

Honor Charter School

NWC Bent Grass Meadows Drive and Sea Oats Drive
El Paso County, Colorado

Traffic Impact Study

KE Job #2026-034

PCD File No. PPR-2615

Prepared for:

TAIT & ASSOCIATES, INC
320 N. Lincoln Avenue
Loveland, CO 80537

Prepared by:



KELLAR ENGINEERING

skellar@kellarengineering.com
970.219.1602 phone



July 16, 2026

Sean K. Kellar, PE, PTOE

This document, together with the concepts and recommendations presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization from Kellar Engineering LLC shall be without liability to Kellar Engineering LLC.

Traffic Engineer's Statement

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



Sean K. Kellar, P.E. #38650

7/16/2026
Date

Developer's Statement

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

Honor Charter School

Date

TABLE OF CONTENTS

	<u>Page</u>
1.0 Introduction	5
2.0 Existing Conditions and Roadway Network	5
2.1 Recent Traffic Volumes	5
3.0 Proposed Development	8
4.0 Pedestrian and Bicycle Facilities	8
4.1 Trip Generation	8
4.2 Trip Distribution	10
4.3 Traffic Assignment	10
4.4 Short Range Total Peak Hour Traffic	10
4.5 Long Range Total Peak Hour Traffic	10
5.0 Traffic Operation Analysis	11
5.1 Analysis Methodology	11
5.2 Intersection Operational Analysis	11
5.3 Stacking Length for Parent Drop-off	11
5.4 Internal Drop-off/Pick-up Circulation	12
5.5 Sight Distance	12
5.6 Transportation Impact Fees	12
6.0 Findings	37

List of Figures:	<u>Page</u>
Figure 1: Vicinity Map	6
Figure 2: Site Plan	7
Figure 3: Recent Peak Hour Traffic	13
Figure 4: 2028 Background Peak Hour Traffic	15
Figure 5: 2045 Background Peak Hour Traffic	17
Figure 6: Trip Distribution	19
Figure 7: Site Generated Traffic	21
Figure 8: 2028 Short Range Total Peak Hour Traffic	23
Figure 9: 2045 Long Range Total Peak Hour Traffic	25

TABLE OF CONTENTS (continued)

List of Tables:	<u>Page</u>
Table 1: Trip Generation	9
Table 2: Recent Peak Hour Operations	27
Table 3: 2028 Background Peak Hour LOS Operations	29
Table 4: 2045 Background Peak Hour LOS Operations	31
Table 5: 2028 Short Range Total Peak Hour LOS Operations	33
Table 6: 2045 Long Range Total Peak Hour LOS Operations	35
Appendices:	<u>Page</u>
Appendix A: Recent Traffic Counts	39
Appendix B: Traffic Queuing Exhibit	45
Appendix C: El Paso County 2045 Roadway Classifications	46
Appendix D: Level of Service (LOS) Table	48
Appendix D2: NCDOT Calculator for On-Site Storage	49
Appendix E: Aerial Image & Street View Image	50
Appendix F: HCM Calculations (Synchro)	52

1.0 Introduction

The purpose of this Traffic Impact Study (TIS) is to identify project traffic generation characteristics, to identify potential traffic related impacts on the adjacent street system, and to develop mitigation measures required for identified traffic impacts. This TIS is for the proposed Honor Charter School project located at the northwest corner of Bent Meadows Drive and Sea Oats Drive in El Paso County, Colorado. See Figure 1: Vicinity Map. The charter school is anticipated to have approximately 621 students with no bus service provided.

Kellar Engineering LLC (KE) has prepared the TIS to document the results of the project's anticipated traffic conditions in accordance with El Paso County's requirements and to identify projected impacts to the local and regional traffic system.

2.0 Existing Conditions and Roadway Network

The project site is located at the northwest quadrant of Sea Oats Drive and Bent Grass Meadows Drive. Bent Grass Meadows Drive is an east-west roadway with: two through lanes, a continuous center left-turn lane, paved shoulders, a detached sidewalk on the south side of the road, and a posted speed of 35 mph adjacent to the project site. Bent Grass Meadows Drive is classified as a minor collector in Figure 22 of the 2045 Major Transportation Corridors Plan (MTCP). See Figure 2: Site Plan and Appendix E.

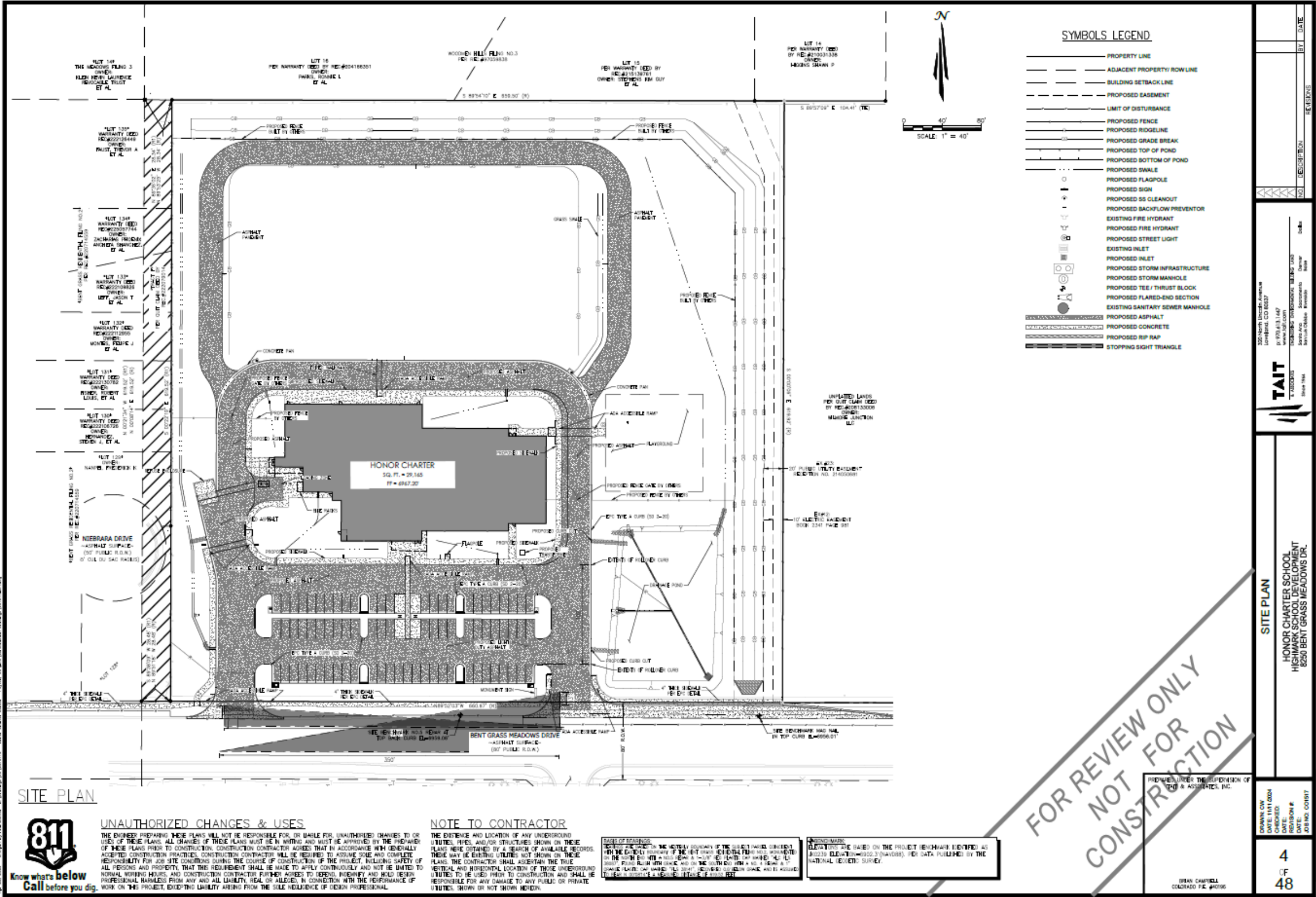
2.1 Recent Traffic Volumes

Recent peak hour traffic volume counts were conducted using data collection cameras on Tuesday, March 17, 2026 when school was in session. The traffic counts were conducted to capture the peak hours of the adjacent street traffic. These traffic counts are shown in Figure 3 with the count sheets provided in Appendix A.

Figure 1: Vicinity Map



Figure 2: Site Plan (For reference only. Provided by Civil Engineer. See Civil Drawings for more information)



3.0 Proposed Development

The proposed project consists of a K-8 charter school. See Table 1: Trip Generation and Figure 2: Site Plan.

4.0 Pedestrian and Bicycle Facilities

Sidewalk exists along the south side of Bent Grass Meadows Drive. The project will be responsible for designing and constructing the sidewalk connection on the north side of Bent Grass Meadows Drive to tie into the existing public street sidewalk to the west on Bent Grass Meadows Drive which provides for adequate pedestrian and bicycle facilities.

4.1 Trip Generation

Site generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). ITE has established trip generation rates in nationwide studies of similar land uses. For this study, KE used the *ITE 12th Edition Trip Generation Manual* average trip rates. Since traffic on the adjacent streets and intersections is highest during the weekday peak hours, this study analyzed the weekday peak hour traffic. The proposed project is anticipated to generate approximately 1,149 daily weekday trips, 646 AM total peak hour trips, 453 School PM total peak hour trips, and 99 PM total peak hour trips. See Table 1: Trip Generation.

Table 1: Trip Generation (ITE 12th Edition)

ITE Code	Land Use	Size	Average Daily Trips		AM Peak Hour Trips						School PM Peak Hour Trips						PM Peak Hour Trips					
			Rate	Total	Rate	% In	In	% Out	Out	Total	Rate	% In	In	% Out	Out	Total	Rate	% In	In	% Out	Out	Total
536	Charter School (K-8)	621 Stdnts	1.85	1,149	1.04	52%	336	48%	310	646	0.73	49%	222	51%	231	453	0.16	35%	35	65%	64	99
Total Proposed		621 Stdnts		1,149			336		310	646			222		231	453			35		64	99

KSF = Thousand Square Feet
*It was conservatively assumed in this analysis to not include additional trip reductions for students walking or bicycling to school

4.2 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns and volumes, anticipated surrounding development areas, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site generated traffic that approaches the site from a given direction and departs the site back to the original source. Figure 6 illustrates the trip distribution used for the project's analysis.

4.3 Traffic Assignment

Traffic assignment was obtained by applying the trip distributions to the estimated trip generation of the development. Figures 7 shows the site generated peak hour traffic assignment.

4.4 Short Range Total Peak Hour Traffic

Site generated peak hour traffic volumes were added to the background traffic volumes to represent the estimated traffic conditions for the short range 2028 horizon. These background (2028) and short range (2028) total traffic volumes are shown in Figures 4 and 8. The short range analysis year 2028 includes the proposed development for this project plus a 2% increase in background traffic per the CDOT Online Transportation Information System (OTIS).

4.5 Long Range Total Peak Hour Traffic

Site generated peak hour traffic volumes were added to the background traffic volumes to represent the estimated traffic conditions for the long range 2045 horizon. These long range (2045) total traffic volumes are shown in Figure 9. The long range analysis year 2045 includes the proposed development for the project plus a 2% increase in background traffic per the CDOT Online Transportation Information System (OTIS).

5.0 Traffic Operation Analysis

KE's analysis of traffic operations in the site vicinity was conducted to determine the capacity at the identified intersection. The acknowledged source for determining overall capacity is the Highway Capacity Manual. Since school is not currently in session for the summer to obtain new school PM peak hour counts, 65% of the PM peak hour volumes were used to approximate the through volumes on Bent Grass Meadows Dr during school dismissal PM peak hour. Per Texas A&M Transportation Institute, school PM dismissal peak hour traffic on the roadway generally ranges between 40% and 70% of the standard PM peak hour commuter volume.

5.1 Analysis Methodology

Capacity analysis results are listed in terms of level of service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. LOS ranges from an A (very little delay) to an F (long delays). A description of the level of service (LOS) for signalized and unsignalized intersections from the Highway Capacity Manual are provided in Appendix F.

5.2 Intersection Operational Analysis

Operational analysis was performed for the short range 2028 horizon. The calculations for this analysis are provided in Appendix F. Using the short range total traffic volumes, the project is projected to operate acceptably with all studied intersections and access points meeting El Paso County's LOS criteria. See Table 5: 2028 Short Range Total Peak Hour Operation.

5.3 Stacking Length for Parent Drop-off

The project site is designed to have vehicles enter the east access with a counter clockwise circulation around the building to maximize onsite vehicle queuing. The North Carolina Department of Transportation (NCDOT) Municipal and Transportation Assistance (MSTA) program has developed the School Traffic Calculator (NCDOT Calculator) to estimate traffic impacts, student loading demands, and vehicle queues for proposed school sites. The NCDOT Calculator has been recognized by the ITE Journal, local jurisdictions, and several Departments of Transportation as a reliable tool for calculating projected vehicles queues for proposed school

sites. Per the NCDOT Calculator, the projected average queue length is approximately 2,641'. See Appendices for NCDOT Calculator. The parent drop-off area is adequately designed to handle this stacking length. This is conservative considering that some students will be walking to school and some parents may carpool.

5.4 Internal Drop-off / Pick-up Circulation

The internal drop-off/pick-up circulation on the site is designed to have vehicles enter the east access and drive around the site with a counter clockwise circulation around the building then exiting out the west access. The internal drop-off/pick-up area is designed adequately to handle adequate vehicle stacking length onsite. One-way traffic circulation is recommended for the parent drop-off area within the parking area for efficient traffic circulation. Additionally, it is recommended that the school implement trained staff and/or trained volunteers (wearing proper PPE) to help direct traffic during the peak drop-off/pick-up times.

5.5 Sight Distance

Per Table 2-21 of the El Paso County Engineering Criteria Manual (ECM), a 40 mph design speed has a minimum required intersection sight distance of 445 feet. The sight distance for the project's proposed access points were reviewed. Based upon review of available data (survey, aerial photography, and street view photos), the sight distance at the proposed access points to Bent Grass Meadows Drive meets the criteria in Table 2-21 of the El Paso County ECM.

5.6 Transportation Impact Fees

The developer is aware of the Transportation Impact Fees and will coordinate with El Paso County on the payment of these fees.

Figure 3: Recent Peak Hour Traffic

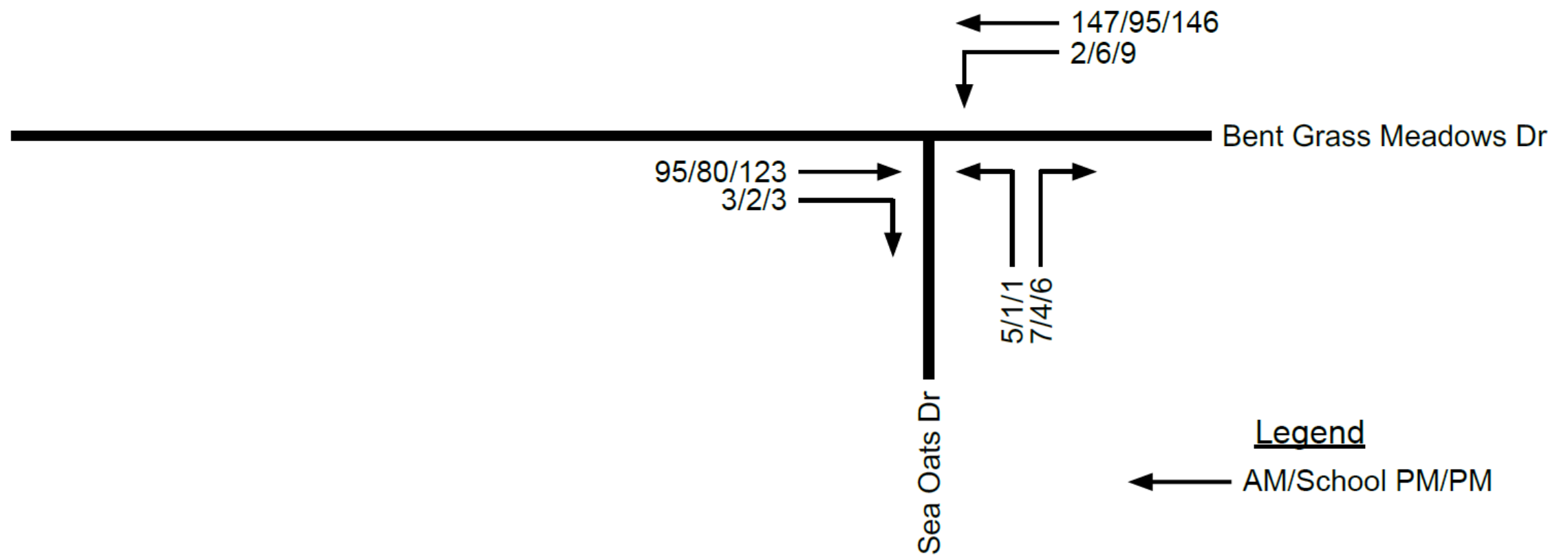


Figure 3: Recent Peak Hour Traffic (Continued...)

