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TRANSMITTAL

DATE: 14 April 2021

TO: David V. Hostetler PLS
Director of Surveying,
Land Development Consultants, Inc.
3898 Maizeland Road
Colorado Springs, CO 80909

JOB NAME: ARACO Concrete **JOB NO.** 194560

TRANSMITTED: ☒ As requested ☐ For your use ☐ For review and comment

☐ For approval ☐ For submittal ☐ _____

COPIES	DESCRIPTION	REMARKS
1	Traffic Impact Study	Combined into one PDF document
1	Deviation	
1	Responses to TIS Comments	
1	Responses to AutoTurn Comments	

BY: jas

COPIES SENT TO:

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ARACO Concrete
Transportation Memorandum
(LSC #194560)
PCD File No.: PPR1950
March 26, 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.

Developer's Statement

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

04-13-21
Date

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March 26, 2021

Arturo Acosta
ARACO Enterprises
7470 Southmoor Drive
Fountain, CO 80817

RE: ARACO Concrete
El Paso County, CO
Transportation Memorandum
LSC # 194560
PCD File No. PPR1950

Dear Mr. Acosta,

LSC Transportation Consultants, Inc. has prepared this Transportation Memorandum for the ARACO Concrete site. The site is located at 7470 Southmoor Drive in unincorporated El Paso County, Colorado. Access is proposed to Southmoor Drive. This report has been prepared as part of a Site Development Plan submittal to the El Paso County Planning and Community Development Department.

This memorandum has been prepared primarily to address the existing roadway and traffic conditions, the existing trip generation, and the projected trip generation following the completion of the proposed site improvements, as well as to evaluate the access plan with respect to the criteria in the *Engineering Criteria Manual*.

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, jurisdictional control, widths, pavement markings, traffic control signs, posted speed limits, intersection and access spacing, roadway and intersection alignments, roadway grades, and auxiliary turn lanes;
- The proposed site improvement plan and access plan;
- Estimated peak-hour and average daily traffic (ADT) volumes adjacent to the proposed ARACO Concrete site on Southmoor Drive;

- Evaluation of access sight distances and comparison to El Paso County *Engineering Criteria Manual* (*ECM)* criteria for stopping sight distance and entering/intersection sight distance;
- Evaluation of the access points with respect to the *ECM* Criteria contained in Section 2.4.1.; and
- Pedestrian & bicycle facilities.

LAND USE AND ACCESS

The 4.2-acre ARACO Concrete site is located at 7470 Southmoor Drive in unincorporated El Paso County, Colorado. Access is to the adjacent Southmoor Drive. The proposed site improvements plan showing the proposed building, on-site circulation, and proposed access points is attached.

The current concrete services business operates out of the 2,000-square-foot building on the site. The company employs eight office staff members and approximately 10-16 field employees who will travel to/from the site for work via private vehicle. Crews then travel to job sites in company vehicles. This site is not a concrete batch plant and no concrete mixer trucks are dispatched from this site.

The proposed site plan shows the addition of a 6,000-square-foot building. Although this will increase the building square footage on-site from 2,000 to 8,000 square feet, the new building is planned to be used for storage and as a shop. It will not contain business offices. There is also outside storage for contractor equipment, which will remain. The parking area south of the building will be formalized and access to this lot will be better defined. The spaces in front of the existing building are proposed to remain. The site plan shows three ninety-degree, head-in or back-in parking spaces and two angle, head-in handicap parking spaces. A deviation has been prepared (and is included with this submittal).

A 114-space RV & vehicle storage lot is also proposed on the north side of the site.

ROAD AND TRAFFIC CONDITIONS

The attached site plan 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:

US Highway 85/87 (US Hwy 85/87) is classified as NR-A (Non-Rural Principal Highway) extending north from I-25 in Fountain to the City of Colorado Springs. In the vicinity of the site, US Hwy 85/87 has a posted speed limit of 50 miles per hour (mph) and is a four-lane urban section with curb and gutter. The T-intersection of US Hwy 85-87/Southmoor Drive is stop-sign-controlled with auxiliary turn lanes.

Southmoor Drive is classified as a two-lane Collector roadway adjacent to the site by the El Paso County road inventory. The County section only extends between 425 feet south of River Drive to the point where the street turns to the east (from which point it extends east to US Highway 85). The posted speed limit on Southmoor Drive is 25 mph, and the paved roadway width is about

22 feet. The section north of the County portion is in the City of Fountain. The City of Fountain Traffic Master Plan shows the "Collector" portion of Southmoor Drive beginning at Carson Boulevard and extending north. There is another County-owned/maintained section north of Lovitt Lane.

Existing Traffic Volumes

Vehicular turning-movement counts were conducted at the intersection of Southmoor Drive/Araco Concrete parking access/Southmoor Lane on Wednesday, August 14, 2019 from 6:30-8:30 a.m. and from 4:00-6:00 p.m. Count data is attached in Appendix Table 2 and is shown in Figure 2. The current volumes on the adjacent section of Southmoor Drive are light.

TRIP GENERATION

Estimates of the existing vehicle-trip generation and trip generation following the implementation of the site plan have been made using the nationally published trip generation rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Corresponding trip-generation rates from ITE Land Use Category "180 – Specialty Trade Contractor" have been used to develop the trip-generation estimates for the exiting business and are based on the Site Development Plan. Table 2 shows estimates of the trip generation. The estimates are based on ITE rates with "building square footage" as the predictor variable.

Regarding the proposed RV Storage lot, ITE's Trip Generation does not include trip-generation rates specifically for RV/boat storage businesses. For this report "RV/Vehicle Storage" rates (shown in the attached Table 2) are based on the results of a trip-generation study consisting of trip-generation data collection by LSC at several RV storage facilities in El Paso County (2018). Please refer to Appendix A for details.

Table 2 and Figure 3 (attached) present estimates of projected site trip generation. Existing count data have also been used in the trip estimate. The table shows estimates of the existing trip generation of the business, based on traffic count data and ITE rates with "building square footage" as the predictor variable.

The entire site is expected to generate about 105 vehicle trips on the average weekday (one half entering and one half exiting in a 24-hour period) following expansion. During the morning peak hour, 12 vehicles are projected to enter the site while 5 are projected to exit. Approximately 7 vehicles would enter and 14 vehicles would exit the site during the evening peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

Directional Distribution

An estimate of the proportion of site-generated vehicle trips to/from the north and south on Southmoor Drive and other key study-area streets that will provide access to the site is a

necessary component in determining the site's traffic impacts on these study-area streets. Figure 3 shows the estimated distribution/proportion of site-generated trips on the area roadway network.

Estimates were based on the following factors: existing traffic-count data, the proposed land use, the site-access plan, existing and planned area street and roadway system that will provide access to the site, the site's geographic location, and adjacent existing land uses.

It is our understanding that the intersection of US Hwy 85/87 with Carson Avenue has been identified as a future signalized intersection (Destination 2025 Priority Project #186) on the City of Fountain's *Major Thoroughfare Plan*. As such, northbound vehicles exiting the site may decide to travel north via Southmoor Drive to access US Hwy 85/87 via the future signal at Carson Avenue rather than turning from the stop-sign-controlled Southmoor Drive intersection with US Hwy 85/87.

Existing Plus Site-Generated Traffic Volumes

Figure 4 shows the sum of existing traffic volumes (from Figure 2) and site-generated peak-hour traffic volumes (shown in Figure 3). These volumes represent the projected short-term total traffic.

Estimated Future 2041 Background Traffic Volumes

Figure 5 shows the projected 20-year background traffic volumes for the year 2041. Estimated 2041 background traffic volumes on adjacent roadways and at the study-area intersections are based on projected additional development (background traffic) in the vicinity of the site and minor northbound-/southbound-through volume increases on Southmoor Drive. Estimated 2040 background northbound and southbound through traffic volumes on SH 115 are based on the CDOT 20-year growth factor of 1.25. The 2041 background volumes assume that Southmoor Drive/US 85/87 would remain a stop-sign-controlled intersection. Traffic from the site is **not** included in the **background** traffic volumes.

Future 2041 Total Traffic Volumes

Figure 6 shows the projected 2041 total traffic volumes, which are the sum of 2041 background traffic volumes (from Figure 5) plus long-term site-generated traffic volumes (from Figure 3).

LEVEL OF SERVICE ANALYSIS

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 1 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 1: Intersection Levels of Service Delay Ranges

Level of Service	Signalized Intersections Average Control Delay (seconds per vehicle)	Unsignalized Intersections 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.

Detailed Synchro reports are attached. A summary of LOS during the weekday morning and evening peak hours for the following unsignalized intersections is shown in the following figures:

- Figure 2: Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 4: Existing + Site Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 5: 2041 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 6: 2041 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

Site Access Intersections

All approaches at both site-access points currently operate at and are projected to remain at LOS A or better following site buildout. Please refer to the detailed Synchro reports (attached) for additional details.

Southmoor Drive/US 85-87

The northeast-bound left-turn at the intersection of US Hwy 85-87/Southmoor Drive currently operates at LOS F and is projected to remain LOS F during the afternoon peak hour through the 20-year horizon. However, analysis results show a volume-to-capacity (v/c) ratio to be well below 1.00 for the eastbound-through turning movement during all short-term traffic scenarios. This is not uncommon for minor street approaches on arterial streets to operate at levels of service E or even F during peak periods, as signal timings would be adjusted to favor heavier northbound and southbound through volumes on US Hwy 85-87. Despite Synchro's reported LOS F (HCM methodology) for the northeast-bound left-turning movement during the afternoon peak hour, gaps created from the nearby signal at US Hwy 85-87/Mesa Ridge Parkway would allow side street vehicles to turn left onto US Hwy 85-87.

SITE-ACCESS PLAN

ECM Criteria for Access Design

Two site-access points will be allowed from the adjacent Southmoor Drive (Collector roadway). Note: the head-in parking spaces on Southmoor Drive are addressed separately in the deviation request. The following summarizes *Engineering Criteria Manual* Section 2.4.1 access criteria, which states the following five access design guidelines:

- Adequate spacing
- Proper alignments
- Clear sight distances
- Coordinated widths with its intended use
- Clearances from intersections

The following sections address each of these criteria for access-point design throughout the site.

Adequate Spacing

Southmoor Drive is a Collector roadway. The *ECM* indicates that accesses shall be separated by a distance equal to the entering sight-distance values in Table 2-35. Based on a posted speed limit of 25 mph, the prescribed spacing would be 425 feet. The distance between the two site-access points is 480 feet, which meets *ECM* criteria.

Access Alignment

All proposed site-access points should be aligned at 90 degrees to the adjacent roadway centerline. The adjacent roadway grades are essentially level. The vertical alignment criteria in *ECM* Section 2.4.1.C.2 shall be met for the driveways. The access points are shown to intersect Southmoor Drive at 90 degrees.

Access Sight Distances

The access sight distance criteria in section 2.4.1.D would apply:

> *"Any potentially obstructing objects, such as but not limited to advertising signs, structures, trees, and bushes, shall be designed, placed, and maintained at a height not to interfere with the sight distance needed by any vehicle using the access."*

Southmoor Drive has a straight horizontal alignment with no significant vertical curvature that would limit access sight distance. Site improvements, such as signs, on-street angled parking, and landscaping, should not impede the required sight-distance lines of sight. The sight distance from the south access to the 90-degree corner to the southeast would be acceptable, given the design speed of that corner and the distance from the driver's eye at the access.

Based on a 25-mph posted speed limit, sight distances for both approaches from both proposed site-access locations exceed the required 425-foot requirement for multi-unit trucks, per *ECM* Table 2-35, with one exception – the sight distance to the south from the south access point. The following analysis corresponds to sight distances for the proposed site-access intersections with Southmoor Drive.

Proposed Southmoor Drive/North Site-Access Intersection

Sight distances are as follows:

- To the northwest: greater than 1/4-mile
- To the southeast: 730 feet (unobstructed to L-corner turn on Southmoor Drive)

Proposed Southmoor Drive/South Site-Access Intersection

Sight distances are as follows:

- To the northwest: greater than 1/4-mile
- To the southeast: 290 feet (unobstructed to L-corner turn on Southmoor Drive). Although this is short of the 425-foot *ECM* minimum criteria, the design speed for traffic arriving from the south around the tight horizontal curve in Southmoor Drive is about 13 to 14 mph (the curve-warning sign indicates an advisory speed of 10 mph). Based on the speed of the approaching vehicle as it turns the corner and is seen by possible, but infrequent, multi-unit trucks, the intersection sight distance, based on the AASHTO formula, is 236 feet. As 290 feet is available, the sight distance is acceptable.

Access Width

The *ECM* requires a minimum of 25-foot width for a commercial access point on a Non-Residential Collector roadway. The south access drive (30 feet wide) would meet this criterion, while the north (gated) access drive (24 feet wide) would be just short of *ECM* criteria. The existing head-in parking adjacent to the existing building is proposed to be replaced with 60-degree angle parking.

For the north access, LSC recommends a 65-foot stacking distance between the entry gate and the west edge of Southmoor Drive. This would allow for a Class A RV, 30-foot-long single-unit truck or a 35-foot-long U-Haul truck (largest size) plus an additional 30 feet to allow for a towed utility trailer, moving trailer, or following passenger vehicle.

Clearances from Intersections

Regarding access clearance from intersection criteria outlined in Section 2.4.1.F of the *ECM*:

> *Access to commercial or industrial properties fronting collector or local roads shall be located a minimum of 50 feet from the point of curvature or point of tangency*

> *of the curb line at the intersection. Access to commercial or industrial parcels fronting Nonresidential Collector roadways shall be located a minimum of 115 – 480 feet from the point of curvature or point of tangency of the curb line at the intersection, depending on the sight distance and location with respect to the intersection, intersection control, and posted speed.*
>
> *In all cases, a minimum corner clearance of 50 feet shall be provided. If the minimum corner clearance cannot be attained, the ECM Administrator may require investigation to determine if left turns should be prohibited into or out of the access point. For proposed access points near stop or signalized intersections, the ECM Administrator will require studies to determine if stopping queues will block the access point and if left turns should be prohibited into or out of the access point.*

Based on the proposed driveway locations shown in the site plan, the south access point would have a centerline offset of about 100 feet from the nearest intersection (Southmoor Drive/Southmoor Lane), which meets the aforementioned *ECM* criteria. This is a minor intersection with low through volumes and low turning volumes to/from Southmoor Lane.

PEDESTRIAN & BICYCLE FACILITIES

Sidewalks exist within the City of Fountain just to the north of the site (at the River Drive/Southmoor intersection). The existing drainage structure just to the north appears to have limited width and future sidewalk installation may not be feasible. There is an existing trail located just north of the site – the Crews Gulch Trail. The section of Southmoor connecting to US Hwy 85/87 has curb & gutter, but no sidewalk. Sidewalk exists along the west side of US Hwy 85/87. Southmoor Lane, which exists directly across from this site, extends east to US Hwy 85. Although Southmoor adjacent to the site frontage does not have sidewalks on either side, the traffic volumes are light and there are paved areas and gravel shoulder areas along the site frontage which can be utilized by the few pedestrians who may walk through this generally industrial area at the south end of Southmoor Drive. Pedestrians would have the option to utilize Southmoor Lane, which is a slower speed, narrow street, to connect to sidewalks along Highway 85/87.

ACCESS AUTOTURN VEHICLE-TURNING ANALYSIS

AutoTurn analysis was run at the request of staff and to assist with the planning and design of the proposed north site access. Detailed AutoTurn analysis exhibits depicting entering and exiting B-40 (simulating a Class A RV) vehicle-movement wheel paths are attached as “AutoTurn Exhibits 1-4.”

CONCLUSIONS/RECOMMENDATIONS

Access Evaluation

- The site-access points meet *ECM* Criteria, or the intent of the *ECM* Criteria (in the case of the sight distance to the south at the south access point). Please refer to this section of the report for details.
- No improvements would be required to the existing auxiliary turn lanes at the intersection of US 85-87/Southmoor Drive due to this development's impact.

Level of Service Analysis

- The site-access points would operate at an acceptable LOS. The intersection of Southmoor Drive/US Hwy 85 has been analyzed and results indicate a LOS F for side street left-turn movements during peak hours. This is not likely to be signalized or converted to a right-in/right-out intersection. Alternatives to the eastbound left-turn movement at this intersection are available. Please refer to this section of the report for details.

County Road Impact Fee Program

South Portion of the Site

This project will be required to participate in the El Paso County Road Improvement Fee Program. The preliminary indication from the applicant is to opt out of the PID option. The applicable fee program land use is "Industrial" and the corresponding building permit "Full Fee" is $3,651 per thousand square feet. Based on 6,000 additional square feet, the fee amount would be $21,906, **plus** the amount for the RV storage.

North Portion of the site (RV Storage)

Per our understanding of recent correspondence received from the County Principal Transportation Planner on another proposed RV Storage use, the roadway impact fee shall be calculated based on:

- The total square footage of RV storage parking spaces (not including drive aisles, landscaping islands, etc.) and
- The mini warehouse fee rate of $725 per 1,000 square feet.
- The latest site plan indicates that the RV storage parking spaces would cover about 26,250 square feet. (26.25 KSF)
- Therefore, the calculated County Roadway Impact Fee for the RV storage use is $19,031.
- This amount paid should be taken into account in the future upon any redevelopment of the RV storage area, so fees are not paid twice for the same lot.

* * * * *

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:JAB:jas

Enclosures: Table 2
Figures 1-6
Appendix Table: Traffic Count Data
Traffic Counts
Levels of Service
AutoTurn Exhibits 1-4
Site Plan Exhibit
Appendix A - Trip Generation Study for RV Storage

Trip Generation Tables

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Table 2: Trip Generation Estimate

ITE		Value	Units [1]	Trip Generation Rates [2]					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
Existing Trip Generation "Snapshot" (from an Actual Count)													
180	Specialty Trade Contractor	2.062	KSF	-	-	-	-	-	N/A	5	3	5	7
Estimate Based on Building Square Footage (Based on ITE Rates)													
180	Specialty Trade Contractor	2.062	KSF	10.22	1.21	0.45	0.63	1.34	21	2	1	1	3
	Difference: Existing (Based on Counts) Minus Existing (Based on ITE Rates)								-	3	2	4	4
Estimate of Trips Following Site Improvements (Based on ITE Fitted Rates)													
180	Specialty Trade Contractor	8.062	KSF	10.22	1.21	0.45	0.63	1.34	82	10	4	5	11
-	RV/Vehicle Storage	1.14	HOC	20.00	2.28	1.37	1.98	2.81	23	2	1	2	3
								Total	**105**	**12**	**5**	**7**	**14**

[1] KSF = 1,000 square feet of gross floor area, HOC = hundred occupied spaces

[2] Source: *Trip Generation* , 10th Edition, 2017, by the Institute of Transportation Engineers (ITE)

Note: "RV/Vehicle Storage" rates based on RV storage facility turning movement counts conducted by LSC in El Paso County (2018)

Figures

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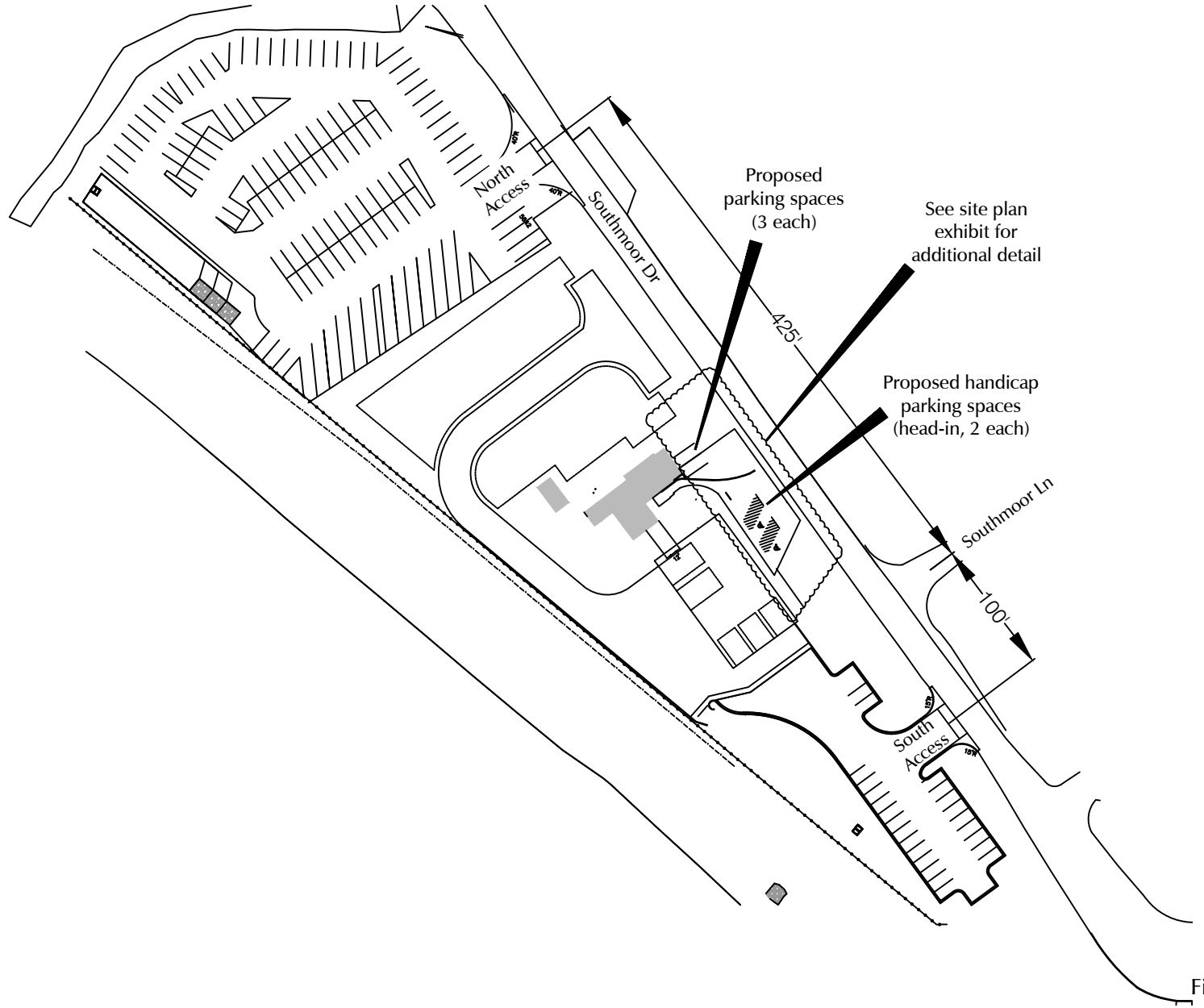

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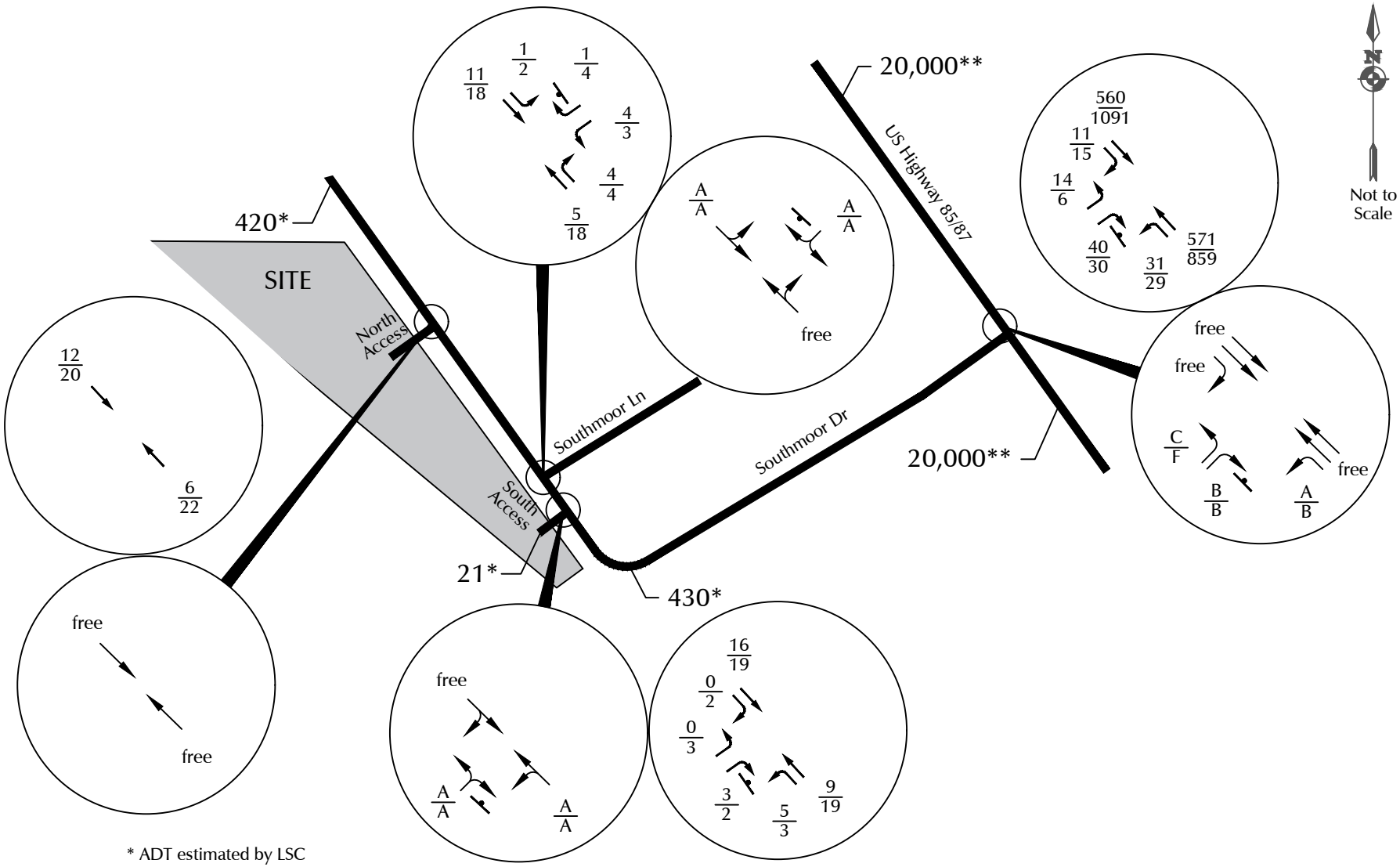
Figure 1

Site Plan

ARACO Concrete (LSC #194560)



* ADT estimated by LSC

** AADT by CDOT (2020)

$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (vehicles per hour) / PM Weekday Peak-Hour Traffic (vehicles per hour)

X,XXX = Average Daily Traffic (vehicles per day)

$\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS / PM Individual Movement Peak-Hour LOS

= Stop Sign

Counts by LSC (July 2020)

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Figure 2

Existing Traffic, Lane Geometry, Traffic Control, and LOS

ARACO Concrete (LSC #194560)

