

TRAFFIC IMPACT STUDY

For

**16888 Elbert Road Rezone
El Paso County, Colorado**
PCD File No. P242

April 2024
Revised May 2024
Revised May 2024

Prepared for:

Holmes Enterprises LLC
16888 Elbert Road
Peyton, CO 80831

Prepared by:



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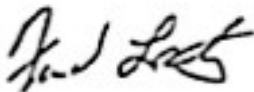
Engineer in Responsible Charge:
Fred Lantz, PE



24-032122

Traffic Engineer's Statement

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



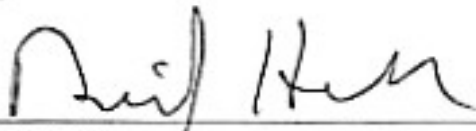
Fred Lantz, P.E. #23410

05/31/2024

Date

Developer's Statement

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



Rick Holmes
Holmes Enterprises LLC
16888 Elbert Road
Peyton, CO 80831

6/1/2024

Date

Accepted for File

By: Gilbert LaForce, P.E.
Engineering Manager

Date: 07/16/2024 4:05:05 PM

El Paso County Department of Public Works



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I. Introduction

Project Overview

This traffic impact study is provided as a planning document and addresses the capacity, geometric, and control requirements associated with the development entitled 16888 Elbert Road Rezone.

This traffic impact study has been revised to address County review comments regarding minor comments throughout.

This proposed mixed-use development consists of a small business event center with associated bed and breakfast facility. The development is located on the west side of Elbert Road approximately three-quarters of a mile south of Hopper Road at 16888 Elbert Road in El Paso County, Colorado.

Study Area Boundaries

The study area to be examined in this analysis encompasses the segment of Elbert Road bounded by Sweet Road to Hopper Road and includes the proposed site access.

Figure 1 illustrates location of the site and study intersections.

Site Description

Land for the development is currently occupied by three single-family detached homes and surrounded by a mix of residential and open space land uses.

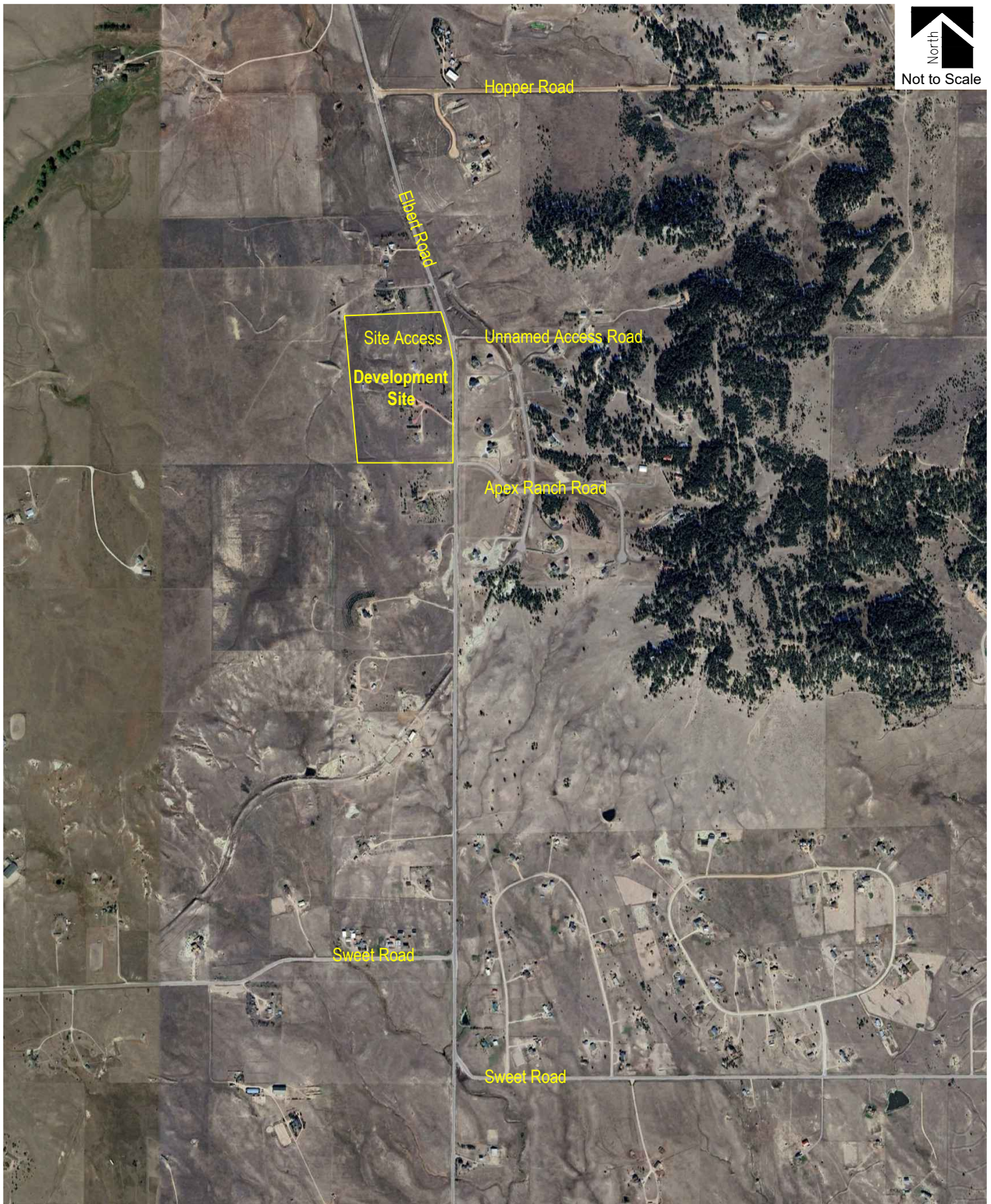
The proposed development is understood to entail the new construction of an approximate 1,500 square foot business event center with eight associated bed and breakfast units. These would be in addition to the existing single-family homes. No other future uses are currently planned or identified pursuant to the proposed rezone. It is anticipated that at such time new uses are proposed and defined, an updated traffic analysis will be required to approve such uses and any associated access.

Proposed access to the development is provided via one full-movement access onto Elbert Road aligning with Unnamed Access Road (referred to as Site Access). With the proposed redevelopment, the existing access approximately 400 feet north of Apex Ranch Road is anticipated to be closed.

For purposes of this study, it is anticipated that development construction would be completed by end of Year 2026.

General site and access locations are shown on Figure 1.

A concept plan, is shown on Figure 2. This plan is provided for illustrative purposes only.



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Figure 1
SITE LOCATION

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Existing and Committed Surface Transportation Network

Within the study area, Elbert Road is the primary roadway that will accommodate traffic to and from the proposed development. The secondary roadways include Unnamed Access Road, Apex Ranch Road, Hopper Road, and Sweet Road. A brief description of each roadway, based on El Paso County's 2016 Major Transportation Corridors Plan Update (MTCP)¹ and El Paso County's Engineering Criteria Manual (ECM)², is provided below:

Elbert Road is a north-south rural minor arterial roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersections within the study area. Elbert Road does not provide a posted speed limit within the study area. Pursuant to section 2.3.2, Table 2-4 of the County's ECM, Elbert Road is expected to provide a posted speed limit of 55 MPH.

Unnamed Access Road is an east-west roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Unnamed Access Road is unclassified in the County's MTCP. However, per Section 2.3.2, Table 2-5 of the County's ECM, and the roadway's estimate right-of-way (ROW) width, Unnamed Access Road is assumed to be classified as a rural local roadway and is assumed to provide a posted speed limit of 30 MPH.

Apex Ranch Road is an east-west roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Apex Ranch Road is unclassified in the County's MTCP. However, per section 2.3.2, Table 2-5 of the County's ECM, and the roadway's estimate ROW Width, Apex Ranch Road is assumed to be classified as a rural local roadway and is assumed to provide a posted speed limit of 30 MPH.

Hopper Road is an east-west rural collector roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Hopper Road does not provide a posted speed limit within the study area. Due to Hopper Road being unpaved, and pursuant to section 2.3.2, Table 2-4 of the County's ECM, Hopper Road is expected to provide a posted speed limit of 45 MPH.

Sweet Road is an east-west rural collector roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersections within the study area. Sweet Road provides a posted speed limit of 55 MPH.

¹ El Paso County 2016 Major Transportation Corridors Plan Update, Felsburg Holt & Ullevig, December 2016.

² El Paso County Engineering Criteria Manual, El Paso County, October 2020.

All study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more “STOP” signs.

Pursuant to the County’s MTCP, Hodgen Road is currently planned to be extended to intersect with Elbert Road between Hopper Road and Sweet Road. However, the County’s MTCP does not mention when this will occur. For analysis purposes, it is assumed that Hodgen Road will not intersect with Elbert Road within the near future, this provides for a conservative analysis.

Comparison of existing roadway cross-sections of Elbert Road to the County’s ECM concludes that Elbert Road is not built to its ultimate width for accommodation of future regional transportation demands. Elbert Road is expected to provide 40 feet of paved width having two through lanes (one lane in each direction).

No other regional or specific improvements for the above-described roadways are known to be planned or committed at this time. All other study area roadways appear to be built to their ultimate cross-sections.

