

Traffic Impact Study

To: Bill Guman, William Guman and Associates, LTD
From: Eli Farney, PE, PTOE
Date: January 29, 2025

Esteban Rodriguez Site

El Paso County, Colorado

PCD File No. SP245, CC241, P2411, P2412

Prepared By:



Eli Farney, PE, PTOE

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JR Engineering

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Centennial, CO 80112

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.

Eli Farney, P.E. #41677

Date

Developer’s Statement

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

Esteban Rodriguez
Brent Houser Enterprises, LLC
11890 Garrett Road
Peyton, CO 80831-7685

Date

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Executive Summary

JR Engineering (JR) has completed a review of the traffic impacts resulting from the proposed development of the Esteban Rodriguez Site (Project) in El Paso County, Colorado (County). A master traffic impact study was completed by LSC Transportation Consultants, dated July 31, 2024.

The objectives of this Traffic Impact Study (TIS, Study) are:

- Collect Year 2024 existing traffic count data at nearby intersections.
- Estimate site-generated traffic and route trips onto adjacent streets.
- Perform traffic operations analysis for Year 2029 Opening Day and Year 2045 Future scenarios.
- Make recommendations for roadway improvements to accommodate new traffic.

The methodology, content, and findings of this TIS are consistent with the following documents:

- *El Paso County Engineering Criteria Manual*, Appendix B: Transportation Impact Study Guidelines
- *Esteban Rodriguez Subdivision Master TIS* by LSC Transportation Consultants, dated July 31, 2024

Key Findings of this TIS

- **Levels of Service:** 2024 Existing condition levels of service are LOS B or better. In the 2029 Opening Day condition, all movements are expected to operate at LOS C or better with total traffic volumes. In the 2045 Future Year condition, all movements are expected to operate at LOS C or better with total traffic.
- **Queue Lengths:** Queuing is expected to be minimal at both intersections in the Existing, Opening Day, and Future Year conditions. No operational issues with queuing are anticipated.
- **Recommendations:** JR recommends adding both left and right turn lanes at each of the Study intersections to accommodate turning traffic by 2029 Opening Day. These turn lanes are not triggered solely by the Esteban Rodriguez site, but along with the surrounding background developments.

Introduction

JR has completed a review of the existing and forecasted traffic operations in the vicinity of the Esteban Rodriguez Site. A vicinity map is included in **Figure 1**.

Proposed Land Use

The majority of the development is anticipated to contain low-density residential land use. Additionally, warehousing and retail land uses are expected along Judge Orr Road on the north side of the site. For the purpose of estimating site-generated traffic volumes using ITE *Trip Generation Manual*, 11th Edition, the following land uses were assumed:

- Warehousing (ITE 150) – 190,000 square feet
- Single-Family Detached Housing (ITE 210) – 144 dwelling units
- Strip Retail Plaza (<40k SF) (ITE 822) – 10,000 square feet

A site plan is included in **Appendix A**.

Study Intersections

The Study analyzes two intersections:

- Judge Orr Road & Elbert Road (E1)
- Judge Orr Road & Northeast Site Access (A1)

Proposed Roadway Improvements

The following improvements are proposed in order to accommodate forecasted traffic volumes:

- Add left and right turn lanes at the Study intersections
 - Based on El Paso County criteria for required turn lanes

Table 7 of the Master TIS lists roadway improvements and right-of-way requirements identified in the El Paso County *Major Transportation Corridors Plan* (MTCP), adopted July 18, 2024. The improvements table is included in **Appendix B**.

Proposed lane geometry and intersection control are shown in **Figure 4**.

Judge Orr Road Classification

Judge Orr Road is classified as a Rural Minor Arterial roadway in the El Paso County MTCP. It is proposed to have 2 lanes in the year 2045. Judge Orr Road was modeled accordingly in this Study.

Phase 1 Traffic Analysis

In addition to analyzing the entire Esteban Rodriguez development, JR analyzed an interim condition in which only Phase 1 of the Project is complete.

Phase 1 includes 15 single-family detached homes, which would generate the following trips:

- Average Daily Trips: 176
- AM Peak Entering Site: 3
- AM Peak Exiting Site: 10
- PM Peak Entering Site: 11
- PM Peak Exiting Site: 6

Traffic volumes generated by Phase 1 only are small compared to traffic generated by the entire Project. Therefore, JR does not anticipate any operational issues to result from Phase 1 traffic.

US 24 & Stapleton Road Future Signal

The US 24 & Stapleton Road intersection is planned to be signalized in the future. CDOT has indicated that nearby projects will be required to escrow a fair share amount toward this traffic signal. Cost estimates and escrow amounts for the Esteban Rodriguez development should be determined at the final plat stage.



Figure 1 - Vicinity Map



2500 1250 0 2500



ORIGINAL SCALE: 1" = 2500'

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JR ENGINEERING

Existing Conditions

Existing Land Use

The Project site is currently vacant. The site does not generate trips in the existing condition.

Existing Traffic Volumes

Existing traffic volumes were obtained on Wednesday, February 21, 2024 by All Traffic Data Services at the intersection of Judge Orr Road & Elbert Road. Existing traffic volumes and lane geometry are shown in **Figure 2**. Traffic counts are included in **Appendix C**.

Traffic Volumes and Distribution

Background Traffic Growth Rate

To determine background traffic volumes, JR considered traffic studies for other developments in the vicinity of the Project site. The site-generated trips from these nearby studies were considered as background traffic in year 2029:

- *Saddlehorn Ranch Filing No. 2 TIS* by LSC Transportation Consultants, dated April 11, 2023
- *Davis Ranch Subdivision Master TIS* by LSC Transportation Consultants, dated July 7, 2023
- *BOCES Campus TIS* by JR Engineering

Additionally, a growth rate was applied to existing traffic volumes to account for other future regional development. JR applied 3% annual growth for the first 6 years, consistent with the Master TIS. JR applied 1% annual growth thereafter. Future background traffic volumes are shown in **Figure 5** (2029) and **Figure 7** (2045).

Site-Generated Traffic Volumes

Site-generated traffic volumes for the 2029 build-out condition were estimated using ITE *Trip Generation Manual*, 11th Edition. The residential and commercial development is expected to produce the following trips:

- Average Daily Trips: 2,292
- AM Peak Entering Site: 76
- AM Peak Exiting Site: 98
- PM Peak Entering Site: 141
- PM Peak Exiting Site: 126

Site-generated traffic volumes are shown in **Figure 3**. A trip generation report is included in **Appendix D**.

Distribution of Site-Generated Traffic

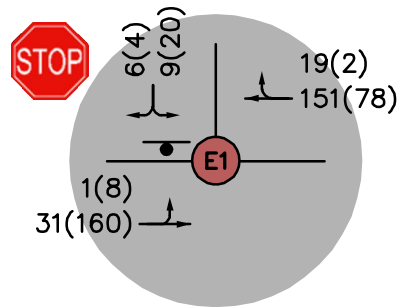
Site-generated traffic was routed onto adjacent streets according to the distribution shown in **Figure 3**. This distribution is similar to what was assumed in the Master TIS.

Total Traffic

Total traffic is the sum of background and site-generated traffic. JR forecasted total traffic volumes at the Study intersections in the years 2029 (Opening Day) and 2045 (Future Year). Total traffic volumes are shown in **Figure 6** (2029) and **Figure 8** (2045).







Figure 2 - 2024 Existing Traffic Volumes and Lane Geometry



D1 2,250 AVERAGE DAILY TRAFFIC

LEGEND

-  PROPOSED INTERSECTION
-  EXISTING INTERSECTION
-  AVERAGE DAILY TRAFFIC
- XX (XX) AM (PM) PEAK HOUR TRIPS
-  STOP SIGN CONTROL



600 300 0 600

ORIGINAL SCALE: 1" = 600'

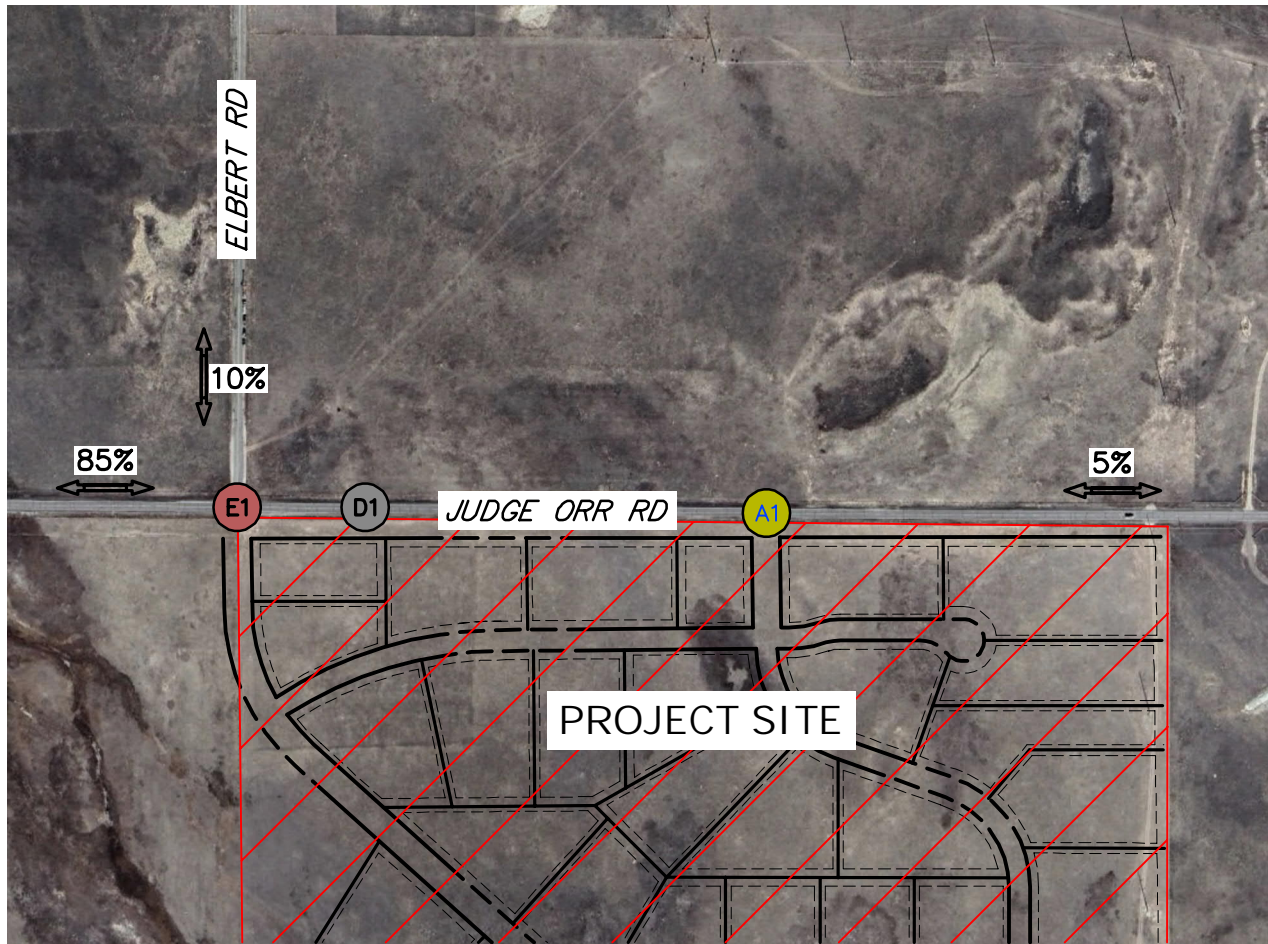
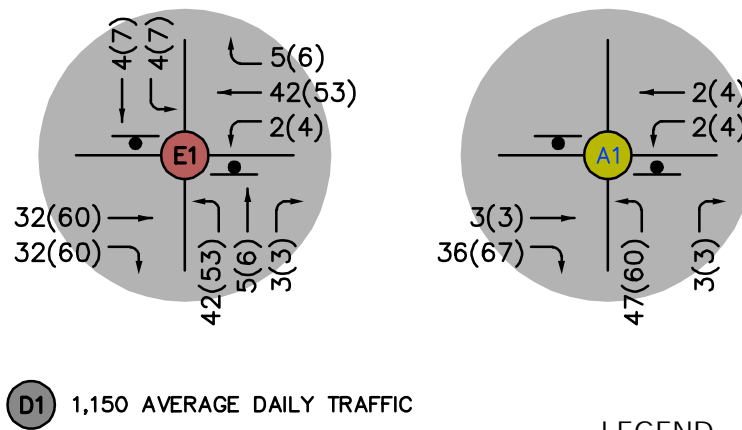






Figure 3 - Site Generated Traffic Volumes and Distribution



LEGEND

-  PROPOSED INTERSECTION
-  EXISTING INTERSECTION
-  AVERAGE DAILY TRAFFIC
- XX (XX) AM (PM) PEAK HOUR TRIPS
-  STOP SIGN CONTROL



600 300 0 600

ORIGINAL SCALE: 1" = 600'