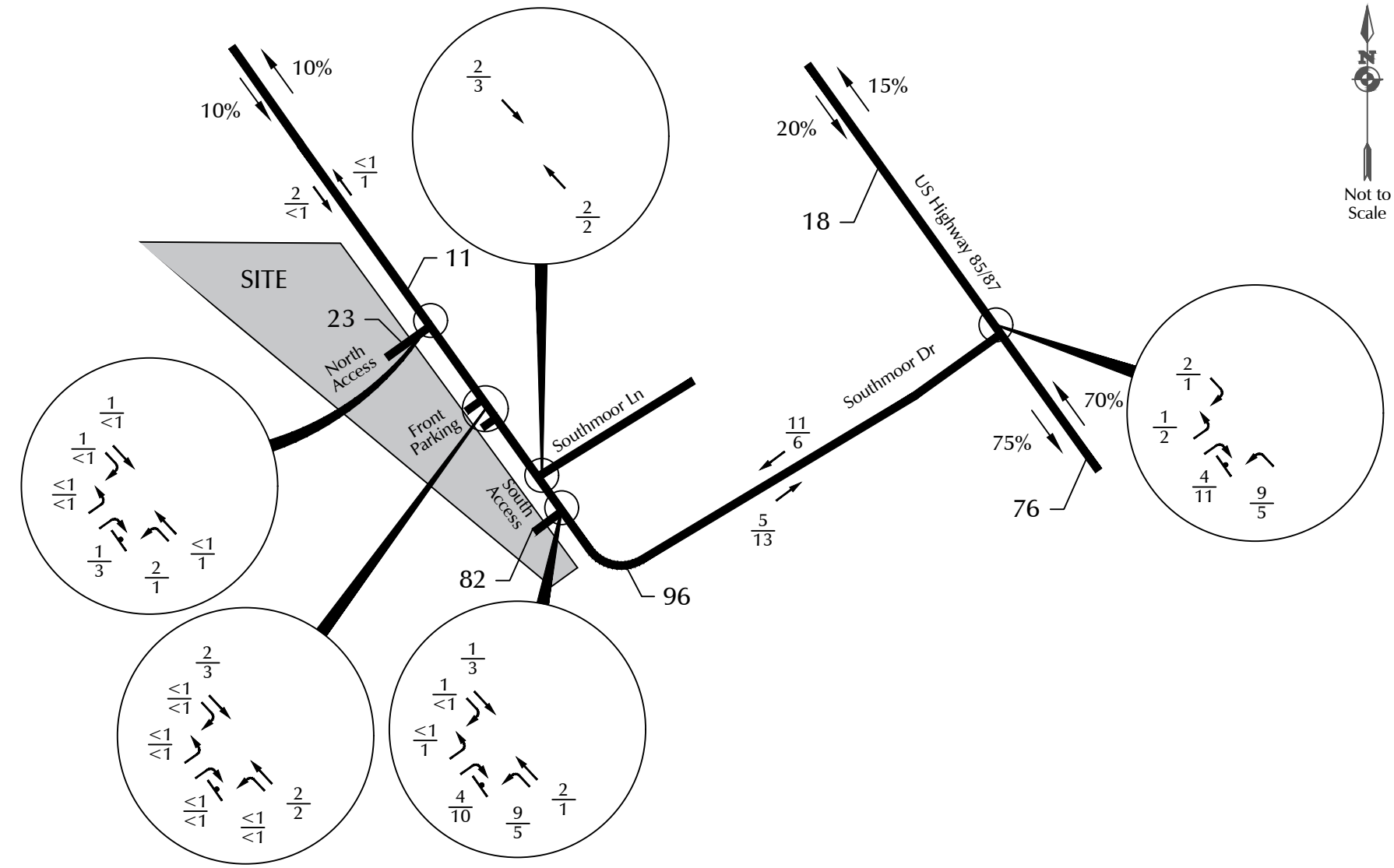

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Figure 3

Site-Generated Traffic

ARACO Concrete (LSC #194560)

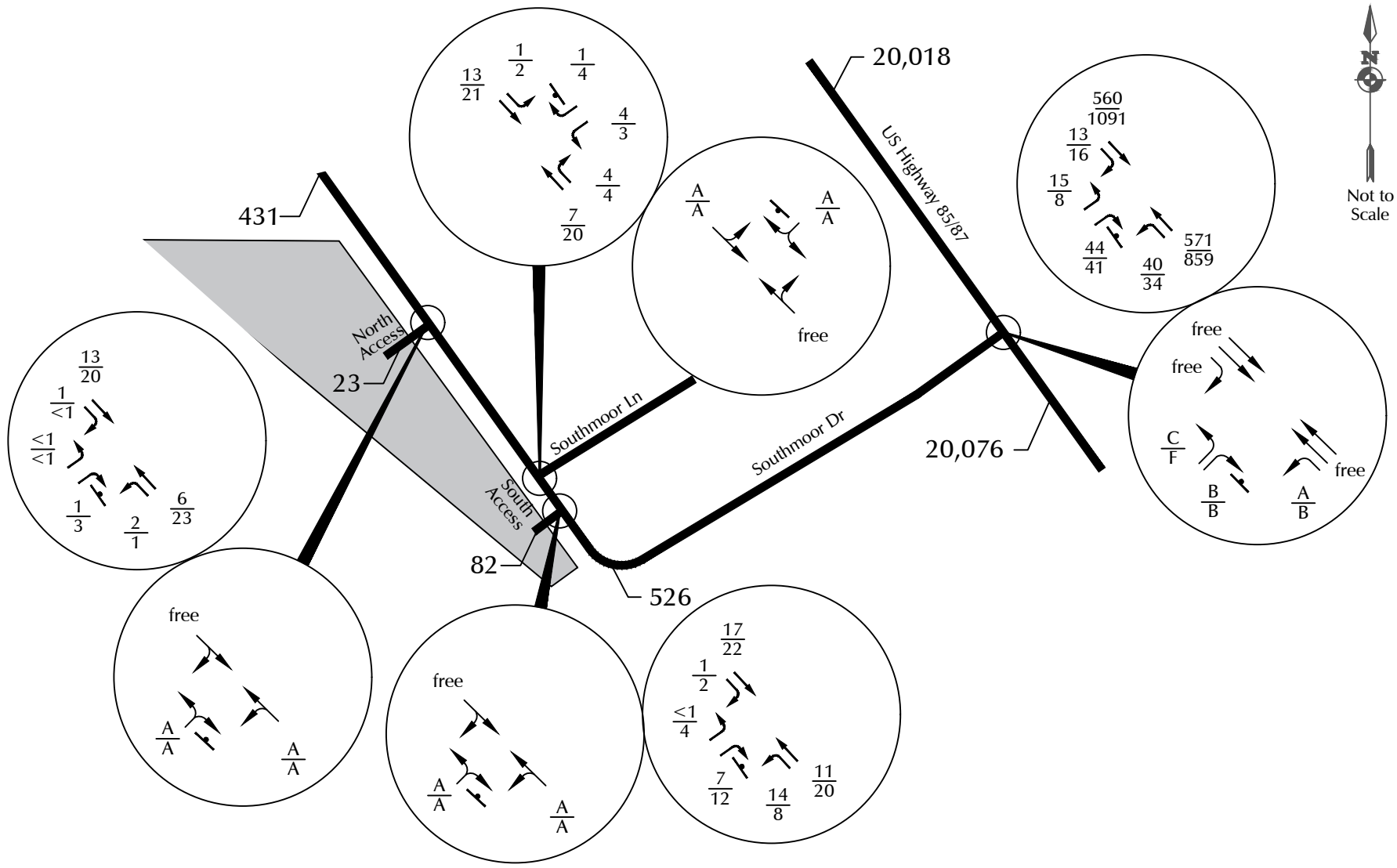

Figure 4

Existing + Site-Generated Traffic, Lane Geometry, Traffic Control, and LOS

ARACO Concrete (LSC #194560)

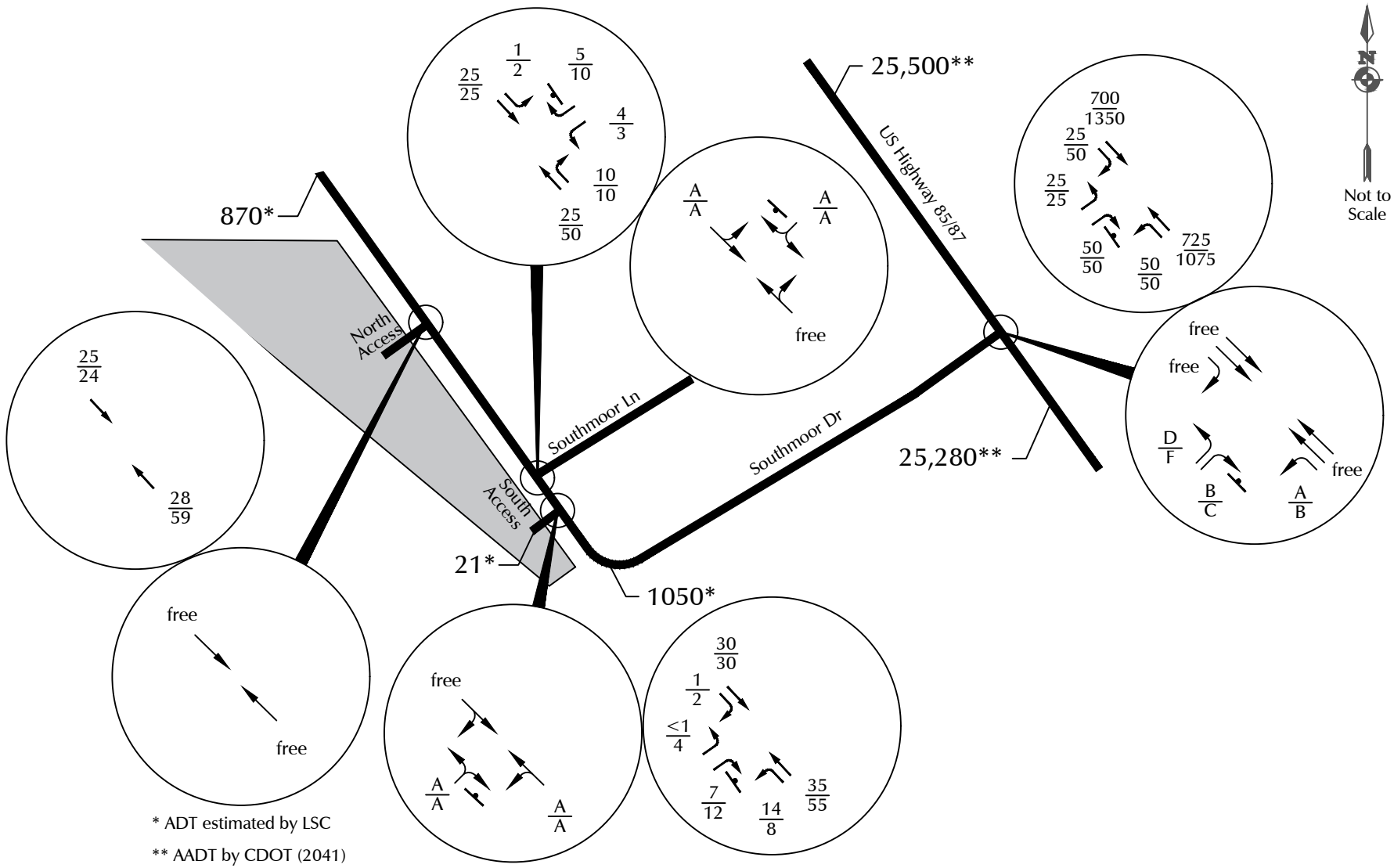

Figure 5

2041 Background Traffic, Lane Geometry, Traffic Control, and LOS

ARACO Concrete (LSC #194560)

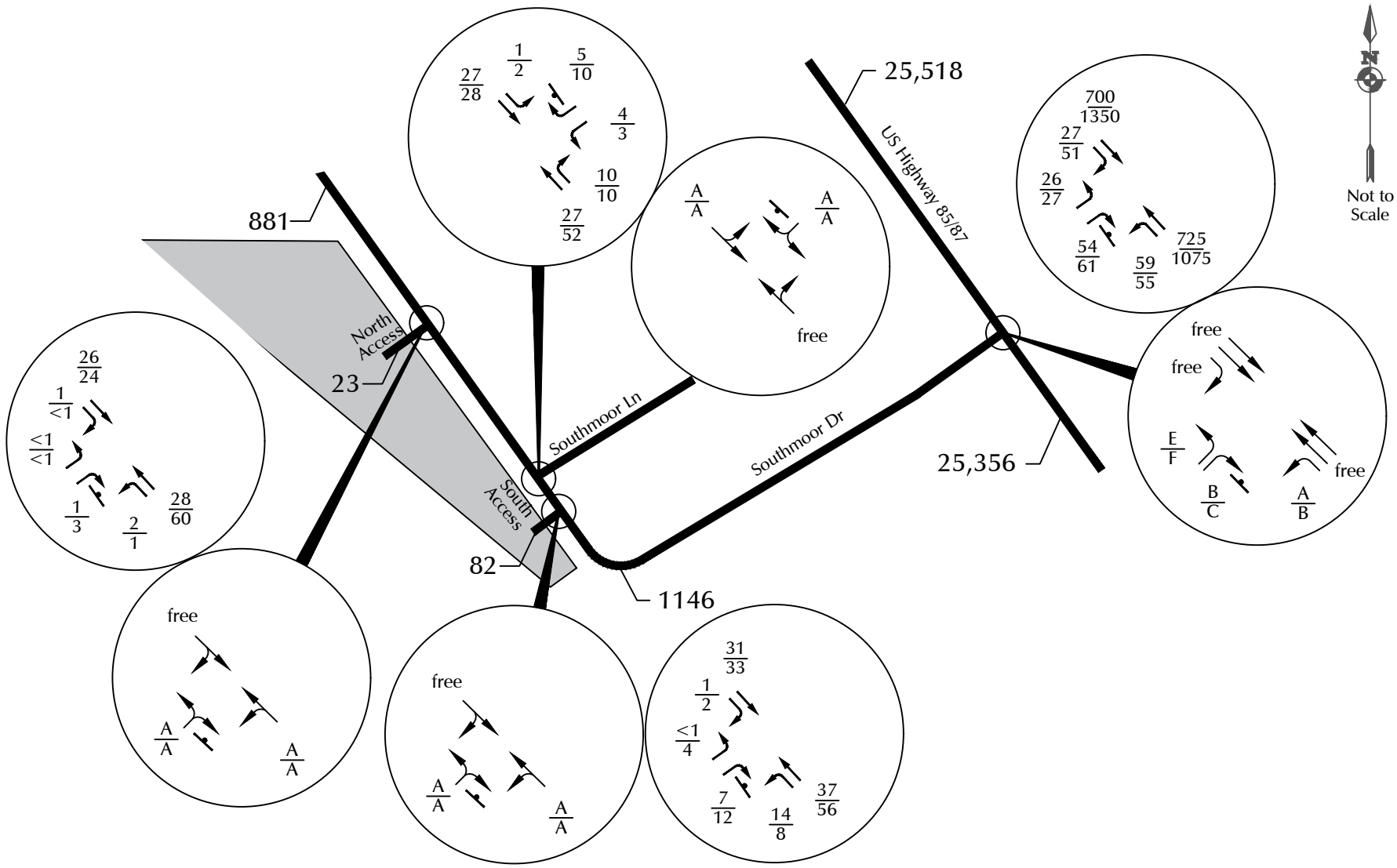

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Figure 6

2041 Total Traffic, Lane Geometry, Traffic Control, and LOS

ARACO Concrete (LSC #194560)

Not to Scale

Note: Refer to text for sign distance looking to/from the north

AASHTO-required sight distance for vehicles traveling at 13-14 mph approaching from the south around horizontal corner on Southmoor Dr

Unobstructed sight distance to vehicles right-turning from the horizontal corner on Southmoor Dr

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Exhibit 1

Sight Distance to the South from the Shifted Proposed Access Location

ARACO Concrete (LSC #194560)

Appendix Tables

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Appendix Table: Traffic Count Data

Southmoor Drive/Southmoor Lane/Existing Araco Access

Volume	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
AM / PM	0 / 2	11 / 16	1 / 2	1 / 4	0 / 0	4 / 3	4 / 4	5 / 15	5 / 3	3 / 2	0 / 2	0 / 3
PHF	1.00 / 1.00			0.63 / 0.58			0.7 / 0.55			0.75 / 1.00		

AM

Time		SB					WB					NB					EB					Total	
		SBL	SBT	SBR	SBU	SB Total	WBL	WBT	WBR	WBU	WB Total	NBL	NBT	NBR	NBU	NB Total	EBL	EBT	EBR	EBU	EB Total		
7:00	AM	0	3	0	0	3	0	0	0	0	0	3	0	2	0	5	0	0	0	0	**0**	**8**	
7:15	AM	1	1	0	0	2	1	0	1	0	2	2	1	0	0	3	0	0	0	0	**0**	**7**	
7:30	AM	0	5	0	0	5	1	0	0	0	1	0	0	1	0	1	0	0	2	0	**2**	**9**	
7:45	AM	0	2	0	0	2	2	0	0	0	2	0	4	1	0	5	0	0	1	0	**1**	**10**	Peak 15
TOTAL		**1**	**11**	**0**	**0**	**12**	**4**	**0**	**1**	**0**	**5**	**5**	**5**	**4**	**0**	**14**	**0**	**0**	**3**	**0**	**3**	**34**	
Peak-15		2					2					5					1						
4x Peak-15		8					8					20					4						
60 Total		12					5					14					3						
PHF		**1.50**					**0.63**					**0.70**					**0.75**						
Approach		**SB**					**WB**					**NB**					**EB**						
PHF – USE		**1.00**					**0.63**					**0.70**					**0.75**						

PM

Time		SB					WB					NB					EB					Total	
		SBL	SBT	SBR	SBU	SB Total	WBL	WBT	WBR	WBU	WB Total	NBL	NBT	NBR	NBU	NB Total	EBL	EBT	EBR	EBU	EB Total		
4:45	PM	0	5	2	0	7	0	0	1	0	1	0	3	0	0	3	1	1	0	0	**2**	**13**	
5:00	PM	1	2	0	0	3	0	0	2	0	2	0	4	0	0	4	1	0	0	0	**1**	**10**	
5:15	PM	0	6	0	0	6	0	0	1	0	1	2	2	1	0	5	0	1	2	0	**3**	**15**	
5:30	PM	1	3	0	0	4	3	0	0	0	3	1	6	3	0	10	1	0	0	0	**1**	**18**	Peak 15
TOTAL		**2**	**16**	**2**	**0**	**20**	**3**	**0**	**4**	**0**	**7**	**3**	**15**	**4**	**0**	**22**	**3**	**2**	**2**	**0**	**7**	**56**	
Peak-15		4					3					10					1						
4x Peak-15		16					12					40					4						
60 Total		20					7					22					7						
PHF		**1.25**					**0.58**					**0.55**					**1.75**						
Approach		**SB**					**WB**					**NB**					**EB**						
PHF – USE		**1.00**					**0.58**					**0.55**					**1.00**						

AM	1.00	0.63	0.70	0.75
PM	1.00	0.58	0.55	1.00

Traffic Counts

TRANSPORTATION
CONSULTANTS, INC.

LSC Transportation Consultants, Inc.

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

File Name : Hwy 85-87 - Southmoor Dr AM
Site Code : 194560
Start Date : 7/16/2020
Page No : 1

Groups Printed- Unshifted

	Hwy 85/87 Southbound					Westbound					Hwy 85/87 Northbound					Southmoor Dr Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
07:00 AM	0	88	0	0	88	0	0	0	0	0	6	131	0	0	137	0	0	9	0	9	234
07:15 AM	0	119	0	0	119	0	0	0	0	0	7	124	0	0	131	2	0	7	0	9	259
07:30 AM	0	144	4	0	148	0	0	0	0	0	8	186	0	1	195	3	0	8	0	11	354
07:45 AM	0	138	1	0	139	0	0	0	0	0	6	154	0	2	162	3	0	5	0	8	309
Total	0	489	5	0	494	0	0	0	0	0	27	595	0	3	625	8	0	29	0	37	1156
08:00 AM	0	136	4	0	140	0	0	0	0	0	6	111	0	1	118	3	0	8	0	11	269
08:15 AM	0	142	2	0	144	0	0	0	0	0	7	120	0	0	127	5	0	19	0	24	295
08:30 AM	0	148	2	0	150	0	0	0	0	0	6	140	0	0	146	2	0	17	0	19	315
08:45 AM	0	121	4	0	125	0	0	0	0	0	7	120	0	0	127	3	0	7	0	10	262
Total	0	547	12	0	559	0	0	0	0	0	26	491	0	1	518	13	0	51	0	64	1141
Grand Total	0	1036	17	0	1053	0	0	0	0	0	53	1086	0	4	1143	21	0	80	0	101	2297
Apprch %	0	98.4	1.6	0		0	0	0	0		4.6	95	0	0.3		20.8	0	79.2	0		
Total %	0	45.1	0.7	0	45.8	0	0	0	0	0	2.3	47.3	0	0.2	49.8	0.9	0	3.5	0	4.4	

LSC Transportation Consultants, Inc.

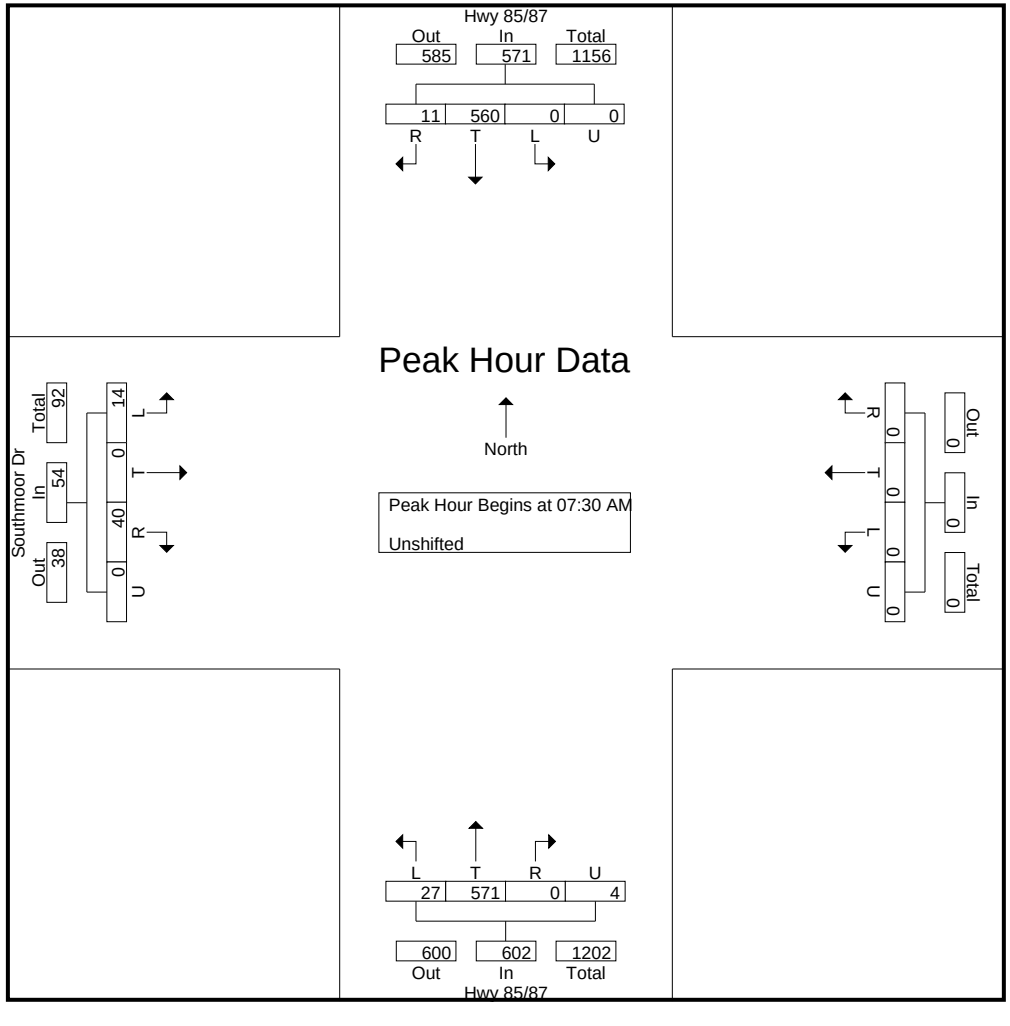
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Hwy 85-87 - Southmoor Dr AM
Site Code : 194560
Start Date : 7/16/2020

	Hwy 85/87 Southbound					Westbound					Hwy 85/87 Northbound					Southmoor Dr Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
Peak Hour Analysis From 7:00:00 AM to 8:45:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 7:30:00 AM																					
7:30:00 AM	0	**144**	**4**	0	**148**	0	0	0	0	0	**8**	**186**	0	1	**195**	3	0	8	0	11	**354**
7:45:00 AM	0	138	1	0	139	0	0	0	0	0	6	154	0	**2**	162	3	0	5	0	8	309
8:00:00 AM	0	136	4	0	140	0	0	0	0	0	6	111	0	1	118	3	0	8	0	11	269
8:15:00 AM	0	142	2	0	144	0	0	0	0	0	7	120	0	0	127	**5**	0	**19**	0	**24**	295
Total Volume	0	560	11	0	571	0	0	0	0	0	27	571	0	4	602	14	0	40	0	54	1227
% App. Total	0	98.1	1.9	0		0	0	0	0		4.5	94.9	0	0.7		25.9	0	74.1	0		
PHF	.000	.972	.688	.000	.965	.000	.000	.000	.000	.000	.844	.767	.000	.500	.772	.700	.000	.526	.000	.563	.867

LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Hwy 85-87 - Southmoor Dr AM
Site Code : 194560
Start Date : 7/16/2020
Page No : 3



LSC Transportation Consultants, Inc.

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

File Name : Hwy 85-87 - Southmoor Dr AM
Site Code : 194560
Start Date : 7/16/2020
Page No : 4

	Hwy 85/87 Southbound					Westbound					Hwy 85/87 Northbound					Southmoor Dr Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
Peak Hour Analysis From 7:00:00 AM to 8:45:00 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	7:45:00 AM					7:00:00 AM					7:00:00 AM					8:00:00 AM					
+0 mins.	0	138	1	0	139	0	0	0	0	0	6	131	0	0	137	3	0	8	0	11	
+5 mins.	0	136	**4**	0	140	0	0	0	0	0	7	124	0	0	131	**5**	0	**19**	0	**24**	
+10 mins.	0	142	2	0	144	0	0	0	0	0	**8**	**186**	0	1	**195**	2	0	17	0	19	
+15 mins.	0	**148**	2	0	**150**	0	0	0	0	0	6	154	0	**2**	162	3	0	7	0	10	
Total Volume	0	564	9	0	573	0	0	0	0	0	27	595	0	3	625	13	0	51	0	64	
% App. Total	0	98.4	1.6	0		0	0	0	0		4.3	95.2	0	0.5		20.3	0	79.7	0		
PHF	.000	.953	.563	.000	.955	.000	.000	.000	.000	.000	.844	.800	.000	.375	.801	.650	.000	.671	.000	.667	

LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
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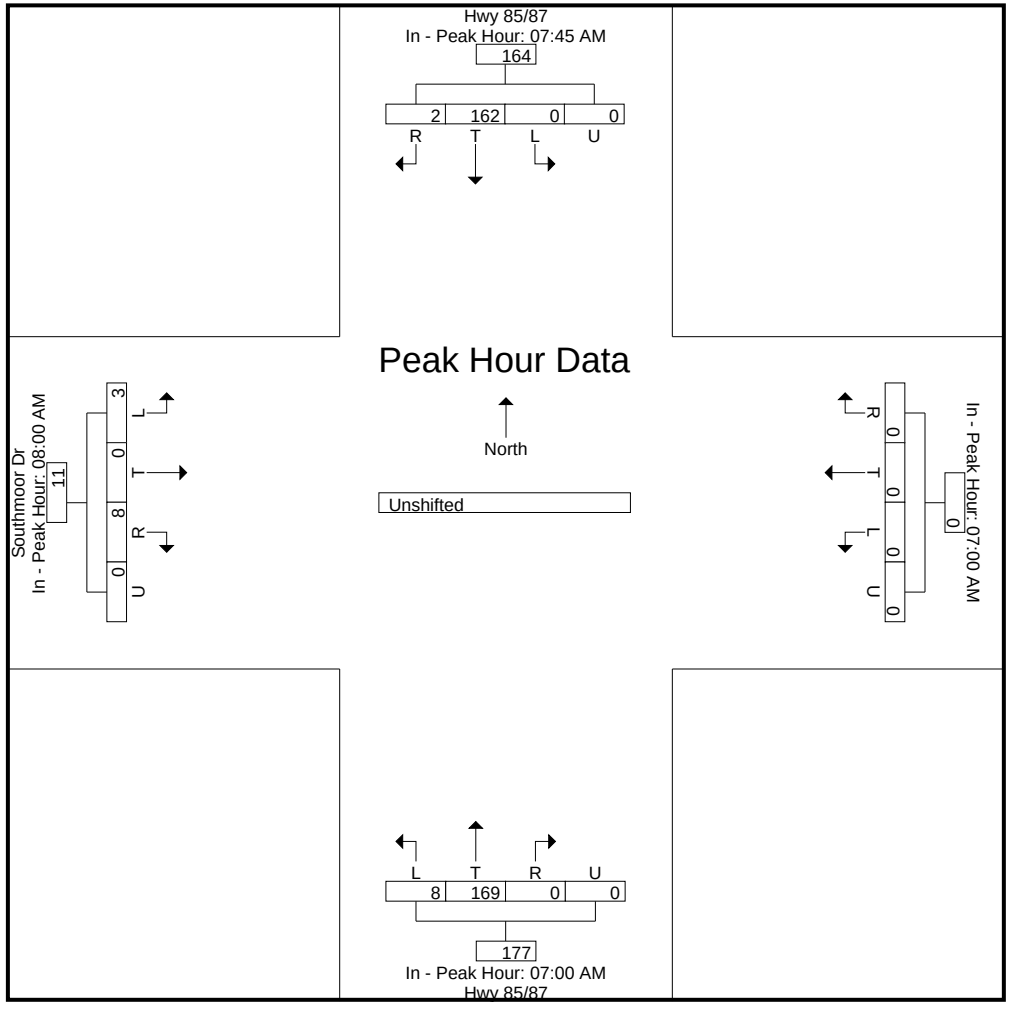
719-633-2868

File Name : Hwy 85-87 - Southmoor Dr AM
Site Code : 194560
Start Date : 7/16/2020
Page No : 5



LSC Transportation Consultants, Inc.

