



LSC TRANSPORTATION CONSULTANTS, INC.
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Nor'Wood Bible Church Traffic Impact Study (LSC #S234370) November 16, 2023

Traffic Engineer's Statement

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



Developer's Statement

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

Nathan Steels

11/17/2023

Date

Nor'Wood Bible Church

Traffic Impact Study

Prepared for:

Nina Ruiz | Senior Executive Consultant
Vertex Consulting Services
455 East Pikes Peak Avenue, Suite 101
Colorado Springs, CO 80903

NOVEMBER 16, 2023

LSC Transportation Consultants

Prepared by: Jeffrey C. Hodsdon, P.E.

LSC #S234370



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November 16, 2023

Nina Ruiz | Senior Executive Consultant
Vertex Consulting Services
455 East Pikes Peak Avenue, Suite 101
Colorado Springs, CO 80903

RE: Nor'Wood Bible Church
El Paso County, Colorado
Traffic Impact Study
LSC #S234370

Dear Ms. Ruiz:

In response to your request, LSC Transportation Consultants, Inc. has prepared this traffic impact study for the proposed Nor'Wood Bible Church development in El Paso County, Colorado. As shown in Figure 1, the site is located south of Judge Orr Road about one-quarter mile east of Curtis Road in unincorporated El Paso County.

REPORT CONTENTS

This report is being prepared as part of a submittal to El Paso County. It identifies the traffic impacts of this development. The report contains the following:

- Existing Sunday morning peak-hour traffic volumes and area road conditions;
- Projections of short-term (2024) and long-term (2043) baseline/background traffic volumes;
- The projected average Sunday and Sunday morning peak-hour vehicle-trips to be generated by the church;
- The assignment of the site's projected trips to the existing and planned adjacent roads and intersections for the short and long term and the resulting total traffic volumes for the short and long term;
- The resulting traffic impacts including level of service analysis at key intersections and average daily traffic volumes on key road sections in the vicinity of the site;
- Recommended improvements and/or traffic impact mitigation measures; and
- Recommended lane configuration for the site-access points and study-area intersections.

PREVIOUS TRAFFIC IMPACT STUDIES

The following recent traffic study has been utilized in the preparation of this report:

- *Saddlehorn Ranch Filing No. 3 Traffic Impact Study* April 30, 2023 (w/Minor Revision 10-13-2023) by LSC.

STUDY AREA

Key approaches at the following offsite intersections have been evaluated for potential inclusion in the study area using criteria in the El Paso County *Engineering Criteria Manual (ECM)* Appendix B.

- Curtis Road/Stapleton Road/Judge Orr Road
- Barrosito Trail (proposed, future road)/Judge Orr Road

The evaluation is included in Appendix A. Calculations are shown in Appendix Table 1. The most recent available weekday peak-hour traffic counts have been utilized in the percent impact calculation. Those count sheets are also included in Appendix A (note: the “denominator” volumes have undoubtedly increased since 2018/2020, so the evaluation is conservative). The estimated church weekday traffic (estimated in the table) during the same/corresponding peak period has also been utilized in the calculation.

Based on the calculations, the *ECM* threshold of ten-percent impact is not met. Therefore, the intersections have not been added to the study area. Any improvements that have been built or may be required in the future to accommodate **weekday** AM peak-hour traffic, will also be sufficient to accommodate significantly lower Sunday morning peak-hour baseline traffic plus site-generated traffic.

LAND USE AND ACCESS

The Nor'Wood Bible Church site is located south of Judge Orr Road about one-quarter mile east of Curtis Road. The site is within the Saddlehorn Ranch Filing No. 3 planned development. Two single-family residential lots shown as part of the Saddlehorn Ranch Filing No. 3 are proposed to be combined into one lot on which the Nor'Wood Bible Church would be developed. These two lots within Saddlehorn Ranch Filing No. 3 have roadway frontage on the planned Barrosito Trail, a Filing No. 3 subdivision street that will be extended south from Judge Orr Road into Saddlehorn Ranch. The Barrosito Trail (proposed, future road)/Judge Orr Road intersection will be about one-quarter mile east of the Curtis Road/Stapleton Road/Judge Orr Road intersection.

A 12,000 square-foot church building is proposed. The site plan is shown in Figure 2.

Currently, two Sunday services are held at the main campus. The times are 8:00 to 9:15 a.m. and 10:45 a.m. to 12:00 p.m.

Currently, there are no plans for a weekday operation such as a daycare or preschool. Therefore, this report focuses on the Sunday morning peak-hour analysis time period.

Saddlehorn Ranch Filing No. 3

Saddlehorn Ranch Filing No. 3 is part of the greater 824-acre Saddlehorn Ranch residential development located southeast of the intersection of Curtis Road and Judge Orr Road in El Paso

County, Colorado. The development includes 2.5-acre single-family residential lots. Figure 1 also shows the overall boundary of Saddlehorn Ranch.

Access for the Nor'Wood Bible Church

The site-access points are proposed to Barrosito Trail at 400 and 575 feet south of Judge Orr Road. The north access is shown at 200' south of the local street to the north (which will extend west from Barrosito Trail). Construction has not begun on Saddlehorn Ranch Filing No. 3.

Sight Distance

The required "Minimum Sight Distance Along Roadway" *ECM* per Table 2-33 is 200 feet for the presumed 30-mph posted speed limit on Barrosito Trail. This prescribed distance would be met for traffic along Barrosito Trail (proposed, future road) approaching the site-access points. Site improvements such as structures, solid fences, landscaping, parking areas, monument signs, etc. must not impede lines of sight for "Sight Distance Along Roadway." It does not appear from the site plan that this would be problematic.

Although Barrosito Trail will be a Rural Local roadway, LSC recommends entering sight distance of 300 feet be provided and maintained along Barrosito Trail (*ECM* Table 2-35 in Section 2.4.1.D).

A clear line of sight for a 300-foot entering sight distance is recommended such that site improvements such as structures, solid fences, landscaping, parking areas, monument signs, etc. do not impede lines of sight for 300 feet of sight distance.

Per *ECM* Table 2-35, accesses shall be spaced 300 feet apart. Please provide recommendations for access locations to meet criteria.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The area roadways in the site's vicinity are shown in Figures 1 and 2 and are described below.

- **Judge Orr Road** is a two-lane roadway that extends east from Eastonville Road across most of El Paso County. It is shown on the *El Paso County 2040 Major Transportation Corridors Plan* and the *Preserved Corridor Network Plan* as a four-lane Minor Arterial west of Curtis Road. Posted speed limits range from 45 to 55 miles per hour (mph). West of Curtis Road, the speed limit is 45 miles per hour (mph). The limit increases to 55 mph east of Curtis Road. The intersection of Curtis Road and Judge Orr Road is two-way, stop-sign-controlled with the stop signs on the northbound and southbound approaches. The intersection of US Highway (Hwy) 24/Judge Orr Road is signalized. Due to the oblique angle of this intersection, the eastbound and westbound approaches are split-phased. The *US 24 Access Control Plan/PEL Study* shows future plans for realignment of Judge Orr at US Hwy 24 to improve the intersection and provide an intersection skew angle closer to 90 degrees.

- Curtis Road** is a two-lane roadway that extends south from the intersection of US Hwy 24/Stapleton Road intersection to Drennan Road. It is shown as a two-lane, rural Principal Arterial on El Paso County's 2040 Major Transportation Corridors Plan and a four-lane Principal Arterial on the Preserved Corridor Network Plan. Adjacent to the site, the posted speed limit is 45 mph. Both intersections of Curtis Road/Judge Orr Road and Curtis Road/Falcon Highway are two-way, stop-sign-controlled. The newer section north of Judge Orr, which connects to Stapleton Road, was constructed to current ECM standards with paved shoulders, etc. Generally, Curtis Road is an "unimproved," two-lane paved road between Judge Orr and Falcon Highway. Roadway construction plans for Curtis Road adjacent to Saddlehorn have been prepared (the plans for the segment adjacent to Filing No. 1 were approved). Please refer to the "deviations" section of this report for a brief discussion of the interim cross section to be constructed.

- Triborough Trail** is a north/south local street that extends north from Londonderry Drive to just east of Beckham Street. The posted speed limit is 25 miles per hour.

Existing Traffic

Please remove since Triborough Trail is not near this development.

Figure 3 shows the current Sunday morning peak-hour traffic volumes at the intersection of Curtis Road/Stapleton Road/Judge Orr Road. These traffic volumes are based on traffic counts conducted by LSC in October 2023. The traffic count reports are attached.

Existing Levels of Service

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

Table 1: Intersection Levels of Service Delay Ranges

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

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

The intersection of Curtis Road/Stapleton Road/Judge Orr Road has been analyzed to determine the existing Sunday morning peak-hour level of service using the unsignalized method of analysis procedures outlined in the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board.

Figure 3 shows the level of service analysis results. As shown on the figure, all movements at these intersections are level of service C or better during the Sunday peak hour. The level of service (LOS) reports are attached.

TRIP GENERATION

The site-generated vehicle-trips were estimated using the nationally published trip-generation rates from *Trip Generation, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE).

Table 2 (attached) shows the trip-generation estimate for Nor'Wood Bible Church.

Weekdays

As shown in Table 2, the church is expected to generate about 91 vehicle trips on the average weekday, with about half entering and half exiting the site during the average 24-hour weekday period. During the morning peak hour (of adjacent roadway traffic), which generally occurs for one hour between 6:30 and 8:30 a.m., about 2 vehicles would enter and 1 vehicle would exit the site. During the afternoon peak hour (of adjacent roadway traffic), which generally occurs for one hour between 4:15 and 6:15 p.m., about 3 vehicles would enter and 3 vehicles would exit the site.

Sundays

A church, typically, has the highest trip generation on Sundays. Table 2 shows the trip-generation estimate for the church on an average Sunday. As presented in the table, the church is estimated to generate about 378 vehicle trips on the average Sunday, with about half entering and half exiting the site during a Sunday 24-hour period, based on the church building square footage of 12,000 square feet.

As mentioned above, ITE trip-generation rates have been used for this report. Regarding the Sunday morning peak hour for churches, ITE trip-generation rates do not specify the number of Sunday services specifically associated with the data points. However, as both the entering and exiting peak-hour trip rates are relatively close in value, this suggests that the rates account for traffic departing a first service and arriving for a second service. The applicant may or may not hold two Sunday morning services at this location, initially. The main campus does hold two services on Sunday morning. Assuming the potential for two Sunday services at this location, both entering and exiting traffic would likely occur during the same hour, but peak during different 15-minute time intervals. The peak hour would potentially occur within the 9:00 to 11:00 a.m. "window of time."

Note: Churches typically prefer to minimize overlap of the highest flow of traffic departing a first service and highest flow of traffic **arriving** for the second service. This is primarily due to the efficient use of parking spaces, but benefits traffic flow as well. Note: While the main campus appears to have a significant stagger of service times, the analysis in this report conservatively assumes a worst-case scenario of minimal stagger by using a low peak-hour factor in the level of service analysis.

During the Sunday morning peak hour, an average of about 60 vehicles are estimated to enter and 65 vehicles are estimated to exit the site.

BACKGROUND TRAFFIC

Background traffic is the traffic estimated to be on the area roadways and intersections without consideration of the proposed church development.

Short Term

Figure 3 shows the existing traffic volumes plus estimated Saddlehorn Ranch development traffic during the Sunday morning peak-hour time period. Also, a 2.4 percent annual growth rate has been applied to the existing volumes on Judge Orr Road/Curtis Road.