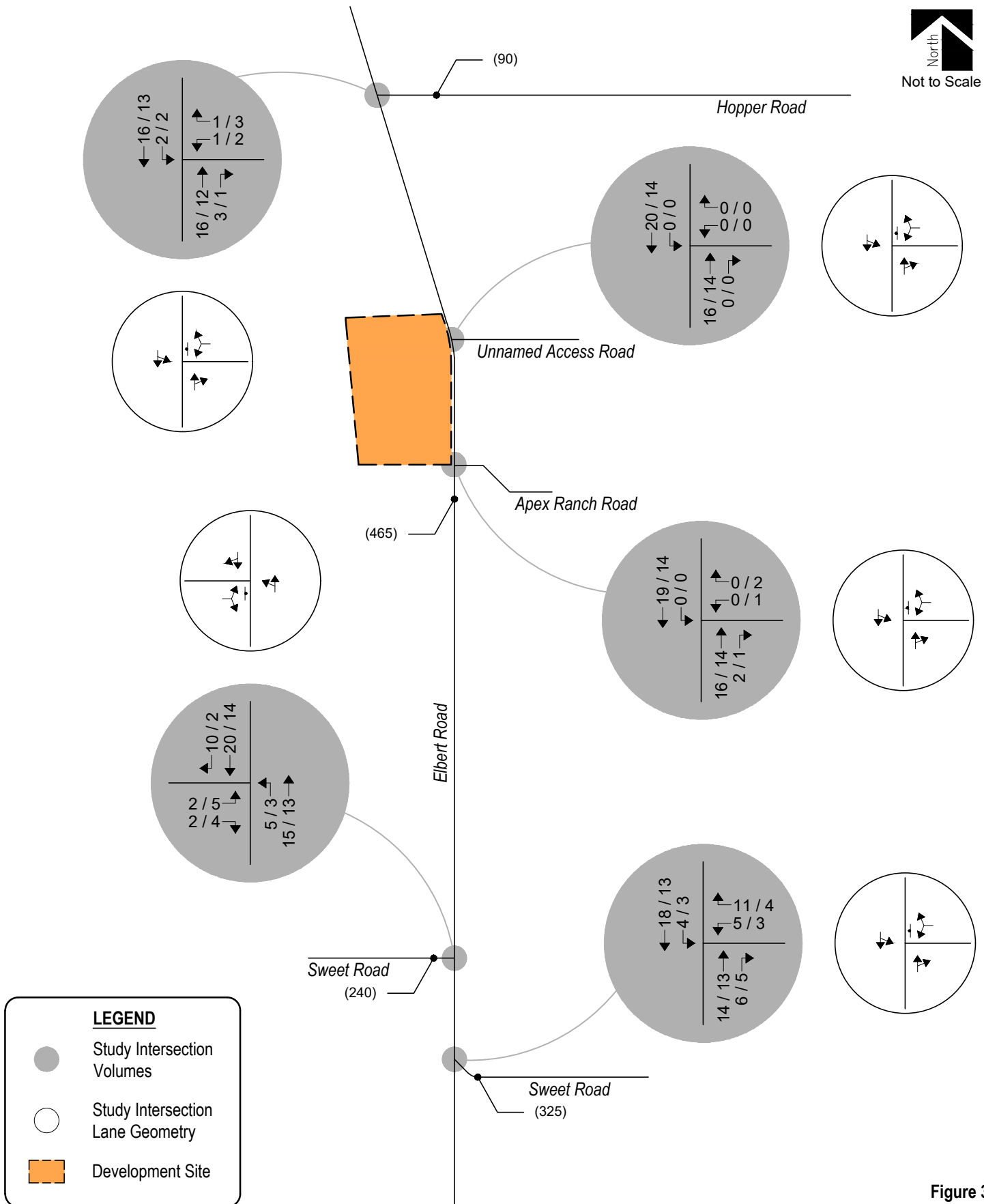
II. Existing Traffic Conditions

Morning (AM) and afternoon (PM) peak hour traffic counts shown for the intersections of Elbert Road bounded by Sweet Road to Hopper Road were obtained from the 16888 Elbert Road Traffic Impact Study³ as collected by SMH consultants. Counts were collected on Wednesday March 22, 2023, with AM peak hour counts were collected during the period of 7:00 a.m. to 9:00 a.m. and PM peak hour counts were collected during the period of 4:00 p.m. to 6:00 p.m. These referenced counts were then grown to Year 2024. A compounded annual growth rate was determined based on the adjacent Overlook at Homestead Traffic Impact Study⁴ (El Paso County PCD File No. P-235), which used a growth rate of approximately 2.25 percent. Therefore, in order to provide for a conservative analysis, an annual growth rate of 3 percent was applied. Average daily traffic (ADT) volumes were derived from standard relationships of ADT volumes versus peak hour volumes.

Existing volumes and intersection geometry are shown on Figure 3. Referenced traffic count data is included for reference in Appendix A.

³ 16888 Elbert Road Traffic Impact Study, Richard Holmes, March 2024.

⁴ Overlook at Homestead Traffic Impact Study, LSC Transportation Consultants, October 6, 2023.



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Peak Hour Intersection Levels of Service – Existing Traffic

The Unsignalized Intersection Analysis techniques, as published in the Highway Capacity Manual (HCM), 6th Edition, by the Transportation Research Board and as incorporated into the SYNCHRO computer program, was used to analyze the study intersections for existing and future traffic conditions. This nationally accepted technique allows for the determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement.

Pursuant to Section B.4.1.A of the County's ECM, the design objective for each scenario of this study shall be level of service "D". Level of service is a method of measurement used by transportation professionals to quantify a driver's perception of travel conditions that include travel time, number of stops, and total amount of stopped delay experienced on a roadway network. The HCM categorizes level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates a level of operation considered unacceptable to most drivers. These levels of service grades with brief descriptions of the operating condition, for unsignalized and signalized intersections, are included for reference in Appendix B and have been used throughout this study.

The level of service analyses results for existing conditions are summarized in Table 1.

Intersection capacity worksheets developed for this study are provided in Appendix C.

Table 1 – Intersection Capacity Analysis Summary – Existing Traffic

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
Elbert Road / Sweet Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Sweet Road (Stop-Controlled) Eastbound Left and Right Northbound Left and Through	A A	A A
Elbert Road / Apex Ranch Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Unnamed Access Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Hopper Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A

Key: Stop-Controlled Intersection: Level of Service

Existing Traffic Analysis Results

Under existing conditions, the unsignalized intersections within the study area have turning movement operations at LOS A during both the morning and afternoon peak traffic hours

III. Future Traffic Conditions Without Proposed Development

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

To account for projected increases in background traffic for Years 2026 and 2040, a compounded annual growth rate of approximately three percent was applied to existing traffic volumes. This annual growth rate provides for a conservative analysis, is comparable to the assumed growth rate used in the Overlook at Homestead Traffic Impact Study, and is assumed to account for regional growth projections and the level of in-fill development expected within the area.

Additionally, in order to account for projected traffic from adjacent developments not yet built, trip generations from the Overlook at Homestead Traffic Impact Study were added to background traffic volumes.

Pursuant to the proposed and non-committed area roadway improvements discussed in Section I, Year 2026 and Year 2040 background traffic conditions assume no roadway improvements to accommodate regional transportation demands. This assumption provides for a conservative analysis.

Projected background traffic volumes and intersection geometry for Years 2026 and 2040 are shown on Figure 4 and Figure 5, respectively.

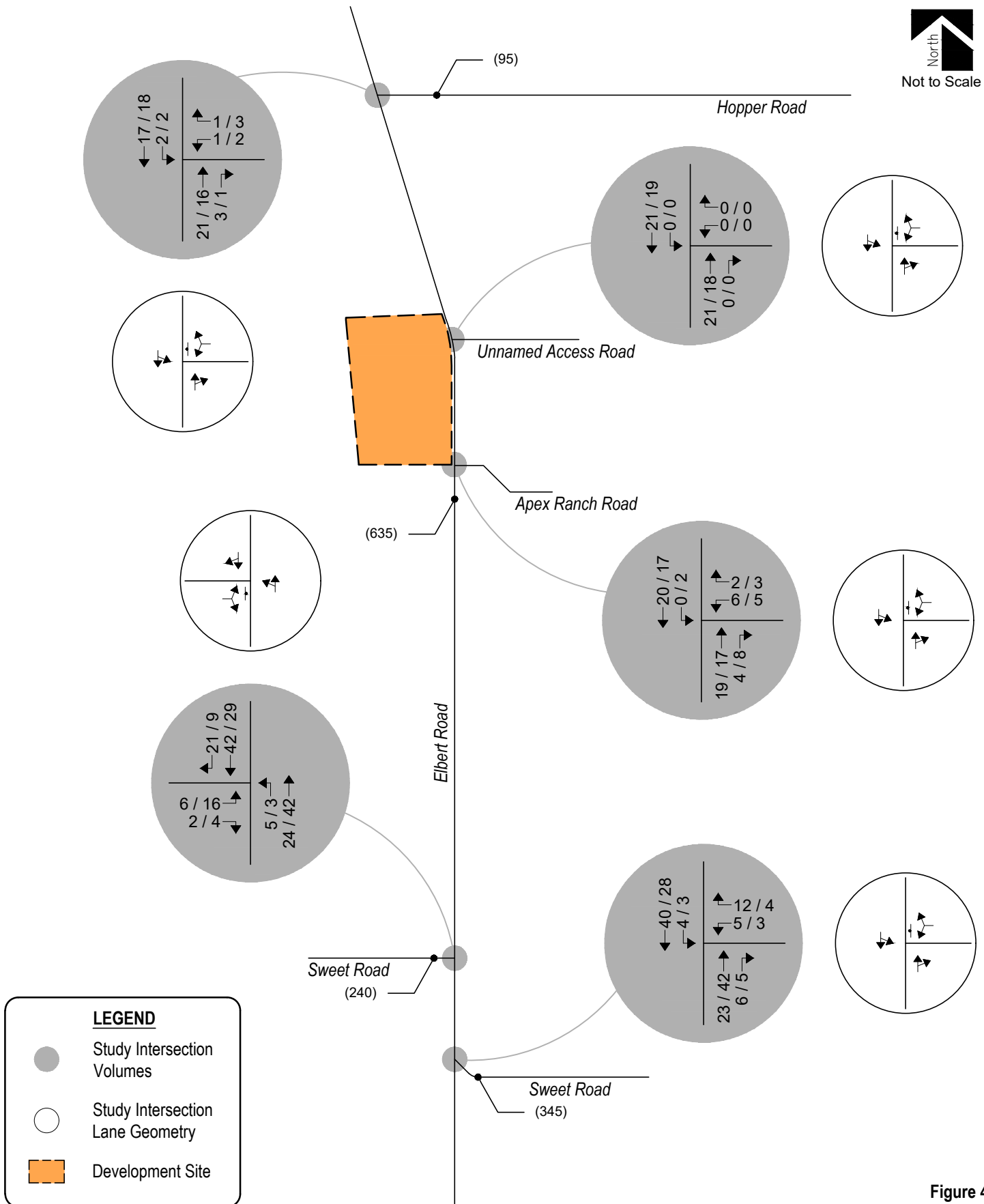


Figure 4
BACKGROUND TRAFFIC - YEAR 2026
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic



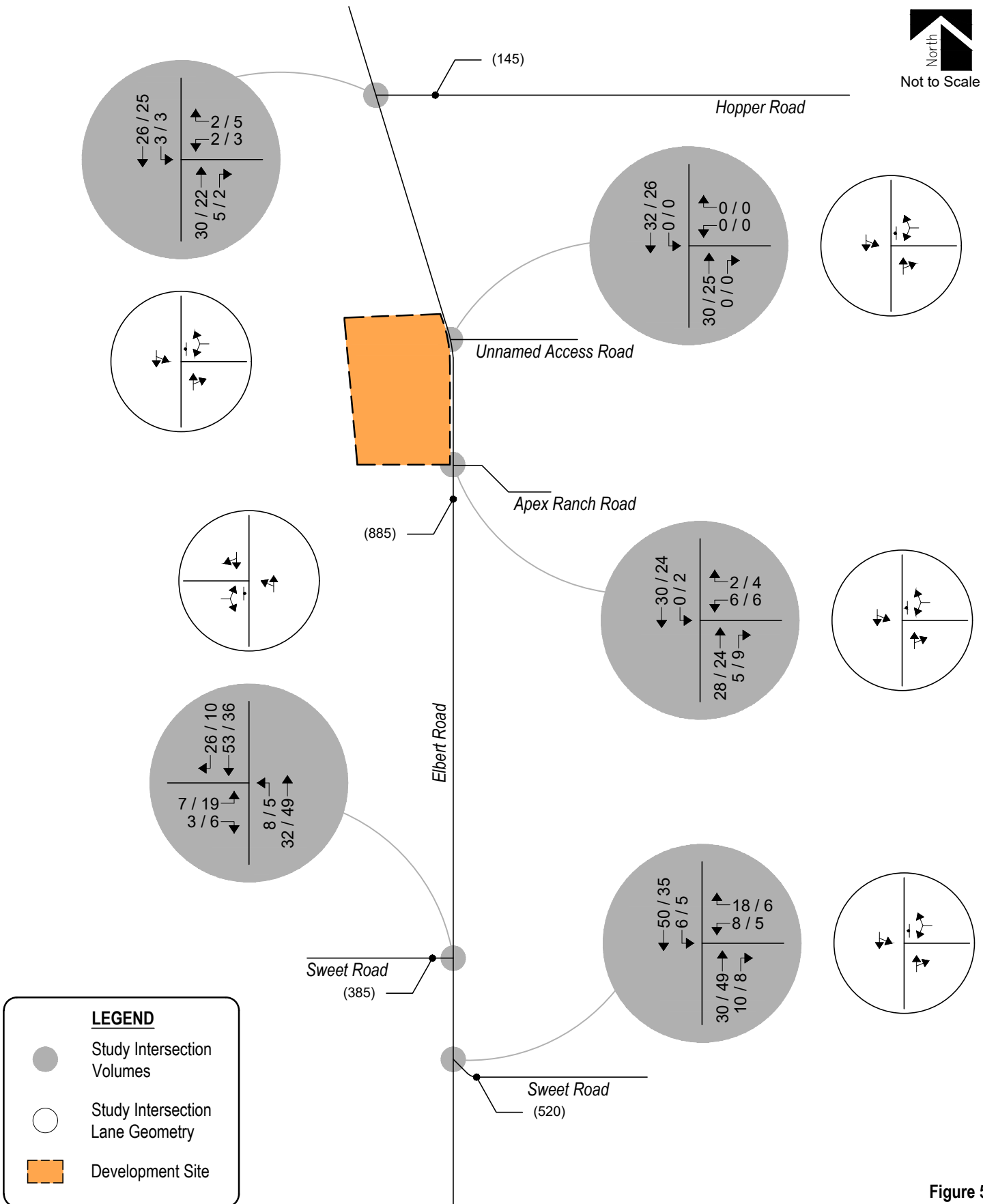


Figure 5
BACKGROUND TRAFFIC - YEAR 2040
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic



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Peak Hour Intersection Levels of Service – Background Traffic

As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2026 are listed in Table 2. Year 2040 operational results are summarized in Table 3.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2026

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
Elbert Road / Sweet Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Sweet Road (Stop-Controlled) Eastbound Left and Right Northbound Left and Through	A A	A A
Elbert Road / Apex Ranch Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Unnamed Access Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Hopper Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A

Key: Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2026

Year 2026 background traffic analysis indicates that the unsignalized intersections within the study area continue to project turning movement operations at LOS A during the morning and afternoon peak traffic hours.

Table 3 – Intersection Capacity Analysis Summary – Background Traffic – Year 2040

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
Elbert Road / Sweet Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Sweet Road (Stop-Controlled) Eastbound Left and Right Northbound Left and Through	A A	A A
Elbert Road / Apex Ranch Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Unnamed Access Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Hopper Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A

Key: Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2040

By Year 2040 and without the proposed development, the unsignalized intersections within the study area are projected to have turning movement operations at LOS A during the morning and afternoon peak traffic hours.

These intersection operations are the same as existing conditions.

IV. Proposed Project Traffic

Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the existing and proposed land uses in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use codes 210 (Single-Family Dwelling Units) and 312 (Business Hotel) were used for estimating trip generation because of their conservative rates and best fit to the existing and proposed land use descriptions. It is important to note that ITE does not provide land use codes for “Bed and Breakfasts” and “Business Event Center” land uses, therefore it was assumed that each bed and breakfast unit may be considered equivalent to one business hotel room with the event center space being expected to operate ancillary to the bed and breakfast.

Trip generation rates used in this study are presented in Table 4.

Table 4 – Trip Generation Rates

ITE CODELAND USEUNIT			TRIP GENERATION RATES						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
210	Single-Family Detached Housing	DU	9.43	0.18	0.53	0.70	0.59	0.35	0.94
312	Business Hotel	RMS	4.02	0.14	0.22	0.36	0.17	0.14	0.31

Key: DU = Dwelling Units. RMS = Rooms.

Note: All data and calculations above are subject to being rounded to nearest value.

Table 5 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development upon build-out.

Table 5 – Trip Generation Summary

ITE CODELAND USESIZE			TOTAL TRIPS GENERATED						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
<u>Site Development - Existing</u>									
210	Single-Family Detached Housing	3 DU	28	1	2	2	2	1	3
Existing Total:			28	1	2	2	2	1	3
<u>Site Development - Proposed</u>									
312	Business Hotel	8 RMS	32	1	2	3	1	1	2
Proposed Total:			32	1	2	3	1	1	2
New Total:			60	2	3	5	3	2	5

Key: DU = Dwelling Units. RMS = Rooms.

Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out, Table 5 illustrates that the proposed development has the potential to generate approximately 60 daily vehicle trips with 3 of those occurring during the morning peak hour and 5 during the afternoon peak hour. Compared to the existing land uses, this represents a potential increase in site traffic generation of approximately 32 daily trips with 3 of those occurring during the morning peak hour and 2 during the afternoon peak hour.

Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

Trip Distribution

The overall directional distribution of site-generated traffic was determined based on the location of development site within the County proposed and existing area land uses, allowed turning movements, available roadway network, and the adjacent Overlook at Homestead Traffic Impact Study.

Overall trip distribution patterns for the development are shown on Figure 6.

Trip Assignment

Trip assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 6.

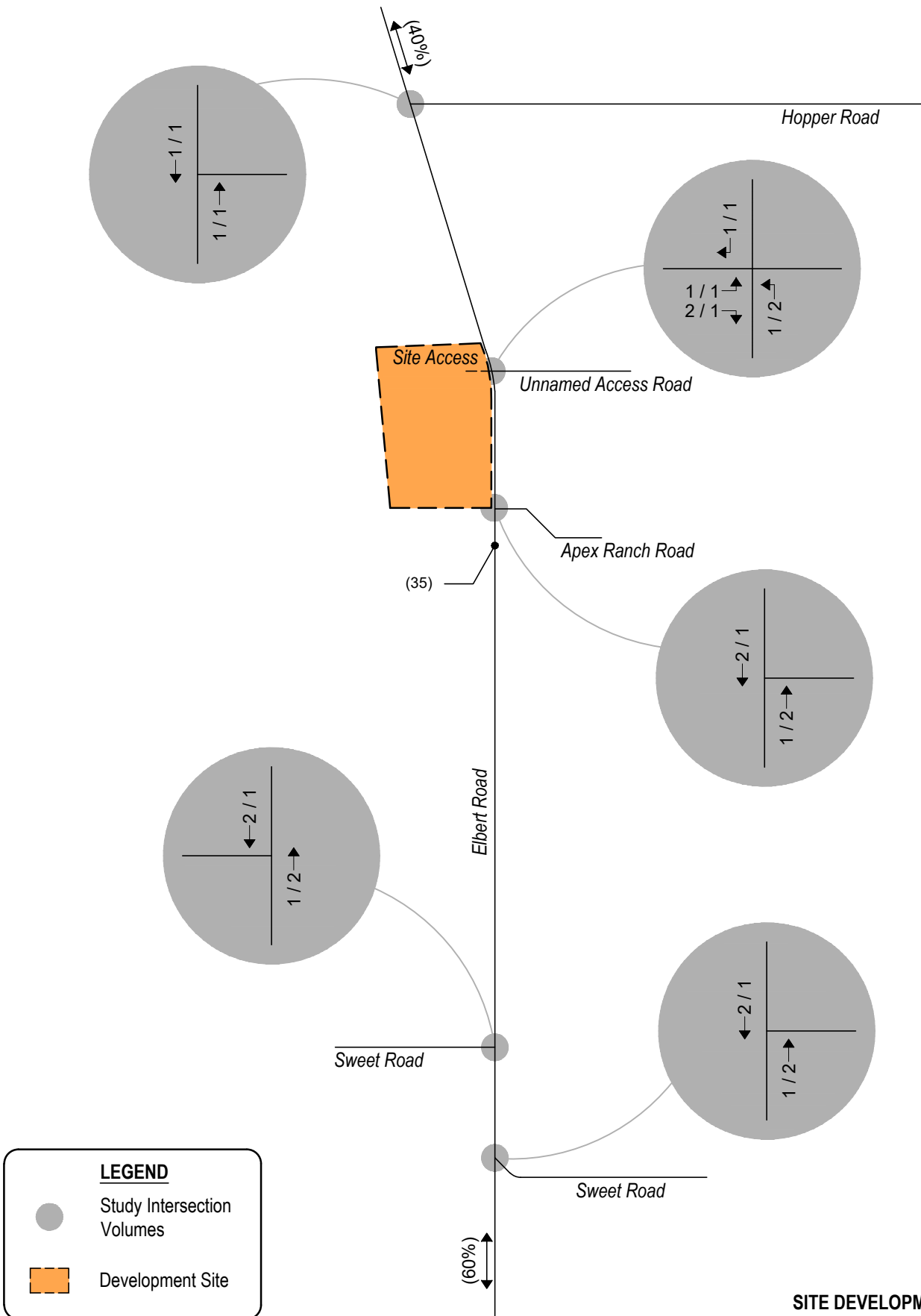


Figure 6
SITE DEVELOPMENT DISTRIBUTION
 (%) : Overall
SITE-GENERATED TRIPS
 AM / PM Peak Hour
 (ADT) : Average Daily Traffic



V. Future Traffic Conditions With Proposed Developments

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Years 2026 and 2040 with consideration of site-generated traffic. For analysis purposes, it was assumed that development construction would be completed by end of Year 2026.

Pursuant to area roadway improvement discussions provided in Section III, Year 2026 and Year 2040 total traffic conditions assume no roadway improvements to accommodate regional transportation demands. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

Projected Year 2026 total traffic volumes and intersection geometry are shown in Figure 7.

Figure 8 shows projected total traffic volumes and intersection geometry for Year 2040.