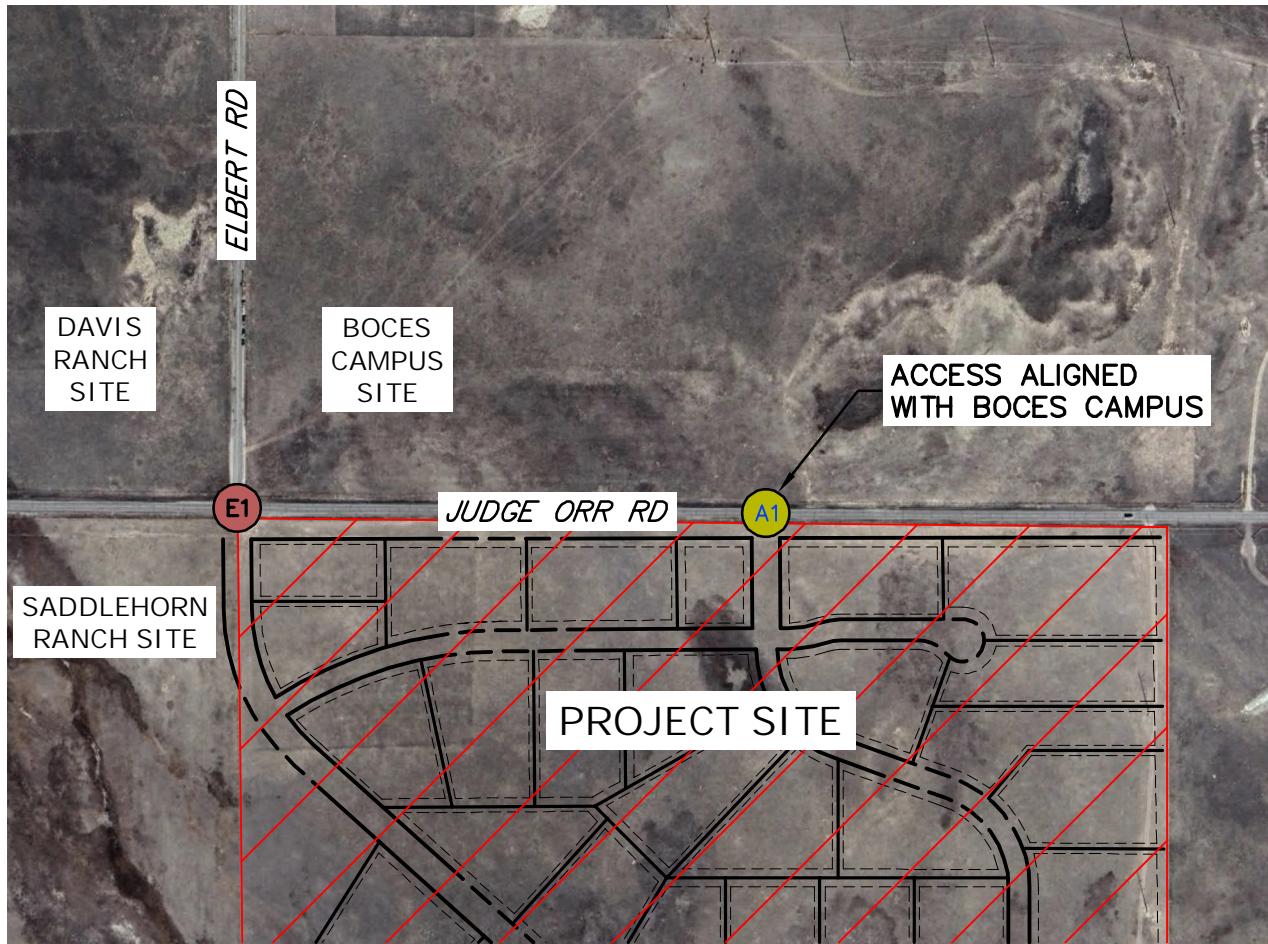
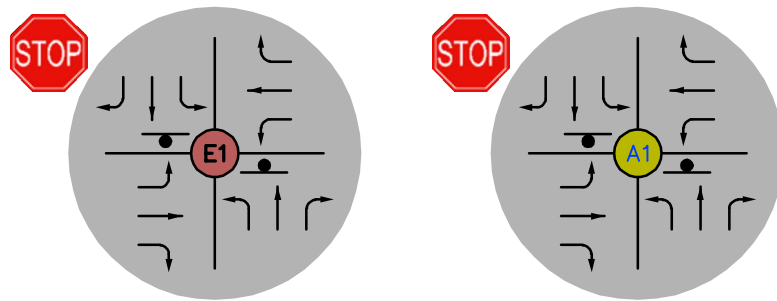






Figure 4 - Proposed Lane Geometry



LEGEND

-  PROPOSED INTERSECTION
-  EXISTING INTERSECTION
-  AVERAGE DAILY TRAFFIC
- XX (XX) AM (PM) PEAK HOUR TRIPS
-  STOP SIGN CONTROL



600 300 0 600

ORIGINAL SCALE: 1" = 600'

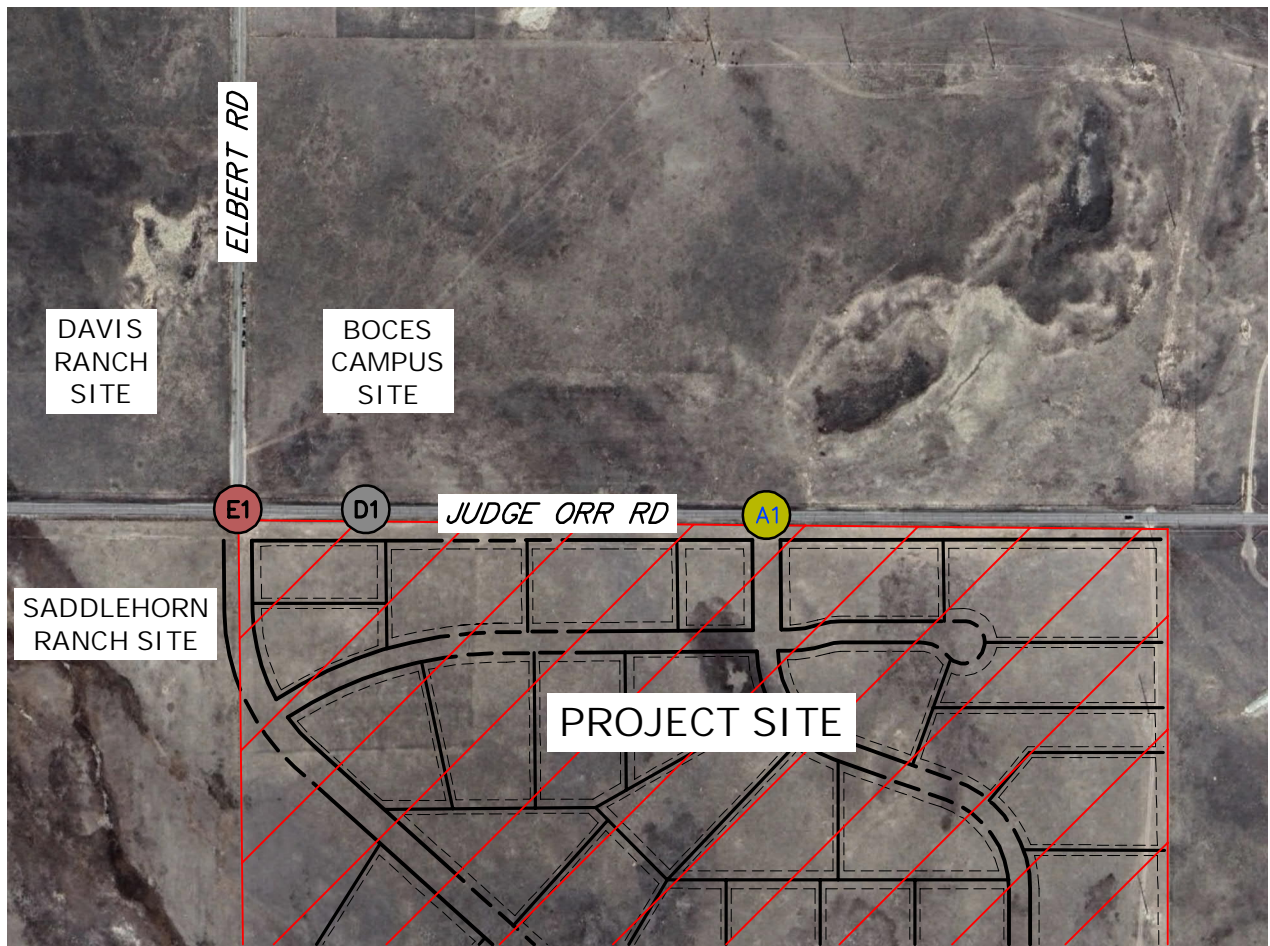
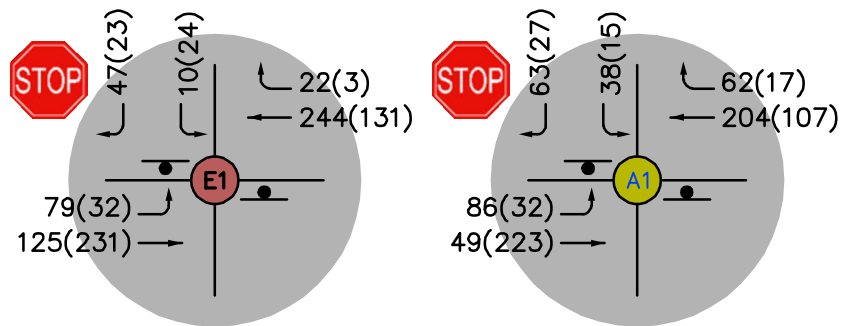






Figure 5 - 2029 Opening Day Background Traffic Volumes



D1 3,800 AVERAGE DAILY TRAFFIC

LEGEND

-  PROPOSED INTERSECTION
-  EXISTING INTERSECTION
-  AVERAGE DAILY TRAFFIC
- XX (XX) AM (PM) PEAK HOUR TRIPS
-  STOP SIGN CONTROL



600 300 0 600

ORIGINAL SCALE: 1" = 600'

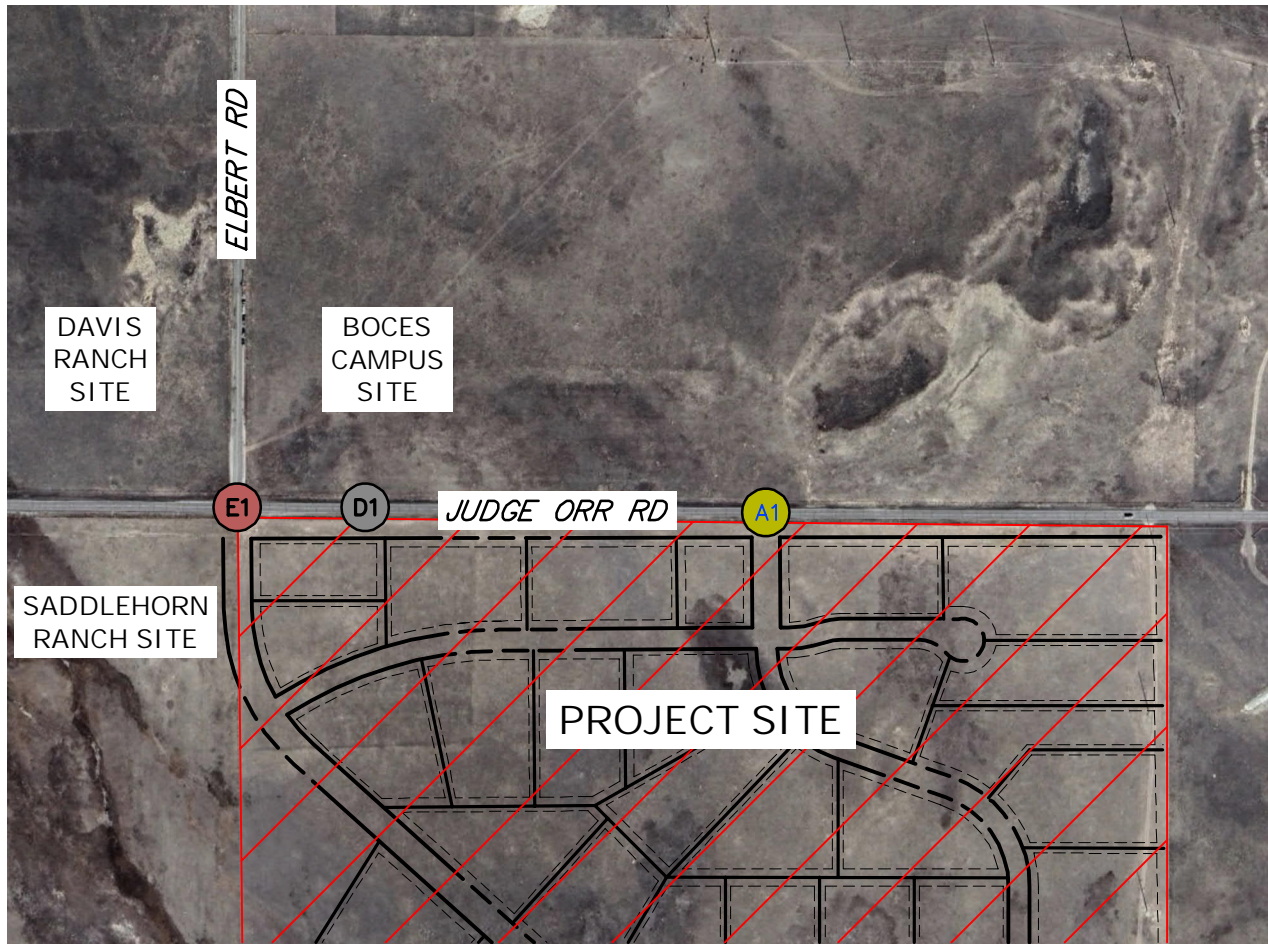
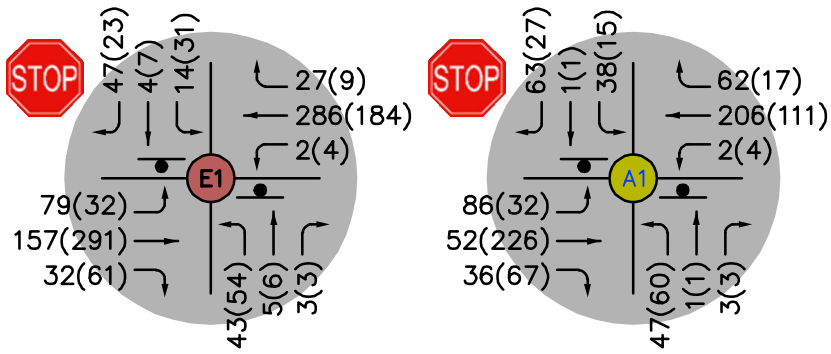