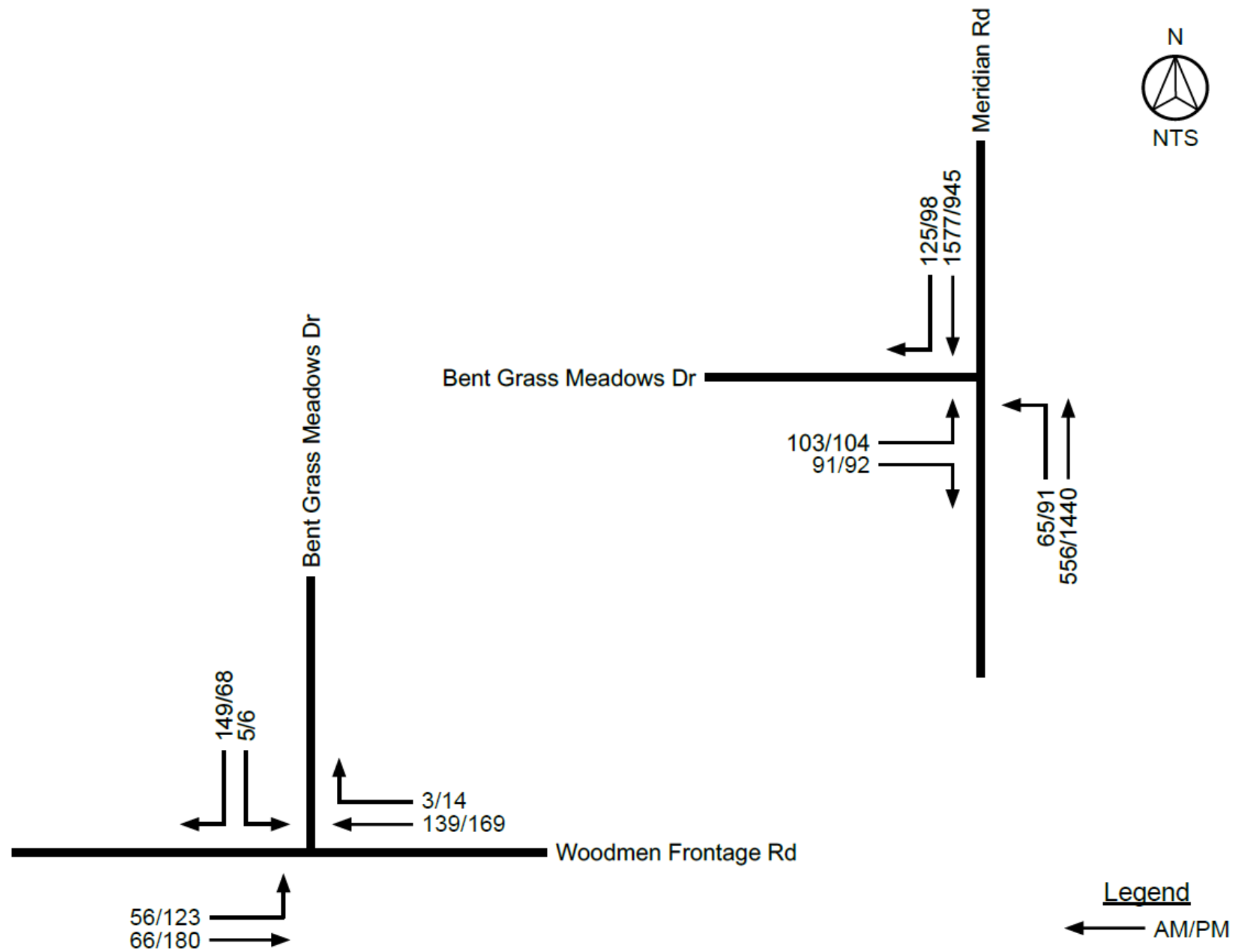


Figure 4: 2028 Background Traffic

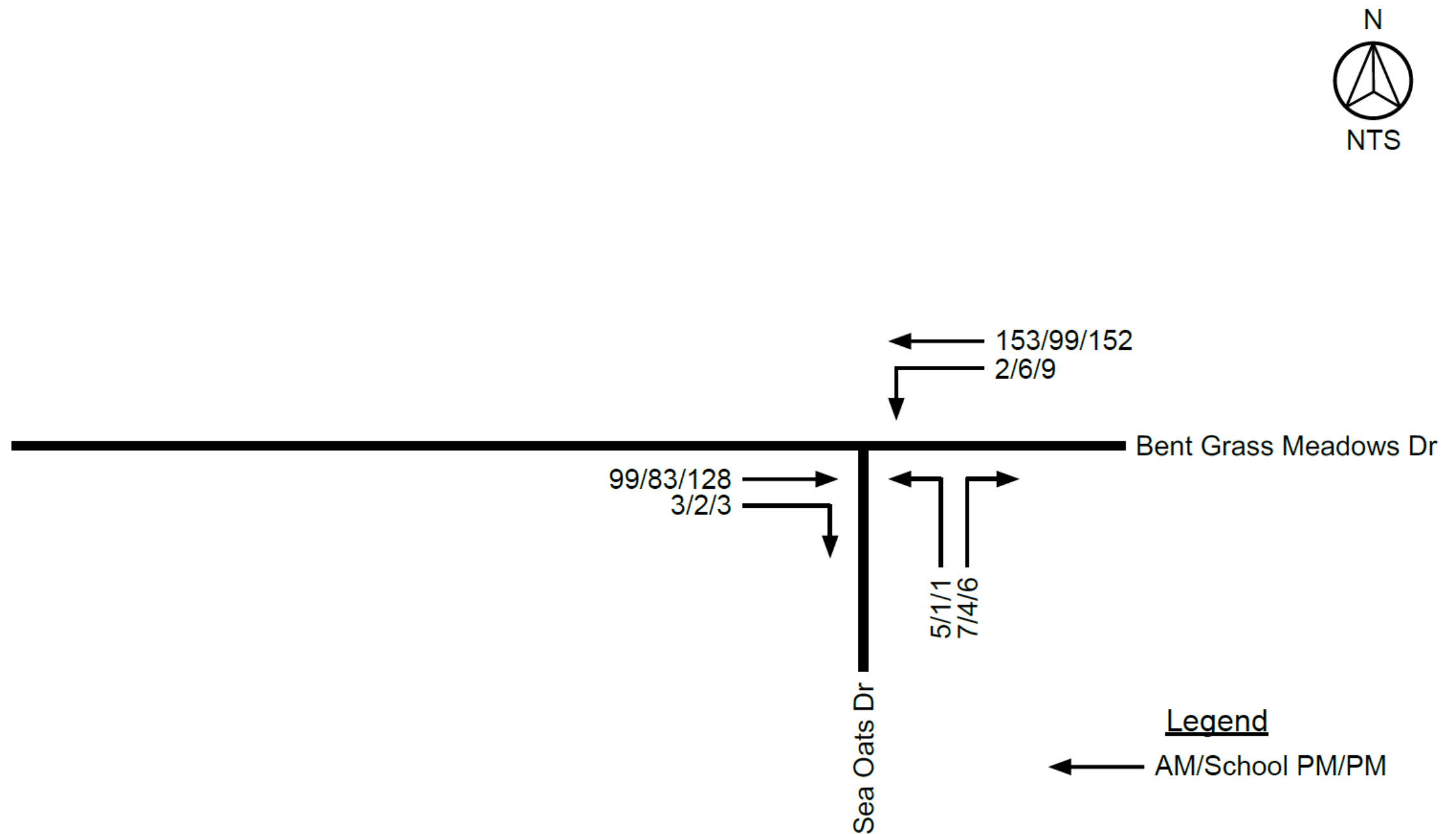


Figure 4: 2028 Background Traffic (Continued...)

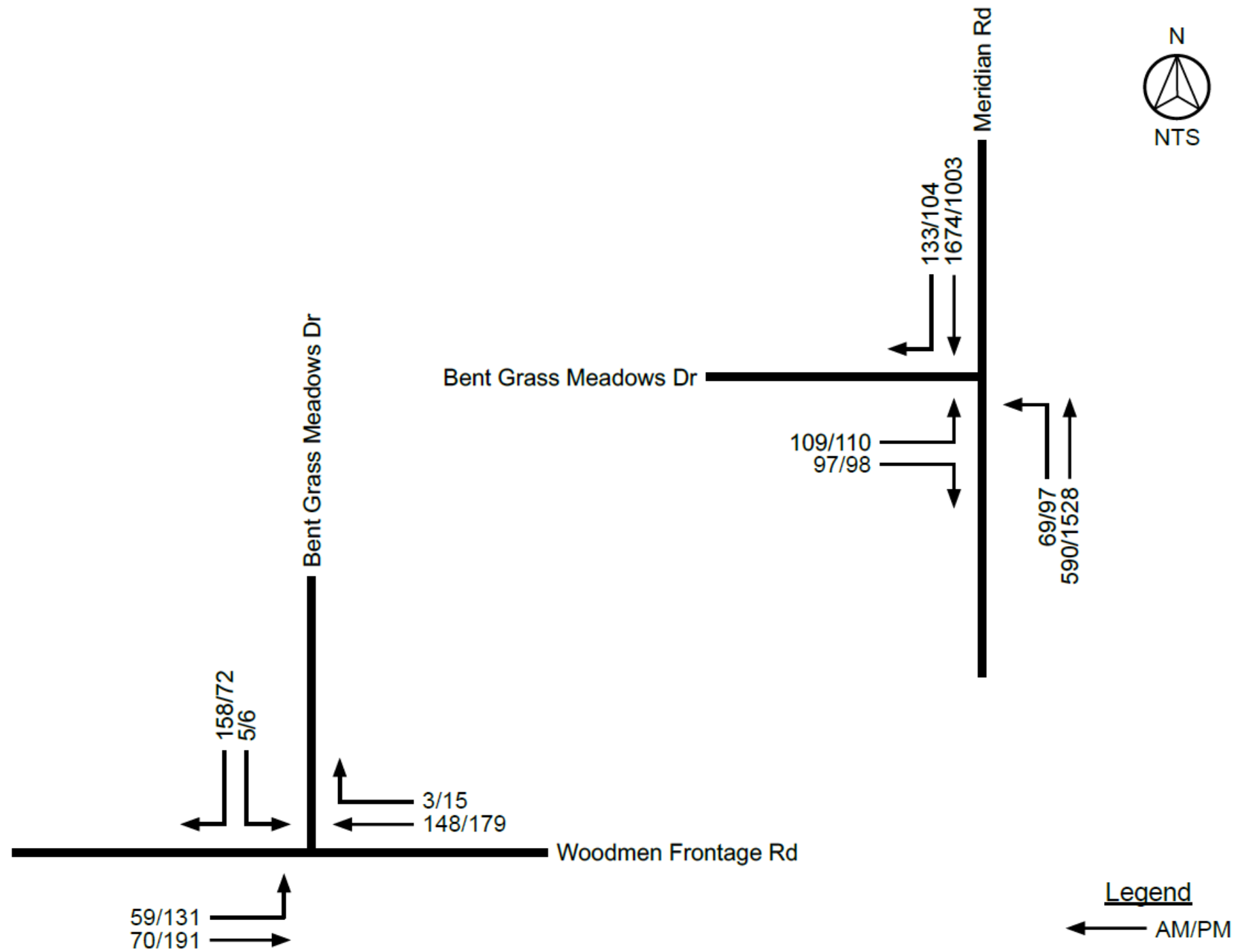


Figure 5: 2045 Background Traffic

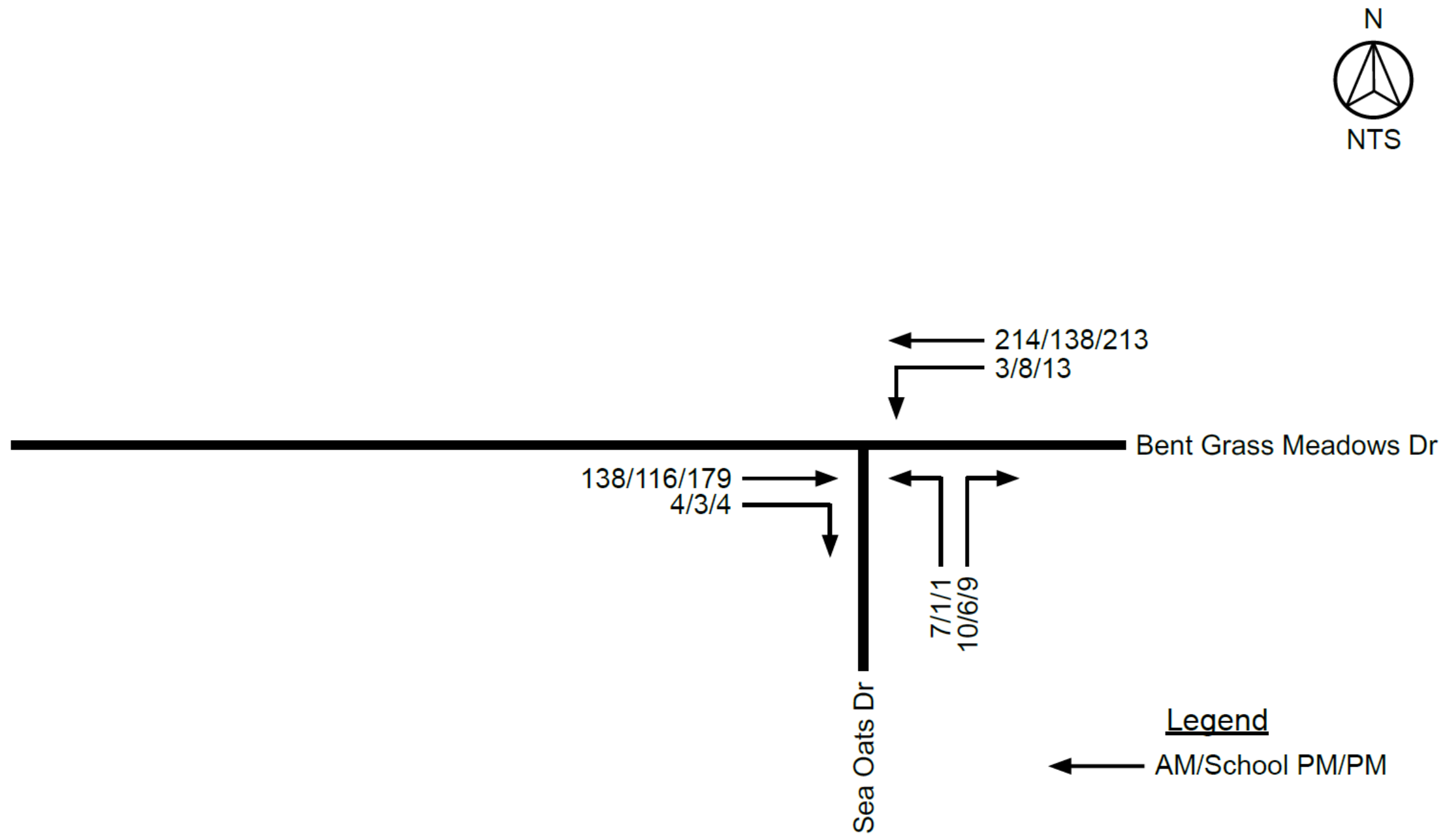


Figure 5: 2045 Background Traffic (Continued...)

