



DREXEL BARRELL & Co.
Engineers - Surveyors

MEMORANDUM

TO: **El Paso County Planning & Community Development**
2880 International Circle, Suite 110
Colorado Springs, CO 80910

FROM: Kurt Crawford, P.E.

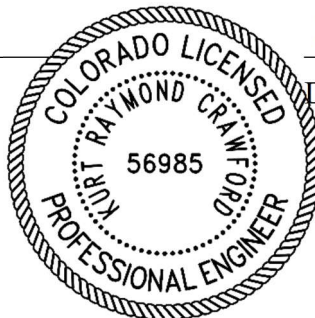
DATE: March 27, 2025

RE: Traffic Memorandum for 2725 Akers Drive
Colorado Springs, Colorado

Traffic Engineer's Statement

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

[Kurt Crawford, Colorado P.E. #56985]



3/27/2025

Date

Developer's Statement

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

Cory Shorette

CES Property Endeavors, LLC

9818 Morning Vista Drive

Peyton, CO 80831

6/10/2025

Date

Accepted for File

By: Gilbert LaForce, P.E.
Engineering Manager

Date: 06/11/2025 10:59:06 AM.

El Paso County Department of Public Works



This memorandum serves to summarize the land use, probable trip generation, and vehicular access for the proposed addition to the building located at 2725 Akers Drive, Colorado Springs, CO 80831. The site is currently occupied by a 5,000 SF building, and a new 7,100 SF addition to the existing building is proposed.

This site is zoned as M and is generally surrounded by residential and commercial uses. The existing access driveway is to remain which serves two lots via an existing shared roadway and maintenance easement agreement. The proposed site will contain 51 parking spaces including 2 handicap accessible spaces (See associated site plan in the appendix for more detail).

Previous Traffic Reports

The traffic study for Citizen on Constitution (PCD File No. P218) from April 2022 by Kimley-Horn is referenced in this report for future total traffic at the nearby intersection of Akers Drive and Constitution Avenue.

Existing Roads & Distribution

The area roadways are shown on the attached site plan, traffic figures, and described below. The street classifications are per the county's Major Thoroughfare Plan.

- **Akers Drive** is classified as a collector roadway with a posted speed limit of 35 mph and provides direct access to the site. The segment of Akers Drive along the frontage of the site includes a median two-way left turn lane (TWLTL). It runs north-south from North Carefree Circle to Constitution Avenue. Akers Drive is stop-controlled at the intersection with Constitution Avenue. The south leg of Akers Drive at this intersection has recently been constructed and is anticipated to open soon for the residential development (Citizen on Constitution).
- **Constitution Avenue** is a four-lane east/west roadway and is classified as a principal arterial. It has a posted speed limit of 50 mph. From Akers Drive, Constitution Avenue provides access to N Powers Blvd (SH-21) to the west, and Marksheffel Road and US Highway 24 to the east. There are existing auxiliary turn lanes at the intersections of Constitution Avenue with Akers Drive and Marksheffel Road.
- **Marksheffel Road** is a four lane north/south roadway which is ultimately planned for six lanes. It is classified as a principal arterial and has a posted speed limit of 50 mph. The intersection of Marksheffel Road and Constitution Avenue is signalized with auxiliary turn lanes on all approaches. Vehicles accessing the site from the north can utilize the right-in/right-out only intersection from Markseffel Road onto Electronic Drive which connects to Akers Drive.

Traffic Volumes

Turning movement counts (TMC) were obtained for the AM and PM peak hours to analyze the intersection of Akers Drive and Constitution Avenue. All recently collected traffic data is in the Appendix. The recently constructed south leg of Akers Drive and Constitution Avenue is anticipated to open soon. The site generated traffic from the previous TIS by Kimley-Horn (April 2022) is included in the total traffic shown on **Figure 4**.

Land Use & Trip Generation

Table 1 below shows the trip generation values for the existing and proposed land use of this site. The total additional trips for the proposed building are shown at the bottom of the table. These values were used to analyze the increase in vehicular trips at the nearby intersection of Akers Drive and Constitution Avenue. The table shows the number of expected trips using the latest ITE trip rates. This manual is currently in its 11th edition and is an industry accepted informational report published by the Institute of Transportation Engineers. This site is estimated to generate an additional 84 average weekday total trips with 12 total trips (9 in/3 out) in the AM peak hour and 14 total trips (5 in/9 out) in the PM peak hour.

Table 1 - Trip Generation Estimate for 2725 Akers Drive, Colorado Springs, CO															
ITE Code / Land Use	Size	Trip Generation Rates ¹			Average Weekday Trips	Trips Generated									
						AM Peak-Hour (7 - 9)					PM Peak-Hour (4 - 6)				
		Avg. Weekday	AM PEAK	PM PEAK		Inbound % Trips	Trips	Outbound % Trips	Trips	Total	Inbound % Trips	Trips	Outbound % Trips	Trips	Total
Existing Land Use															
#180 Specialty Trade Contractor	3.0 KSF	9.82	1.66	1.93	29	74%	4	26%	1	5	32%	2	68%	4	6
#712 Small Office Building	2.0 KSF	14.39	1.67	2.13	29	82%	3	18%	1	4	34%	1	66%	3	4
Total Trips					58	7		2		9	3		7		10
Proposed Land Use															
#180 Specialty Trade Contractor	7.1 KSF	9.82	1.66	1.93	70	74%	9	26%	3	12	32%	4	68%	9	13
#712 Small Office Building	5.0 KSF	14.39	1.67	2.13	72	82%	7	18%	2	9	34%	4	66%	7	11
Total Trips					142	16		5		21	8		16		24
Additional Proposed Total Trips Compared to Existing Total Trips					84	9		3		12	5		9		14

¹Source: "Trip Generation" Institute of Transportation Engineers, 11th Edition, 2021
KSF = 1000 SF of Floor Area

Trip Distribution

The anticipated distribution of site traffic is 60% to/from the west, 30% to/from the east, and 10% to/from the north. It is assumed that the inbound traffic from the south, east and west will typically access the site via the intersection of Akers Drive & Constitution Avenue. The inbound traffic from the north will typically come from Marksheffel Road and access the proposed site via Electronic Drive and Akers Drive. The outbound traffic to the south, east and west is assumed to utilize the same routes as previously discussed in the reverse direction. The outbound traffic to the north will typically make right turns onto North Carefree Circle from Akers Drive to access the signalized intersection at Marksheffel Road. The estimated site generated traffic and distribution is shown in **Figure 3**.

