

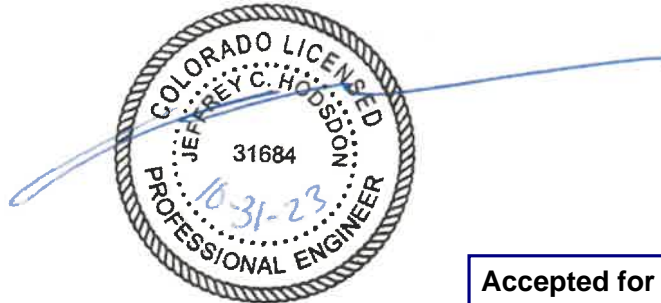


LSC TRANSPORTATION CONSULTANTS, INC.
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Joyful View Subdivision
Traffic Impact Study
PCD File No.: SF22-31
(LSC #S214051)
October 31, 2023

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.

Accepted for File

By: Gilbert LaForce, P.E.
Engineering Manager

Date: 02/22/2024 9:29:14 AM

El Paso County Department of Public Works



A handwritten signature in blue ink, likely belonging to the Developer, Gilbert LaForce.

1-16-2024

Date

Joyful View Subdivision

Traffic Impact Study

Prepared for:

Nina Ruiz

Vertex Consulting Services

Senior Executive Consultant

455 E Pikes Peak Ave, Suite 101

Colorado Springs, CO 80903

OCTOBER 31, 2023

LSC Transportation Consultants

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

LSC #S214051

PCD File No.: SF22-31



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October 31, 2023

Nina Ruiz
Vertex Consulting Services
Senior Executive Consultant
455 E Pikes Peak Ave, Suite 101
Colorado Springs, CO 80903

RE: Joyful View Subdivision
Traffic Impact Study
El Paso County, Colorado
LSC # S214051
PCD File No.: SF22-31

Dear Ms. Ruiz,

In response to your request, LSC Transportation Consultants, Inc. has prepared this traffic impact study (TIS) for the proposed Joyful View residential development in El Paso County. As shown in Figure 1, the site is located east of Peyton Highway approximately two miles north of State Highway (SH) 94 in El Paso County, Colorado (El Paso County parcel numbers 3300000466 and 3300000467).

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 traffic counts on Peyton Highway in the general vicinity of the property;
- Estimated current average weekday traffic (AWT) volumes;
- Projections of 20-year background traffic volumes;
- The proposed site land use, the roadways proposed to provide access to the site, and the location of the proposed access road connection to Peyton Highway;
- Estimates of average weekday and weekday peak-hour trip generation for the proposed development;
- Assignment of the site-generated traffic to the roadway network;

- Projected resulting total peak-hour traffic volumes at the access point intersections with Peyton Highway;
- Projected total daily (AWT) volumes;
- Intersection level of service analysis at the intersection of Peyton Highway/Joyful View for both background and total traffic scenarios;
- Evaluation of the need for any auxiliary-lane at the site-access points; and
- Findings and recommendations.

RECENT TRAFFIC REPORTS

LSC is not aware of any traffic studies completed within the study area in the last five years.

LAND USE

Proposed Site Land Use

Figure 1 shows the site location relative to the adjacent and nearby roadways. As shown, the development is located approximately 600 feet east of Peyton Highway and approximately two miles north SH 94 in El Paso County, Colorado. The land is currently vacant and is proposed to be subdivided into 9 lots for single-family dwelling units. The site plan is shown in Figure 2.

Proposed Site Access

As shown in Figure 2, the access to the site is proposed via a 30-foot (with a 26-foot-wide travel surface), east/west, private, gravel road, Joyful View, which will connect the site to Peyton Highway.

Currently, a driveway to Peyton Highway exists at the location where Joyful View will extend east to the site. This driveway currently provides access to one single-family home. The proposed subdivision road will extend south from Joyful View to a cul-de-sac within the site. The spacing along Joyful View between Peyton Highway and the proposed subdivision road will exceed the required spacing along a Rural Local Roadway.

Nearby Parcels

There are several parcels to the east along and north of Joyful View which currently have limited to no access. Grand View Estates III/IV intended to have access to Peyton Highway to the west and JD Johnson Road to the east. This report assumes a potential future extension of Joyful View to the east to provide access to these parcels, if developed/subdivided in the future.

SIGHT DISTANCE - JOYFUL VIEW/PEYTON HIGHWAY

Stopping Sight Distance

The required “sight distance along the roadway,” per the El Paso County *Engineering Criteria Manual (ECM)* and extrapolating from Table 2-21, is 665 feet for Peyton Highway/Joyful View. There is sufficient line of sight at the intersection. The intersection line-of-sight “triangles” will need to be kept free of site improvements and landscaping (that would limit the line of sight needed to maintain *ECM*-prescribed stopping sight distance).

Entering Sight Distance

With a 55-mile-per-hour (mph) posted speed limit and minimal vertical curvature on Peyton Highway in the vicinity of the site, the minimum sight distance for both approaches at Joyful View is 550 feet for passenger vehicles (per Table 2-33 of the *ECM*). Intersection line-of-sight “triangles” will need to be kept free of site improvements and landscaping (that would limit the line of sight needed to maintain *ECM*-prescribed entering sight distance).

EXISTING ROAD AND TRAFFIC CONDITIONS

Figure 1 shows the streets adjacent to and in the vicinity of the site. Adjacent streets serving the site are identified below followed by a brief description of each:

Peyton Highway is a two-lane major collector, per the 2019 Road Report. The 2016 *Major Transportation Corridors Plan (MTCP)* shows the 2040 classification of Peyton Highway as a Minor Arterial. The roadway runs north/south from Hanover Road to the south to Falcon Highway to the north. At Falcon Highway, the roadway shifts one mile to the west and continues north to the County Line. The posted speed limit is 55 mph adjacent to the site.

Joyful View is a proposed 30-foot, private, local, gravel road that would extend east from Peyton Highway to the proposed north-south subdivision road (also a 30-foot, private road).