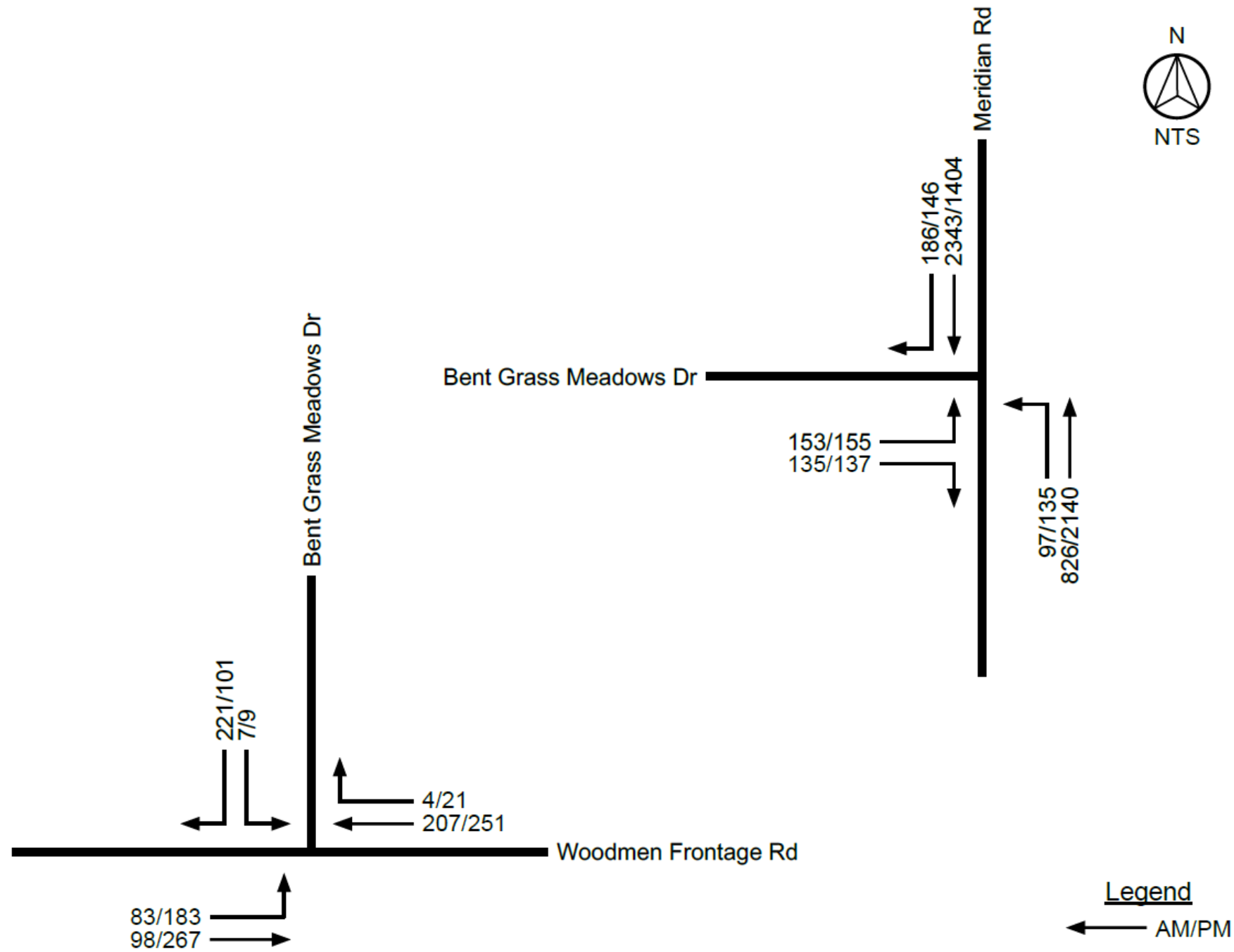


Figure 6: Trip Distribution

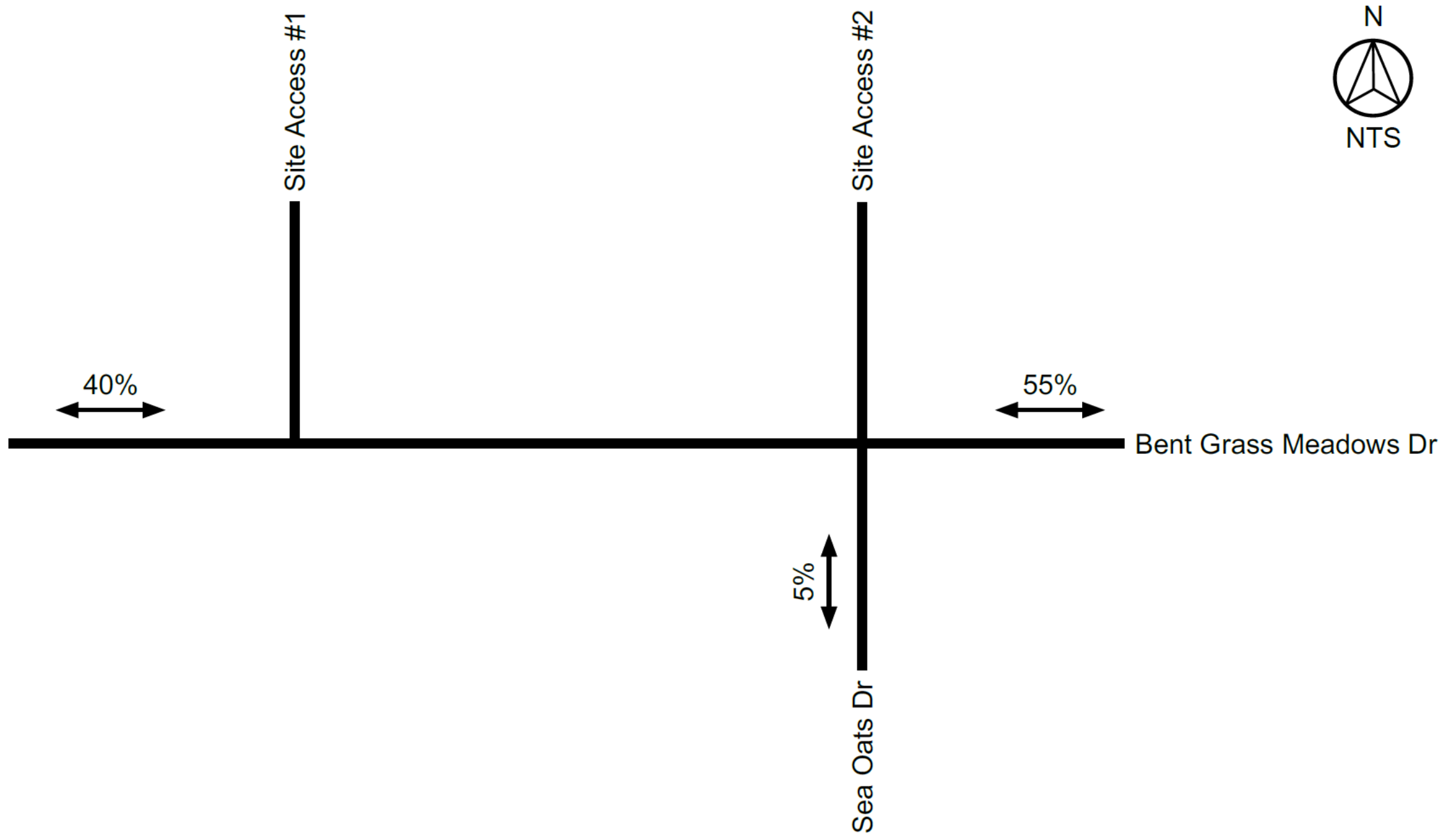


Figure 6: Trip Distribution (Continued...)



Figure 7: Site Generated Traffic

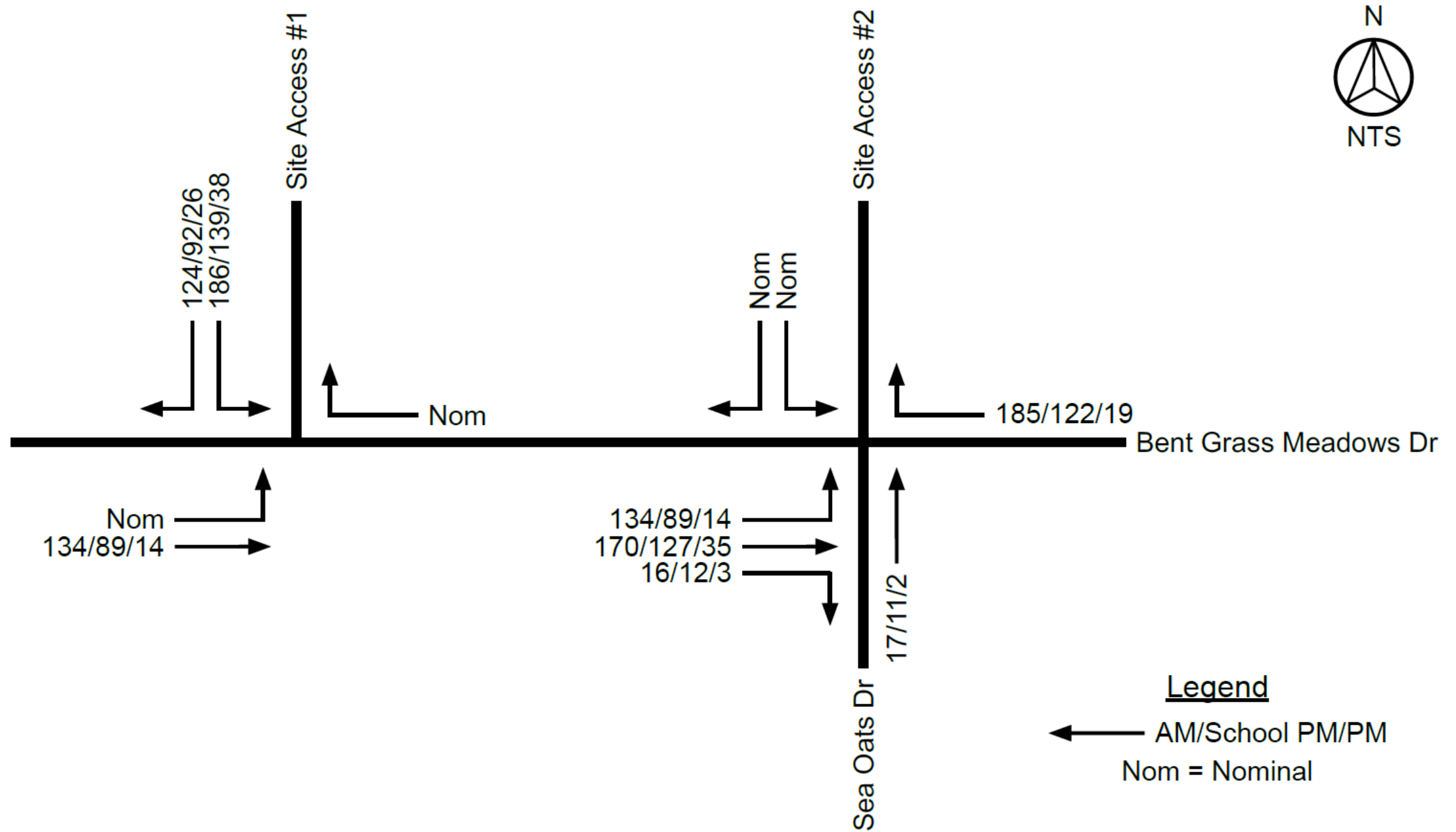


Figure 7: Site Generated Traffic (Continued...)



Figure 8: 2028 Short Range Total Traffic

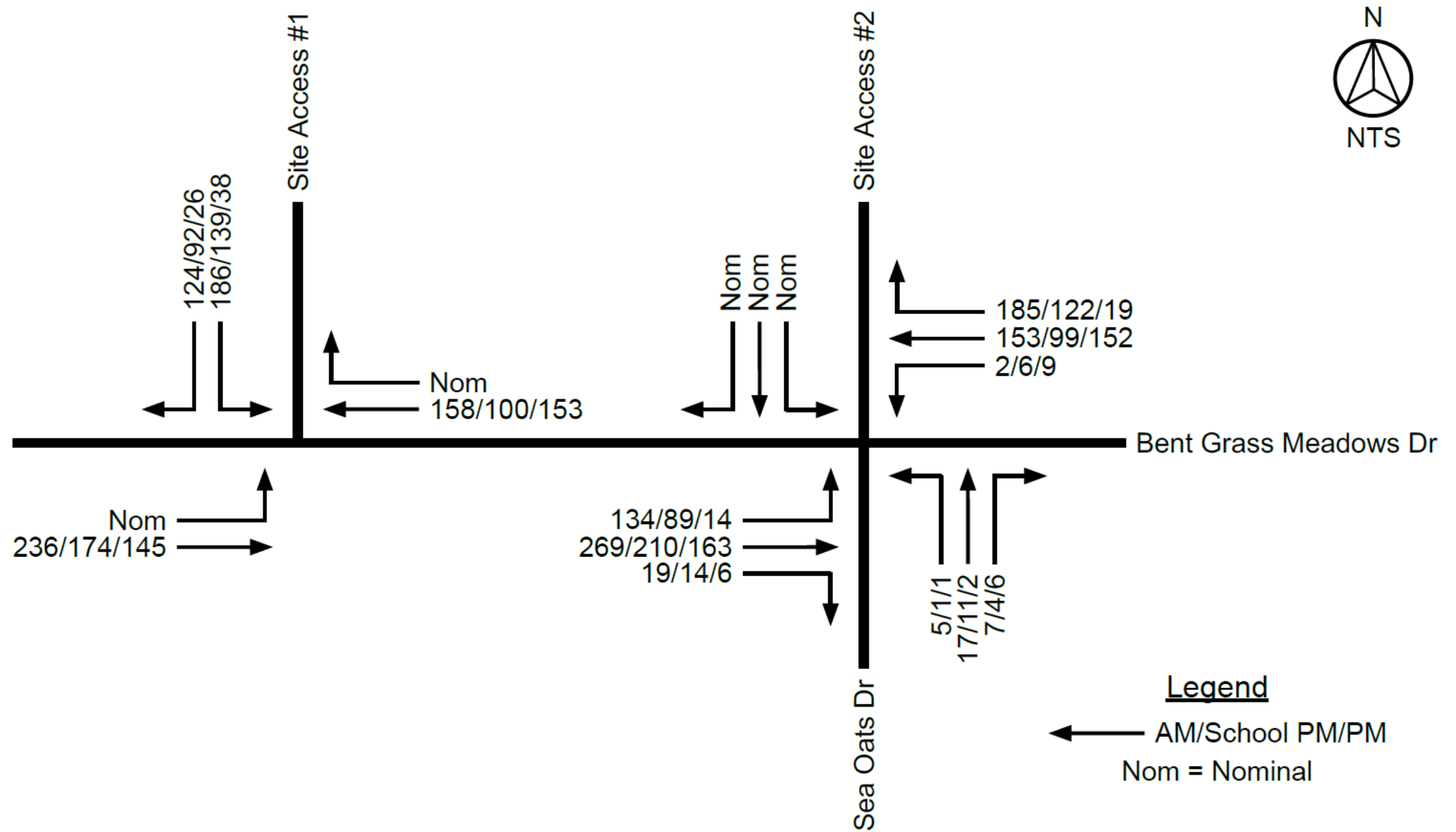


Figure 8: 2028 Short Range Total Traffic (Continued...)

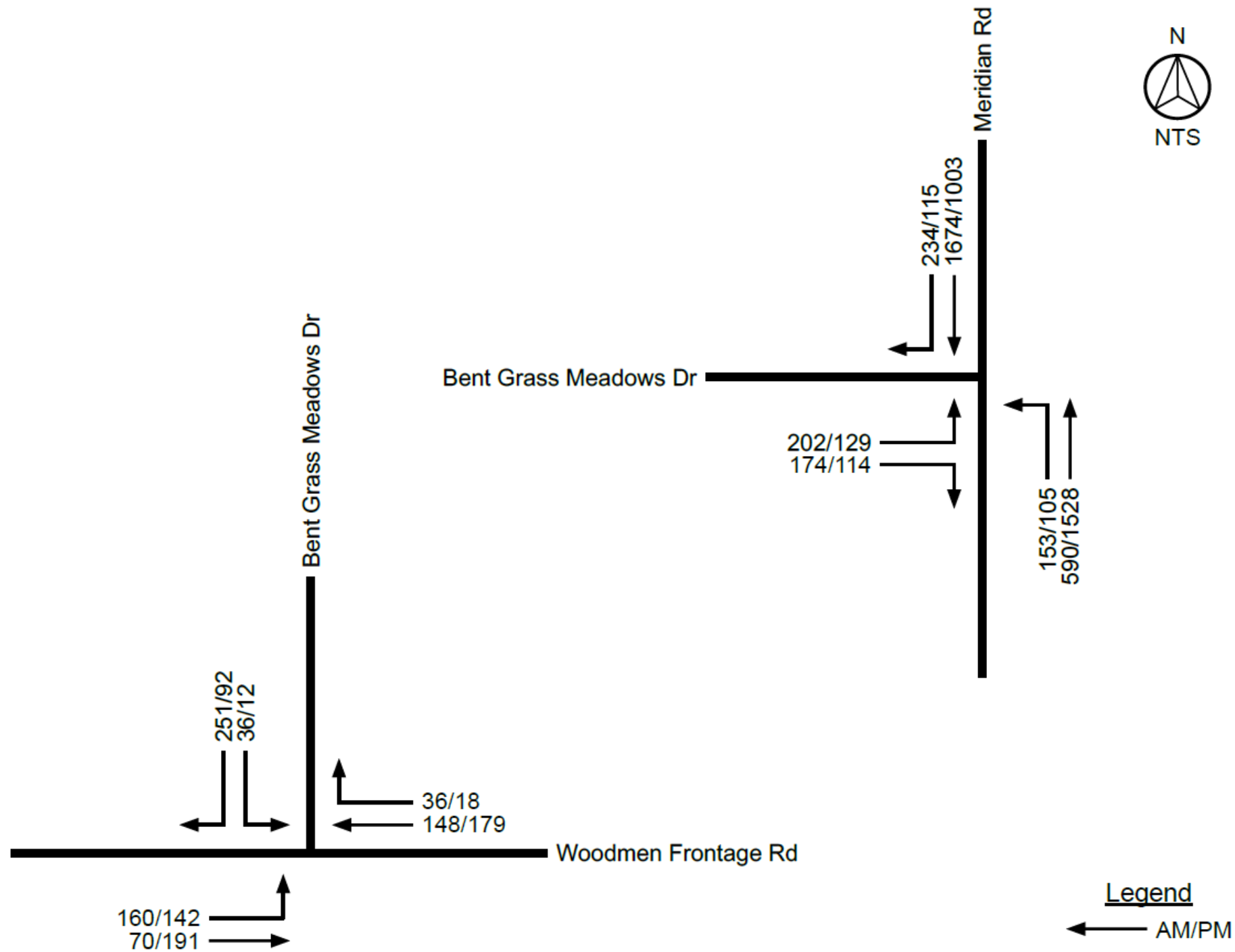


Figure 9: 2045 Long Range Total Traffic

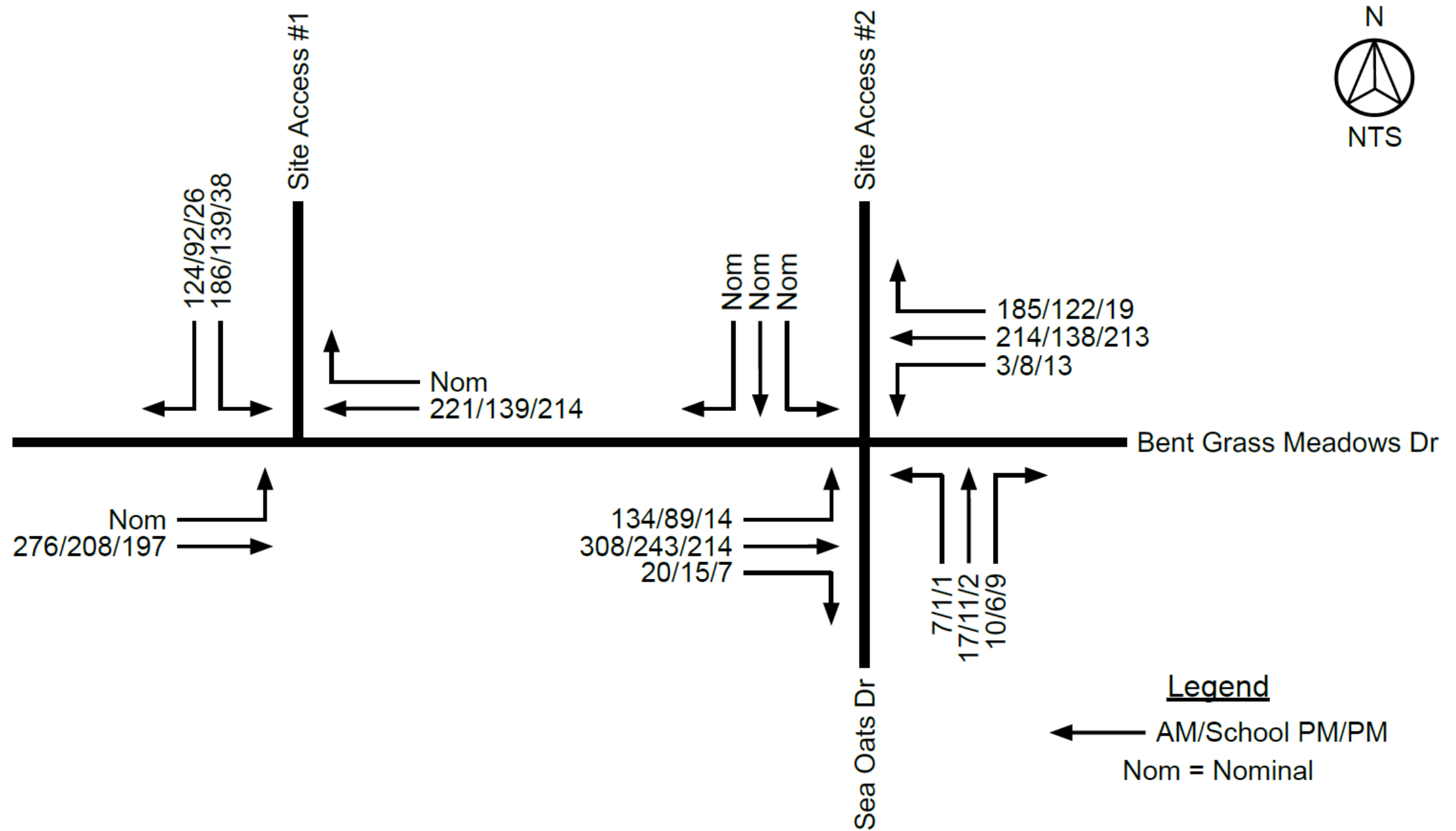


Figure 9: 2045 Long Range Total Traffic (Continued...)