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

File Name : Hwy 85-87 - Southmoor Dr PM
Site Code : 194560
Start Date : 7/16/2020
Page No : 1

Groups Printed- Unshifted

	Hwy 85-87 Southbound					Westbound					Hwy 85-87 Northbound					Southmoor Dr Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
04:00 PM	0	223	5	0	228	0	0	0	0	0	6	215	0	0	221	2	0	5	0	7	456
04:15 PM	0	251	1	0	252	0	0	0	0	0	10	203	0	1	214	4	0	14	0	18	484
04:30 PM	0	240	4	0	244	0	0	0	0	0	6	207	0	0	213	3	0	10	0	13	470
04:45 PM	0	286	2	0	288	0	0	0	0	0	6	231	0	0	237	1	0	2	0	3	528
Total	0	1000	12	0	1012	0	0	0	0	0	28	856	0	1	885	10	0	31	0	41	1938
05:00 PM	0	247	3	0	250	0	0	0	0	0	8	214	0	0	222	1	0	4	0	5	477
05:15 PM	0	298	7	0	305	0	0	0	0	0	7	217	0	0	224	4	0	16	0	20	549
05:30 PM	0	260	3	0	263	0	0	0	0	0	7	197	0	1	205	0	0	8	0	8	476
05:45 PM	0	247	5	0	252	0	0	0	0	0	6	198	0	0	204	4	0	12	0	16	472
Total	0	1052	18	0	1070	0	0	0	0	0	28	826	0	1	855	9	0	40	0	49	1974
Grand Total	0	2052	30	0	2082	0	0	0	0	0	56	1682	0	2	1740	19	0	71	0	90	3912
Apprch %	0	98.6	1.4	0		0	0	0	0		3.2	96.7	0	0.1		21.1	0	78.9	0		
Total %	0	52.5	0.8	0	53.2	0	0	0	0	0	1.4	43	0	0.1	44.5	0.5	0	1.8	0	2.3	

LSC Transportation Consultants, Inc.

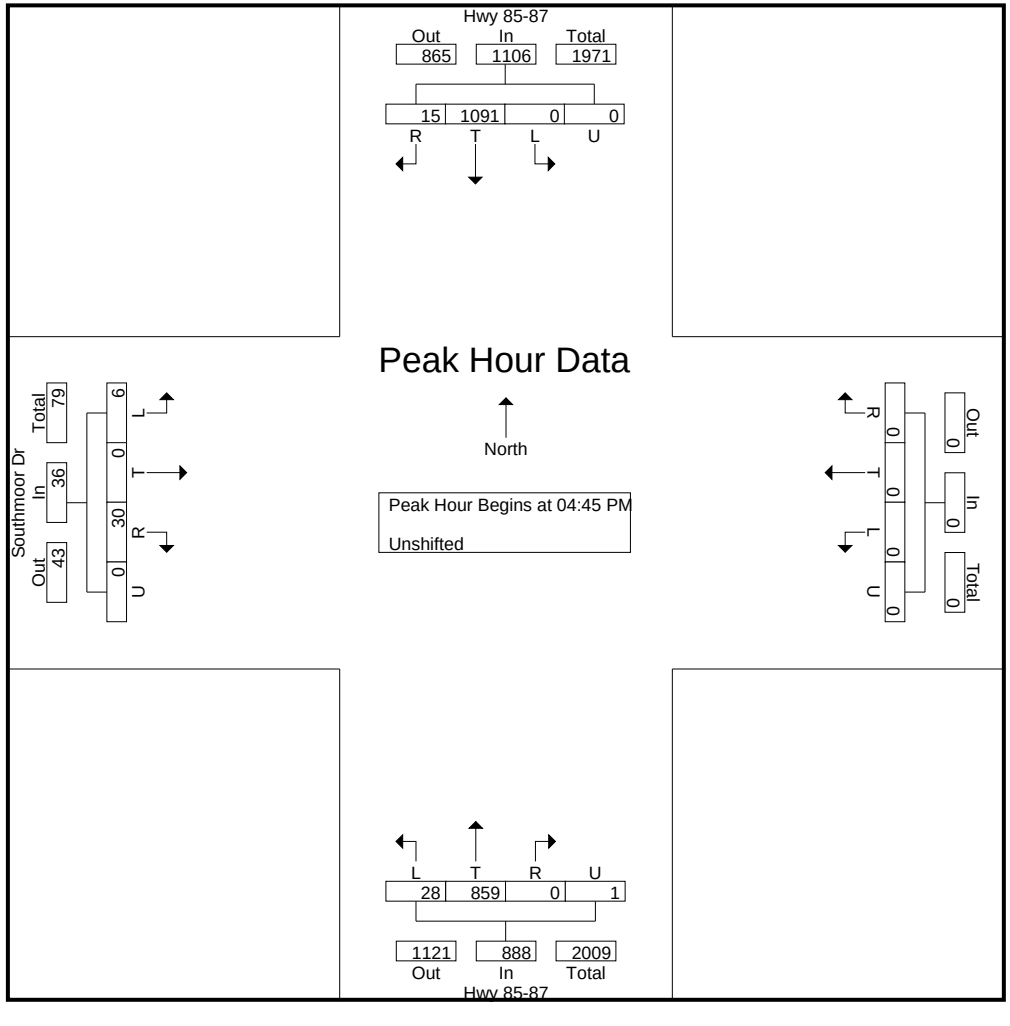
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Hwy 85-87 - Southmoor Dr PM
Site Code : 194560
Start Date : 7/16/2020
Page No : 2

	Hwy 85-87 Southbound					Westbound					Hwy 85-87 Northbound					Southmoor Dr Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:45:00 PM																					
4:45:00 PM	0	286	2	0	288	0	0	0	0	0	6	**231**	0	0	**237**	1	0	2	0	3	528
5:00:00 PM	0	247	3	0	250	0	0	0	0	0	**8**	214	0	0	222	1	0	4	0	5	477
5:15:00 PM	0	**298**	**7**	0	**305**	0	0	0	0	0	7	217	0	0	224	**4**	0	**16**	0	**20**	**549**
5:30:00 PM	0	260	3	0	263	0	0	0	0	0	7	197	0	**1**	205	0	0	8	0	8	476
Total Volume	0	1091	15	0	1106	0	0	0	0	0	28	859	0	1	888	6	0	30	0	36	2030
% App. Total	0	98.6	1.4	0		0	0	0	0		3.2	96.7	0	0.1		16.7	0	83.3	0		
PHF	.000	.915	.536	.000	.907	.000	.000	.000	.000	.000	.875	.930	.000	.250	.937	.375	.000	.469	.000	.450	.924

LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Hwy 85-87 - Southmoor Dr PM
Site Code : 194560
Start Date : 7/16/2020
Page No : 3



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

File Name : Hwy 85-87 - Southmoor Dr PM
Site Code : 194560
Start Date : 7/16/2020
Page No : 4

	Hwy 85-87 Southbound					Westbound					Hwy 85-87 Northbound					Southmoor Dr Eastbound					
Start Time	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**L**	**T**	**R**	**U**	**App. Total**	**Int. Total**
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	4:45:00 PM					4:00:00 PM					4:30:00 PM					5:00:00 PM					
+0 mins.	0	286	2	0	288	0	0	0	0	0	6	207	0	0	213	1	0	4	0	5	
+5 mins.	0	247	3	0	250	0	0	0	0	0	6	**231**	0	0	**237**	**4**	0	**16**	0	**20**	
+10 mins.	0	**298**	**7**	0	**305**	0	0	0	0	0	**8**	214	0	0	222	0	0	8	0	8	
+15 mins.	0	260	3	0	263	0	0	0	0	0	7	217	0	0	224	4	0	12	0	16	
Total Volume	0	1091	15	0	1106	0	0	0	0	0	27	869	0	0	896	9	0	40	0	49	
% App. Total	0	98.6	1.4	0		0	0	0	0		3	97	0	0		18.4	0	81.6	0		
PHF	.000	.915	.536	.000	.907	.000	.000	.000	.000	.000	.844	.940	.000	.000	.945	.563	.000	.625	.000	.613	

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545 E Pikes Peak Ave, Suite 210
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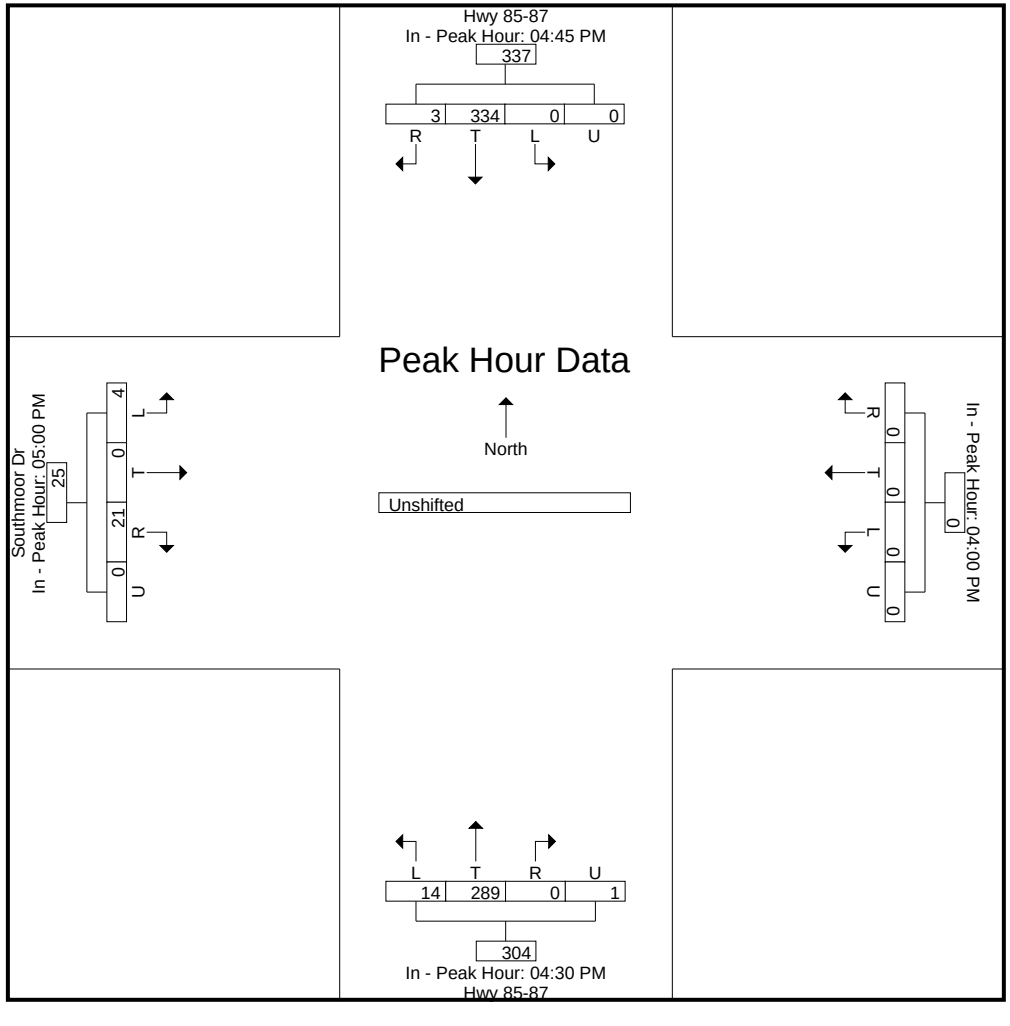
File Name : Hwy 85-87 - Southmoor Dr PM
Site Code : 194560
Start Date : 7/16/2020
Page No : 5



LSC Transportation Consultants, Inc.

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

File Name : Southmoor Dr - Araco Concrete Access AM
Site Code : 00000000
Start Date : 8/14/2019
Page No : 1

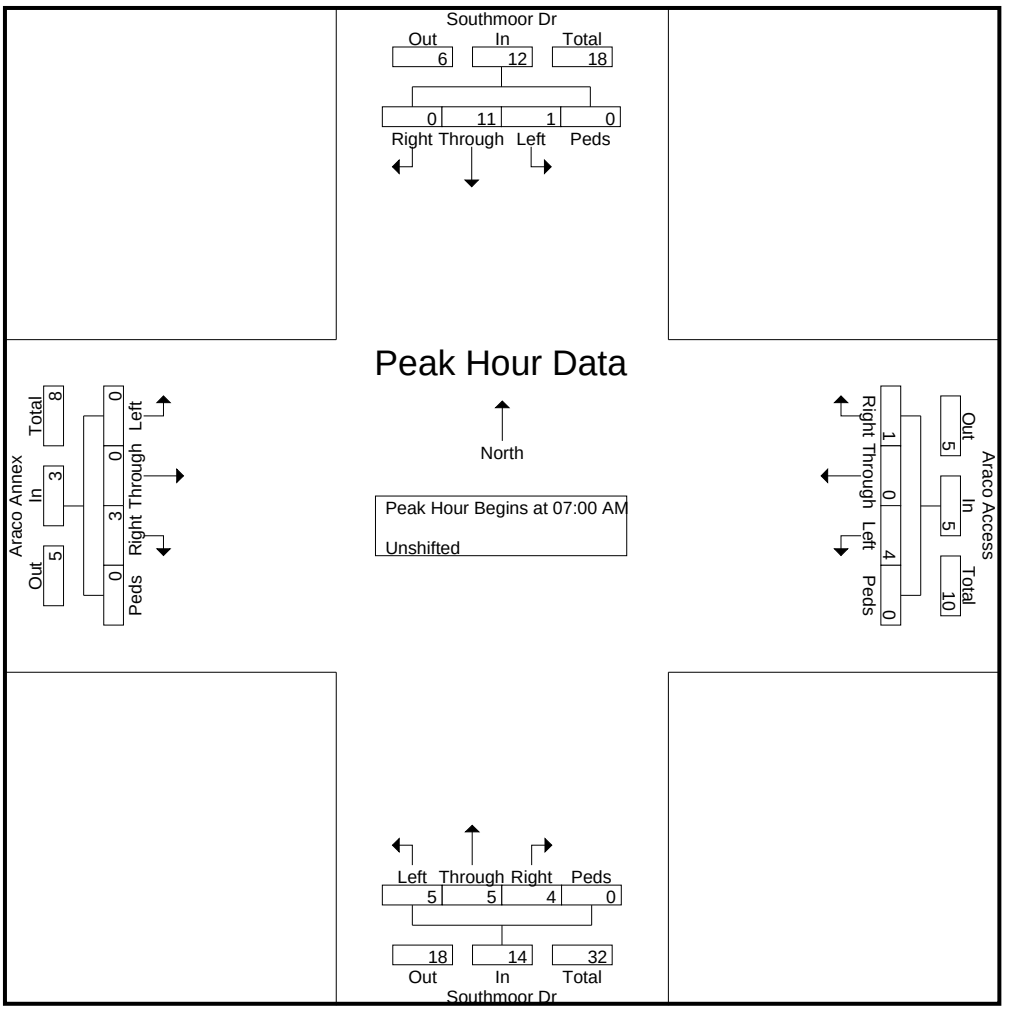
Groups Printed- Unshifted

	Southmoor Dr Southbound					Araco Access Westbound					Southmoor Dr Northbound					Araco Annex Eastbound					
Start Time	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Int. Total
06:30 AM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	6
06:45 AM	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Total	1	10	0	0	11	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	13
07:00 AM	0	3	0	0	3	0	0	0	0	0	3	0	2	0	5	0	0	0	0	0	8
07:15 AM	1	1	0	0	2	1	0	1	0	2	2	1	0	0	3	0	0	0	0	0	7
07:30 AM	0	5	0	0	5	1	0	0	0	1	0	0	1	0	1	0	0	2	0	2	9
07:45 AM	0	2	0	0	2	2	0	0	0	2	0	4	1	0	5	0	0	1	0	1	10
Total	1	11	0	0	12	4	0	1	0	5	5	5	4	0	14	0	0	3	0	3	34
08:00 AM	0	4	0	0	4	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
08:15 AM	0	3	0	0	3	1	0	1	0	2	1	3	0	0	4	0	0	0	0	0	9
Grand Total	2	28	0	0	30	6	0	2	0	8	6	9	4	0	19	0	0	4	0	4	61
Apprch %	6.7	93.3	0	0		75	0	25	0		31.6	47.4	21.1	0		0	0	100	0		
Total %	3.3	45.9	0	0	49.2	9.8	0	3.3	0	13.1	9.8	14.8	6.6	0	31.1	0	0	6.6	0	6.6	

LSC Transportation Consultants, Inc.
545 E Pikes Peak Ave, Suite 210
Colorado Springs, CO 80905
719-633-2868

File Name : Southmoor Dr - Araco Concrete Access AM
Site Code : 00000000
Start Date : 8/14/2019
Page No : 2

	Southmoor Dr Southbound					Araco Access Westbound					Southmoor Dr Northbound					Araco Annex Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	3	0	0	3	0	0	0	0	0	**3**	0	**2**	0	**5**	0	0	0	0	0	8
07:15 AM	**1**	1	0	0	2	1	0	**1**	0	**2**	2	1	0	0	3	0	0	0	0	0	7
07:30 AM	0	**5**	0	0	**5**	1	0	0	0	1	0	0	1	0	1	0	0	**2**	0	**2**	9
07:45 AM	0	2	0	0	2	**2**	0	0	0	2	0	**4**	1	0	5	0	0	1	0	1	**10**
Total Volume	1	11	0	0	12	4	0	1	0	5	5	5	4	0	14	0	0	3	0	3	34
% App. Total	8.3	91.7	0	0		80	0	20	0		35.7	35.7	28.6	0		0	0	100	0		
PHF	.250	.550	.000	.000	.600	.500	.000	.250	.000	.625	.417	.313	.500	.000	.700	.000	.000	.375	.000	.375	.850



LSC Transportation Consultants, Inc.

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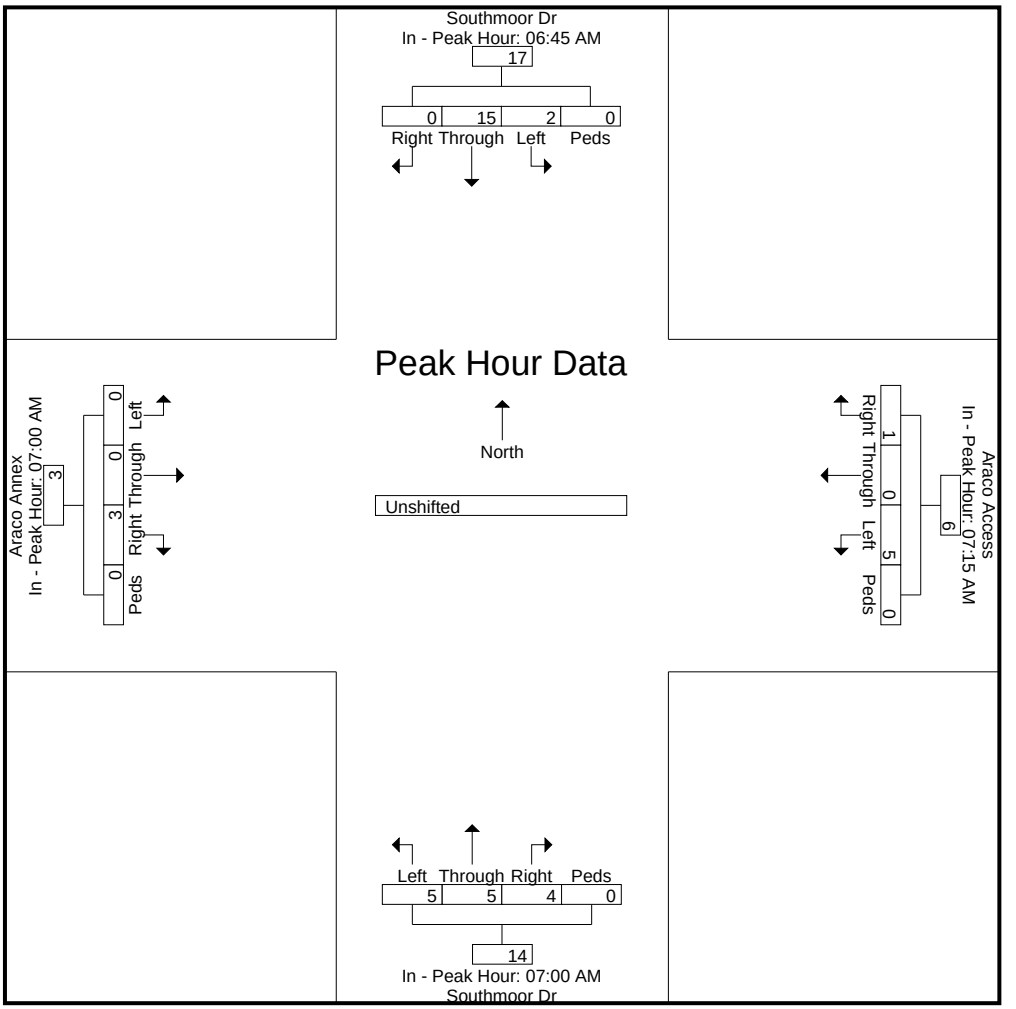
719-633-2868

File Name : Southmoor Dr - Araco Concrete Access AM
Site Code : 00000000
Start Date : 8/14/2019
Page No : 3

	Southmoor Dr Southbound					Araco Access Westbound					Southmoor Dr Northbound					Araco Annex Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	06:45 AM					07:15 AM					07:00 AM					07:00 AM					
+0 mins.	**1**	**6**	0	0	**7**	1	0	**1**	0	**2**	**3**	0	**2**	0	**5**	0	0	0	0	0	
+15 mins.	0	3	0	0	3	1	0	0	0	1	2	1	0	0	3	0	0	0	0	0	
+30 mins.	1	1	0	0	2	**2**	0	0	0	2	0	0	1	0	1	0	0	**2**	0	**2**	
+45 mins.	0	5	0	0	5	1	0	0	0	1	0	**4**	1	0	5	0	0	1	0	1	
Total Volume	2	15	0	0	17	5	0	1	0	6	5	5	4	0	14	0	0	3	0	3	
% App. Total	11.8	88.2	0	0		83.3	0	16.7	0		35.7	35.7	28.6	0		0	0	100	0		
PHF	.500	.625	.000	.000	.607	.625	.000	.250	.000	.750	.417	.313	.500	.000	.700	.000	.000	.375	.000	.375	



LSC Transportation Consultants, Inc.

