LSC TRANSPORTATION CONSULTANTS, INC.
2504 East Pikes Peak Avenue, Suite 304
Colorado Springs, CO 80909
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JeniShay Farms
Transportation Memorandum
(LSC #194650)
PCD File No. SP209
July 1, 2021

Traffic Engineer's Statement

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

COLORADO LICENSED
COLLEEN GUILLOTTE
43798
7-1-21
PROFESSIONAL ENGINEER

Developer's Statement

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

11/17/21

Date

JeniShay Farms

Transportation Memorandum

Prepared for:
Shay Miles
15630 Fox Creek Lane
Colorado Springs, CO 80906-6121

JULY 1, 2021

LSC Transportation Consultants
Prepared by: Colleen Guillotte P.E., PTOE, RSP
Reviewed by: Jeffrey C. Hodsdon, P.E.

LSC #194650
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CONTENTS

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July 1, 2021

Shay Miles
15630 Fox Creek Lane
Colorado Springs, CO 80906-6121

RE: JeniShay Farms
El Paso County, CO
Transportation Memorandum
LSC #194650
PCD File No. SP209

Dear Mr. Miles,

LSC Transportation Consultants, Inc. has prepared this Transportation Memorandum for the JeniShay Farms residential development in El Paso County, Colorado. The 39.72-acre site is located generally northeast of Black Forest Road and Terra Ridge Circle. Access would be via an extension of Fox Creek Lane (an existing cul-de-sac) north through the currently vacant property at 15630 Fox Creek Lane. This report has been prepared for submittal to the El Paso County.

REPORT CONTENTS

The preparation of this report included the following:

- An inventory of existing roadway and traffic conditions on the adjacent and nearby roadway system, including surface conditions, functional classification, widths, pavement markings, traffic control signs, posted speed limits, intersection and access spacing, roadway and intersection alignments, roadway grades, and auxiliary turn lanes;

- Weekday peak-hour turning-movement traffic counts at the Black Forest Road/Terra Ridge Circle intersection;

- Estimated current average weekday traffic (AWT) volumes on the study-area streets including Black Forest Road, Terra Ridge Circle, and Fox Creek Lane;

- Projections of 20-year background traffic volumes on the study-area streets;

- Estimates of average weekday and weekday peak-hour trip generation for the proposed JeniShay Farms development and the estimated directional distribution of site-generated vehicle trips on the area street and roadway network;

- The proposed site land use;

- Projected site-generated and resulting total peak-hour intersection traffic volumes at the intersection of Black Forest Road/Terra Ridge Circle;

- Projected total daily (AWT) volumes on the study-area streets;

- Intersection level of service analysis at the Black Forest Road/Terra Ridge Circle intersection; and

- Findings and recommendations.

OTHER TRAFFIC IMPACT STUDIES USED IN THE PREPARATION OF THIS REPORT

Flying Horse North is located west of Black Forest Road. LSC previously completed the Preliminary Plan for this development in April 2018. Additionally, LSC completed the *Flying Horse North Filing No. 1* in July 2018. This report is consistent with previous traffic studies completed for properties adjacent to the JeniShay Farms development.

CORRIDOR PRESERVATION

The El Paso County *Major Transportation Corridors Plan* (MTCP) shows Black Forest Road as a four-lane minor arterial adjacent to the site. The Flying Horse North plan shows ROW preservation of 90 feet from the centerline of Black Forest Road for the future 180 feet if needed.

LAND USE AND ACCESS

Figure 1 shows the site location relative to the adjacent and nearby roadways. The JeniShay Farms residential development is proposed to contain seven single-family detached dwelling units, as shown in Figure 2. It should be noted that the site plan shows nine lots. However, the two southernmost lots already exist and are being re-platted as part of this subdivision. The traffic generated by these lots has been included in the background traffic. Therefore, only the seven new lots are analyzed in this report.

The 39.72-acre site is located generally north of Terra Ridge Circle and east of Black Forest Road. Access would be via a proposed extension of Fox Creek Lane (an existing cul-de-sac). This extension would be north through the currently-vacant 6.19-acre Lot 6 (of Terra Ridge Filing No. 1). It is our understanding that a home will be built on this lot in the future, although the lot will be reduced in size for the extension of Fox Creek Lane.

INTERSECTION SIGHT DISTANCE

Intersection sight distance was measured at the existing Black Forest Road/Terra Ridge Circle intersection. The *Engineering Criteria Manual* (ECM) requires a sight distance of a minimum of 555 feet at an intersection on a 45-mile-per-hour (mph) road. To the north of Terra Ridge Circle, the sight distance exceeds ¼ mile, while the sight distance to the south is approximately 625 feet. The sight distance exceeds 555 feet to the north and south of Terra Ridge Circle.

ROAD AND TRAFFIC CONDITIONS

The roads in the study area are identified below, followed by a brief description of each:

Black Forest Road is a two-lane, paved rural minor arterial that extends north from Woodmen Road to County Line Road. Black Forest Road is offset about one-quarter mile to the east at Hodgen Road. The posted speed limit is 45 miles per hour adjacent to the site.

Terra Ridge Circle is an approximately 1.2-mile-long local road that forms a loop and intersects with Black Forest Road at both ends. The roadway is located east of Black Forest Road and provides access to residential lots. The posted speed limit is 25 mph. Both intersections of Black Forest Road/Terra Ridge Circle are stop-controlled.

Fox Creek Lane is a local road cul-de-sac off of Terra Ridge Circle that is approximately 0.1 miles in length. The intersection with Terra Ridge Circle is stop-controlled.

Stagecoach Road is the west leg of the Black Forest Road/Terra Ridge Circle intersection. This leg is currently under construction, as is the Flying Horse North development.

Existing Traffic Volumes

Figure 3 shows the results of peak-hour traffic volume counts conducted in March 2019 at the intersection of Black Forest Road/Terra Ridge Circle along with existing lane geometries and traffic controls. The traffic count sheets are attached.

At the time the counts were recorded, Stagecoach Road was only graded and Flying Horse North was not undergoing much construction. At the time of this report preparation, Stagecoach Road has been paved and some housing has been constructed, with the area still undergoing additional construction.

FUTURE BACKGROUND TRAFFIC

Short-Term Background Traffic Volumes

Figure 4 shows the projected short-term background traffic volumes. Estimated background traffic volumes are based on information contained in nearby, previously-conducted LSC traffic impact studies. Traffic from the proposed JeniShay Farms development is **not** included in the short-term background traffic volumes.

In the short-term background, it is assumed that Filing 1 of the Flying Horse North development has been constructed. Background traffic volumes were developed to be consistent with the short-term traffic volumes in the Flying Horse North Filing No. 1 Updated Traffic Impact Analysis, July 10, 2018.

2040 Background Traffic Volumes

Figure 5 shows the projected long-term background traffic volumes for the year 2040. Estimated 2040 background traffic volumes are based on information contained in nearby, previously-conducted LSC traffic impact studies. Traffic from the proposed JeniShay Farms development is **not** included in the 2040 background traffic volumes.

The 2040 background traffic volumes assume the buildout of Flying Horse North located west of Black Forest Road.

TRIP GENERATION

Estimates of the vehicle trips projected to be generated by the seven single-family homes were developed using the nationally published trip-generation rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Table 1 below presents a summary of the estimated site trip generation. A detailed trip-generation estimate for the development, including ITE rates for the proposed land uses, is presented in Table 3 (attached).

The proposed JeniShay Farms residential development is projected to generate about 90 vehicle trips on the average weekday during a 24-hour period, with approximately half entering and half exiting the site. During the morning peak hour, approximately two entering vehicles and seven exiting vehicles would be generated. Approximately five entering and three exiting vehicles would be generated by the site during the evening peak hour.

Table 1: Estimated Site Vehicle-Trip Generation

Analysis Period	Weekday		
	In	Out	Total
Morning Peak Hour	2	7	9
Evening Peak Hour	5	3	8
Daily/24-hour	45	45	90

TRIP DISTRIBUTION AND ASSIGNMENT

Trip Directional Distribution

The estimated directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site's traffic impacts. Figure 6 shows the percentages of the site-generated vehicle trips projected to be oriented to and from the site's major approaches. Estimates have been based on the following factors: the proposed new land use, the existing and future area road system serving the site, and the site's geographic location relative to the overall greater Colorado Springs area.

As shown in Figure 6, it is assumed that approximately 65 percent of the traffic generated by the site will be to/from the south, while 35 percent of the traffic will be to/from the north. It is assumed that a small percentage of traffic will travel to/from destinations within Flying Horse North to the west or for travel through Flying Horse North. The extension of Terra Ridge Circle to the west is planned to be a local road immediately west of Black Forest Road. Further to the west, the roadway is proposed to be a minor collector and then a major collector as it approaches State Highway 83. Based on the proposed classifications, it can be assumed that the new Stagecoach Road to the west will primarily serve the residential area and only minimal cut-through traffic would be expected. As a result, Stagecoach Road west of Black Forest Road is not anticipated to draw much traffic from JeniShay Farms.

Site-Generated Traffic

Site-generated traffic volumes have been estimated at the intersection of Black Forest Road/Terra Ridge Circle. Figure 6 shows the projected site-generated traffic volumes for the weekday morning and evening peak hours. These volumes have been calculated by applying the directional distribution percentages (also shown in Figure 6) to the trip-generation estimates (from Table 3). Estimated site-generated average weekday traffic volumes (AWTs) are also shown in the figure. As shown, the development is expected to add approximately 90 vehicles per day (vpd) to Fox Creek Lane and Terra Ridge Circle. Black Forest Road south of Terra Ridge Circle is forecast to carry approximately 60 vpd from the site. To the north of Terra Ridge Circle, Black Forest Road is forecast to carry approximately 30 vpd of site-generated traffic.