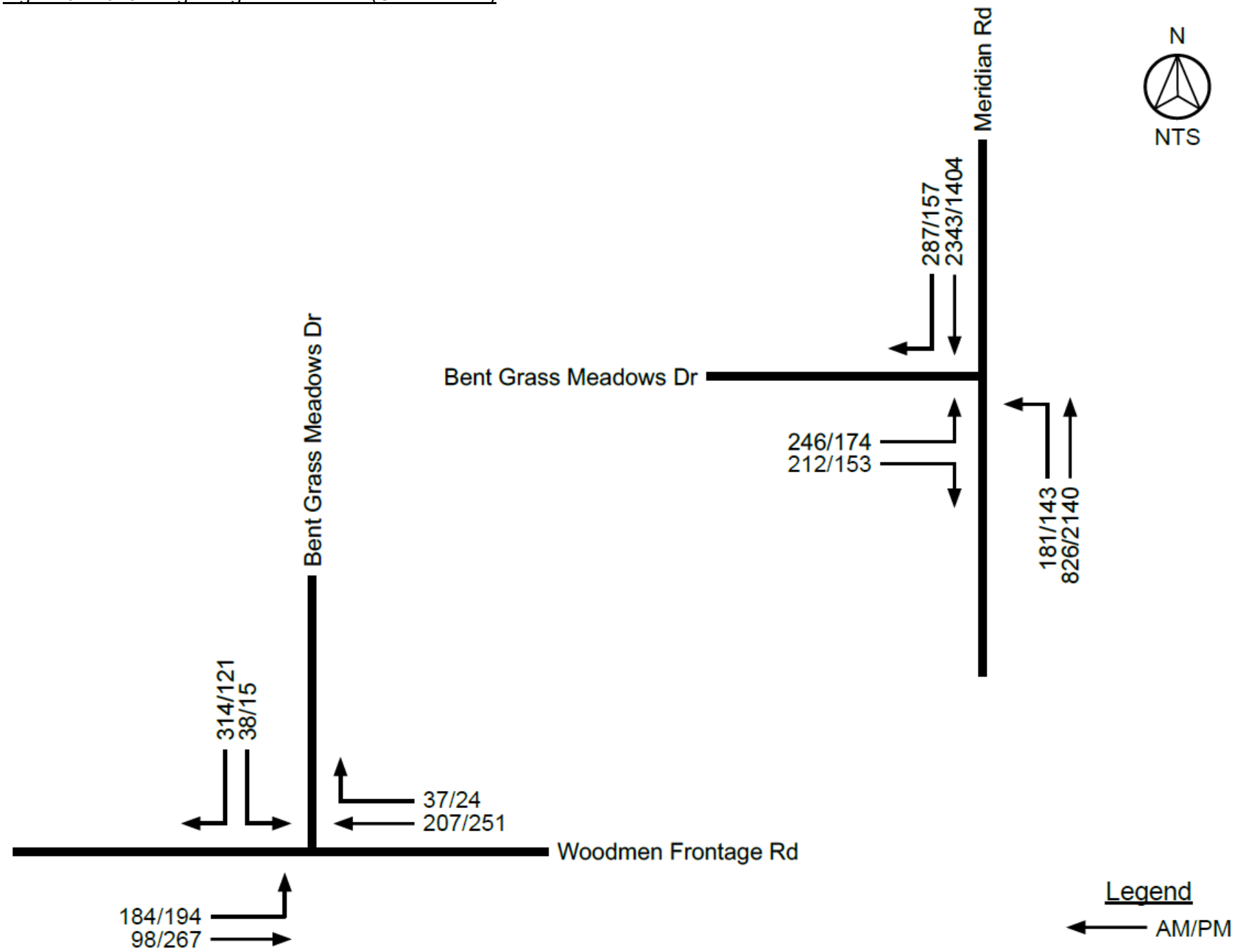


Table 2: Recent Peak Hour Operations

Intersection	Movement	Level of Service (LOS)		
		AM	School PM	PM
		LOS	LOS	LOS
Sea Oats Dr/Bent Grass Meadows Dr				
	EB Thru/Right	A	A	A
	EB Approach	A	A	A
	WB Left	A	A	A
	WB Thru	A	A	A
	WB Approach	A	A	A
	NB Left/Right	A	A	A
	NB Approach	A	A	A

Table 2: Recent Peak Hour Operations (Continued...)

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Woodman Frontage Rd/ Bent Grass Meadows Dr			
	EB Left	A	A
	EB Thru	A	A
	EB Approach	A	A
	WB Thru/Right	A	A
	WB Approach	A	A
	SB Left	B	B
	SB Right	A	A
	SB Approach	B	B

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Meridian Road/Bent Grass Meadows Dr			
	EB Left	D	C
	EB Right	A	A
	EB Approach	D	C
	NB Left	A	A
	NB Thru	A	A
	NB Approach	A	A
	SB Thru	A	A
	SB Right	A	A
	SB Approach	A	A
	Overall	A	A

Table 3: 2028 Background Peak Hour Operations

Intersection	Movement	Level of Service (LOS)		
		AM	School PM	PM
		LOS	LOS	LOS
Sea Oats Dr/Bent Grass Meadows Dr				
	EB Thru/Right	A	A	A
	EB Approach	A	A	A
	WB Left	A	A	A
	WB Thru	A	A	A
	WB Approach	A	A	A
	NB Left/Right	A	A	A
	NB Approach	A	A	A

Table 3: 2028 Background Peak Hour Operations (Continued...)

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Woodman Frontage Rd/ Bent Grass Meadows Dr			
	EB Left	A	A
	EB Thru	A	A
	EB Approach	A	A
	WB Thru/Right	A	A
	WB Approach	A	A
	SB Left	B	C
	SB Right	B	B
	SB Approach	B	B

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Meridian Road/Bent Grass Meadows Dr			
	EB Left	D	C
	EB Right	A	A
	EB Approach	D	C
	NB Left	A	A
	NB Thru	A	A
	NB Approach	A	A
	SB Thru	A	A
	SB Right	A	A
	SB Approach	A	A
	Overall	A	A

Table 4: 2045 Background Peak Hour Operations

Intersection	Movement	Level of Service (LOS)		
		AM	School PM	PM
		LOS	LOS	LOS
Sea Oats Dr/Bent Grass Meadows Dr				
	EB Thru/Right	A	A	A
	EB Approach	A	A	A
	WB Left	A	A	A
	WB Thru	A	A	A
	WB Approach	A	A	A
	NB Left/Right	A	A	A
	NB Approach	A	A	A

Table 4: 2045 Background Peak Hour Operations (Continued...)

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Woodman Frontage Rd/ Bent Grass Meadows Dr			
	EB Left	A	A
	EB Thru	A	A
	EB Approach	A	A
	WB Thru/Right	A	A
	WB Approach	A	A
	SB Left	B	C
	SB Right	B	B
	SB Approach	B	B

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Meridian Road/Bent Grass Meadows Dr			
	EB Left	E	D
	EB Right	A	A
	EB Approach	E	D
	NB Left	D	A
	NB Thru	A	A
	NB Approach	A	A
	SB Thru	B	A
	SB Right	A	A
	SB Approach	B	A
	Overall	B	A

Table 5: 2028 Short Range Total Peak Hour Operations

Intersection	Movement	Level of Service (LOS)		
		AM	School PM	PM
		LOS	LOS	LOS
Site Access #2/Sea Oats Dr/Bent Grass Meadows Dr				
	EB Left	A	A	A
	EB Thru/Right	A	A	A
	EB Approach	A	A	A
	WB Left	A	A	A
	WB Thru	A	A	A
	WB Right	A	A	A
	WB Approach	A	A	A
	NB Left/Thru/Right	C	B	B
	NB Approach	C	B	B
	SB Left/Thru/Right	A	A	A
	SB Approach	A	A	A

Intersection	Movement	Level of Service (LOS)		
		AM	School PM	PM
		LOS	LOS	LOS
Site Access #1/Bent Grass Meadows Dr				
	EB Left	A	A	A
	EB Thru	A	A	A
	EB Approach	A	A	A
	WB Thru/Right	A	A	A
	WB Approach	A	A	A
	SB Left	B	B	B
	SB Right	A	A	A
	SB Approach	B	B	B

Table 5: 2028 Short Range Total Peak Hour Operations (Continued...)

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Woodman Frontage Rd/ Bent Grass Meadows Dr			
	EB Left	A	A
	EB Thru	A	A
	EB Approach	A	A
	WB Thru/Right	A	A
	WB Approach	A	A
	SB Left	B	C
	SB Right	B	A
	SB Approach	B	B

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Meridian Road/Bent Grass Meadows Dr			
	EB Left	D	C
	EB Right	A	A
	EB Approach	D	C
	NB Left	B	A
	NB Thru	A	A
	NB Approach	A	A
	SB Thru	B	A
	SB Right	A	A
	SB Approach	A	A
	Overall	B	A

Table 6: 2045 Long Range Total Peak Hour Operations

Intersection	Movement	Level of Service (LOS)		
		AM	School PM	PM
		LOS	LOS	LOS
Site Access #2/Sea Oats Dr/Bent Grass Meadows Dr				
	EB Left	A	A	A
	EB Thru/Right	A	A	A
	EB Approach	A	A	A
	WB Left	A	A	A
	WB Thru	A	A	A
	WB Right	A	A	A
	WB Approach	A	A	A
	NB Left/Thru/Right	C	B	B
	NB Approach	C	B	B
	SB Left/Thru/Right	A	A	A
	SB Approach	A	A	A

Intersection	Movement	Level of Service (LOS)		
		AM	School PM	PM
		LOS	LOS	LOS
Site Access #1/Bent Grass Meadows Dr				
	EB Left	A	A	A
	EB Thru	A	A	A
	EB Approach	A	A	A
	WB Thru/Right	A	A	A
	WB Approach	A	A	A
	SB Left	C	B	B
	SB Right	B	A	A
	SB Approach	B	B	B

Table 6: 2045 Long Range Total Peak Hour Operations (Continued...)

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Woodman Frontage Rd/ Bent Grass Meadows Dr			
	EB Left	A	A
	EB Thru	A	A
	EB Approach	A	A
	WB Thru/Right	A	A
	WB Approach	A	A
	SB Left	C	C
	SB Right	B	B
	SB Approach	B	B

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Meridian Road/Bent Grass Meadows Dr			
	EB Left	E	D
	EB Right	A	A
	EB Approach	E	D
	NB Left	E	A
	NB Thru	A	A
	NB Approach	B	A
	SB Thru	C	A
	SB Right	A	A
	SB Approach	C	A
	Overall	C	A

6.0 Findings

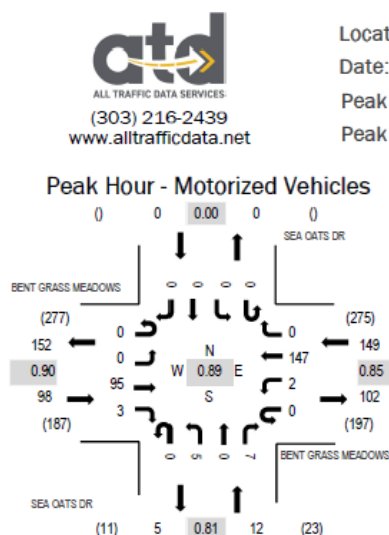
Based upon the analysis in this study, the proposed project located at the northwest corner of Sea Oats Drive and Bent Grass Meadows Drive, El Paso County, CO will be able to meet El Paso County's requirements for traffic at the time of development.

The findings of the TIS are summarized below:

- The proposed project is anticipated to generate a maximum of approximately 1,149 daily trips, 646 AM total peak hour trips, 453 School PM total peak hour trips and 99 PM total peak hour trips.
- The project complies with El Paso County Engineering Criteria Manual (ECM) Levels of Service (LOS) requirements for traffic.
- The study intersections will operate acceptably and comply with the County's intersection levels of service (LOS) requirements with the development of the project and background traffic in the 2028 Short Range Total and 2045 Long Range Total future.
- Per the ECM Section 2.3.7.D.2, due to the projected AM peak hour turning volumes, a westbound right-turn lane is warranted at the Site Access #2/Bent Grass Meadows Drive intersection. This right-turn lane should have a minimum total length of 320' (120' bay taper + 200' full width).
- It is recommended that the school have on-site manual traffic control conducted by trained staff (wearing proper PPE) or by certified traffic control technicians directing traffic to assist with traffic circulation during peak student drop-off and pick-up times.

APPENDICES:

Appendix A: Recent Traffic Counts



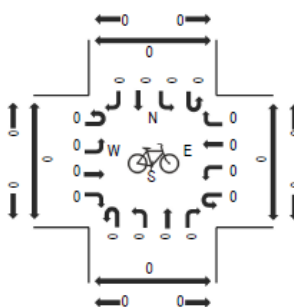
Location: 1 SEA OATS DR & BENT GRASS MEADOWS AM

Date: Tuesday, March 17, 2026

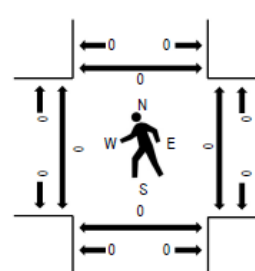
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BENT GRASS MEADOWS Eastbound				BENT GRASS MEADOWS Westbound				SEA OATS DR Northbound				SEA OATS DR Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	29	0	0	0	27	0	0	0	3	0	0	0	0	0	59	255	0	0	0	0
7:15 AM	0	0	25	1	0	0	44	0	0	1	2	0	0	0	0	0	73	259	0	0	0	0
7:30 AM	0	0	27	1	0	0	38	0	0	1	0	2	0	0	0	0	69	236	0	0	0	0
7:45 AM	0	0	20	1	0	0	29	0	0	3	0	1	0	0	0	0	54	223	0	0	0	0
8:00 AM	0	0	23	0	0	2	36	0	0	0	0	2	0	0	0	0	63	230	0	0	0	0
8:15 AM	0	0	13	0	0	0	36	0	0	1	0	0	0	0	0	0	50		0	0	0	0
8:30 AM	0	0	22	2	0	1	28	0	0	0	0	3	0	0	0	0	56		0	0	0	0
8:45 AM	0	0	21	2	0	1	33	0	0	0	0	4	0	0	0	0	61		0	0	0	0
Count Total	0	0	180	7	0	4	271	0	0	6	0	17	0	0	0	0	485		0	0	0	0
Peak Hour	0	0	95	3	0	2	147	0	0	5	0	7	0	0	0	0	259		0	0	0	0

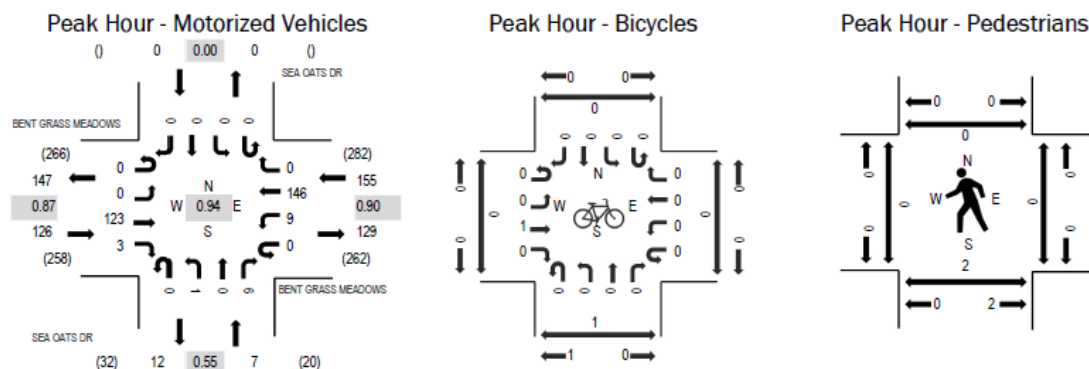


Location: 1 SEA OATS DR & BENT GRASS MEADOWS PM

Date: Tuesday, March 17, 2026

Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM



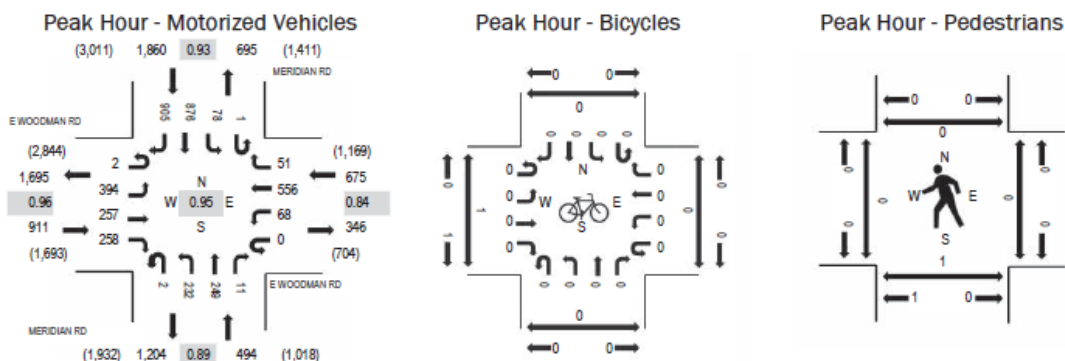
Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BENT GRASS MEADOWS Eastbound				BENT GRASS MEADOWS Westbound				SEA OATS DR Northbound				SEA OATS DR Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	30	5	0	3	33	0	0	1	0	3	0	0	0	0	75	286	0	0	1	0
4:15 PM	0	0	31	1	0	1	30	0	0	1	0	4	0	0	0	0	68	283	0	0	0	0
4:30 PM	0	0	33	1	0	1	42	0	0	0	0	0	0	0	0	0	77	288	0	0	0	0
4:45 PM	0	0	25	0	0	3	36	0	0	1	0	1	0	0	0	0	66	275	0	0	0	0
5:00 PM	0	0	27	2	0	3	37	0	0	0	0	3	0	0	0	0	72	274	0	0	2	0
5:15 PM	0	0	38	0	0	2	31	0	0	0	0	2	0	0	0	0	73		0	0	0	0
5:30 PM	0	0	30	2	0	1	28	0	0	0	0	3	0	0	0	0	64		0	0	1	0
5:45 PM	0	0	31	2	0	5	26	0	0	0	0	1	0	0	0	0	65		0	0	0	0
Count Total	0	0	245	13	0	19	263	0	0	3	0	17	0	0	0	0	560		0	0	4	0
Peak Hour	0	0	123	3	0	9	146	0	0	1	0	6	0	0	0	0	288		0	0	2	0