Existing Traffic Volumes

A daily-traffic-volume machine count was conducted in February 2021 on Peyton Highway just north of State Highway 94. Peyton Highway has a daily traffic volume of 750 vehicles per day (vpd) on an average weekday. There are 64 vehicles per hour (vph) during the morning peak and 74 vph during the evening peak. Please refer to the attached count data sheet for additional detail.

Pedestrian, Bicycle, and Public Transit Access

There are no sidewalks along Peyton Highway. In the *El Paso County Major Transportation Corridors Plan Update*, it is shown that Peyton Highway is planned to have multi-modal improvements, including a proposed bicycle route.

There are no Mountain Metropolitan Transit routes in the vicinity of the site.

FUTURE BACKGROUND CONDITIONS

Background traffic is traffic that is anticipated to occur without the addition of the proposed development. Figure 3 shows the estimated short-term background traffic volumes that include Peyton Highway through traffic plus traffic on Joyful View. Joyful View traffic assumes trips to/from the existing home and one potential additional home on the large lot north of the site (LSC assumption). These include estimates of peak-hour intersection turning movements, based on ITE trip-generation rates.

Long-term background volumes on Peyton Highway were projected using the Pikes Peak Area Council of Government (PPACG) travel demand model. Based on the model, it is estimated that the roadway will experience a growth rate of approximately 9.1 percent per year. This results in Peyton Highway having a long-term volume of 4,350 vpd. Figure 4 shows the daily and peak-hour projected long-term background traffic volumes. This estimate may be conservative.

There are several parcels to the east along and north of Joyful View which currently have limited to no access. Grand View Estates III/IV intended to have access to Peyton Highway to the west and JD Johnson Road to the east. This report assumes a potential future extension of Joyful View to the east to provide access to these parcels, if developed/subdivided in the future.

Figure 4 presents estimates of future background traffic that could be generated with the development of parcels to the east along and north of Joyful View. LSC has assumed future development of 110 five-acre lots that would take access to Peyton Highway via a future extension of Joyful View to the east.

TRIP GENERATION

The estimates of vehicle trips expected to be generated by the proposed development have been made using the nationally-published trip-generation rates found in *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE).

Table 1 provides a summary of the site-generated traffic for the development. As shown, the development is anticipated to generate approximately 110 total daily trips on the average weekday. During the morning peak hour, approximately 2 vehicles would enter, and 6 vehicles

would exit the site. During the evening peak hour, approximately 6 vehicles would enter, and 4 vehicles would exit.

Table 1: Site Vehicle-Trip Generation

Analysis Period	Weekday		
	In	Out	Total
Morning Peak Hour	2	6	8
Afternoon Peak Hour	6	4	10
Daily	55	55	110

A detailed trip-generation estimate for the development, including calculated trip-generation rates, is presented in Table 3 (attached). Note: This trip-generation estimate based on ITE rates may be conservative given the rural and relatively remote location of the site.

TRIP DISTRIBUTION AND ASSIGNMENT

Estimating the 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 5 shows the percentages of the site-generated vehicle trips projected to be oriented to/from each approach to the site. The directional-distribution estimates have been based on the following factors: the location of the site with respect to employment, commercial, schools, and activity centers; the land use proposed for the site; the proposed access system for the site-access points; the roadway system serving the site; and the traffic counts.

Site-generated traffic volumes have been estimated at the study intersections, as shown in Figure 5. These volumes have been calculated by applying the directional-distribution percentages to the trip-generation estimates (from Table 3).

TOTAL TRAFFIC

Short-Term Total Traffic Volumes

Figure 6 shows the sum of the short-term background traffic volumes (from Figure 3) and site-generated peak-hour traffic volumes (shown in Figure 5). These volumes represent the projected short-term total traffic following completion of the development. Laneage and traffic control at the study intersections are also shown in this figure.

2043 Total Traffic Volumes

Figure 7 shows the sum of the long-term background traffic volumes (from Figure 4) and the site-generated peak-hour traffic volumes (shown in Figure 5). These volumes represent the

projected long-term total traffic following completion of the development. Laneage and traffic control at the study-area intersections are also shown in this figure.

LEVEL OF SERVICE ANALYSIS

The intersection of Peyton Highway/Joyful View has been analyzed to determine the projected intersection levels of service for short- and long-term background and total traffic scenarios for the morning and afternoon 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

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.		

All turning movements at the intersection of Joyful View/Peyton Highway are forecast to operate at LOS B or better in all future scenarios during all peak hours.

AUXILIARY LANES

Short Term

Due to the low projected volume of turning traffic at the intersection of Joyful View/Peyton Highway, no auxiliary lanes would be required in the short term, as the volumes are not projected to exceed the thresholds for auxiliary turn lanes in the El Paso County *Engineering Criteria Manual*.

Long Term

Peyton Highway/Joyful View Intersection

Based on estimates of future background traffic (shown in Figure 4) that could be generated with the development of parcels to the east along and north of Joyful View, the El Paso County *Engineering Criteria Manual* threshold at which a southbound left-turn lane would be required would be exceeded at the Peyton Highway/Joyful View Intersection. Based on a design speed of 60 mph, the southbound-left turn lane on Peyton Highway approaching Joyful View would be 580 feet, consisting of a 290-foot full-width lane, a 240-foot approach taper, and 50 feet of storage length.

MAJOR TRANSPORTATION CORRIDORS PLAN (MTCP)

Roadway Classifications

Peyton Highway is shown as a Rural Minor Arterial on the 2016 *MTCP*.

Joyful View and Ellas Way (the north-south subdivision roadway within the proposed single-family residential development) are proposed to be private, Rural Local (Gravel) roads. These roads, as proposed, will have a 30-foot-wide cross-section (with a 26-foot-wide travel surface).

Based on the long-term, **background** (and total) projected 2043 ADT, Joyful view has the potential (based on the possible background traffic scenario described herein) to carry an ADT in the **Rural Minor Collector** range (1,062 vpd projected background traffic and 1,172 vpd projected total traffic). The *ECM* standard ROW for a Rural Minor Collector is 80 feet.