Long Term (2043)

Figure 7 shows the projected background traffic volumes for the long term (2043). These volumes are estimates by LSC and include the estimated Sunday morning peak-hour time period for Saddlehorn Ranch, Davis Ranch, and Esteban Rodriguez. **Additionally**, the following percent annual growth rates have been applied to the existing volumes on Judge Orr Road and Curtis Road:

- Judge Orr Road west of Curtis Road: 0.5 percent per year for 20 years.
- Curtis Road: 4 percent per year for 20 years.

Include discussion on why there's such a difference in growth rates between the 2 roads.

DIRECTIONAL DISTRIBUTION

The directional distribution of the site-generated traffic volumes on the area roadways is an important factor in determining the site's traffic impacts. Figure 4 shows the short-term and long-term directional-distribution estimates for the site-generated traffic volumes. The estimates have been based on the following factors: current church member zip-code data provided by the applicant, the site's location with respect to nearby communities and neighborhoods and the balance of the Falcon/Peyton area, the overall City of Colorado Springs/Pikes Peak region urbanizing area, and the site's proposed land use.

Localized routing estimates of site-generated trips have been based on the site's proposed access-point locations and the future Saddlehorn Filing No. 3 roadway system relative to the adjacent arterial roadways.

SITE-GENERATED TRAFFIC

Figure 5 shows the projected short-term and long-term site-generated, Sunday morning peak-hour and Sunday (daily/24-hour) traffic volumes, respectively. The site-generated traffic volumes were calculated by applying the directional-distribution percentages (from Figure 4) and local trip-routing estimates to the trip-generation estimate from Table 1.

TOTAL TRAFFIC

Figure 6 shows the projected short-term total Sunday morning peak-hour and Sunday (daily/24-hour) traffic volumes. The short-term total traffic volumes are the sum of the short-term baseline traffic volumes (from Figure 3) plus the short-term site-generated traffic volumes from Figure 5.

Figure 8 shows the projected 2043 total traffic volumes. The 2043 total traffic volumes are the sum of the 2043 background traffic volumes (from Figure 7) plus the long-term site-generated traffic volumes from Figure 5.

PROJECTED LEVELS OF SERVICE

The access-point intersections with Barrosito Trail, and the intersections of Barrosito Trail (proposed, future road)/Judge Orr Road and Curtis Road/Stapleton Road/Judge Orr Road have been analyzed to determine the projected levels of service for the background and total traffic volumes, based on the unsignalized method of analysis procedures from the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. Figures 3, 6, 7, and 8 show the level of service analysis results. The level of service reports are attached.

All movements at the study-area intersections, including the site-access intersections on Barrosito Trail are projected to operate at LOS C or better during the Sunday morning peak hour, based on the projected short-term and 2043 total traffic volumes.

PEDESTRIAN FACILITIES

Saddlehorn Ranch Filing No. 3 subdivision roads will be constructed to Rural Local standards, so sidewalks would not be required. No trail connections are shown on the site plan. A Park 'n Ride facility is located approximately 4.5 miles southwest of the site near US Hwy 24/New Meridian Road.

RECOMMENDATIONS

Discuss how the development meets criteria for not requiring turn lanes for each proposed access. Reference ECM Chapter 2.3.7D and state how criteria is being met. Provide justification including the project peak hour turning volume for each access point.

Auxiliary Lanes

- The auxiliary turn lanes planned for construction with Saddlehorn Ranch Filing No. 3 will meet the needs of this development. No additional auxiliary turn lanes would be necessary.

Other Recommendations

- The applicant will need to dedicate the same amount of right-of-way as required with Filing No. 3.
- The access driveways will need to be designed to EPC standards.
- The site-access driveways on Barrosito Trail should be controlled with stop signs.

County Road Impact Fee Program

Provide recommendations for access driveways. See comment at the beginning of the report regarding minimum access spacing not being met.

- The applicant will be required to participate in the County Road Impact Fee Program.
- No PID option is available for this land use. The up-front, full fee would be \$32,810. This amount is subject to change. Road Impact fees will need to be paid at time of plat recording or at time of building permit.

Provide the breakdown on how the road impact fee was calculated.

Deviations

No deviation requests are included with this submittal.

SUMMARY & CONCLUSIONS

Trip Generation

- The Nor'Wood Bible Church is expected to generate about 91 vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour, about 2 vehicles would enter and 1 vehicle would exit the site. During the afternoon peak hour, about 2 vehicles would enter and 3 vehicles would exit the site.
- On Sundays, the church is expected to generate about 378 vehicle-trips with about half entering and half exiting the site during a 24-hour period. During the Sunday morning peak hour, about 60 vehicles would enter and 65 vehicles would exit the site.

Level of Service

- All movements at the access points and study-area intersections are projected to operate at LOS A or B during the Sunday morning peak hour through 2043.

Recommendations & Requirements

- The auxiliary turn lanes planned for construction with Saddlehorn Ranch Filing No. 3 will meet the needs of this development. No additional auxiliary turn lanes would be necessary.
- Please refer to the additional recommendations in the section above.
- The applicant will be required to participate in the El Paso County Road Improvement Fee Program.

Discuss if improvements to the Judge Orr Road/Barrosito Trail intersection are needed. Discuss Saddlehorn development improvements on Judge Orr Road (auxiliary lanes, etc).

Please discuss
Please provide a section addressing CDOT traffic letter requirements, and escrow towards the signalization of US Hwy 24/Stapleton Road.

Respectfully submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

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

JCH:jas

Enclosures: Table 2
Figures 1-10
Traffic Count Reports
Level of Service Reports

Tables



Table 1: Trip Generation Estimate

ITE Land Use		Value	Units ¹	Trip Generation Rates ²				Trips Generated					
Code	Description			Average Daily	A.M. Peak		P.M. Peak		Average Daily	A.M. Peak		P.M. Peak	
				In	Out	In	Out		In	Out	In	Out	
<u>Sundays -- Peak Hour of the Generator</u>													
560	Church (Sunday)	12.0	KSF	31.46	4.97	5.39	-	-	378	60	65	-	-
<u>Weekday -- Daily & Peak Hours of Adjacent Street Traffic</u>													
560	Church (Weekday)	12.0	KSF	7.60	0.20	0.12	0.22	0.27	91	2	1	3	3
¹ KSF = 1,000 square feet of building floor area ² Source: <i>Trip Generation, 11th Edition (2021)</i> by the Institute of Transportation Engineers (ITE) Updated: 11/06/2023													

Figures



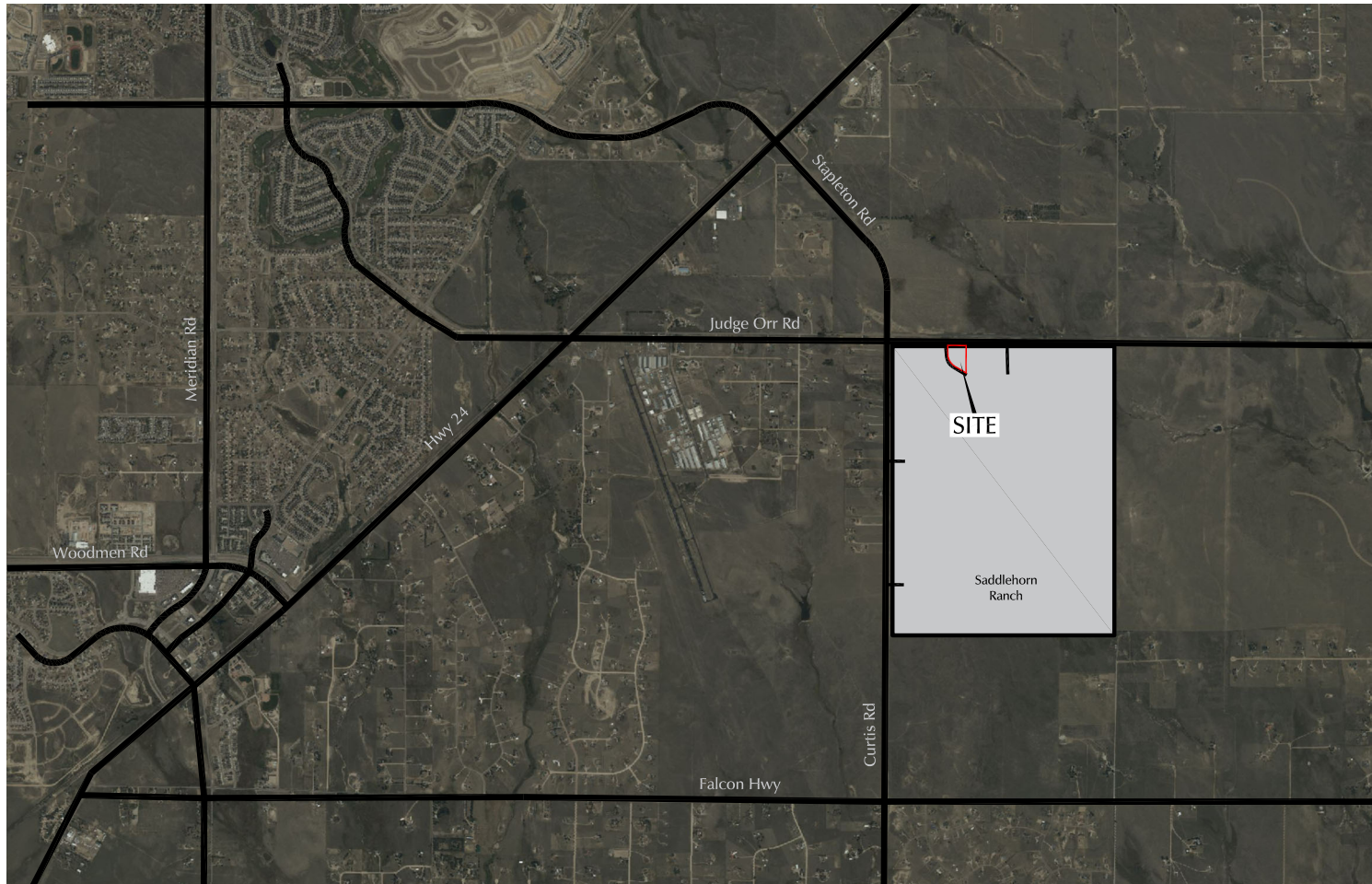


Figure 1

Vicinity Map

NorWood Bible Church (LSC # S234370)

Approximate Scale
1" = 100'