Location: 1 MERIDIAN RD & E WOODMAN RD AM
 Date: Wednesday, February 26, 2025
 Peak Hour: 07:00 AM - 08:00 AM
 Peak 15-Minutes: 07:30 AM - 07:45 AM



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E WOODMAN RD Eastbound				E WOODMAN RD Westbound				MERIDIAN RD Northbound				MERIDIAN RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	86	55	61	0	17	155	12	0	52	58	3	0	6	194	247	946	3,940	0	0	0	0
7:15 AM	0	100	61	81	0	22	124	10	0	67	63	3	1	16	236	246	1,030	3,755	0	0	0	0
7:30 AM	0	98	67	65	0	18	171	11	0	59	75	1	0	23	228	222	1,038	3,512	0	0	0	0
7:45 AM	2	110	74	51	0	11	106	18	2	54	53	4	0	33	218	190	926	3,215	0	0	1	0
8:00 AM	1	97	67	52	0	13	88	10	0	52	93	4	0	16	125	143	761	2,951	0	0	0	0
8:15 AM	2	99	64	38	0	10	104	16	0	49	74	6	0	22	151	152	787		0	0	1	0
8:30 AM	1	76	73	37	0	11	113	15	1	51	66	6	0	22	113	156	741		0	0	0	0
8:45 AM	2	89	50	34	0	19	87	8	3	36	73	10	0	18	121	112	662		0	0	0	0
Count Total	8	755	511	419	0	121	948	100	6	420	555	37	1	156	1,386	1,468	6,891		0	0	2	0
Peak Hour	2	394	257	258	0	68	556	51	2	232	249	11	1	78	876	905	3,940		0	0	1	0

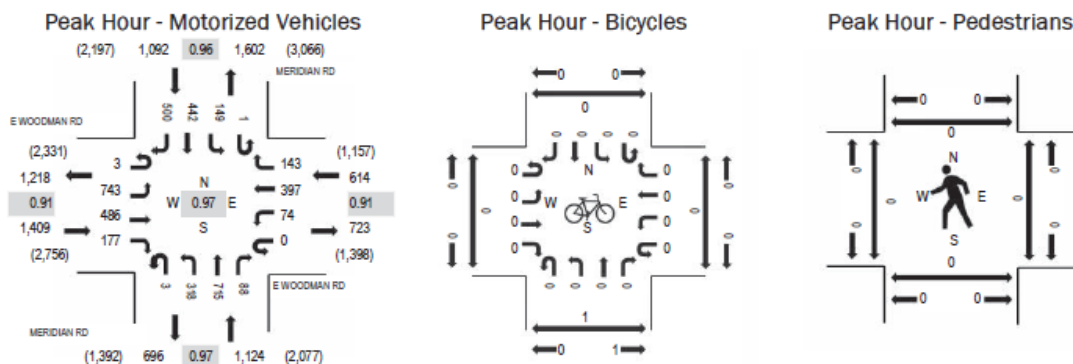


Location: 1 MERIDIAN RD & E WOODMAN RD PM

Date: Wednesday, February 26, 2025

Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E WOODMAN RD Eastbound				E WOODMAN RD Westbound				MERIDIAN RD Northbound				MERIDIAN RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	1	183	117	39	0	17	86	38	1	77	189	23	1	29	128	134	1,063	4,239	0	0	0	0
4:15 PM	0	191	118	44	0	20	109	29	1	81	169	31	0	44	97	110	1,044	4,207	0	0	0	0
4:30 PM	2	204	132	51	0	15	92	37	0	79	180	16	0	40	125	119	1,092	4,201	0	0	0	0
4:45 PM	0	165	119	43	0	22	110	39	1	81	177	18	0	36	92	137	1,040	4,125	0	0	0	0
5:00 PM	1	167	127	52	0	19	98	34	1	45	172	24	0	32	114	145	1,031	3,948	0	0	1	0
5:15 PM	2	173	117	43	0	25	91	31	0	74	168	20	0	38	109	147	1,038		0	0	0	0
5:30 PM	1	221	119	56	0	14	74	32	0	55	152	22	0	31	116	123	1,016		0	0	0	0
5:45 PM	3	135	93	37	1	17	81	26	1	51	153	15	0	36	92	122	863		0	0	0	1
Count Total	10	1,439	942	365	1	149	741	266	5	543	1,360	169	1	286	873	1,037	8,187		0	0	1	1
Peak Hour	3	743	486	177	0	74	397	143	3	318	715	88	1	149	442	500	4,239		0	0	0	0

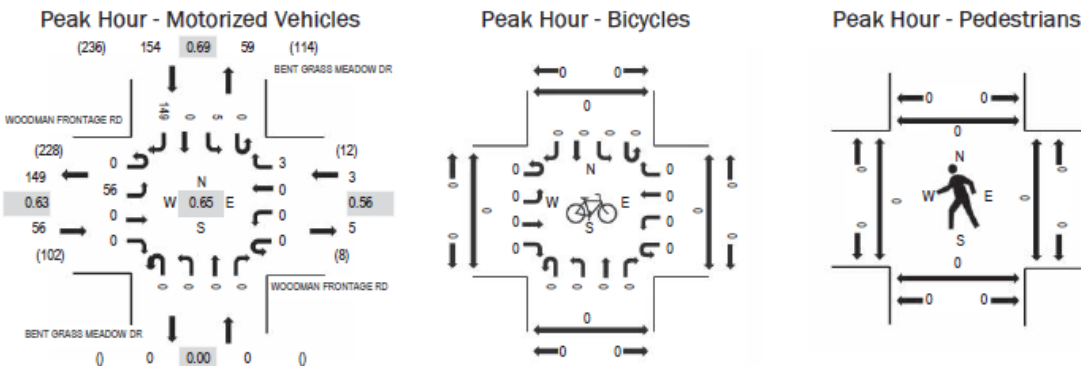


Location: 3 BENT GRASS MEADOW DR & WOODMAN FRONTAGE RD AM

Date: Wednesday, February 26, 2025

Peak Hour: 07:00 AM - 08:00 AM

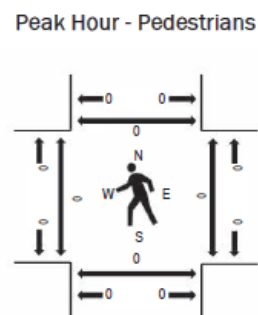
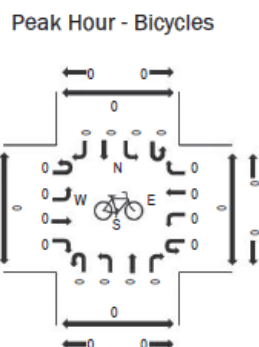
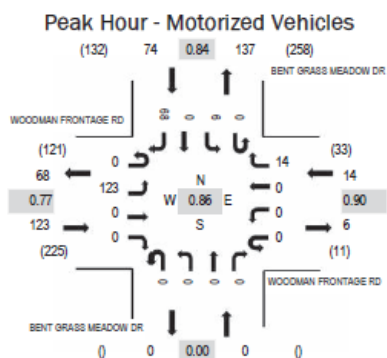
Peak 15-Minutes: 07:30 AM - 07:45 AM



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WOODMAN FRONTAGE RD Eastbound				WOODMAN FRONTAGE RD Westbound				BENT GRASS MEADOW DR Northbound				BENT GRASS MEADOW DR Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn Left Thru Right				U-Turn Left Thru Right				U-Turn Left Thru Right				U-Turn Left Thru Right						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
7:00 AM	0	3	0	0	0	0	0	1	0	0	0	0	0	1	0	33	38	213	0	0	0	0
7:15 AM	0	13	0	0	0	0	0	1	0	0	0	0	0	1	0	37	52	212	0	0	0	0
7:30 AM	0	26	0	0	0	0	0	0	0	0	0	0	0	3	0	53	82	189	0	0	0	0
7:45 AM	0	14	0	0	0	0	0	1	0	0	0	0	0	0	0	26	41	153	0	0	0	0
8:00 AM	0	12	0	0	0	0	0	2	0	0	0	0	0	0	0	23	37	137	0	0	0	0
8:15 AM	0	10	0	0	0	0	0	2	0	0	0	0	0	1	0	16	29		0	0	0	0
8:30 AM	0	12	0	0	0	0	0	4	0	0	0	0	0	1	0	29	46		0	0	0	0
8:45 AM	0	12	0	0	0	0	0	1	0	0	0	0	0	1	0	11	25		0	0	0	0
Count Total	0	102	0	0	0	0	0	12	0	0	0	0	0	8	0	228	350		0	0	0	0
Peak Hour	0	56	0	0	0	0	0	3	0	0	0	0	0	5	0	149	213		0	0	0	0

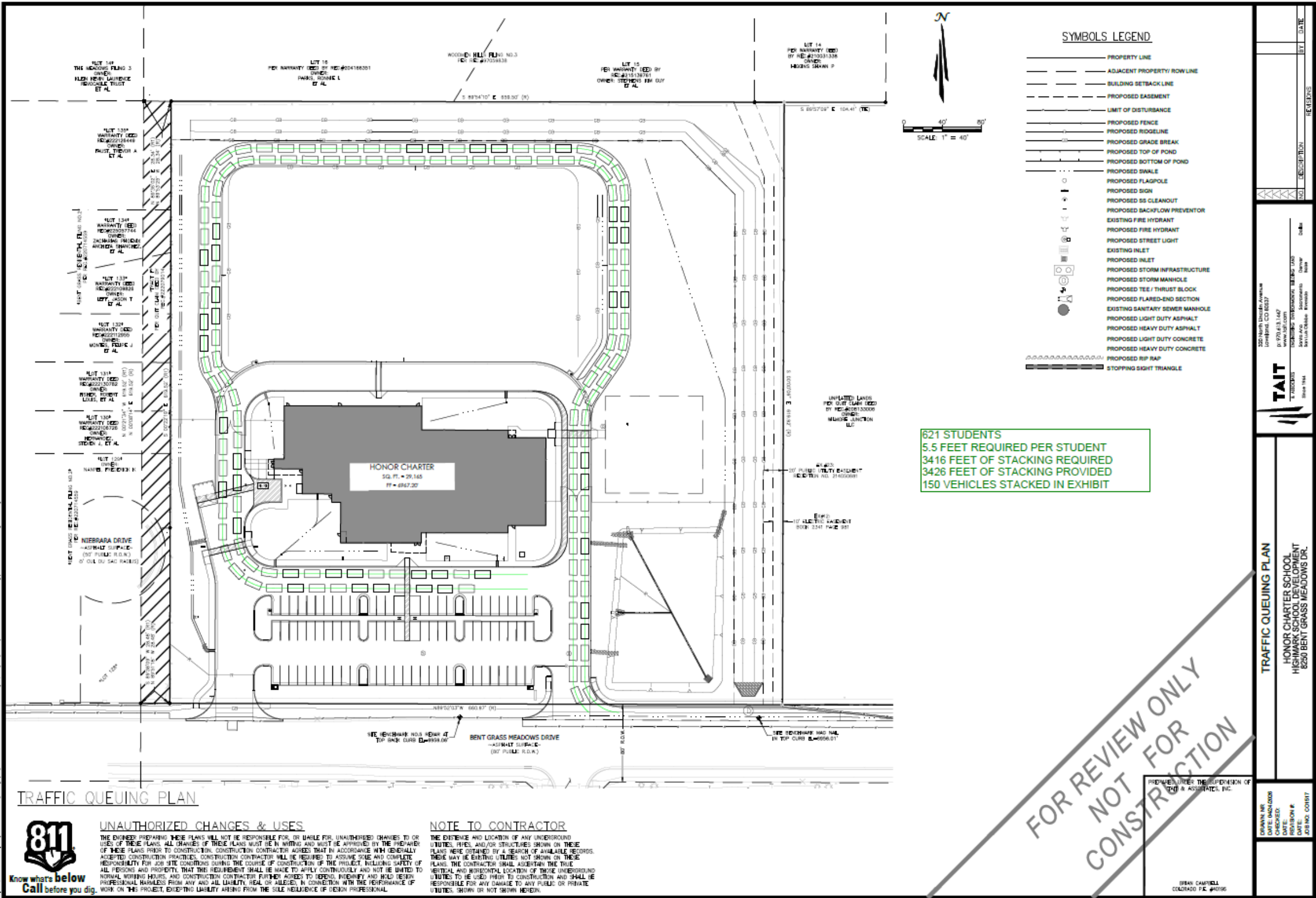


Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WOODMAN FRONTAGE RD Eastbound				WOODMAN FRONTAGE RD Westbound				BENT GRASS MEADOW DR Northbound				BENT GRASS MEADOW DR Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
4:00 PM	0	28	0	0	0	0	0	0	4	0	0	0	0	0	2	0	13	47	187	0	0	0	0
4:15 PM	0	19	0	0	0	0	0	0	6	0	0	0	0	0	0	0	11	36	186	0	0	0	0
4:30 PM	0	31	0	0	0	0	0	0	4	0	0	0	0	0	1	0	16	52	211	0	0	0	0
4:45 PM	0	29	0	0	0	0	0	0	1	0	0	0	0	0	1	0	21	52	206	0	0	0	0
5:00 PM	0	23	0	0	0	0	0	0	4	0	0	0	0	0	4	0	15	46	203	0	0	0	0
5:15 PM	0	40	0	0	0	0	0	0	5	0	0	0	0	0	0	0	16	61		0	0	0	0
5:30 PM	0	26	0	0	0	0	0	0	4	0	0	0	0	0	2	0	15	47		0	0	0	0
5:45 PM	0	29	0	0	0	0	0	0	5	0	0	0	0	0	1	0	14	49		0	0	0	0
Count Total	0	225	0	0	0	0	0	0	33	0	0	0	0	0	11	0	121	390		0	0	0	0
Peak Hour	0	123	0	0	0	0	0	0	14	0	0	0	0	0	6	0	68	211		0	0	0	0