Reimbursable Improvements

No roadway improvement projects in the vicinity of the site have been identified as being needed by the year 2040 per Map 13 and Table 4 of El Paso County's 2016 *MTCP*. Per the *MTCP*, Peyton Highway will remain acceptable as a paved, "unimproved" roadway through 2040.

MULTI-MODAL TRANSPORTATION AND TDM OPPORTUNITIES

The following multi-modal improvement projects have been identified as being needed by the year 2040 per Map 15 and Table 5 of El Paso County's 2016 *MTCP*:

- M1 – bicycle lanes on S. Peyton Highway from Squirrel Creek Road to Falcon Highway (15.93 miles)

No sidewalks would be required, as all study-area roadways are Rural roadways.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

The Joyful View Subdivision will be required to participate in the Countywide Road Impact Fee program. The applicant will opt out of the PID options. Based on the current full-fee rate of \$3,830 per dwelling unit, the total fee amount would be \$34,470. This rate and resulting fee amount are subject to change. The fee will be payable at the time of the building permit.

DEVIATIONS

The following transportation-related deviations to *ECM* design criteria are requested:

- 2.3.2 Design Standards by Functional Classification – requesting 30' roadway cross-section with a 26' travel surface (private gravel roadways)
- 2.3.8.A Roadway Terminations - Cul-de-Sacs – for length of cul-de-sac/non-through street.

Please see the Deviations, which are separate submittal documents.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

- The development is projected to generate the following trips:
 - Approximately 110 total daily trips on the average weekday.
 - About 8 new morning peak-hour trips, with 2 inbound and 6 outbound.
 - About 10 new afternoon peak-hour trips, with 6 inbound and 4 outbound.

Level of Service

- All individual turning movements at the unsignalized intersection of Joyful View/Peyton Highway are projected to operate at LOS B or better in all future scenarios during both peak hours.

Auxiliary Turn Lanes

- Short Term: Due to the low volume of turning traffic at the intersection of Joyful View/Peyton Highway, no auxiliary lanes are required, based on the projected short-term total traffic. The volumes do not exceed the thresholds in the El Paso County *Engineering Criteria Manual*.
- Long Term: Based on estimates of future background traffic (based on the possible background traffic scenario described herein, as required per the review comments) and resulting total traffic (shown in Figures 4 and 7, respectively), the threshold volume, at which a southbound left-turn lane would be required, would be exceeded at the Peyton Highway/Joyful View Intersection.

Improvements to be Constructed with the Subdivision

- The developer would construct the gravel private roadways – Joyful View and the proposed subdivision road – from Peyton Highway into the development. The developer would also construct the Joyful View connection to Peyton Highway to specifications identified as part of an El Paso County driveway permit.

* * * * *

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

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By

Jeffrey C. Hodsdon, P.E.
Principal

JCH/JAB:jas

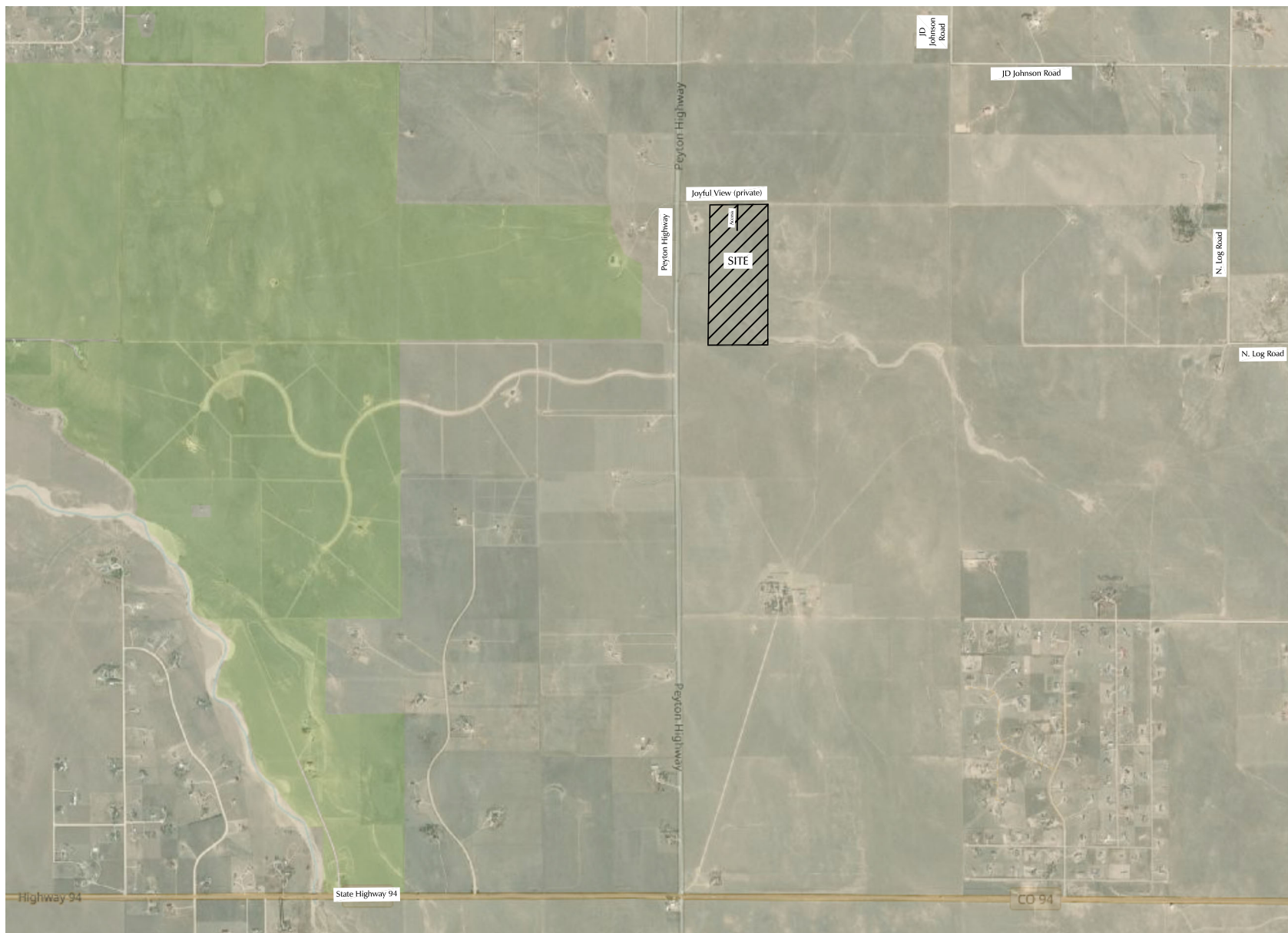
Enclosures: Table 3
Figures 1-7
Traffic Count Reports
Level of Service Reports
MTCP Maps 13-15