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

File Name : Southmoor Dr - Araco Concrete Access PM
Site Code : 00194560
Start Date : 8/15/2019
Page No : 1

Groups Printed- Unshifted

	Southmoor Dr Southbound					Araco Access Westbound					Southmoor Dr Northbound					Araco Annex Eastbound					
Start Time	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Int. Total
04:00 PM	1	3	0	0	4	0	0	1	0	1	0	2	2	0	4	0	0	0	0	0	9
04:15 PM	0	2	0	0	2	1	0	3	0	4	0	4	3	0	7	1	0	2	0	3	16
04:30 PM	0	4	0	0	4	1	0	0	0	1	0	1	1	0	2	0	0	1	0	1	8
04:45 PM	0	5	2	0	7	0	0	1	0	1	0	3	0	0	3	1	1	0	0	2	13
Total	1	14	2	0	17	2	0	5	0	7	0	10	6	0	16	2	1	3	0	6	46
05:00 PM	1	2	0	0	3	0	0	2	0	2	0	4	0	0	4	1	0	0	0	1	10
05:15 PM	0	6	0	0	6	0	0	1	0	1	2	2	1	0	5	0	1	2	0	3	15
05:30 PM	1	3	0	0	4	3	0	0	0	3	1	6	3	0	10	1	0	0	0	1	18
05:45 PM	1	2	0	0	3	0	0	1	0	1	1	4	2	0	7	0	1	1	0	2	13
Total	3	13	0	0	16	3	0	4	0	7	4	16	6	0	26	2	2	3	0	7	56
Grand Total	4	27	2	0	33	5	0	9	0	14	4	26	12	0	42	4	3	6	0	13	102
Apprch %	12.1	81.8	6.1	0		35.7	0	64.3	0		9.5	61.9	28.6	0		30.8	23.1	46.2	0		
Total %	3.9	26.5	2	0	32.4	4.9	0	8.8	0	13.7	3.9	25.5	11.8	0	41.2	3.9	2.9	5.9	0	12.7	

LSC Transportation Consultants, Inc.
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File Name : Southmoor Dr - Araco Concrete Access PM
Site Code : 00194560
Start Date : 8/15/2019
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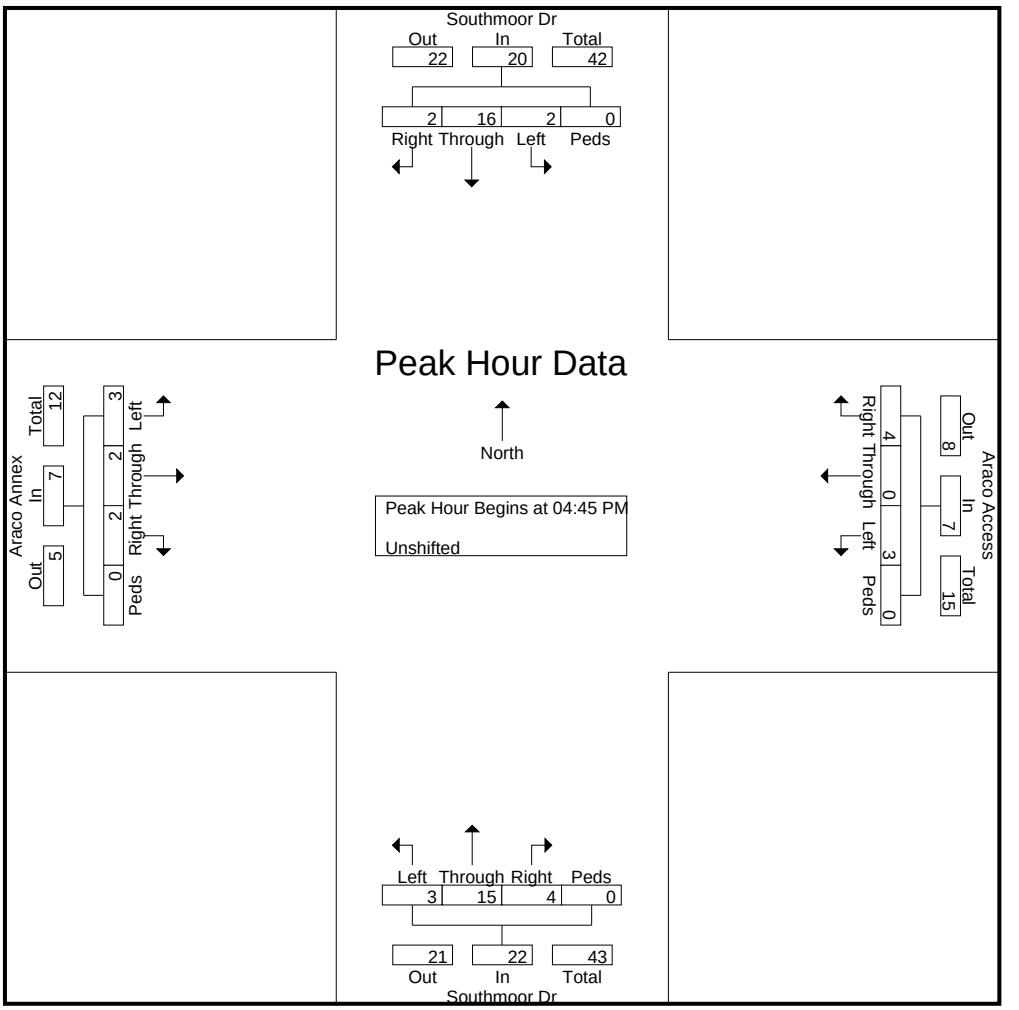
	Southmoor Dr Southbound					Araco Access Westbound					Southmoor Dr Northbound					Araco Annex Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	5	**2**	0	**7**	0	0	1	0	1	0	3	0	0	3	**1**	**1**	0	0	2	13
05:00 PM	**1**	2	0	0	3	0	0	**2**	0	2	0	4	0	0	4	1	0	0	0	1	10
05:15 PM	0	**6**	0	0	6	0	0	1	0	1	**2**	2	1	0	5	0	1	**2**	0	**3**	15
05:30 PM	1	3	0	0	4	**3**	0	0	0	**3**	1	**6**	**3**	0	**10**	1	0	0	0	1	**18**
Total Volume	2	16	2	0	20	3	0	4	0	7	3	15	4	0	22	3	2	2	0	7	56
% App. Total	10	80	10	0		42.9	0	57.1	0		13.6	68.2	18.2	0		42.9	28.6	28.6	0		
PHF	.500	.667	.250	.000	.714	.250	.000	.500	.000	.583	.375	.625	.333	.000	.550	.750	.500	.250	.000	.583	.778



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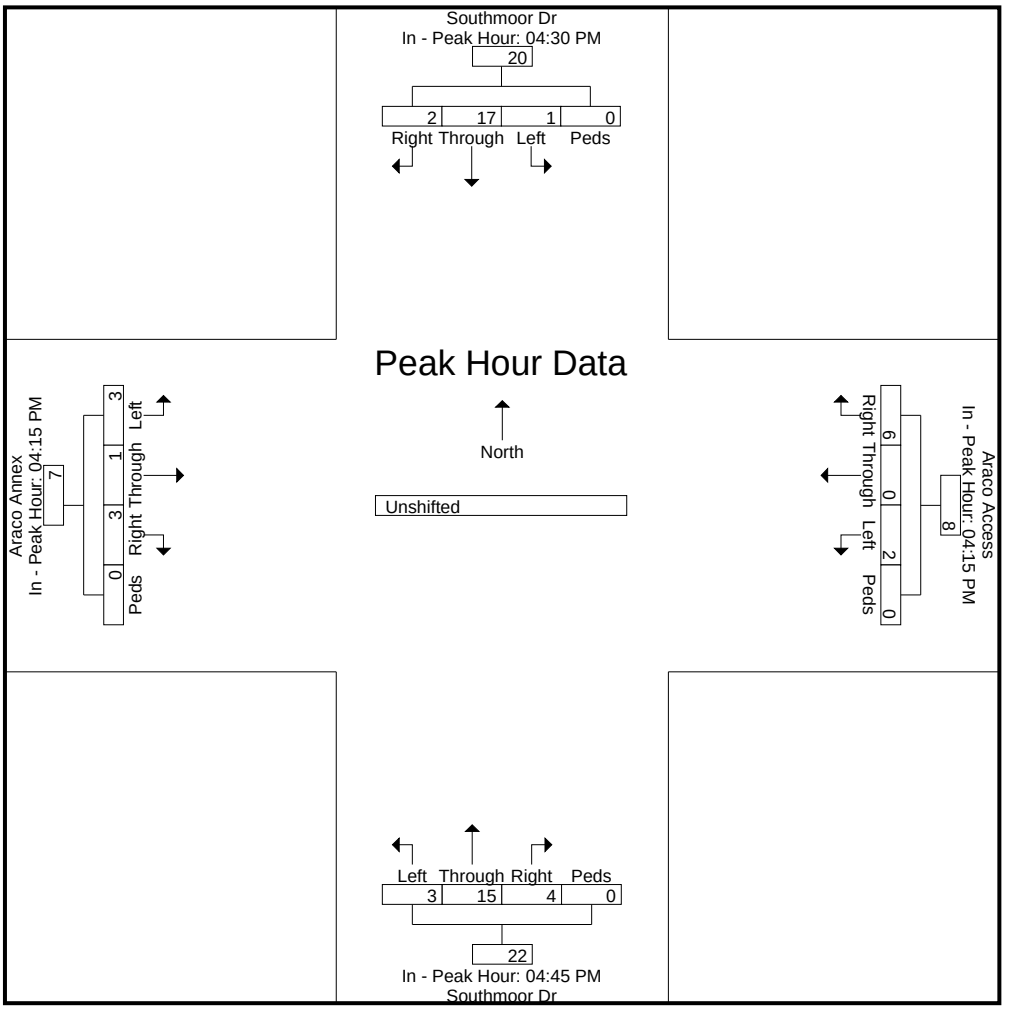
	Southmoor Dr Southbound					Araco Access Westbound					Southmoor Dr Northbound					Araco Annex Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	04:30 PM					04:15 PM					04:45 PM					04:15 PM					
+0 mins.	0	4	0	0	4	**1**	0	**3**	0	**4**	0	3	0	0	3	**1**	0	**2**	0	**3**	
+15 mins.	0	5	**2**	0	**7**	1	0	0	0	1	0	4	0	0	4	0	0	1	0	1	
+30 mins.	**1**	2	0	0	3	0	0	1	0	1	**2**	2	1	0	5	1	**1**	0	0	2	
+45 mins.	0	**6**	0	0	6	0	0	2	0	2	1	**6**	**3**	0	**10**	1	0	0	0	1	
Total Volume	1	17	2	0	20	2	0	6	0	8	3	15	4	0	22	3	1	3	0	7	
% App. Total	5	85	10	0		25	0	75	0		13.6	68.2	18.2	0		42.9	14.3	42.9	0		
PHF	.250	.708	.250	.000	.714	.500	.000	.500	.000	.500	.375	.625	.333	.000	.550	.750	.250	.375	.000	.583	



Levels of Service

TRANSPORTATION
CONSULTANTS, INC.

Intersection	
Int Delay, s/veh	0.9

Movement	SET	SER	NWU	NWL	NWT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	560	11	4	27	571	14	40
Future Vol, veh/h	560	11	4	27	571	14	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	Signal
Storage Length	-	0	-	250	-	100	0
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	602	12	4	29	614	17	48

Major/Minor	Major1		Major2			Minor1	
Conflicting Flow All	0	0	602	614	0	975	301
Stage 1	-	-	-	-	-	602	-
Stage 2	-	-	-	-	-	373	-
Critical Hdwy	-	-	6.44	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.52	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	596	961	-	249	695
Stage 1	-	-	-	-	-	510	-
Stage 2	-	-	-	-	-	666	-
Platoon blocked, %	-	-			-		
Mov Cap-1 Maneuver	-	-	880	880	-	240	695
Mov Cap-2 Maneuver	-	-	-	-	-	240	-
Stage 1	-	-	-	-	-	510	-
Stage 2	-	-	-	-	-	641	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.5	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	240	695	880	-	-	-
HCM Lane V/C Ratio	0.07	0.069	0.038	-	-	-
HCM Control Delay (s)	21.1	10.6	9.2	-	-	-
HCM Lane LOS	C	B	A	-	-	-
HCM 95th %tile Q(veh)	0.2	0.2	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	15	0	5	9	0	3
Future Vol, veh/h	15	0	5	9	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	0	6	12	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	19	0	43	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	24	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1597	-	968	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1597	-	964	1059
Mov Cap-2 Maneuver	-	-	-	-	964	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	995	-

Approach	SE	NW	NE
HCM Control Delay, s	0	2.6	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	1059	1597	-	-	-
HCM Lane V/C Ratio	0.004	0.004	-	-	-
HCM Control Delay (s)	8.4	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	1	11	5	4	1	6
Future Vol, veh/h	1	11	5	4	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	14	6	5	1	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	25	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	991	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	990	1073
Mov Cap-2 Maneuver	-	-	-	-	990	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1007	-

Approach	SE	NW	SW
HCM Control Delay, s	0.6	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1608	-	1060
HCM Lane V/C Ratio	-	-	0.001	-	0.008
HCM Control Delay (s)	-	-	7.2	0	8.4
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	SET	SER	NWU	NWL	NWT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	1091	15	1	28	859	6	30
Future Vol, veh/h	1091	15	1	28	859	6	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	Signal
Storage Length	-	0	-	250	-	100	0
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	95	95	93	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	1148	16	1	30	924	7	36

Major/Minor	Major1		Major2			Minor1	
Conflicting Flow All	0	0	1148	1164	0	1672	574
Stage 1	-	-	-	-	-	1148	-
Stage 2	-	-	-	-	-	524	-
Critical Hdwy	-	-	6.44	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.52	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	267	596	-	87	462
Stage 1	-	-	-	-	-	264	-
Stage 2	-	-	-	-	-	559	-
Platoon blocked, %	-	-			-		
Mov Cap-1 Maneuver	-	-	569	569	-	82	462
Mov Cap-2 Maneuver	-	-	-	-	-	82	-
Stage 1	-	-	-	-	-	264	-
Stage 2	-	-	-	-	-	529	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.4	20.1
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	82	462	569	-	-	-
HCM Lane V/C Ratio	0.088	0.078	0.055	-	-	-
HCM Control Delay (s)	53.1	13.5	11.7	-	-	-
HCM Lane LOS	F	B	B	-	-	-
HCM 95th %tile Q(veh)	0.3	0.3	0.2	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	2	3	19	3	2
Future Vol, veh/h	19	2	3	19	3	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	3	4	24	4	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	58	26
Stage 1	-	-	-	-	26	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1587	-	949	1050
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1587	-	946	1050
Mov Cap-2 Maneuver	-	-	-	-	946	-
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	988	-

Approach	SE	NW	NE
HCM Control Delay, s	0	1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	985	1587	-	-	-
HCM Lane V/C Ratio	0.007	0.002	-	-	-
HCM Control Delay (s)	8.7	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	2	18	18	4	3	4
Future Vol, veh/h	2	18	18	4	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	23	23	5	4	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	28	0	-	0	55	26
Stage 1	-	-	-	-	26	-
Stage 2	-	-	-	-	29	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1585	-	-	-	953	1050
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1585	-	-	-	951	1050
Mov Cap-2 Maneuver	-	-	-	-	951	-
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	994	-

Approach	SE	NW	SW
HCM Control Delay, s	0.7	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1585	-	1005
HCM Lane V/C Ratio	-	-	0.002	-	0.009
HCM Control Delay (s)	-	-	7.3	0	8.6
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0

Intersection	
Int Delay, s/veh	1.1

Movement	SET	SER	NWU	NWL	NWT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	560	13	4	40	571	15	44
Future Vol, veh/h	560	13	4	40	571	15	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	Signal
Storage Length	-	0	-	250	-	100	0
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	602	14	4	43	614	18	53

Major/Minor	Major1		Major2			Minor1	
Conflicting Flow All	0	0	602	616	0	1003	301
Stage 1	-	-	-	-	-	602	-
Stage 2	-	-	-	-	-	401	-
Critical Hdwy	-	-	6.44	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.52	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	596	960	-	239	695
Stage 1	-	-	-	-	-	510	-
Stage 2	-	-	-	-	-	645	-
Platoon blocked, %	-	-			-		
Mov Cap-1 Maneuver	-	-	901	901	-	227	695
Mov Cap-2 Maneuver	-	-	-	-	-	227	-
Stage 1	-	-	-	-	-	510	-
Stage 2	-	-	-	-	-	611	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.7	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	227	695	901	-	-	-
HCM Lane V/C Ratio	0.08	0.076	0.053	-	-	-
HCM Control Delay (s)	22.2	10.6	9.2	-	-	-
HCM Lane LOS	C	B	A	-	-	-
HCM 95th %tile Q(veh)	0.3	0.2	0.2	-	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	17	1	14	11	1	7
Future Vol, veh/h	17	1	14	11	1	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	1	18	14	1	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	23	0	73	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1592	-	931	1054
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	972	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1592	-	921	1054
Mov Cap-2 Maneuver	-	-	-	-	921	-
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	961	-

Approach	SE	NW	NE
HCM Control Delay, s	0	4.1	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	1035	1592	-	-	-
HCM Lane V/C Ratio	0.01	0.011	-	-	-
HCM Control Delay (s)	8.5	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	1	13	7	4	4	1
Future Vol, veh/h	1	13	7	4	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	17	9	5	5	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	14	0	-	0	31	12
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	19	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1604	-	-	-	983	1069
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1604	-	-	-	982	1069
Mov Cap-2 Maneuver	-	-	-	-	982	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1004	-

Approach	SE	NW	SW
HCM Control Delay, s	0.5	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1604	-	998
HCM Lane V/C Ratio	-	-	0.001	-	0.006
HCM Control Delay (s)	-	-	7.2	0	8.6
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0

Intersection	
Int Delay, s/veh	0.8

Movement	SET	SER	NWU	NWL	NWT	NEL	NER
Lane Configurations							
Traffic Vol, veh/h	1091	16	1	34	859	8	41
Future Vol, veh/h	1091	16	1	34	859	8	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	Signal
Storage Length	-	0	-	250	-	100	0
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	95	95	93	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	1148	17	1	37	924	10	49

Major/Minor	Major1		Major2			Minor1	
Conflicting Flow All	0	0	1148	1165	0	1686	574
Stage 1	-	-	-	-	-	1148	-
Stage 2	-	-	-	-	-	538	-
Critical Hdwy	-	-	6.44	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.52	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	267	595	-	85	462
Stage 1	-	-	-	-	-	264	-
Stage 2	-	-	-	-	-	549	-
Platoon blocked, %	-	-			-		
Mov Cap-1 Maneuver	-	-	571	571	-	79	462
Mov Cap-2 Maneuver	-	-	-	-	-	79	-
Stage 1	-	-	-	-	-	264	-
Stage 2	-	-	-	-	-	512	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.5	20.7
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	79	462	571	-	-	-
HCM Lane V/C Ratio	0.122	0.107	0.066	-	-	-
HCM Control Delay (s)	56.8	13.7	11.7	-	-	-
HCM Lane LOS	F	B	B	-	-	-
HCM 95th %tile Q(veh)	0.4	0.4	0.2	-	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	22	2	8	20	4	12
Future Vol, veh/h	22	2	8	20	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	3	10	26	5	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	31	0	76	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1582	-	927	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	976	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1582	-	921	1044
Mov Cap-2 Maneuver	-	-	-	-	921	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	970	-

Approach	SE	NW	NE
HCM Control Delay, s	0	2.1	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	1010	1582	-	-	-
HCM Lane V/C Ratio	0.02	0.006	-	-	-
HCM Control Delay (s)	8.6	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	20	1	1	23	1	3
Future Vol, veh/h	20	1	1	23	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	10	50	50	10	50	50
Mvmt Flow	26	1	1	29	1	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	58	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	-	-	4.6	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.65	-	3.95	3.75
Pot Cap-1 Maneuver	-	-	1326	-	842	926
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	881	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1326	-	841	926
Mov Cap-2 Maneuver	-	-	-	-	841	-
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	880	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.3	9
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	903	1326	-	-	-
HCM Lane V/C Ratio	0.006	0.001	-	-	-
HCM Control Delay (s)	9	7.7	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	700	25	50	725	25	54
Future Vol, veh/h	700	25	50	725	25	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Signal
Storage Length	-	0	250	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	753	27	54	780	30	65

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	780	0	1251	377
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	498	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	833	-	165	621
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	576	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	833	-	154	621
Mov Cap-2 Maneuver	-	-	-	-	154	-
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	539	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.6	18.6
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	154	621	833	-	-	-
HCM Lane V/C Ratio	0.196	0.105	0.065	-	-	-
HCM Control Delay (s)	34	11.5	9.6	-	-	-
HCM Lane LOS	D	B	A	-	-	-
HCM 95th %tile Q(veh)	0.7	0.3	0.2	-	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	30	1	14	35	1	7
Future Vol, veh/h	30	1	14	35	1	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	1	17	42	1	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	39	0	115	39
Stage 1	-	-	-	-	39	-
Stage 2	-	-	-	-	76	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1571	-	881	1033
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	947	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1571	-	871	1033
Mov Cap-2 Maneuver	-	-	-	-	871	-
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	937	-

Approach	SE	NW	NE
HCM Control Delay, s	0	2.1	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	1010	1571	-	-	-
HCM Lane V/C Ratio	0.01	0.011	-	-	-
HCM Control Delay (s)	8.6	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	1	25	25	10	4	5
Future Vol, veh/h	1	25	25	10	4	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	32	32	13	5	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	45	0	-	0	73	39
Stage 1	-	-	-	-	39	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1563	-	-	-	931	1033
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1563	-	-	-	930	1033
Mov Cap-2 Maneuver	-	-	-	-	930	-
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	988	-

Approach	SE	NW	SW
HCM Control Delay, s	0.3	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1563	-	985
HCM Lane V/C Ratio	-	-	0.001	-	0.012
HCM Control Delay (s)	-	-	7.3	0	8.7
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0

Intersection	
Int Delay, s/veh	3.3

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	1350	50	50	1075	25	50
Future Vol, veh/h	1350	50	50	1075	25	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Signal
Storage Length	-	0	250	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1452	54	54	1156	30	60

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1506	0	2138	726
Stage 1	-	-	-	-	1452	-
Stage 2	-	-	-	-	686	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	441	-	42	367
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	461	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	441	-	37	367
Mov Cap-2 Maneuver	-	-	-	-	37	-
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	405	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.6	95.7
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	37	367	441	-	-	-
HCM Lane V/C Ratio	0.814	0.164	0.122	-	-	-
HCM Control Delay (s)	253.8	16.7	14.3	-	-	-
HCM Lane LOS	F	C	B	-	-	-
HCM 95th %tile Q(veh)	3	0.6	0.4	-	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	30	2	8	55	4	12
Future Vol, veh/h	30	2	8	55	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	3	10	66	5	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	41	0	126	40
Stage 1	-	-	-	-	40	-
Stage 2	-	-	-	-	86	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1568	-	869	1031
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	937	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1568	-	863	1031
Mov Cap-2 Maneuver	-	-	-	-	863	-
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	930	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.9	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	983	1568	-	-	-
HCM Lane V/C Ratio	0.021	0.006	-	-	-
HCM Control Delay (s)	8.7	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	2	25	50	10	3	10
Future Vol, veh/h	2	25	50	10	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	32	64	13	4	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	77	0	-	0	109	71
Stage 1	-	-	-	-	71	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1522	-	-	-	888	991
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1522	-	-	-	886	991
Mov Cap-2 Maneuver	-	-	-	-	886	-
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	984	-

Approach	SE	NW	SW
HCM Control Delay, s	0.5	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1522	-	965
HCM Lane V/C Ratio	-	-	0.002	-	0.017
HCM Control Delay (s)	-	-	7.4	0	8.8
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0.1

Intersection	
Int Delay, s/veh	1.4

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	700	27	59	725	26	54
Future Vol, veh/h	700	27	59	725	26	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Signal
Storage Length	-	0	250	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	753	29	63	780	31	65

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	782	0	1269	377
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	516	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	832	-	160	621
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	564	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	832	-	148	621
Mov Cap-2 Maneuver	-	-	-	-	148	-
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	521	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.7	19.4
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	148	621	832	-	-	-
HCM Lane V/C Ratio	0.212	0.105	0.076	-	-	-
HCM Control Delay (s)	35.7	11.5	9.7	-	-	-
HCM Lane LOS	E	B	A	-	-	-
HCM 95th %tile Q(veh)	0.8	0.3	0.2	-	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	31	1	14	37	1	7
Future Vol, veh/h	31	1	14	37	1	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	1	17	45	1	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	41	0	120	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1568	-	876	1030
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	944	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1568	-	866	1030
Mov Cap-2 Maneuver	-	-	-	-	866	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	934	-

Approach	SE	NW	NE
HCM Control Delay, s	0	2	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	1006	1568	-	-	-
HCM Lane V/C Ratio	0.01	0.011	-	-	-
HCM Control Delay (s)	8.6	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	26	1	2	28	1	1
Future Vol, veh/h	26	1	2	28	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	83	78	78
Heavy Vehicles, %	10	50	50	10	50	50
Mvmt Flow	33	1	2	34	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	34	0	72	34
Stage 1	-	-	-	-	34	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	-	-	4.6	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.65	-	3.95	3.75
Pot Cap-1 Maneuver	-	-	1317	-	826	917
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	874	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1317	-	824	917
Mov Cap-2 Maneuver	-	-	-	-	824	-
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	872	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.5	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	868	1317	-	-	-
HCM Lane V/C Ratio	0.003	0.002	-	-	-
HCM Control Delay (s)	9.2	7.7	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	1	27	27	10	4	5
Future Vol, veh/h	1	27	27	10	4	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	35	35	13	5	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	48	0	-	0	79	42
Stage 1	-	-	-	-	42	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1559	-	-	-	924	1029
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1559	-	-	-	923	1029
Mov Cap-2 Maneuver	-	-	-	-	923	-
Stage 1	-	-	-	-	979	-
Stage 2	-	-	-	-	985	-

Approach	SE	NW	SW
HCM Control Delay, s	0.3	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1559	-	979
HCM Lane V/C Ratio	-	-	0.001	-	0.012
HCM Control Delay (s)	-	-	7.3	0	8.7
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0

Intersection	
Int Delay, s/veh	4

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	1350	51	55	1075	27	61
Future Vol, veh/h	1350	51	55	1075	27	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Signal
Storage Length	-	0	250	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1452	55	59	1156	33	73

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1507	0	2148	726
Stage 1	-	-	-	-	1452	-
Stage 2	-	-	-	-	696	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	440	-	41	367
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	456	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	440	-	36	367
Mov Cap-2 Maneuver	-	-	-	-	36	-
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	395	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.7	99.7
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	36	367	440	-	-	-
HCM Lane V/C Ratio	0.904	0.2	0.134	-	-	-
HCM Control Delay (s)	286.1	17.2	14.4	-	-	-
HCM Lane LOS	F	C	B	-	-	-
HCM 95th %tile Q(veh)	3.3	0.7	0.5	-	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	33	2	8	56	4	12
Future Vol, veh/h	33	2	8	56	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	3	10	67	5	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	45	0	131	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	87	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1563	-	863	1026
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	936	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1563	-	857	1026
Mov Cap-2 Maneuver	-	-	-	-	857	-
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	929	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.9	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	978	1563	-	-	-
HCM Lane V/C Ratio	0.021	0.006	-	-	-
HCM Control Delay (s)	8.8	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	24	1	1	60	1	3
Future Vol, veh/h	24	1	1	60	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	83	78	78
Heavy Vehicles, %	10	50	50	10	50	50
Mvmt Flow	31	1	1	72	1	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	32	0	106	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	74	-
Critical Hdwy	-	-	4.6	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.65	-	3.95	3.75
Pot Cap-1 Maneuver	-	-	1319	-	788	920
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	841	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1319	-	787	920
Mov Cap-2 Maneuver	-	-	-	-	787	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	840	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.1	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	883	1319	-	-	-
HCM Lane V/C Ratio	0.006	0.001	-	-	-
HCM Control Delay (s)	9.1	7.7	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	2	28	52	10	3	10
Future Vol, veh/h	2	28	52	10	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	36	67	13	4	13

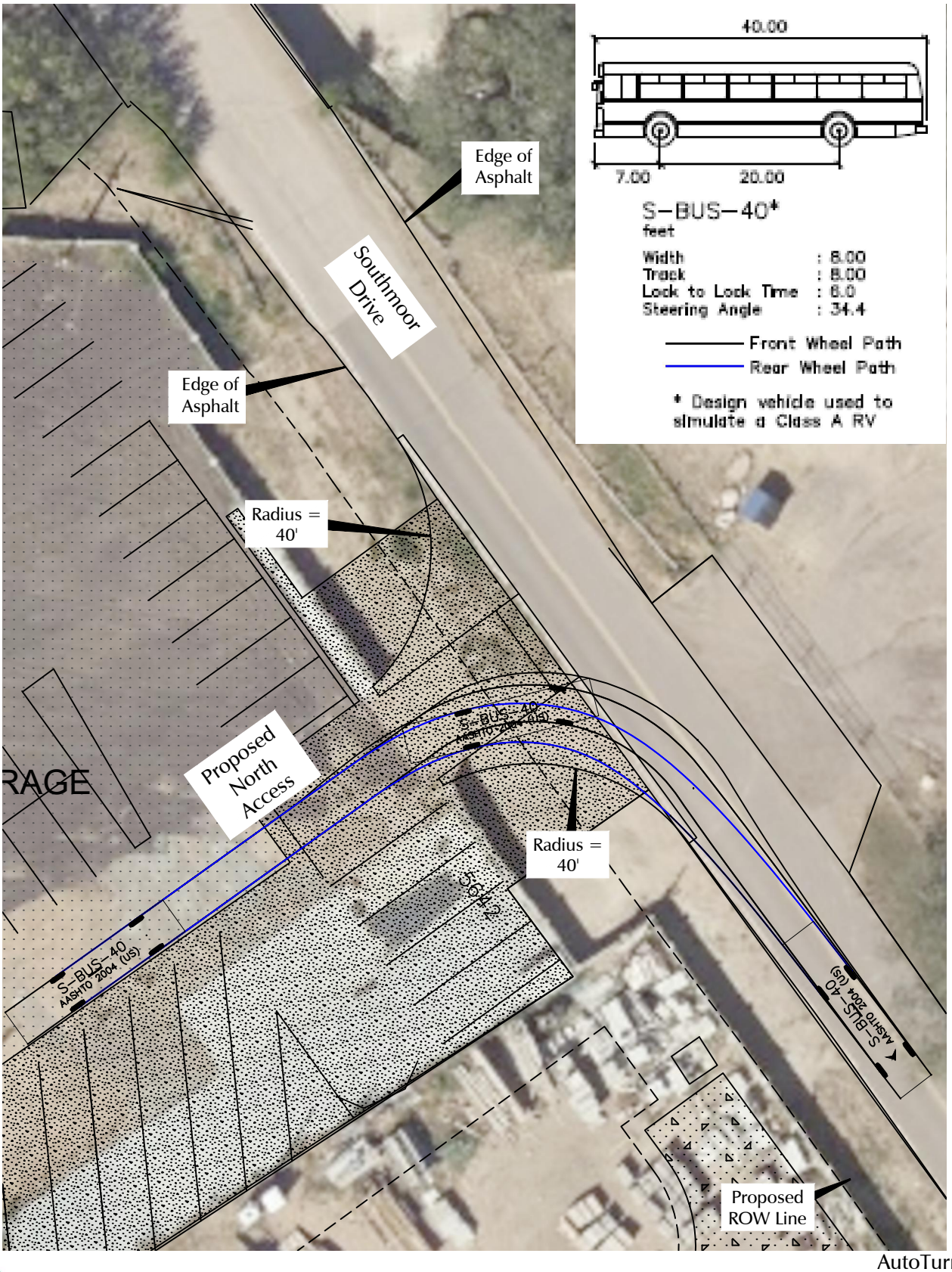
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	80	0	-	0	116	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1518	-	-	-	880	988
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1518	-	-	-	878	988
Mov Cap-2 Maneuver	-	-	-	-	878	-
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	980	-

Approach	SE	NW	SW
HCM Control Delay, s	0.5	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1518	-	960
HCM Lane V/C Ratio	-	-	0.002	-	0.017
HCM Control Delay (s)	-	-	7.4	0	8.8
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0.1

AutoTurn Exhibits

TRANSPORTATION
CONSULTANTS, INC.