Short-Term Total Traffic Volumes

Figure 7 shows the sum of the short-term background traffic volumes (from Figure 4) and site-generated peak-hour traffic volumes (shown in Figure 6). These volumes represent the projected short-term total traffic following site buildout. Laneage and traffic control at the study-area intersections following site buildout are also shown in this figure.

2040 Total Traffic Volumes

Figure 8 shows the sum of 2040 background traffic volumes (from Figure 5) plus site-generated traffic volumes (from Figure 6).

LEVEL OF SERVICE ANALYSIS

The intersection of Black Forest Road/Terra Ridge Circle has been analyzed to determine the projected intersection levels of service for short- and long-term traffic scenarios for the morning and evening peak-hour periods.

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 2 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 2: Intersection Levels of Service Delay Ranges

	Signalized Intersections	Unsignalized Intersections
Level of Service	Average Control Delay (seconds per vehicle)	Average Control Delay (seconds per vehicle)(1)
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more
(1) For unsignalized intersections, if V/C ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.		

LOS values have been included in each figure for each turning movement/approach during the weekday morning and evening peak hours for the intersection of Black Forest Road/Terra Ridge Circle.

As shown in these figures, all turning movements at the unsignalized intersection of Black Forest Road/Terra Ridge Circle are projected to operate at LOS B or better during both peak periods through the 2040 horizon, with or without this proposed development. Detailed Synchro reports are attached.

AUXILIARY TURN-LANE ANALYSIS

Short-Term

No modifications are required to existing lane configurations, cross-sections, and traffic control based on the short-term background or short-term total traffic scenarios.

Long-Term

With the buildout of the Flying Horse North development west of Black Forest Road, a northbound left-turn lane at the intersection of Black Forest Road/Stagecoach Road/Terra Ridge Circle was identified as a future requirement in the "master TIS" for Flying Horse North. This turn lane was called out as a requirement due to projected northbound left-turning traffic to be generated by the Flying Horse North development. In the *Flying Horse North Preliminary Plan TIS*, dated April 3, 2019, it is projected that this turn lane will be required in Phase 3 of the development.

Southbound left-turning volumes at the intersection of Black Forest Road/Terra Ridge Circle do not exceed and are not projected to exceed the El Paso County *Engineering Criteria Manual* (ECM) minimum volume threshold triggering the requirement for a left-turn lane. However, because a northbound left-turn lane will be constructed, the north leg of the intersection will have to be widened for the lane redirect. At the design stage of this future left-turn lane, the plans will properly accommodate the turning movements to/from the existing east leg of the intersection.

DEVIATION REQUESTS

No deviation requests are being submitted for the proposed development. The extension of Fox Creek Lane will result in a cul-de-sac length of approximately 1,612 feet. El Paso County has stated that no deviation will be required.

CONCLUSIONS AND RECOMMENDATIONS

- The site is projected to generate about 90 new driveway vehicle trips on the average weekday.

- During the weekday morning peak hour of adjacent street traffic, two vehicles would enter the site while seven vehicles would exit.

- During the weekday evening peak hour of adjacent street traffic, three vehicles would enter the site while five vehicles would exit.

- All individual turning movements and approaches at the unsignalized intersection of Black Forest Road/Terra Ridge Circle are projected to operate at LOS B or better during both peak hours through the 2040 horizon year, with or without this development.

- Please refer to the "Auxiliary Turn-Lane Analysis" section for more details. No modifications to the existing laneage at the study-area intersections are likely necessary as a result of this development.

- No pedestrian facilities are required, due to the rural roadway classification for all roadways within the study area. The project is not expected to increase pedestrian or bicycle traffic within the study area.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

JeniShay Farms will be required to participate in the Countywide Road Impact Fee program. The specific PID option (or opt-out option), as well as the specific calculated fee amount, will be provided prior to recording of the plat. The fee per residential dwelling unit will be payable at the time of the building permit.

Black Forest Road is listed as a corridor to be upgraded as part of the rural county road upgrade improvements in the MTCP. The roadway doesn't currently meet the current design standards for a rural minor arterial.

* * * * *

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

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

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

JCH:CRG:jas

Enclosures: Table 3
Figure 1 - Figure 8
Traffic Count Reports
Synchro LOS Reports

Table 3

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Table 3: Detailed Trip Generation Estimate

ITE		Value	Units	Trip Generation Rates [1]					Total Trips Generated				
				Average	A.M.		P.M.		Average	A.M.		P.M.	
Code	Description			Weekday	In	Out	In	Out	Weekday	In	Out	In	Out
210	Single-Family Detached Housing	7	DU[2][3]	12.86	0.35	1.05	0.71	0.42	90	2	7	5	3

Notes:

(1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)

(2) DU = dwelling unit

(3) 7 lots were analyzed instead of the 9 shown in the site plan because 2 of the lots in the site plan already exist and are being replatted to be part of the JeniShay Farms subdivision

Source: LSC Transportation Consultants, Inc.

Figures

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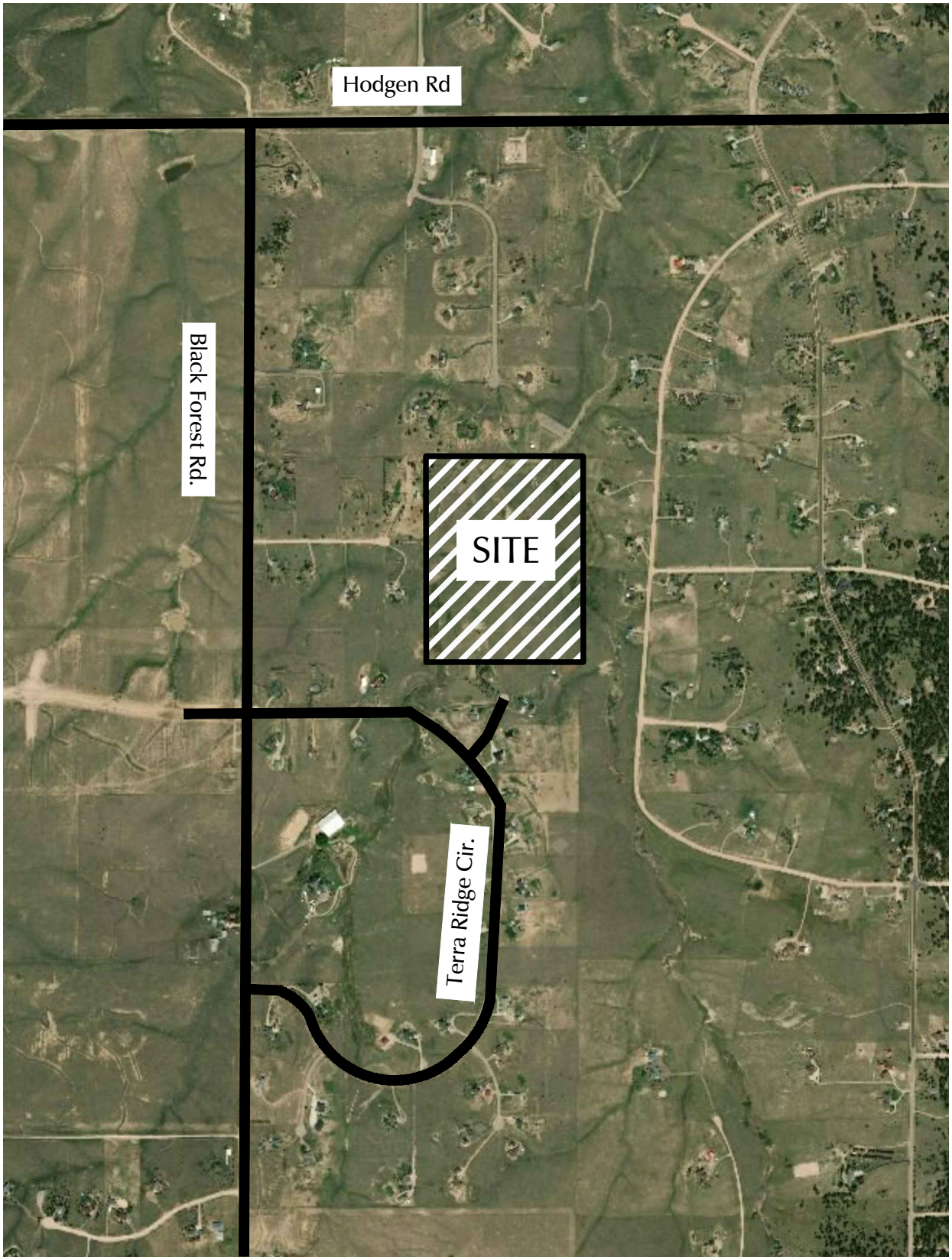
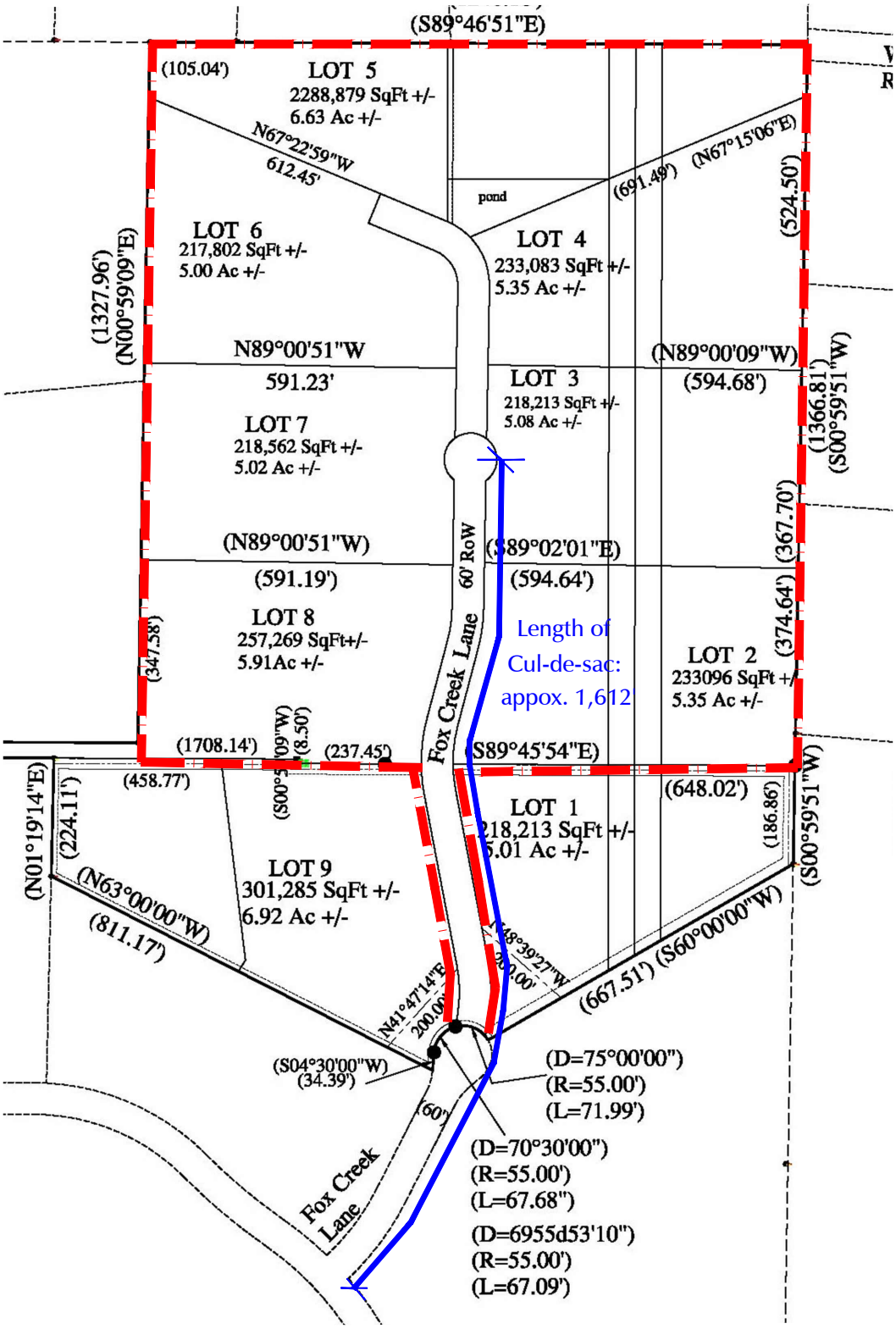