Figure 6 - 2029 Opening Day Total Traffic Volumes



D1 4,950 AVERAGE DAILY TRAFFIC

LEGEND

- PROPOSED INTERSECTION
- EXISTING INTERSECTION
- AVERAGE DAILY TRAFFIC
- XX (XX) AM (PM) PEAK HOUR TRIPS
- STOP SIGN CONTROL



600 300 0 600

ORIGINAL SCALE: 1" = 600'

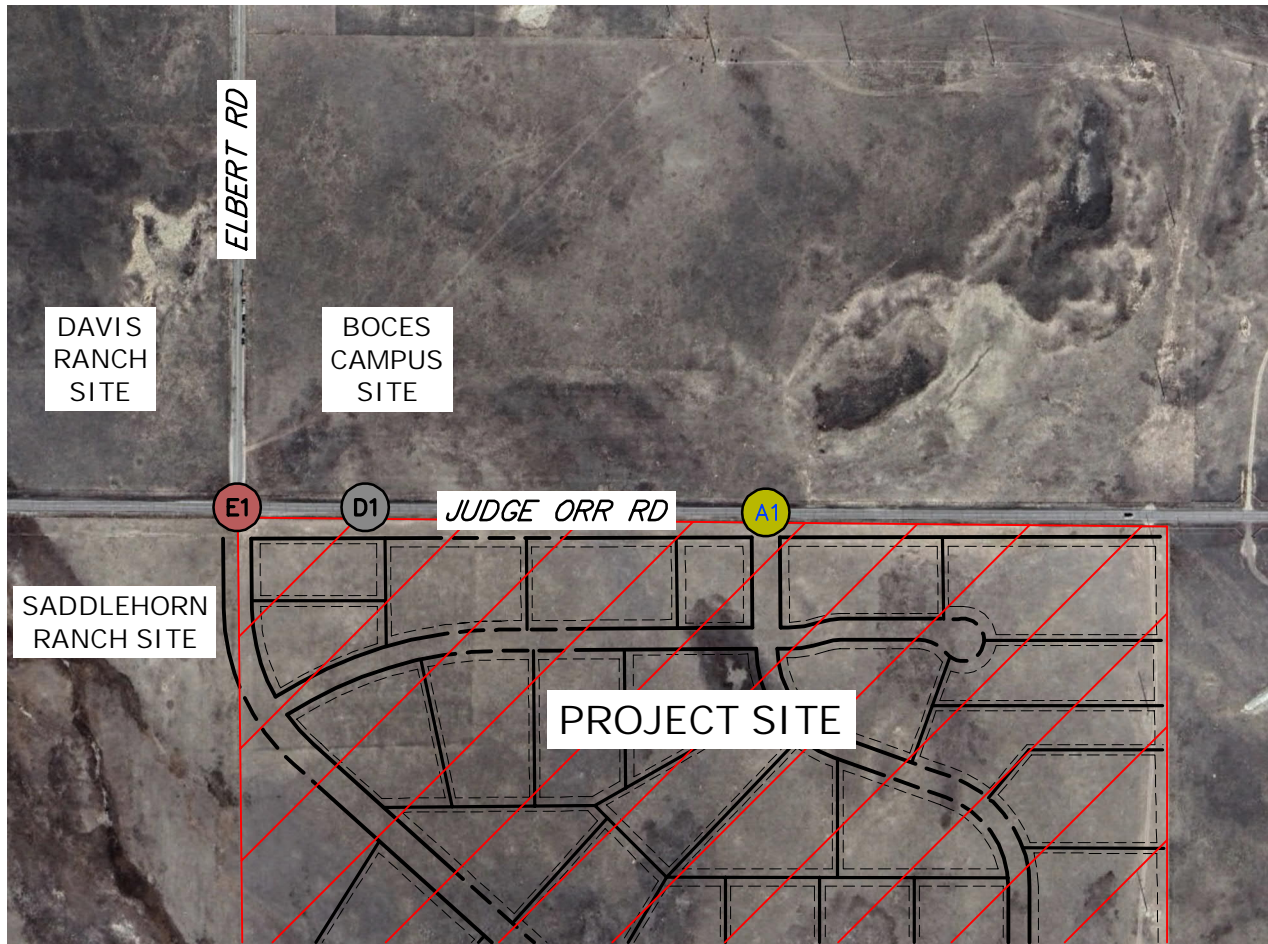
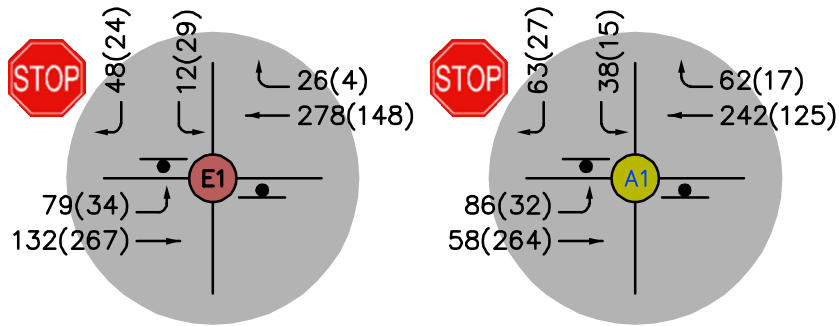


Figure 7 - 2045 Future Year Background Traffic Volumes



D1 4,300 AVERAGE DAILY TRAFFIC

LEGEND

- PROPOSED INTERSECTION
- EXISTING INTERSECTION
- AVERAGE DAILY TRAFFIC
- XX (XX) AM (PM) PEAK HOUR TRIPS
- STOP SIGN CONTROL



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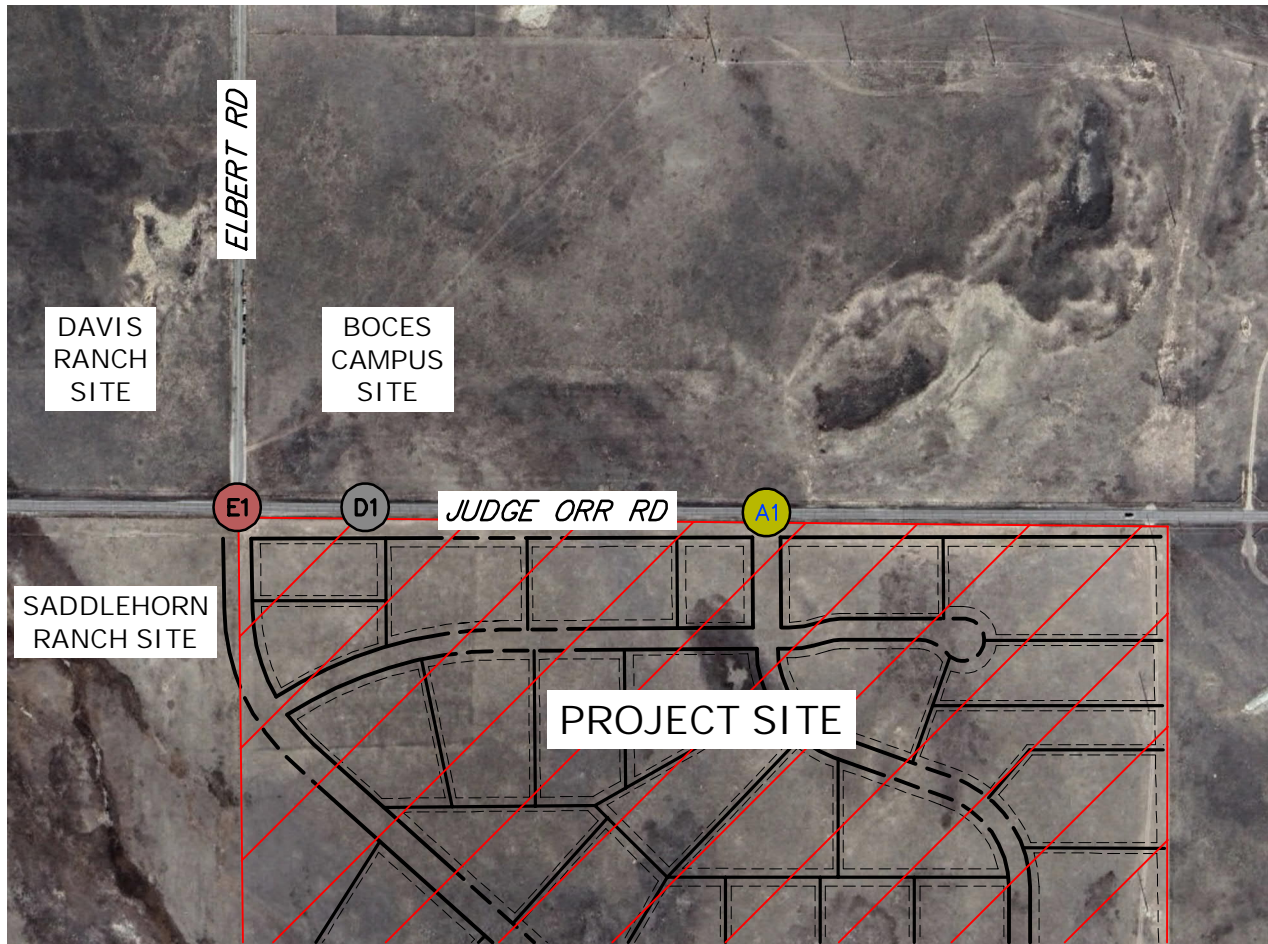
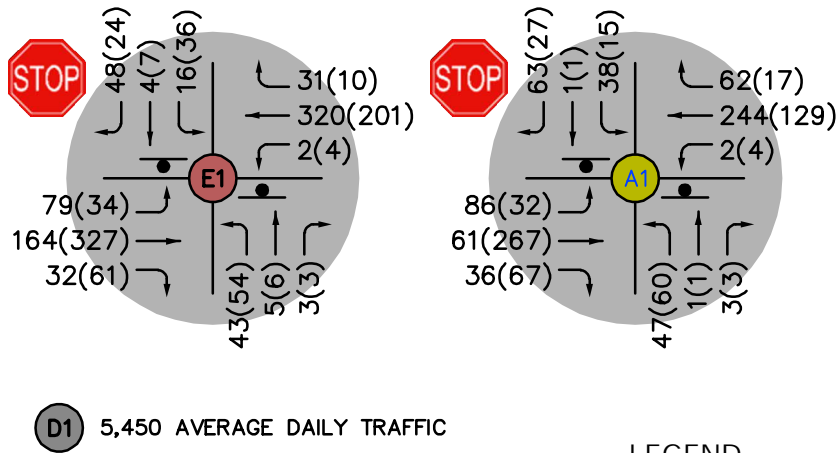







Figure 8 - 2045 Future Year Total Traffic Volumes



LEGEND

-  PROPOSED INTERSECTION
-  EXISTING INTERSECTION
-  AVERAGE DAILY TRAFFIC
-  AM (PM) PEAK HOUR TRIPS
-  STOP SIGN CONTROL



600 300 0 600

ORIGINAL SCALE: 1" = 600'


Traffic Operations Analysis

Traffic operations were analyzed using *Highway Capacity Manual*, 7th Edition methodology. Synchro reports are included in **Appendix E**.

Levels of Service



JR analyzed each of the Study intersections for peak hour level of service (LOS). **Table 1** includes the LOS for each movement in the existing condition (year 2024). **Table 2** includes the forecasted LOS for background traffic and total traffic in the year 2029. **Table 3** includes the forecasted LOS for background traffic and total traffic in the year 2045.

Table 1: 2024 Existing Levels of Service



Intersection	Movement	AM Peak LOS	PM Peak LOS
E1: Judge Orr Rd & Elbert Rd	EB Left/Through	A	A
	WB Through/Right	N/A	N/A
	SB Left/Right	A	B

Table 2: 2029 Opening Day Levels of Service

Intersection	Movement	AM Peak LOS		PM Peak LOS	
		Background Traffic	Total Traffic	Background Traffic	Total Traffic
E1: Judge Orr Rd & Elbert Rd	EB Left	A	A	A	A
	WB Left	N/A	A	N/A	A
	NB Left	N/A	C	N/A	C
	NB Through	N/A	C	N/A	B
	NB Right	N/A	A	N/A	B
	SB Left	C	C	B	C
	SB Through	N/A	C	N/A	C
	SB Right	B	B	A	A
A1: NE Access & Judge Orr Rd	EB Left	A	A	A	A
	WB Left	N/A	A	N/A	A
	NB Left	N/A	C	N/A	B
	NB Through	N/A	B	N/A	B
	NB Right	N/A	A	N/A	A
	SB Left	B	B	B	B
	SB Through	N/A	B	N/A	B
	SB Right	A	A	A	A

Table 3: 2045 Future Year Levels of Service



Intersection	Movement	AM Peak LOS		PM Peak LOS	
		Background Traffic	Total Traffic	Background Traffic	Total Traffic
E1: Judge Orr Rd & Elbert Rd	EB Left	A	A	A	A
	WB Left	N/A	A	N/A	A
	NB Left	N/A	C	N/A	C
	NB Through	N/A	C	N/A	C
	NB Right	N/A	A	N/A	B
	SB Left	C	C	B	C
	SB Through	N/A	C	N/A	C
	SB Right	B	B	A	A
A1: NE Access & Judge Orr Rd	EB Left	A	A	A	A
	WB Left	N/A	A	N/A	A
	NB Left	N/A	C	N/A	C
	NB Through	N/A	C	N/A	B
	NB Right	N/A	A	N/A	A
	SB Left	C	C	B	B
	SB Through	N/A	B	N/A	B
	SB Right	B	B	A	A



Discussion on Levels of Service

In the 2024 Existing condition, movements at the Judge Orr & Elbert intersection operate at LOS B or better.