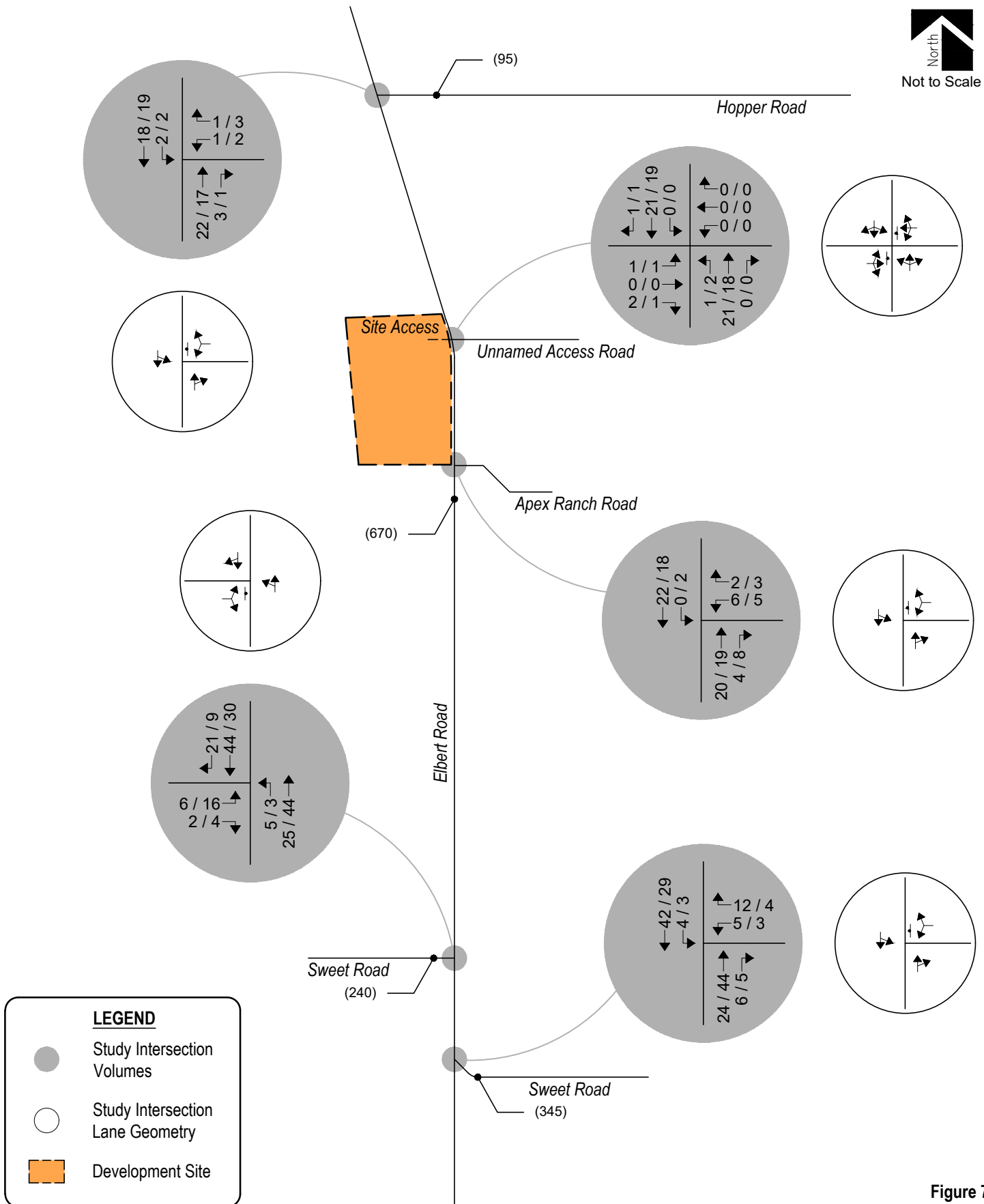


Figure 7
TOTAL TRAFFIC - YEAR 2026
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic



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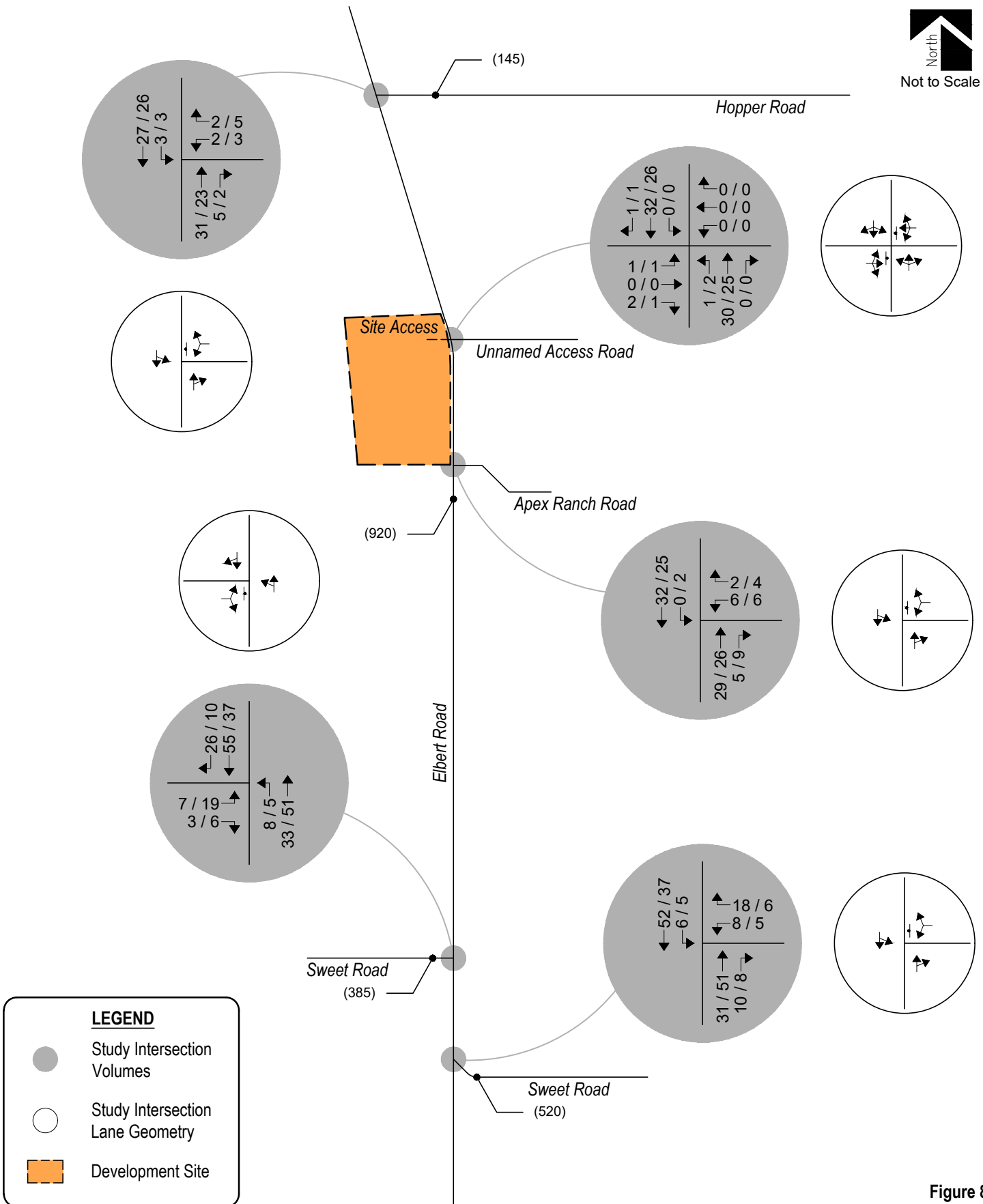


Figure 8
TOTAL TRAFFIC - YEAR 2040
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic



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VI. Project Impacts

The analyses and procedures described in this study were performed in accordance with the latest HCM and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

Peak Hour Intersection Levels of Service – Total Traffic

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. Total traffic level of service analysis results for Years 2026 and 2040 are summarized in Table 6 and Table 7, respectively.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 6 – Intersection Capacity Analysis Summary – Total Traffic – Year 2026

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
Elbert Road / Sweet Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Sweet Road (Stop-Controlled) Eastbound Left and Right Northbound Left and Through	A A	A A
Elbert Road / Apex Ranch Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Unnamed Access Road / Site Access (Stop-Controlled) Eastbound Left, Through and Right Westbound Left, Through and Right Southbound Left and Through	A A A	A A A
Elbert Road / Hopper Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A

Key: Stop-Controlled Intersection: Level of Service

Table 7 – Intersection Capacity Analysis Summary – Total Traffic – Year 2040

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
Elbert Road / Sweet Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Sweet Road (Stop-Controlled) Eastbound Left and Right Northbound Left and Through	A A	A A
Elbert Road / Apex Ranch Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A
Elbert Road / Unnamed Access Road / Site Access (Stop-Controlled) Eastbound Left, Through and Right Westbound Left, Through and Right Southbound Left and Through	A A A	A A A
Elbert Road / Hopper Road (Stop-Controlled) Westbound Left and Right Southbound Left and Through	A A	A A

Key: Stop-Controlled Intersection: Level of Service

Total Traffic Analysis Results Upon Development Build-Out

Table 7 illustrates how, by Year 2040 and upon development build-out, the unsignalized intersection of Elbert Road and Sweet Road continues to anticipate turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

The unsignalized intersection of Elbert Road and Sweet Road continues to project turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

The unsignalized intersection of Elbert Road and Apex Ranch Road continues to anticipate turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

The unsignalized intersection of Elbert Road and Site Access continues to expect turning movement operations at LOS A during both the morning and afternoon peak traffic hours.

The unsignalized intersection of Elbert Road and Hopper Road continues to project turning movement operations at LOS A During both the morning and afternoon peak traffic hours.

These intersection operations are similar to existing conditions.

Recommended Improvements

Table 8 illustrates anticipated roadway and intersection control improvements associated with the proposed development.

Table 8 – Recommended Improvements Summary

IMPROVEMENT	TYPE	TIMING	RESPONSIBILITY
Construction of Site Access across from Unnamed Access Road	Access	With Final Site/Construction Plan(s) Approval	Applicant

No other roadway or intersection improvements are currently identified or recommended with the proposed 16888 Elbert Road Rezone.

Road Impact Fees

This site is subject to the El Paso County Road Impact Fee Program (Resolution 19-471), as amended and is considered to fall within the category of Hotel/Motel. Pursuant to the latest proposed site plan and land use densities as previously described, it is anticipated that eight rooms may be considered for determination of applicable fees. Based on the number of rooms, a resulting impact fee of \$22,448 is estimated. Obligation for payment will be selected at the final land use approval stage, which is understood to be concurrent with the site plan application.

VII. Conclusion

This traffic impact study addressed the capacity, geometric, and control requirements associated with the development entitled 16888 Elbert Road Rezone. This proposed mixed-use development consists of a 1,500 square foot business event center with eight associated bed and breakfasts. The development is located on the west side of Elbert Road approximately three-quarters of a mile south of Hopper Road at 16888 Elbert Road in El Paso County, Colorado.

The study area examined in this analysis encompassed in this analysis encompasses the segment of Elbert Road bounded by Sweet Road to Hopper Road and includes the proposed site access.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2026 and Year 2040 background traffic conditions, and Year 2026 and Year 2040 total traffic conditions.

Analysis of existing traffic conditions indicates that the unsignalized intersections within the study have turning movement operations at LOS A during the morning and afternoon peak traffic hours.

Without the proposed development, Year 2026 background operational analysis shows that the unsignalized intersections within the study area continue to project operations at LOS A during morning and afternoon peak traffic hours.