Figure 1

Vicinity Map

JeniShay Farms (LSC# 194650)

LSC TRANSPORTATION CONSULTANTS, INC.



NTS

Figure 2

Site Plan

JeniShay Farms (LSC# 194650)

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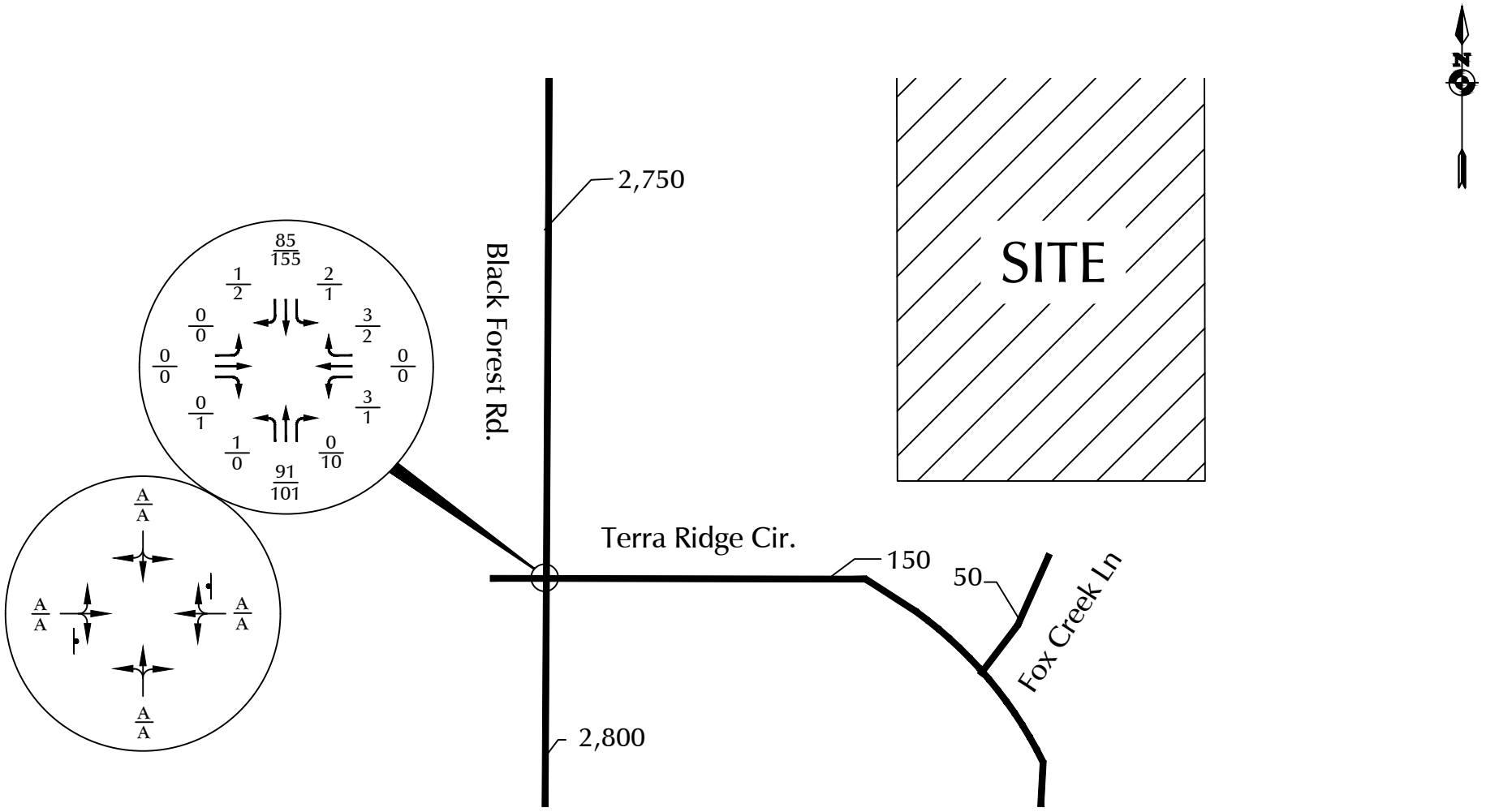

LEGEND: $\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$ (Counts by LSC 3/2019)

XXX = Average Daily Traffic (vehicles per day) (Estimated by LSC)

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

= Stop Sign

Note: Stagecoach Road was not constructed at the time counts were completed. The roadway has since been constructed.

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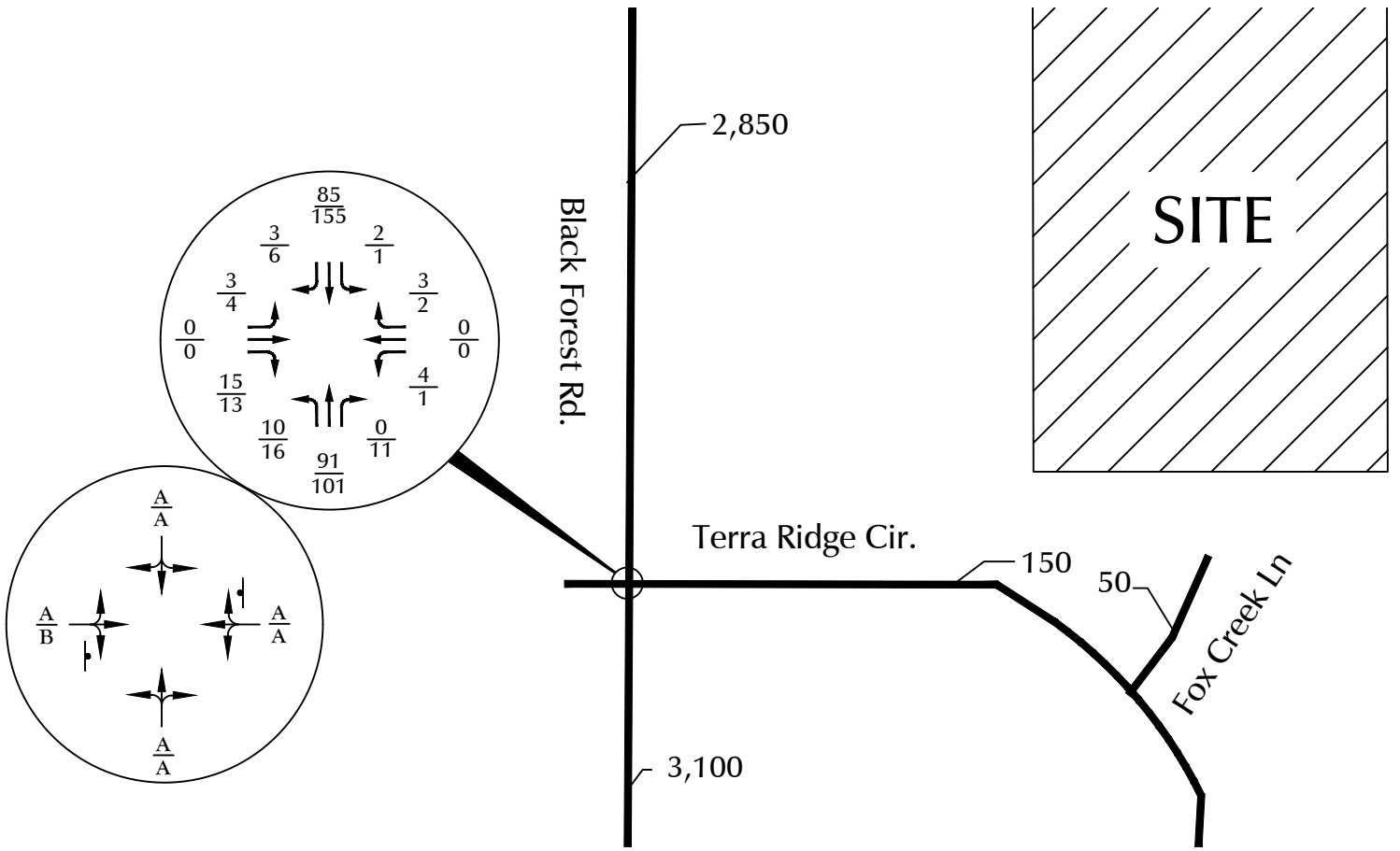
Figure 3