In the 2029 Opening Day condition, all movements are expected to operate at LOS C or better with only background traffic. With total traffic volumes, some movements are expected to degrade, but do not become worse than LOS C.

In the 2045 Future Year condition, all movements are expected to operate at LOS C or better with total traffic volumes.

Queue Lengths

JR analyzed each of the Study intersections for 95th percentile queue lengths. **Table 4** includes the queue lengths for the year 2024 with existing traffic. **Table 5** includes the queue lengths for the year 2029 with total traffic. **Table 6** includes the queue lengths for the year 2045 with total traffic.

Table 4: 2024 Existing 95th Percentile Queue Lengths


Intersection	Movement	AM Peak Queue (ft)	PM Peak Queue (ft)
 E1: Judge Orr Rd & Elbert Rd	EB Left/Through	<25	<25
	WB Through/Right	N/A	N/A
	SB Left/Right	<25	<25

Table 5: 2029 Opening Day 95th Percentile Queue Lengths





Intersection	Movement	AM Peak Queue (ft)	PM Peak Queue (ft)
 E1: Judge Orr Rd & Elbert Rd	EB Left	<25	<25
	WB Left	<25	<25
	NB Left	<25	<25
	NB Through	<25	<25
	NB Right	<25	<25
	SB Left	<25	<25
	SB Through	<25	<25
	SB Right	<25	<25
 A1: NE Access & Judge Orr Rd	EB Left	<25	<25
	WB Left	<25	<25
	NB Left	<25	<25
	NB Through	<25	<25
	NB Right	<25	<25
	SB Left	<25	<25
	SB Through	<25	<25
	SB Right	<25	<25

Table 6: 2045 Future Year 95th Percentile Queue Lengths

Intersection	Movement	AM Peak Queue (ft)	PM Peak Queue (ft)
 E1: Judge Orr Rd & Elbert Rd	EB Left	<25	<25
	WB Left	<25	<25
	NB Left	<25	<25
	NB Through	<25	<25
	NB Right	<25	<25
	SB Left	<25	<25
	SB Through	<25	<25
 A1: NE Access & Judge Orr Rd	EB Left	<25	<25
	WB Left	<25	<25
	NB Left	<25	<25
	NB Through	<25	<25
	NB Right	<25	<25
	SB Left	<25	<25
	SB Through	<25	<25
	SB Right	<25	<25

Discussion on Queue Lengths

Queue lengths are expected to be minimal at each intersection in the Existing, Opening Day, and Future Year conditions. This is a result of low traffic volumes in the vicinity of the Project. No operational issues with queuing are anticipated.

Conclusion

Below is a summary of the conclusions and findings of this TIS.

Levels of Service

2024 Existing condition levels of service are LOS B or better. In the 2029 Opening Day condition, all movements are expected to operate at LOS C or better with total traffic volumes. In the 2045 Future Year condition, all movements are expected to operate at LOS C or better with total traffic.

Queue Lengths

Queue lengths are expected to be minimal at both intersections in the Existing, Opening Day, and Future Year conditions. No operational issues with queuing are anticipated.

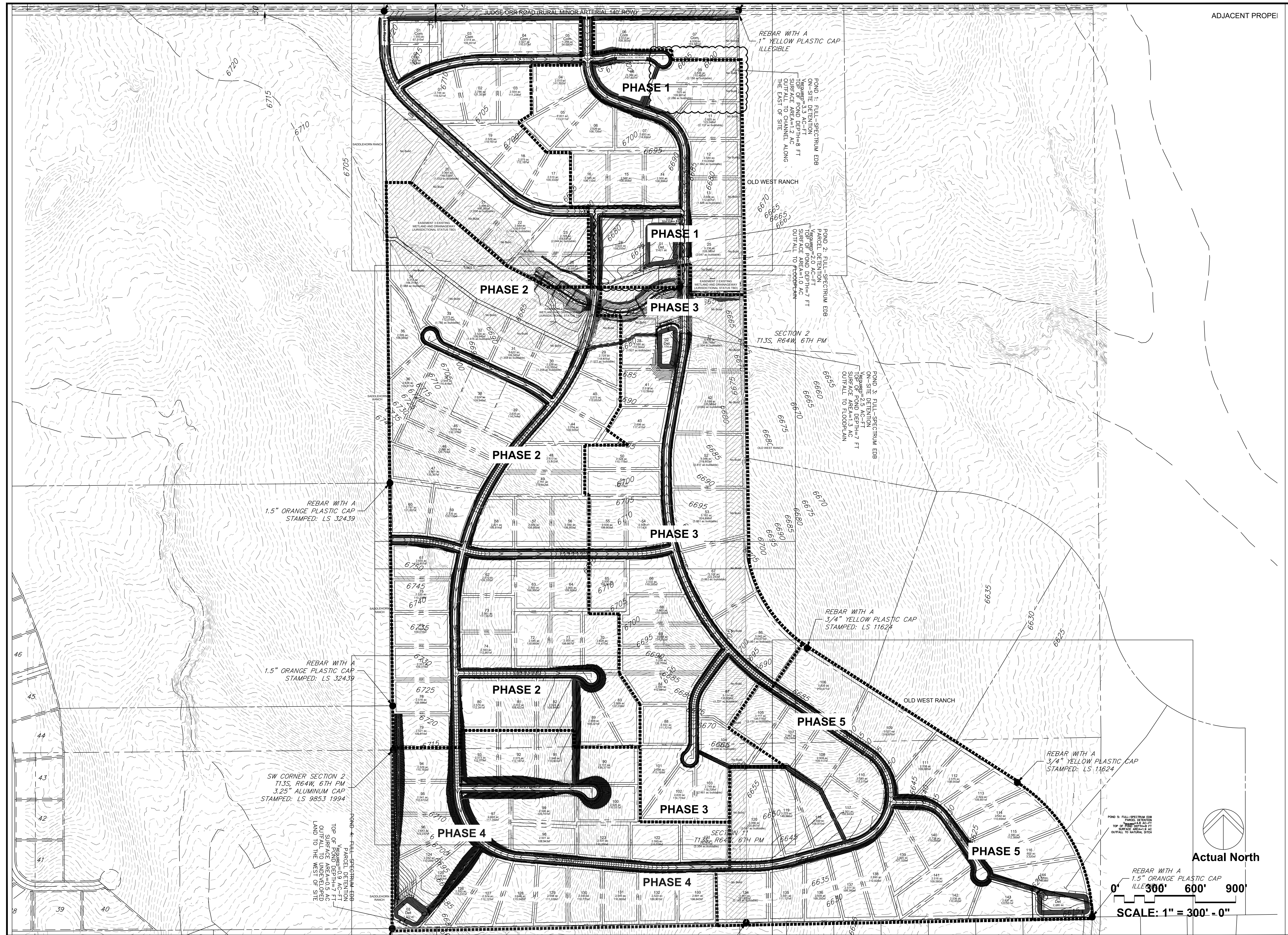
Recommendations

JR recommends adding both left and right turn lanes at each of the Study intersections to accommodate turning traffic by 2029 Opening Day. These turn lanes are not triggered solely by the Esteban Rodriguez site, but along with the surrounding background developments.

Road Impact Fee Program

This development is subject to the road impact fee program. Payment option will be determined at the subdivision stage.

Appendix A: Site Plan



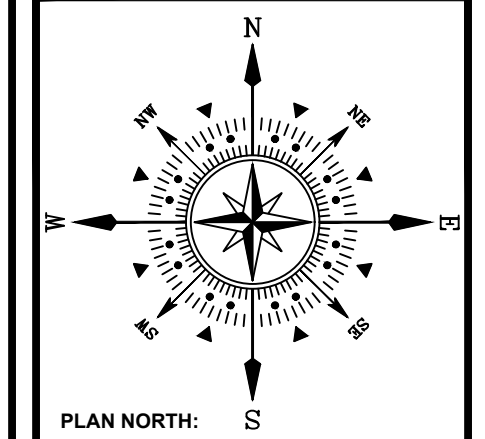
ADJACENT PROPE

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ESTEBAN RODRIGUEZ
JUDGE ORR ROAD
PEYTON, CO 80831
 PROJECT NAME:
 PROJECT ADDRESS:
 PROJECT DESCRIPTION: 496.25 ACRE PHASING PLAN

DATE: 07/19/2024
 DESIGNED: WFG
 CHECKED: GEM

REVISIONS:	DATE:	BY:	DESCRIPTION:
08/19/24	WFG	WFG	PHASING LIMITS MODIFICATIONS
08/27/24	WFG	WFG	LOT MODIFICATIONS
08/29/24	WFG	WFG	CC MODIFICATIONS
10/30/24	WFG	WFG	DETENTION POND MODIFICATIONS

NOTES:

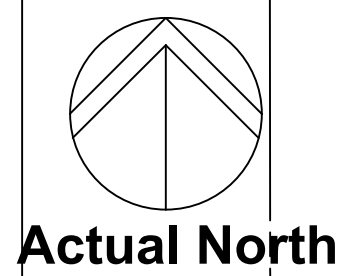
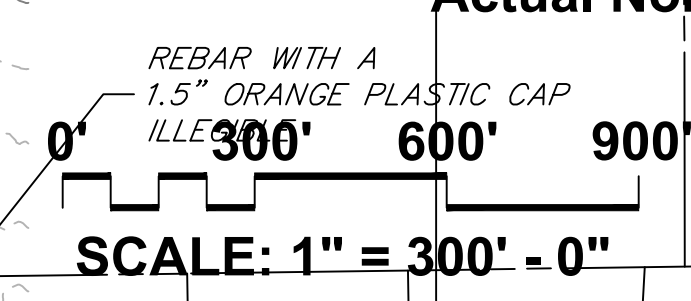
PLAN SCALE: 1" = 300' (OR AS NOTED ON PLAN)