Level of Service Analysis

The study intersection of Akers Drive and Constitution has been analyzed to determine the projected control delay and corresponding levels of service for turning movements. The total traffic (existing traffic + site generated traffic) is shown in **Figure 4**. Please note that the south leg of this intersection is anticipated to open soon. The estimated site generated traffic from the previous traffic study was included in the total traffic figure and analysis.

Synchro V11 Traffic Software (synchro) was used to model the total estimated traffic using procedures in the latest edition of the Highway Capacity Manual. The LOS summary for the intersection analysis is shown below in **Table 2**. Synchro reports are included in the **Appendix**. For comparison purposes, the intersection was modeled using the following scenarios:

1. Existing Traffic
2. Existing Traffic + Site Generated Traffic
3. Existing Traffic + Citizen on Constitution Site Generated Traffic
4. Total Traffic (Stop-Controlled)
5. Total Traffic (Signalized)

Table 2 Level of Service Analysis / Average Delay in Seconds												
Intersection	Approach	Existing		Existing + Site Gen		Existing + Citizen on Constitution Site Gen		Total Traffic*		Total Traffic*		
		Stop-Controlled		Stop-Controlled		Stop-Controlled		Stop-Controlled		Signalized		
		AM	PM	AM	PM	AM	PM	AM	PM		AM	PM
Constitution Ave & Akers Dr	Intersection	<u>A / 2.0</u>	<u>A / 1.1</u>	<u>A / 2.7</u>	<u>A / 1.7</u>	<u>A / 3.6</u>	<u>A / 2.7</u>	<u>A / 3.8</u>	<u>A / 2.9</u>		<u>B / 11.8</u>	<u>A / 9.8</u>
	EBL	A / 9.8	B / 11.5	A / 9.8	B / 11.6	A / 9.8	B / 11.5	A / 9.8	B / 11.6	EB	B / 10.9	A / 9.1
	WBL	-	-	-	-	B / 11.7	B / 14.5	B / 11.7	B / 14.5	WB	B / 11.2	A / 9.5
	NBL	-	-	-	-	D / 34.8	F / 72.7	E / 35.8	F / 74.0	NB	C / 20.2	C / 23.5
	SBL	D / 32.4	E / 44.6	E / 45.1	F / 67.2	E / 49.3	F / 82.3	F / 51.5	F / 88.8	SB	C / 22.0	C / 24.5

* Total Traffic Includes site generated traffic for both the proposed site and the Citizen on Constitution development. The volumes are referenced from the Citizen on Constitution Traffic Study for the south leg of the intersection.

The southbound left turning movements at the unsignalized intersection currently operate at LOS D in the AM peak hour and LOS E in the PM peak hour. Upon opening of the Citizen on Constitution development, the stop-controlled left turn movements at this intersection will operate at LOS F in the PM peak hour. The site generated traffic from the proposed addition for this project will slightly increase the average delay per vehicle as shown in the column for total traffic. A traffic signal at this intersection would provide LOS C or better for all approaches.

Auxiliary Turn Lanes

No additional auxiliary lanes are necessary with this proposed development. The existing two-way left turn lane (TWLTL) in front of the site is well suited to handle the low volume of inbound left turn movements. It is assumed that the Akers Drive southbound approach leg at the intersection of Constitution Avenue will be restriped for through movements before opening of the northbound approach leg.

Access Evaluation

There are no proposed changes to the access for this site. The existing access driveway is to remain which serves two lots via an existing shared roadway and maintenance easement agreement. The spacing is approximately 300' from the intersection of Winslow Park Dr to the north and 400' from the intersection of Hunter Jumper Dr to the south. The existing sight distance is greater than 500' in both directions. There are no suggested striping improvements as Akers Drive is currently striped with a two-way left turn lane (TWLTL). The low volume of traffic projected in and out of this site is easily accommodated by the existing roadway.

MTCP Roadway Improvements

The 2016 El Paso County Major Transportation Corridor Plan (MTCP) does not show any planned improvements in the study area.

County Road Improvement Fee Program

Transportation Impact Fees

The roadway impact fees for the building addition's proposed land uses are summarized in **Table 3** below.

Table 3 - EPC Road Impact Fee 2725 Akers Drive, Colorado Springs, CO				
ITE Code / Land Use ¹	Size ²	Land Use	Fee (per 1,000 SF)	Total
#180 Specialty Trade Contractor	4.1 KSF	General Commercial	\$5,498	\$22,542
#712 Small Office Building	3.0 KSF	Office	\$3,340	\$10,020
				\$32,562

¹Source: "Trip Generation" Institute of Transportation Engineers, 11th Edition, 2021

²KSF = 1000 SF of Floor Area

Conclusion

The vehicular traffic estimated from the proposed building addition will be adequately accommodated by the surrounding roadway network with the assumption that Akers Drive and Constitution Avenue will be signalized in the near future. The proposed building is expected to generate approximately an additional 84 average weekday total trips with 12 total trips (9 in/3 out) in the AM peak hour and 14 total trips (5 in/9 out) in the PM peak hour. No additional auxiliary lanes are required for the proposed development.

The intersection of Akers Drive and Constitution Avenue will likely meet signal warrants upon the opening of the residential development (Citizen on Constitution) on the south side of Constitution Avenue. As shown in the synchro analysis, the left-turn movements from Akers Drive will operate at LOS F in the PM peak hour with the additional traffic from the development.

The additional trips generated by the proposed addition to 2725 Akers Drive will have a slight effect on the average delay per vehicle at the intersection of Akers Drive and Constitution Avenue. Alternative routes are also available for outbound traffic from this site which provide safer turn movements prior to signalization of Akers Drive and Constitution Avenue. Vehicles traveling to the east of Akers Drive can utilize the right-in/right-out only intersection onto Marksheffel from Electronic Drive which then leads to the signalized intersection with Constitution Avenue. Vehicles traveling north can access N Carefree Circle from Akers Drive and continue to the signalized intersection with Marksheffel Road.