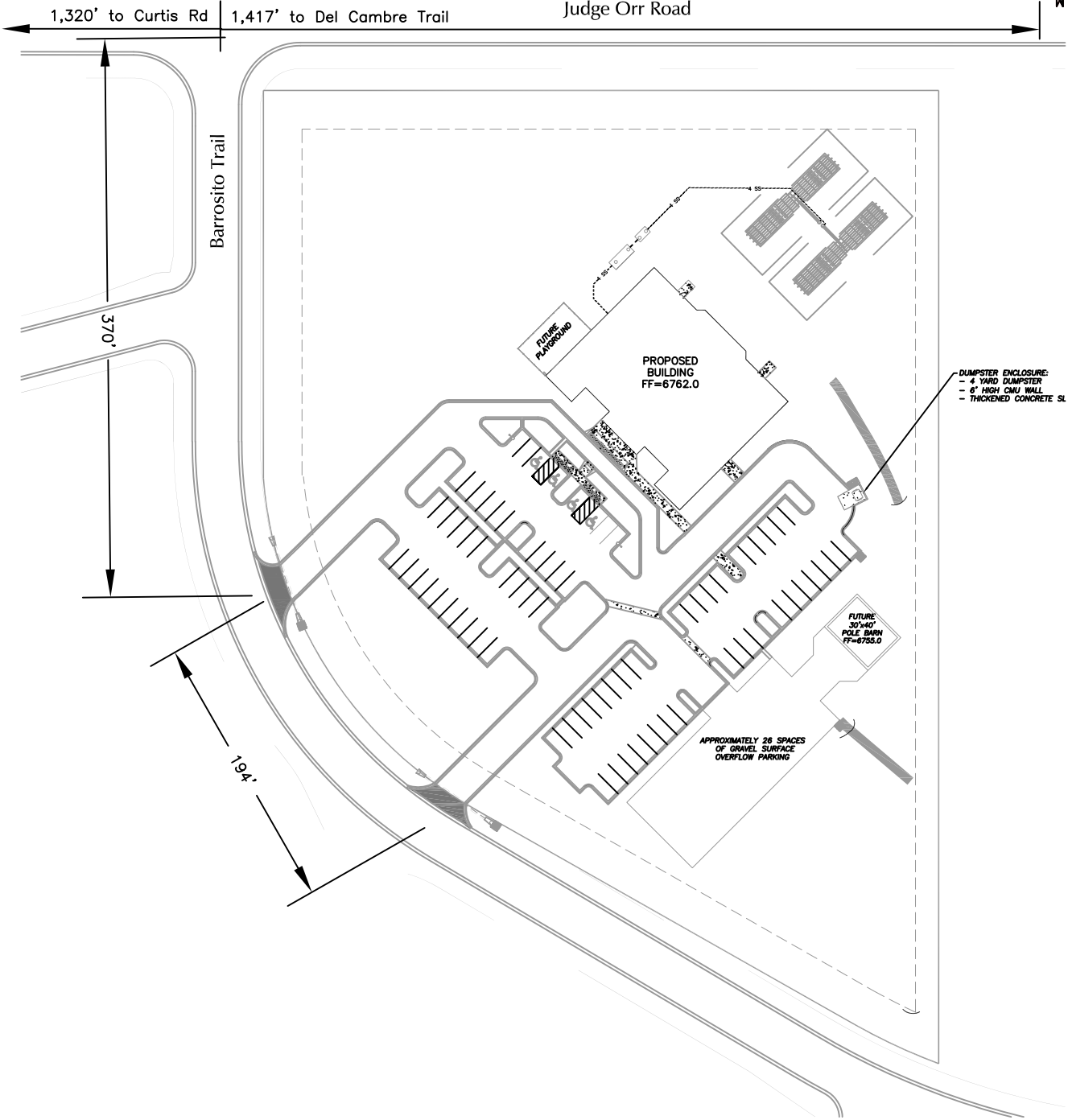
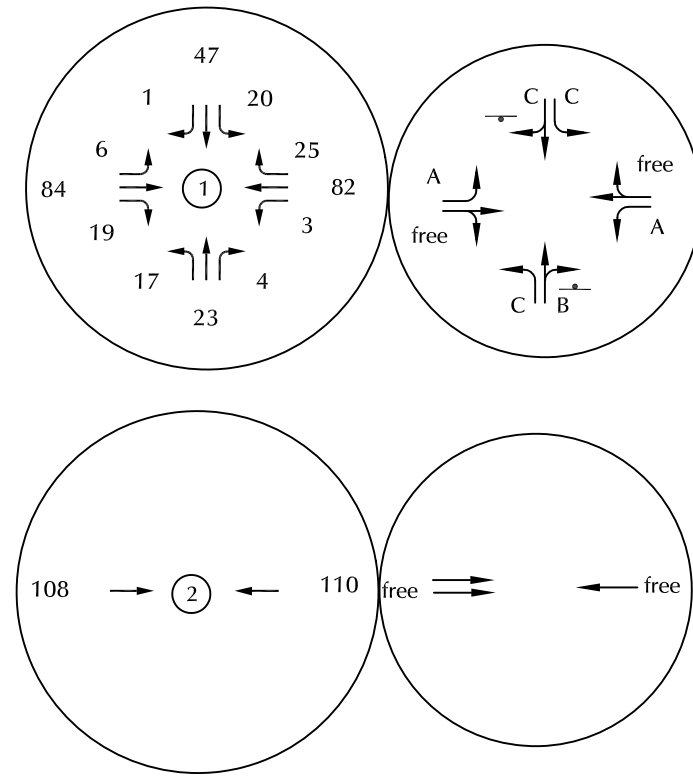
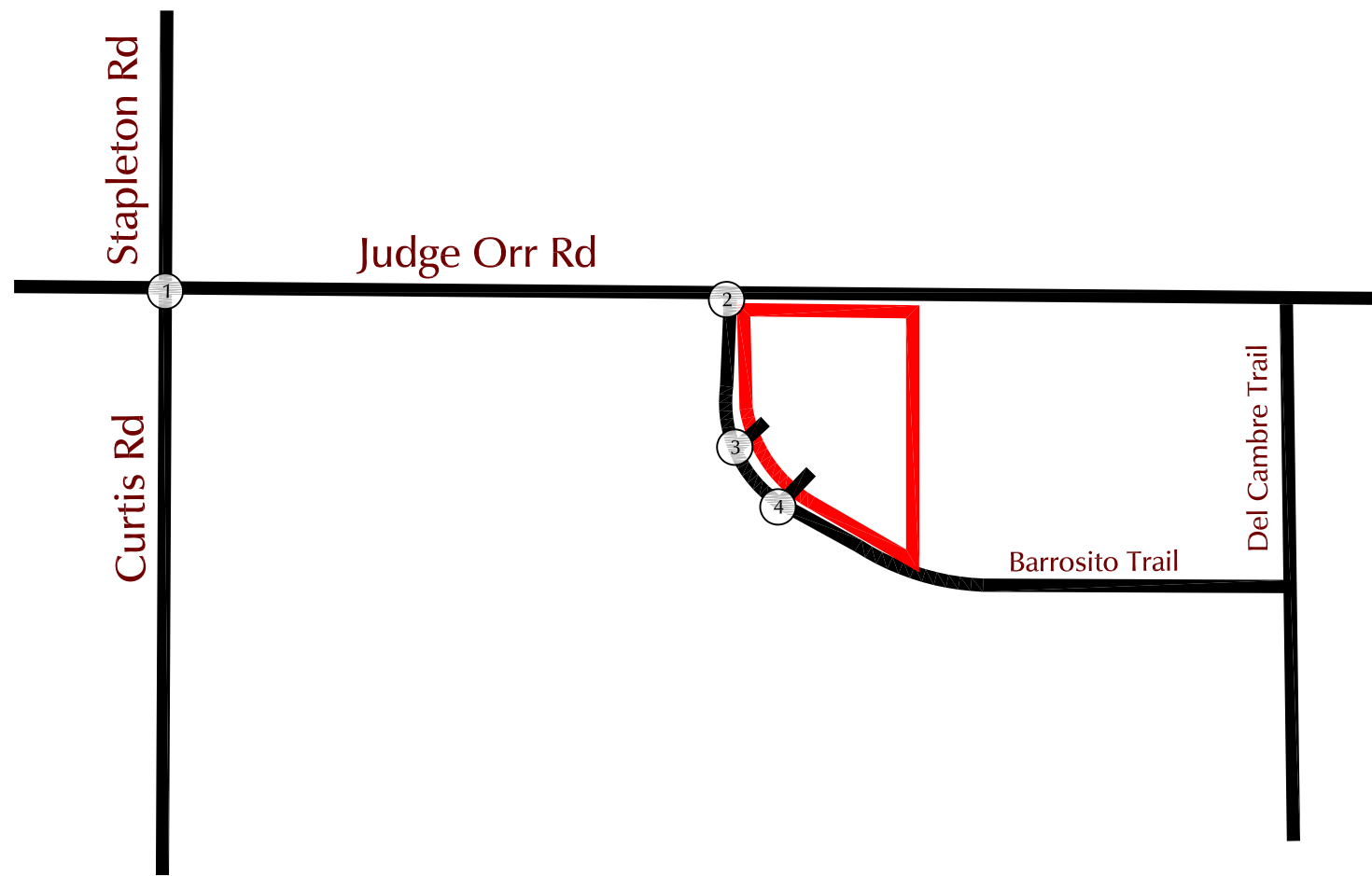