SHEET TITLE:
PHASING PLAN

SHEET NO.
PLP1.6

7 of 8 SHEETS

FILE NO.
 XXXXX



Appendix B: Roadway Improvement Table from Master TIS

Table 7*: Roadway Improvements

Esteban Rodriguez Sketch Plan

CDOT Intersections				
Item #	Location/Roadway Segment	Improvement	Timing	Responsibility
US Highway 24/Judge Orr Intersection				
1.1	Judge Orr Road at US Highway 24	Realignment of Judge Orr Road at US Highway 24 per CDOT Hwy 24 PEL Study	Future (the PEL study identified this as a high priority project with a time frame of less than 5 years)	CDOT
1.2	US Highway 24 at Judge Orr Road	Southwest-bound right-turn deceleration lane on US Hwy 24 approaching Judge Orr Road	As required by other development(s) or with realignment of US Hwy 24/Judge Orr	CDOT or by others
1.3	US Highway 24 at Judge Orr Road	Construct southwest-bound right-turn acceleration lane on US Hwy 24 at Judge Orr Road	As required by other development(s) or with realignment of US Hwy 24/Judge Orr	CDOT or by others
1.4	Judge Orr Road at US Highway 24	Eastbound left-turn lane on Judge Orr Road approaching US Hwy 24	With realignment of US Hwy 24/Judge Orr	CDOT
1.5	Judge Orr Road at US Highway 24	Westbound dual left-turn lanes on Judge Orr Road approaching US Hwy 24	With realignment of US Hwy 24/Judge Orr	CDOT
1.6	US Highway 24 at Judge Orr Road	Northeast-bound right-turn deceleration lane on US Hwy 24 approaching Judge Orr Road	With realignment of US Hwy 24/Judge Orr	CDOT
1.7	Judge Orr Road at US Highway 24	Eastbound right-turn deceleration lane on Judge Orr Road approaching US Hwy 24	As required by other development(s) or with realignment of US Hwy 24/Judge Orr	CDOT or by others
US Highway 24/Stapleton Intersection				
2.1a	US Highway 24/Stapleton Intersection	Escrow Contribution toward traffic control upgrade - CDOT Escrow for Participation in the cost of future signalization	To be addressed with the Preliminary Plan/Plats and Future Access Permit(s)	Applicant
2.1b	US Highway 24/Stapleton Intersection	Traffic Control Upgrade - Signalization of the intersection	CDOT - Once warrants are met	CDOT is collecting escrow from area developments impacting this intersection.
US Highway 24/Elbert Road Intersections				
3.1	US Highway 24/Elbert Road Intersection (Westbound left-turn)	Lengthening of the westbound left-turn deceleration lane to CDOT standards (800-foot plus storage plus taper) - Existing deficiency.	Depending on the level of site-generated traffic added to this turning movement as development progresses, determination will be made if the project significantly impacts this intersection and this turning movement. If determined with the preliminary plan that site traffic impact is to a level that warrants the need for this project to submit an access permit and participate in some form toward this improvement, there will likely be either identification of an escrow contribution toward a future improvement or a requirement to complete this improvement (to be determined with the preliminary plan). (fee program credit per fee program provisions)	Applicant and/or other developments that may add westbound left-turning movements to this intersection
3.1a	US Highway 24/Elbert Road Intersection	Potential Escrow Contribution toward traffic control upgrade - CDOT Escrow for Participation in the cost of future signalization	To be addressed with the Preliminary Plan/Plats and Future Access Permit(s)	Applicant
3.1b	US Highway 24/Elbert Road Intersection	Traffic Control Upgrade - Signalization of the intersection	CDOT - Once warrants are met	CDOT is collecting escrow from area developments impacting this intersection.
US Highway 24/Rex Road (Future) Intersection				
4.1	US Highway 24/Rex Road Intersection (Future)	New Intersection Construction and Future Signalization	As Per CDOT AP No. 221088	Permittee (Grandview Reserve Development)
Adjacent County Arterial Roadway ROW Requirements				
5.1	Judge Orr Road Site Frontage	Right-of-Way Dedication Half of 2-Lane Rural Minor Arterial ROW (which is 100' total) Shown in 2024 DRAFT 2045 MTCP	Dedicate adjacent half ROW with plats but to be verified/detailed with the Preliminary Plan.	Applicant
5.2	Judge Orr Road Site Frontage	Corridor Preservation for 4-Lane Minor Arterial or updated 2065 Classification to be determined in the 2045 MTCP.	ROW preservation to be indicated with plats but to be verified/detailed with the Preliminary Plan.	Applicant
El Paso County Roadway Segment Improvements				
6.1	Judge Orr Road (Short Term) Site Frontage	Widening of the south half to the Rural Minor Arterial cross section as parcels develop (or provide funds toward future widening)	As development occurs - details to be determined at the Preliminary Plan stage	Applicant Note: potential for negotiated fee program credit based on construction of the ultimate Rural Minor Arterial half section. This will be subject to submission and review and potential acceptance of a proposed fee program credit agreement by EPC and the Fee Program Committee.
6.2	Judge Orr Road (Long Term) Adjacent to the site frontage, but on the north side of the roadway	Future widening on the north side, to complete the full Rural Minor Arterial cross section.	Two-lane Rural Minor Arterial Shown in DRAFT 2045 MTCP (note: not yet adopted)	Most likely the property owner on the north side of Judge Orr, if/when that property develops.
6.3	Judge Orr Road (Long Term) US Highway 24 to Peyton Highway	Rural county road upgrade to Rural Minor Arterial cross section, DRAFT 2045 MTCP Project No. 159	Two-lane Rural Minor Arterial Shown in DRAFT 2045 MTCP (note: not yet adopted)	Adjacent developments as they occur; any "gaps" may be projects completed by the county with fee program funds; applicant will pay fee program traffic impact fees.
6.4	Curtis Road (Long Term) Judge Orr Road to Highway 94	Rural county road upgrade to Rural Minor Arterial cross section, DRAFT 2045 MTCP Project No. 512	Two-lane Rural Minor Arterial Shown in DRAFT 2045 MTCP (note: not yet adopted)	Adjacent developments as they occur; any "gaps" may be projects completed by the county with fee program funds; applicant will pay fee program traffic impact fees.
6.5	Rex Road (Long Term) Elbert Road to US Highway 24	New county road connection - Rural Minor Arterial DRAFT 2045 MTCP Project No. 401	New two-lane Rural Minor Arterial Shown in DRAFT 2045 MTCP (note: not yet adopted)	Likely with development of the property through which the roadway segment is shown to connect through; any "gaps" may be projects completed by the county with fee program funds; applicant will pay fee program traffic impact fees.
Internal Development Roadways				
7.1	Internal Development Roadways (shown in Figure 10)	Construct to County Standards IAW the classification map (shown in Figure 10); details to be addressed with the preliminary plan.	As development occurs; phasing/timing details to be addressed with the Preliminary Plan.	Applicant
El Paso County Intersections and Site Access Intersections				
Item #		Improvement	Timing	Responsibility
Judge Orr/Curtis Road Intersection				
8.1	Judge Orr/Curtis Road Intersection (westbound approach)	Westbound right-turn deceleration lane	Once peak-hour westbound right-turn volume exceeds 50 vehicles per hour. Projections indicate this threshold would be exceeded, based on the 2030 analysis.	Install lane if threshold exceeded due to this development's traffic (to be determined with the preliminary plan) or if already exceeded at the time of Preliminary Plan or escrow a pro-rata share for future construction (fee program credit per fee program provisions)
8.2	Judge Orr/Curtis Road Intersection (eastbound approach)	Eastbound right-turn deceleration lane	Currently warranted by ECM. The Saddlehorn Filing No. 2 TIS report and MeadowLake Industrial Park Filing NO. 1 TIS reports include narrative for the provision in the "State Highway Access Code" Section 3.5 (5) for low through volumes. Please refer to those reports for details.	This project is not projected to add eastbound right turning traffic to this intersection, so the responsibility is "by others." Note: This project will add eastbound through traffic, which has the potential to affect the timing of need for the right-turn lane (by others) because the eastbound through volume is the key factor in the determination of the timing of this turn lane as described in the "timing" column.
8.3	Judge Orr/Curtis Road Intersection (northbound approach)	Northbound Left Turn Lane - potential future lengthening (restriping)	Proposed triggers 1) If ECM thresholds for additional stacking length are exceeded AND once (and if) the intersection is signalized or if stop signs are switched to EB and WB. OR 2) while NB stop control remains, if queue reaches lengths which result in operational or safety issues.	This project is not projected to add northbound left turning traffic to this intersection, so the responsibility is "by others."
8.4	Judge Orr/Curtis Road Intersection (Southbound approach)	Southbound Left Turn Lane = potential future lengthening for additional vehicle storage	Proposed triggers 1) If ECM thresholds for additional stacking length are exceeded AND once (and if) the intersection is signalized or if stop signs are switched to EB and WB. OR 2) while SB stop control remains, if the southbound queues reach lengths which result in operational or safety issues due to queuing - such as queues spilling into the adjacent through lane (this can be evaluated at Preliminary Plan);	Identify potentially Escrow for improvement depending on anticipated need at Preliminary Plan (or possibly construction if determined to be needed based on this development's traffic AND if conditions called out in the "Timing" column warrant the need for this lane extension. (fee program credit per fee program provisions)
8.5	Judge Orr/Curtis Road Intersection (Intersection Control)	Potentially sign for all-way stop-sign control (AWSC)	Once warrants for AWSC are met (Note: The 2030 Total traffic LOS indicates an E LOS for one of the peak hours (the AM peak); however the PM peak hour shows LOS C; while the AM peak LOS may be an indicator of a possible need for traffic control change, traffic control is not typically changed based on volumes during one hour of the day. Other considerations may include the future safety record, however. This can be reevaluated with the Preliminary Plan and/or Final Plats.	El Paso County and/or other developments as there are multiple projects in the area that may trigger the change in traffic control due to development traffic
8.6	Judge Orr/Curtis Road Intersection (Intersection Control)	Long Term: Reconstruct intersection as a modern roundabout (or signalize the intersection)	Once LOS of AWSC drops below acceptable levels (roundabout); or once signal warrants are met (for conversion to a signal or roundabout)	El Paso County and/or other developments as there are multiple projects in the area that may trigger the change in traffic control due to development traffic. This intersection will be fee-program eligible for a signal/roundabout and applicant will pay fee program traffic impact fees.
Judge Orr/Elbert Road/West Site Access				
9.1	Judge Orr/Elbert Road Intersection w/ addition of south leg (west Site Access) with this development.	The northbound left-turn and the eastbound right-turn volumes are projected to meet the thresholds requiring auxiliary lanes. These will be required (to be verified with the preliminary plan); a deviation may be submitted with the preliminary plan for the northbound left-turn lane if the northbound approach is likely to be stop-sign controlled through the long term, and if no projected queuing or LOS issues absent this lane; construct this intersection to County Standards; south leg to be added IAW the classification map (shown in Figure 10); details to be addressed with the preliminary plan; construct south leg of the intersection to County Standards IAW the classification map (shown in Figure 10); details to be addressed with the preliminary plan.	As development occurs this can be confirmed with the Preliminary Plan (if this changes with the preliminary plan, requirements and associated phasing/timing details to be addressed at that time)	Applicant and/or other developments that may add turning movements to this intersection
Judge Orr/East Site Access				
10.1	Judge Orr/East Site Access	No Auxiliary Turn Lanes Required (to be verified with the preliminary plan); construct this intersection to County Standards; south leg to be added IAW the classification map (shown in Figure 10); details to be addressed with the preliminary plan.	As development occurs this can be confirmed with the Preliminary Plan (if this changes with the preliminary plan, requirements and associated phasing/timing details to be addressed at that time)	Applicant

** Note: CDOT Formula taken from recent nearby projects: [sample] The development is required to participate in the cost of the future traffic signal at Stapleton and Hwy 24. Based on the average AM&PM site-generated passenger cars directly impacting the 4-hour warrant, the development would be responsible for ~\$_____, (____ new vehicles / 60 vehicles-to-warrant x ~\$700K/signal cost).

Appendix C: Traffic Counts

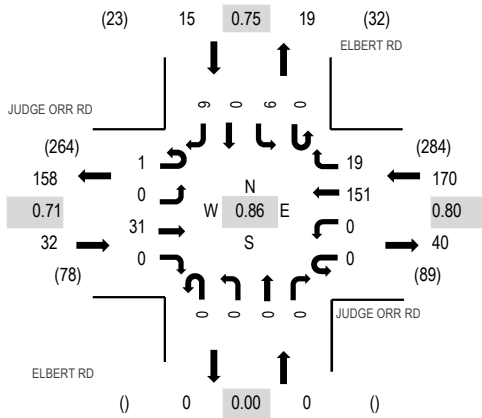
Location: 1 ELBERT RD & JUDGE ORR RD AM

Date: Wednesday, February 21, 2024

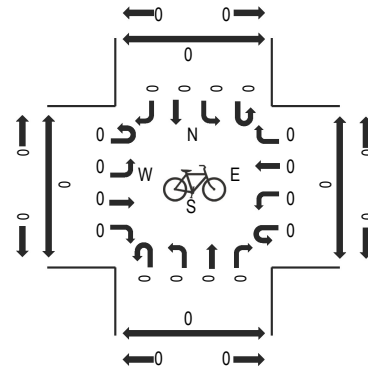
Peak Hour: 07:00 AM - 08:00 AM

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

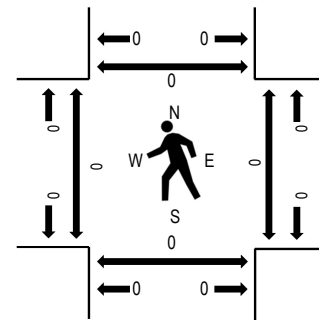
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians

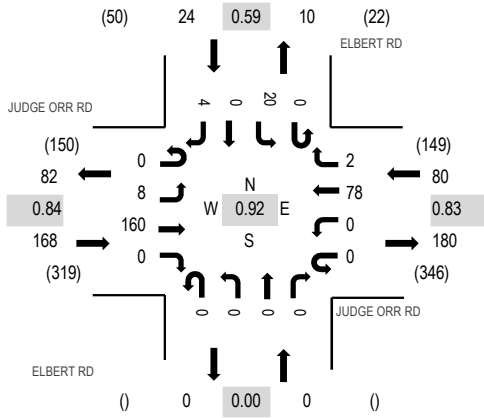


Note: Total study counts contained in parentheses.

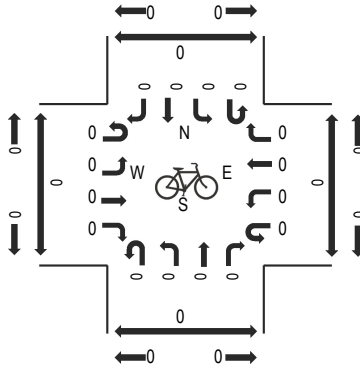
Traffic Counts - Motorized Vehicles

Interval Start Time	JUDGE ORR RD Eastbound				JUDGE ORR RD Westbound				ELBERT RD Northbound				ELBERT RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	1	0	0	0	47	6	0	0	0	0	0	2	0	3	59	217	0	0	0	0
7:15 AM	0	0	11	0	0	0	41	7	0	0	0	0	0	3	0	1	63	201	0	0	0	0
7:30 AM	0	0	10	0	0	0	38	4	0	0	0	0	0	1	0	1	54	183	0	0	0	0
7:45 AM	1	0	9	0	0	0	25	2	0	0	0	0	0	3	0	1	41	166	0	0	0	0
8:00 AM	0	1	16	0	0	0	20	5	0	0	0	0	0	0	0	1	43	168	0	0	0	0
8:15 AM	0	0	10	0	0	0	31	2	0	0	0	0	0	2	0	0	45		0	0	0	0
8:30 AM	0	0	9	0	0	0	25	1	0	0	0	0	0	1	0	1	37		0	0	0	0
8:45 AM	0	0	10	0	0	0	26	4	0	0	0	0	0	1	0	2	43		0	0	0	0
Count Total	1	1	76	0	0	0	253	31	0	0	0	0	0	13	0	10	385		0	0	0	0
Peak Hour	1	0	31	0	0	0	151	19	0	0	0	0	0	9	0	6	217		0	0	0	0