Appendix B: Traffic Queuing Exhibit



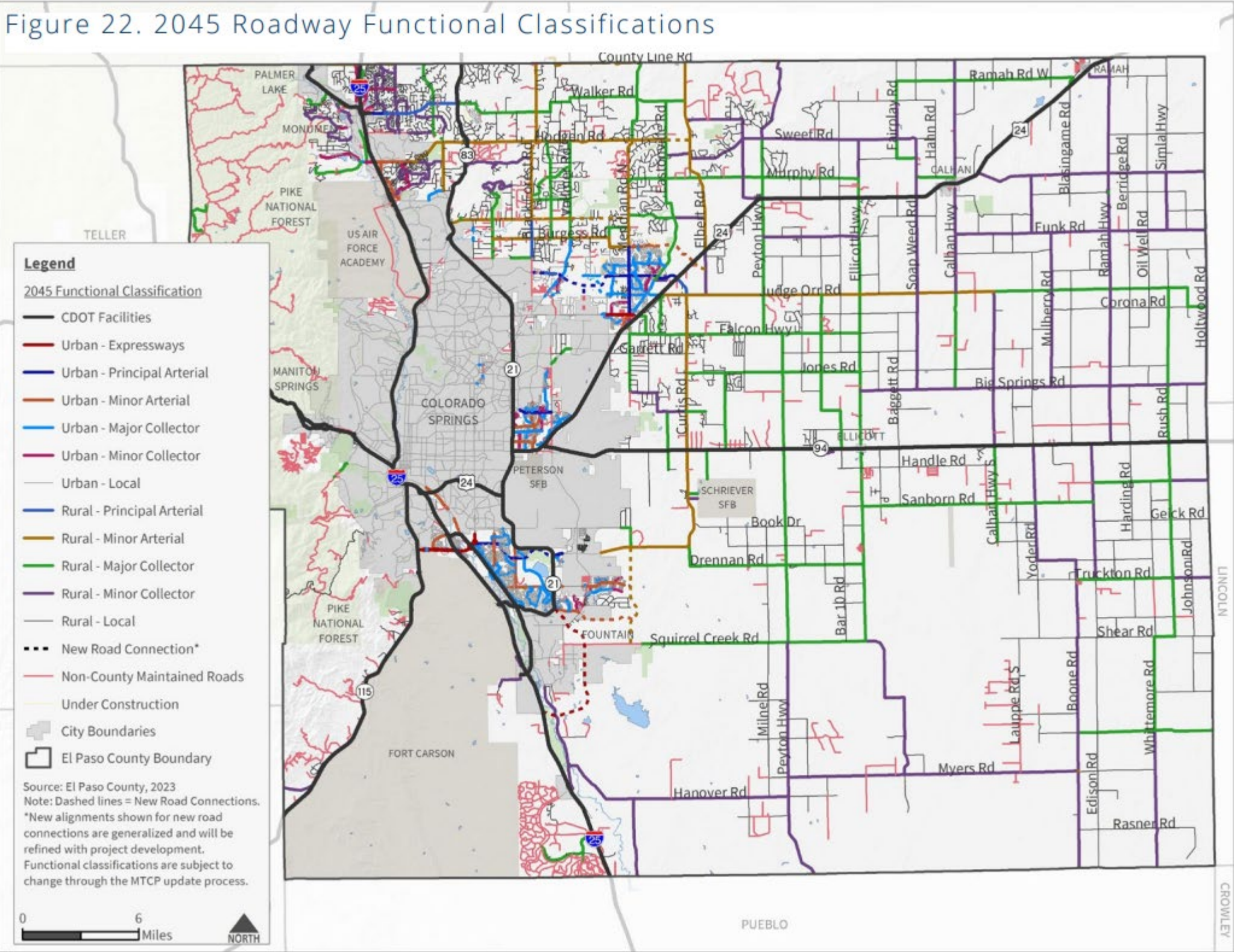
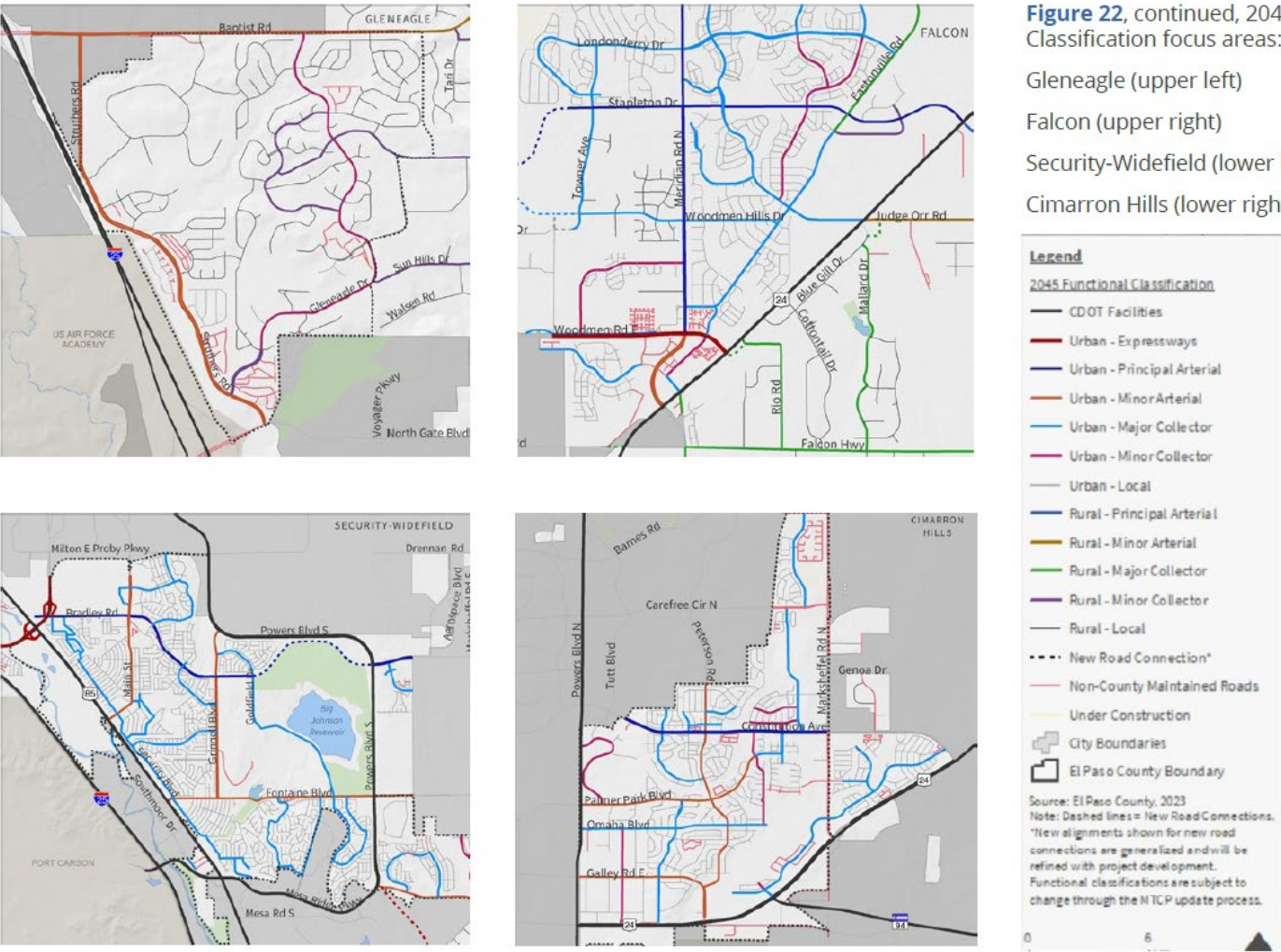




Figure 22. 2045 Roadway Functional Classifications (continued)



Appendix D: Level of Service (LOS) Table

Level of Service Definitions

Level of Service (LOS)	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

MSTA School Traffic Calculations

AM and PM Peak Traffic Estimates

(These numbers do not reflect peak hour traffic volumes)

				School Name: Honor Charter School										
				Type: Urban Charter					Version: 04012021					
				MSTA School Queue Input					Calculations					
AM Cars / Student	PM Cars / Student	Avg. Car Length	PM At one Time	Grade Level	Student Population	Number of Buses	Staff Members	Student Drivers	PM Total Vehicles	PM Peak Vehicles	Average Queue Length	Total AM Trips	Total PM Trips	High Demand Length
55.94%	39.15%	22.19	48.67%	K - 10	621		30		244	119	2641	725	518	30%
52.91%	47.50%	22.19	46.12%	11th										
50.08%	47.58%	22.83	55.71%	12th										
Sum >>					621		30		244	119	2641	725	518	3433
												792		
				Grade K-10										
				AM Trips Generated					PM Trips Generated					
				Direction	Parents	Buses	Staff	Trips	Parents	Buses	Staff	Trips		
				IN	347		30	377	244			244		
				OUT	347			347	244		30	274		
				AM K-10 Trips				725	PM K-10 Trips				518	
				Grade 11										
				AM Trips Generated					PM Trips Generated					
				Direction	Parents	Buses	Staff	Trips	Parents	Buses	Staff	Trips		
				IN										
				OUT										
				AM 11th Trips					PM 11th Trips					
				Grade 12										
				AM Trips Generated					PM Trips Generated					
				Direction	Parents	Buses	Staff	Trips	Parents	Buses	Staff	Trips		
				IN										
				OUT										
				AM 12th Trips					PM 12th Trips					
				All AM TRIPS		In	377			All PM TRIPS		In	244	
						Out	347					Out	274	
						Total	725					Total	518	1243

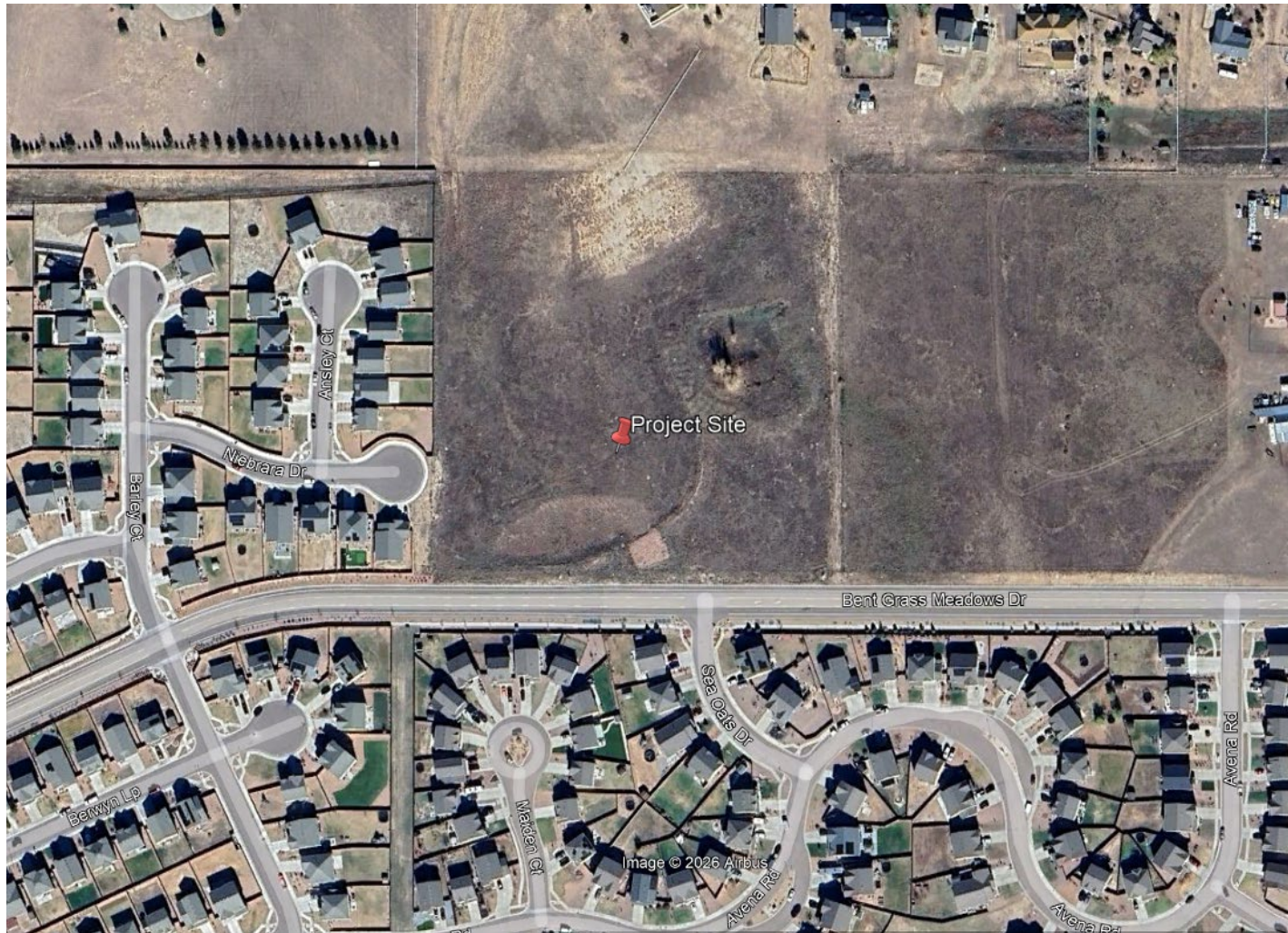
NOTES

Average Queue Length does not include an alternative traffic pattern required for high traffic demand days which is usually 30% additional length.

Average Queue Length does not include the Student Loading Zone.

Peak traffic volumes at schools normally occur within a 30-minute time period. (justifying a PHF of 0.5)

Appendix E: Aerial Image



Appendix E (Continued...): Street View Image (Bent Grass Meadows Dr Looking Eastbound)



Appendix F: HCM Calculations (Synchro)

Recent AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

									
Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	 			 	 				
Traffic Volume (veh/h)	103	91	65	556	1577	125			
Future Volume (veh/h)	103	91	65	556	1577	125			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	108	0	68	585	1660	132			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	206		306	2915	2523	1125			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.06	0.00	0.05	0.82	0.71	0.71			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	36.3	0.0	6.1	1.6	7.3	3.7			
Ln Grp LOS	D		A	A	A	A			
Approach Vol, veh/h	108			653	1792				
Approach Delay, s/veh	36.3			2.1	7.0				
Approach LOS	D			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			66.0		9.0	8.3	57.7		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			48.0		18.0	5.0	38.5		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.7		
Max Q Clear (g_c+I1), s			4.7		4.3	2.6	21.1		
Green Ext Time (g_e), s			3.7		0.2	0.0	10.8		
Prob of Phs Call (p_c)			1.00		0.89	0.76	1.00		
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

Recent AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	108	68	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.3	0.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.3	0.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	264	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	55.2	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	34.2	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	7.3	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	53.2	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	206	306	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.52	0.22	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	829	335	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	34.2	5.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	36.3	6.1	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.9	0.2	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.0	0.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.17	0.01	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	585	0	0	0	1660	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	2.7	0.0	0.0	0.0	19.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.7	0.0	0.0	0.0	19.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2915	0	0	0	2523	0	0
V/C Ratio (X)	0.00	0.20	0.00	0.00	0.00	0.66	0.00	0.00
Avail Cap (c_a), veh/h	0	2915	0	0	0	2523	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.4	0.0	0.0	0.0	5.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.6	0.0	0.0	0.0	7.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0

Recent AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	3.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	132	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	95	0	1125	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	380	0	1125	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A

Notes

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

Recent AM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection

Int Delay, s/veh 4.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	56	66	139	3	5	149
Future Vol, veh/h	56	66	139	3	5	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	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	61	72	151	3	5	162

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	154	0	0 347 153
Stage 1	-	-	- 153 -
Stage 2	-	-	- 194 -
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	1426	-	- 650 893
Stage 1	-	-	- 875 -
Stage 2	-	-	- 839 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1426	-	- 622 893
Mov Cap-2 Maneuver	-	-	- 622 -
Stage 1	-	-	- 837 -
Stage 2	-	-	- 839 -

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1426	-	-	-	622	893
HCM Lane V/C Ratio	0.043	-	-	-	0.009	0.181
HCM Control Delay (s)	7.6	-	-	-	10.8	9.9
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.7

Recent AM Peak Hour
3: Sea Oats Dr & Bent Grass Meadows Dr

Kellar Engineering
04/14/2026

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	3	2	147	5	7
Future Vol, veh/h	95	3	2	147	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	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	103	3	2	160	5	8
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	106	0	269	105
Stage 1	-	-	-	-	105	-
Stage 2	-	-	-	-	164	-
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	-	-	1485	-	720	949
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1485	-	719	949
Mov Cap-2 Maneuver	-	-	-	-	719	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	864	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.1		9.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	837	-	-	1485	-	
HCM Lane V/C Ratio	0.016	-	-	0.001	-	
HCM Control Delay (s)	9.4	-	-	7.4	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Recent PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026



Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	↰↱	↱	↰	↑↑	↑↑	↱			
Traffic Volume (veh/h)	104	92	91	1440	945	98			
Future Volume (veh/h)	104	92	91	1440	945	98			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	108	0	95	1500	984	102			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	240		498	2773	2272	1013			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.07	0.00	0.07	0.78	0.64	0.64			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	28.1	0.0	3.4	3.3	6.0	4.4			
Ln Grp LOS	C		A	A	A	A			
Approach Vol, veh/h	108			1595	1086				
Approach Delay, s/veh	28.1			3.3	5.9				
Approach LOS	C			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			51.3		8.7	8.5	42.9		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			33.0		18.0	5.5	23.0		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.7		
Max Q Clear (g_c+I1), s			11.6		3.8	2.9	10.3		
Green Ext Time (g_e), s			10.4		0.2	0.0	5.1		
Prob of Phs Call (p_c)			1.00		0.83	0.79	1.00		
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

Recent PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	108	95	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.8	0.9	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.8	0.9	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	519	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	40.4	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	30.1	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	38.4	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	240	498	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.45	0.19	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1037	544	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	26.8	3.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	0.2	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	28.1	3.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.7	0.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1500	0	0	0	984	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	9.6	0.0	0.0	0.0	8.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.6	0.0	0.0	0.0	8.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	2773	0	0	0	2272	0	0
V/C Ratio (X)	0.00	0.54	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	2773	0	0	0	2272	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.5	0.0	0.0	0.0	5.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.3	0.0	0.0	0.0	6.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0

Recent PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	1.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment				R		R		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	102	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	110	0	1013	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	476	0	1013	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	5.2
HCM 6th LOS	A

Notes

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

Recent PM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	123	180	169	14	6	68
Future Vol, veh/h	123	180	169	14	6	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	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	134	196	184	15	7	74
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	199	0	-	0	656	192
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	464	-
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	1373	-	-	-	430	850
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	633	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1373	-	-	-	388	850
Mov Cap-2 Maneuver	-	-	-	-	388	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	633	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.2	0		10		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1373	-	-	-	388	850
HCM Lane V/C Ratio	0.097	-	-	-	0.017	0.087
HCM Control Delay (s)	7.9	-	-	-	14.4	9.6
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.1	0.3

Recent PM Peak Hour
3: Sea Oats Dr & Bent Grass Meadows Dr

Kellar Engineering
04/14/2026

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	123	3	9	146	1	6
Future Vol, veh/h	123	3	9	146	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	131	3	10	155	1	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	134
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1451
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1451
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	872	-	-	1451	-
HCM Lane V/C Ratio	0.009	-	-	0.007	-
HCM Control Delay (s)	9.2	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Recent School PM Peak Hour
3: Sea Oats Dr & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	2	6	95	1	4
Future Vol, veh/h	80	2	6	95	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	2	6	101	1	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	87	0	199
Stage 1	-	-	-	-	86
Stage 2	-	-	-	-	113
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1509	-	790
Stage 1	-	-	-	-	937
Stage 2	-	-	-	-	912
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1509	-	787
Mov Cap-2 Maneuver	-	-	-	-	787
Stage 1	-	-	-	-	937
Stage 2	-	-	-	-	908

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	929	-	-	1509	-
HCM Lane V/C Ratio	0.006	-	-	0.004	-
HCM Control Delay (s)	8.9	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

2028 Background AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

									
Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	 	 	 	 	 				
Traffic Volume (veh/h)	109	97	69	590	1674	133			
Future Volume (veh/h)	109	97	69	590	1674	133			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	115	0	73	621	1762	140			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	199		286	2949	2571	1147			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.06	0.00	0.05	0.83	0.72	0.72			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	39.4	0.0	7.3	1.6	7.6	3.6			
Ln Grp LOS	D		A	A	A	A			
Approach Vol, veh/h	115			694	1902				
Approach Delay, s/veh	39.4			2.2	7.3				
Approach LOS	D			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			70.9		9.1	8.5	62.4		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			53.0		18.0	5.0	43.5		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.7		
Max Q Clear (g_c+I1), s			4.9		4.6	2.7	23.8		
Green Ext Time (g_e), s			4.0		0.2	0.0	12.5		
Prob of Phs Call (p_c)			1.00		0.92	0.80	1.00		
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