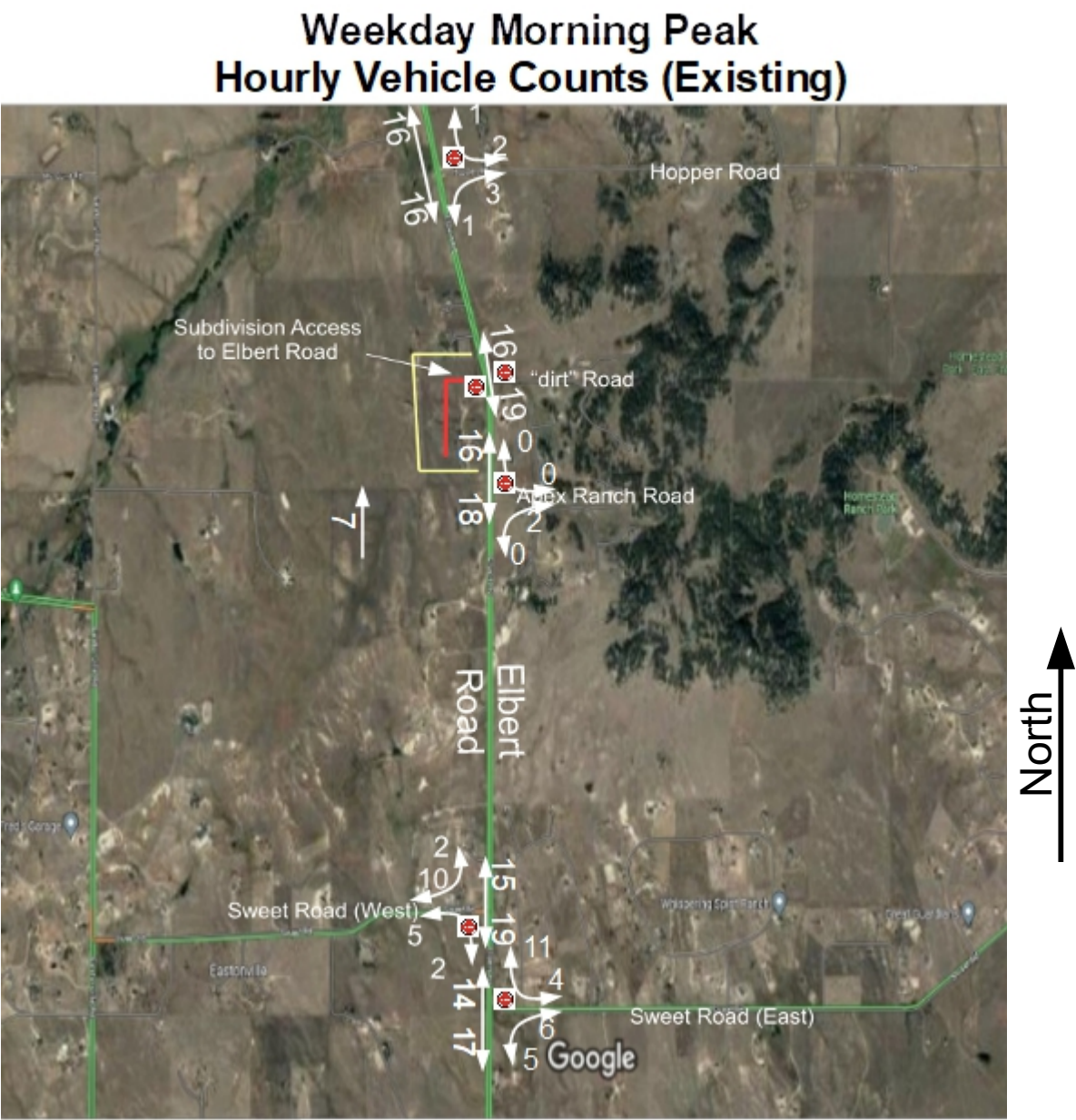
By Year 2040 and without the proposed development, the unsignalized intersections within the study area continue to have turning movement projected operations at LOS A for the morning and afternoon peak traffic hours.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system upon roadway and intersection control improvements assumed within this analysis. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2040 background traffic conditions. Proposed site access has long-term operations at LOS A during peak traffic periods and upon build-out.

APPENDIX A

Traffic Count Data

Weekdays Morning Average Hourly Traffic Flow for Intersections



 **Stop-Sign Controlled**

Weekday Afternoon Average Hourly Traffic Flow for Intersections

**Weekday Afternoon Peak
Hourly Vehicle Counts (Existing)**



Stop-Sign Controlled

Appendix A – Traffic Count Data

Traffic Count Sunday 3/19/2023 7:30am-9:45am

Sunday (03/19/2023)

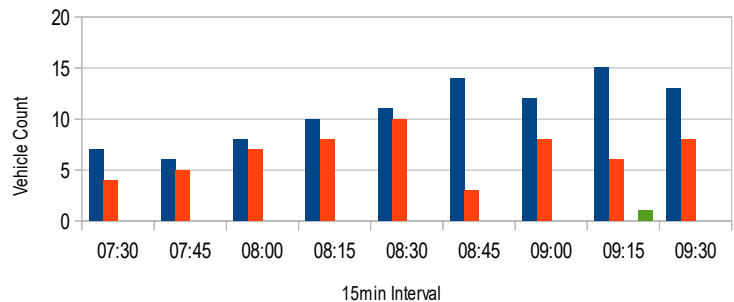
15 min Intervals	Elbert Road South Bound	Elbert Road North Bound	Entering Driveway from Northbound Elbert Road	Exiting Driveway to Northbound Elbert Road
07:30	7	4		
07:45	6	5		
08:00	8	7		
08:15	10	8		
08:30	11	10		
08:45	14	3		
09:00	12	8		
09:15	15	6		1
09:30	13	8		
Totals	96	59		1
Average	11	7		0

2496

1456

16888 Driveway - N/S Elbert Road

Sunday 3/19/2023 7:30am-9:45am



■ Elbert Road South Bound ■ Elbert Road North Bound
■ Entering Driveway from Northbound Elbert Road ■ Exiting Driveway to Northbound Elbert Road

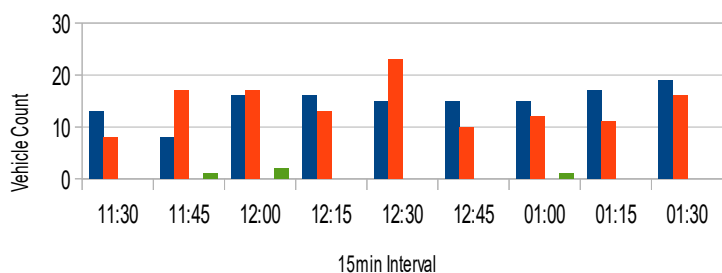
Traffic Count Sunday 3/19/2023 11:30am-1:45pm

Sunday (03/19/2023)

15 min Intervals	Elbert Road South Bound	Elbert Road North Bound	Entering Driveway from Northbound Elbert Road	Exiting Driveway to Southbound Elbert Road
11:30	13	8		
11:45	8	17		1
12:00	16	17		2
12:15	16	13		
12:30	15	23		
12:45	15	10		
01:00	15	12		1
01:15	17	11		
01:30	19	16		
Totals	134	127	0	4
Average	15	14	0	1

16888 Driveway - N/S Elbert Road

Sunday 3/19/2023 11:30am-1:45pm



■ Elbert Road South Bound ■ Elbert Road North Bound
■ Entering Driveway from Northbound Elbert Road ■ Exiting Driveway to Southbound Elbert Road

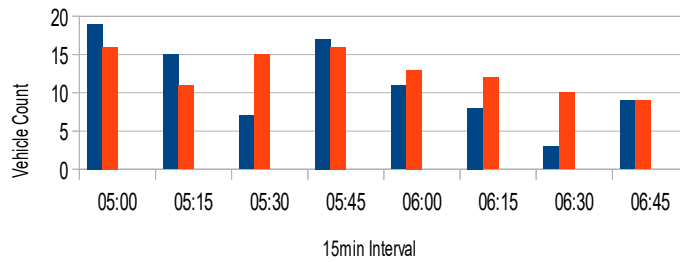
Traffic Count Sunday 3/19/2023 5:00pm-7:00pm

Sunday (03/19/2023)

15 min Intervals	Elbert Road South Bound	Elbert Road North Bound	Entering Driveway from Northbound Elbert Road	Exiting Driveway to Southbound Elbert Road
05:00	19	16		
05:15	15	11		
05:30	7	15		
05:45	17	16		
06:00	11	13		
06:15	8	12		
06:30	3	10		
06:45	9	9		
Totals	89	102		
Average	11	13		

16888 Driveway - N/S Elbert Road

Sunday 3/19/2023 5:00pm-7:00pm



- Elbert Road South Bound
- Elbert Road North Bound
- Entering Driveway from Northbound Elbert Road
- Exiting Driveway to Southbound Elbert Road

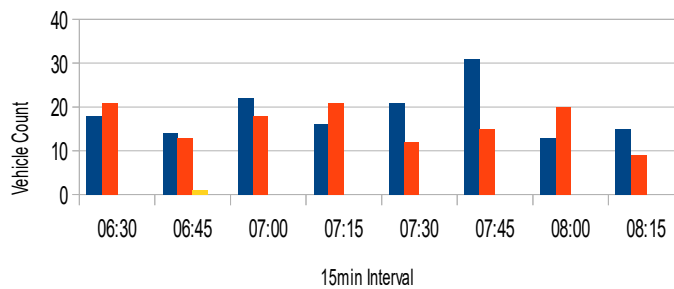
Traffic Count Wednesday 3/22/2023 6:30am-8:30am

Wednesday (03/22/2023)

15 min Intervals	Elbert Road South Bound	Elbert Road North Bound	Entering Driveway from Northbound Elbert Road	Exiting Driveway to Southbound Elbert Road
06:30	18	21		
06:45	14	13	1	
07:00	22	18		
07:15	16	21		
07:30	21	12		
07:45	31	15		
08:00	13	20		
08:15	15	9		
Totals	150	129	1	
Average	19	16	1	

16888 Driveway - N/S Elbert Road

Wednesday 3/22/2023 6:30am-8:30am

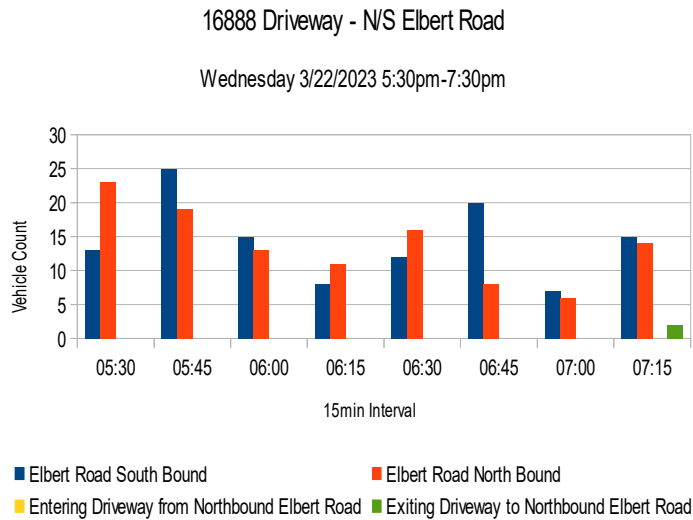


- Elbert Road South Bound
- Elbert Road North Bound
- Entering Driveway from Northbound Elbert Road
- Exiting Driveway to Southbound Elbert Road

3024
1764

Traffic Count Wednesday 3/22/2023 5:30pm-7:30pm

Wednesday (03/22/2023)				
	Elbert Road South Bound	Elbert Road North Bound	Entering Driveway from Northbound Elbert Road	Exiting Driveway to Northbound Elbert Road
15 min Intervals				
05:30	13	23		
05:45	25	19		
06:00	15	13		
06:15	8	11		
06:30	12	16		
06:45	20	8		
07:00	7	6		
07:15	15	14		2
Totals	115	110	0	2
Average	14	14	0	2



APPENDIX B

Level of Service Definitions

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 6th Edition, Transportation Research Board, 2016: Chapter 19 – Signalized Intersections.

Motorized Vehicle Level of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio ^a	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
$> 10 - 20$	B	F
$> 20 - 35$	C	F
$> 35 - 55$	D	F
$> 55 - 80$	E	F
> 80	F	F

Note: ^a For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 6th Edition, Transportation Research Board, 2016: Chapter 20 – Two-Way Stop-Controlled Intersections, Chapter 21 – All-Way Stop-Controlled Intersections, and Chapter 22 - Roundabouts.