Table 3

Table 3: Detailed Trip-Generation Estimate

Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates ⁽¹⁾						Total Trips Generated			
			Average Weekday Traffic ⁽²⁾	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour	
				In	Out	In	Out		In	Out	In	Out
210	Single Family Detached Housing	9 DU ⁽²⁾	12.23	0.23	0.69	0.71	0.42	110	2	6	6	4
Notes: (1) Source: "Trip Generation, 11th Edition, 2021" by the Institute of Transportation Engineers (ITE) (2) DU = dwelling unit												
Source: LSC Transportation Consultants, Inc.												
6/30/2023												

Figures 1-7



Not to
scale

Figure 1

Vicinity Map

Joyful View (LSC# S214050)

Peyton Highway

Joyful View
(Private)

NO PARCEL INFO FOUND ON EL PASO
COUNTY ASSESSOR GIS

Elias Way
(Private)

JOYFUL VIEW ROAD
(PRIVATE-LOCAL)

ELLAS WAY
(PRIVATE-LOCAL)

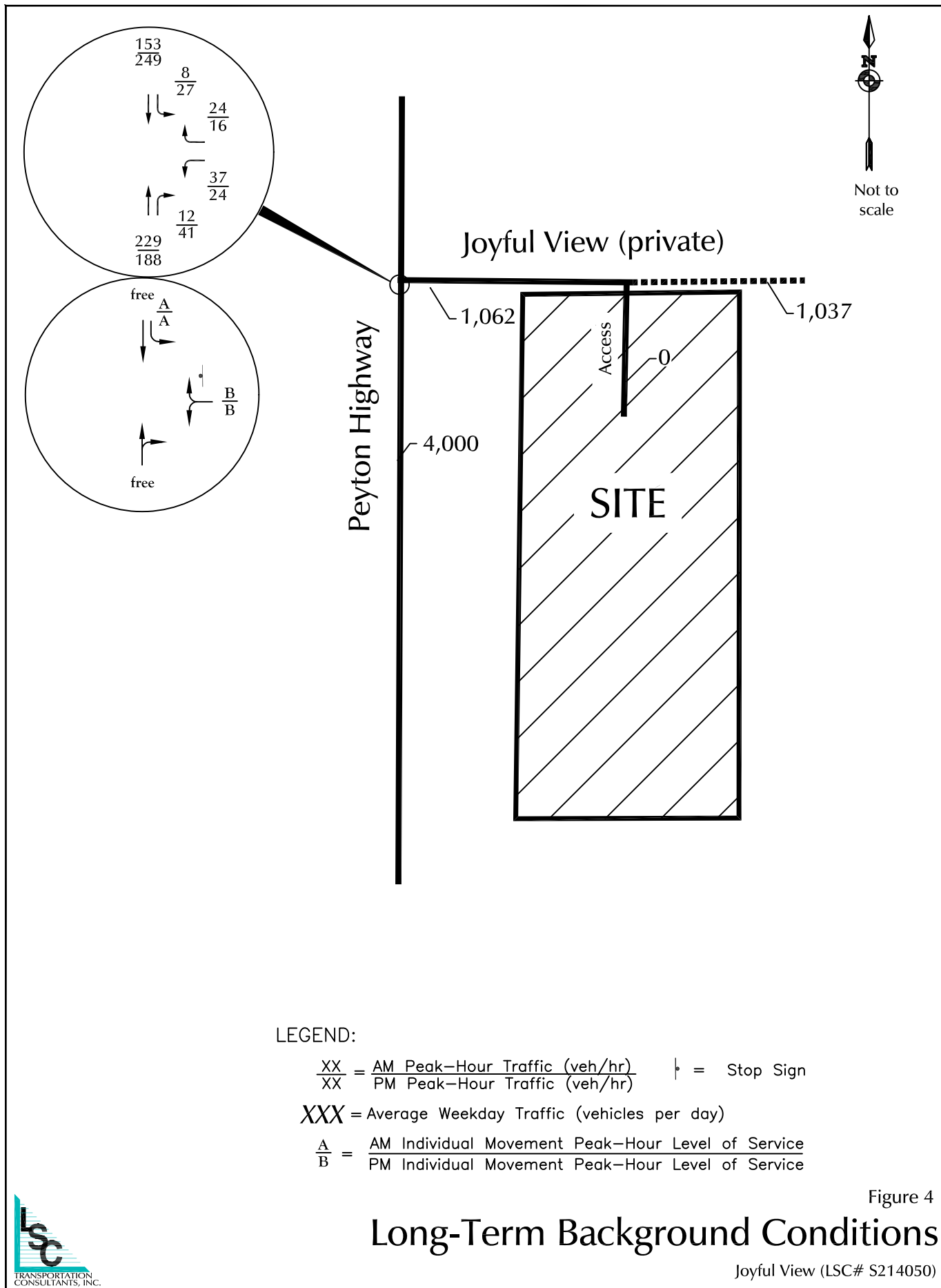
Potential future extension
(by others)