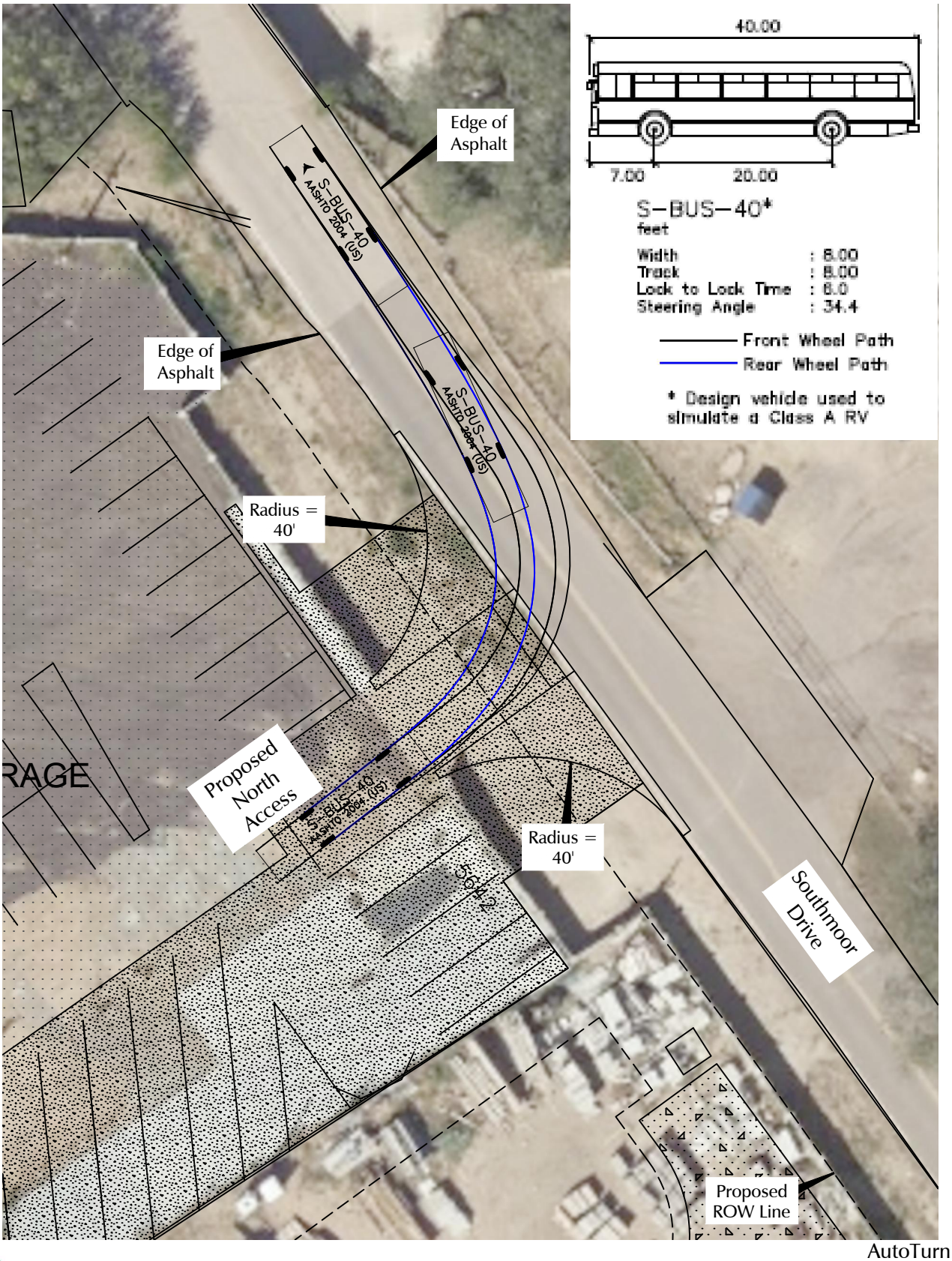


AutoTurn Exhibit 1

AutoTurn Analysis
North Access - RV Storage (Exiting to South)

Araco Concrete (LSC # 194560))

LSC TRANSPORTATION CONSULTANTS, INC.

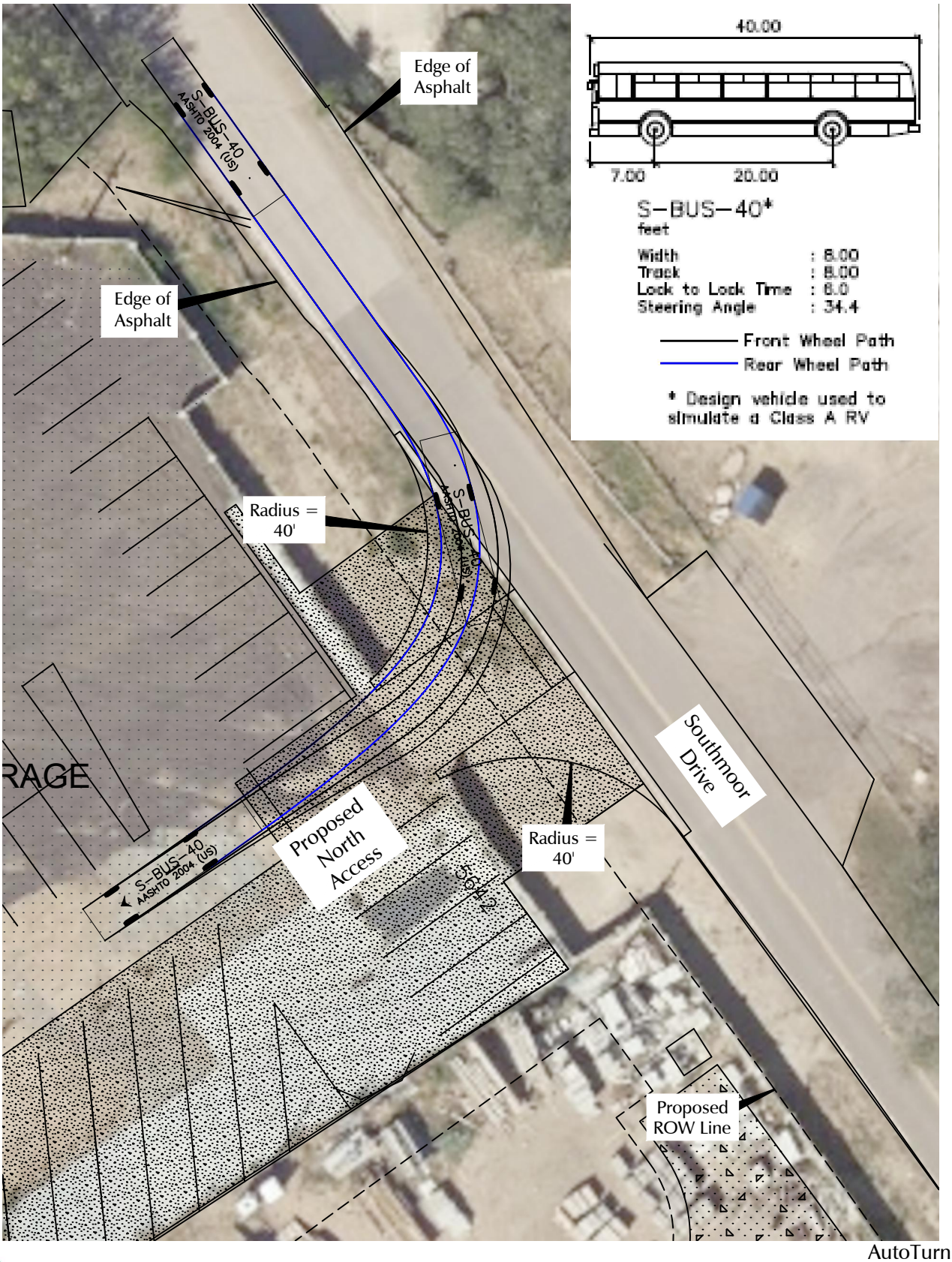


AutoTurn Exhibit 2

AutoTurn Analysis
North Access - RV Storage (Exiting to North)

Araco Concrete (LSC # 194560))

TRANSPORTATION CONSULTANTS, INC.



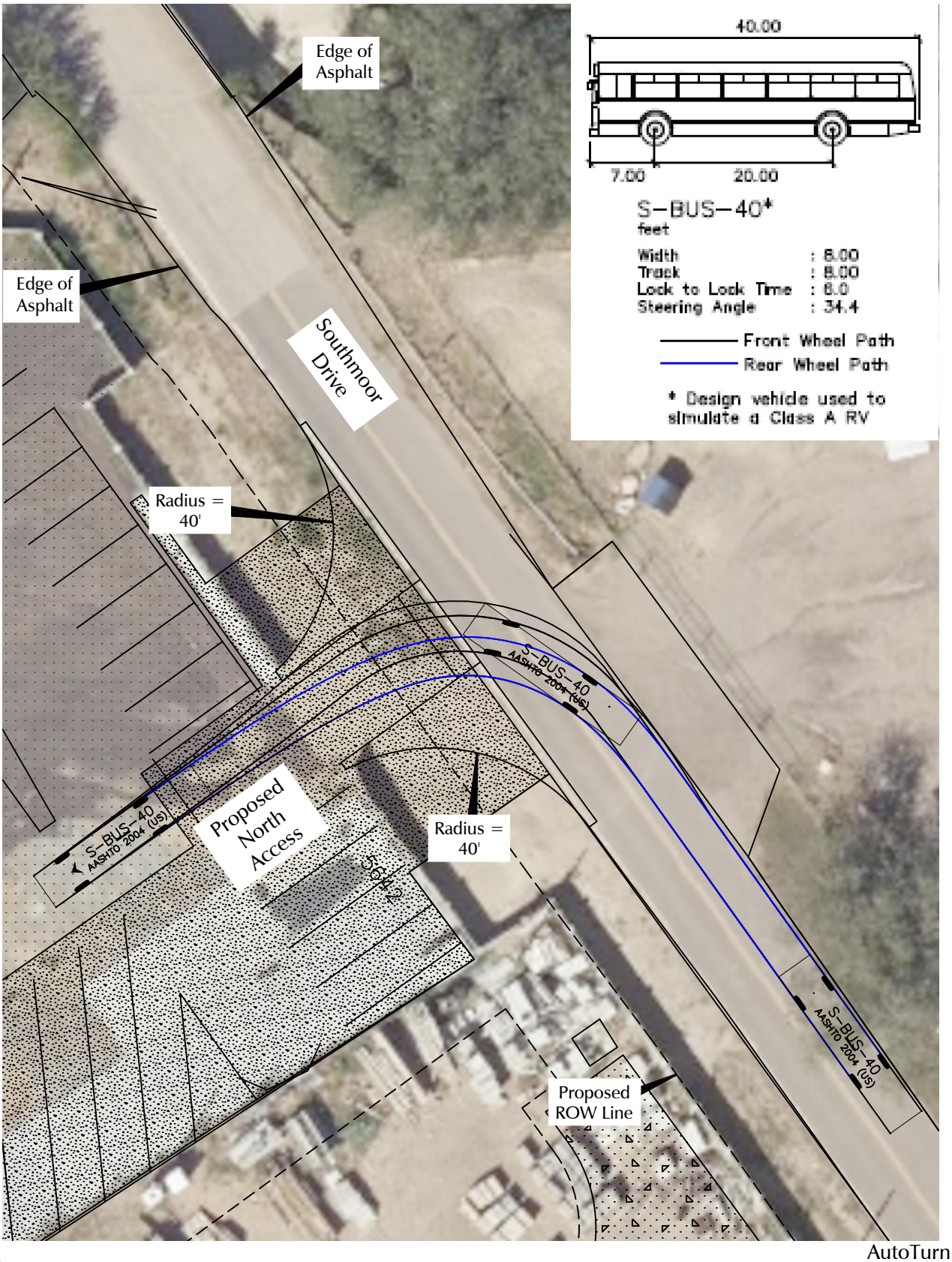
AutoTurn Exhibit 3

AutoTurn Analysis

North Access - RV Storage (Entering from North)

Araco Concrete (LSC # 194560))

TRANSPORTATION CONSULTANTS, INC.



AutoTurn Exhibit 4

AutoTurn Analysis

North Access - RV Storage (Entering from South)

Araco Concrete (LSC # 194560))

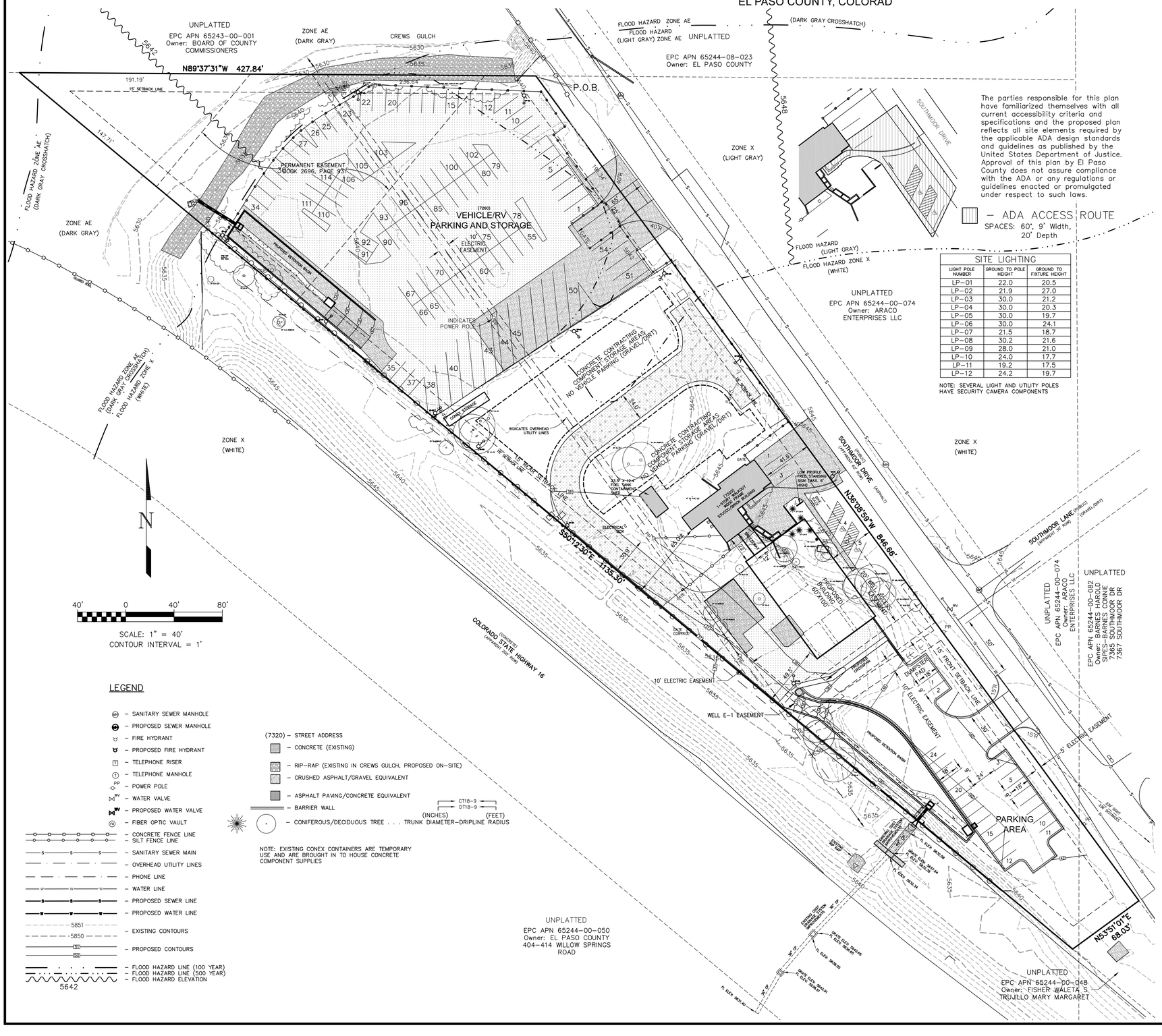
TRANSPORTATION CONSULTANTS, INC.

Site Plan

TRANSPORTATION
CONSULTANTS, INC.

ARACO CONCRETE

SITE DEVELOPMENT PLAN
EL PASO COUNTY, COLORAD

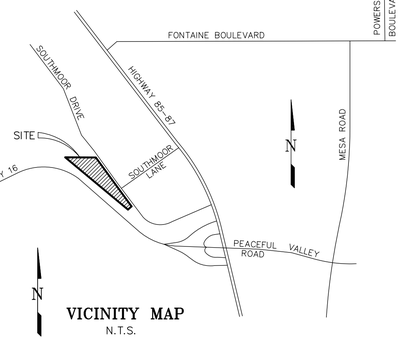


The parties responsible for this plan have familiarized themselves with all current accessibility criteria and specifications and the proposed plan reflects all site elements required by the applicable ADA design standards and guidelines as published by the United States Department of Justice. Approval of this plan by El Paso County does not assure compliance with the ADA or any regulations or guidelines enacted or promulgated under respect to such laws.

– ADA ACCESS ROUTE
SPACES: 60', 9' Width, 20' Depth

SITE LIGHTING		
LIGHT POLE NUMBER	GROUND TO POLE HEIGHT	GROUND TO FIXTURE HEIGHT
LP–01	22.0	20.5
LP–02	21.9	27.0
LP–03	30.0	21.2
LP–04	30.0	20.3
LP–05	30.0	19.7
LP–06	30.0	24.1
LP–07	21.5	18.7
LP–08	30.2	21.6
LP–09	28.0	21.0
LP–10	24.0	17.7
LP–11	19.2	17.5
LP–12	24.2	19.7

NOTE: SEVERAL LIGHT AND UTILITY POLES HAVE SECURITY CAMERA COMPONENTS



VICINITY MAP
N.T.S.

PARCEL DESCRIPTION: 7470 Southmoor Drive

A PARCEL COMBINATION of El Paso County Assessor's Parcel No. 65244–00–053, 065 and 073 being a portion of the Southwest Quarter of the Southeast Quarter (SW4SE4) of Section 24, Township 15 South, Range 66 West of the 6th P.M., as described by document (QC Deed, Book 2450, Page 633 and Deed, Book 1480, Page 431, El Paso County, Colorado records) and EXCEPT Southmoor Drive (a.k.a. Old Colorado Springs and Pueblo Road – 60' public r.o.w.), that parcel described by document (QC Deed, Book 2354, Page 912, said El Paso County records) and that parcel described by document (Court Order Acquisition CDOT Project No. S 0016(34) Parcel No. 5, Book 2696, Page 89, said records), situate in El Paso County, Colorado, more particularly described as follows:

Beginning at the intersection of the Northerly line of said Section 24's SW4SE4 with the Southwesterly right–of–way line of said Southmoor Drive (all bearings in this description are relative to said SW4SE4's Northerly line, which bears N89°37'31"W "assumed"); thence N89°37'31"W along said Northerly line, said line also being coincident with the Northerly line of said Book 2450, Page 633's parcel, 427.84 feet to a point on a Northeasterly line of said Book 2696, Page 89's parcel; thence S50°12'30"E along said parcel's Northeasterly line, 1135.30 feet to a point on the Northwesterly line of said Book 2354, Page 912's parcel; thence N53°51'01"E along said parcel's Northwesterly line, 68.03 feet to a point on said Southmoor Drive's Southwesterly right–of–way line; thence N36°08'59"W along said Southwesterly right–of–way line, said line also being coincident with the Northeasterly line of said Book 1480, Page 431's parcel and as extended Northwesterly, 846.66 feet to the Point of Beginning and the terminus point of this description;

Containing 4.201 acres (183,006 square feet), more or less.

SITE DATA:

EXISTING ZONE: M (INDUSTRIAL–OBSOLETE)

EXISTING USE: INDUSTRIAL OFFICE COMPLEX

LOT AREA REQUIREMENTS: None

SETBACK REQUIREMENTS: Front, Side and Rear Yard = 15'–0" minimum

BUILDING HEIGHT REQUIREMENTS: 50' maximum allowed; Existing Building = 18.5' average height; Proposed Building = 25' average height

BUILDING SQUARE FEET:
EXISTING BUILDING: 2,062 SQ. FT.
PROPOSED BUILDING: 6,000 SQ. FT.
COMPONENT STORAGE AREA: 16,887 SQ. FT.

LOT COVERAGE: 12.7%
Parcel Size: 4.201 acres = 183,006 SQ. FT.
Impervious: 2,800 SQ. FT.
Gravel Parking Lot: 12,000 SQ. FT.

PARKING REQUIREMENTS: Per Article 5–15.05.050 Parking
C. Public Buildings – 1 Space Per 50 Square Feet
F. All other commericial uses – 1 Space Per 200 Square Feet

Parking Required Per C. = 23
Parking Required Per F. = 6

PARKING PROVIDED: VEHICLE/RV STORAGE = 114 parking spaces (minimum size = 10' X 20', 24' minimum width drive aisles); OFFICE/MAINTENANCE = 5 parking spaces including 2 ADA spaces (1 Van Accessible); EMPLOYEE/VISITOR PARKING AREA = 24 parking spaces; TOTAL = 143 vehicle parking spaces plus 2 bicycle parking spaces

NOTES:

1. FEDERAL EMERGENCY MANAGEMENT AGENCY, Flood Insurance Rate Map Number 08041C0951 F, effective date March 17, 1997, indicates the area in the vicinity of this parcel of land to be a Zone X – light grey (Areas of 500 year flood; areas of 100 year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100 year flood), Zone AE – Dark Grey (Base flood elevations determined) and Zone AE – Dark Grey cross–hatched (floodway areas in Zone AE).
2. BENCHMARK: NGS "U 347", found NGS brass cap set in top of concrete post 0.8' above ground, 3 miles Northwest along the Denver and Rio Grande Western Railroad from the Station at Fountain, 4–1/2 poles Northwest of Milepost 85, 21' Northeast of the Northeast rail, 47.5' North of a signal case, 32.7' Southwest of a telephone pole, 2.6' Southeast of a witness post; Elevation = 5662.75 (NAVD 88 datum).
3. Water and sanitary sewer services to be provided by the WIDEFIELD WATER AND SANITATION DISTRICT. Gas service will be provided by BLACK HILLS ENERGY. Electric service will be provided by the CITY OF FOUNTAIN. Fire protection to be provided by the SECURITY FIRE PROTECTION DISTRICT.
4. For more detailed site information regarding building structure, grading and erosion control, utilities and landscaping, see compiled Bid Plan and/or Construction Plan Sets.

OWNER/SUBDIVIDER:
ARACO ENTERPRISES, LLC
Arturo Acosta (719)–576–1705
7470 Southmoor Dr
Fountain, CO 80817

FILE NO. EA–17–075

LEGEND

- (M) – SANITARY SEWER MANHOLE
- – PROPOSED SEWER MANHOLE
- – FIRE HYDRANT
- – PROPOSED FIRE HYDRANT
- T – TELEPHONE RISER
- T – TELEPHONE MANHOLE
- PP – POWER POLE
- – WATER VALVE
- – PROPOSED WATER VALVE
- FO – FIBER OPTIC VAULT
- – CONCRETE FENCE LINE
- – SILT FENCE LINE
- – SANITARY SEWER MAIN
- – OVERHEAD UTILITY LINES
- – PHONE LINE
- – WATER LINE
- – PROPOSED SEWER LINE
- – PROPOSED WATER LINE
- 5851 – EXISTING CONTOURS
- 5850 – PROPOSED CONTOURS
- – FLOOD HAZARD LINE (100 YEAR)
- – FLOOD HAZARD LINE (500 YEAR)
- 5642 – FLOOD HAZARD ELEVATION

(7320) – STREET ADDRESS
– CONCRETE (EXISTING)
– RIP–RAP (EXISTING IN CREWS GULCH, PROPOSED ON–SITE)
– CRUSHED ASPHALT/GRAVEL EQUIVALENT
– ASPHALT PAVING/CONCRETE EQUIVALENT
– BARRIER WALL
– CONIFEROUS/DECIDUOUS TREE . . . TRUNK DIAMETER–DRIPLINE RADIUS (INCHES) (FEET) CT18–9 DT18–9

NOTE: EXISTING CONEX CONTAINERS ARE TEMPORARY USE AND ARE BROUGHT IN TO HOUSE CONCRETE COMPONENT SUPPLIES

CALL BEFORE YOU DIG . . .
811
DIAL 811
48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS FOR LOCATING AND MARKING GAS, ELECTRIC, WATER AND WASTEWATER

REVISIONS

No.	Description	By	Date
1	DATA CLARIFICATION	DVH	02/21/18
2	LANDSCAPE DATA	BRH	08/05/19
3	UPDATE	BRH	10/24/19
4	COUNTY COMMENTS	BRH	06/24/20
5	COUNTY COMMENTS	DVH	03/04/21

H Scale: 1" = 40'
V Scale: N/A
Designed By: N/A
Drawn By: SLG
Checked By: DVH
Date: 08/14/17

Land Development Consultants, Inc.
PLANNING · SURVEYING
www.ldc-inc.com TEL: (719) 528-6133 FAX: (719) 528-6848
3898 MAIZELAND ROAD COLORADO SPRINGS, CO 80909

ARACO CONCRETE
SITE DEVELOPMENT PLAN
A PORTION OF THE SOUTHEAST QUARTER OF SECTION 24, TOWNSHIP 15 SOUTH, RANGE 66 WEST OF THE 6TH P.M., ELPASO COUNTY, COLORADO

Project No.: 17033

Sheet: 1 of 1

Appendix A - Trip Generation Study for RV Storage

TRANSPORTATION
CONSULTANTS, INC.