Figure 2
Site Plan



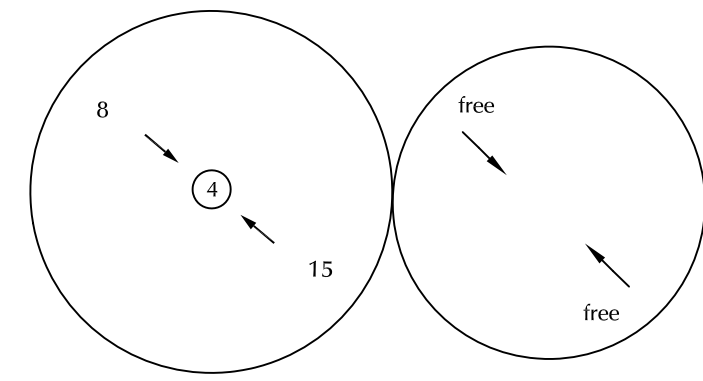
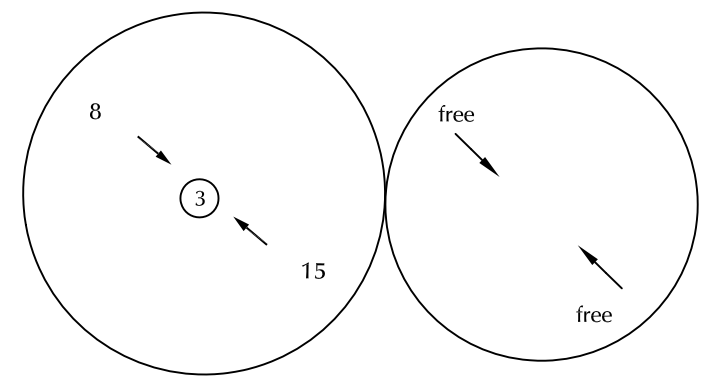
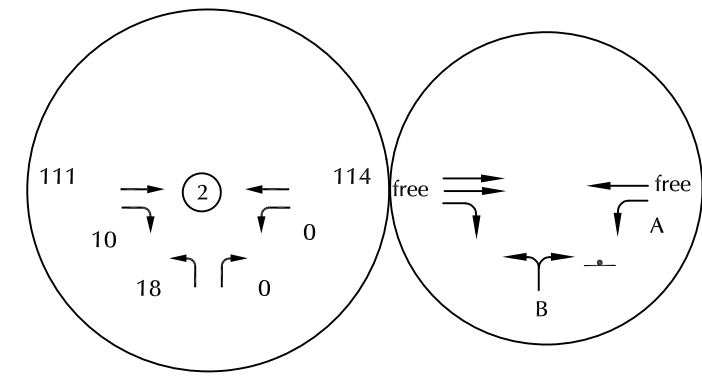
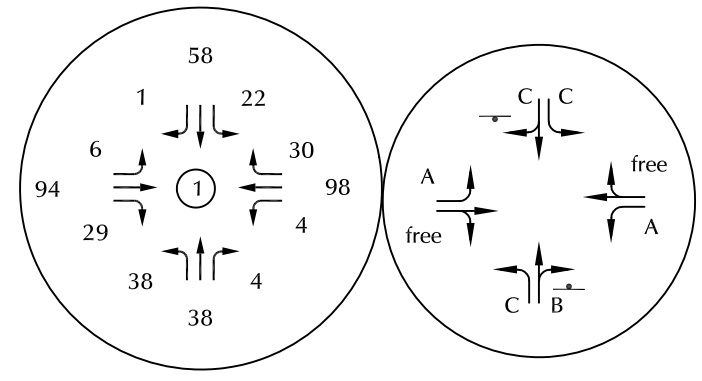
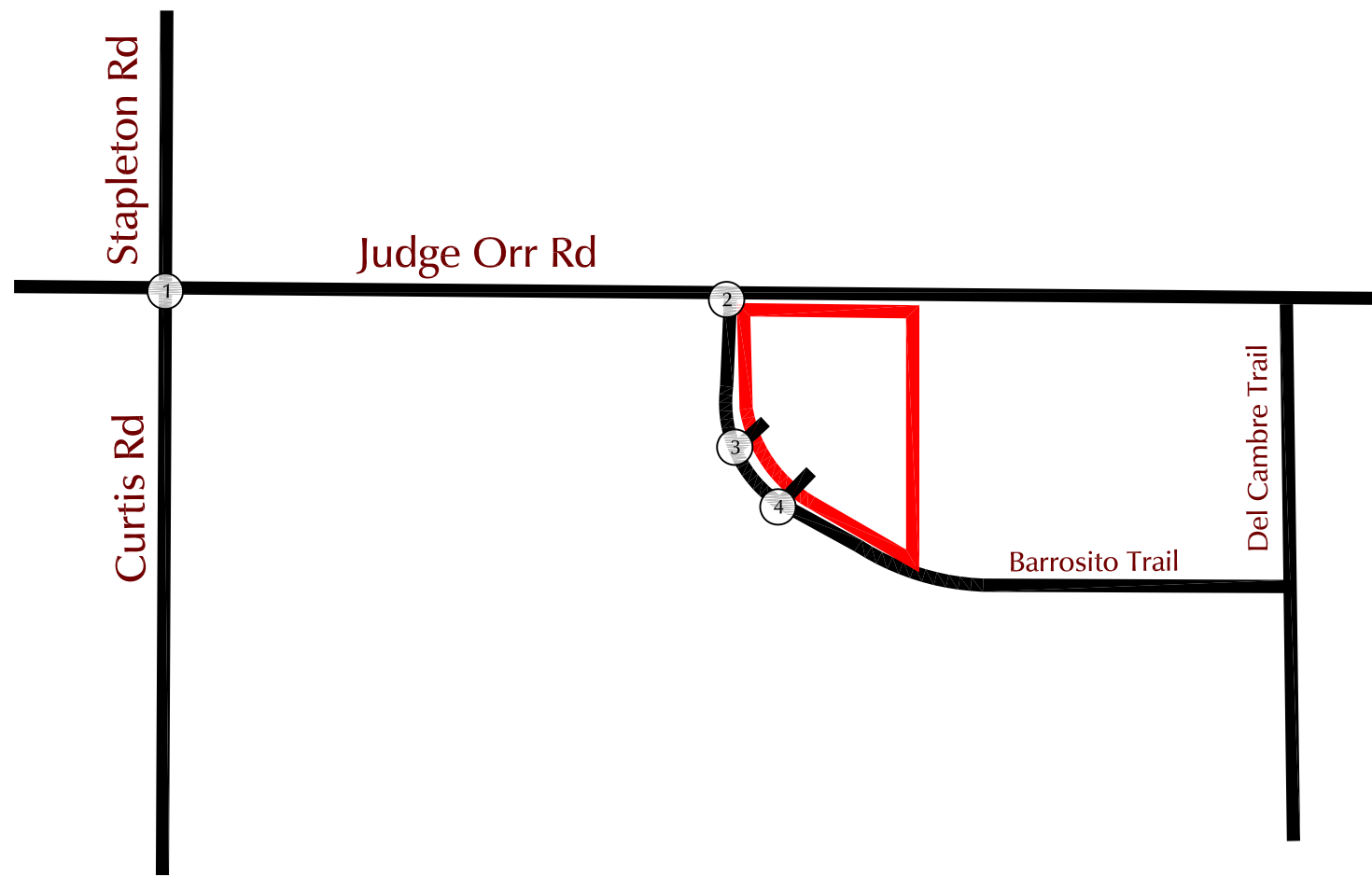


Update map, if access locations 3 and 4 are not existing remove from plan or provide a disclaimer.

LEGEND:
 T = Stop Sign
 XX = AM Sunday Peak-Hour Traffic (vehicles per hour) (counts by LSC: 10/2023)



Figure 3
**Existing Traffic,
 Lane Geometry and Traffic Control**
 NorWood Bible Church (LSC # S234370)



LEGEND:
 † = Stop Sign
 XX = AM Sunday Peak-Hour Traffic (vehicles per hour)



Figure 4
**Short-Term Background Traffic,
 Lane Geometry and Traffic Control**
 NorWood Bible Church (LSC # S234370)



Figure 5

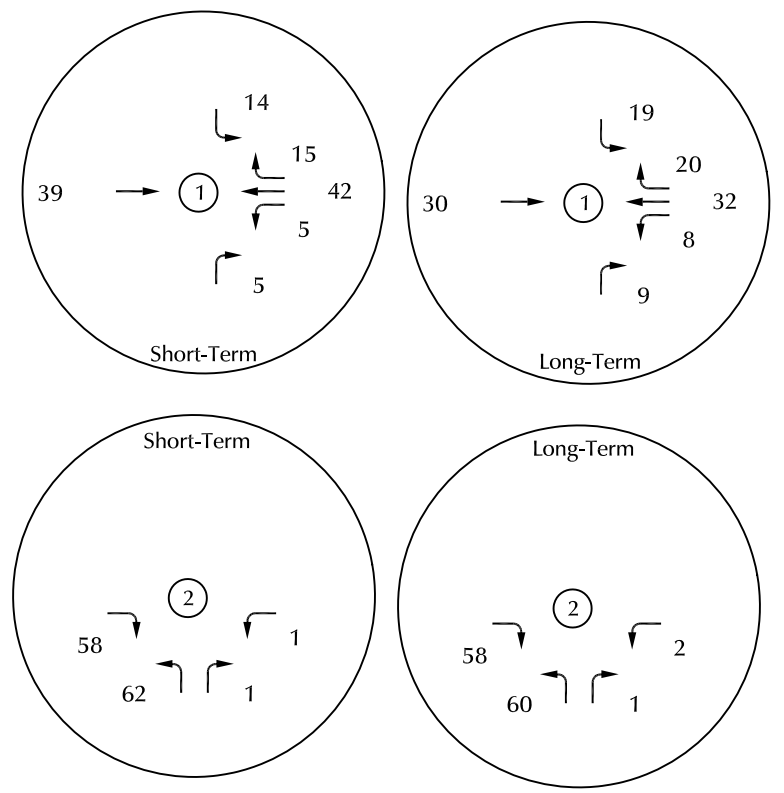
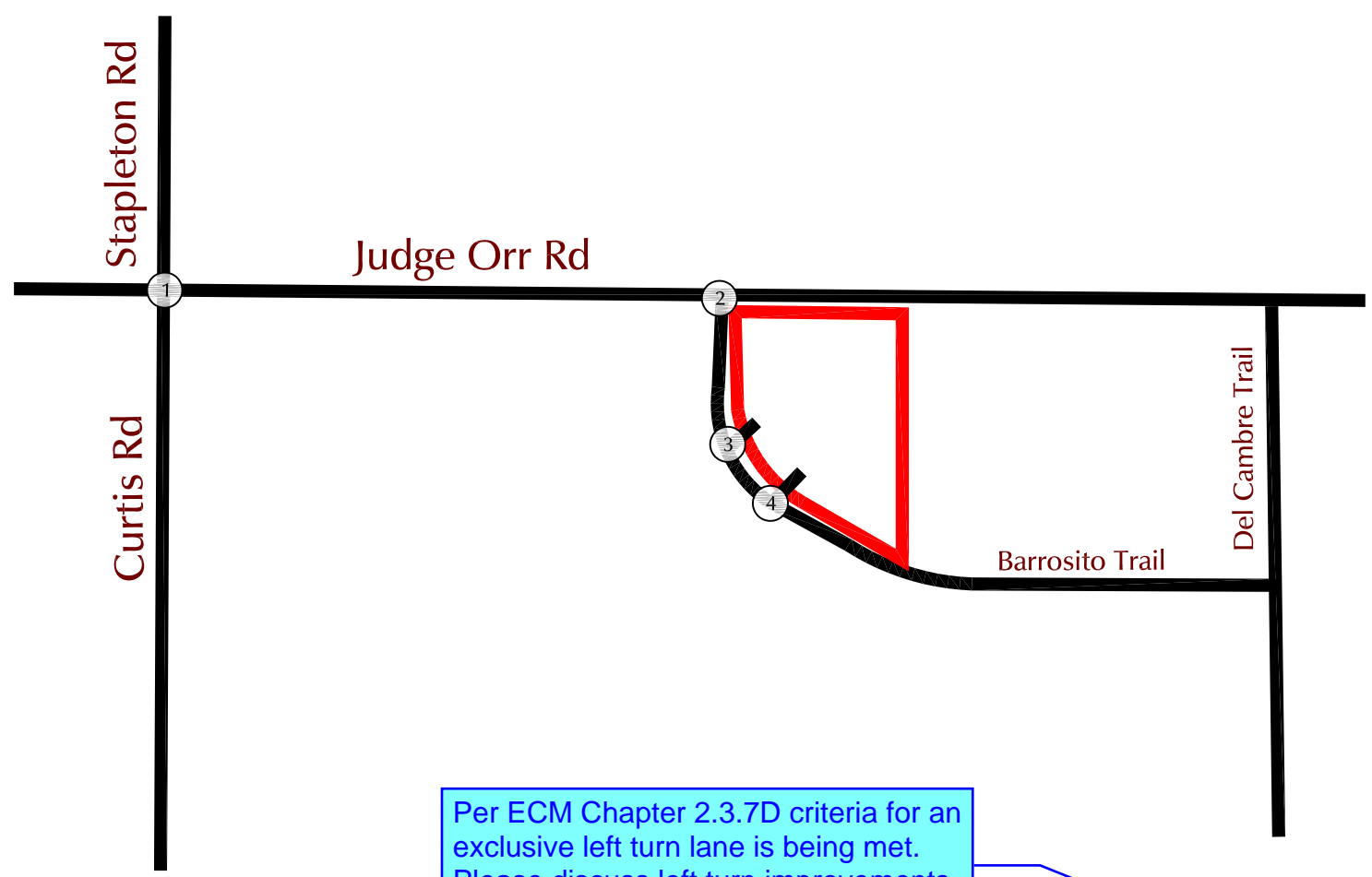
Estimated Directional Distribution of Site-Generated Traffic

NorWood Bible Church (LSC # S234370)

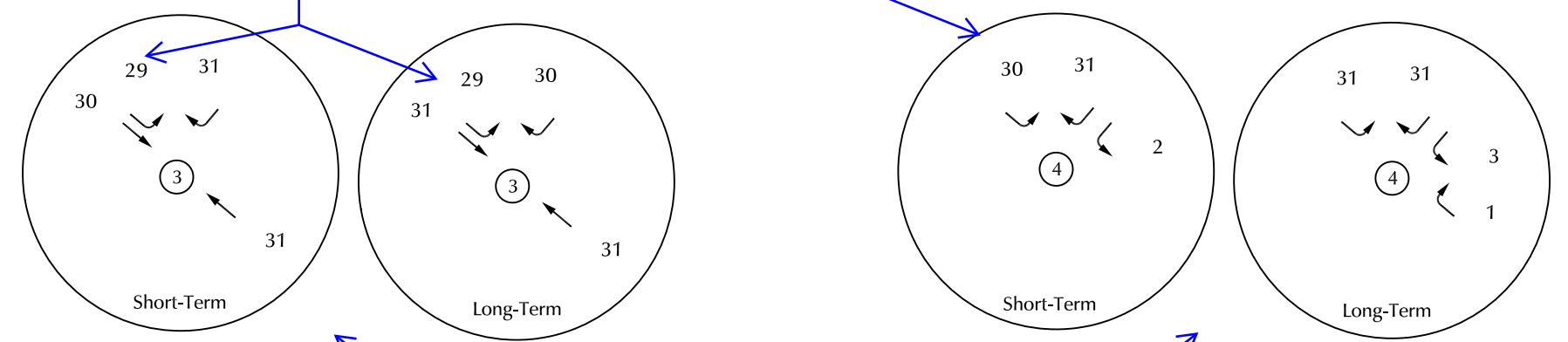
LEGEND:

$$\frac{\text{XX}\%}{\text{XX}\%} = \frac{\text{Percent Short-Term Distribution}}{\text{Percent Long-Term Distribution}}$$





Per ECM Chapter 2.3.7D criteria for an exclusive left turn lane is being met. Please discuss left turn improvements for Barrosito Trail.