Motorized Vehicle Level of Service (LOS) for Unsignalized & Roundabout Intersections

LOS is a quantitative stratification of performance measure(s) representing quality of service. Quality of service describes how well a transportation facility or service operates from a traveler's perspective. LOS is measured on an A – F scale, with LOS A representing the best operating conditions from a traveler's perspective.

Control Delay (s/veh)	<u>LOS by Volume-to-Capacity Ratio^a</u>	
	$v/c \leq 1.0$	$v/c > 1.0$
0 – 10	A	F
> 10 – 15	B	F
> 15 – 25	C	F
> 25 – 35	D	F
> 35 – 50	E	F
> 50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.




^a For approaches and intersectionwide assessment, LOS is defined solely by control delay.

APPENDIX C

Capacity Worksheets

HCM 6th TWSC
1: Elbert Road & Sweet Road

Existing Traffic Volumes
AM Peak Traffic Hour

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	11	14	6	4	18
Future Vol, veh/h	5	11	14	6	4	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	5	12	15	7	4	20




Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	47	19	0	0	22
Stage 1	19	-	-	-	-
Stage 2	28	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	963	1059	-	-	1593
Stage 1	1004	-	-	-	-
Stage 2	995	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	960	1059	-	-	1593
Mov Cap-2 Maneuver	960	-	-	-	-
Stage 1	1004	-	-	-	-
Stage 2	992	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1026	1593
HCM Lane V/C Ratio	-	-	0.017	0.003
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0




HCM 6th TWSC
2: Elbert Road & Sweet Road

Existing Traffic Volumes
AM Peak Traffic Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	5	15	20	10
Future Vol, veh/h	2	2	5	15	20	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	2	2	5	16	22	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	54	28	33	0	-	0
Stage 1	28	-	-	-	-	-
Stage 2	26	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	954	1047	1579	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	951	1047	1579	-	-	-
Mov Cap-2 Maneuver	951	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	1.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1579	-	997	-	-	
HCM Lane V/C Ratio	0.003	-	0.004	-	-	
HCM Control Delay (s)	7.3	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	




HCM 6th TWSC 3: Elbert Road & Apex Ranch Road

Existing Traffic Volumes
AM Peak Traffic Hour

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	16	2	0	19
Future Vol, veh/h	0	0	16	2	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	0	17	2	0	21
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	39	18	0	0	19	0
Stage 1	18	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	973	1061	-	-	1597	-
Stage 1	1005	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	973	1061	-	-	1597	-
Mov Cap-2 Maneuver	973	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		1597	-	
HCM Lane V/C Ratio	-	-		-	-	
HCM Control Delay (s)	-	-		0	-	
HCM Lane LOS	-	-		A	-	
HCM 95th %tile Q(veh)	-	-		0	-	




HCM 6th TWSC 4: Elbert Road & Unnamed Local Road

Existing Traffic Volumes
AM Peak Traffic Hour

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	16	0	0	20
Future Vol, veh/h	0	0	16	0	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	0	17	0	0	22
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	39	17	0	0	17	0
Stage 1	17	-	-	-	-	-
Stage 2	22	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	973	1062	-	-	1600	-
Stage 1	1006	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	973	1062	-	-	1600	-
Mov Cap-2 Maneuver	973	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1600	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	




HCM 6th TWSC
5: Elbert Road & Hopper Road

Existing Traffic Volumes
AM Peak Traffic Hour

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	16	3	2	16
Future Vol, veh/h	1	1	16	3	2	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	1	1	17	3	2	17
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	40	19	0	0	20	0
Stage 1	19	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	972	1059	-	-	1596	-
Stage 1	1004	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	971	1059	-	-	1596	-
Mov Cap-2 Maneuver	971	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.6	0		0.8		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	1013	1596	-	
HCM Lane V/C Ratio	-	-	0.002	0.001	-	
HCM Control Delay (s)	-	-	8.6	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

HCM 6th TWSC
1: Elbert Road & Sweet Road

Existing Traffic Volumes
PM Peak Traffic Hour

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	4	13	5	3	13
Future Vol, veh/h	3	4	13	5	3	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	3	4	14	5	3	14




Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	37	17	0	0	19
Stage 1	17	-	-	-	-
Stage 2	20	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	975	1062	-	-	1597
Stage 1	1006	-	-	-	-
Stage 2	1003	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	973	1062	-	-	1597
Mov Cap-2 Maneuver	973	-	-	-	-
Stage 1	1006	-	-	-	-
Stage 2	1001	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 1022	1597	-
HCM Lane V/C Ratio	-	- 0.007	0.002	-
HCM Control Delay (s)	-	- 8.5	7.3	0
HCM Lane LOS	-	- A	A	A
HCM 95th %tile Q(veh)	-	- 0	0	-




HCM 6th TWSC
2: Elbert Road & Sweet Road

Existing Traffic Volumes
PM Peak Traffic Hour

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	4	3	13	14	2
Future Vol, veh/h	5	4	3	13	14	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	5	4	3	14	15	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	36	16	17	0	-	0
Stage 1	16	-	-	-	-	-
Stage 2	20	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	977	1063	1600	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	1003	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	975	1063	1600	-	-	-
Mov Cap-2 Maneuver	975	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	1003	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	1.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1600	-	1012	-	-	
HCM Lane V/C Ratio	0.002	-	0.01	-	-	
HCM Control Delay (s)	7.3	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th TWSC
3: Elbert Road & Apex Ranch Road

Existing Traffic Volumes
PM Peak Traffic Hour

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	14	1	0	14
Future Vol, veh/h	1	2	14	1	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	1	2	15	1	0	15




Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	31	16	0	0	16
Stage 1	16	-	-	-	-
Stage 2	15	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	983	1063	-	-	1602
Stage 1	1007	-	-	-	-
Stage 2	1008	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	983	1063	-	-	1602
Mov Cap-2 Maneuver	983	-	-	-	-
Stage 1	1007	-	-	-	-
Stage 2	1008	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 1035	1602	-
HCM Lane V/C Ratio	-	- 0.003	-	-
HCM Control Delay (s)	-	- 8.5	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0	0	-




HCM 6th TWSC
4: Elbert Road & Unnamed Local Road

Existing Traffic Volumes
PM Peak Traffic Hour

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	14	0	0	14
Future Vol, veh/h	0	0	14	0	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	0	15	0	0	15
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	30	15	0	0	15	0
Stage 1	15	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	984	1065	-	-	1603	-
Stage 1	1008	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	984	1065	-	-	1603	-
Mov Cap-2 Maneuver	984	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1603	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	




HCM 6th TWSC
5: Elbert Road & Hopper Road

Existing Traffic Volumes
PM Peak Traffic Hour

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	12	1	2	13
Future Vol, veh/h	2	3	12	1	2	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	2	3	13	1	2	14
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	32	14	0	0	14	0
Stage 1	14	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	982	1066	-	-	1604	-
Stage 1	1009	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	981	1066	-	-	1604	-
Mov Cap-2 Maneuver	981	-	-	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	1004	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.5	0		1		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1030		1604	-	
HCM Lane V/C Ratio	-	- 0.005		0.001	-	
HCM Control Delay (s)	-	- 8.5		7.2	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0		0	-	

HCM 6th TWSC
1: Elbert Road & Sweet Road

Background Traffic Volumes
AM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	12	23	6	4	40
Future Vol, veh/h	5	12	23	6	4	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	5	13	25	7	4	43




Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	80	29	0	0	32
Stage 1	29	-	-	-	-
Stage 2	51	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	922	1046	-	-	1580
Stage 1	994	-	-	-	-
Stage 2	971	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	919	1046	-	-	1580
Mov Cap-2 Maneuver	919	-	-	-	-
Stage 1	994	-	-	-	-
Stage 2	968	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1005	1580
HCM Lane V/C Ratio	-	-	0.018	0.003
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0




HCM 6th TWSC
2: Elbert Road & Sweet Road

Background Traffic Volumes
AM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	2	5	24	42	21
Future Vol, veh/h	6	2	5	24	42	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	7	2	5	26	46	23
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	94	58	69	0	-	0
Stage 1	58	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	906	1008	1532	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	903	1008	1532	-	-	-
Mov Cap-2 Maneuver	903	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.9	1.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1532	-	927	-	-	
HCM Lane V/C Ratio	0.004	-	0.009	-	-	
HCM Control Delay (s)	7.4	0	8.9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th TWSC 3: Elbert Road & Apex Ranch Road




Background Traffic Volumes
AM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	2	19	4	0	20
Future Vol, veh/h	6	2	19	4	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	7	2	21	4	0	22
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	45	23	0	0	25	0
Stage 1	23	-	-	-	-	-
Stage 2	22	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	965	1054	-	-	1589	-
Stage 1	1000	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	965	1054	-	-	1589	-
Mov Cap-2 Maneuver	965	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 986		1589	-	
HCM Lane V/C Ratio	-	- 0.009		-	-	
HCM Control Delay (s)	-	- 8.7		0	-	
HCM Lane LOS	-	- A		A	-	
HCM 95th %tile Q(veh)	-	- 0		0	-	

HCM 6th TWSC




4: Elbert Road & Unnamed Local Road

Background Traffic Volumes
AM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	21	0	0	21
Future Vol, veh/h	0	0	21	0	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	0	23	0	0	23
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	46	23	0	0	23	0
Stage 1	23	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	964	1054	-	-	1592	-
Stage 1	1000	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	964	1054	-	-	1592	-
Mov Cap-2 Maneuver	964	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1592	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	




HCM 6th TWSC
5: Elbert Road & Hopper Road

Background Traffic Volumes
AM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	21	3	2	17
Future Vol, veh/h	1	1	21	3	2	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	1	1	23	3	2	18
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	47	25	0	0	26	0
Stage 1	25	-	-	-	-	-
Stage 2	22	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	963	1051	-	-	1588	-
Stage 1	998	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	962	1051	-	-	1588	-
Mov Cap-2 Maneuver	962	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.6	0		0.8		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	1005	1588	-	
HCM Lane V/C Ratio	-	-	0.002	0.001	-	
HCM Control Delay (s)	-	-	8.6	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	




HCM 6th TWSC
1: Elbert Road & Sweet Road

Background Traffic Volumes
PM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	4	42	5	3	28
Future Vol, veh/h	3	4	42	5	3	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	3	4	46	5	3	30
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	85	49	0	0	51	0
Stage 1	49	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	916	1020	-	-	1555	-
Stage 1	973	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	914	1020	-	-	1555	-
Mov Cap-2 Maneuver	914	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	972	1555	-	
HCM Lane V/C Ratio	-	-	0.008	0.002	-	
HCM Control Delay (s)	-	-	8.7	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	




HCM 6th TWSC
2: Elbert Road & Sweet Road

Background Traffic Volumes
PM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	4	3	42	29	9
Future Vol, veh/h	16	4	3	42	29	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	17	4	3	46	32	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	89	37	42	0	-	0
Stage 1	37	-	-	-	-	-
Stage 2	52	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	912	1035	1567	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	910	1035	1567	-	-	-
Mov Cap-2 Maneuver	910	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	0.5		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1567	-	933	-	-	
HCM Lane V/C Ratio	0.002	-	0.023	-	-	
HCM Control Delay (s)	7.3	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