APPENDIX A – TRIP GENERATION STUDY FOR RV STORAGE

For this report "RV/Vehicle Storage" rates (shown in Table 2) are based on the results of a trip generation study consisting of trip generation data collection by LSC at several RV storage facilities in El Paso County (2018). These counts were conducted specifically to estimate a trip-generation rate for this land use, as ITE's *Trip Generation* does not include trip-generation rates specifically for RV/boat storage businesses. These rates have been used within TIS reports for other RV storage projects in El Paso County within the past couple of years. The following list contains dates and location data for these sample RV storage facility counts in El Paso County. Raw count data is attached:

- Dalby Drive, LLC RV Storage – July 20, 2018
    - 6850 Dalby Drive, Colorado Springs, CO 80923
- All About Outdoor Storage – July 24-25, 2018
    - 16140 Old Denver Road, Monument, CO 80312
- All Outside Storage – July 23, 2018
    - 835 N Washington Street, Monument, CO 80132
- Falcon Meadow Campground (2 site accesses) – July 2018
    - 11150 US 24, Peyton, CO 80831

DEVIATION

TRANSPORTATION
CONSULTANTS, INC.

Planning and Community Development Department
2880 International Circle
Colorado Springs, Colorado 80910
Phone: 719.520.6300
Fax: 719.520.6695
Website www.elpasoco.com

DEVIATION REQUEST AND DECISION FORM

Updated: 6/26/2019

PROJECT INFORMATION

Project Name :	Araco Concrete
Schedule No.(s) :	6524400085
Legal Description :	TR IN SE4 24-15-66 DES AS FOLS: BEG AT INTERSEC OF NLY LN OF SW4SE4 SEC 24 WITH SWLY R/W OF SOUTHMOOR DR, TH N89<3731W ALG SD NLY LN 427.84 FT TO A PT ON NELY LN OF MESA RIDGE PARKWAY BK 2696-89, TH S50<1230E ALG MESA RIDGE PARKWAY 1135.30 FT TO A PT ON NWLY LN OF BK 2354-912, TH N53<5101E 68.03 FT TO SWLY R/W OF SOUTHMOOR DR, TH N36<0859W ALG SWLY R/W 846.66 FT TO POB

APPLICANT INFORMATION

Company :	Araco Enterprises, LLC
Name :	Arturo Acosta
	☒ Owner ☐ Consultant ☐ Contractor
Mailing Address :	ARACO Enterprises 7470 Southmoor Drive Fountain, CO 80817
Phone Number :	(719) 576-1705
FAX Number :	N/A
Email Address :	arturo@aracoconcrete.com

ENGINEER INFORMATION

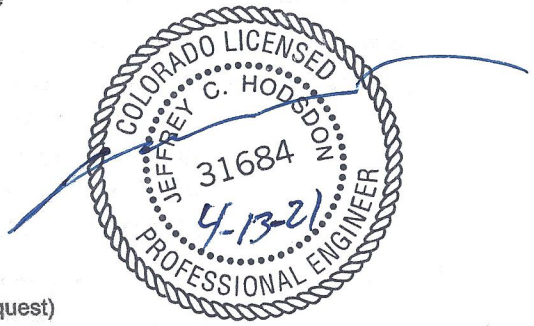
Company :	LSC Transportation Consultants, Inc.		
Name :	Jeffrey C. Hodsdon	Colorado P.E. Number :	31684
Mailing Address :	2504 E. Pikes Peak Ave, Suite 304, Suite 304 Colorado Springs, CO 80909		
Phone Number :	719-633-2868		
FAX Number :	719-633-5430		
Email Address :	jeff@LSCtrans.com		

OWNER, APPLICANT, AND ENGINEER DECLARATION

To the best of my knowledge, the information on this application and all additional or supplemental documentation is true, factual and complete. I am fully aware that any misrepresentation of any information on this application may be grounds for denial. I have familiarized myself with the rules, regulations and procedures with respect to preparing and filing this application. I also understand that an incorrect submittal will be cause to have the project removed from the agenda of the Planning Commission, Board of County Commissioners and/or Board of Adjustment or delay review until corrections are made, and that any approval of this application is based on the representations made in the application and may be revoked on any breach of representation or condition(s) of approval.

Signature of owner (or authorized representative) — Date: 04-13-21

Engineer's Seal, Signature
And Date of Signature



DEVIATION REQUEST (Attach diagrams, figures, and other documentation to clarify request)

Access to a Collector Street (1/4/2020): A deviation from the standards of or in Sections **2.2.5.D** and **2.3.2 (Table 2-7)** of the Engineering Criteria Manual (ECM) is requested. Requests for access are reviewed by the ECM Administrator as per ECM Section 2.2.4.B.4. The request is for driveway access to Southmoor Drive, an Urban Non-Residential Collector, in the form of five head-in parking spaces adjacent to the street right-of-way (two accessible and three standard) in front of the existing building. These basically operate as "on-street" parking spaces, but are set back from the roadway (and are outside the right-of-way). The parking configuration is depicted in the attached Deviation Exhibits. The exhibit set includes an angled parking option for the two accessible spaces.

A deviation from the standards of or in Sections **2.2.5.D** of the Engineering Criteria Manual (ECM) is requested.

Identify the specific ECM standard which a deviation is requested:

2.3.2 Design Standards by Functional Classification
Table 2-7: Roadway Design Standards for Urban Collectors and Locals
Criteria for an Urban Non-Residential Collector Roadway: No access permitted.

Standard 2.3.2 does not permit access on Urban Non-Residential Collector roadways. This standard is reflected in ECM Table 2-7 (Roadway Design Standards for Urban Collectors and Locals).

2.2.4.B,4 Roadway Functional Classifications and Urban/Rural Designations – Urban Roadways - Non-Residential Collector
Intersection and parcel access locations and design are reviewed by the ECM Administrator to ensure roadway objectives are being met.

State the reason for the requested deviation:

Five head-in parking spaces (two accessible and three standard) in front of the existing building are proposed to remain. These are requested to remain in place for customers. These are important to the business operation. The accessible spaces would provide better accessibility for disabled persons.

Explain the proposed alternative and compare to the ECM standards (May provide applicable regional or national standards used as basis):

- Table 2-7: Roadway Design Standards for Urban Collectors and Locals indicates for an Urban Non-Residential Collector Roadway: No access permitted.
- The standards indicate *"Where no local public or private road exists, temporary or partial turn movement parcel access may be permitted."*
- Collector access Criteria indicates: This criterion indicates that single-family residence access to major collector roadways is not permitted. However, commercial access is requested to an Urban Non-Residential Collector.
- Intersection and parcel access locations and design are reviewed by the ECM Administrator to ensure roadway objectives are being met.

Explain the proposed alternative and compare to the ECM standards (May provide applicable regional or national standards used as basis):

Although Southmoor Drive is classified by the ECM as a Collector (design ADT of 3,000 vehicles/day), the roadway functions similar to a Local roadway and has a design ADT of 750 vehicles/day. Existing traffic volumes on Southmoor Drive adjacent to the site reflect an actual ADT of approximately 420 vehicles/day.

The head-in parking spaces are set back from the edge of the roadway. This provides area for backing maneuvers between the parking stalls and the edge of the street. Please refer to the deviation exhibits. The three standard spaces on the north are positioned such that backing maneuvers can occur without encroaching in the street. Autoturn analysis of the accessible spaces at 90-degree angle indicate some encroachment into the roadway with a backing maneuver. If the spaces are angled, the turning paths show backing could occur without encroachment (off the roadway). Please refer to the attached deviation exhibits.

LIMITS OF CONSIDERATION

(At least one of the conditions listed below must be met for this deviation request to be considered.)

☐ The ECM standard is inapplicable to the particular situation.

☒ Topography, right-of-way, or other geographical conditions or impediments impose an undue hardship and an equivalent alternative that can accomplish the same design objective is available and does not compromise public safety or accessibility.

☐ A change to a standard is required to address a specific design or construction problem, and if not modified, the standard will impose an undue hardship on the applicant with little or no material benefit to the public.

Provide justification:

The shape of the site limits the design of the parking areas. The business needs the spaces in front for the viability of the business. The company employs a minimum of 24 office staff members and field employees who will travel to/from the site for work via private vehicle. Crews then travel to job sites in company vehicles. The number of available parking spaces within the southern portion of the property (26) would not be able to accommodate more than two additional visiting vehicles.

As shown in the deviation exhibits, the parking lot provides area for backing maneuvers between the parking stalls and the edge of the street. Also, the adjacent Southmoor Drive carries low (local level) volumes and that will most likely not change.

CRITERIA FOR APPROVAL

Per ECM section 5.8.7 the request for a deviation may be considered if the request is **not based exclusively on financial considerations**. The deviation must not be detrimental to public safety or surrounding property. The applicant must include supporting information demonstrating compliance with **all of the following criteria**:

The deviation will achieve the intended result with a comparable or superior design and quality of improvement.

Two of the five proposed parking spaces at the front of the property adjacent to Southmoor Drive are accessible spaces. These head-in parking spaces allow disabled employees, customers, and/or visitors easier access to the company's main building. The three standard parking spaces would accommodate customers and visitors. As shown in the deviation exhibits, the head-in spaces are set back from the roadway, which leaves a "buffer" area sufficient for backing maneuvers to occur between the parking stalls and the edge of the street. Please refer to the deviation exhibits.

The deviation will not adversely affect safety or operations.

As shown in the deviation exhibits, the head-in spaces are set back from the roadway, which leaves a "buffer" area sufficient for backing maneuvers to occur between the parking stalls and the edge of the street. Also, the adjacent Southmoor Drive carries low (local level) volumes and that will most likely not change.

LSC recommends utilizing the angle, head-in parking configuration for the accessible spaces and adding an edge stripe on Southmoor Drive along with a striped "buffer area" to guide motorists backing out of spaces.

The deviation will not adversely affect maintenance and its associated cost.

The proposed parking spaces in front of the property would be maintained by the applicant.

The deviation will not adversely affect aesthetic appearance.

Spacing will not negatively affect the aesthetic or general appearance of the road corridor. The deviation is consistent with the character of the area.

The deviation meets the design intent and purpose of the ECM standards.

The existing parking spaces along Southmoor Drive would meet the design intent and purpose of ECM standards if they were to remain, as proposed in this deviation. Traffic volumes on Southmoor Drive are relatively low, vehicles would be able to back out of the proposed parking spaces without impeding opposing through vehicles on Southmoor Drive.

The deviation meets the control measure requirements of Part I.E.3 and Part I.E.4 of the County's MS4 permit, as applicable.

The requested deviation meets control measure requirements of Part I.E.3 and Part I.E.4 of the MS4 Permit. Grading and Erosion Control Plans and SWMP Report will provide protection of existing conditions and erosion-control measures per standards.

Construction of the roadways and development of the site will be required to meet the above sections of the MS4 permit. The spacing deviation requested in itself does not involve any disturbance.

REVIEW AND RECOMMENDATION:

Approved by the ECM Administrator
This request has been determined to have met the criteria for approval. A deviation from Section _____ of the ECM is hereby granted based on the justification provided.

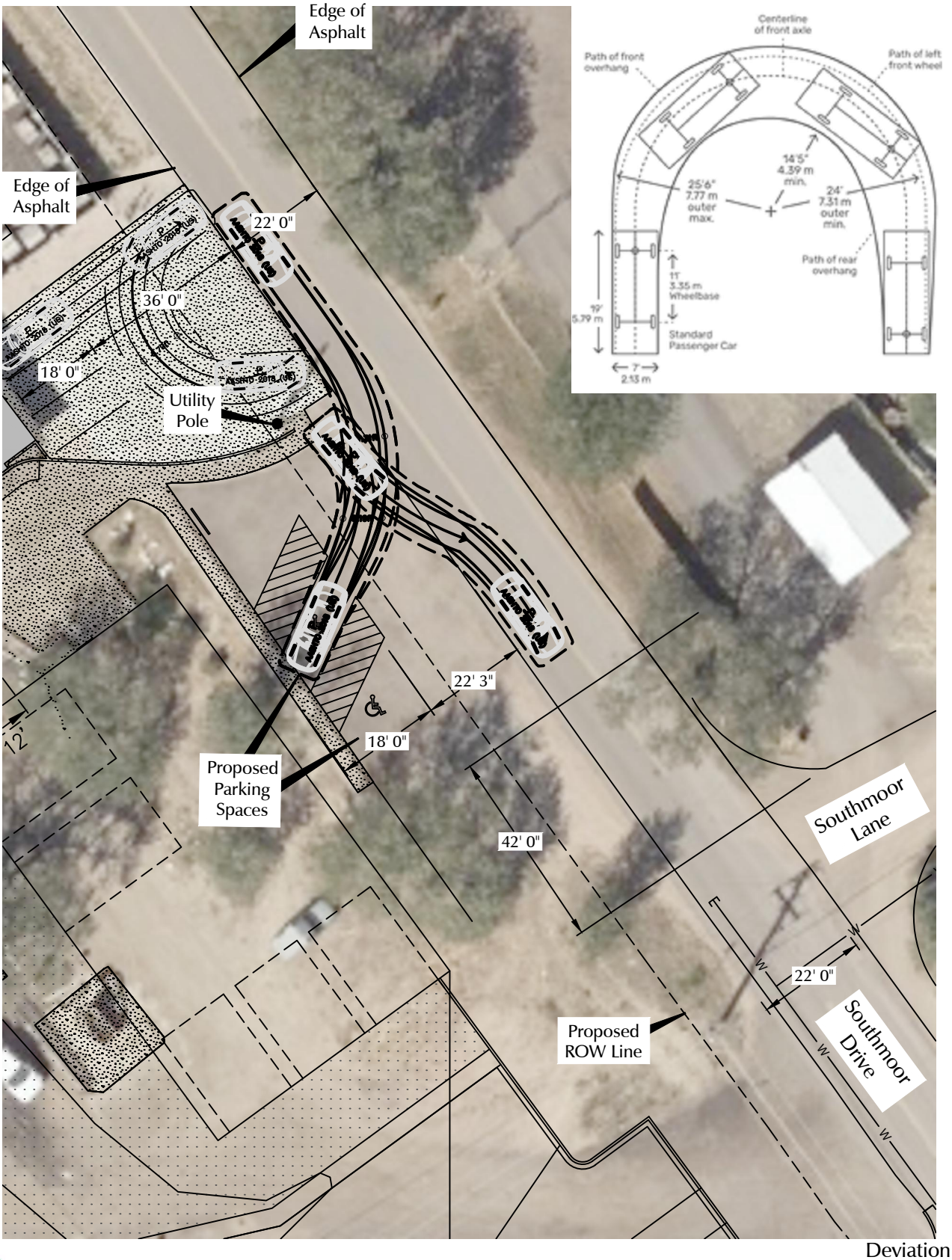
Denied by the ECM Administrator
This request has been determined not to have met criteria for approval. A deviation from Section _____ of the ECM is hereby denied.

ECM ADMINISTRATOR COMMENTS/CONDITIONS:

PCD File No. _____

Exhibits

TRANSPORTATION
CONSULTANTS, INC.

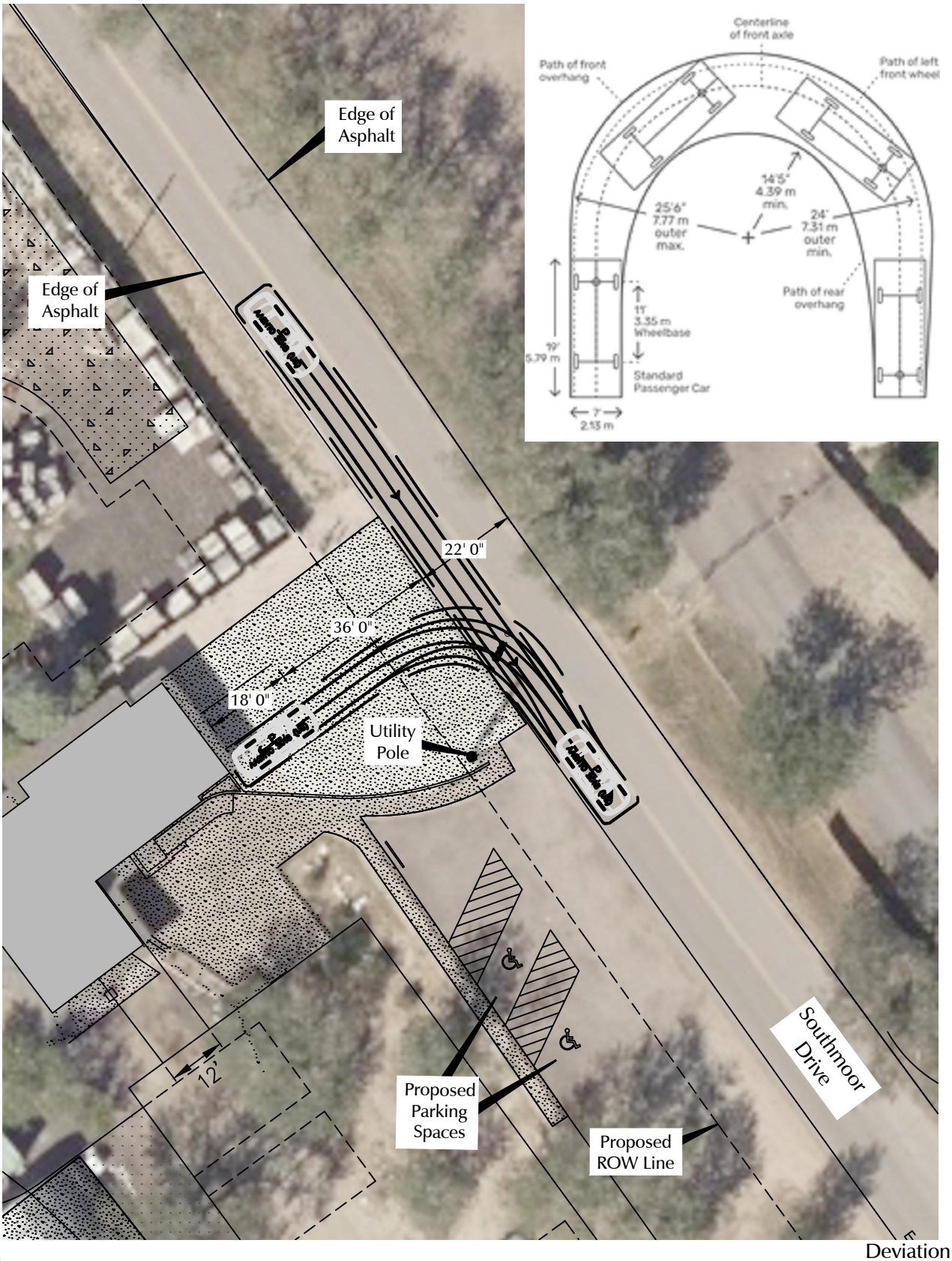


Deviation Exhibit 1

Parking Deviation
60-Degree Parking Spaces

Araco Concrete (LSC # 194560))

LSC TRANSPORTATION CONSULTANTS, INC.

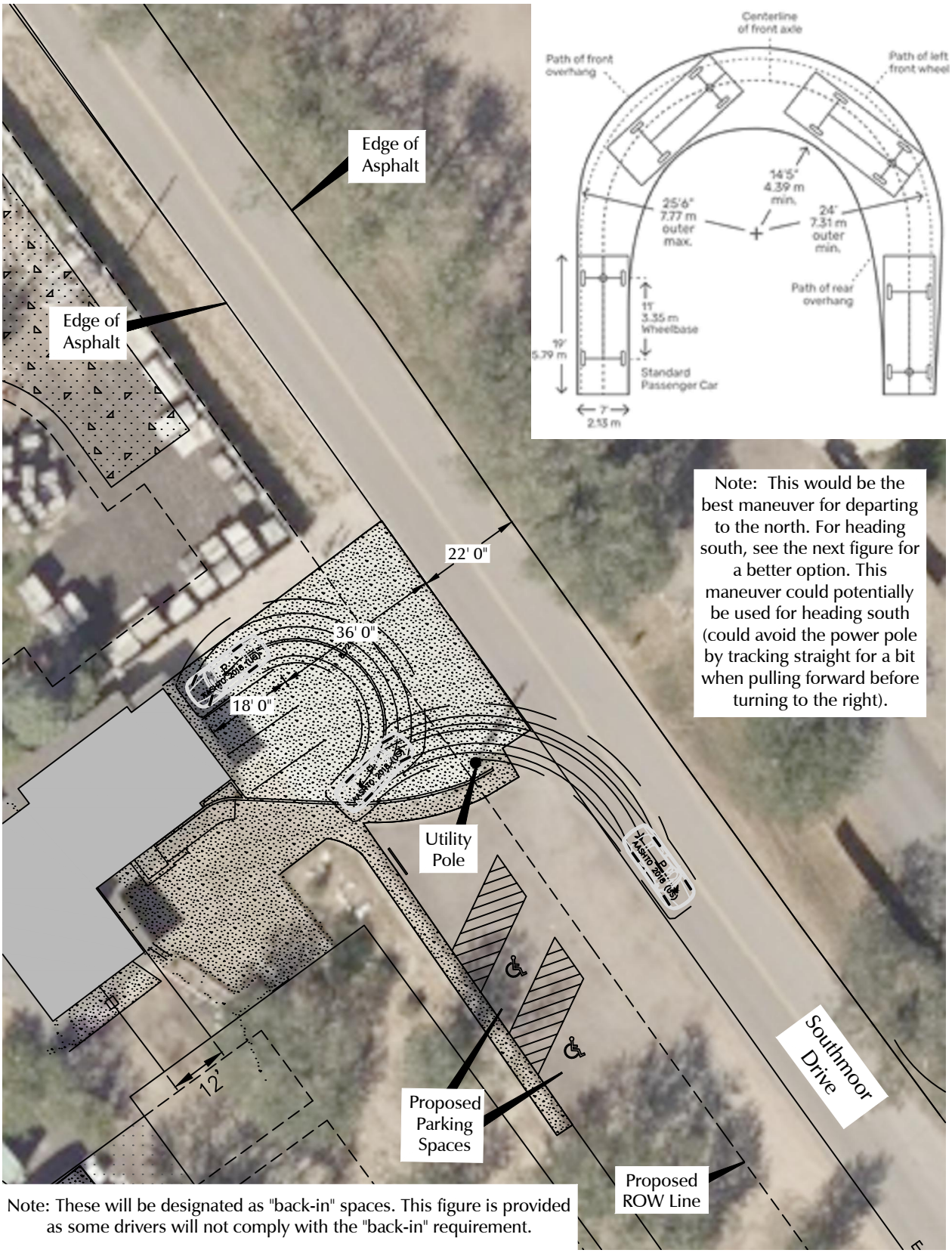


Deviation Exhibit 2

Parking Deviation - North Parking Lot
Back-In Maneuver from North

Araco Concrete (LSC # 194560))

LSC TRANSPORTATION CONSULTANTS, INC.

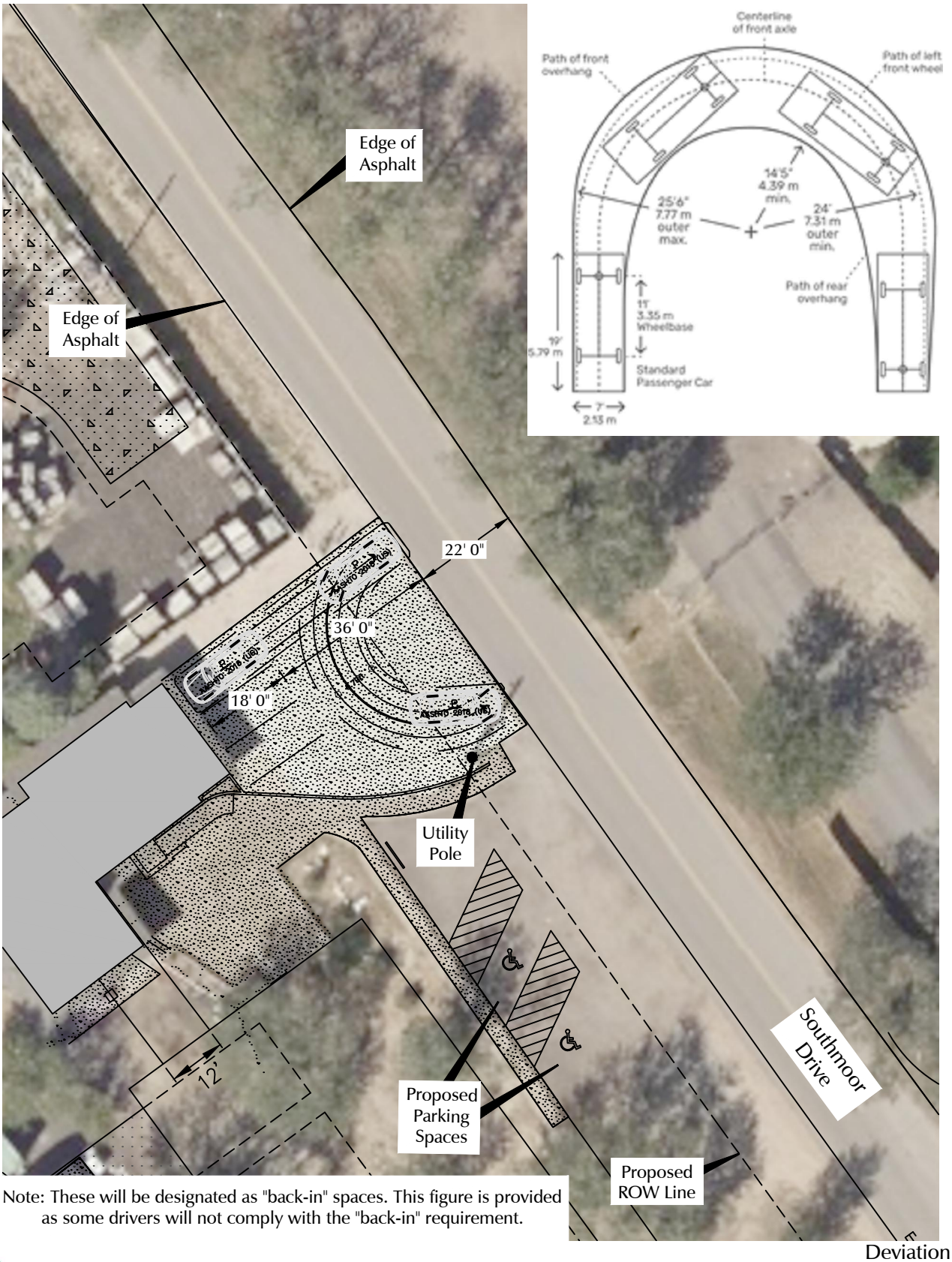


Deviation Exhibit 3

Parking Deviation - North Parking Lot
Back-Out and Pull Fwd (Exit to South, Space #1)

Araco Concrete (LSC # 194560))

LSC TRANSPORTATION CONSULTANTS, INC.