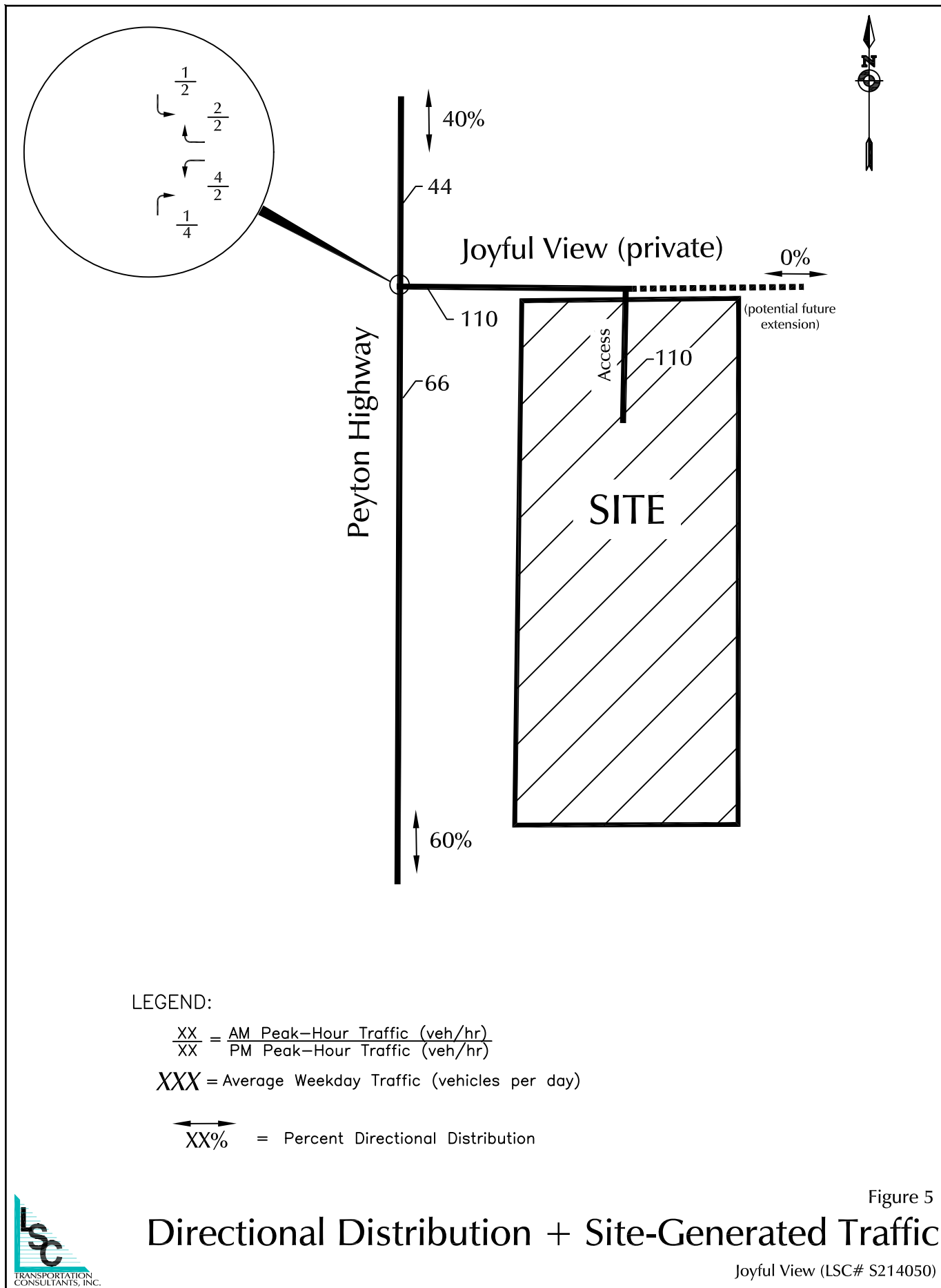
Approximate
Scale
1" = 350'