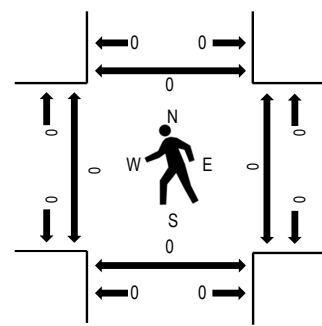
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	JUDGE ORR RD Eastbound				JUDGE ORR RD Westbound				ELBERT RD Northbound				ELBERT RD Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
4:00 PM	0	2	48	0	0	0	12	1	0	0	0	0	0	0	6	0	2	71	272	0	0	0	0
4:15 PM	0	2	35	0	0	0	23	1	0	0	0	0	0	5	0	1	67	261	0	0	0	0	
4:30 PM	0	1	40	0	0	0	26	0	0	0	0	0	0	6	0	1	74	242	0	0	0	0	
4:45 PM	0	3	37	0	0	0	17	0	0	0	0	0	0	3	0	0	60	238	0	0	0	0	
5:00 PM	0	5	32	0	0	0	18	1	0	0	0	0	0	4	0	0	60	246	0	0	0	0	
5:15 PM	0	1	33	0	0	0	10	2	0	0	0	0	0	1	0	1	48		0	0	0	0	
5:30 PM	0	0	46	0	0	0	15	0	0	0	0	0	0	8	0	1	70		0	0	0	0	
5:45 PM	0	2	32	0	0	0	22	1	0	0	0	0	0	10	0	1	68		0	0	0	0	
Count Total	0	16	303	0	0	0	143	6	0	0	0	0	0	43	0	7	518		0	0	0	0	
Peak Hour	0	8	160	0	0	0	78	2	0	0	0	0	0	20	0	4	272		0	0	0	0	

Appendix D: Trip Generation Report

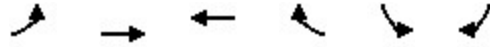
Project: Esteban Rodriguez Site

ITE Code	Description	Size	Units	Weekday Average Daily Trips			Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
				Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
150	Warehousing	190	1000 Square Ft.	169	169	338	36	10	46	14	35	49
210	Single-Family Detached Housing	144	Dwelling Units	705	705	1410	26	78	104	88	52	140
822	Strip Retail Plaza (<40k)	10	1000 Square Ft.	272	272	544	14	10	24	39	39	78
Unadjusted Volume				1146	1146	2292	76	98	174	141	126	267
Internal Capture				0%	0%	0%	0%	0%	0%	0%	0%	0%
Pass-By Trips				0%	0%	0%	0%	0%	0%	0%	0%	0%
Volume Added to Adjacent Streets				1146	1146	2292	76	98	174	141	126	267

Source: Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition

Appendix E: Synchro Reports

Lanes, Volumes, Timings
 1: Judge Orr Road & Elbert Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Volume (vph)	1	31	151	19	9	6
Future Volume (vph)	1	31	151	19	9	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.984		0.946	
Flt Protected		0.999			0.971	
Satd. Flow (prot)	0	1861	1833	0	1711	0
Flt Permitted		0.999			0.971	
Satd. Flow (perm)	0	1861	1833	0	1711	0
Link Speed (mph)		55	55		40	
Link Distance (ft)		624	2250		531	
Travel Time (s)		14.2	51.1		12.1	
Peak Hour Factor	0.78	0.78	0.85	0.78	0.78	0.78
Adj. Flow (vph)	1	40	178	24	12	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	41	202	0	20	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.1%
Analysis Period (min)	15
	ICU Level of Service A

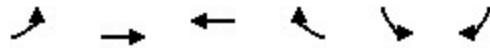
Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	1	31	151	19	9	6
Future Vol, veh/h	1	31	151	19	9	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	85	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	40	178	24	12	8

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	202	0	-	0	232 190
Stage 1	-	-	-	-	190 -
Stage 2	-	-	-	-	42 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1370	-	-	-	756 852
Stage 1	-	-	-	-	842 -
Stage 2	-	-	-	-	980 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1370	-	-	-	755 852
Mov Cap-2 Maneuver	-	-	-	-	755 -
Stage 1	-	-	-	-	842 -
Stage 2	-	-	-	-	980 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.24	0	9.66
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	56	-	-	-	791
HCM Lane V/C Ratio	0.001	-	-	-	0.024
HCM Control Delay (s/veh)	7.6	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lanes, Volumes, Timings
 1: Judge Orr Road & Elbert Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	8	160	78	2	20	4
Future Volume (vph)	8	160	78	2	20	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996		0.978	
Flt Protected		0.997			0.960	
Satd. Flow (prot)	0	1857	1855	0	1749	0
Flt Permitted		0.997			0.960	
Satd. Flow (perm)	0	1857	1855	0	1749	0
Link Speed (mph)		55	55		40	
Link Distance (ft)		624	2250		531	
Travel Time (s)		14.2	51.1		12.1	
Peak Hour Factor	0.78	0.85	0.81	0.78	0.78	0.78
Adj. Flow (vph)	10	188	96	3	26	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	198	99	0	31	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.9%
Analysis Period (min)	15
	ICU Level of Service A

























Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	8	160	78	2	20	4
Future Vol, veh/h	8	160	78	2	20	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	85	81	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	188	96	3	26	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	99	0	-	0	306 98
Stage 1	-	-	-	-	98 -
Stage 2	-	-	-	-	209 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1494	-	-	-	686 958
Stage 1	-	-	-	-	926 -
Stage 2	-	-	-	-	826 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1494	-	-	-	680 958
Mov Cap-2 Maneuver	-	-	-	-	680 -
Stage 1	-	-	-	-	919 -
Stage 2	-	-	-	-	826 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.38	0	10.26
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	93	-	-	-	715
HCM Lane V/C Ratio	0.007	-	-	-	0.043
HCM Control Delay (s/veh)	7.4	0	-	-	10.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lanes, Volumes, Timings
1: Elbert Road & Judge Orr Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	125	0	0	244	22	0	0	0	10	0	47
Future Volume (vph)	79	125	0	0	244	22	0	0	0	10	0	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Link Speed (mph)		55			55			40				40
Link Distance (ft)		624			2250			428				531
Travel Time (s)		7.7			27.9			7.3				9.1
Peak Hour Factor	0.81	0.84	0.78	0.78	0.88	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	98	149	0	0	277	28	0	0	0	13	0	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	149	0	0	277	28	0	0	0	13	0	60
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	30.6%
ICU Level of Service	A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↗	↘	↗	↗	↘	↗	↗	↘	↗	↗
Traffic Vol, veh/h	79	125	0	0	244	22	0	0	0	10	0	47
Future Vol, veh/h	79	125	0	0	244	22	0	0	0	10	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	84	78	78	88	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	149	0	0	277	28	0	0	0	13	0	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	305	0	0	149	0	0	621	649	149	621	621	277
Stage 1	-	-	-	-	-	-	344	344	-	277	277	-
Stage 2	-	-	-	-	-	-	277	305	-	344	344	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1255	-	-	1433	-	-	400	389	898	400	403	762
Stage 1	-	-	-	-	-	-	672	637	-	729	681	-
Stage 2	-	-	-	-	-	-	729	662	-	672	637	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1255	-	-	1433	-	-	339	358	898	369	372	762
Mov Cap-2 Maneuver	-	-	-	-	-	-	339	358	-	369	372	-
Stage 1	-	-	-	-	-	-	619	587	-	729	681	-
Stage 2	-	-	-	-	-	-	671	662	-	619	587	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	3.21	0	0	11.01
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3	
Capacity (veh/h)	-	-	-	1255	-	-	1433	-	-	-	369	-	762
HCM Lane V/C Ratio	-	-	-	0.078	-	-	-	-	-	-	0.035	-	0.079
HCM Control Delay (s/veh)	0	0	0	8.1	-	-	0	-	-	-	15.1	0	10.1
HCM Lane LOS	A	A	A	A	-	-	A	-	-	-	C	A	B
HCM 95th %tile Q(veh)	-	-	-	0.3	-	-	0	-	-	-	0.1	-	0.3

Lanes, Volumes, Timings
2: Northeast Access & Judge Orr Road

JR Engineering
01/28/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	49	0	0	204	62	0	0	0	38	0	63
Future Volume (vph)	86	49	0	0	204	62	0	0	0	38	0	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Link Speed (mph)		55			55			30				30
Link Distance (ft)		2250			375			584				460
Travel Time (s)		27.9			4.6			13.3				10.5
Peak Hour Factor	0.82	0.78	0.78	0.78	0.87	0.79	0.78	0.78	0.78	0.78	0.78	0.79
Adj. Flow (vph)	105	63	0	0	234	78	0	0	0	49	0	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	63	0	0	234	78	0	0	0	49	0	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↗	↘	↗	↗	↘	↗	↗	↘	↗	↗
Traffic Vol, veh/h	86	49	0	0	204	62	0	0	0	38	0	63
Future Vol, veh/h	86	49	0	0	204	62	0	0	0	38	0	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	78	78	78	87	79	78	78	78	78	78	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	63	0	0	234	78	0	0	0	49	0	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	313	0	0	63	0	0	507	586	63	507	507	234
Stage 1	-	-	-	-	-	-	273	273	-	234	234	-
Stage 2	-	-	-	-	-	-	234	313	-	273	273	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1247	-	-	1540	-	-	476	423	1002	476	468	805
Stage 1	-	-	-	-	-	-	733	684	-	769	711	-
Stage 2	-	-	-	-	-	-	769	657	-	733	684	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1247	-	-	1540	-	-	393	387	1002	436	429	805
Mov Cap-2 Maneuver	-	-	-	-	-	-	393	387	-	436	429	-
Stage 1	-	-	-	-	-	-	672	627	-	769	711	-
Stage 2	-	-	-	-	-	-	692	657	-	672	627	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	5.1	0	0	11.61
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	-	-	1247	-	-	1540	-	-	436	-	805
HCM Lane V/C Ratio	-	-	-	0.084	-	-	-	-	-	0.112	-	0.099
HCM Control Delay (s/veh)	0	0	0	8.2	-	-	0	-	-	14.3	0	10
HCM Lane LOS	A	A	A	A	-	-	A	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	-	0.3	-	-	0	-	-	0.4	-	0.3

Lanes, Volumes, Timings
1: Elbert Road & Judge Orr Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	231	0	0	131	3	0	0	0	24	0	23
Future Volume (vph)	32	231	0	0	131	3	0	0	0	24	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Link Speed (mph)		55			55			40			40	
Link Distance (ft)		624			2250			428			531	
Travel Time (s)		7.7			27.9			7.3			9.1	
Peak Hour Factor	0.78	0.88	0.78	0.78	0.84	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	263	0	0	156	4	0	0	0	31	0	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	263	0	0	156	4	0	0	0	31	0	29
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↗	↘	↗	↗	↘	↗	↗	↘	↗	↗
Traffic Vol, veh/h	32	231	0	0	131	3	0	0	0	24	0	23
Future Vol, veh/h	32	231	0	0	131	3	0	0	0	24	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	88	78	78	84	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	263	0	0	156	4	0	0	0	31	0	29

























Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	160	0	0	263	0	0	501	504	263	501	501	156
Stage 1	-	-	-	-	-	-	345	345	-	156	156	-
Stage 2	-	-	-	-	-	-	156	160	-	345	345	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1419	-	-	1302	-	-	481	470	776	481	472	890
Stage 1	-	-	-	-	-	-	671	636	-	846	769	-
Stage 2	-	-	-	-	-	-	846	766	-	671	636	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1419	-	-	1302	-	-	451	456	776	467	459	890
Mov Cap-2 Maneuver	-	-	-	-	-	-	451	456	-	467	459	-
Stage 1	-	-	-	-	-	-	652	618	-	846	769	-
Stage 2	-	-	-	-	-	-	818	766	-	652	618	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.03	0	0	11.26
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	-	-	1419	-	-	1302	-	-	-	467	890
HCM Lane V/C Ratio	-	-	-	0.029	-	-	-	-	-	0.066	-	0.033
HCM Control Delay (s/veh)	0	0	0	7.6	-	-	0	-	-	13.3	0	9.2
HCM Lane LOS	A	A	A	A	-	-	A	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-	-	0	-	-	0.2	-	0.1

Lanes, Volumes, Timings
2: Northeast Access & Judge Orr Road

JR Engineering
01/28/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	223	0	0	107	17	0	0	0	15	0	27
Future Volume (vph)	32	223	0	0	107	17	0	0	0	15	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Link Speed (mph)		55			55			30				30
Link Distance (ft)		2250			375			584				464
Travel Time (s)		27.9			4.6			13.3				10.5
Peak Hour Factor	0.78	0.87	0.78	0.78	0.83	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	256	0	0	129	22	0	0	0	19	0	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	256	0	0	129	22	0	0	0	19	0	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.7%
Analysis Period (min)	15
	ICU Level of Service A

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↖	↗	↖	↖	↗	↖	↖	↗	↖
Traffic Vol, veh/h	32	223	0	0	107	17	0	0	0	15	0	27
Future Vol, veh/h	32	223	0	0	107	17	0	0	0	15	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	87	78	78	83	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	256	0	0	129	22	0	0	0	19	0	35

























Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	151	0	0	256	0	0	467	489	256	467	467	129
Stage 1	-	-	-	-	-	-	338	338	-	129	129	-
Stage 2	-	-	-	-	-	-	129	151	-	338	338	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1430	-	-	1309	-	-	506	479	782	506	493	921
Stage 1	-	-	-	-	-	-	676	640	-	875	789	-
Stage 2	-	-	-	-	-	-	875	773	-	676	640	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1430	-	-	1309	-	-	473	466	782	491	479	921
Mov Cap-2 Maneuver	-	-	-	-	-	-	473	466	-	491	479	-
Stage 1	-	-	-	-	-	-	657	622	-	875	789	-
Stage 2	-	-	-	-	-	-	842	773	-	657	622	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.05	0	0	10.33
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3	
Capacity (veh/h)	-	-	-	1430	-	-	1309	-	-	-	491	-	921
HCM Lane V/C Ratio	-	-	-	0.029	-	-	-	-	-	-	0.039	-	0.038
HCM Control Delay (s/veh)	0	0	0	7.6	-	-	0	-	-	-	12.6	0	9.1
HCM Lane LOS	A	A	A	A	-	-	A	-	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-	-	0	-	-	-	0.1	-	0.1