2028 Background AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	115	73	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.6	0.7	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.6	0.7	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	237	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	59.9	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	36.1	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	10.6	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	57.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	199	286	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.58	0.25	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	778	308	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	36.7	6.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	0.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	39.4	7.3	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.1	0.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.1	0.3	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.19	0.01	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	621	0	0	0	1762	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	2.9	0.0	0.0	0.0	21.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.9	0.0	0.0	0.0	21.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	2949	0	0	0	2571	0	0
V/C Ratio (X)	0.00	0.21	0.00	0.00	0.00	0.69	0.00	0.00
Avail Cap (c_a), veh/h	0	2949	0	0	0	2571	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.4	0.0	0.0	0.0	6.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.6	0.0	0.0	0.0	7.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0

2028 Background AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.0	0.0	4.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	140	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	91	0	1147	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	357	0	1147	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Notes

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

2028 Background AM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	59	70	148	3	5	158
Future Vol, veh/h	59	70	148	3	5	158
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	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	64	76	161	3	5	172
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	164	0	-	0	367	163
Stage 1	-	-	-	-	163	-
Stage 2	-	-	-	-	204	-
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	1414	-	-	-	633	882
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	830	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1414	-	-	-	605	882
Mov Cap-2 Maneuver	-	-	-	-	605	-
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	830	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.5	0		10.1		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1414	-	-	-	605	882
HCM Lane V/C Ratio	0.045	-	-	-	0.009	0.195
HCM Control Delay (s)	7.7	-	-	-	11	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.7

Intersection

Int Delay, s/veh 0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	99	3	2	153	5	7
Future Vol, veh/h	99	3	2	153	5	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	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	108	3	2	166	5	8

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	111
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1479
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1479
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	829	-	-	1479	-
HCM Lane V/C Ratio	0.016	-	-	0.001	-
HCM Control Delay (s)	9.4	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

2028 Background PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026



Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	↰↰	↱	↰	↑↑	↑↑	↱			
Traffic Volume (veh/h)	110	98	97	1528	1003	104			
Future Volume (veh/h)	110	98	97	1528	1003	104			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	115	0	101	1592	1045	108			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	246		477	2768	2260	1008			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.07	0.00	0.07	0.78	0.64	0.64			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	28.2	0.0	3.7	3.5	6.3	4.5			
Ln Grp LOS	C		A	A	A	A			
Approach Vol, veh/h	115			1693	1153				
Approach Delay, s/veh	28.2			3.5	6.1				
Approach LOS	C			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			51.2		8.8	8.6	42.7		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			33.0		18.0	5.0	23.5		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.7		
Max Q Clear (g_c+I1), s			12.8		3.9	2.9	11.1		
Green Ext Time (g_e), s			10.9		0.3	0.0	5.4		
Prob of Phs Call (p_c)			1.00		0.85	0.81	1.00		
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

2028 Background PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	115	101	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	1.9	0.9	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.9	0.9	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	487	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	40.2	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	29.1	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	38.2	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	246	477	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.47	0.21	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1037	505	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	26.8	3.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.2	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	28.2	3.7	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.8	0.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1592	0	0	0	1045	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	10.8	0.0	0.0	0.0	9.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	10.8	0.0	0.0	0.0	9.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	2768	0	0	0	2260	0	0
V/C Ratio (X)	0.00	0.58	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	2768	0	0	0	2260	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.7	0.0	0.0	0.0	5.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.5	0.0	0.0	0.0	6.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0

2028 Background PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	1.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	108	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	113	0	1008	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	476	0	1008	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Notes

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

2028 Background PM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	131	191	179	15	6	72
Future Vol, veh/h	131	191	179	15	6	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	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	142	208	195	16	7	78

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	211	0	0 695 203
Stage 1	-	-	- 203 -
Stage 2	-	-	- 492 -
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	1360	-	- 408 838
Stage 1	-	-	- 831 -
Stage 2	-	-	- 615 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1360	-	- 366 838
Mov Cap-2 Maneuver	-	-	- 366 -
Stage 1	-	-	- 745 -
Stage 2	-	-	- 615 -

Approach	EB	WB	SB
HCM Control Delay, s	3.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1360	-	-	-	366	838
HCM Lane V/C Ratio	0.105	-	-	-	0.018	0.093
HCM Control Delay (s)	8	-	-	-	15	9.7
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.1	0.3

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	128	3	9	152	1	6
Future Vol, veh/h	128	3	9	152	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	136	3	10	162	1	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	139
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1445
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1445
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	865	-	-	1445	-
HCM Lane V/C Ratio	0.009	-	-	0.007	-
HCM Control Delay (s)	9.2	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	83	2	6	99	1	4
Future Vol, veh/h	83	2	6	99	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	2	6	105	1	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	90
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1505
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1505
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	924	-	-	1505	-
HCM Lane V/C Ratio	0.006	-	-	0.004	-
HCM Control Delay (s)	8.9	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

2028 Short Range Total AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
07/16/2026

									
Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	 			 	 				
Traffic Volume (veh/h)	202	174	153	590	1674	234			
Future Volume (veh/h)	202	174	153	590	1674	234			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	213	0	161	621	1762	246			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	312		276	2833	2417	1078			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.09	0.00	0.06	0.80	0.68	0.68			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	37.9	0.0	17.9	2.2	10.1	5.3			
Ln Grp LOS	D		B	A	B	A			
Approach Vol, veh/h	213			782	2008				
Approach Delay, s/veh	37.9			5.4	9.5				
Approach LOS	D			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			68.3		11.7	9.4	58.9		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			53.0		18.0	5.5	43.0		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.6		
Max Q Clear (g_c+I1), s			5.4		6.8	3.9	27.2		
Green Ext Time (g_e), s			4.0		0.5	0.1	11.0		
Prob of Phs Call (p_c)			1.00		0.99	0.97	1.00		
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

2028 Short Range Total AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
07/16/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	213	161	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.8	1.9	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.8	1.9	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	214	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	56.4	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	29.3	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	29.3	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	54.4	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	312	276	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.68	0.58	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	778	291	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	35.3	15.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.6	2.7	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	37.9	17.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.9	1.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.1	2.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.35	0.08	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	621	0	0	0	1762	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	3.4	0.0	0.0	0.0	25.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.4	0.0	0.0	0.0	25.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	2833	0	0	0	2417	0	0
V/C Ratio (X)	0.00	0.22	0.00	0.00	0.00	0.73	0.00	0.00
Avail Cap (c_a), veh/h	0	2833	0	0	0	2417	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.0	0.0	0.0	0.0	8.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	2.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.2	0.0	0.0	0.0	10.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	5.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.7	0.0	0.0

2028 Short Range Total AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
07/16/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	6.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.28	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	246	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	143	0	1078	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	357	0	1078	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B

Notes

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

2028 Short Range Total AM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection						
Int Delay, s/veh	6.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	160	70	148	36	36	251
Future Vol, veh/h	160	70	148	36	36	251
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	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	174	76	161	39	39	273
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	200	0	-	0	605	181
Stage 1	-	-	-	-	181	-
Stage 2	-	-	-	-	424	-
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	1372	-	-	-	461	862
Stage 1	-	-	-	-	850	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1372	-	-	-	402	862
Mov Cap-2 Maneuver	-	-	-	-	402	-
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	660	-
Approach	EB	WB		SB		
HCM Control Delay, s	5.6	0		11.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1372	-	-	-	402	862
HCM Lane V/C Ratio	0.127	-	-	-	0.097	0.317
HCM Control Delay (s)	8	-	-	-	14.9	11.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.3	1.4

2028 Short Range Total AM Peak Hour
3: Sea Oats Dr/Site Access #2 & Bent Grass Meadows Dr

Kellar Engineering
04/24/2026

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	134	269	19	2	153	185	5	17	7	0	0	0
Future Vol, veh/h	134	269	19	2	153	185	5	17	7	0	0	0
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	150	-	-	150	-	150	-	-	-	-	-	-
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	146	292	21	2	166	201	5	18	8	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	367	0	0	313	0	0	866	966	303	778	775	166
Stage 1	-	-	-	-	-	-	595	595	-	170	170	-
Stage 2	-	-	-	-	-	-	271	371	-	608	605	-
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	1192	-	-	1247	-	-	274	255	737	314	329	878
Stage 1	-	-	-	-	-	-	491	492	-	832	758	-
Stage 2	-	-	-	-	-	-	735	620	-	483	487	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1192	-	-	1247	-	-	248	223	737	264	288	878
Mov Cap-2 Maneuver	-	-	-	-	-	-	248	223	-	264	288	-
Stage 1	-	-	-	-	-	-	431	432	-	730	756	-
Stage 2	-	-	-	-	-	-	734	619	-	402	428	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	0	19.8	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	274	1192	-	-	1247	-	-	-
HCM Lane V/C Ratio	0.115	0.122	-	-	0.002	-	-	-
HCM Control Delay (s)	19.8	8.4	-	-	7.9	-	-	0
HCM Lane LOS	C	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.4	0.4	-	-	0	-	-	-

2028 Short Range Total AM Peak Hour
8: Bent Grass Meadows Dr & Site Access #1

Kellar Engineering
04/24/2026

Intersection						
Int Delay, s/veh	5.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	236	158	0	186	124
Future Vol, veh/h	0	236	158	0	186	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	150	-	-	-	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	0	257	172	0	202	135
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	172	0	-	0	429	172
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	257	-
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	1405	-	-	-	583	872
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	786	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1405	-	-	-	583	872
Mov Cap-2 Maneuver	-	-	-	-	583	-
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	786	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		12.6		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1405	-	-	-	583	872
HCM Lane V/C Ratio	-	-	-	-	0.347	0.155
HCM Control Delay (s)	0	-	-	-	14.4	9.9
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	1.5	0.5

2028 Short Range Total PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

									
Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	 	 	 	 	 	 			
Traffic Volume (veh/h)	129	114	105	1528	1003	115			
Future Volume (veh/h)	129	114	105	1528	1003	115			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	134	0	109	1592	1045	120			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	257		474	2756	2242	1000			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.07	0.00	0.07	0.78	0.63	0.63			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	28.4	0.0	3.9	3.6	6.5	4.7			
Ln Grp LOS	C		A	A	A	A			
Approach Vol, veh/h	134			1701	1165				
Approach Delay, s/veh	28.4			3.6	6.3				
Approach LOS	C			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			51.0		9.0	8.7	42.3		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			33.0		18.0	5.0	23.5		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.6		
Max Q Clear (g_c+I1), s			12.9		4.2	3.0	11.2		
Green Ext Time (g_e), s			10.8		0.3	0.0	5.4		
Prob of Phs Call (p_c)			1.00		0.89	0.84	1.00		
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

2028 Short Range Total PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	134	109	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.2	1.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.2	1.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	482	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	39.8	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	28.6	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	37.8	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	257	474	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.52	0.23	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	1037	498	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	26.7	3.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.6	0.2	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	28.4	3.9	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.9	0.1	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	1592	0	0	0	1045	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	10.9	0.0	0.0	0.0	9.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	10.9	0.0	0.0	0.0	9.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	2756	0	0	0	2242	0	0
V/C Ratio (X)	0.00	0.58	0.00	0.00	0.00	0.47	0.00	0.00
Avail Cap (c_a), veh/h	0	2756	0	0	0	2242	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.7	0.0	0.0	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.6	0.0	0.0	0.0	6.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0

2028 Short Range Total PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	1.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	120	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	118	0	1000	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	476	0	1000	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Notes

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

2028 Short Range Total PM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	142	191	179	18	12	92
Future Vol, veh/h	142	191	179	18	12	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	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	154	208	195	20	13	100
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	215	0	-	0	721	205
Stage 1	-	-	-	-	205	-
Stage 2	-	-	-	-	516	-
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	1355	-	-	-	394	836
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	599	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1355	-	-	-	349	836
Mov Cap-2 Maneuver	-	-	-	-	349	-
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	599	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.4	0		10.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1355	-	-	-	349	836
HCM Lane V/C Ratio	0.114	-	-	-	0.037	0.12
HCM Control Delay (s)	8	-	-	-	15.7	9.9
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.4	-	-	-	0.1	0.4

2028 Short Range Total PM Peak Hour
3: Sea Oats Dr/Site Access #2 & Bent Grass Meadows Dr

Kellar Engineering
04/24/2026

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	163	6	9	152	19	1	2	6	0	0	0
Future Vol, veh/h	14	163	6	9	152	19	1	2	6	0	0	0
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	150	-	-	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	173	6	10	162	20	1	2	6	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	182	0	0	179	0	0	398	408	176	392	391	162
Stage 1	-	-	-	-	-	-	206	206	-	182	182	-
Stage 2	-	-	-	-	-	-	192	202	-	210	209	-
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	1393	-	-	1397	-	-	562	533	867	567	545	883
Stage 1	-	-	-	-	-	-	796	731	-	820	749	-
Stage 2	-	-	-	-	-	-	810	734	-	792	729	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1393	-	-	1397	-	-	554	523	867	553	535	883
Mov Cap-2 Maneuver	-	-	-	-	-	-	554	523	-	553	535	-
Stage 1	-	-	-	-	-	-	787	723	-	811	744	-
Stage 2	-	-	-	-	-	-	804	729	-	775	721	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.4			10.1			0		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	717	1393	-	-	1397	-	-	-
HCM Lane V/C Ratio	0.013	0.011	-	-	0.007	-	-	-
HCM Control Delay (s)	10.1	7.6	-	-	7.6	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

2028 Short Range Total PM Peak Hour
8: Bent Grass Meadows Dr & Site Access #1

Kellar Engineering
04/24/2026

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	145	153	0	38	26
Future Vol, veh/h	0	145	153	0	38	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	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	0	158	166	0	41	28
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	166	0	-	0	324	166
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	158	-
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	1412	-	-	-	670	878
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1412	-	-	-	670	878
Mov Cap-2 Maneuver	-	-	-	-	670	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	871	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		10.1		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1412	-	-	-	670	878
HCM Lane V/C Ratio	-	-	-	-	0.062	0.032
HCM Control Delay (s)	0	-	-	-	10.7	9.2
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0.1

2028 Short Range Total School PM Peak Hour
3: Sea Oats Dr/Site Access #2 & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

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	89	210	14	6	99	122	1	11	4	0	0	0
Future Vol, veh/h	89	210	14	6	99	122	1	11	4	0	0	0
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	150	-	-	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	95	223	15	6	105	130	1	12	4	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	235	0	0	238	0	0	603	668	231	546	545	105
Stage 1	-	-	-	-	-	-	421	421	-	117	117	-
Stage 2	-	-	-	-	-	-	182	247	-	429	428	-
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	1332	-	-	1329	-	-	411	379	808	448	446	949
Stage 1	-	-	-	-	-	-	610	589	-	888	799	-
Stage 2	-	-	-	-	-	-	820	702	-	604	585	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1332	-	-	1329	-	-	387	350	808	409	412	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	387	350	-	409	412	-
Stage 1	-	-	-	-	-	-	567	547	-	825	795	-
Stage 2	-	-	-	-	-	-	816	698	-	546	543	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.2			0.2			14.1			0		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	411	1332	-	-	1329	-	-	-
HCM Lane V/C Ratio	0.041	0.071	-	-	0.005	-	-	-
HCM Control Delay (s)	14.1	7.9	-	-	7.7	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	-

2028 Short Range Total School PM Peak Hour
8: Bent Grass Meadows Dr & Site Access #1

Kellar Engineering
06/23/2026

Intersection

Int Delay, s/veh 4.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	174	100	0	139	92
Future Vol, veh/h	0	174	100	0	139	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	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	0	189	109	0	151	100

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	109	0	0 298 109
Stage 1	-	-	- 109 -
Stage 2	-	-	- 189 -
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	1481	-	- 693 945
Stage 1	-	-	- 916 -
Stage 2	-	-	- 843 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1481	-	- 693 945
Mov Cap-2 Maneuver	-	-	- 693 -
Stage 1	-	-	- 916 -
Stage 2	-	-	- 843 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1481	-	-	-	693	945
HCM Lane V/C Ratio	-	-	-	-	0.218	0.106
HCM Control Delay (s)	0	-	-	-	11.6	9.3
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.8	0.4

2045 Background AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

									
Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	 	 	 	 	 				
Traffic Volume (veh/h)	153	135	97	826	2343	186			
Future Volume (veh/h)	153	135	97	826	2343	186			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	161	0	102	869	2466	196			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	224		164	3057	2780	1240			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.06	0.00	0.04	0.86	0.78	0.78			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	59.3	0.0	41.3	1.8	13.9	3.5			
Ln Grp LOS	E		D	A	B	A			
Approach Vol, veh/h	161			971	2662				
Approach Delay, s/veh	59.3			5.9	13.2				
Approach LOS	E			A	B				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			107.7		12.3	9.3	98.4		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			93.0		18.0	5.0	83.5		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.7		
Max Q Clear (g_c+I1), s			7.4		7.5	3.2	61.2		
Green Ext Time (g_e), s			6.1		0.3	0.0	18.9		
Prob of Phs Call (p_c)			1.00		1.00	0.97	1.00		
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

2045 Background AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	161	102	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	5.5	1.2	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	5.5	1.2	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	112	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	95.9	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	34.7	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	34.7	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	93.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	224	164	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.72	0.62	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	518	166	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	55.0	34.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.3	6.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	59.3	41.3	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.4	2.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.5	2.6	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.42	0.10	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	869	0	0	0	2466	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	5.4	0.0	0.0	0.0	59.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.4	0.0	0.0	0.0	59.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	3057	0	0	0	2780	0	0
V/C Ratio (X)	0.00	0.28	0.00	0.00	0.00	0.89	0.00	0.00
Avail Cap (c_a), veh/h	0	3057	0	0	0	2780	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	1.6	0.0	0.0	0.0	9.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	4.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.8	0.0	0.0	0.0	13.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.0	0.0	13.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	1.8	0.0	0.0

2045 Background AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	14.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.70	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	196	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	103	0	1240	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	238	0	1240	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

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

2045 Background AM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection						
Int Delay, s/veh	5.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	98	207	4	7	221
Future Vol, veh/h	83	98	207	4	7	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	87	103	218	4	7	233
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	222	0	-	0	497	220
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	277	-
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	1347	-	-	-	532	820
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	770	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1347	-	-	-	497	820
Mov Cap-2 Maneuver	-	-	-	-	497	-
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	770	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.6	0		11.1		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1347	-	-	-	497	820
HCM Lane V/C Ratio	0.065	-	-	-	0.015	0.284
HCM Control Delay (s)	7.9	-	-	-	12.4	11.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0	1.2