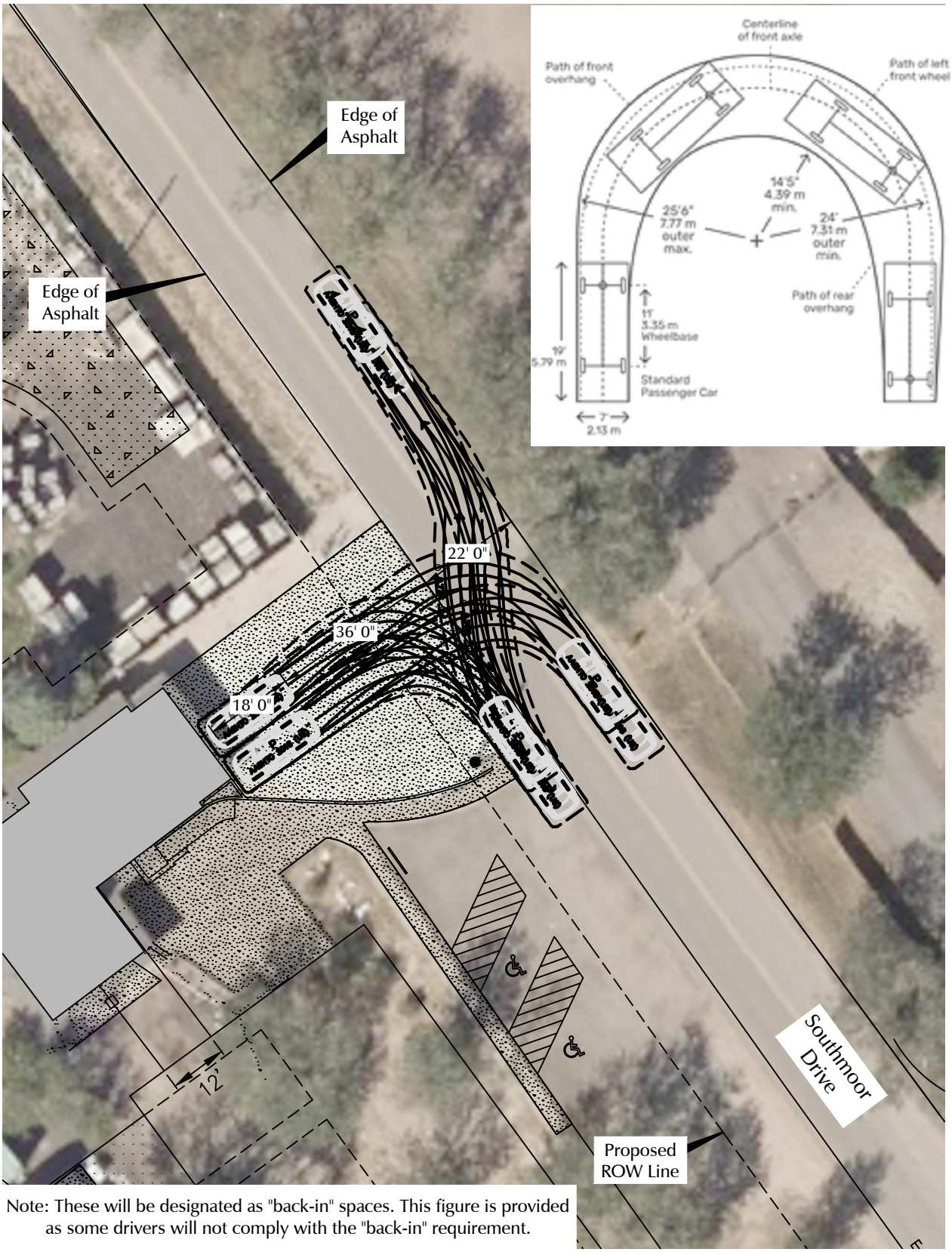
Note: These will be designated as "back-in" spaces. This figure is provided as some drivers will not comply with the "back-in" requirement.

Deviation Exhibit 4

Parking Deviation - North Parking Lot
Back-Out Maneuver to Head South (Space #1)

Araco Concrete (LSC # 194560))

LSC TRANSPORTATION CONSULTANTS, INC.



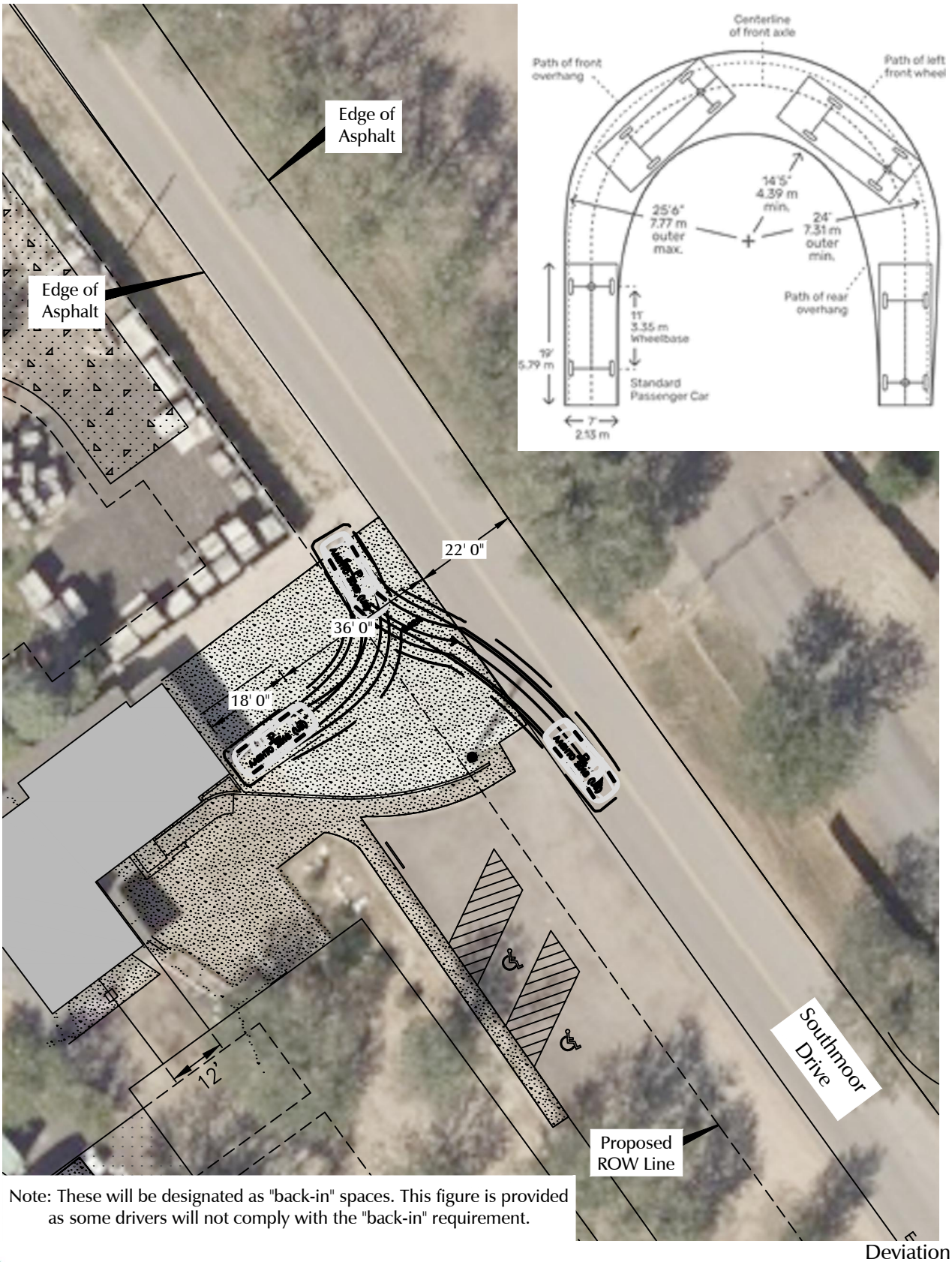
Note: These will be designated as "back-in" spaces. This figure is provided as some drivers will not comply with the "back-in" requirement.

Deviation Exhibit 5

Parking Deviation - North Parking Lot
Pull-In from S, Back-Out to Head N (Spaces 2+3)

Araco Concrete (LSC # 194560))

LSC TRANSPORTATION CONSULTANTS, INC.



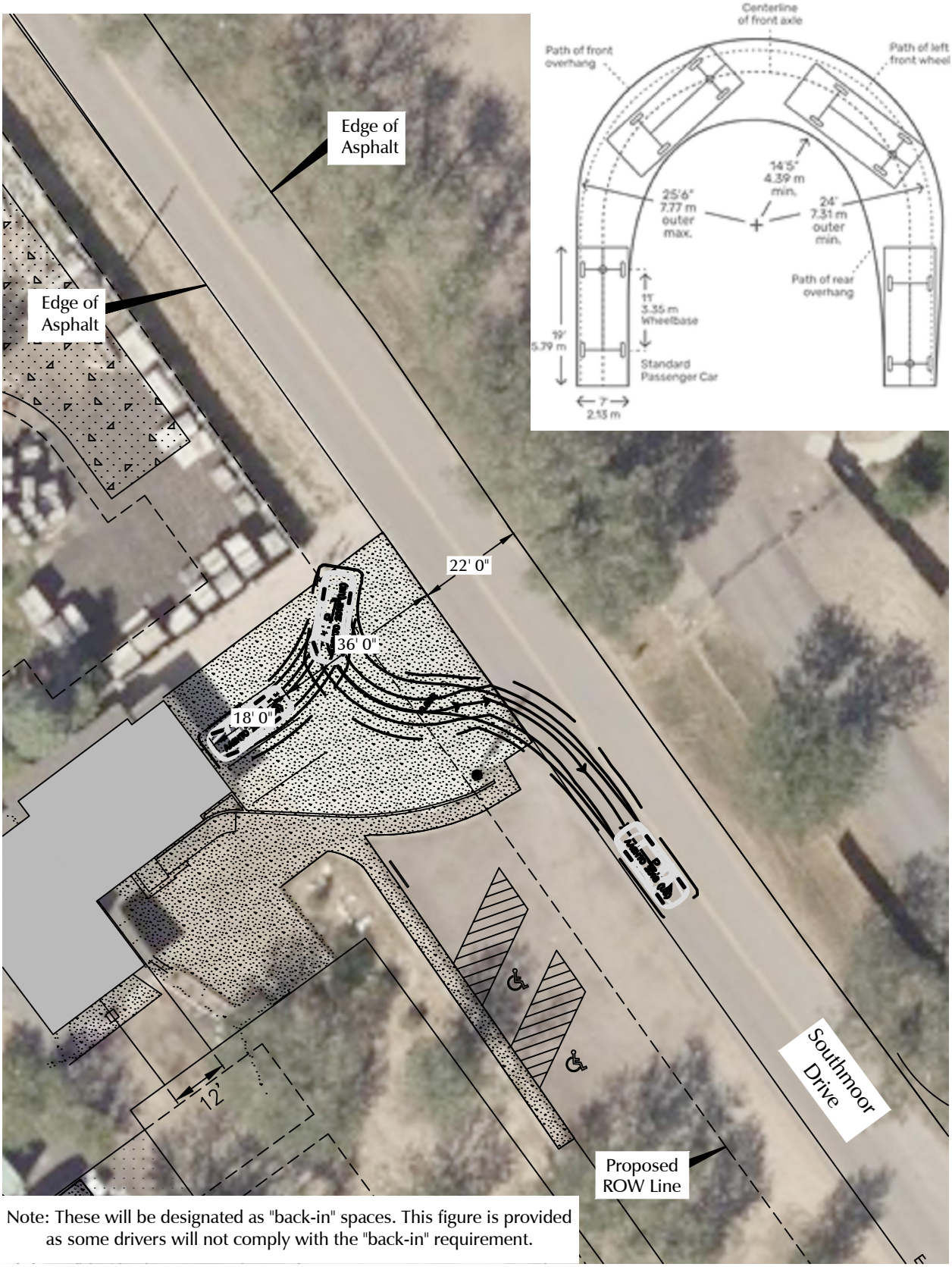
Note: These will be designated as "back-in" spaces. This figure is provided as some drivers will not comply with the "back-in" requirement.

Deviation Exhibit 6

Parking Deviation - North Parking Lot
Back-Out Maneuver to Head South (Space #3)

Araco Concrete (LSC # 194560))

LSC TRANSPORTATION CONSULTANTS, INC.



Note: These will be designated as "back-in" spaces. This figure is provided as some drivers will not comply with the "back-in" requirement.

Deviation Exhibit 7

Parking Deviation - North Parking Lot
Back-Out Maneuver to Head South (Space #2)

Araco Concrete (LSC # 194560))

TRANSPORTATION CONSULTANTS, INC.

Responses
to
TIS Comments

TRANSPORTATION
CONSULTANTS, INC.

1 The site plan & letter of intent indicates 114 spaces. Revise accordingly.

- Evaluation of the access points with respect to the *ECM* Criteria contained in Section 2.4.1.; and
- Pedestrian & bicycle facilities.

2 This is a site development plan not a subdivision. Please revise.

LAND USE AND ACCESS

The 4.2-acre ARACO Concrete 3 subdivision is located at 7470 Southmoor Drive in unincorporated El Paso County, Colorado. Access is to the adjacent Southmoor Drive. The proposed site improvements plan showing the proposed building, on-site circulation, and proposed access points is attached.

The current concrete services business operates out of the 2,000 square foot building on the site. The company employs eight office staff members and approximately 10-16 field employees who will travel to/from the site for work via private vehicle. Crews then travel to job sites in company vehicles. This site is not a concrete batch plant and no concrete mixer trucks are dispatched from this site.

The proposed site plan shows the addition of a 6,000 square foot building. Although this will increase the building square footage on-site from 2,000 to 8,000 square feet, the new building is planned to be used for storage and as a shop. It will not contain business offices. There is also outside storage for contractor equipment, which will remain. The parking area south of the building will be formalized and access to this lot will be better defined. The head-in parking in front of the existing building is proposed to remain.

A 97-space RV & vehicle storage lot is also proposed on the north side of the site.

4 Per staff's discussion with the engineering manager, only 2 access points will be allowed to the site as Southmoor Drive is a collector roadway. Comments have been provided on the site plan to limit the access points off of Southmoor. Revise the narrative accordingly.

ROAD AND TRAFFIC CONDITIONS

The attached site plan shows the str[illegible] streets serving the site are identified b[illegible]scription of each:

US Highway 85/87 (US Hwy 85/87) is classified as NR-A (Non-Rural Principal Highway) extending north from I-25 in Fountain to the City of Colorado Springs. In the vicinity of the site, US Hwy 85/87 has a posted speed limit of 50 miles per hour (mph) and is a four-lane urban section with curb and gutter. The T-intersection of US Hwy 85-87/Southmoor Drive is stop sign-controlled with auxiliary turn lanes.

Southmoor Drive is classified as a two-lane Collector roadway adjacent to the site by the El Paso County road inventory. The county section only extends between 425 feet south of River Drive to the point where the street turns to the east (from which point it extends east to US Highway 85). The posted speed limit on Southmoor Drive is 25 mph, and the paved roadway width is about 22 feet. The section north of the County portion is in the City of Fountain. The City of Fountain Traffic Master Plan shows the “Collector” portion of Southmoor Drive beginning at Carson Boulevard and extending north. There is another County-owned/maintained section north of Lovitt Lane.

LSC Responses to Araco Concrete TIS Redline Comments

Page: 2

Number: 1 Author: Daniel Torres Subject: Callout Date: 8/25/2020 07:40:51

The site plan & letter of intent indicates 114 spaces. Revise accordingly.

Author: jchodsdon Subject: Sticky Note Date: 4/6/2021 22:14:03

LSC Response: The text has been updated accordingly.

Number: 2 Author: Daniel Torres Subject: Callout Date: 8/24/2020 10:27:24

This is a site development plan not a subdivision. Please revise.

Author: jchodsdon Subject: Sticky Note Date: 4/6/2021 22:14:12

LSC Response: The text has been updated accordingly.

Number: 3 Author: Daniel Torres Subject: Highlight Date: 8/24/2020 10:26:27

e subdivision

Number: 4 Author: Daniel Torres Subject: Text Box Date: 8/25/2020 07:39:57

Per staff's discussion with the engineering manager, only 2 access points will be allowed to the site as Southmoor Drive is a collector roadway. Comments have been provided on the site plan to limit the access points off of Southmoor. Revise the narrative accordingly.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:28:16

LSC Response: A deviation has been prepared (and is included with this submittal) to request that the parking in front be allowed to remain. The text has been updated to note this.

Please indicate in your narrative how you created your trip generation for the Vehicle/RV/Boat storage at it is not listed in the ITE land use codes. If using previous counts conducted by LSC at other facilities, then please provide information regarding those studies such as dates, location etc. 1

Existing Traffic Volumes

Vehicular turning-movement counts were conducted at the intersection of Southmoor Drive/Araco Concrete parking access/Southmoor Lane on Wednesday, August 14, 2019 from 6:30-8:30 a.m. and from 4:00-6:00 p.m. Count data is attached in Appendix Table 2 and is shown in Figure 2. The current volumes on the adjacent section of Southmoor Drive are light.

TRIP GENERATION

Estimates of the existing vehicle-trip generation and trip generation following the implementation of the site plan have been made using the nationally published trip generation rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Corresponding trip generation rates from ITE Land Use Category "180 – Specialty Trade Contractor" have been used to develop the trip-generation estimates for exiting business and following the site improvements.

Proposed land uses include 2 recreational vehicle, automobile, and boat storage; contractor's equipment yard; light manufacturing (pre-fabricated concrete components); general office; outside storage; parking lots; vehicle repair garage; and commercial warehouse.

Table 2 and Figure 3 (attached) present estimates of projected site trip generation. The site plan (attached) shows the specifics of the proposed site improvements. Existing count data have also been used in the trip estimate. The table shows estimates of the existing trip generation of the business, based on traffic count data and ITE rates with "building square footage" as the predictor variable.

The entire site is expected to generate about 102 vehicle-trips on the average weekday (one half entering and one half exiting in a 24-hour period) following expansion. During the morning peak hour, 12 vehicles are projected to enter the site while 5 are projected to exit. Approximately 7 vehicles would enter and 14 vehicles would exit the site during the evening peak hour.

The table shows estimates of the post-project trip generation. The estimate based on ITE rates with "building square footage" as the predictor variable (the typical method) is presented. However, based on the existing counts ("snapshot" of the trip generation), this estimate may be low for this particular operation. The potential increase in the number of employees is not known. However, any increase in employees is not anticipated to be proportionate to the increase in
space rathe

Vehicle repair garage has not been included in the trip generation. Please give reasoning in your narrative for not including it as the letter of intent indicates that part of the 6000 sq. ft addition is for commercial vehicle repair. Is it more conservative to use Specialty Trade Contractor? if not then vehicle repair should be accounted for in your trip distribution. Please discuss with the applicant how many service bays they are proposing and what sq. ft is intended for the vehicle repair garage. Please address and revise accordingly. 3

LEVEL OF SE

Level of se
intersection
delay. LOS F indicates a high level of congestion or delay. Table 1 shows the level of service delay ranges for signalized and unsignalized intersections.

Page: 3

Number: 1 Author: Daniel Torres Subject: Callout Date: 8/24/2020 14:23:50

Please indicate in your narrative how you created your trip generation for the Vehicle/RV/Boat storage at it is not listed in the ITE land use codes. If using previous counts conducted by LSC at other facilities, then please provide information regarding those studies such as dates, location etc.

Author: jchodsdon Subject: Sticky Note Date: 4/6/2021 22:44:32

LSC Response: Included as requested.

Number: 2 Author: Daniel Torres Subject: Highlight Date: 8/24/2020 11:09:16

: recreational vehicle, automobile, and boat storage

Number: 3 Author: Daniel Torres Subject: Callout Date: 4/1/2021 09:27:42

Vehicle repair garage has not been included in the trip generation. Please give reasoning in your narrative for not including it as the letter of intent indicates that part of the 6000 sq. ft addition is for commercial vehicle repair. Is it more conservative to use Specialty Trade Contractor? if not then vehicle repair should be accounted for in your trip distribution. Please discuss with the applicant how many service bays they are proposing and what sq. ft is intended for the vehicle repair garage. Please address and revise accordingly.

Author: jchodsdon Subject: Sticky Note Date: 4/6/2021 22:47:09

LSC Response: The repair garage has been removed from the letter of intent and references have been removed from this report.

1 It is indicated that the LOS will remain LOS F. Is the existing LOS F? If so then please state it.

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	≤ 10.0
B	10.1 – 20.0	10.1 – 15.0
C	20.1 – 35.0	15.1 – 25.0
D	35.1 – 55.0	25.1 – 35.0
E	55.1 – 80.0	35.1 – 50.0
F	≥ 80.1	≥ 50.1

[1] For unsignalized intersections, if V/C is > 1.00, then LOS is LOS F regardless of the projected average control delay per vehicle

All approaches at both site access points currently operate at and are projected to remain at LOS A or better following site buildout. Please refer to the detailed Synchro reports (attached) for additional details. Figure 4 contains the short-term total traffic volumes and LOS results for each study area intersection, which consists of existing background traffic (from Figure 2) plus projected site-generated traffic (from Figure 3).

The northeast-bound left-turn at the intersection of US Hwy 85-87/Southmoor Drive is projected to remain LOS F during the afternoon peak hour. However, analysis results show a volume-to-capacity (v/c) ratio to be well below 1.00 for the eastbound through turning movement during all short-term traffic scenarios. This is not uncommon for minor street approaches on arterial streets to operate at levels of service E or even F during peak periods, as signal timings would be adjusted to favor heavier northbound and southbound through volumes on US Hwy 85-87. Despite Synchro's reported LOS F (HCM methodology) for the northeast-bound left-turning movement during the afternoon peak hour, gaps created from the nearby signal at US Hwy 85-87/Mesa Ridge Parkway would allow side street vehicles to turn left onto US Hwy 85-87.

It is our understanding that the intersection of US Hwy 85/87 with Carson Avenue has been identified as a future signalized intersection (Destination 2025 Priority Project #186) on the City of Fountain's *Major Thoroughfare Plan*. As such, northbound vehicles exiting the site may decide to travel north via Southmoor Drive to access US Hwy 85/87 via the future signal at Carson Avenue rather than turning from the stop sign-controlled Southmoor Drive intersection with US Hwy 85/87.

2 Please also include discussion of your trip distribution in your narrative. include your reasoning for the trip distribution.

Page: 4

Number: 1 Author: Daniel Torres Subject: Callout Date: 8/25/2020 08:05:31

It is indicated that the LOS will remain LOS F. Is the existing LOS F? If so then please state it.

Author: jchodsdon Subject: Sticky Note Date: 4/6/2021 22:49:49

LSC Response: The text has been updated accordingly.

Number: 2 Author: Daniel Torres Subject: Text Box Date: 8/26/2020 11:36:58

Please also include discussion of your trip distribution in your narrative. include your reasoning for the trip distribution.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:28:56

LSC Response: Text has been updated to include directional distribution discussion.

There is an additional access point shown near the existing building. As stated before and on the site development plan, only 2 access points would be allowed. Please be sure to update your site plan and your analysis as necessary if the location of the two proposed access points change. 1

SITE ACCESS PLAN

ECM Criteria for Access Design

Two site access points will be allowed from the adjacent Southmoor Drive (Collector roadway). The following summarizes *Engineering Criteria Manual* Section 2.4.1 access criteria, which states the following five access design guidelines:

- Adequate spacing
- Proper alignments
- Clear sight distances
- Coordinated widths with its intended use
- Clearances from intersections

The following sections address each of these criteria for access-point design throughout the site.

Adequate Spacing

Southmoor Drive is a Collector roadway. The *ECM* indicates that accesses shall be separated by a distance equal to the entering sight-distance values in Table 2-35. Based on a posted speed limit of 25 mph, the prescribed spacing would be 425 feet. The distance between the two site access points is 480 feet, which meets *ECM* criteria.

Access Alignment

All proposed site access points should be aligned at 90 degrees to the adjacent roadway centerline. The adjacent roadway grades are essentially level. The vertical alignment criteria in ECM Section 2.4.1.C.2 shall be met for the driveways. The access points are shown to intersect Southmoor Drive at 90 degrees.

Access Sight Distances

The access sight distance criteria in section 2.4.1.D would apply:

> *"Any potentially obstructing objects, such as but not limited to advertising signs, structures, trees, and bushes, shall be designed, placed, and maintained at a height not to interfere with the sight distance needed by any vehicle using the access."*

Southmoor Drive has a straight horizontal alignment with no significant vertical curvature that would limit access sight distance. Site improvements, such as signs, on-street parking, and landscaping, should not impede the required sight-distance lines of sight. The sight distance from the south access to the 90-degree corner to the southeast would be acceptable, given the design speed of that corner and the distance from the driver's eye at the access.

Page: 5

Number: 1 Author: Daniel Torres Subject: Callout Date: 8/27/2020 16:29:39

There is an additional access point shown near the existing building. As stated before and on the site development plan, only 2 access points would be allowed. Please be sure to update your site plan and your analysis as necessary if the location of the two proposed access points change.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:29:21

LSC Response: A deviation has been prepared (and is included with this submittal) to request that the parking in front be allowed to remain. The text has been updated to note this.

1 See previous comments regarding access points and update accordingly.

Based on a 25-mph posted speed limit, sight distances for both approaches from both proposed site access locations exceed the required 425-foot requirement for multi-unit trucks, per *ECM* Table 2-35, with one exception – the sight distance to the south from the south access point. The following analysis corresponds to sight distances for the proposed site-access intersections with Southmoor Drive.

Proposed Southmoor Drive/North Site Access Intersection

Sight distances are as follows:

- To the northwest: greater than 1/4-mile
- To the southeast: 730 feet (unobstructed to L-corner turn on Southmoor Drive)

Proposed Southmoor Drive/South Site-Access Intersection

Sight distances are as follows:

- To the northwest: greater than 1/4-mile
- To the southeast: 290 feet (unobstructed to L-corner turn on Southmoor Drive). Although this is short of the 425-foot *ECM* minimum criteria, the design speed for traffic arriving from the south around the tight horizontal curve in Southmoor Drive is about 13 to 14 mph (the curve warning sign indicates an advisory speed of 10 mph). Based on the speed of the approaching vehicle as it turns the corner and is seen by possible, but infrequent, multi-unit trucks, the intersection sight distance, based on the AASHTO formula, is 236 feet. As 290 feet is available, the sight distance is acceptable.

Access Width

2 The site plan indicates a 25' wide access. Coordinate with the planner and revise accordingly.

The *ECM* requires a minimum of 25-foot width for a commercial access point on a Non-Residential Collector roadway. The south access drive (30 feet wide) would meet this criterium, while the north (gated) access drive (24 feet wide) would be just short of *ECM* criteria. 3 he existing head-in parking adjacent to the existing building is proposed to remain.

For the north access, LSC recommends a 65-foot stacking distance between the entry gate and the west edge of Southmoor Drive. This would allow for a Class A RV, 30-foot-long single-unit truck or a 35-foot-long U-Haul truck (largest size) plus an additional 30 feet to allow for a towed utility trailer, moving trailer, or following passenger vehicle.

Clearances from Intersections

Regarding access clearance from intersection criteria outlined in Section 2.4.1.F of the *ECM*:

> *Access to commercial or industrial properties fronting collector or local roads shall be located a minimum of 50 feet from the point of curvature or point of tangency of the curb line at the intersection. Access to commercial or industrial parcels fronting Nonresidential Collector roadways shall be located a minimum of 115 –*

Page: 6

Number: 1 Author: Daniel Torres Subject: Callout Date: 8/24/2020 17:17:06

See previous comments regarding access points and update accordingly.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 13:24:05

LSC Response: A deviation has been prepared (and is included with this submittal) to request that the parking in front be allowed to remain. The text has been updated to note this.

Number: 2 Author: Daniel Torres Subject: Callout Date: 9/18/2020 09:47:25

The site plan indicates a 25' wide access. Coordinate with the planner and revise accordingly.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 13:25:24

LSC Response: The site plan has been revised and the AutoTurn rerun with the updated radius.

Number: 3 Author: Daniel Torres Subject: Highlight Date: 8/24/2020 15:07:05

1 The ECM criteria indicates that the access shall be a minimum 50' from the point of curvature. It does not appear to meet this criteria. A comment has been provided on the site development plan to comply with this criteria. Revise your narrative/analysis accordingly.