If you have any questions or would like to discuss my analysis further, please don't hesitate to contact me.

APPENDIX

Traffic Counts

Traffic Figures 1-4

Traffic Figure 5 (From previous LSC Traffic Study)

Site Plan

Synchro Reports



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

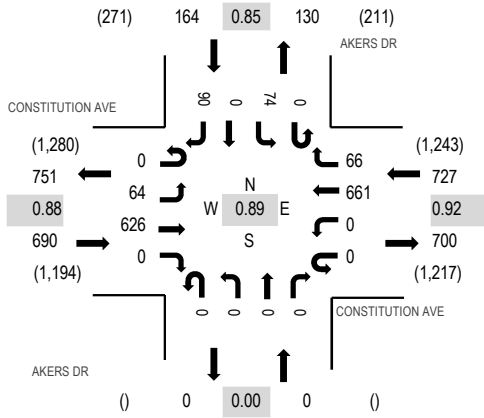
Location: 1 AKERS DR & CONSTITUTION AVE AM

Date: Tuesday, March 18, 2025

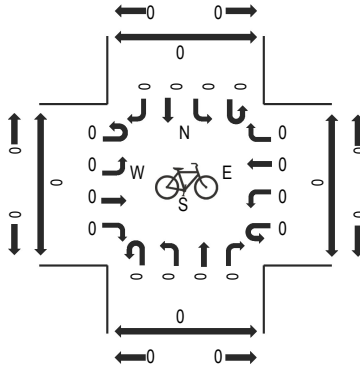
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

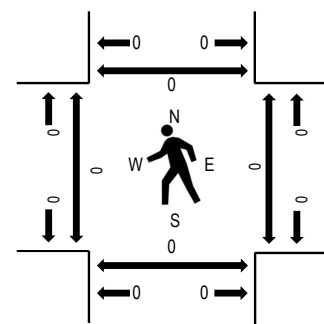
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION AVE Eastbound				CONSTITUTION AVE Westbound				AKERS DR Northbound				AKERS DR Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	9	138	0	0	0	173	10	0	0	0	0	0	17	0	13	360	1,581	0	0	0	0
7:15 AM	0	20	169	0	0	0	143	13	0	0	0	0	0	15	0	19	379	1,524	0	0	0	0
7:30 AM	0	22	173	0	0	0	179	19	0	0	0	0	0	19	0	30	442	1,434	0	0	0	0
7:45 AM	0	13	146	0	0	0	166	24	0	0	0	0	0	23	0	28	400	1,269	0	0	0	0
8:00 AM	1	10	116	0	0	0	123	13	0	0	0	0	1	12	0	27	303	1,127	0	0	0	0
8:15 AM	0	4	125	0	0	0	116	20	0	0	0	0	0	16	0	8	289		0	0	0	1
8:30 AM	1	6	117	0	1	0	120	6	0	0	0	0	0	10	0	16	277		0	0	0	0
8:45 AM	0	9	115	0	0	0	105	12	0	0	0	0	0	5	0	12	258		0	0	0	0
Count Total	2	93	1,099	0	1	0	1,125	117	0	0	0	0	1	117	0	153	2,708		0	0	0	1
Peak Hour	0	64	626	0	0	0	661	66	0	0	0	0	0	74	0	90	1,581		0	0	0	0



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

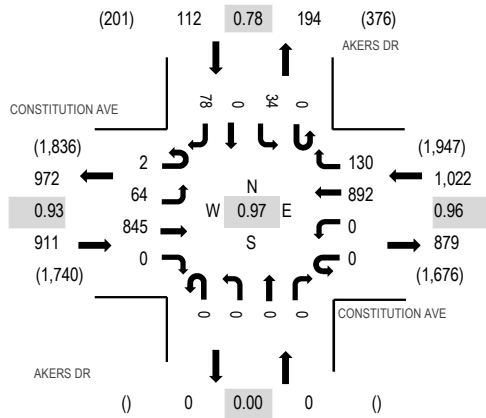
Location: 1 AKERS DR & CONSTITUTION AVE PM

Date: Tuesday, March 18, 2025

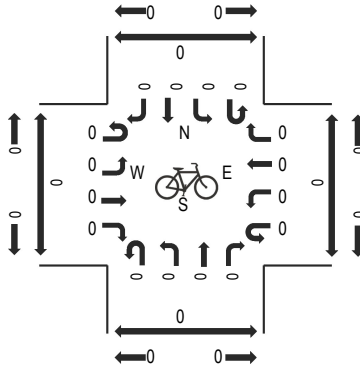
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

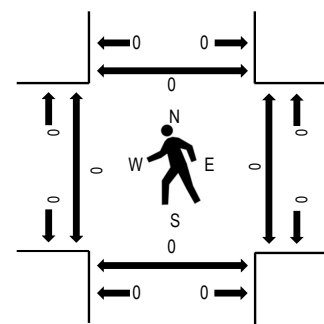
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