Existing Traffic Conditions

JeniShay Farms (LSC# 194650)



LEGEND: $\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$

XXX = Annual Average Daily Traffic (vehicles per day)

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

= Stop Sign

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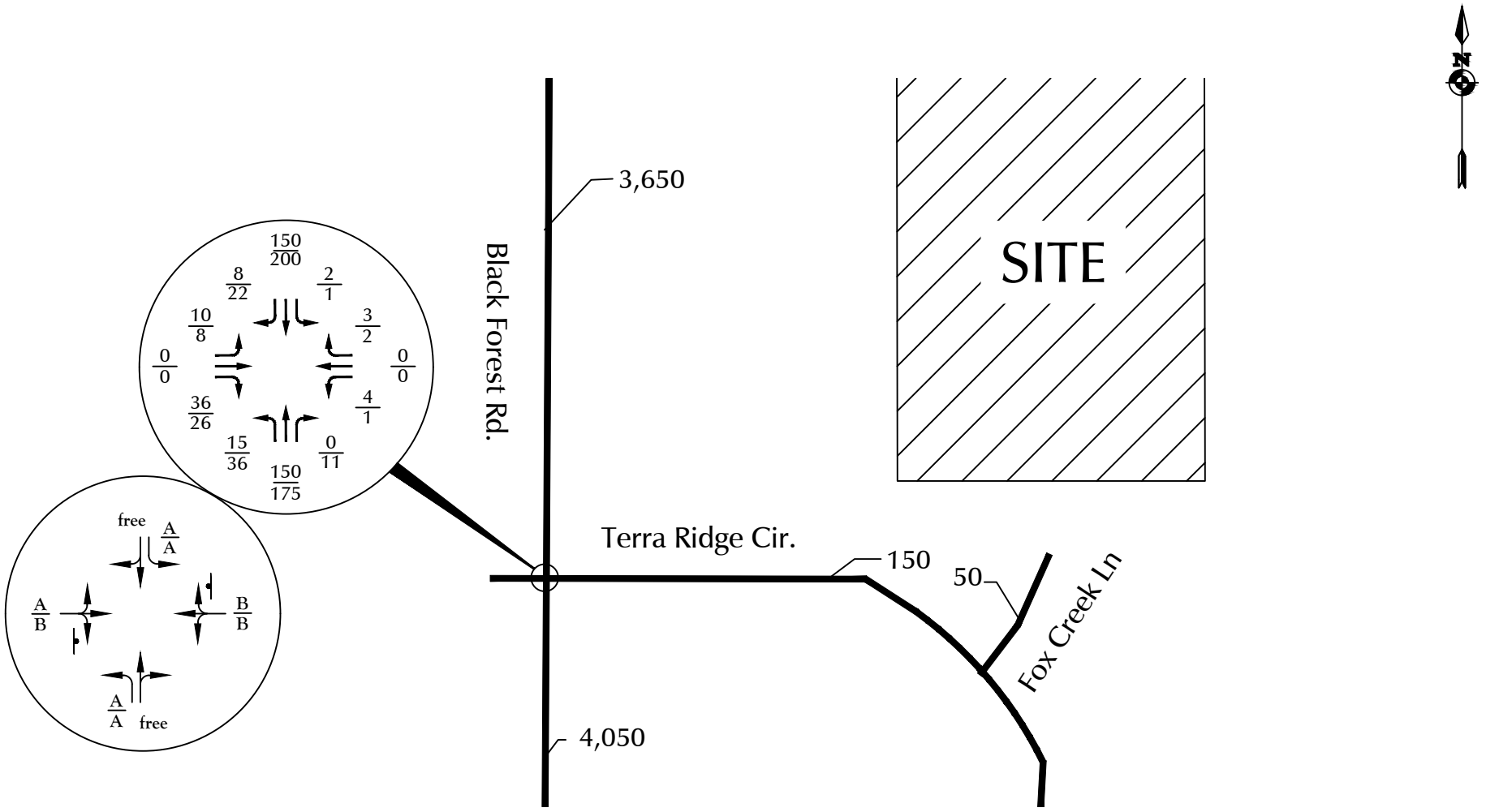
Figure 4

Short-Term Projected Background Traffic Conditions

JeniShay Farms (LSC# 194650)



LEGEND: $\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$

XXX = Average Daily Traffic (vehicles per day)

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

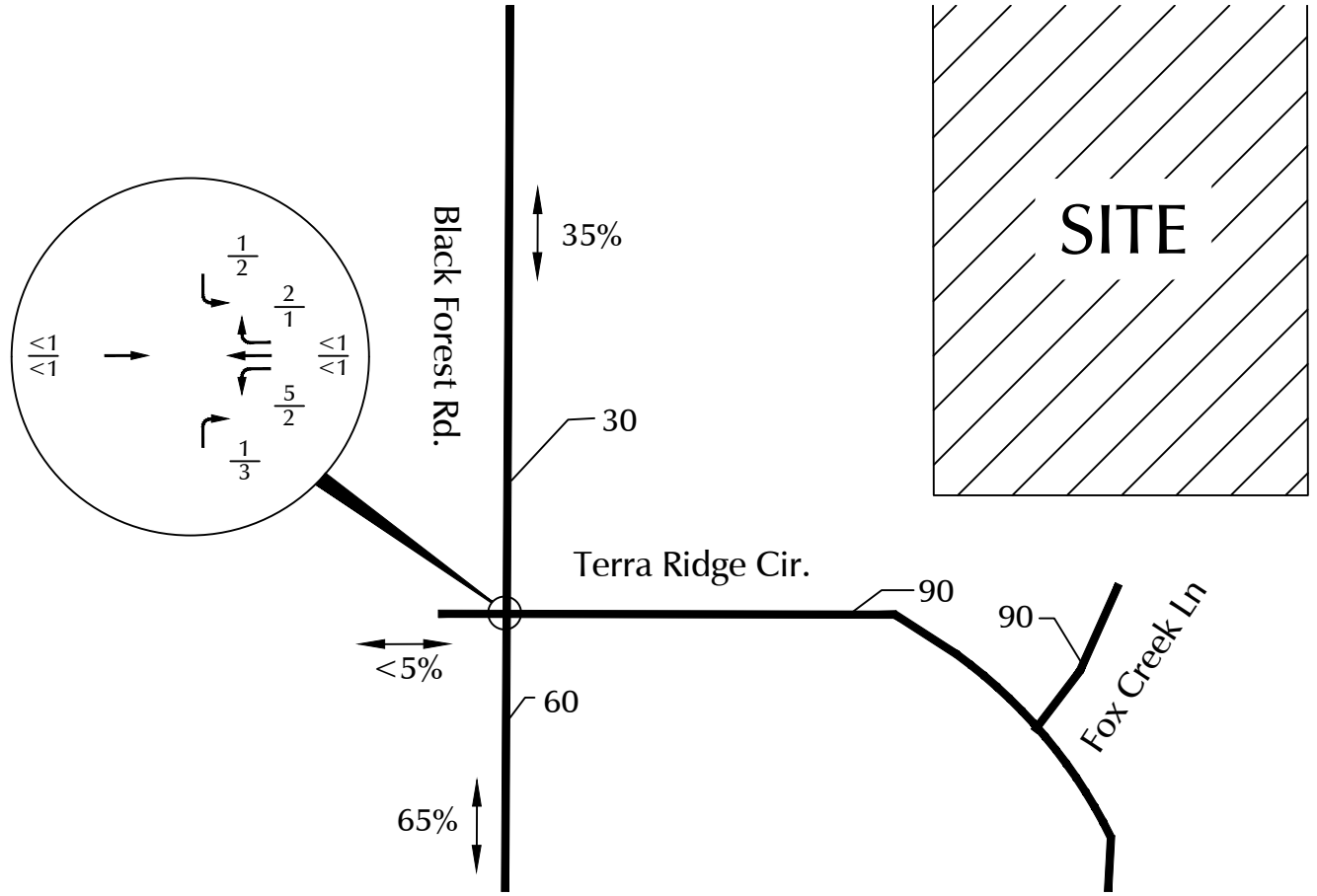
= Stop Sign

Figure 5

2040 Projected Background Traffic Conditions

JeniShay Farms (LSC# 194650)

LSC TRANSPORTATION CONSULTANTS, INC.



LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$

XXX = Average Daily Traffic (vehicles per day)

35% = Estimated Percent Directional Distribution

Figure 6

Directional Distribution and Site-Generated Traffic

JeniShay Farms (LSC# 194650)

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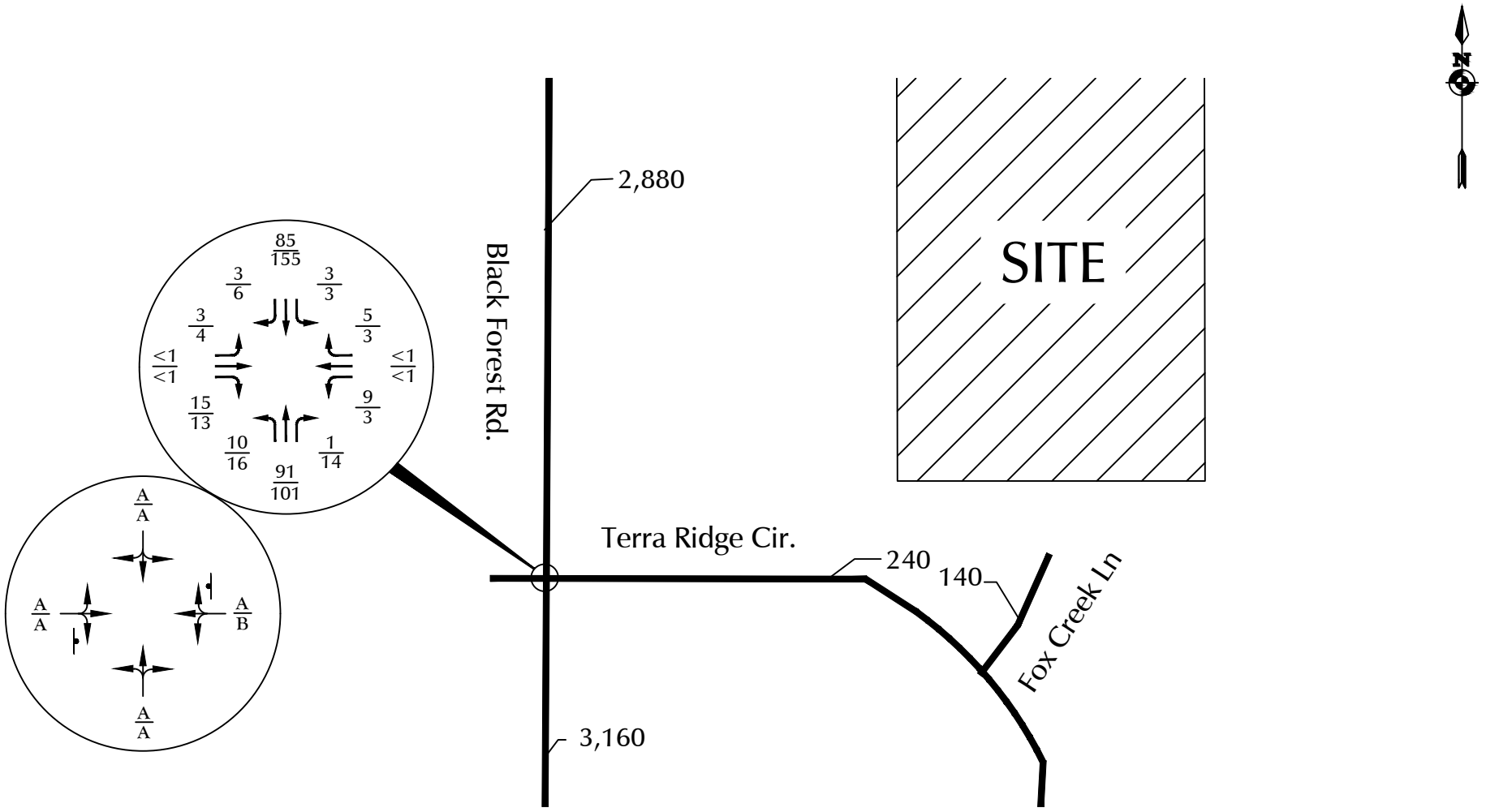

LEGEND:

$\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$

XXX = Average Daily Traffic (vehicles per day)

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

= Stop Sign

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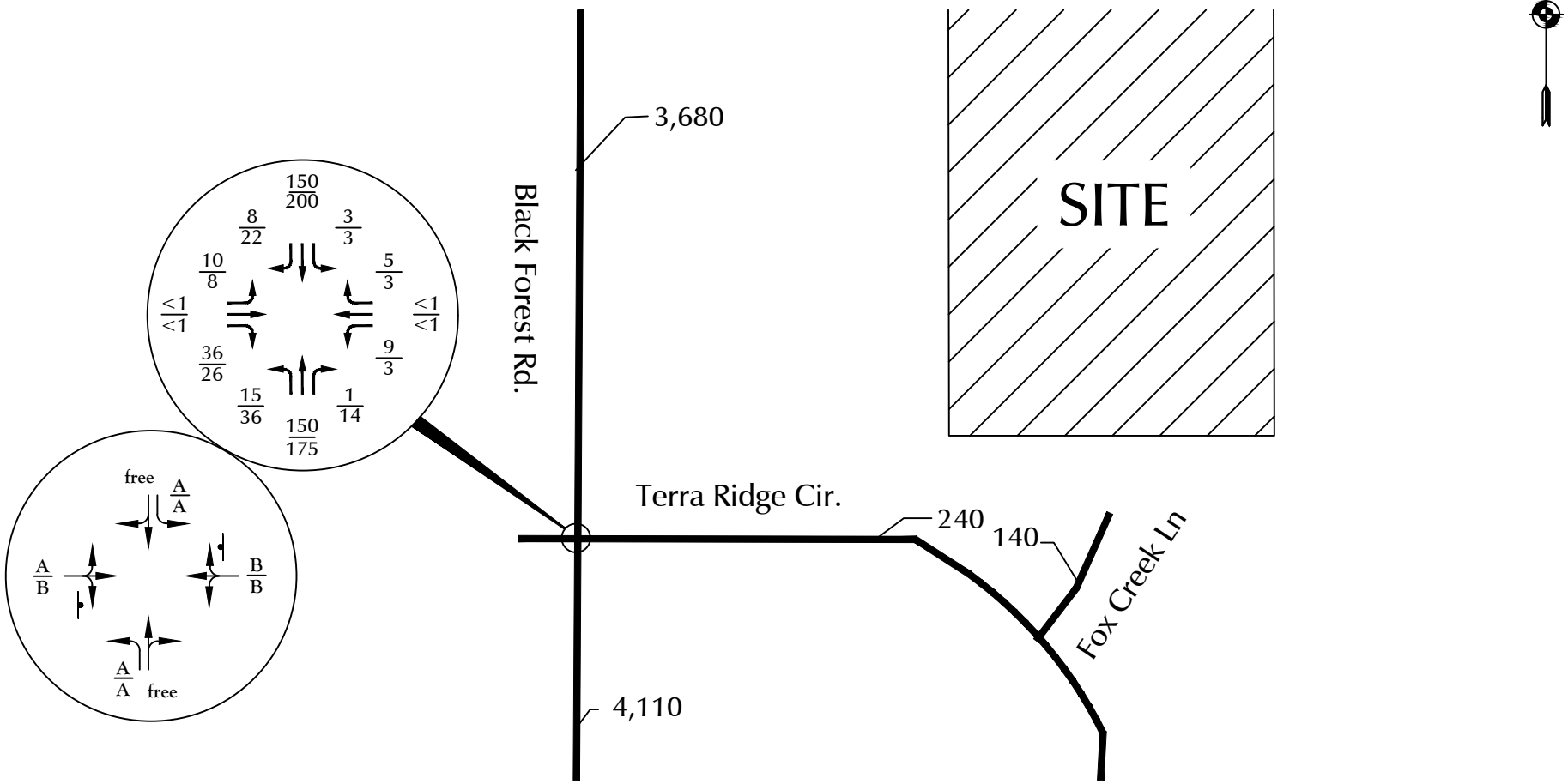
Figure 7

Short-Term Background plus Site-Generated Traffic Conditions

JeniShay Farms (LSC# 194650)



LEGEND: $\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$

XXX = Average Daily Traffic (vehicles per day)

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

= Stop Sign

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Figure 8

2040 Total Traffic Conditions

JeniShay Farms (LSC# 194650)

Traffic Counts

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CONSULTANTS, INC.

LSC Transportation Consultants, Inc.