> *480 feet from the point of curvature or point of tangency of the curb line at the intersection, depending on the sight distance and location with respect to the intersection, intersection control, and posted speed.*
>
> *In all cases, a minimum corner clearance of 50 feet shall be provided. If the minimum corner clearance cannot be attained, the ECM Administrator may require investigation to determine if left turns should be prohibited into or out of the access point. For proposed access points near stop or signalized intersections, the ECM Administrator will require studies to determine if stopping queues will block the access point and if left turns should be prohibited into or out of the access point.*

Based on the proposed driveway locations shown in the site plan, the south access point would have a centerline offset of about 60 feet from the nearest intersection (Southmoor Drive/Southmoor Lane), which meets the aforementioned *ECM* criteria. This is a minor intersection with low through volumes and low turning volumes to/from Southmoor Lane.

PEDESTRIAN & BICYCLE FACILITIES

Sidewalks exist within the City of Fountain just to the north of the site (at the River Drive/Southmoor intersection). The existing drainage structure just to the north appears to have limited width and future sidewalk installation may not be feasible. There is an existing trail located just north of the site – the Crews Gulch Trail. The section of Southmoor connecting to US Hwy 85/87 has curb & gutter, but no sidewalk. Sidewalk exists along the west side of US Hwy 85/87. Southmoor lane, which exists directly across from this site, extends east to US Hwy 85. Although Southmoor Lane does not have a sidewalk, the roadway is gravel and narrow, limiting vehicle speeds, and carries low traffic volumes.

2 State whether or not there is sidewalk along either side of Southmoor drive along the property frontage. Is any sidewalk along the property frontage recommended?

ACCESS AUTOTURN VEHICLE TURNING ANALYSIS

AutoTurn analysis was run at the request of staff and to assist with the planning and design of the proposed north site access. Detailed AutoTurn analysis exhibits depicting entering and exiting B-40 (simulating a Class A RV) vehicle-movement wheel paths are attached as "AutoTurn Exhibits 1-4."

CONCLUSIONS/RECOMMENDATIONS

Access Evaluation

- The site access points meet *ECM* Criteria, or the intent of the *ECM* Criteria (in the case of the sight distance to the south at the south access point). Please refer to this section of the report for details.

Page: 7

Number: 1 Author: Daniel Torres Subject: Callout Date: 8/25/2020 08:06:23

The ECM criteria indicates that the access shall be a minimum 50' from the point of curvature. It does not appear to meet this criteria. A comment has been provided on the site development plan to comply with this criteria. Revise your narrative/analysis accordingly.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:29:59

LSC Response: The site plan has been revised and the TIS has been updated to address this comment. The south access has been shifted to be offset 100' from Southmoor Ln.

Number: 2 Author: Daniel Torres Subject: Callout Date: 8/25/2020 09:19:52

State whether or not there is sidewalk along either side of Southmoor drive along the property frontage. Is any sidewalk along the property frontage recommended?

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 13:45:42

LSC Response: The TIS has been updated to address this comment.

Level of Service Analysis

- The site access points would operate at an acceptable LOS. The intersection of Southmoor Drive/US Hwy 85 has been analyzed and results indicate a LOS F for side street left-turn movements during peak hours. This is not likely to be signalized or converted to a right-in/right-out intersection. Alternatives to the eastbound left-turn movement at this intersection are available. Please refer to this section of the report for details.

County Road Impact Fee Program

? Please indicate the land use from the fee schedule [1]

South portion of the site

This project will be required to participate in the El Paso County Road Improvement Fee Program. The preliminary indication from the applicant is to opt out of the PID option. The applicable building permit [2] is $3,651 per thousand square feet. Based on 6,000 additional square feet, the opt-out building permit fee would be $21,906 plus the amount for the RV storage.

North Portion of the site (RV Storage)

Per our understanding of recent correspondence received from the County Principal Tra[3]rage use, the roadway impact fee shall be calc

Per the site plan and Letter of intent there are 114 spaces. Please revise the sq. ft. accordingly. Comments have been provided in the site plan to indicate the size of the parking spaces for proper measurement.

spaces (not including drive aisles, landscaping

0 square feet.

age parking spaces would cover about 24,700 square feet (24.7 KSF)

- Therefore, the calculated County Roadway Impact Fee for the RV storage use is $17,908.
- This amount paid should be taken into account in the future upon any redevelopment of the RV storage area, so fees are not paid twice for the same lot.

(This section left blank intentionally)

Please state whether or not there is any improvements required to the existing auxiliary turn lanes at the hwy85-87/southmoor intersection due to the developments impact. [4]

Page: 8

Number: 1 Author: Daniel Torres Subject: Callout Date: 8/24/2020 17:37:58

? Please indicate the land use from the fee schedule

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 13:50:44

LSC Response: Added as requested.

Number: 2 Author: Daniel Torres Subject: Highlight Date: 8/24/2020 17:34:53

building permit

Number: 3 Author: Daniel Torres Subject: Callout Date: 4/7/2021 13:51:19

Per the site plan and Letter of intent there are 114 spaces. Please revise the sq. ft. accordingly. Comments have been provided in the site plan to indicate the size of the parking spaces for proper measurement.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 13:53:33

LSC Response: This comment has been addressed in the updated report.

Number: 4 Author: Daniel Torres Subject: Text Box Date: 4/1/2021 09:41:49

Please state whether or not there is any improvements required to the existing auxiliary turn lanes at the hwy85-87/ southmoor intersection due to the developments impact.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:32:35

LSC Response: Text has been updated to state that no turn-lane changes would be required.

Table 2: Trip Generation Estimate

ITE		Value	Units [1]	Trip Generation Rates [2]					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
Existing Trip Generation "Snapshot" (from an Actual Count)													
180	Specialty Trade Contractor	2.062	KSF	-	-	-	-	-	N/A	5	3	5	7
Estimate Based on Building Square Footage (Based on ITE Rates)													
180	Specialty Trade Contractor	2.062	KSF	10.22	1.21	0.45	0.63	1.34	21	2	1	1	3
	Difference: Existing (Based on Counts) Minus Existing (Based on ITE Rates)								-	3	2	4	4
Estimate of Trips Following Site Improvements (Based on ITE Fitted Rates)													
180	Specialty Trade Contractor	8.062	KSF	10.22	1.21	0.45	0.63	1.34	82	10	4	5	11
416	RV/Vehicle Storage	0.97	HOC	20.00	2.28	1.37	1.98	2.81	19	2	1	2	3
								Total	**102**	**12**	**5**	**7**	**14**

[1] KSF = 1,000 square feet of gross floor area, HOC = hundred occupied spaces

[2] Source: *Trip Generation* , 10th Edition, 2017, by the Institute of Transportation Engineers (ITE)

Note: "RV/Vehicle Storage" rates based on RV storage facility turning movement counts conducted by LSC in El Paso County (2018)

RV/Vehicle storage does not have a land use code in the ITE. The code listed appears to be for RV Park. Please revise accordingly. 1

114 spaces per site plan. Revise 2

Page: 11

Number: 1 Author: Daniel Torres Subject: Callout Date: 9/18/2020 09:48:39

RV/Vehicle storage does not have a land use code in the ITE. The code listed appears to be for RV Park. Please revise accordingly.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:00:07

LSC Response: Revised as requested.

Number: 2 Author: Daniel Torres Subject: Callout Date: 8/25/2020 08:23:19

114 spaces per site plan. Revise

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 13:58:26

LSC Response: Trip Gen table has been updated accordingly

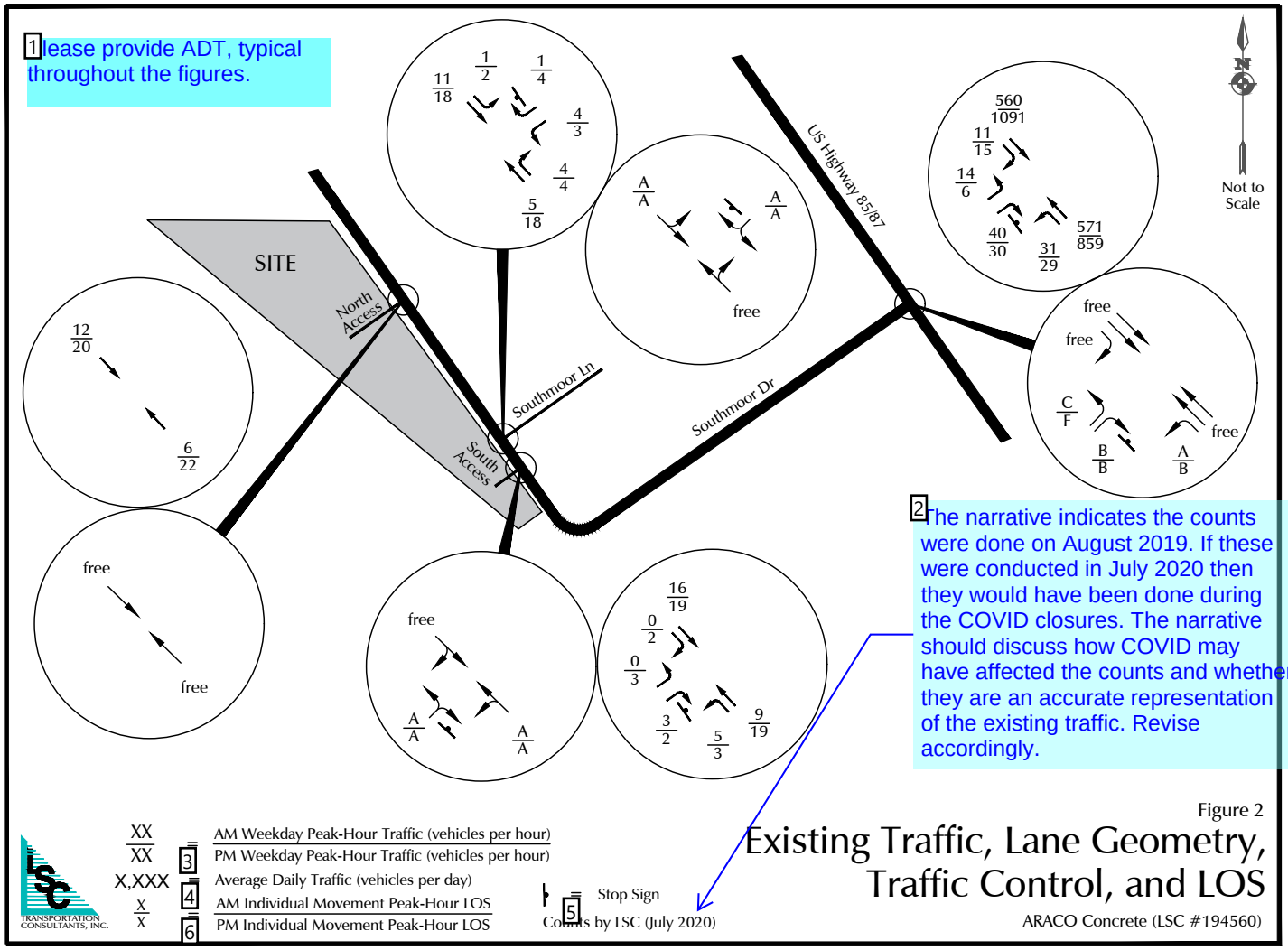


Figure 2

Existing Traffic, Lane Geometry, Traffic Control, and LOS

ARACO Concrete (LSC #194560)

Number: 1 Author: Daniel Torres Subject: Text Box Date: 4/1/2021 10:06:36

Please provide ADT, typical throughout the figures.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:00:46

LSC Response: Added as requested.

Number: 2 Author: Daniel Torres Subject: Callout Date: 8/25/2020 08:20:36

The narrative indicates the counts were done on August 2019. If these were conducted in July 2020 then they would have been done during the COVID closures. The narrative should discuss how COVID may have affected the counts and whether they are an accurate representation of the existing traffic. Revise accordingly.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:01:34

LSC Response: This has been addressed in the updated report.

Number: 3 Author: AutoCAD SHX Text Date: Indeterminate

=

Number: 4 Author: AutoCAD SHX Text Date: Indeterminate

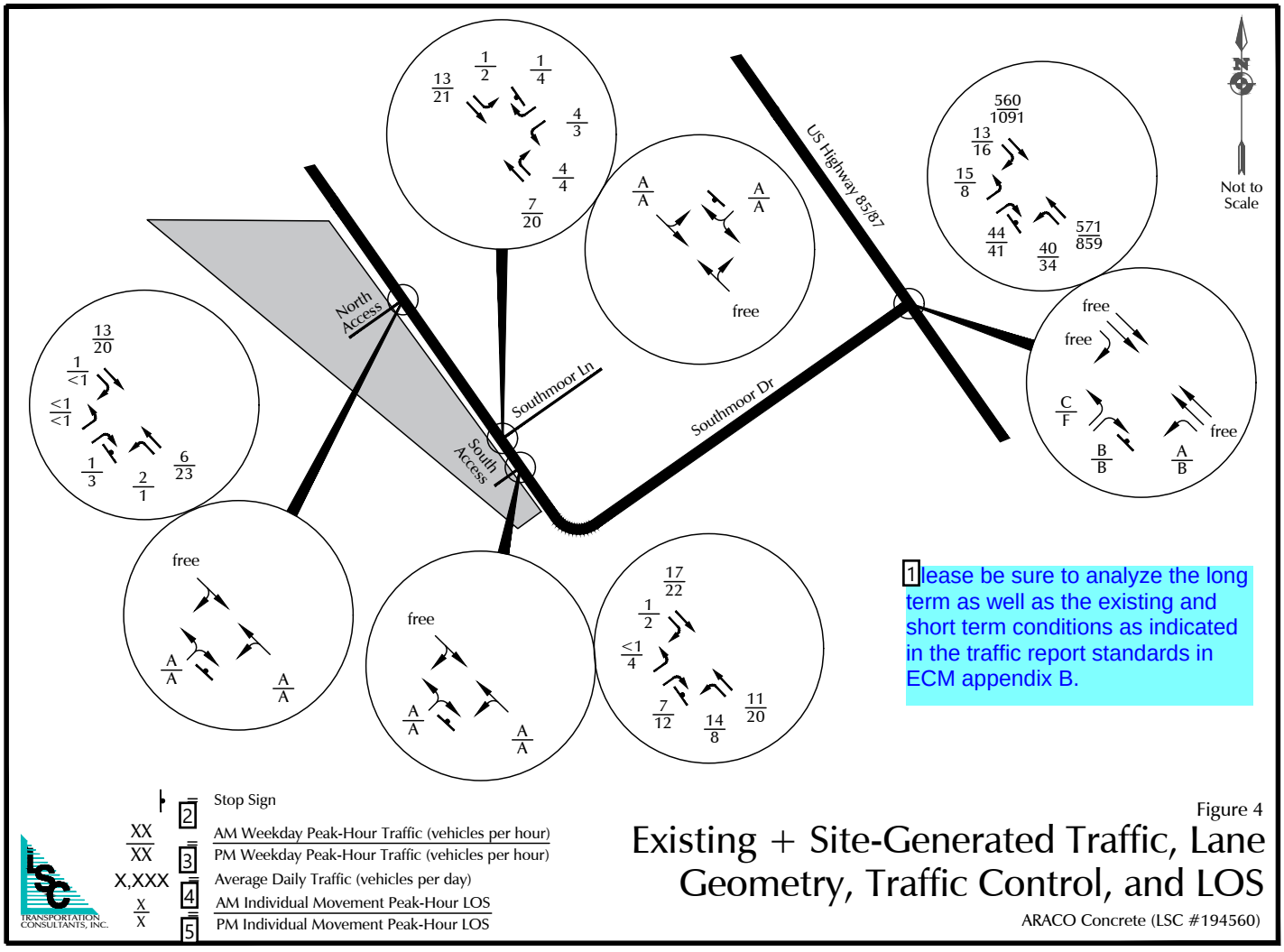
=

Number: 5 Author: AutoCAD SHX Text Date: Indeterminate

=

Number: 6 Author: AutoCAD SHX Text Date: Indeterminate

=



1 Please be sure to analyze the long term as well as the existing and short term conditions as indicated in the traffic report standards in ECM appendix B.

2 Stop Sign

3 XX / XX — AM Weekday Peak-Hour Traffic (vehicles per hour) / PM Weekday Peak-Hour Traffic (vehicles per hour)

X,XXX — Average Daily Traffic (vehicles per day)

4 X / X — AM Individual Movement Peak-Hour LOS / PM Individual Movement Peak-Hour LOS

5

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 4

Existing + Site-Generated Traffic, Lane Geometry, Traffic Control, and LOS

ARACO Concrete (LSC #194560)

Page: 15

Number: 1 Author: Daniel Torres Subject: Text Box Date: 4/1/2021 11:37:07

Please be sure to analyze the long term as well as the existing and short term conditions as indicated in the traffic report standards in ECM appendix B.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:32:58

LSC Response: The long-term scenario has been added.

Number: 2 Author: AutoCAD SHX Text Date: Indeterminate

=

Number: 3 Author: AutoCAD SHX Text Date: Indeterminate

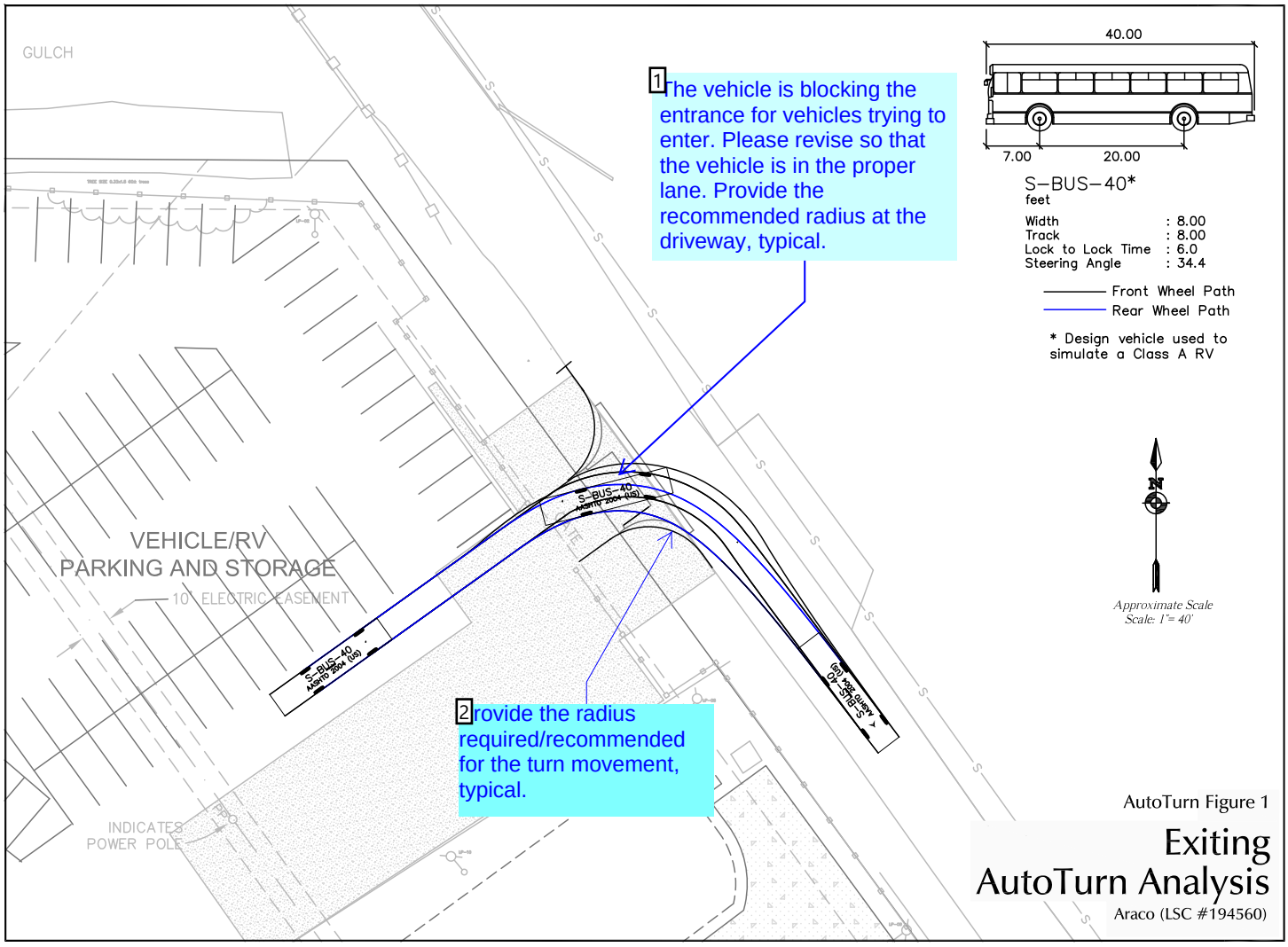
=

Number: 4 Author: AutoCAD SHX Text Date: Indeterminate

=

Number: 5 Author: AutoCAD SHX Text Date: Indeterminate

=


GULCH
1 The vehicle is blocking the entrance for vehicles trying to enter. Please revise so that the vehicle is in the proper lane. Provide the recommended radius at the driveway, typical.
2 rovide the radius required/recommended for the turn movement, typical.
VEHICLE/RV
PARKING AND STORAGE
10' ELECTRIC EASEMENT
INDICATES
POWER POLE
S-BUS-40
Width 8.00 (US)
S-BUS-40
Width 8.00 (US)
S-BUS-40
Width 8.00 (US)
40.00
7.00
20.00
S-BUS-40*
feet
Width : 8.00
Track : 8.00
Lock to Lock Time : 6.0
Steering Angle : 34.4
Front Wheel Path
Rear Wheel Path
* Design vehicle used to simulate a Class A RV
N
Approximate Scale
Scale: 1"= 40'
AutoTurn Figure 1
Exiting
AutoTurn Analysis
Araco (LSC #194560)

Number: 1 Author: Daniel Torres Subject: Callout Date: 8/25/2020 10:54:50

The vehicle is blocking the entrance for vehicles trying to enter. Please revise so that the vehicle is in the proper lane. Provide the recommended radius at the driveway, typical.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:03:51

LSC Response: The site plan has been revised and the AutoTurn rerun with the updated radius.

Number: 2 Author: Daniel Torres Subject: Callout Date: 4/1/2021 10:00:28

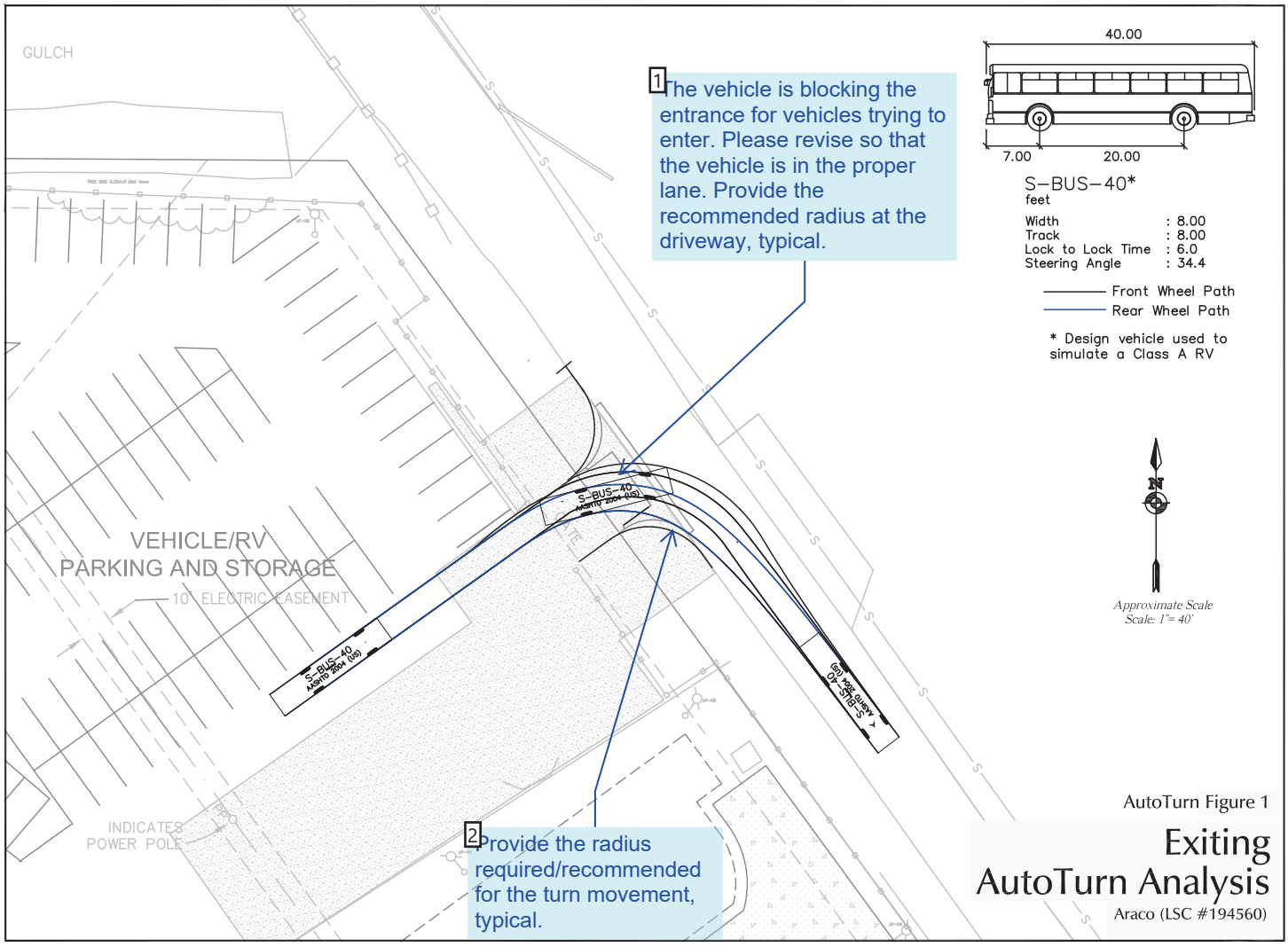
Provide the radius required/recommended for the turn movement, typical.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 14:03:37

LSC Response: The site plan has been revised and the AutoTurn rerun with the updated radius.

Responses to AutoTurn Comments

TRANSPORTATION CONSULTANTS, INC.


GULCH
1 The vehicle is blocking the entrance for vehicles trying to enter. Please revise so that the vehicle is in the proper lane. Provide the recommended radius at the driveway, typical.
40.00
7.00
20.00
S-BUS-40*
feet
Width : 8.00
Track : 8.00
Lock to Lock Time : 6.0
Steering Angle : 34.4
Front Wheel Path
Rear Wheel Path
* Design vehicle used to simulate a Class A RV
N
Approximate Scale
Scale: 1"= 40'
VEHICLE/RV
PARKING AND STORAGE
10' ELECTRIC EASEMENT
INDICATES
POWER POLE
2 Provide the radius required/recommended for the turn movement, typical.
AutoTurn Figure 1
Exiting
AutoTurn Analysis
Araco (LSC #194560)

LSC Responses to Araco Concrete AUTOTURN comments

Page: 1

Number: 1 Author: Daniel Torres Subject: Callout Date: 8/25/2020 11:54:50 AM

The vehicle is blocking the entrance for vehicles trying to enter. Please revise so that the vehicle is in the proper lane. Provide the recommended radius at the driveway, typical.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 2:17:42 PM

LSC Response: The site plan has been revised and the AutoTurn rerun with the updated radius.

Number: 2 Author: Daniel Torres Subject: Callout Date: 8/25/2020 12:02:44 PM

Provide the radius required/recommended for the turn movement, typical.

Author: jchodsdon Subject: Sticky Note Date: 4/7/2021 2:17:24 PM

LSC Response: The site plan has been revised and the AutoTurn rerun with the updated radius.