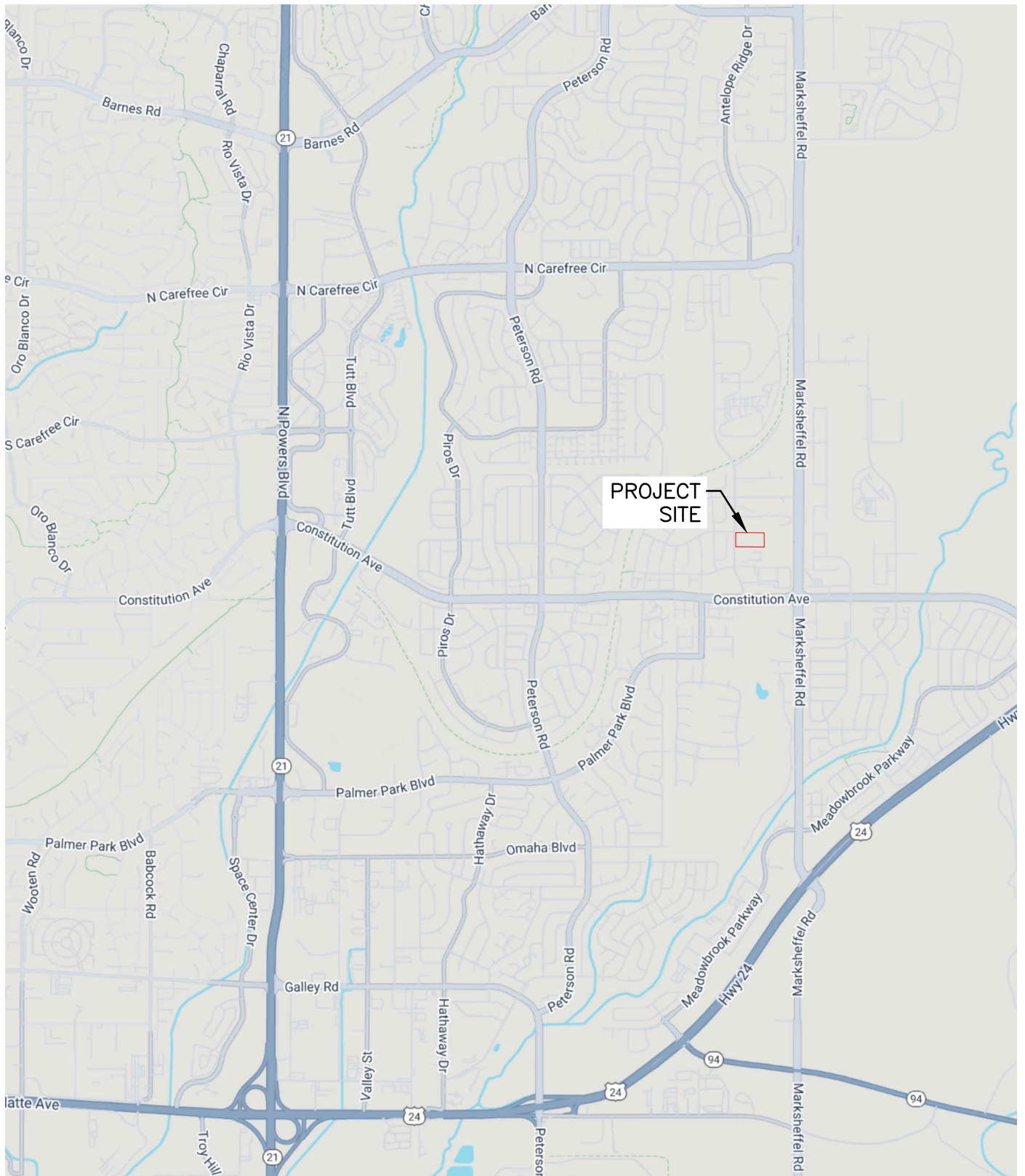
Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	CONSTITUTION AVE Eastbound				CONSTITUTION AVE Westbound				AKERS DR Northbound				AKERS DR Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	1	21	208	0	1	0	199	28	0	0	0	0	1	7	0	12	478	1,966	0	0	1	0
4:15 PM	1	12	217	0	0	0	216	28	0	0	0	0	0	8	0	19	501	2,013	0	0	2	0
4:30 PM	0	19	175	0	0	0	221	35	0	0	0	0	0	12	0	16	478	2,026	0	0	0	0
4:45 PM	1	23	196	0	0	0	219	45	0	0	0	0	0	8	0	17	509	2,045	0	0	0	0
5:00 PM	0	14	199	0	0	0	242	32	0	0	0	0	0	7	0	31	525	1,922	0	0	0	0
5:15 PM	0	14	218	0	0	0	230	24	0	0	0	0	0	12	0	16	514		0	0	0	0
5:30 PM	1	13	232	0	0	0	201	29	0	0	0	0	0	7	0	14	497		0	0	0	0
5:45 PM	0	12	163	0	0	0	171	26	0	0	0	0	0	6	0	8	386		0	0	0	0
Count Total	4	128	1,608	0	1	0	1,699	247	0	0	0	0	1	67	0	133	3,888		0	0	3	0
Peak Hour	2	64	845	0	0	0	892	130	0	0	0	0	0	34	0	78	2,045		0	0	0	0