Show peak hour values for right ingress turns

LEGEND:
XX = AM Sunday Peak-Hour Traffic (vehicles per hour)



Figure 6
Estimated Site-Generated Traffic
NorWood Bible Church (LSC # S224540)

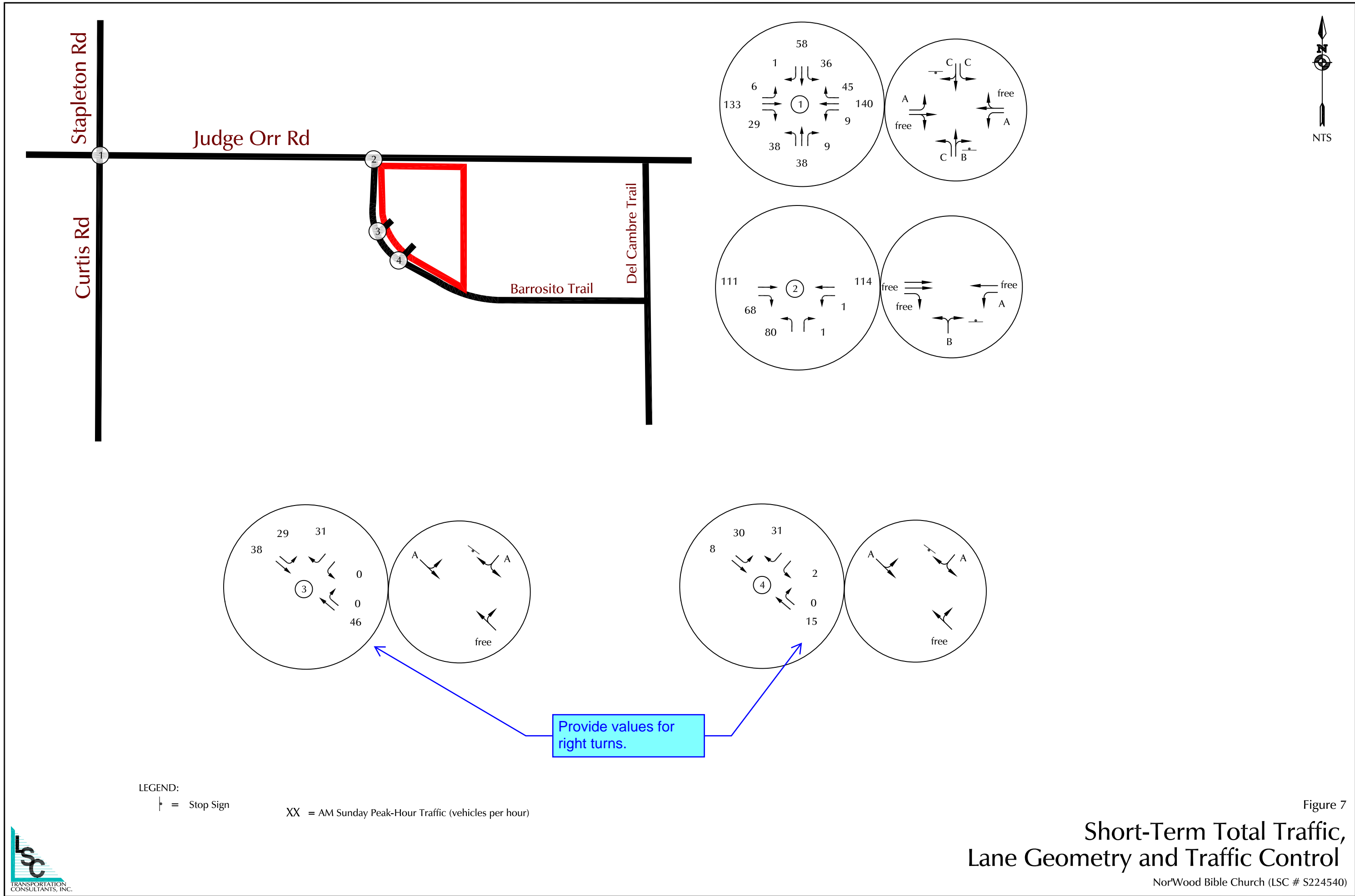
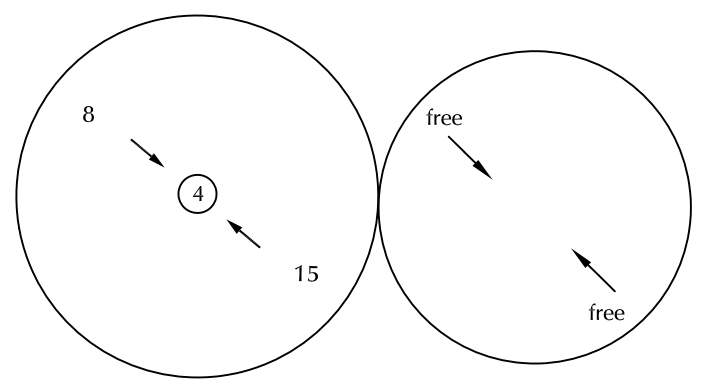
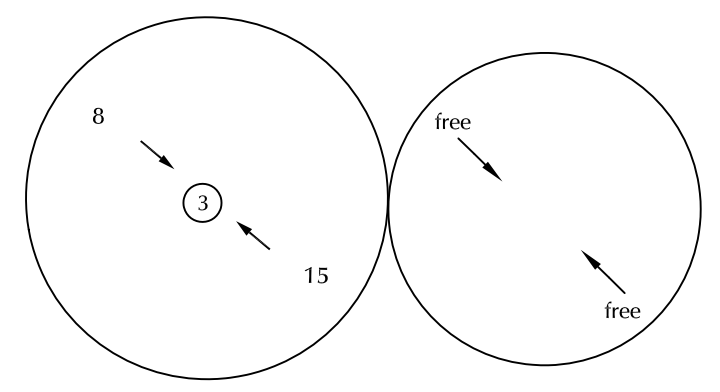
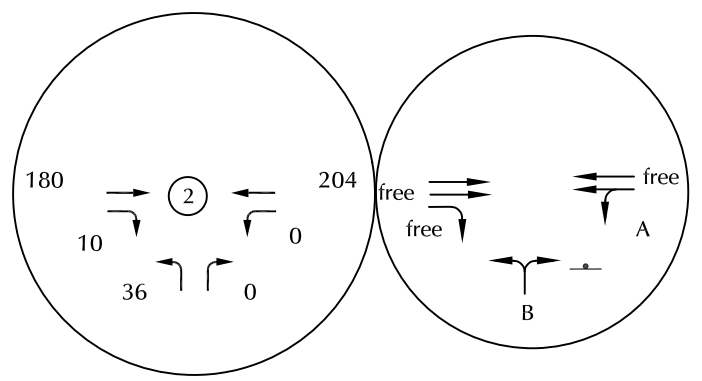
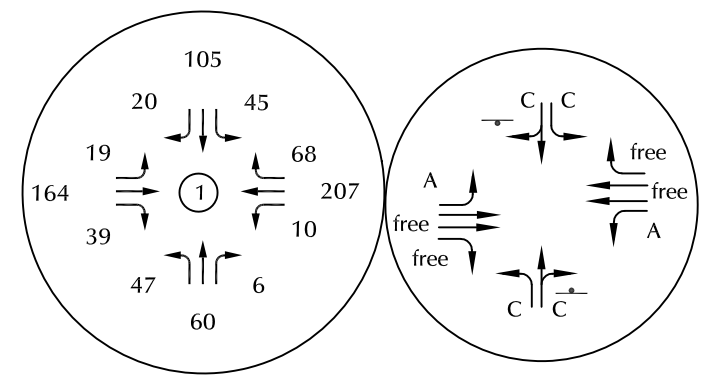
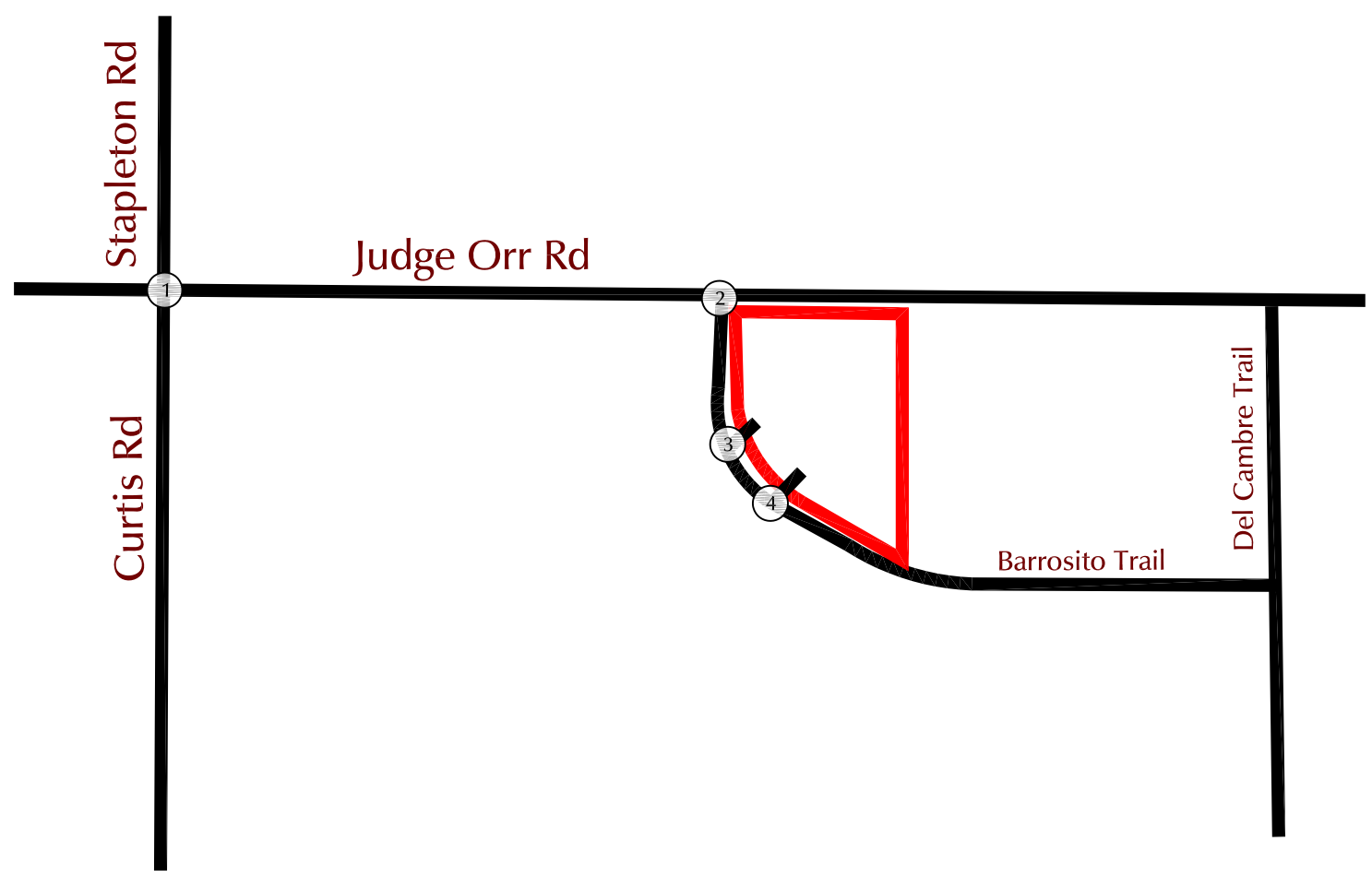