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

File Name : Black Forest Rd - Terra Ridge Cir AM
Site Code : 00194260
Start Date : 3/19/2019
Page No : 1

Groups Printed- Unshifted

	Black Forest Rd Southbound				Terra Ridge Cir Westbound				Black Forest Rd Northbound				Stagecoach Rd Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
05:30	0	11	0	0	1	0	1	0	0	15	0	0	0	0	0	0	28
05:45	1	13	0	0	2	0	1	0	0	22	0	0	0	0	0	0	39
Total	1	24	0	0	3	0	2	0	0	37	0	0	0	0	0	0	67
06:00	0	18	0	0	0	0	2	0	0	21	0	0	0	0	0	0	41
06:15	0	17	0	0	2	0	0	0	0	16	1	0	0	0	0	0	36
06:30	1	19	0	0	1	0	2	0	0	22	0	0	0	0	0	0	45
06:45	0	24	1	0	0	0	0	0	1	18	0	0	0	0	0	0	44
Total	1	78	1	0	3	0	4	0	1	77	1	0	0	0	0	0	166
07:00	0	23	0	0	0	0	1	0	0	22	0	0	0	0	0	0	46
07:15	1	19	0	0	2	0	0	0	0	29	0	0	0	0	0	0	51
Grand Total	3	144	1	0	8	0	7	0	1	165	1	0	0	0	0	0	330
Apprch %	2	97.3	0.7	0	53.3	0	46.7	0	0.6	98.8	0.6	0	0	0	0	0	
Total %	0.9	43.6	0.3	0	2.4	0	2.1	0	0.3	50	0.3	0	0	0	0	0	

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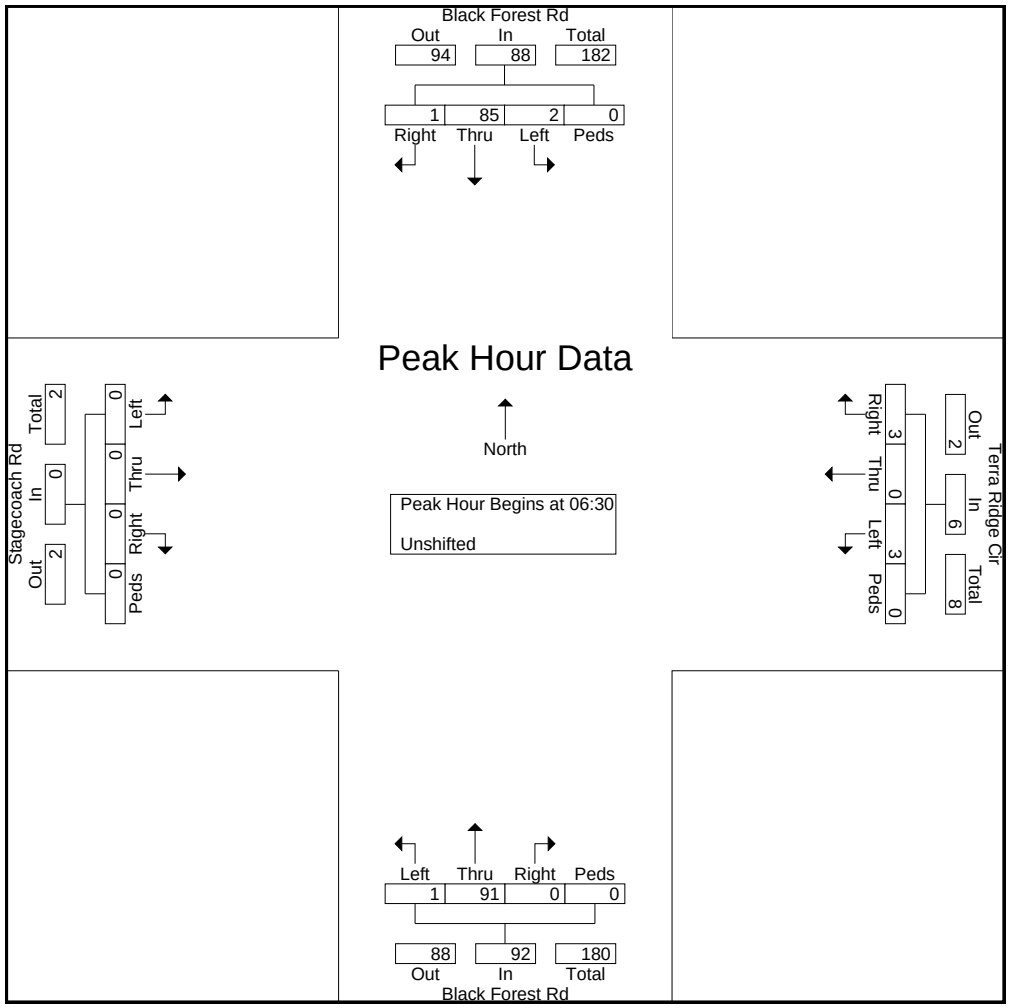
719-633-2868

File Name : Black Forest Rd - Terra Ridge Cir AM
Site Code : 00194260
Start Date : 3/19/2019
Page No : 2

	Black Forest Rd Southbound					Terra Ridge Cir Westbound					Black Forest Rd Northbound					Stagecoach Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 05:30 to 07:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:30																					
06:30	**1**	19	0	0	20	1	0	**2**	0	**3**	0	22	0	0	22	0	0	0	0	0	45
06:45	0	**24**	**1**	0	**25**	0	0	0	0	0	**1**	18	0	0	19	0	0	0	0	0	44
07:00	0	23	0	0	23	0	0	1	0	1	0	22	0	0	22	0	0	0	0	0	46
07:15	1	19	0	0	20	**2**	0	0	0	2	0	**29**	0	0	**29**	0	0	0	0	0	**51**
Total Volume	2	85	1	0	88	3	0	3	0	6	1	91	0	0	92	0	0	0	0	0	186
% App. Total	2.3	96.6	1.1	0		50	0	50	0		1.1	98.9	0	0		0	0	0	0		
PHF	.500	.885	.250	.000	.880	.375	.000	.375	.000	.500	.250	.784	.000	.000	.793	.000	.000	.000	.000	.000	.912



LSC Transportation Consultants, Inc.
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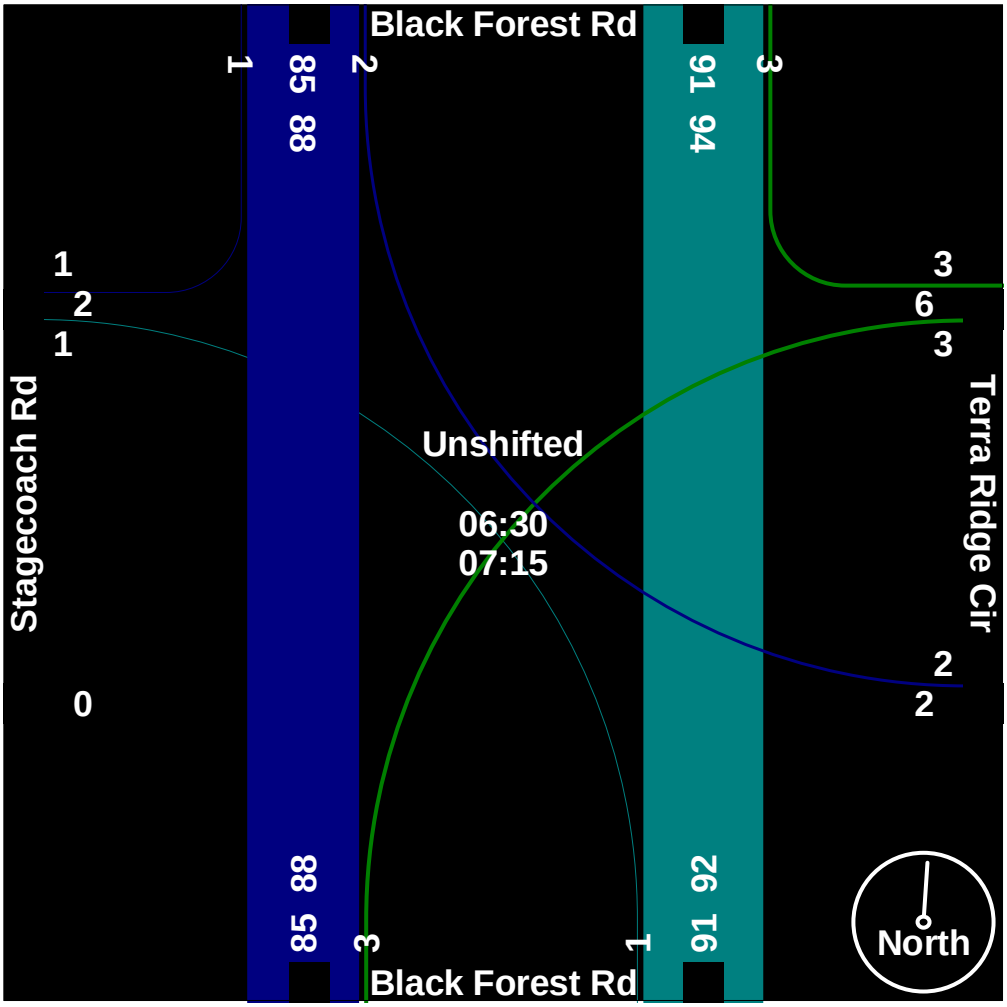
Start Date : 3/19/2019
Page No : 3



LSC Transportation Consultants, Inc.