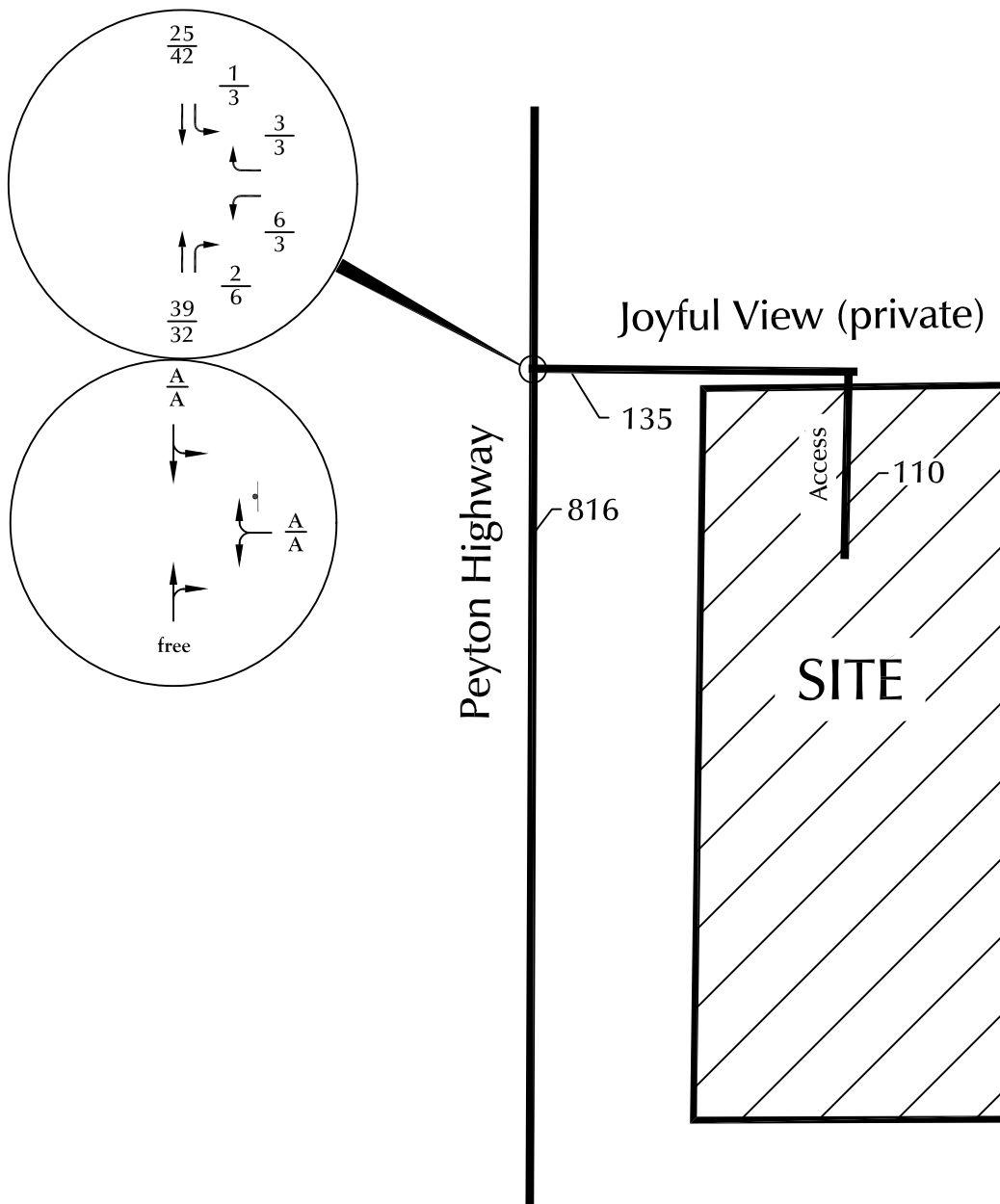
Site

GARRETT & ELIZABETH J GIBSON
SCH. NO. 3300000468

30.00' RECORDED AT BOOK A, PAGE 78 AND
BOOK 571, PAGE 55







LEGEND:

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

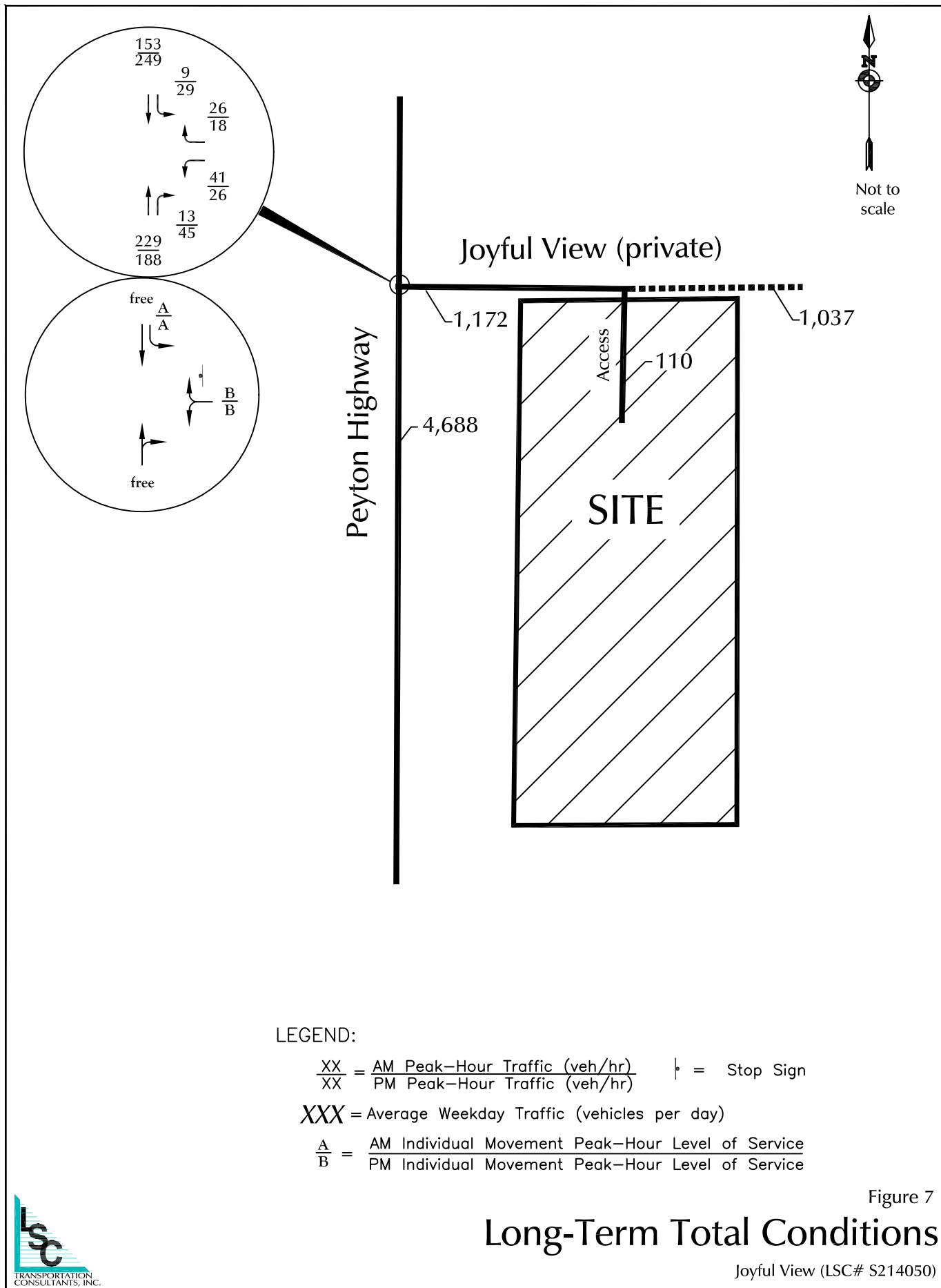
XXX = Average Weekday Traffic (vehicles per day)