Figure 7

Short-Term Total Traffic, Lane Geometry and Traffic Control

NorWood Bible Church (LSC # S224540)

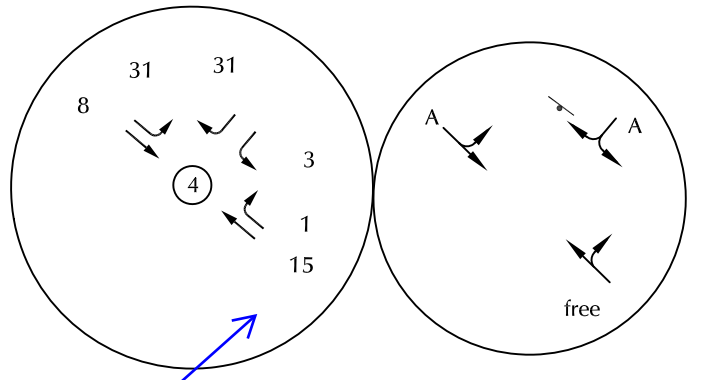
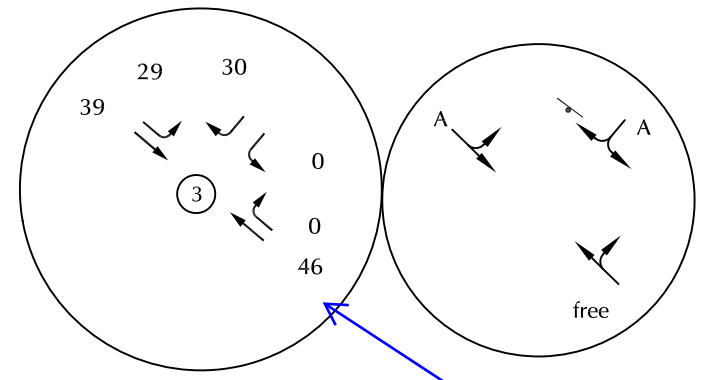
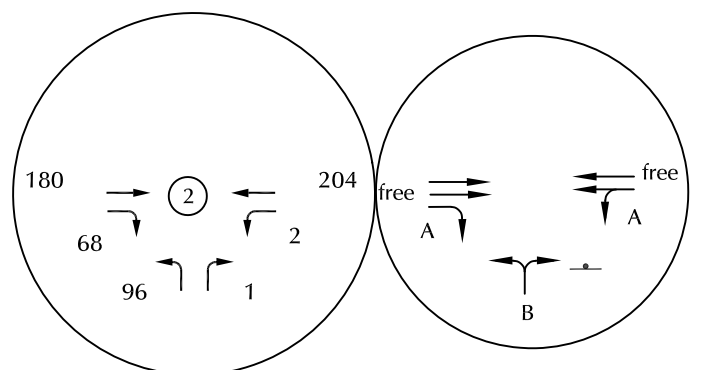
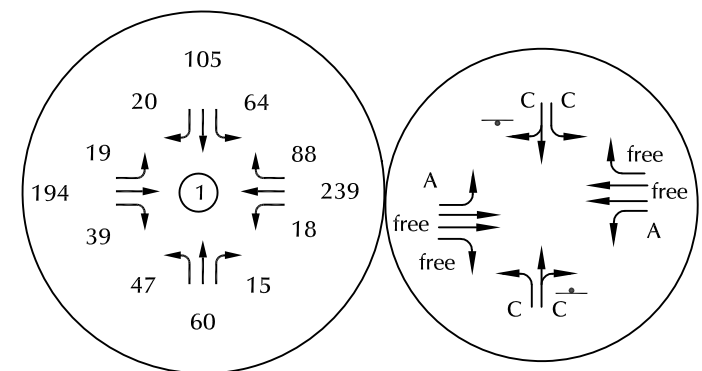
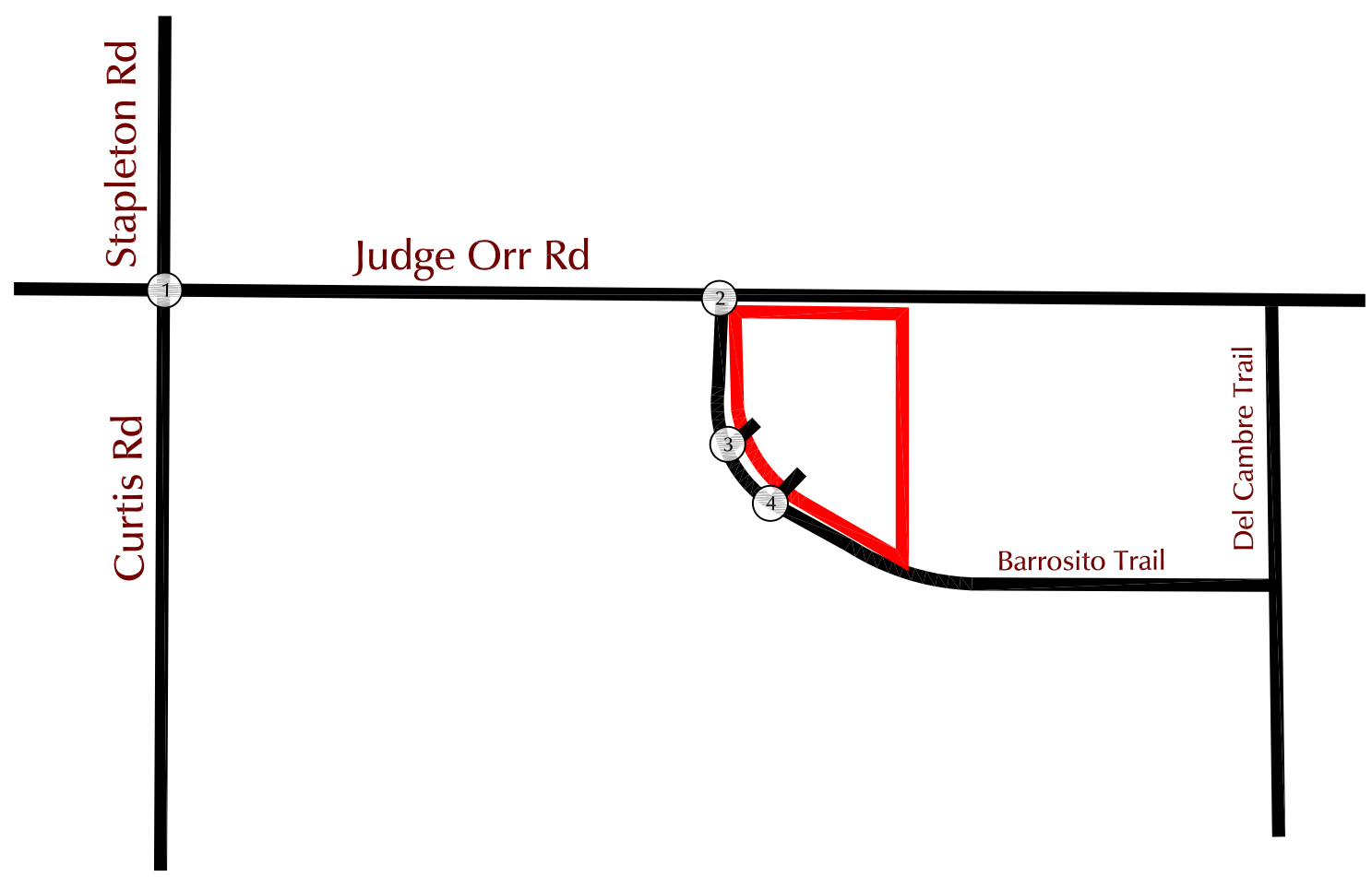




LEGEND:
 | = Stop Sign
 XX = AM Sunday Peak-Hour Traffic (vehicles per hour)



Figure 8
**2043 Background Traffic,
 Lane Geometry and Traffic Control**
 NorWood Bible Church (LSC # S224540)



Provide values for right turns.

LEGEND:
 | = Stop Sign
 XX = AM Sunday Peak-Hour Traffic (vehicles per hour)



Figure 9
**2043 Total Traffic,
 Lane Geometry and Traffic Control**
 NorWood Bible Church (LSC # S224540)

Traffic Counts



LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
 Colorado Springs, CO 80909
 719-633-2868

File Name : Curtis Rd - Judge Orr Rd Sun V
 Site Code : S234310
 Start Date : 10/21/2023
 Page No : 1

