	12	446	14	134	474
Future Volume (vph)	12	446	14	134	474
Turn Type	NA	pm+pt	NA	Prot	Over
Protected Phases	4	3	8	2	3
Permitted Phases		8			
Detector Phase	4	3	8	2	3
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0
Total Split (s)	10.0	30.0	40.0	80.0	30.0
Total Split (%)	8.3%	25.0%	33.3%	66.7%	25.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead			Lead
Lead-Lag Optimize?	Yes	Yes			Yes
Recall Mode	None	None	None	Min	None
Act Effct Green (s)	19.6		36.0	10.6	14.5
Actuated g/C Ratio	0.36		0.66	0.19	0.27
v/c Ratio	0.18		0.56	0.41	0.63
Control Delay	4.7		7.6	23.1	6.7
Queue Delay	0.0		0.0	0.0	0.0
Total Delay	4.7		7.6	23.1	6.7
LOS	A		A	C	A
Approach Delay	4.7		7.6	10.3	
Approach LOS	A		A	B	

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 54.6			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 46.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Golden Sage Rd & Woodmen Frontage Rd



Intersection	
Intersection Delay, s/veh	3.8
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	119	484	640
Demand Flow Rate, veh/h	121	493	653
Vehicles Circulating, veh/h	478	144	13
Vehicles Exiting, veh/h	159	13	586
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.8	7.3	0.8
Approach LOS	A	A	A

Lane	Left	Left	Left	Bypass
Designated Moves	TR	LT	L	R
Assumed Moves	TR	LT	L	R
RT Channelized				Free
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	509
Entry Flow, veh/h	121	493	144	1938
Cap Entry Lane, veh/h	847	1191	1362	0.980
Entry HV Adj Factor	0.981	0.981	0.979	499
Flow Entry, veh/h	119	484	141	1900
Cap Entry, veh/h	832	1169	1333	0.263
V/C Ratio	0.143	0.414	0.106	0.0
Control Delay, s/veh	5.8	7.3	3.5	A
LOS	A	A	A	1
95th %tile Queue, veh	0	2	0	