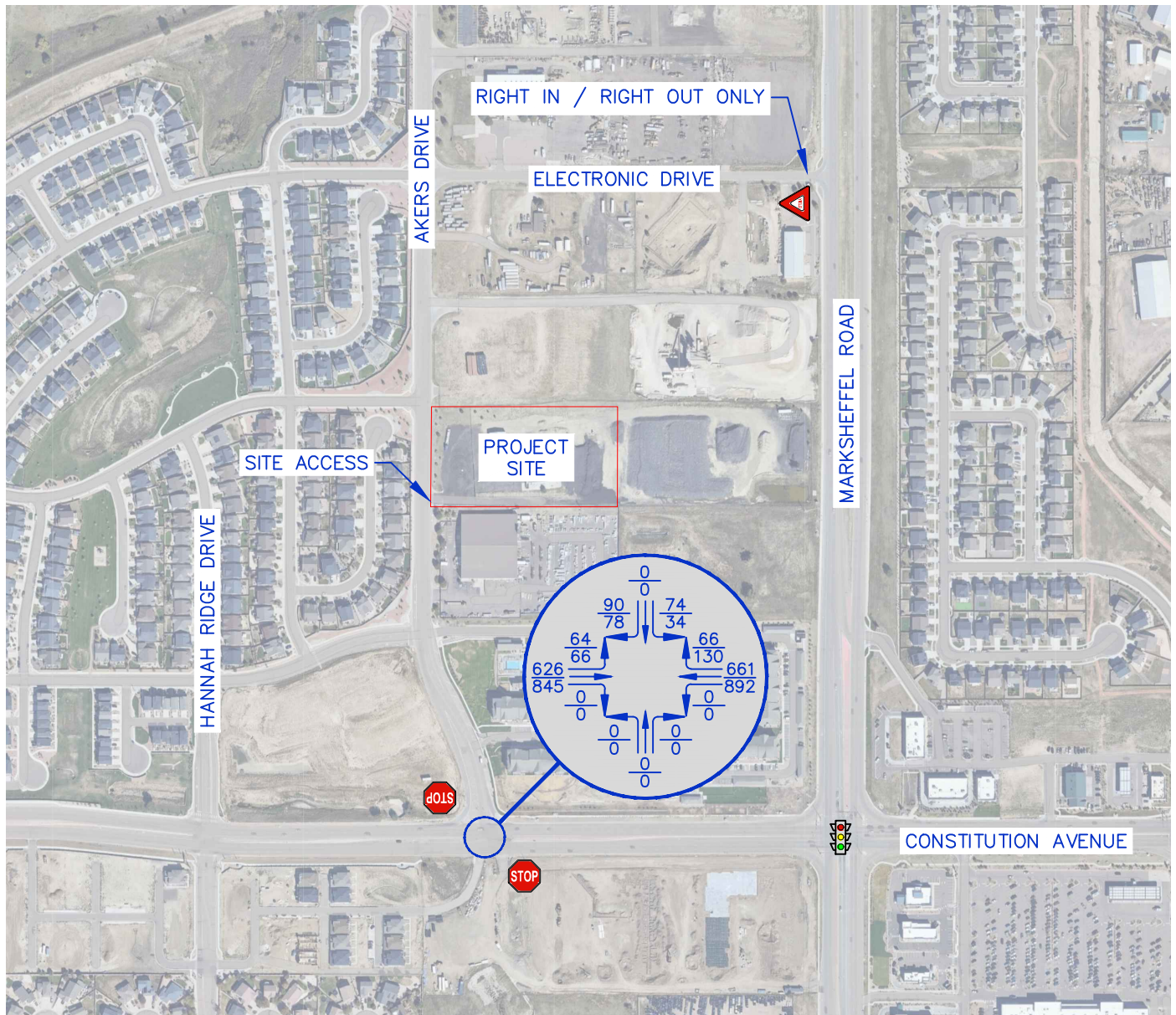


VICINITY MAP
2725 AKERS DRIVE
COLORADO SPRINGS, COLORADO

Drexel, Barrell & Co.
Engineers • Surveyors

DATE:
3/26/2025
JOB NO:
22004-00

DWG. NO.
FIGURE 1



NOTE:

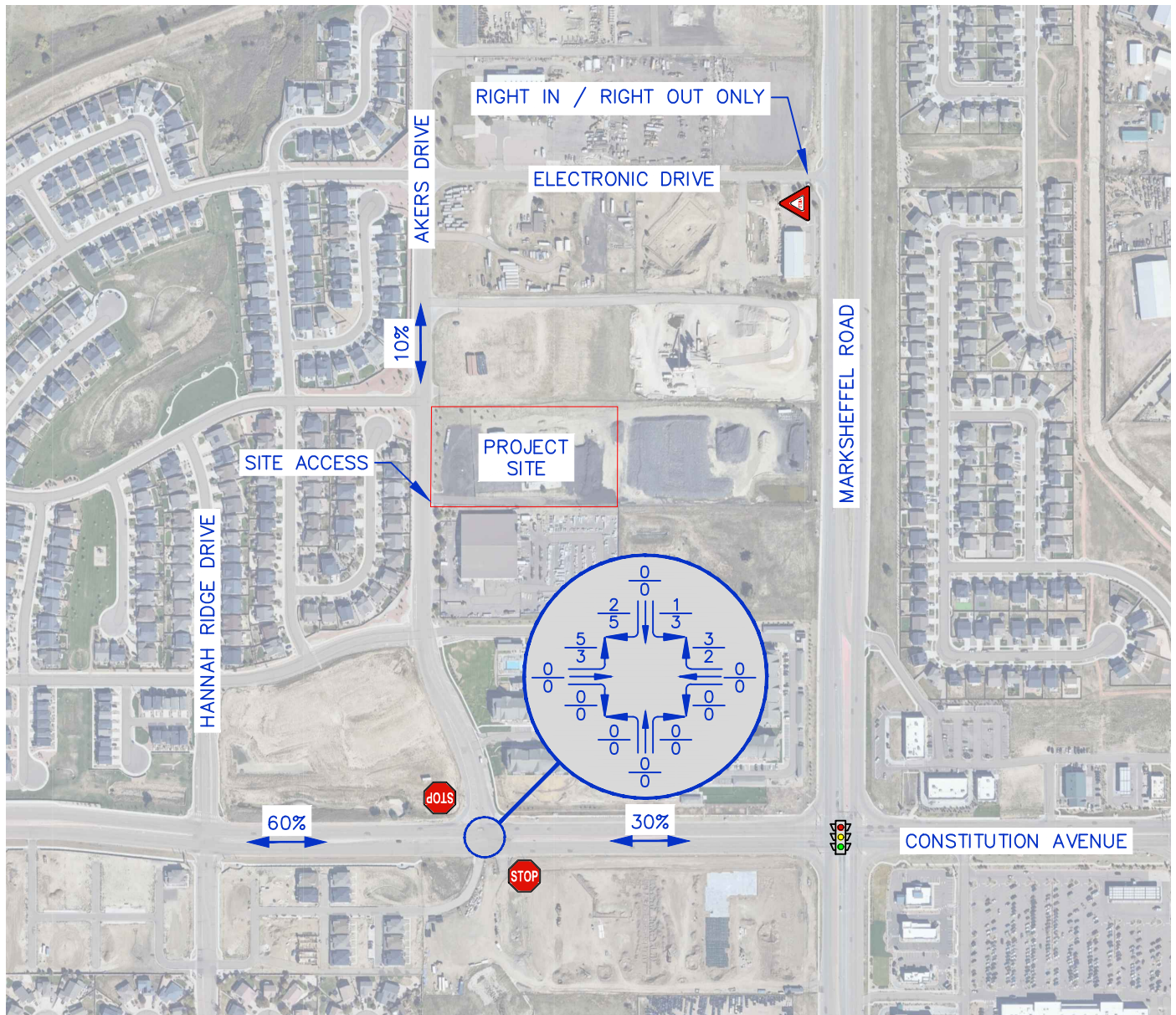
PEAK HOUR TRAFFIC COUNTS WERE CONDUCTED
ON TUESDAY, MARCH 18, 2025 BY ALL TRAFFIC
DATA SERVICES (ATD)

PEAK HOURS
7:00 AM – 8:00 AM
4:45 PM – 5:45 PM

LEGEND:

- ← = LANE MOVEMENT
- XXX
XXX = WEEKDAY AM/PM
PEAK-HOUR TRAFFIC
- STOP = STOP SIGN
- YIELD = YIELD SIGN
- TRAFFIC SIGNAL = TRAFFIC SIGNAL

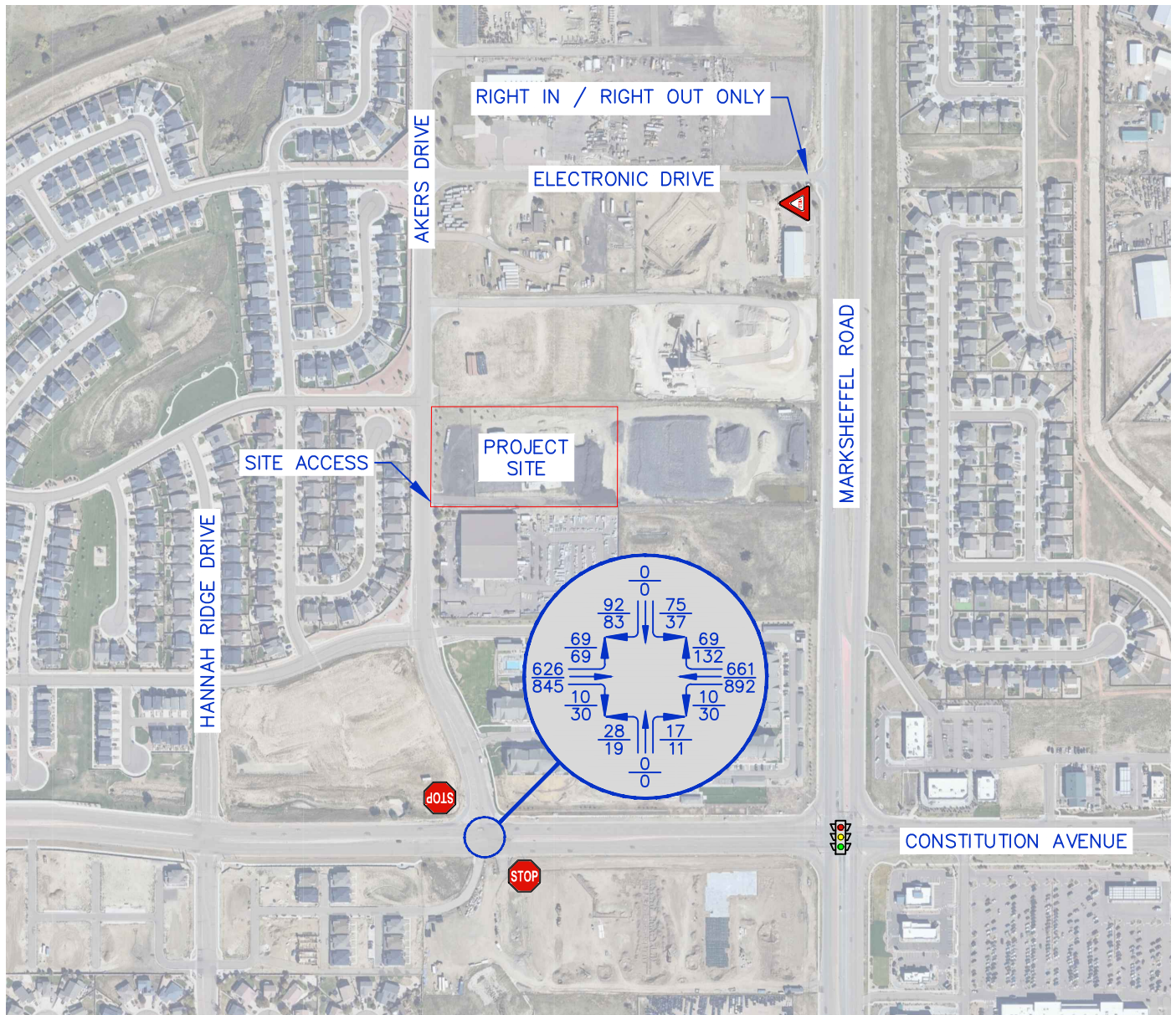




LEGEND:

- ← = LANE MOVEMENT
- XXX
XXX = WEEKDAY AM/PM
PEAK-HOUR TRAFFIC
- XX% = DISTRIBUTION
- STOP = STOP SIGN
- YIELD = YIELD SIGN
- TRAFFIC SIGNAL = TRAFFIC SIGNAL





NOTE:

THE SOUTH LEG OF AKERS DRIVE IS ANTICIPATED TO OPEN IN THE NEAR FUTURE. THE SITE GENERATED TRAFFIC FOR THE SOUTH LEG OF THE INTERSECTION IS REFERENCED FROM CITIZEN ON CONSTITUTION TRAFFIC STUDY BY KIMLEY-HORN.



LEGEND:

- ← = LANE MOVEMENT
- $\frac{XXX}{XXX}$ = WEEKDAY AM/PM
PEAK-HOUR TRAFFIC
- STOP = STOP SIGN
- YIELD = YIELD SIGN
- TRAFFIC SIGNAL = TRAFFIC SIGNAL