Groups Printed- Unshifted

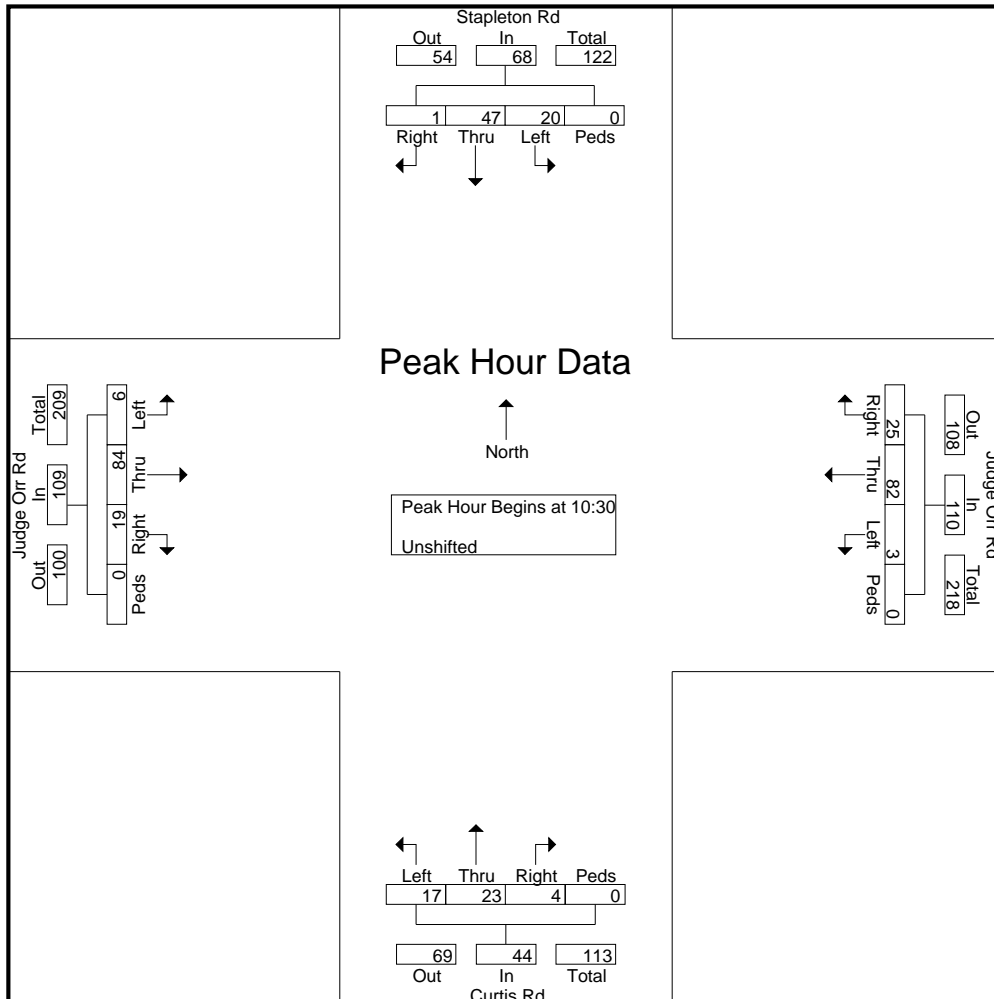
Start Time	Stapleton Rd Southbound					Judge Orr Rd Westbound					Curtis Rd Northbound					Judge Orr Rd Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
09:30	1	6	4	0	11	3	14	0	0	17	1	4	4	0	9	1	14	2	0	17	54
09:45	0	10	3	0	13	5	19	4	0	28	0	10	7	0	17	5	14	0	0	19	77
Total	1	16	7	0	24	8	33	4	0	45	1	14	11	0	26	6	28	2	0	36	131
10:00	0	8	5	0	13	0	5	0	0	5	1	8	1	0	10	2	9	1	0	12	40
10:15	0	10	8	0	18	4	14	1	0	19	1	10	2	0	13	3	16	2	0	21	71
10:30	0	8	9	0	17	9	27	1	0	37	2	5	4	0	11	3	15	0	0	18	83
10:45	0	17	3	0	20	5	23	2	0	30	1	4	2	0	7	6	18	1	0	25	82
Total	0	43	25	0	68	18	69	4	0	91	5	27	9	0	41	14	58	4	0	76	276
11:00	0	11	3	0	14	5	17	0	0	22	0	9	1	0	10	6	21	2	0	29	75
11:15	1	11	5	0	17	6	15	0	0	21	1	5	10	0	16	4	30	3	0	37	91
11:30	0	15	2	0	17	3	17	0	0	20	1	9	1	0	11	3	12	1	0	16	64
11:45	1	6	7	0	14	2	16	1	0	19	2	13	2	0	17	4	23	2	0	29	79
Total	2	43	17	0	62	16	65	1	0	82	4	36	14	0	54	17	86	8	0	111	309
Grand Total	3	102	49	0	154	42	167	9	0	218	10	77	34	0	121	37	172	14	0	223	716
Apprch %	1.9	66.2	31.8	0		19.3	76.6	4.1	0		8.3	63.6	28.1	0		16.6	77.1	6.3	0		
Total %	0.4	14.2	6.8	0	21.5	5.9	23.3	1.3	0	30.4	1.4	10.8	4.7	0	16.9	5.2	24	2	0	31.1	

LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
 Colorado Springs, CO 80909
 719-633-2868

File Name : Curtis Rd - Judge Orr Rd Sun V
 Site Code : S234310
 Start Date : 10/21/2023
 Page No : 2

Start Time	Stapleton Rd Southbound					Judge Orr Rd Westbound					Curtis Rd Northbound					Judge Orr Rd Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 09:30 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 10:30																					
10:30	0	8	9	0	17	9	27	1	0	37	2	5	4	0	11	3	15	0	0	18	83
10:45	0	17	3	0	20	5	23	2	0	30	1	4	2	0	7	6	18	1	0	25	82
11:00	0	11	3	0	14	5	17	0	0	22	0	9	1	0	10	6	21	2	0	29	75
11:15	1	11	5	0	17	6	15	0	0	21	1	5	10	0	16	4	30	3	0	37	91
Total Volume	1	47	20	0	68	25	82	3	0	110	4	23	17	0	44	19	84	6	0	109	331
% App. Total	1.5	69.1	29.4	0		22.7	74.5	2.7	0		9.1	52.3	38.6	0		17.4	77.1	5.5	0		
PHF	.250	.691	.556	.000	.850	.694	.759	.375	.000	.743	.500	.639	.425	.000	.688	.792	.700	.500	.000	.736	.909



LSC Transportation Consultants, Inc.

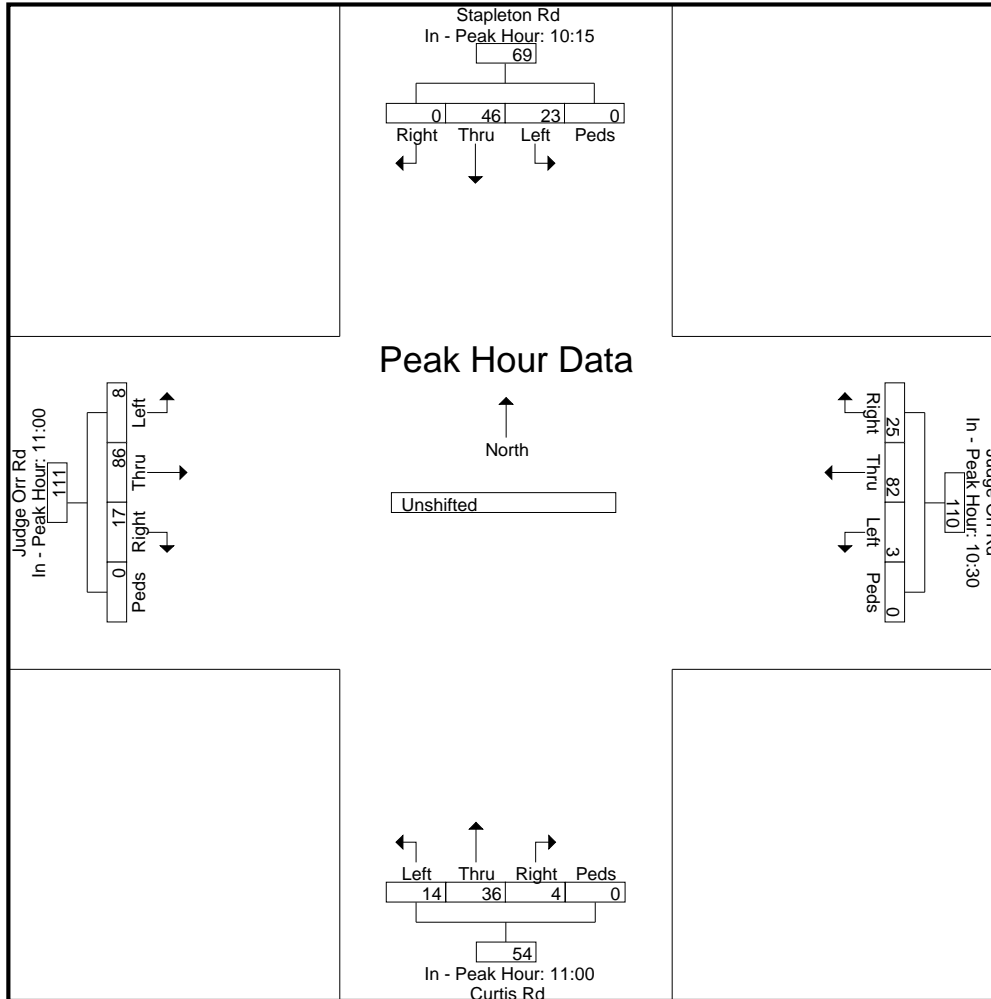
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File Name : Curtis Rd - Judge Orr Rd Sun V
 Site Code : S234310
 Start Date : 10/21/2023
 Page No : 3

Start Time	Stapleton Rd Southbound					Judge Orr Rd Westbound					Curtis Rd Northbound					Judge Orr Rd Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 09:30 to 11:45 - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	10:15					10:30					11:00					11:00				
+0 mins.	0	10	8	0	18	9	27	1	0	37	0	9	1	0	10	6	21	2	0	29
+15 mins.	0	8	9	0	17	5	23	2	0	30	1	5	10	0	16	4	30	3	0	37
+30 mins.	0	17	3	0	20	5	17	0	0	22	1	9	1	0	11	3	12	1	0	16
+45 mins.	0	11	3	0	14	6	15	0	0	21	2	13	2	0	17	4	23	2	0	29
Total Volume	0	46	23	0	69	25	82	3	0	110	4	36	14	0	54	17	86	8	0	111
% App. Total	0	66.7	33.3	0		22.7	74.5	2.7	0		7.4	66.7	25.9	0		15.3	77.5	7.2	0	
PHF	.000	.676	.639	.000	.863	.694	.759	.375	.000	.743	.500	.692	.350	.000	.794	.708	.717	.667	.000	.750



Level of Service Reports



Intersection Level Of Service Report
Intersection 3: Curtis Road/Judge Orr Road

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.087

Intersection Setup

Name	Curtis Road			Stapleton Road			Judge Orr Road			Judge Orr Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔			↔			↔			↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Curtis Road			Stapleton Road			Judge Orr Road			Judge Orr Road		
Base Volume Input [veh/h]	17	23	4	20	47	1	6	84	19	3	82	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	23	4	20	47	1	6	84	19	3	82	25
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.7500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	7	1	6	14	0	2	28	6	1	24	7
Total Analysis Volume [veh/h]	20	27	5	24	55	1	7	112	22	4	96	29
Pedestrian Volume [ped/h]	0			0			0			0		



Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.04	0.01	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.14	10.97	9.15	10.79	11.22	9.36	7.47	0.00	0.00	7.49	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.15	0.15	0.12	0.29	0.29	0.01	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.56	3.79	3.79	2.89	7.19	7.19	0.36	0.00	0.00	0.21	0.00	0.00
d_A, Approach Delay [s/veh]	10.86			11.06			0.37			0.23		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.81											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Curtis Road/Judge Orr Road

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.083

Intersection Setup

Name	Curtis Road			Stapleton Road			Judge Orr Road			Judge Orr Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔			↔			↔			↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Curtis Road			Stapleton Road			Judge Orr Road			Judge Orr Road		
Base Volume Input [veh/h]	17	23	4	20	47	1	6	84	19	3	82	25
Base Volume Adjustment Factor	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	21	14	0	2	10	0	0	8	10	1	14	4
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	38	4	22	58	1	6	94	29	4	98	30
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.7500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	11	1	6	17	0	2	31	9	1	29	9
Total Analysis Volume [veh/h]	45	45	5	26	68	1	7	125	34	5	115	35
Pedestrian Volume [ped/h]	0			0			0			0		



Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.08	0.01	0.05	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.20	11.57	9.49	11.54	11.83	9.71	7.53	0.00	0.00	7.54	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.27	0.26	0.26	0.14	0.39	0.39	0.01	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.72	6.60	6.60	3.54	9.72	9.72	0.37	0.00	0.00	0.26	0.00	0.00
d_A, Approach Delay [s/veh]	11.76			11.73			0.32			0.24		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.54											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 5: Judge Orr Road/Barrosito Trail

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name	Barrosito Trail		Judge Orr Road		Judge Orr Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Barrosito Trail		Judge Orr Road		Judge Orr Road	
Base Volume Input [veh/h]	0	0	108	0	0	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0240	1.0000	1.0000	1.0240
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	18	0	0	10	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	0	111	10	0	114
Peak Hour Factor	0.8500	0.8500	0.7000	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	40	3	0	34
Total Analysis Volume [veh/h]	21	0	159	12	0	134
Pedestrian Volume [ped/h]	0		0		0	



Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.99	8.87	0.00	0.00	7.56	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.18	2.18	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.99		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.64					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Curtis Road/Judge Orr Road

Control Type:	Two-way stop	Delay (sec / veh):	16.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.128

Intersection Setup

Name	Curtis Road			Stapleton Road			Judge Orr Road			Judge Orr Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔			↔			↔			↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Curtis Road			Stapleton Road			Judge Orr Road			Judge Orr Road		
Base Volume Input [veh/h]	17	23	4	20	47	1	6	84	19	3	82	25
Base Volume Adjustment Factor	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240	1.0240
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	21	14	0	2	10	0	0	8	10	1	14	4
Site-Generated Trips [veh/h]	0	0	5	14	0	0	0	39	0	5	42	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	38	9	36	58	1	6	133	29	9	140	45
Peak Hour Factor	0.8500	0.8500	0.6500	0.6500	0.8500	0.8500	0.8500	0.6000	0.8500	0.5500	0.6000	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	11	3	14	17	0	2	55	9	4	58	15
Total Analysis Volume [veh/h]	45	45	14	55	68	1	7	222	34	16	233	60
Pedestrian Volume [ped/h]	0			0			0			0		



Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.11	0.02	0.15	0.16	0.00	0.01	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	16.77	14.67	10.58	16.32	15.04	11.24	7.85	0.00	0.00	7.78	0.00	0.00
Movement LOS	C	B	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.44	0.42	0.42	0.51	0.57	0.57	0.02	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	10.92	10.61	10.61	12.81	14.18	14.18	0.42	0.00	0.00	0.93	0.00	0.00
d_A, Approach Delay [s/veh]	15.03			15.58			0.21			0.40		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	4.59											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: Judge Orr Road/Barrosito Trail

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.217

Intersection Setup

Name	Barrosito Trail		Judge Orr Road		Judge Orr Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Barrosito Trail		Judge Orr Road		Judge Orr Road	
Base Volume Input [veh/h]	0	0	108	0	0	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0240	1.0000	1.0000	1.0240
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	18	0	0	10	0	1
Site-Generated Trips [veh/h]	62	1	0	58	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	1	111	68	1	114
Peak Hour Factor	0.5000	0.5000	0.7000	0.5000	0.5000	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	1	40	34	1	34
Total Analysis Volume [veh/h]	160	2	159	136	2	134
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.25	10.10	0.00	0.00	7.85	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.83	0.83	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	20.83	20.83	0.00	0.00	0.12	0.00
d_A, Approach Delay [s/veh]	11.24		0.00		0.12	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	3.10					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 15: Barrosito Trail/South Site Access

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Barrosito Trail		Barrosito Trail		S. Site Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Barrosito Trail		Barrosito Trail		S. Site Access	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	15	0	0	8	0	0
Site-Generated Trips [veh/h]	0	0	30	0	2	31
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	0	30	8	2	31
Peak Hour Factor	0.8500	0.5000	0.5000	0.8500	0.5000	0.5000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	15	2	1	16
Total Analysis Volume [veh/h]	18	0	60	9	4	62
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.04	0.00	0.00	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	7.32	0.00	9.66	8.63
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.10	0.10	0.20	0.20
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.58	2.58	5.07	5.07
d_A, Approach Delay [s/veh]	0.00		6.37		8.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.62					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 23: BarrositoTrail/North Site Access

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.064

Intersection Setup

Name	Barrosito Trail		Barrosito Trail		North Site Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Barrosito Trail		Barrosito Trail		North Site Access	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	15	0	0	8	0	0
Site-Generated Trips [veh/h]	31	0	29	30	0	31
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	0	29	38	0	31
Peak Hour Factor	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	0	15	19	0	16
Total Analysis Volume [veh/h]	92	0	58	76	0	62
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.04	0.00	0.00	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	7.46	0.00	10.57	8.99
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.10	0.10	0.21	0.21
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.50	2.50	5.14	5.14
d_A, Approach Delay [s/veh]	0.00		3.23		8.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.44					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Curtis Road/Judge Orr Road

Control Type:	Two-way stop	Delay (sec / veh):	22.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.210

Intersection Setup

Name	Curtis Road			Stapleton Drive			Judge Orr Road			Judge Orr Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Curtis Road			Stapleton Drive			Judge Orr Road			Judge Orr Road		
Base Volume Input [veh/h]	17	23	4	20	47	1	6	84	19	3	82	25
Base Volume Adjustment Factor	1.5000	2.0000	1.1000	1.1500	2.0000	1.5000	1.5000	1.1000	1.5000	1.1000	1.1000	1.1500
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	21	14	2	22	11	18	10	72	10	7	117	39
Site-Generated Trips [veh/h]	0	0	9	19	0	0	0	30	0	8	32	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	60	15	64	105	20	19	194	39	18	239	88
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.7500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	18	4	19	31	6	6	65	11	5	70	26
Total Analysis Volume [veh/h]	55	71	18	75	124	24	22	259	46	21	281	104
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.21	0.02	0.23	0.34	0.03	0.02	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	22.34	18.54	11.82	19.47	20.11	14.25	8.14	0.00	0.00	7.92	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.77	0.88	0.88	0.88	1.67	1.67	0.06	0.00	0.00	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	19.33	22.10	22.10	22.04	41.74	41.74	1.44	0.00	0.00	1.28	0.00	0.00
d_A, Approach Delay [s/veh]	19.15			19.26			0.55			0.41		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	6.73											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: Judge Orr Road/BarrositoTrail

Control Type:	Two-way stop	Delay (sec / veh):	11.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.179

Intersection Setup

Name	Barrosito Trail		Judge Orr Road		Judge Orr Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Barrosito Trail		Judge Orr Road		Judge Orr Road	
Base Volume Input [veh/h]	18	0	108	0	0	95
Base Volume Adjustment Factor	1.0000	1.0000	1.1000	1.0000	1.0000	1.1000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	18	0	61	10	0	99
Site-Generated Trips [veh/h]	60	1	0	58	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	1	180	68	2	204
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	0	53	20	1	60
Total Analysis Volume [veh/h]	113	1	212	80	2	240
Pedestrian Volume [ped/h]	0		0		0	



Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.18	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.93	10.12	0.00	0.00	7.84	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.65	0.65	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	16.27	16.27	0.00	0.00	0.08	0.04
d_A, Approach Delay [s/veh]	11.91		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.12					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Curtis Road/Judge Orr Road

Control Type:	Two-way stop	Delay (sec / veh):	25.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.239

Intersection Setup

Name	Curtis Road			Stapleton Drive			Judge Orr Road			Judge Orr Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Curtis Road			Stapleton Drive			Judge Orr Road			Judge Orr Road		
Base Volume Input [veh/h]	17	23	4	20	47	1	6	84	19	3	82	25
Base Volume Adjustment Factor	1.5000	2.0000	1.1000	1.1500	2.0000	1.5000	1.5000	1.1000	1.5000	1.1000	1.1000	1.1500
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	21	14	2	22	11	18	10	72	10	7	117	39
Site-Generated Trips [veh/h]	0	0	9	19	0	0	0	30	0	8	32	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	60	15	64	105	20	19	194	39	18	239	88
Peak Hour Factor	0.8500	0.8500	0.6500	0.7500	0.8500	0.8500	0.8500	0.7500	0.8500	0.5500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	18	6	21	31	6	6	65	11	8	80	29
Total Analysis Volume [veh/h]	55	71	23	85	124	24	22	259	46	33	319	117
Pedestrian Volume [ped/h]	0			0			0			0		



Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.24	0.24	0.03	0.30	0.38	0.03	0.02	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	25.46	20.52	12.55	23.47	22.39	15.69	8.28	0.00	0.00	7.95	0.00	0.00
Movement LOS	D	C	B	C	C	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.90	1.03	1.03	1.25	1.90	1.90	0.06	0.00	0.00	0.08	0.00	0.00
95th-Percentile Queue Length [ft/ln]	22.59	25.84	25.84	31.26	47.46	47.46	1.50	0.00	0.00	2.03	0.00	0.00
d_A, Approach Delay [s/veh]	21.11			22.09			0.56			0.56		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	7.42											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 5: Judge Orr Road/BarrositoTrail

Control Type:	Two-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.306

Intersection Setup

Name	Barrosito Trail		Judge Orr Road		Judge Orr Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Barrosito Trail		Judge Orr Road		Judge Orr Road	
Base Volume Input [veh/h]	18	0	108	0	0	95
Base Volume Adjustment Factor	1.0000	1.0000	1.1000	1.0000	1.0000	1.1000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	18	0	61	10	0	99
Site-Generated Trips [veh/h]	60	1	0	58	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	1	180	68	2	204
Peak Hour Factor	0.5000	0.5000	0.8500	0.5000	0.5000	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	1	53	34	1	60
Total Analysis Volume [veh/h]	192	2	212	136	4	240
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.31	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.26	11.40	0.00	0.00	7.99	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.30	1.30	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	32.60	32.60	0.00	0.00	0.17	0.08
d_A, Approach Delay [s/veh]	13.24		0.00		0.13	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	3.31					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 15: Barrosito Trail/South Site Access

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Barrosito Trail		Barrosito Trail		S. Site Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Barrosito Trail		Barrosito Trail		S. Site Access	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	15	0	0	8	0	0
Site-Generated Trips [veh/h]	0	1	31	0	3	31
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	1	31	8	3	31
Peak Hour Factor	0.7500	0.5000	0.5000	0.7500	0.5000	0.5000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	1	16	3	2	16
Total Analysis Volume [veh/h]	20	2	62	11	6	62
Pedestrian Volume [ped/h]	0		0		0	



Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.04	0.00	0.01	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	7.33	0.00	9.73	8.66
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.11	0.11	0.21	0.21
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.67	2.67	5.30	5.30
d_A, Approach Delay [s/veh]	0.00		6.23		8.75	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.44					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 23: BarrositoTrail/North Site Access

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name	Barrosito Trail		Barrosito Trail		North Site Access	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

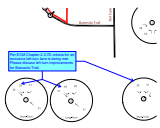
Name	Barrosito Trail		Barrosito Trail		North Site Access	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	15	0	0	8	0	0
Site-Generated Trips [veh/h]	31	0	29	31	0	30
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	0	29	39	0	30
Peak Hour Factor	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	0	15	20	0	15
Total Analysis Volume [veh/h]	92	0	58	78	0	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

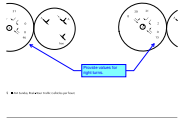
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.04	0.00	0.00	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	7.46	0.00	10.57	8.98
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.10	0.10	0.20	0.20
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.50	2.50	4.96	4.96
d_A, Approach Delay [s/veh]	0.00		3.18		8.98	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.37					
Intersection LOS	A					



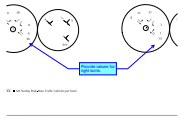
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Per ECM Chapter 2.3.7D criteria for an exclusive left turn lane is being met. Please discuss left turn improvements for Barrosito Trail.



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Provide values for right turns.



Subject: Callout
Page Label: 25
Author: Carlos
Date: 12/12/2023 1:54:19 PM
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Provide values for right turns.

CDurham (1)

seasonally, the following percent
ages on Judge Orr Road and Curtis
ear for 20 years.
Include discussion on why there's
such a difference in growth rates
between the 2 roads.
times on the area roadways is an
figure 4 shows the short-term and

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Author: CDurham
Date: 12/14/2023 8:29:57 AM
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Include discussion on why there's such a difference in growth rates between the 2 roads.