Lanes, Volumes, Timings
1: Elbert Road & Judge Orr Road

JR Engineering
01/28/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	157	32	2	286	27	43	5	3	14	4	47
Future Volume (vph)	79	157	32	2	286	27	43	5	3	14	4	47
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		55			55			40			40	
Link Distance (ft)		624			2250			428			531	
Travel Time (s)		7.7			27.9			7.3			9.1	
Peak Hour Factor	0.81	0.85	0.78	0.78	0.88	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	98	185	41	3	325	35	55	6	4	18	5	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	185	41	3	325	35	55	6	4	18	5	60
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.5%
ICU Level of Service	A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↖	↗	↖	↖	↗	↖	↖	↗	↖
Traffic Vol, veh/h	79	157	32	2	286	27	43	5	3	14	4	47
Future Vol, veh/h	79	157	32	2	286	27	43	5	3	14	4	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	85	78	78	88	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	185	41	3	325	35	55	6	4	18	5	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	360	0	0	226	0	0	712	745	185	713	751	325
Stage 1	-	-	-	-	-	-	380	380	-	330	330	-
Stage 2	-	-	-	-	-	-	333	365	-	383	421	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1199	-	-	1343	-	-	347	343	858	347	340	716
Stage 1	-	-	-	-	-	-	642	614	-	683	646	-
Stage 2	-	-	-	-	-	-	681	623	-	640	589	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1199	-	-	1343	-	-	287	314	858	311	311	716
Mov Cap-2 Maneuver	-	-	-	-	-	-	287	314	-	311	311	-
Stage 1	-	-	-	-	-	-	590	564	-	682	644	-
Stage 2	-	-	-	-	-	-	617	622	-	578	541	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	2.49			0.05			19.46			12.34		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	287	314	858	1199	-	-	1343	-	-	311	311	716
HCM Lane V/C Ratio	0.192	0.02	0.004	0.081	-	-	0.002	-	-	0.058	0.016	0.084
HCM Control Delay (s/veh)	20.5	16.7	9.2	8.3	-	-	7.7	-	-	17.3	16.8	10.5
HCM Lane LOS	C	C	A	A	-	-	A	-	-	C	C	B
HCM 95th %tile Q(veh)	0.7	0.1	0	0.3	-	-	0	-	-	0.2	0.1	0.3

Lanes, Volumes, Timings
2: Northeast Access & Judge Orr Road

JR Engineering
01/28/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	52	36	2	206	62	47	1	3	38	1	63
Future Volume (vph)	86	52	36	2	206	62	47	1	3	38	1	63
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		2250			375			584			426	
Travel Time (s)		27.9			4.6			13.3			9.7	
Peak Hour Factor	0.82	0.79	0.78	0.78	0.87	0.79	0.78	0.78	0.78	0.78	0.78	0.79
Adj. Flow (vph)	105	66	46	3	237	78	60	1	4	49	1	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	66	46	3	237	78	60	1	4	49	1	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	34.9%
Analysis Period (min)	15
	ICU Level of Service A

























Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↖	↗	↖	↖	↗	↖	↖	↗	↖
Traffic Vol, veh/h	86	52	36	2	206	62	47	1	3	38	1	63
Future Vol, veh/h	86	52	36	2	206	62	47	1	3	38	1	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	79	78	78	87	79	78	78	78	78	78	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	66	46	3	237	78	60	1	4	49	1	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	315	0	0	112	0	0	518	596	66	518	564	237
Stage 1	-	-	-	-	-	-	276	276	-	242	242	-
Stage 2	-	-	-	-	-	-	243	320	-	276	322	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1245	-	-	1478	-	-	468	417	998	468	435	802
Stage 1	-	-	-	-	-	-	731	682	-	762	706	-
Stage 2	-	-	-	-	-	-	761	652	-	730	651	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1245	-	-	1478	-	-	384	381	998	425	398	802
Mov Cap-2 Maneuver	-	-	-	-	-	-	384	381	-	425	398	-
Stage 1	-	-	-	-	-	-	669	625	-	760	704	-
Stage 2	-	-	-	-	-	-	683	651	-	665	596	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	3.95			0.06			15.63			11.74		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	384	381	998	1245	-	-	1478	-	-	425	398	802
HCM Lane V/C Ratio	0.157	0.003	0.004	0.084	-	-	0.002	-	-	0.115	0.003	0.099
HCM Control Delay (s/veh)	16.1	14.5	8.6	8.2	-	-	7.4	-	-	14.6	14.1	10
HCM Lane LOS	C	B	A	A	-	-	A	-	-	B	B	A
HCM 95th %tile Q(veh)	0.6	0	0	0.3	-	-	0	-	-	0.4	0	0.3

Lanes, Volumes, Timings
1: Elbert Road & Judge Orr Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	291	61	4	184	9	54	6	3	31	7	23
Future Volume (vph)	32	291	61	4	184	9	54	6	3	31	7	23
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		55			55			40			40	
Link Distance (ft)		624			2250			428			531	
Travel Time (s)		7.7			27.9			7.3			9.1	
Peak Hour Factor	0.78	0.89	0.79	0.78	0.86	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	327	77	5	214	12	69	8	4	40	9	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	327	77	5	214	12	69	8	4	40	9	29
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.3%
Analysis Period (min)	15
	ICU Level of Service A

























Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↑	↗	↘	↑	↗
Traffic Vol, veh/h	32	291	61	4	184	9	54	6	3	31	7	23
Future Vol, veh/h	32	291	61	4	184	9	54	6	3	31	7	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	89	79	78	86	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	327	77	5	214	12	69	8	4	40	9	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	225	0	0	404	0	0	638	645	327	637	710	214
Stage 1	-	-	-	-	-	-	409	409	-	224	224	-
Stage 2	-	-	-	-	-	-	229	236	-	413	486	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1343	-	-	1155	-	-	390	391	714	390	358	826
Stage 1	-	-	-	-	-	-	619	596	-	778	718	-
Stage 2	-	-	-	-	-	-	774	710	-	616	551	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1343	-	-	1155	-	-	353	377	714	367	346	826
Mov Cap-2 Maneuver	-	-	-	-	-	-	353	377	-	367	346	-
Stage 1	-	-	-	-	-	-	600	578	-	775	715	-
Stage 2	-	-	-	-	-	-	734	707	-	586	534	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.72			0.18			17.01			13.52		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	353	377	714	1343	-	-	1155	-	-	367	346	826
HCM Lane V/C Ratio	0.196	0.02	0.005	0.031	-	-	0.004	-	-	0.108	0.026	0.036
HCM Control Delay (s/veh)	17.6	14.7	10.1	7.8	-	-	8.1	-	-	16	15.7	9.5
HCM Lane LOS	C	B	B	A	-	-	A	-	-	C	C	A
HCM 95th %tile Q(veh)	0.7	0.1	0	0.1	-	-	0	-	-	0.4	0.1	0.1

Lanes, Volumes, Timings
2: Northeast Access & Judge Orr Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	226	67	4	111	17	60	1	3	15	1	27
Future Volume (vph)	32	226	67	4	111	17	60	1	3	15	1	27
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		2250			375			584			422	
Travel Time (s)		27.9			4.6			13.3			9.6	
Peak Hour Factor	0.78	0.87	0.80	0.78	0.83	0.78	0.79	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	260	84	5	134	22	76	1	4	19	1	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	260	84	5	134	22	76	1	4	19	1	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.6%
Analysis Period (min)	15
	ICU Level of Service A

























Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↖	↘	↗	↖	↘	↗	↖	↘	↗	↖
Traffic Vol, veh/h	32	226	67	4	111	17	60	1	3	15	1	27
Future Vol, veh/h	32	226	67	4	111	17	60	1	3	15	1	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	87	80	78	83	78	79	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	260	84	5	134	22	76	1	4	19	1	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	156	0	0	344	0	0	486	508	260	486	570	134
Stage 1	-	-	-	-	-	-	342	342	-	144	144	-
Stage 2	-	-	-	-	-	-	145	166	-	342	426	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1425	-	-	1215	-	-	491	468	779	491	432	915
Stage 1	-	-	-	-	-	-	673	638	-	859	778	-
Stage 2	-	-	-	-	-	-	858	761	-	673	586	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1425	-	-	1215	-	-	456	453	779	471	417	915
Mov Cap-2 Maneuver	-	-	-	-	-	-	456	453	-	471	417	-
Stage 1	-	-	-	-	-	-	654	620	-	855	774	-
Stage 2	-	-	-	-	-	-	821	758	-	649	569	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.81			0.25			14.22			10.54		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	456	453	779	1425	-	-	1215	-	-	471	417	915
HCM Lane V/C Ratio	0.167	0.003	0.005	0.029	-	-	0.004	-	-	0.041	0.003	0.038
HCM Control Delay (s/veh)	14.5	13	9.6	7.6	-	-	8	-	-	13	13.7	9.1
HCM Lane LOS	B	B	A	A	-	-	A	-	-	B	B	A
HCM 95th %tile Q(veh)	0.6	0	0	0.1	-	-	0	-	-	0.1	0	0.1

Lanes, Volumes, Timings
1: Elbert Road & Judge Orr Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	132	0	0	278	26	0	0	0	12	0	48
Future Volume (vph)	79	132	0	0	278	26	0	0	0	12	0	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Link Speed (mph)		55			55			40			40	
Link Distance (ft)		624			2250			428			531	
Travel Time (s)		7.7			27.9			7.3			9.1	
Peak Hour Factor	0.81	0.84	0.78	0.78	0.88	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	98	157	0	0	316	33	0	0	0	15	0	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	157	0	0	316	33	0	0	0	15	0	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	32.3%
ICU Level of Service	A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↗	↘	↗	↗	↘	↗	↗	↘	↗	↗
Traffic Vol, veh/h	79	132	0	0	278	26	0	0	0	12	0	48
Future Vol, veh/h	79	132	0	0	278	26	0	0	0	12	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	84	78	78	88	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	157	0	0	316	33	0	0	0	15	0	62

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	349	0	0	157	0	0	668	701	157	668	668	316
Stage 1	-	-	-	-	-	-	352	352	-	316	316	-
Stage 2	-	-	-	-	-	-	316	349	-	352	352	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1210	-	-	1423	-	-	372	363	888	372	379	725
Stage 1	-	-	-	-	-	-	665	631	-	695	655	-
Stage 2	-	-	-	-	-	-	695	633	-	665	631	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1210	-	-	1423	-	-	313	333	888	342	348	725
Mov Cap-2 Maneuver	-	-	-	-	-	-	313	333	-	342	348	-
Stage 1	-	-	-	-	-	-	611	581	-	695	655	-
Stage 2	-	-	-	-	-	-	636	633	-	611	581	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	3.15	0	0	11.55
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	-	-	1210	-	-	1423	-	-	342	-	725
HCM Lane V/C Ratio	-	-	-	0.081	-	-	-	-	-	0.045	-	0.085
HCM Control Delay (s/veh)	0	0	0	8.2	-	-	0	-	-	16	0	10.4
HCM Lane LOS	A	A	A	A	-	-	A	-	-	C	A	B
HCM 95th %tile Q(veh)	-	-	-	0.3	-	-	0	-	-	0.1	-	0.3

Lanes, Volumes, Timings
2: Northeast Access & Judge Orr Road

JR Engineering
01/28/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	58	0	0	242	62	0	0	0	38	0	63
Future Volume (vph)	86	58	0	0	242	62	0	0	0	38	0	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Link Speed (mph)		55			55			30				30
Link Distance (ft)		2250			375			584				419
Travel Time (s)		27.9			4.6			13.3				9.5
Peak Hour Factor	0.82	0.79	0.78	0.78	0.88	0.79	0.78	0.78	0.78	0.78	0.78	0.79
Adj. Flow (vph)	105	73	0	0	275	78	0	0	0	49	0	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	73	0	0	275	78	0	0	0	49	0	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	30.8%
ICU Level of Service	A
Analysis Period (min)	15

























Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↑	↗	↘	↑	↗
Traffic Vol, veh/h	86	58	0	0	242	62	0	0	0	38	0	63
Future Vol, veh/h	86	58	0	0	242	62	0	0	0	38	0	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	79	78	78	88	79	78	78	78	78	78	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	73	0	0	275	78	0	0	0	49	0	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	353	0	0	73	0	0	558	637	73	558	558	275
Stage 1	-	-	-	-	-	-	283	283	-	275	275	-
Stage 2	-	-	-	-	-	-	275	353	-	283	283	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1205	-	-	1526	-	-	440	395	988	440	438	764
Stage 1	-	-	-	-	-	-	724	677	-	731	683	-
Stage 2	-	-	-	-	-	-	731	631	-	724	677	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1205	-	-	1526	-	-	360	361	988	402	400	764
Mov Cap-2 Maneuver	-	-	-	-	-	-	360	361	-	402	400	-
Stage 1	-	-	-	-	-	-	661	618	-	731	683	-
Stage 2	-	-	-	-	-	-	655	631	-	661	618	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	4.87	0	0	12.13
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	-	-	1205	-	-	1526	-	-	402	-	764
HCM Lane V/C Ratio	-	-	-	0.087	-	-	-	-	-	0.121	-	0.104
HCM Control Delay (s/veh)	0	0	0	8.3	-	-	0	-	-	15.2	0	10.3
HCM Lane LOS	A	A	A	A	-	-	A	-	-	C	A	B
HCM 95th %tile Q(veh)	-	-	-	0.3	-	-	0	-	-	0.4	-	0.3