**TOTAL TRAFFIC
2725 AKERS DRIVE
COLORADO SPRINGS, COLORADO**

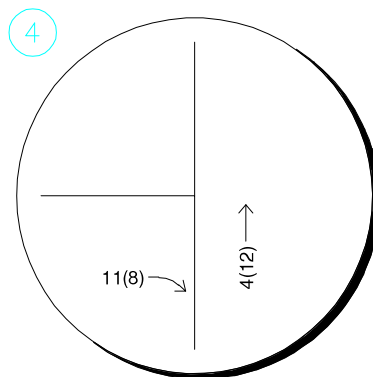
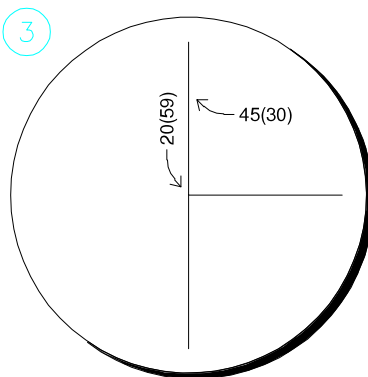
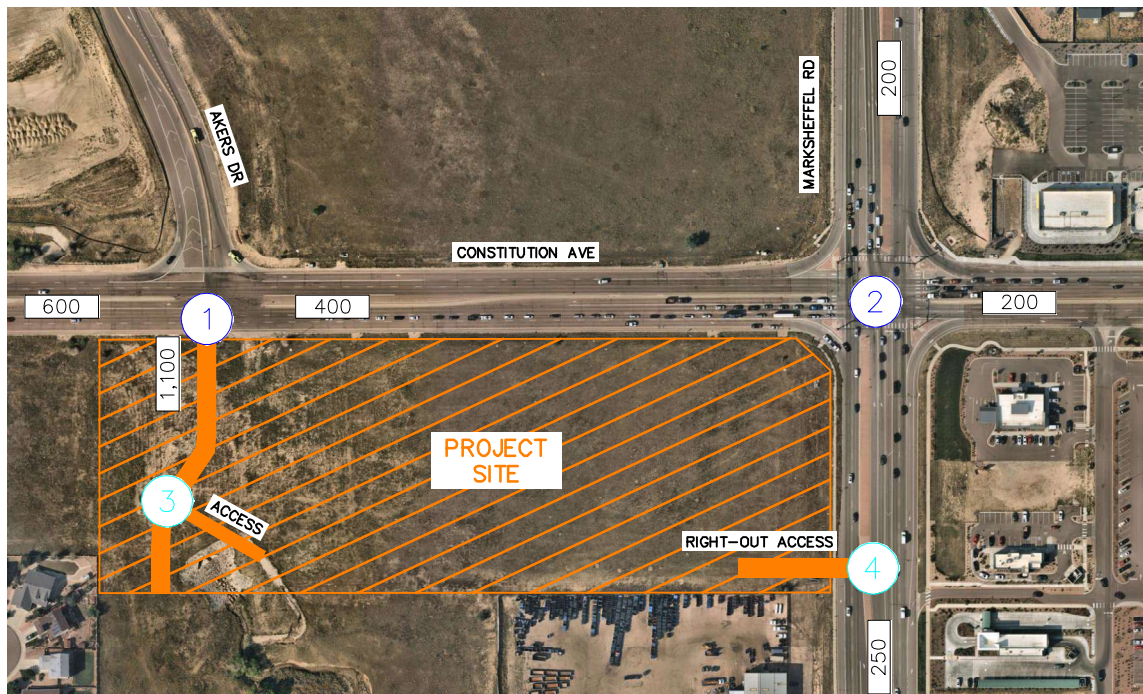
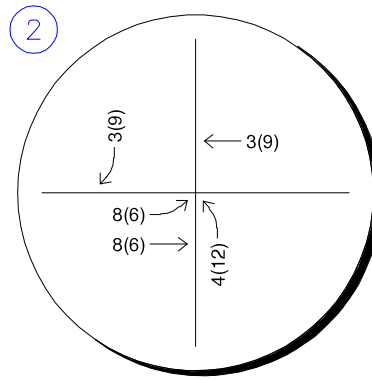
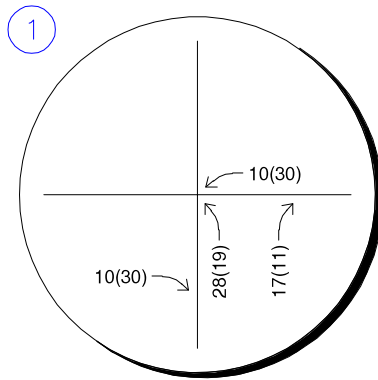
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DATE:
3/26/2025

JOB NO:
22004-00

DWG. NO.