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

File Name : Black Forest Rd - Terra Ridge Cir PM
Site Code : 194260
Start Date : 3/12/2019
Page No : 1

Groups Printed- Unshifted

	Black Forest Rd Southbound				Terra Ridge Cir Westbound				Black Forest Rd Northbound				Stage Coach Rd Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
16:00	0	30	0	0	0	0	0	0	0	34	1	0	0	0	1	0	66
16:15	0	30	0	0	0	0	2	0	0	32	1	0	0	0	1	0	66
16:30	1	25	0	0	0	0	0	0	0	22	0	0	0	0	1	0	49
16:45	0	31	0	0	1	0	1	0	0	25	2	0	0	0	0	0	60
Total	1	116	0	0	1	0	3	0	0	113	4	0	0	0	3	0	241
17:00	0	39	0	0	0	0	1	0	0	32	2	0	0	0	0	0	74
17:15	0	49	0	0	0	0	0	0	0	24	3	0	0	0	0	0	76
17:30	1	36	2	0	0	0	0	0	0	20	3	0	0	0	1	0	63
17:45	0	33	0	0	0	0	0	0	0	21	2	0	0	0	0	0	56
Total	1	157	2	0	0	0	1	0	0	97	10	0	0	0	1	0	269
Grand Total	2	273	2	0	1	0	4	0	0	210	14	0	0	0	4	0	510
Apprch %	0.7	98.6	0.7	0	20	0	80	0	0	93.8	6.2	0	0	0	100	0	
Total %	0.4	53.5	0.4	0	0.2	0	0.8	0	0	41.2	2.7	0	0	0	0.8	0	

LSC Transportation Consultants, Inc.
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719-633-2868

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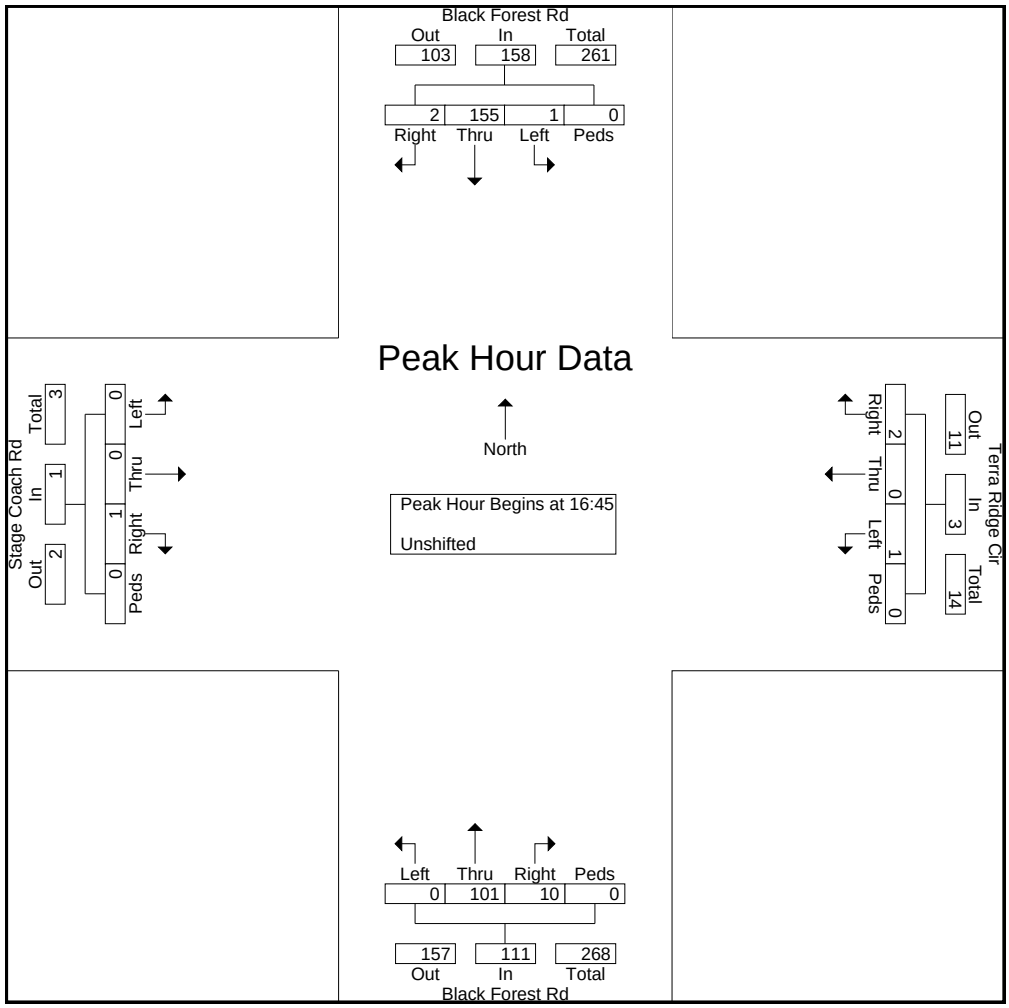
	Black Forest Rd Southbound					Terra Ridge Cir Westbound					Black Forest Rd Northbound					Stage Coach Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	31	0	0	31	**1**	0	**1**	0	**2**	0	25	2	0	27	0	0	0	0	0	60
17:00	0	39	0	0	39	0	0	1	0	1	0	**32**	2	0	**34**	0	0	0	0	0	74
17:15	0	**49**	0	0	**49**	0	0	0	0	0	0	24	**3**	0	27	0	0	0	0	0	**76**
17:30	**1**	36	**2**	0	39	0	0	0	0	0	0	20	3	0	23	0	0	**1**	0	**1**	63
Total Volume	1	155	2	0	158	1	0	2	0	3	0	101	10	0	111	0	0	1	0	1	273
% App. Total	0.6	98.1	1.3	0		33.3	0	66.7	0		0	91	9	0		0	0	100	0		
PHF	.250	.791	.250	.000	.806	.250	.000	.500	.000	.375	.000	.789	.833	.000	.816	.000	.000	.250	.000	.250	.898



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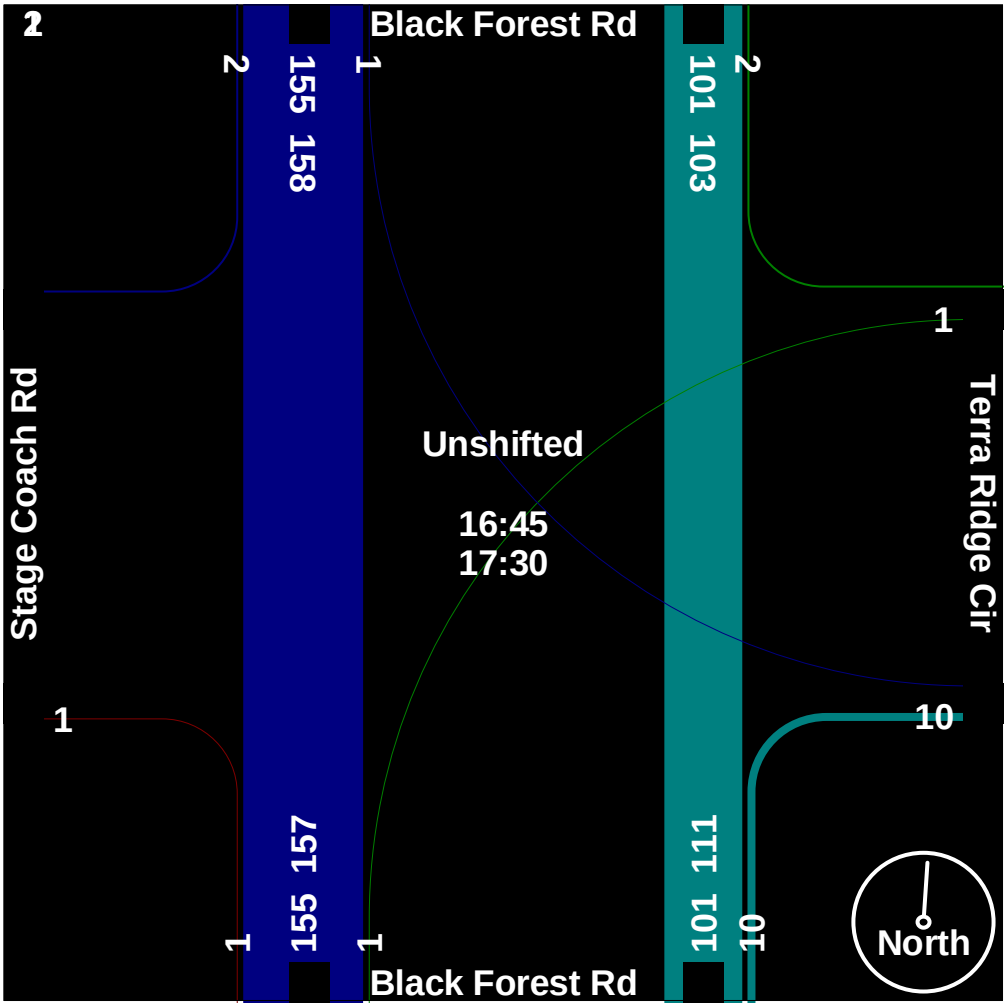