HCM 6th TWSC 3: Elbert Road & Apex Ranch Road

Background Traffic Volumes
PM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	3	17	8	2	17
Future Vol, veh/h	5	3	17	8	2	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	5	3	18	9	2	18

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	45	23	0	0	27
Stage 1	23	-	-	-	-
Stage 2	22	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	965	1054	-	-	1587
Stage 1	1000	-	-	-	-
Stage 2	1001	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	964	1054	-	-	1587
Mov Cap-2 Maneuver	964	-	-	-	-
Stage 1	1000	-	-	-	-
Stage 2	1000	-	-	-	-




Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	996	1587
HCM Lane V/C Ratio	-	-	0.009	0.001
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC




4: Elbert Road & Unnamed Local Road

Background Traffic Volumes
PM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	18	0	0	19
Future Vol, veh/h	0	0	18	0	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	0	20	0	0	21
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	41	20	0	0	20	0
Stage 1	20	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	970	1058	-	-	1596	-
Stage 1	1003	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	970	1058	-	-	1596	-
Mov Cap-2 Maneuver	970	-	-	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	-	1596	-
HCM Lane V/C Ratio		-	-	-	-	-
HCM Control Delay (s)		-	-	0	0	-
HCM Lane LOS		-	-	A	A	-
HCM 95th %tile Q(veh)		-	-	-	0	-




HCM 6th TWSC
5: Elbert Road & Hopper Road

Background Traffic Volumes
PM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	16	1	2	18
Future Vol, veh/h	2	3	16	1	2	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	2	3	17	1	2	20
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	42	18	0	0	18	0
Stage 1	18	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	969	1061	-	-	1599	-
Stage 1	1005	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	968	1061	-	-	1599	-
Mov Cap-2 Maneuver	968	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.5	0		0.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	1022	1599	-	
HCM Lane V/C Ratio	-	-	0.005	0.001	-	
HCM Control Delay (s)	-	-	8.5	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

HCM 6th TWSC
1: Elbert Road & Sweet Road South

Background Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	18	30	10	6	50
Future Vol, veh/h	8	18	30	10	6	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	9	20	33	11	7	54

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	107	39	0	0	44
Stage 1	39	-	-	-	-
Stage 2	68	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	891	1033	-	-	1564
Stage 1	983	-	-	-	-
Stage 2	955	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	887	1033	-	-	1564
Mov Cap-2 Maneuver	887	-	-	-	-
Stage 1	983	-	-	-	-
Stage 2	950	-	-	-	-




Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	983	1564
HCM Lane V/C Ratio	-	-	0.029	0.004
HCM Control Delay (s)	-	-	8.8	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC




2: Elbert Road & Sweet Road North

Background Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	3	8	32	23	26
Future Vol, veh/h	7	3	8	32	23	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	3	9	35	25	28
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	92	39	53	0	-	0
Stage 1	39	-	-	-	-	-
Stage 2	53	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	908	1033	1553	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	903	1033	1553	-	-	-
Mov Cap-2 Maneuver	903	-	-	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.9	1.5		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1553	-	938	-	-	
HCM Lane V/C Ratio	0.006	-	0.012	-	-	
HCM Control Delay (s)	7.3	0	8.9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th TWSC 3: Elbert Road & Apex Ranch Road

Background Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	2	28	5	0	30
Future Vol, veh/h	6	2	28	5	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	7	2	30	5	0	33
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	66	33	0	0	35	0
Stage 1	33	-	-	-	-	-
Stage 2	33	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	939	1041	-	-	1576	-
Stage 1	989	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	939	1041	-	-	1576	-
Mov Cap-2 Maneuver	939	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	963	1576	-	
HCM Lane V/C Ratio	-	-	0.009	-	-	
HCM Control Delay (s)	-	-	8.8	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	

HCM 6th TWSC




4: Elbert Road & Unnamed Local Road

Background Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	0	30	0	0	32
Future Vol, veh/h	0	0	30	0	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	0	33	0	0	35
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	68	33	0	0	33	0
Stage 1	33	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	937	1041	-	-	1579	-
Stage 1	989	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	937	1041	-	-	1579	-
Mov Cap-2 Maneuver	937	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1579	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	




HCM 6th TWSC
5: Elbert Road & Hopper Road

Background Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	30	5	3	26
Future Vol, veh/h	2	2	30	5	3	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	2	2	33	5	3	28
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	70	36	0	0	38	0
Stage 1	36	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	934	1037	-	-	1572	-
Stage 1	986	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	932	1037	-	-	1572	-
Mov Cap-2 Maneuver	932	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0.8		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	982	1572	-	
HCM Lane V/C Ratio	-	-	0.004	0.002	-	
HCM Control Delay (s)	-	-	8.7	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	




HCM 6th TWSC
1: Elbert Road & Sweet Road

Background Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	6	49	8	5	35
Future Vol, veh/h	5	6	49	8	5	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	5	7	53	9	5	38
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	106	58	0	0	62	0
Stage 1	58	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	892	1008	-	-	1541	-
Stage 1	965	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	889	1008	-	-	1541	-
Mov Cap-2 Maneuver	889	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0.9		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	950	1541	-	
HCM Lane V/C Ratio	-	-	0.013	0.004	-	
HCM Control Delay (s)	-	-	8.8	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

HCM 6th TWSC
2: Elbert Road & Sweet Road




Background Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	6	5	49	36	10
Future Vol, veh/h	19	6	5	49	36	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	21	7	5	53	39	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	108	45	50	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	63	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	889	1025	1557	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	886	1025	1557	-	-	-
Mov Cap-2 Maneuver	886	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	0.7		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1557	-	916	-	-	
HCM Lane V/C Ratio	0.003	-	0.03	-	-	
HCM Control Delay (s)	7.3	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

HCM 6th TWSC

3: Elbert Road & Apex Ranch Road

Background Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	4	24	9	2	24
Future Vol, veh/h	6	4	24	9	2	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	7	4	26	10	2	26




Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	61	31	0
Stage 1	31	-	-
Stage 2	30	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	945	1043	-
Stage 1	992	-	-
Stage 2	993	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	944	1043	-
Mov Cap-2 Maneuver	944	-	-
Stage 1	992	-	-
Stage 2	992	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	981	1575
HCM Lane V/C Ratio	-	-	0.011	0.001
HCM Control Delay (s)	-	-	8.7	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0




HCM 6th TWSC 4: Elbert Road & Unnamed Local Road

Background Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	25	0	0	25
Future Vol, veh/h	0	0	25	0	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	0	27	0	0	27
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	54	27	0	0	27	0
Stage 1	27	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	954	1048	-	-	1587	-
Stage 1	996	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	954	1048	-	-	1587	-
Mov Cap-2 Maneuver	954	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	-	1587	-
HCM Lane V/C Ratio		-	-	-	-	-
HCM Control Delay (s)		-	-	0	0	-
HCM Lane LOS		-	-	A	A	-
HCM 95th %tile Q(veh)		-	-	-	0	-




HCM 6th TWSC
5: Elbert Road & Hopper Road

Background Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	5	22	2	3	25
Future Vol, veh/h	3	5	22	2	3	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	3	5	24	2	3	27
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	58	25	0	0	26	0
Stage 1	25	-	-	-	-	-
Stage 2	33	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	949	1051	-	-	1588	-
Stage 1	998	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	947	1051	-	-	1588	-
Mov Cap-2 Maneuver	947	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.6	0		0.8		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1009		1588	-	
HCM Lane V/C Ratio	-	- 0.009		0.002	-	
HCM Control Delay (s)	-	- 8.6		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0		0	-	




HCM 6th TWSC
1: Elbert Road & Sweet Road

Total Traffic Volumes
AM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	12	24	6	4	42
Future Vol, veh/h	5	12	24	6	4	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	5	13	26	7	4	46
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	84	30	0	0	33	0
Stage 1	30	-	-	-	-	-
Stage 2	54	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	918	1044	-	-	1579	-
Stage 1	993	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	915	1044	-	-	1579	-
Mov Cap-2 Maneuver	915	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	966	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1002		1579	-	
HCM Lane V/C Ratio	-	- 0.018		0.003	-	
HCM Control Delay (s)	-	- 8.7		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	




HCM 6th TWSC
2: Elbert Road & Sweet Road

Total Traffic Volumes
AM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	2	5	25	44	21
Future Vol, veh/h	6	2	5	25	44	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	7	2	5	27	48	23
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	97	60	71	0	-	0
Stage 1	60	-	-	-	-	-
Stage 2	37	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	902	1005	1529	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	899	1005	1529	-	-	-
Mov Cap-2 Maneuver	899	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.9	1.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1529	-	923	-	-	
HCM Lane V/C Ratio	0.004	-	0.009	-	-	
HCM Control Delay (s)	7.4	0	8.9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th TWSC 3: Elbert Road & Apex Ranch Road

Total Traffic Volumes
AM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	2	20	4	0	22
Future Vol, veh/h	6	2	20	4	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	7	2	22	4	0	24

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	48	24	0	0	26
Stage 1	24	-	-	-	-
Stage 2	24	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	962	1052	-	-	1588
Stage 1	999	-	-	-	-
Stage 2	999	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	962	1052	-	-	1588
Mov Cap-2 Maneuver	962	-	-	-	-
Stage 1	999	-	-	-	-
Stage 2	999	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	983	1588
HCM Lane V/C Ratio	-	-	0.009	-
HCM Control Delay (s)	-	-	8.7	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0




HCM 6th TWSC
4: Elbert Road & Site Access/Unnamed Local Road

Total Traffic Volumes
AM Peak Traffic Hour - Year 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	1	0	2	0	0	0	1	21	0	0	21	1	
Future Vol, veh/h	1	0	2	0	0	0	1	21	0	0	21	1	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	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	1	0	2	0	0	0	1	23	0	0	23	1	
Major/Minor	Minor2		Minor1		Major1		Major2						
Conflicting Flow All	49	49	24	50	49	23	24	0	0	23	0	0	
Stage 1	24	24	-	25	25	-	-	-	-	-	-	-	
Stage 2	25	25	-	25	24	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-	
Pot Cap-1 Maneuver	951	843	1052	950	843	1054	1591	-	-	1592	-	-	
Stage 1	994	875	-	993	874	-	-	-	-	-	-	-	
Stage 2	993	874	-	993	875	-	-	-	-	-	-	-	
Platoon blocked, %								-	-	-			-
Mov Cap-1 Maneuver	950	842	1052	947	842	1054	1591	-	-	1592	-	-	
Mov Cap-2 Maneuver	950	842	-	947	842	-	-	-	-	-	-	-	
Stage 1	993	875	-	992	873	-	-	-	-	-	-	-	
Stage 2	992	873	-	991	875	-	-	-	-	-	-	-	
Approach	EB		WB		NB		SB						
HCM Control Delay, s	8.6		0		0.3		0						
HCM LOS	A		A										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1591	-	-	1016	-	1592	-	-					
HCM Lane V/C Ratio	0.001	-	-	0.003	-	-	-	-					
HCM Control Delay (s)	7.3	0	-	8.6	0	0	-	-					
HCM Lane LOS	A	A	-	A	A	A	-	-					
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-					