Lanes, Volumes, Timings
1: Elbert Road & Judge Orr Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	267	0	0	148	4	0	0	0	29	0	24
Future Volume (vph)	34	267	0	0	148	4	0	0	0	29	0	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Link Speed (mph)		55			55			40			40	
Link Distance (ft)		624			2250			428			531	
Travel Time (s)		7.7			27.9			7.3			9.1	
Peak Hour Factor	0.78	0.88	0.78	0.78	0.85	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	44	303	0	0	174	5	0	0	0	37	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	303	0	0	174	5	0	0	0	37	0	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	30.7%
Analysis Period (min)	15
	ICU Level of Service A

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↗	↘	↗	↗	↘	↗	↗	↘	↗	↗
Traffic Vol, veh/h	34	267	0	0	148	4	0	0	0	29	0	24
Future Vol, veh/h	34	267	0	0	148	4	0	0	0	29	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	88	78	78	85	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	303	0	0	174	5	0	0	0	37	0	31

























Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	179	0	0	303	0	0	565	570	303	565	565	174
Stage 1	-	-	-	-	-	-	391	391	-	174	174	-
Stage 2	-	-	-	-	-	-	174	179	-	391	391	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1396	-	-	1257	-	-	436	431	736	436	434	869
Stage 1	-	-	-	-	-	-	634	607	-	828	755	-
Stage 2	-	-	-	-	-	-	828	751	-	634	607	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1396	-	-	1257	-	-	407	418	736	422	421	869
Mov Cap-2 Maneuver	-	-	-	-	-	-	407	418	-	422	421	-
Stage 1	-	-	-	-	-	-	614	588	-	828	755	-
Stage 2	-	-	-	-	-	-	798	751	-	614	588	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.96	0	0	12.06
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3	
Capacity (veh/h)	-	-	-	1396	-	-	1257	-	-	-	422	-	869
HCM Lane V/C Ratio	-	-	-	0.031	-	-	-	-	-	-	0.088	-	0.035
HCM Control Delay (s/veh)	0	0	0	7.7	-	-	0	-	-	-	14.3	0	9.3
HCM Lane LOS	A	A	A	A	-	-	A	-	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-	-	0	-	-	-	0.3	-	0.1

Lanes, Volumes, Timings
2: Northeast Access & Judge Orr Road

JR Engineering
01/28/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	264	0	0	125	17	0	0	0	15	0	27
Future Volume (vph)	32	264	0	0	125	17	0	0	0	15	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1863	1863	1863	1583	1863	1863	1863	1770	1863	1583
Link Speed (mph)		55			55			30				30
Link Distance (ft)		2250			375			584				430
Travel Time (s)		27.9			4.6			13.3				9.8
Peak Hour Factor	0.78	0.88	0.78	0.78	0.84	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	300	0	0	149	22	0	0	0	19	0	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	300	0	0	149	22	0	0	0	19	0	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	30.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↗	↘	↗	↗	↘	↗	↗	↘	↗	↗
Traffic Vol, veh/h	32	264	0	0	125	17	0	0	0	15	0	27
Future Vol, veh/h	32	264	0	0	125	17	0	0	0	15	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	88	78	78	84	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	300	0	0	149	22	0	0	0	19	0	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	171	0	0	300	0	0	531	553	300	531	531	149
Stage 1	-	-	-	-	-	-	382	382	-	149	149	-
Stage 2	-	-	-	-	-	-	149	171	-	382	382	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1407	-	-	1261	-	-	459	441	740	459	454	898
Stage 1	-	-	-	-	-	-	640	613	-	854	774	-
Stage 2	-	-	-	-	-	-	854	757	-	640	613	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1407	-	-	1261	-	-	428	428	740	446	441	898
Mov Cap-2 Maneuver	-	-	-	-	-	-	428	428	-	446	441	-
Stage 1	-	-	-	-	-	-	622	595	-	854	774	-
Stage 2	-	-	-	-	-	-	821	757	-	622	595	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.92	0	0	10.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3	
Capacity (veh/h)	-	-	-	1407	-	-	1261	-	-	-	446	-	898
HCM Lane V/C Ratio	-	-	-	0.029	-	-	-	-	-	-	0.043	-	0.039
HCM Control Delay (s/veh)	0	0	0	7.6	-	-	0	-	-	-	13.4	0	9.2
HCM Lane LOS	A	A	A	A	-	-	A	-	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-	-	0	-	-	-	0.1	-	0.1

Lanes, Volumes, Timings
1: Elbert Road & Judge Orr Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	164	32	2	320	31	43	5	3	16	4	48
Future Volume (vph)	79	164	32	2	320	31	43	5	3	16	4	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		55			55			40			40	
Link Distance (ft)		624			2250			428			531	
Travel Time (s)		7.7			27.9			7.3			9.1	
Peak Hour Factor	0.81	0.86	0.78	0.78	0.89	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	98	191	41	3	360	40	55	6	4	21	5	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	191	41	3	360	40	55	6	4	21	5	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.3%
ICU Level of Service	A
Analysis Period (min)	15

























Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↗	↘	↗	↗	↘	↗	↗	↘	↗	↗
Traffic Vol, veh/h	79	164	32	2	320	31	43	5	3	16	4	48
Future Vol, veh/h	79	164	32	2	320	31	43	5	3	16	4	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	86	78	78	89	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	191	41	3	360	40	55	6	4	21	5	62

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	399	0	0	232	0	0	753	790	191	754	791	360
Stage 1	-	-	-	-	-	-	386	386	-	365	365	-
Stage 2	-	-	-	-	-	-	367	404	-	389	427	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1159	-	-	1336	-	-	326	322	851	326	322	685
Stage 1	-	-	-	-	-	-	638	610	-	654	623	-
Stage 2	-	-	-	-	-	-	652	599	-	635	585	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1159	-	-	1336	-	-	267	295	851	290	294	685
Mov Cap-2 Maneuver	-	-	-	-	-	-	267	295	-	290	294	-
Stage 1	-	-	-	-	-	-	584	559	-	653	622	-
Stage 2	-	-	-	-	-	-	588	598	-	572	536	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	2.49			0.05			20.78			12.95		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	267	295	851	1159	-	-	1336	-	-	290	294	685
HCM Lane V/C Ratio	0.207	0.022	0.005	0.084	-	-	0.002	-	-	0.071	0.017	0.09
HCM Control Delay (s/veh)	22	17.5	9.2	8.4	-	-	7.7	-	-	18.3	17.5	10.8
HCM Lane LOS	C	C	A	A	-	-	A	-	-	C	C	B
HCM 95th %tile Q(veh)	0.8	0.1	0	0.3	-	-	0	-	-	0.2	0.1	0.3

Lanes, Volumes, Timings
2: Northeast Access & Judge Orr Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	61	36	2	244	62	47	1	3	38	1	63
Future Volume (vph)	86	61	36	2	244	62	47	1	3	38	1	63
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		2250			375			584			400	
Travel Time (s)		27.9			4.6			13.3			9.1	
Peak Hour Factor	0.82	0.79	0.78	0.78	0.88	0.79	0.78	0.78	0.78	0.78	0.78	0.79
Adj. Flow (vph)	105	77	46	3	277	78	60	1	4	49	1	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	77	46	3	277	78	60	1	4	49	1	80
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	36.9%
ICU Level of Service	A
Analysis Period (min)	15

























Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↖	↗	↖	↖	↗	↖	↖	↗	↖
Traffic Vol, veh/h	86	61	36	2	244	62	47	1	3	38	1	63
Future Vol, veh/h	86	61	36	2	244	62	47	1	3	38	1	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	79	78	78	88	79	78	78	78	78	78	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	77	46	3	277	78	60	1	4	49	1	80

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	356	0	0	123	0	0	570	648	77	570	616	277
Stage 1	-	-	-	-	-	-	287	287	-	282	282	-
Stage 2	-	-	-	-	-	-	283	361	-	288	333	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1203	-	-	1464	-	-	432	389	984	432	406	762
Stage 1	-	-	-	-	-	-	720	674	-	725	677	-
Stage 2	-	-	-	-	-	-	724	626	-	720	644	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1203	-	-	1464	-	-	352	355	984	391	370	762
Mov Cap-2 Maneuver	-	-	-	-	-	-	352	355	-	391	370	-
Stage 1	-	-	-	-	-	-	658	616	-	723	676	-
Stage 2	-	-	-	-	-	-	646	625	-	653	588	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	3.8			0.05			16.79			12.29		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	352	355	984	1203	-	-	1464	-	-	391	370	762
HCM Lane V/C Ratio	0.171	0.004	0.004	0.087	-	-	0.002	-	-	0.125	0.003	0.105
HCM Control Delay (s/veh)	17.3	15.2	8.7	8.3	-	-	7.5	-	-	15.5	14.8	10.3
HCM Lane LOS	C	C	A	A	-	-	A	-	-	C	B	B
HCM 95th %tile Q(veh)	0.6	0	0	0.3	-	-	0	-	-	0.4	0	0.3

Lanes, Volumes, Timings
1: Elbert Road & Judge Orr Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	327	61	4	201	10	54	6	3	36	7	24
Future Volume (vph)	34	327	61	4	201	10	54	6	3	36	7	24
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		55			55			40			40	
Link Distance (ft)		624			2250			428			531	
Travel Time (s)		7.7			27.9			7.3			9.1	
Peak Hour Factor	0.78	0.89	0.79	0.78	0.87	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	44	367	77	5	231	13	69	8	4	46	9	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	367	77	5	231	13	69	8	4	46	9	31
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.2%
Analysis Period (min)	15
	ICU Level of Service A

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↑	↗	↘	↑	↗
Traffic Vol, veh/h	34	327	61	4	201	10	54	6	3	36	7	24
Future Vol, veh/h	34	327	61	4	201	10	54	6	3	36	7	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	89	79	78	87	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	367	77	5	231	13	69	8	4	46	9	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	244	0	0	445	0	0	700	709	367	700	773	231
Stage 1	-	-	-	-	-	-	455	455	-	241	241	-
Stage 2	-	-	-	-	-	-	246	254	-	458	532	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1322	-	-	1116	-	-	354	359	678	354	330	808
Stage 1	-	-	-	-	-	-	585	569	-	762	706	-
Stage 2	-	-	-	-	-	-	758	697	-	582	526	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1322	-	-	1116	-	-	319	346	678	332	317	808
Mov Cap-2 Maneuver	-	-	-	-	-	-	319	346	-	332	317	-
Stage 1	-	-	-	-	-	-	566	550	-	759	703	-
Stage 2	-	-	-	-	-	-	717	694	-	552	508	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.7			0.17			18.62			14.65		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	319	346	678	1322	-	-	1116	-	-	332	317	808
HCM Lane V/C Ratio	0.217	0.022	0.006	0.033	-	-	0.005	-	-	0.139	0.028	0.038
HCM Control Delay (s/veh)	19.4	15.6	10.3	7.8	-	-	8.2	-	-	17.6	16.7	9.6
HCM Lane LOS	C	C	B	A	-	-	A	-	-	C	C	A
HCM 95th %tile Q(veh)	0.8	0.1	0	0.1	-	-	0	-	-	0.5	0.1	0.1

Lanes, Volumes, Timings
 2: Northeast Access & Judge Orr Road

JR Engineering
 01/28/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	267	67	4	129	17	60	1	3	15	1	27
Future Volume (vph)	32	267	67	4	129	17	60	1	3	15	1	27
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		2250			375			584			445	
Travel Time (s)		27.9			4.6			13.3			10.1	
Peak Hour Factor	0.78	0.88	0.80	0.78	0.84	0.78	0.79	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	303	84	5	154	22	76	1	4	19	1	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	303	84	5	154	22	76	1	4	19	1	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.4%
ICU Level of Service	A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↑	↗	↘	↑	↗
Traffic Vol, veh/h	32	267	67	4	129	17	60	1	3	15	1	27
Future Vol, veh/h	32	267	67	4	129	17	60	1	3	15	1	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	150	-	150	150	-	150	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	88	80	78	84	78	79	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	303	84	5	154	22	76	1	4	19	1	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	175	0	0	387	0	0	550	571	303	550	633	154
Stage 1	-	-	-	-	-	-	385	385	-	164	164	-
Stage 2	-	-	-	-	-	-	164	186	-	386	469	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1401	-	-	1171	-	-	446	431	736	446	397	892
Stage 1	-	-	-	-	-	-	638	610	-	838	763	-
Stage 2	-	-	-	-	-	-	838	746	-	637	561	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1401	-	-	1171	-	-	413	416	736	427	384	892
Mov Cap-2 Maneuver	-	-	-	-	-	-	413	416	-	427	384	-
Stage 1	-	-	-	-	-	-	619	593	-	835	759	-
Stage 2	-	-	-	-	-	-	800	743	-	614	544	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.73			0.23			15.37			10.93		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	413	416	736	1401	-	-	1171	-	-	427	384	892
HCM Lane V/C Ratio	0.184	0.003	0.005	0.029	-	-	0.004	-	-	0.045	0.003	0.039
HCM Control Delay (s/veh)	15.7	13.7	9.9	7.6	-	-	8.1	-	-	13.8	14.4	9.2
HCM Lane LOS	C	B	A	A	-	-	A	-	-	B	B	A
HCM 95th %tile Q(veh)	0.7	0	0	0.1	-	-	0	-	-	0.1	0	0.1