Levels of Service

TRANSPORTATION
CONSULTANTS, INC.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	3	0	3	1	91	0	2	85	1
Future Vol, veh/h	0	0	0	3	0	3	1	91	0	2	85	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	79	79	79	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	3	0	3	1	115	0	2	85	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	209	207	86	207	207	115	86	0	0	115	0	0
Stage 1	90	90	-	117	117	-	-	-	-	-	-	-
Stage 2	119	117	-	90	90	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	748	690	973	751	690	937	1510	-	-	1474	-	-
Stage 1	917	820	-	888	799	-	-	-	-	-	-	-
Stage 2	885	799	-	917	820	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	744	689	973	749	689	937	1510	-	-	1474	-	-
Mov Cap-2 Maneuver	744	689	-	749	689	-	-	-	-	-	-	-
Stage 1	916	819	-	887	798	-	-	-	-	-	-	-
Stage 2	881	798	-	916	819	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.4	0.1	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1510	-	-	-	833	1474	-	-
HCM Lane V/C Ratio	0.001	-	-	-	0.007	0.001	-	-
HCM Control Delay (s)	7.4	0	-	0	9.4	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	1	1	0	2	0	101	10	1	155	2
Future Vol, veh/h	0	0	1	1	0	2	0	101	10	1	155	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	1	0	2	0	101	10	1	191	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	301	305	192	301	301	106	193	0	0	111	0	0
Stage 1	194	194	-	106	106	-	-	-	-	-	-	-
Stage 2	107	111	-	195	195	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	651	608	850	651	612	948	1380	-	-	1479	-	-
Stage 1	808	740	-	900	807	-	-	-	-	-	-	-
Stage 2	898	804	-	807	739	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	649	607	850	650	611	948	1380	-	-	1479	-	-
Mov Cap-2 Maneuver	649	607	-	650	611	-	-	-	-	-	-	-
Stage 1	808	739	-	900	807	-	-	-	-	-	-	-
Stage 2	896	804	-	805	738	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	9.4	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1380	-	-	850	822	1479	-	-
HCM Lane V/C Ratio	-	-	-	0.001	0.004	0.001	-	-
HCM Control Delay (s)	0	-	-	9.2	9.4	7.4	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	0	15	4	0	3	10	91	0	2	85	3
Future Vol, veh/h	3	0	15	4	0	3	10	91	0	2	85	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	79	79	79	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	15	4	0	3	13	115	0	2	85	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	234	232	87	239	233	115	88	0	0	115	0	0
Stage 1	91	91	-	141	141	-	-	-	-	-	-	-
Stage 2	143	141	-	98	92	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	721	668	971	715	667	937	1508	-	-	1474	-	-
Stage 1	916	820	-	862	780	-	-	-	-	-	-	-
Stage 2	860	780	-	908	819	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	713	661	971	699	660	937	1508	-	-	1474	-	-
Mov Cap-2 Maneuver	713	661	-	699	660	-	-	-	-	-	-	-
Stage 1	908	819	-	854	773	-	-	-	-	-	-	-
Stage 2	850	773	-	893	818	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.6	0.7	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1508	-	-	916	784	1474	-	-
HCM Lane V/C Ratio	0.008	-	-	0.02	0.009	0.001	-	-
HCM Control Delay (s)	7.4	0	-	9	9.6	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	0	13	1	0	2	16	101	11	1	155	6
Future Vol, veh/h	4	0	13	1	0	2	16	101	11	1	155	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	13	1	0	2	16	101	11	1	191	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	337	341	195	342	339	107	198	0	0	112	0	0
Stage 1	197	197	-	139	139	-	-	-	-	-	-	-
Stage 2	140	144	-	203	200	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	617	581	846	612	582	947	1375	-	-	1478	-	-
Stage 1	805	738	-	864	782	-	-	-	-	-	-	-
Stage 2	863	778	-	799	736	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	610	573	846	597	574	947	1375	-	-	1478	-	-
Mov Cap-2 Maneuver	610	573	-	597	574	-	-	-	-	-	-	-
Stage 1	795	737	-	854	773	-	-	-	-	-	-	-
Stage 2	851	769	-	786	735	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	9.6	1	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	775	792	1478	-	-
HCM Lane V/C Ratio	0.012	-	-	0.022	0.004	0.001	-	-
HCM Control Delay (s)	7.6	0	-	9.7	9.6	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	36	4	0	3	15	116	0	2	128	8
Future Vol, veh/h	10	0	36	4	0	3	15	116	0	2	128	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	90	90	90	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	36	4	0	3	17	129	0	2	128	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	301	299	132	317	303	129	136	0	0	129	0	0
Stage 1	136	136	-	163	163	-	-	-	-	-	-	-
Stage 2	165	163	-	154	140	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	651	613	917	636	610	921	1448	-	-	1457	-	-
Stage 1	867	784	-	839	763	-	-	-	-	-	-	-
Stage 2	837	763	-	848	781	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	643	605	917	605	602	921	1448	-	-	1457	-	-
Mov Cap-2 Maneuver	643	605	-	605	602	-	-	-	-	-	-	-
Stage 1	857	783	-	829	754	-	-	-	-	-	-	-
Stage 2	824	754	-	814	780	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	10.1	0.9	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1448	-	-	839	709	1457	-	-
HCM Lane V/C Ratio	0.012	-	-	0.055	0.01	0.001	-	-
HCM Control Delay (s)	7.5	-	-	9.5	10.1	7.5	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	26	1	0	2	36	146	11	1	168	22
Future Vol, veh/h	8	0	26	1	0	2	36	146	11	1	168	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	26	1	0	2	36	146	11	1	187	24

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	426	430	199	438	437	152	211	0	0	157	0	0
Stage 1	201	201	-	224	224	-	-	-	-	-	-	-
Stage 2	225	229	-	214	213	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	539	518	842	529	513	894	1360	-	-	1423	-	-
Stage 1	801	735	-	779	718	-	-	-	-	-	-	-
Stage 2	778	715	-	788	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	527	504	842	502	499	894	1360	-	-	1423	-	-
Mov Cap-2 Maneuver	527	504	-	502	499	-	-	-	-	-	-	-
Stage 1	780	734	-	759	699	-	-	-	-	-	-	-
Stage 2	756	696	-	763	725	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10.1	1.4	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1360	-	-	738	709	1423	-	-
HCM Lane V/C Ratio	0.026	-	-	0.046	0.004	0.001	-	-
HCM Control Delay (s)	7.7	-	-	10.1	10.1	7.5	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	15	9	0	5	10	91	1	3	85	3
Future Vol, veh/h	3	0	15	9	0	5	10	91	1	3	85	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	79	79	79	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	15	9	0	5	13	115	1	3	85	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	237	235	87	242	236	116	88	0	0	116	0	0
Stage 1	93	93	-	142	142	-	-	-	-	-	-	-
Stage 2	144	142	-	100	94	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	717	666	971	712	665	936	1508	-	-	1473	-	-
Stage 1	914	818	-	861	779	-	-	-	-	-	-	-
Stage 2	859	779	-	906	817	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	707	659	971	695	658	936	1508	-	-	1473	-	-
Mov Cap-2 Maneuver	707	659	-	695	658	-	-	-	-	-	-	-
Stage 1	906	816	-	853	772	-	-	-	-	-	-	-
Stage 2	847	772	-	890	815	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.8	0.7	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1508	-	-	914	765	1473	-	-
HCM Lane V/C Ratio	0.008	-	-	0.02	0.018	0.002	-	-
HCM Control Delay (s)	7.4	0	-	9	9.8	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	0	13	3	0	3	16	101	14	3	155	6
Future Vol, veh/h	4	0	13	3	0	3	16	101	14	3	155	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	13	3	0	3	16	101	14	4	191	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	345	350	195	349	346	108	198	0	0	115	0	0
Stage 1	203	203	-	140	140	-	-	-	-	-	-	-
Stage 2	142	147	-	209	206	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	609	574	846	606	577	946	1375	-	-	1474	-	-
Stage 1	799	733	-	863	781	-	-	-	-	-	-	-
Stage 2	861	775	-	793	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	600	565	846	590	568	946	1375	-	-	1474	-	-
Mov Cap-2 Maneuver	600	565	-	590	568	-	-	-	-	-	-	-
Stage 1	789	731	-	853	772	-	-	-	-	-	-	-
Stage 2	848	766	-	778	729	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	10	0.9	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	772	727	1474	-	-
HCM Lane V/C Ratio	0.012	-	-	0.022	0.008	0.003	-	-
HCM Control Delay (s)	7.6	0	-	9.8	10	7.4	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	10	0	36	9	0	5	15	150	1	3	150	8
Future Vol, veh/h	10	0	36	9	0	5	15	150	1	3	150	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	90	90	90	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	36	9	0	5	17	167	1	3	150	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	364	362	154	380	366	168	158	0	0	168	0	0
Stage 1	160	160	-	202	202	-	-	-	-	-	-	-
Stage 2	204	202	-	178	164	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	592	565	892	578	562	876	1422	-	-	1410	-	-
Stage 1	842	766	-	800	734	-	-	-	-	-	-	-
Stage 2	798	734	-	824	762	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	583	557	892	549	554	876	1422	-	-	1410	-	-
Mov Cap-2 Maneuver	583	557	-	549	554	-	-	-	-	-	-	-
Stage 1	832	764	-	790	725	-	-	-	-	-	-	-
Stage 2	784	725	-	789	760	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	10.8	0.7	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	800	633	1410	-	-
HCM Lane V/C Ratio	0.012	-	-	0.058	0.022	0.002	-	-
HCM Control Delay (s)	7.6	-	-	9.8	10.8	7.6	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	26	3	0	3	36	175	14	3	200	22
Future Vol, veh/h	8	0	26	3	0	3	36	175	14	3	200	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	26	3	0	3	36	175	14	3	222	24

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	496	501	234	507	506	182	246	0	0	189	0	0
Stage 1	240	240	-	254	254	-	-	-	-	-	-	-
Stage 2	256	261	-	253	252	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	484	472	805	476	469	861	1320	-	-	1385	-	-
Stage 1	763	707	-	750	697	-	-	-	-	-	-	-
Stage 2	749	692	-	751	698	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	471	458	805	450	455	861	1320	-	-	1385	-	-
Mov Cap-2 Maneuver	471	458	-	450	455	-	-	-	-	-	-	-
Stage 1	742	706	-	730	678	-	-	-	-	-	-	-
Stage 2	726	673	-	725	697	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	11.2	1.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1320	-	-	690	591	1385	-	-
HCM Lane V/C Ratio	0.027	-	-	0.049	0.01	0.002	-	-
HCM Control Delay (s)	7.8	-	-	10.5	11.2	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0	0	-	-