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

Figure 6

Short-Term Total Conditions

Joyful View (LSC# S214050)



Traffic Counts

Location: PEYTON HIGHWAY N-O SR 94
City: PEYTON
County: EL PASO
Direction: NORTH/SOUTH

COUNTER MEASURES INC.
1889 YORK STREET
DENVER, COLORADO 80206
303-333-7409




Site Code: 21290
Station ID: 2129

Start Time	02-Feb-21	NORTHBOU	SOUTHBOU								Total
12:00 AM		1	1								2
01:00		1	1								2
02:00		0	1								1
03:00		0	0								0
04:00		3	4								7
05:00		5	9								14
06:00		37	20								57
07:00		39	25								64
08:00		23	25								48
09:00		27	23								50
10:00		17	24								41
11:00		17	18								35
12:00 PM		33	13								46
01:00		26	10								36
02:00		17	28								45
03:00		28	40								68
04:00		33	35								68
05:00		32	42								74
06:00		17	28								45
07:00		13	14								27
08:00		4	4								8
09:00		5	4								9
10:00		1	4								5
11:00		0	0								0
Total		379	373								752
Percent		50.4%	49.6%								
AM Peak	-	07:00	07:00	-	-	-	-	-	-	07:00	
Vol.	-	39	25	-	-	-	-	-	-	64	
PM Peak	-	12:00	17:00	-	-	-	-	-	-	17:00	
Vol.	-	33	42	-	-	-	-	-	-	74	
Grand Total		379	373								752
Percent		50.4%	49.6%								
ADT		ADT 752	AADT 752								

Levels of Service




HCM 6th TWSC
3: Peyton Highway & Joyful View

Short Term Background
AM Peak Hour

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	1	39	1	1	25
Future Vol, veh/h	2	1	39	1	1	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	46	1	1	29
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	78	47	0	0	47	0
Stage 1	47	-	-	-	-	-
Stage 2	31	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	925	1022	-	-	1560	-
Stage 1	975	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	924	1022	-	-	1560	-
Mov Cap-2 Maneuver	924	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0.3		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	955	1560	-	
HCM Lane V/C Ratio	-	-	0.004	0.001	-	
HCM Control Delay (s)	-	-	8.8	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	




HCM 6th TWSC
3: Peyton Highway & Joyful View

Short Term Background
PM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	32	2	1	42
Future Vol, veh/h	1	1	32	2	1	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	38	2	1	49
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	90	39	0	0	40	0
Stage 1	39	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	910	1033	-	-	1570	-
Stage 1	983	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	909	1033	-	-	1570	-
Mov Cap-2 Maneuver	909	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		0.2		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	967	1570	-	
HCM Lane V/C Ratio	-	-	0.002	0.001	-	
HCM Control Delay (s)	-	-	8.7	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	




HCM 6th TWSC
3: Peyton Highway & Joyful View

Short Term Total
AM Peak Hour

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	3	39	2	1	25
Future Vol, veh/h	6	3	39	2	1	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	4	46	2	1	29
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	78	47	0	0	48	0
Stage 1	47	-	-	-	-	-
Stage 2	31	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	925	1022	-	-	1559	-
Stage 1	975	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	924	1022	-	-	1559	-
Mov Cap-2 Maneuver	924	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.8	0	0.3			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	955	1559	-	
HCM Lane V/C Ratio	-	-	0.011	0.001	-	
HCM Control Delay (s)	-	-	8.8	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	




HCM 6th TWSC
5: Peyton Highway & South Access

Short Term Total
AM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	1	41	1	0	31
Future Vol, veh/h	2	1	41	1	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	48	1	0	36
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	85	49	0	0	49	0
Stage 1	49	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	916	1020	-	-	1558	-
Stage 1	973	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	916	1020	-	-	1558	-
Mov Cap-2 Maneuver	916	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	986	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 948		1558	-	
HCM Lane V/C Ratio	-	- 0.004		-	-	
HCM Control Delay (s)	-	- 8.8		0	-	
HCM Lane LOS	-	- A		A	-	
HCM 95th %tile Q(veh)	-	- 0		0	-	

HCM 6th TWSC
3: Peyton Highway & Joyful View

Short Term Total
PM Peak Hour

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	3	32	6	3	42
Future Vol, veh/h	3	3	32	6	3	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	38	7	4	49




Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	99	42	0	0	45
Stage 1	42	-	-	-	-
Stage 2	57	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	900	1029	-	-	1563
Stage 1	980	-	-	-	-
Stage 2	966	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	897	1029	-	-	1563
Mov Cap-2 Maneuver	897	-	-	-	-
Stage 1	980	-	-	-	-
Stage 2	963	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	958	1563
HCM Lane V/C Ratio	-	-	0.007	0.002
HCM Control Delay (s)	-	-	8.8	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
5: Peyton Highway & South Access

Short Term Total
PM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	37	2	1	45
Future Vol, veh/h	1	0	37	2	1	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	44	2	1	53





Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	100	45	0
Stage 1	45	-	-
Stage 2	55	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	899	1025	-
Stage 1	977	-	-
Stage 2	968	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	898	1025	-
Mov Cap-2 Maneuver	898	-	-
Stage 1	977	-	-
Stage 2	967	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	898	1562
HCM Lane V/C Ratio	-	-	0.001	0.001
HCM Control Delay (s)	-	-	9	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0





HCM 6th TWSC
3: Peyton Highway & Joyful View

Long Term Background
AM Peak Hour

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	24	229	12	8	153
Future Vol, veh/h	37	24	229	12	8	153
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	235	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	28	269	14	9	180
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	474	276	0	0	283	0
Stage 1	276	-	-	-	-	-
Stage 2	198	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	549	763	-	-	1279	-
Stage 1	771	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	545	763	-	-	1279	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.6	0		0.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 614		1279	-	
HCM Lane V/C Ratio	-	- 0.117		0.007	-	
HCM Control Delay (s)	-	- 11.6		7.8	-	
HCM Lane LOS	-	- B		A	-	
HCM 95th %tile Q(veh)	-	- 0.4		0	-	