HCM 6th TWSC
5: Elbert Road & Hopper Road

Total Traffic Volumes
AM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	22	3	2	18
Future Vol, veh/h	1	1	22	3	2	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	1	1	24	3	2	20




Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	50	26	0	0	27
Stage 1	26	-	-	-	-
Stage 2	24	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	959	1050	-	-	1587
Stage 1	997	-	-	-	-
Stage 2	999	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	958	1050	-	-	1587
Mov Cap-2 Maneuver	958	-	-	-	-
Stage 1	997	-	-	-	-
Stage 2	998	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 1002	1587	-
HCM Lane V/C Ratio	-	- 0.002	0.001	-
HCM Control Delay (s)	-	- 8.6	7.3	0
HCM Lane LOS	-	- A	A	A
HCM 95th %tile Q(veh)	-	- 0	0	-

HCM 6th TWSC
1: Elbert Road & Sweet Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	4	44	5	3	29
Future Vol, veh/h	3	4	44	5	3	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	3	4	48	5	3	32




Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	89	51	0	0	53
Stage 1	51	-	-	-	-
Stage 2	38	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	912	1017	-	-	1553
Stage 1	971	-	-	-	-
Stage 2	984	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	910	1017	-	-	1553
Mov Cap-2 Maneuver	910	-	-	-	-
Stage 1	971	-	-	-	-
Stage 2	982	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	968	1553
HCM Lane V/C Ratio	-	-	0.008	0.002
HCM Control Delay (s)	-	-	8.7	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0




HCM 6th TWSC
2: Elbert Road & Sweet Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	4	3	44	30	9
Future Vol, veh/h	16	4	3	44	30	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	17	4	3	48	33	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	92	38	43	0	-	0
Stage 1	38	-	-	-	-	-
Stage 2	54	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	908	1034	1566	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	906	1034	1566	-	-	-
Mov Cap-2 Maneuver	906	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	0.5		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1566	-	929	-	-	
HCM Lane V/C Ratio	0.002	-	0.023	-	-	
HCM Control Delay (s)	7.3	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

HCM 6th TWSC 3: Elbert Road & Apex Ranch Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	3	19	8	2	18
Future Vol, veh/h	5	3	19	8	2	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	5	3	21	9	2	20

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	50	26	0	0	30
Stage 1	26	-	-	-	-
Stage 2	24	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	959	1050	-	-	1583
Stage 1	997	-	-	-	-
Stage 2	999	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	958	1050	-	-	1583
Mov Cap-2 Maneuver	958	-	-	-	-
Stage 1	997	-	-	-	-
Stage 2	998	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	991	1583
HCM Lane V/C Ratio	-	-	0.009	0.001
HCM Control Delay (s)	-	-	8.7	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0




HCM 6th TWSC
4: Elbert Road & Site Access/Unnamed Local Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 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	1	0	1	0	0	0	2	18	0	0	19	1
Future Vol, veh/h	1	0	1	0	0	0	2	18	0	0	19	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	1	0	1	0	0	0	2	20	0	0	21	1
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	46	46	22	46	46	20	22	0	0	20	0	0
Stage 1	22	22	-	24	24	-	-	-	-	-	-	-
Stage 2	24	24	-	22	22	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	955	846	1055	955	846	1058	1593	-	-	1596	-	-
Stage 1	996	877	-	994	875	-	-	-	-	-	-	-
Stage 2	994	875	-	996	877	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	954	845	1055	953	845	1058	1593	-	-	1596	-	-
Mov Cap-2 Maneuver	954	845	-	953	845	-	-	-	-	-	-	-
Stage 1	995	877	-	993	874	-	-	-	-	-	-	-
Stage 2	993	874	-	995	877	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	8.6		0			0.7			0			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1593	-	-	1002	-	1596	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.002	-	-	-	-				
HCM Control Delay (s)	7.3	0	-	8.6	0	0	-	-				
HCM Lane LOS	A	A	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-				




HCM 6th TWSC
5: Elbert Road & Hopper Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 2026

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	17	1	2	19
Future Vol, veh/h	2	3	17	1	2	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	2	3	18	1	2	21
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	44	19	0	0	19	0
Stage 1	19	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	967	1059	-	-	1597	-
Stage 1	1004	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	966	1059	-	-	1597	-
Mov Cap-2 Maneuver	966	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.5	0		0.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1020		1597	-	
HCM Lane V/C Ratio	-	- 0.005		0.001	-	
HCM Control Delay (s)	-	- 8.5		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0		0	-	




HCM 6th TWSC
1: Elbert Road & Sweet Road South

Total Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	18	31	10	6	52
Future Vol, veh/h	8	18	31	10	6	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	9	20	34	11	7	57
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	111	40	0	0	45	0
Stage 1	40	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	886	1031	-	-	1563	-
Stage 1	982	-	-	-	-	-
Stage 2	952	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	882	1031	-	-	1563	-
Mov Cap-2 Maneuver	882	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0.8		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 980		1563	-	
HCM Lane V/C Ratio	-	- 0.029		0.004	-	
HCM Control Delay (s)	-	- 8.8		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	




HCM 6th TWSC 2: Elbert Road & Sweet Road North

Total Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	3	8	33	55	26
Future Vol, veh/h	7	3	8	33	55	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	3	9	36	60	28
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	128	74	88	0	-	0
Stage 1	74	-	-	-	-	-
Stage 2	54	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	866	988	1508	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	861	988	1508	-	-	-
Mov Cap-2 Maneuver	861	-	-	-	-	-
Stage 1	943	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	1.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1508	-	896	-	-	
HCM Lane V/C Ratio	0.006	-	0.012	-	-	
HCM Control Delay (s)	7.4	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th TWSC
3: Elbert Road & Apex Ranch Road

Total Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	2	29	5	0	32
Future Vol, veh/h	6	2	29	5	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	7	2	32	5	0	35
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	70	35	0	0	37	0
Stage 1	35	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	934	1038	-	-	1574	-
Stage 1	987	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	934	1038	-	-	1574	-
Mov Cap-2 Maneuver	934	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	958	1574	-	
HCM Lane V/C Ratio	-	-	0.009	-	-	
HCM Control Delay (s)	-	-	8.8	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	




HCM 6th TWSC
4: Elbert Road & Site Access/Unnamed Local Road

Total Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	1	0	2	0	0	0	1	30	0	0	32	0
Future Vol, veh/h	1	0	2	0	0	0	1	30	0	0	32	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	1	0	2	0	0	0	1	33	0	0	35	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	70	70	35	71	70	33	35	0	0	33	0	0
Stage 1	35	35	-	35	35	-	-	-	-	-	-	-
Stage 2	35	35	-	36	35	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	922	821	1038	920	821	1041	1576	-	-	1579	-	-
Stage 1	981	866	-	981	866	-	-	-	-	-	-	-
Stage 2	981	866	-	980	866	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	921	820	1038	917	820	1041	1576	-	-	1579	-	-
Mov Cap-2 Maneuver	921	820	-	917	820	-	-	-	-	-	-	-
Stage 1	980	866	-	980	865	-	-	-	-	-	-	-
Stage 2	980	865	-	978	866	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	8.6		0		0.2		0					
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1576	-	-	996	-	1579	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.003	-	-	-	-				
HCM Control Delay (s)	7.3	0	-	8.6	0	0	-	-				
HCM Lane LOS	A	A	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-				




HCM 6th TWSC
5: Elbert Road & Hopper Road

Total Traffic Volumes
AM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	31	5	3	27
Future Vol, veh/h	2	2	31	5	3	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	2	2	34	5	3	29
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	72	37	0	0	39	0
Stage 1	37	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	932	1035	-	-	1571	-
Stage 1	985	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	930	1035	-	-	1571	-
Mov Cap-2 Maneuver	930	-	-	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	980	1571	-	
HCM Lane V/C Ratio	-	-	0.004	0.002	-	
HCM Control Delay (s)	-	-	8.7	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

HCM 6th TWSC
1: Elbert Road & Sweet Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	6	51	8	5	37
Future Vol, veh/h	5	6	51	8	5	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	5	7	55	9	5	40




Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	110	60	0	0	64
Stage 1	60	-	-	-	-
Stage 2	50	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	887	1005	-	-	1538
Stage 1	963	-	-	-	-
Stage 2	972	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	884	1005	-	-	1538
Mov Cap-2 Maneuver	884	-	-	-	-
Stage 1	963	-	-	-	-
Stage 2	969	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	946	1538
HCM Lane V/C Ratio	-	-	0.013	0.004
HCM Control Delay (s)	-	-	8.9	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0




HCM 6th TWSC
2: Elbert Road & Sweet Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	6	5	51	37	10
Future Vol, veh/h	19	6	5	51	37	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	21	7	5	55	40	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	111	46	51	0	-	0
Stage 1	46	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	886	1023	1555	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	883	1023	1555	-	-	-
Mov Cap-2 Maneuver	883	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	0.7		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1555	-	913	-	-	
HCM Lane V/C Ratio	0.003	-	0.03	-	-	
HCM Control Delay (s)	7.3	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

HCM 6th TWSC
3: Elbert Road & Apex Ranch Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	4	26	9	2	25
Future Vol, veh/h	6	4	26	9	2	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	7	4	28	10	2	27
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	64	33	0	0	38	0
Stage 1	33	-	-	-	-	-
Stage 2	31	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	942	1041	-	-	1572	-
Stage 1	989	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1041	-	-	1572	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0.5		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	979	1572	-	
HCM Lane V/C Ratio	-	-	0.011	0.001	-	
HCM Control Delay (s)	-	-	8.7	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	




HCM 6th TWSC
4: Elbert Road & Site Access/Unnamed Local Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	1	0	1	0	0	0	2	25	0	0	26	1
Future Vol, veh/h	1	0	1	0	0	0	2	25	0	0	26	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	1	0	1	0	0	0	2	27	0	0	28	1
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	60	60	29	60	60	27	29	0	0	27	0	0
Stage 1	29	29	-	31	31	-	-	-	-	-	-	-
Stage 2	31	31	-	29	29	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	936	831	1046	936	831	1048	1584	-	-	1587	-	-
Stage 1	988	871	-	986	869	-	-	-	-	-	-	-
Stage 2	986	869	-	988	871	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	935	830	1046	934	830	1048	1584	-	-	1587	-	-
Mov Cap-2 Maneuver	935	830	-	934	830	-	-	-	-	-	-	-
Stage 1	987	871	-	985	868	-	-	-	-	-	-	-
Stage 2	985	868	-	987	871	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	8.7		0			0.5			0			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1584	-	-	987	-	1587	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.002	-	-	-	-				
HCM Control Delay (s)	7.3	0	-	8.7	0	0	-	-				
HCM Lane LOS	A	A	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-				

HCM 6th TWSC
5: Elbert Road & Hopper Road

Total Traffic Volumes
PM Peak Traffic Hour - Year 2040

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	5	23	2	3	26
Future Vol, veh/h	3	5	23	2	3	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	3	5	25	2	3	28
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	60	26	0	0	27	0
Stage 1	26	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	947	1050	-	-	1587	-
Stage 1	997	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	945	1050	-	-	1587	-
Mov Cap-2 Maneuver	945	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.6	0		0.8		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 1008		1587	-	
HCM Lane V/C Ratio	-	- 0.009		0.002	-	
HCM Control Delay (s)	-	- 8.6		7.3	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0		0	-	