2045 Background AM Peak Hour
3: Sea Oats Dr & Bent Grass Meadows Dr

Kellar Engineering
04/14/2026

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	138	4	3	214	7	10
Future Vol, veh/h	138	4	3	214	7	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	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	145	4	3	225	7	11
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	149	0	378	147
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	231	-
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	-	-	1432	-	624	900
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	807	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1432	-	623	900
Mov Cap-2 Maneuver	-	-	-	-	623	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	805	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		9.8	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	761	-	-	1432	-	
HCM Lane V/C Ratio	0.024	-	-	0.002	-	
HCM Control Delay (s)	9.8	-	-	7.5	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

2045 Background PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026



Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	↰↱	↱	↰	↑↑	↑↑	↱			
Traffic Volume (veh/h)	155	137	135	2140	1404	146			
Future Volume (veh/h)	155	137	135	2140	1404	146			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	161	0	141	2229	1462	152			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	252		349	2895	2483	1107			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.07	0.00	0.06	0.81	0.70	0.70			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	38.8	0.0	6.8	5.7	7.2	4.3			
Ln Grp LOS	D		A	A	A	A			
Approach Vol, veh/h	161			2370	1614				
Approach Delay, s/veh	38.8			5.8	6.9				
Approach LOS	D			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			69.7		10.3	9.3	60.4		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			53.0		18.0	6.5	42.0		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.7		
Max Q Clear (g_c+I1), s			26.9		5.6	3.5	18.9		
Green Ext Time (g_e), s			19.1		0.4	0.1	11.1		
Prob of Phs Call (p_c)			1.00		0.97	0.96	1.00		
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

2045 Background PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	161	141	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.6	1.5	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.6	1.5	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	313	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	57.9	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	39.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	15.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	55.9	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	252	349	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.64	0.40	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	778	388	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	36.1	6.1	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.7	0.8	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	38.8	6.8	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.5	0.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.6	0.4	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.27	0.01	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	2229	0	0	0	1462	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	24.9	0.0	0.0	0.0	16.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	24.9	0.0	0.0	0.0	16.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	2895	0	0	0	2483	0	0
V/C Ratio (X)	0.00	0.77	0.00	0.00	0.00	0.59	0.00	0.00
Avail Cap (c_a), veh/h	0	2895	0	0	0	2483	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.7	0.0	0.0	0.0	6.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.0	0.0	1.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.7	0.0	0.0	0.0	7.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.0	0.0	3.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0

2045 Background PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.2	0.0	0.0	0.0	3.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	0.17	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment				R		R		
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	152	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	115	0	1107	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	357	0	1107	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

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

2045 Background PM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	183	267	251	21	9	101
Future Vol, veh/h	183	267	251	21	9	101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	193	281	264	22	9	106
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	286	0	-	0	942	275
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	667	-
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	1276	-	-	-	292	764
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	510	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1276	-	-	-	248	764
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	655	-
Stage 2	-	-	-	-	510	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.4	0		11.3		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1276	-	-	-	248	764
HCM Lane V/C Ratio	0.151	-	-	-	0.038	0.139
HCM Control Delay (s)	8.3	-	-	-	20.1	10.5
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.1	0.5

2045 Background PM Peak Hour
3: Sea Oats Dr & Bent Grass Meadows Dr

Kellar Engineering
04/14/2026

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	179	4	13	213	1	9
Future Vol, veh/h	179	4	13	213	1	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	188	4	14	224	1	9

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	192
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1381
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1381
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	811	-	-	1381	-
HCM Lane V/C Ratio	0.013	-	-	0.01	-
HCM Control Delay (s)	9.5	-	-	7.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	116	3	8	138	1	6
Future Vol, veh/h	116	3	8	138	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	3	8	145	1	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	125
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1462
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1462
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	886	-	-	1462	-
HCM Lane V/C Ratio	0.008	-	-	0.006	-
HCM Control Delay (s)	9.1	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

2045 Long Range Total AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
07/16/2026



Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	↰↰	↱	↰	↑↑	↑↑	↱			
Traffic Volume (veh/h)	246	212	181	826	2343	287			
Future Volume (veh/h)	246	212	181	826	2343	287			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	259	0	191	869	2466	302			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	310		211	3022	2619	1168			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.09	0.00	0.08	0.85	0.74	0.74			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	77.9	0.0	78.8	2.5	25.3	6.9			
Ln Grp LOS	E		E	A	C	A			
Approach Vol, veh/h	259			1060	2768				
Approach Delay, s/veh	77.9			19.1	23.3				
Approach LOS	E			B	C				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			132.1		17.9	17.0	115.1		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			123.0		18.0	12.5	106.0		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.7		
Max Q Clear (g_c+I1), s			9.3		13.1	12.7	91.4		
Green Ext Time (g_e), s			6.1		0.4	0.0	13.1		
Prob of Phs Call (p_c)			1.00		1.00	1.00	1.00		
Prob of Max Out (p_x)			0.00		0.41	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

2045 Long Range Total AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
07/16/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	259	191	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	11.1	10.7	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	11.1	10.7	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	100	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	112.6	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	110.6	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	310	211	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.84	0.91	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	415	211	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	67.2	57.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	10.7	37.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	77.9	94.8	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.9	7.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	2.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	5.3	9.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.90	0.33	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	869	0	0	0	2466	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	7.3	0.0	0.0	0.0	89.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.3	0.0	0.0	0.0	89.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	3022	0	0	0	2619	0	0
V/C Ratio (X)	0.00	0.29	0.00	0.00	0.00	0.94	0.00	0.00
Avail Cap (c_a), veh/h	0	3022	0	0	0	2619	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.2	0.0	0.0	0.0	16.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	8.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.5	0.0	0.0	0.0	25.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.0	0.0	28.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	3.1	0.0	0.0

2045 Long Range Total AM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
07/16/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.0	0.0	31.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	1.45	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	302	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	142	0	1168	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	190	0	1168	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

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

2045 Long Range Total AM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection						
Int Delay, s/veh	7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	184	98	207	37	38	314
Future Vol, veh/h	184	98	207	37	38	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	194	103	218	39	40	331
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	257	0	-	0	729	238
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	491	-
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	1308	-	-	-	390	801
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	615	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1308	-	-	-	332	801
Mov Cap-2 Maneuver	-	-	-	-	332	-
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	615	-
Approach	EB	WB		SB		
HCM Control Delay, s	5.4	0		13.1		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1308	-	-	-	332	801
HCM Lane V/C Ratio	0.148	-	-	-	0.12	0.413
HCM Control Delay (s)	8.2	-	-	-	17.3	12.6
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.4	2

2045 Long Range Total AM Peak Hour
3: Sea Oats Dr/Site Access #2 & Bent Grass Meadows Dr

Kellar Engineering
04/24/2026

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	134	308	20	3	214	185	7	17	10	0	0	0
Future Vol, veh/h	134	308	20	3	214	185	7	17	10	0	0	0
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	150	-	-	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	141	324	21	3	225	195	7	18	11	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	420	0	0	345	0	0	946	1043	335	862	858	225
Stage 1	-	-	-	-	-	-	617	617	-	231	231	-
Stage 2	-	-	-	-	-	-	329	426	-	631	627	-
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	1139	-	-	1214	-	-	241	229	707	275	294	814
Stage 1	-	-	-	-	-	-	477	481	-	772	713	-
Stage 2	-	-	-	-	-	-	684	586	-	469	476	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1139	-	-	1214	-	-	218	200	707	228	257	814
Mov Cap-2 Maneuver	-	-	-	-	-	-	218	200	-	228	257	-
Stage 1	-	-	-	-	-	-	418	421	-	676	712	-
Stage 2	-	-	-	-	-	-	682	585	-	388	417	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.5			0.1			21.1			0		
HCM LOS							C			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	259	1139	-	-	1214	-	-	-				
HCM Lane V/C Ratio	0.138	0.124	-	-	0.003	-	-	-				
HCM Control Delay (s)	21.1	8.6	-	-	8	-	-	0				
HCM Lane LOS	C	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0.5	0.4	-	-	0	-	-	-				

2045 Long Range Total AM Peak Hour
8: Bent Grass Meadows Dr & Site Access #1

Kellar Engineering
04/24/2026

Intersection

Int Delay, s/veh 5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	276	221	0	186	124
Future Vol, veh/h	0	276	221	0	186	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	150	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	291	233	0	196	131

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	233	0	0 524 233
Stage 1	-	-	- 233 -
Stage 2	-	-	- 291 -
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	1335	-	- 514 806
Stage 1	-	-	- 806 -
Stage 2	-	-	- 759 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1335	-	- 514 806
Mov Cap-2 Maneuver	-	-	- 514 -
Stage 1	-	-	- 806 -
Stage 2	-	-	- 759 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1335	-	-	-	514	806
HCM Lane V/C Ratio	-	-	-	-	0.381	0.162
HCM Control Delay (s)	0	-	-	-	16.2	10.3
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	1.8	0.6

2045 Long Range Total PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

									
Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	 	 	 	 	 	 			
Traffic Volume (veh/h)	174	153	143	2140	1404	157			
Future Volume (veh/h)	174	153	143	2140	1404	157			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	181	0	149	2229	1462	164			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	2	2	2			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	275		345	2871	2457	1096			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00			
Prop Arrive On Green	0.08	0.00	0.06	0.81	0.69	0.69			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	38.4	0.0	7.5	6.1	7.5	4.5			
Ln Grp LOS	D		A	A	A	A			
Approach Vol, veh/h	181			2378	1626				
Approach Delay, s/veh	38.4			6.2	7.2				
Approach LOS	D			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4	5	6		
Case No			4.0		9.0	1.2	7.0		
Phs Duration (G+Y+Rc), s			69.1		10.9	9.3	59.8		
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5		
Max Green (Gmax), s			53.0		18.0	6.8	41.7		
Max Allow Headway (MAH), s			4.7		3.8	3.6	4.7		
Max Q Clear (g_c+I1), s			27.9		6.1	3.6	19.3		
Green Ext Time (g_e), s			18.6		0.4	0.1	11.0		
Prob of Phs Call (p_c)			1.00		0.98	0.96	1.00		
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00		
Left-Turn Movement Data									
Assigned Mvmt					7	5	1		
Mvmt Sat Flow, veh/h					3456	1781	0		
Through Movement Data									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		0		3647		
Right-Turn Movement Data									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		1585		1585		
Left Lane Group Data									
Assigned Mvmt		0	0	0	7	5	1	0	0
Lane Assignment					LL (Pr/Pm)				

2045 Long Range Total PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	181	149	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1728	1781	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.1	1.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.1	1.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1728	310	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	57.3	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	38.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	17.8	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	55.3	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	275	345	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.66	0.43	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	778	389	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	35.8	6.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.7	0.9	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	38.4	7.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.7	0.4	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.8	0.5	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.30	0.02	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment	T			T				
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	2229	0	0	0	1462	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	25.9	0.0	0.0	0.0	17.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	25.9	0.0	0.0	0.0	17.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	2871	0	0	0	2457	0	0
V/C Ratio (X)	0.00	0.78	0.00	0.00	0.00	0.60	0.00	0.00
Avail Cap (c_a), veh/h	0	2871	0	0	0	2457	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.0	0.0	0.0	0.0	6.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.1	0.0	0.0	0.0	7.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.0	0.0	3.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.9	0.0	0.0	0.0	0.4	0.0	0.0

2045 Long Range Total PM Peak Hour
7: Meridian Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	0.0	0.0	3.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.18	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment			R		R			
Lanes in Grp	0	0	0	1	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	164	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	126	0	1096	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	357	0	1096	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Notes

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

2045 Long Range Total PM Peak Hour
3: Woodmen Frontage Rd & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

Intersection

Int Delay, s/veh 3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	194	267	251	24	15	121
Future Vol, veh/h	194	267	251	24	15	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	300	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	204	281	264	25	16	127

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	289	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1273	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1273	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1273	-	-	-	237	762
HCM Lane V/C Ratio	0.16	-	-	-	0.067	0.167
HCM Control Delay (s)	8.4	-	-	-	21.3	10.7
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.6	-	-	-	0.2	0.6

2045 Long Range Total PM Peak Hour
3: Sea Oats Dr/Site Access #2 & Bent Grass Meadows Dr

Kellar Engineering
04/24/2026

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	214	7	13	213	19	1	2	9	0	0	0
Future Vol, veh/h	14	214	7	13	213	19	1	2	9	0	0	0
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	150	-	-	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	225	7	14	224	20	1	2	9	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	244	0	0	232	0	0	521	531	229	516	514	224
Stage 1	-	-	-	-	-	-	259	259	-	252	252	-
Stage 2	-	-	-	-	-	-	262	272	-	264	262	-
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	1322	-	-	1336	-	-	466	454	810	470	464	815
Stage 1	-	-	-	-	-	-	746	694	-	752	698	-
Stage 2	-	-	-	-	-	-	743	685	-	741	691	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1322	-	-	1336	-	-	458	444	810	455	454	815
Mov Cap-2 Maneuver	-	-	-	-	-	-	458	444	-	455	454	-
Stage 1	-	-	-	-	-	-	738	686	-	744	691	-
Stage 2	-	-	-	-	-	-	735	678	-	722	683	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.4	10.4	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	674	1322	-	-	1336	-	-	-
HCM Lane V/C Ratio	0.019	0.011	-	-	0.01	-	-	-
HCM Control Delay (s)	10.4	7.8	-	-	7.7	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

2045 Long Range Total PM Peak Hour
8: Bent Grass Meadows Dr & Site Access #1

Kellar Engineering
04/24/2026

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	197	214	0	38	26
Future Vol, veh/h	0	197	214	0	38	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	207	225	0	40	27
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	225	0	-	0	432	225
Stage 1	-	-	-	-	225	-
Stage 2	-	-	-	-	207	-
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	1344	-	-	-	581	814
Stage 1	-	-	-	-	812	-
Stage 2	-	-	-	-	828	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1344	-	-	-	581	814
Mov Cap-2 Maneuver	-	-	-	-	581	-
Stage 1	-	-	-	-	812	-
Stage 2	-	-	-	-	828	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		10.8		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1344	-	-	-	581	814
HCM Lane V/C Ratio	-	-	-	-	0.069	0.034
HCM Control Delay (s)	0	-	-	-	11.7	9.6
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0.1

2045 Long Range Total School PM Peak Hour
3: Sea Oats Dr/Site Access #2 & Bent Grass Meadows Dr

Kellar Engineering
06/23/2026

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	89	243	15	8	138	122	1	11	6	0	0	0
Future Vol, veh/h	89	243	15	8	138	122	1	11	6	0	0	0
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	150	-	-	150	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	94	256	16	8	145	128	1	12	6	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	273	0	0	272	0	0	677	741	264	622	621	145
Stage 1	-	-	-	-	-	-	452	452	-	161	161	-
Stage 2	-	-	-	-	-	-	225	289	-	461	460	-
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	1290	-	-	1291	-	-	367	344	775	399	403	902
Stage 1	-	-	-	-	-	-	587	570	-	841	765	-
Stage 2	-	-	-	-	-	-	778	673	-	581	566	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1290	-	-	1291	-	-	345	317	775	362	371	902
Mov Cap-2 Maneuver	-	-	-	-	-	-	345	317	-	362	371	-
Stage 1	-	-	-	-	-	-	544	528	-	780	760	-
Stage 2	-	-	-	-	-	-	773	669	-	523	525	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			0.2			14.5			0		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	397	1290	-	-	1291	-	-	-
HCM Lane V/C Ratio	0.048	0.073	-	-	0.007	-	-	-
HCM Control Delay (s)	14.5	8	-	-	7.8	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	-

2045 Long Range Total School PM Peak Hour
8: Bent Grass Meadows Dr & Site Access #1

Kellar Engineering
06/23/2026

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	208	139	0	139	92
Future Vol, veh/h	0	208	139	0	139	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	219	146	0	146	97
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	146	0	-	0	365	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	219	-
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	1436	-	-	-	635	901
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	817	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1436	-	-	-	635	901
Mov Cap-2 Maneuver	-	-	-	-	635	-
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	817	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		11.2		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1436	-	-	-	635	901
HCM Lane V/C Ratio	-	-	-	-	0.23	0.107
HCM Control Delay (s)	0	-	-	-	12.4	9.5
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.9	0.4



Sean Kellar, PE, PTOE

Principal Engineer

Education

B.S., Civil Engineering, Arizona State University – Tempe, AZ

Registration

Colorado, Professional Engineer (PE)
Wyoming, Professional Engineer (PE)
Idaho, Professional Engineer (PE)
Arizona, Professional Engineer (PE)
Kansas, Professional Engineer (PE)
Missouri, Professional Engineer (PE)
Professional Traffic Operations Engineer (PTOE)

Professional Memberships

Institute of Transportation Engineers (ITE)

Industry Tenure

Over 25 Years

Sean's wide range of expertise includes: transportation planning, traffic modeling roadway design, bike and pedestrian facilities, traffic impact studies, traffic signal warrant analysis, parking studies, corridor planning and access management. Sean's experience in both the private and public sectors; passion for safety and excellence; and strong communication and collaboration skills can bring great value to any project. Prior to starting Kellar Engineering, Sean was employed at the Missouri Department of Transportation (MoDOT) as the District Traffic Engineer for the Kansas City District. Sean also worked for the City of Loveland, CO for over 10 years as a Senior Civil Engineer supervising a division of transportation/traffic engineers. While at the City of Loveland, Sean managed several capital improvement projects, presented several projects to the City Council and Planning Commission in public hearings, and managed the revisions to the City's Street Standards. Sean is also proficient in Highway Capacity Software, Synchro, PT Vissim, Rodel, GIS, and AutoCAD.



WORK EXPERIENCE:

Kellar Engineering, Principal Engineer/President – January 2016 – Present

Missouri Department of Transportation, District Traffic Engineer, Kansas City District – June 2015 – January 2016

City of Loveland, Colorado, Senior Civil Engineer, Public Works Department – February 2005 – June 2015

Kirkham Michael Consulting Engineers, Project Manager - February 2004 – February 2005

Dibble and Associates Consulting Engineers, Project Engineer – August 1999 – February 2004