HCM 6th TWSC
3: Peyton Highway & Joyful View

Long Term Background
PM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	16	188	41	27	249
Future Vol, veh/h	24	16	188	41	27	249
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	235	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	19	221	48	32	293
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	602	245	0	0	269	0
Stage 1	245	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	463	794	-	-	1295	-
Stage 1	796	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	451	794	-	-	1295	-
Mov Cap-2 Maneuver	451	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	12.2	0		0.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	545	1295	-	
HCM Lane V/C Ratio	-	-	0.086	0.025	-	
HCM Control Delay (s)	-	-	12.2	7.8	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-	





HCM 6th TWSC
3: Peyton Highway & Joyful View

Long Term Total
AM Peak Hour

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	26	229	13	9	153
Future Vol, veh/h	41	26	229	13	9	153
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	235	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	31	269	15	11	180
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	479	277	0	0	284	0
Stage 1	277	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	545	762	-	-	1278	-
Stage 1	770	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	540	762	-	-	1278	-
Mov Cap-2 Maneuver	540	-	-	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.8	0		0.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	609		1278	-	
HCM Lane V/C Ratio	-	0.129		0.008	-	
HCM Control Delay (s)	-	11.8		7.8	-	
HCM Lane LOS	-	B		A	-	
HCM 95th %tile Q(veh)	-	0.4		0	-	

HCM 6th TWSC
3: Peyton Highway & Joyful View

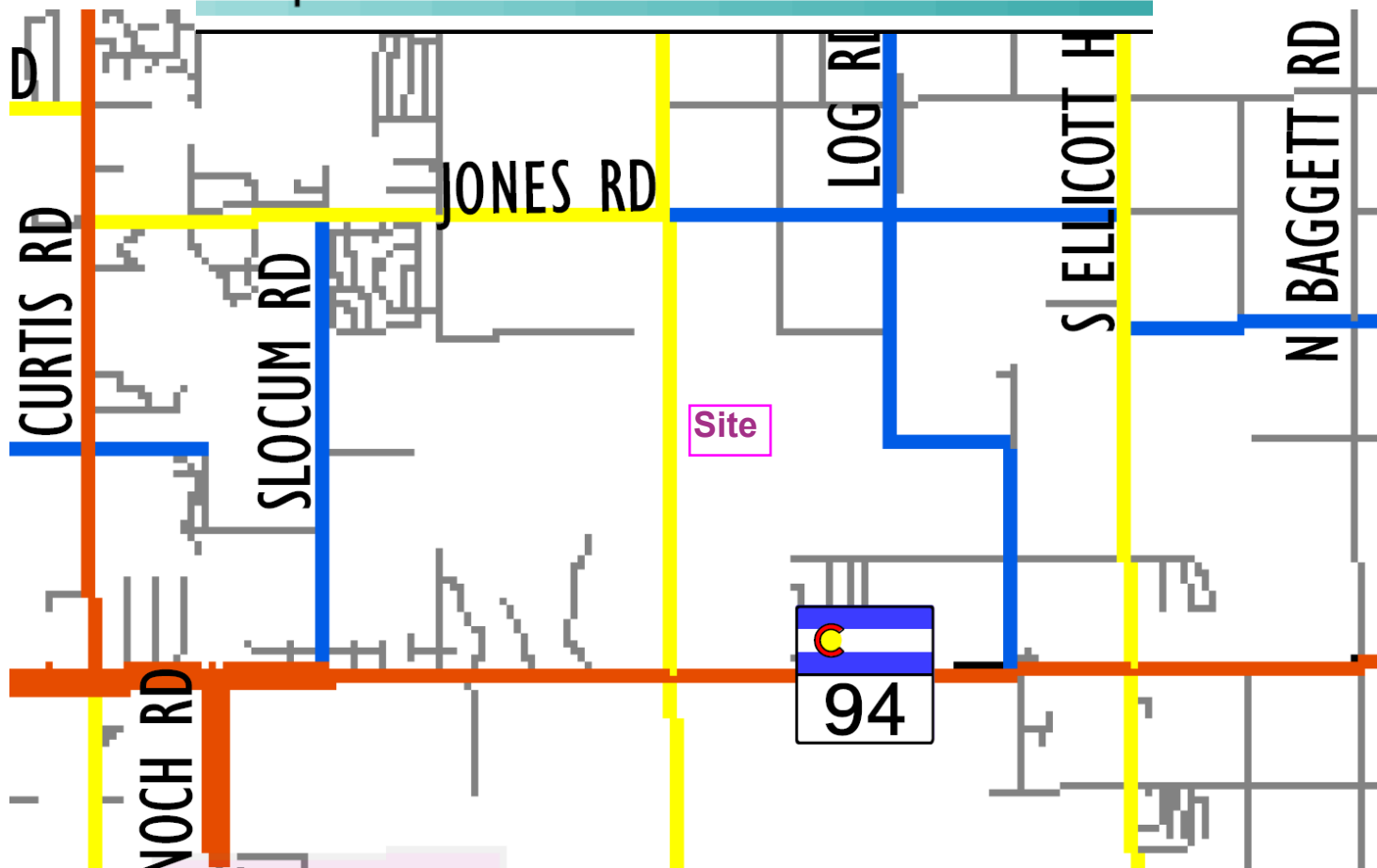
Long Term Total
PM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	18	188	45	27	249
Future Vol, veh/h	26	18	188	45	27	249
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	235	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	21	221	53	32	293
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	605	248	0	0	274	0
Stage 1	248	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	461	791	-	-	1289	-
Stage 1	793	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	449	791	-	-	1289	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	12.3	0		0.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	545	1289	-	
HCM Lane V/C Ratio	-	-	0.095	0.025	-	
HCM Control Delay (s)	-	-	12.3	7.9	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-	

MTCP Maps



Map 14: 2040 Functional Classification



Map 17: 2060 Corridor Preservation