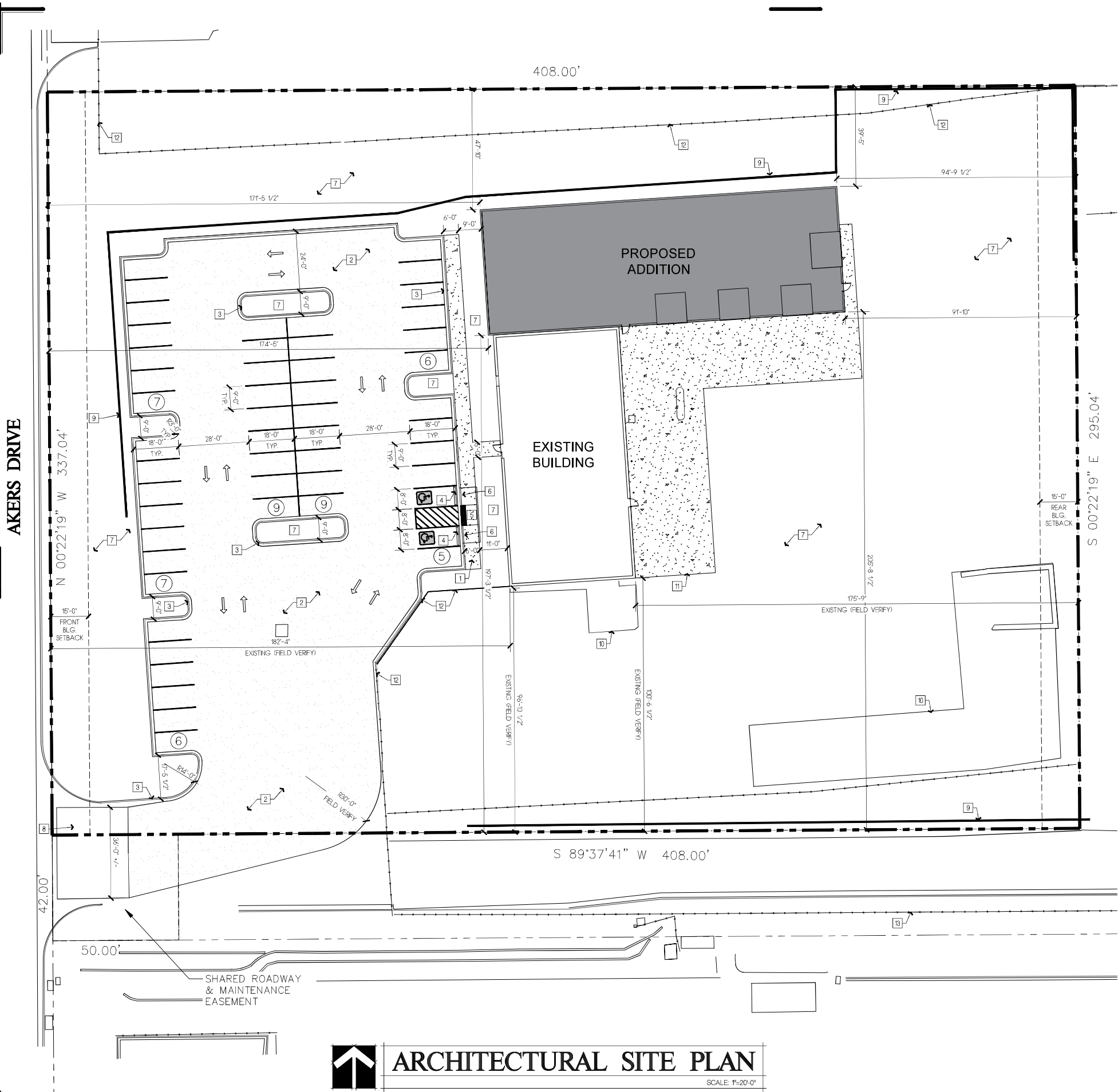
FIGURE 4



LEGEND	
ⓧ	Study Area Key Intersection
ⓧ	Project Access Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume

CITIZEN ON CONSTITUTION
 EL PASO COUNTY, COLORADO
 PROJECT TRAFFIC ASSIGNMENT

FIGURE 7



ARCHITECTURAL SITE PLAN

SCALE 1"=20'-0"



PROJECT TEAM

PROPERTY OWNER/CLIENT

LANDSCAPE ENDEAVORS
CORY SHORETTE
(719) 683-5480

ARCHITECT

BUCHER DESIGN STUDIO, INC.
BRIAN K. BUCHER AIA, NCARB, ICC
PRESIDENT, ARCHITECT
12325 ORACLE BLVD. SUITE 101
COLORADO SPRINGS, CO 80921
(719) 484-0480

CIVIL ENGINEER

ANDREW W. McCORD, PE, PRINCIPAL
KIOWA ENGINEERING CORP.
1604 S 21st ST
COLORADO SPRINGS, CO 80904
(719) 630-7342 ext. 201

LANDSCAPE ARCHITECT

JOHN MACKAY, PLA, PRESIDENT
HIGHER GROUND DESIGNS, INC.
5350 NORTH ACADEMY BLVD, #207
COLORADO SPRINGS, CO 80918
(719) 477-1646

SITE LIGHTING ENGINEER

DMCE ENGINEERING
MIKE BRUNGARDT, PE
4800 WADSWORTH BLVD. SUITE 110
WHEAT RIDGE, CO 80033
(303) 421-3208

GENERAL CONTRACTOR

BROOKS WILLIAMS, SENIOR MANAGER
NUNN CONSTRUCTION
(719)599-7710

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BUCHER
DESIGN STUDIO
architecture • planning

12325 Oracle Blvd, Suite 111
Colorado Springs, CO 80921
(719) 484-0480

Brian K. Bucher, AIA
Architect
CO license no. C-4889
CA license no. C 23506

PROPERTY DATA

PROJECT ADDRESS: 2725 AKERS DRIVE
COLORADO SPRINGS CO 80922

TAX SCHEDULE NO: 5332414003

LEGAL DESCRIPTION: LOT 1 SEDER SUB.

(E) COUNTY ZONING: M

LOT SIZE: 120,376 SQ. FT. / 2.76 ACRES

BUILDING SETBACKS:
NORTH/SOUTH (SIDE) = 0 FT.
EAST (REAR) = 15 FT.
WEST (FRONT)= 15 FT.

BUILDING HEIGHT: MAX. 50 FT. / PROPOSED = 22 FT. +/-

PROJECT/BUILDING DATA

PROJECT NAME: LANDSCAPE ENDEAVORS SDP AMENDMENT

PROJECT DESCRIPTION: PROPOSED ADDITION TO EXISTING BUILDING AND SITE DEVELOPMENT.

BUILDING AREA: 5,000 S.F. EXISTING + 7,100 S.F. ADDITION = 12,100 S.F. TOTAL

CONSTRUCTION TYPE: TYPE: II-B

FIRE SPRINKLER SYSTEM: NO

PROPOSED OCCUPANCY USE: OFFICE/WAREHOUSE

OFF-STREET PARKING

OFFICE: 5,000 S.F. @ 1 STALL PER 200 S.F. = 25 STALLS REQUIRED.
WAREHOUSE: 7,100 S.F. @ 1 STALL PER 1,000 S.F. = 7 STALLS REQUIRED.

32 TOTAL STALLS REQUIRED / 49 STANDARD STALLS PROVIDED

2 DISABLED SPACES REQ'D / 2 DISABLED SPACES PROVIDED

SITE PLAN KEY NOTES

- 1 PROPOSED CONC. SIDEWALK, RE. CIVIL TYP.
- 2 NEW ASPHALT PAVING WHERE INDICATED RE. CIVIL
- 3 PROPOSED CONC. CURB, GUTTER, TYP. RE. CIVIL
- 4 PROPOSED WHEEL STOP, TYP. WHERE INDICATED
- 5 ADA CURB RAMP PER COUNTY STANDARDS & ANSI A117.1-2017.
- 6 ADA PARKING SIGN, TYP. AT ADA STALLS, SEE DETAIL ON ELEVATIONS SHEET.
- 7 PROPOSED LANDSCAPING AREA RE. LANDSCAPE PLANS.
- 8 EXISTING ENTRY DRIVE RE. CIVIL PATCH/REPAIR AS REQUIRED PER COUNTY STANDARDS.
- 9 PROPOSED RETAINING WALL, RE. CIVIL
- 10 EXISTING CONC. SLAB TO REMAIN, OWNER VERIFY.
- 11 PROPOSED CONC. SLAB RE. CIVIL
- 12 RE-CONFIGURE EXISTING CHAIN LINK FENCE AS REQUIRED. COORDINATE W/ OWNER
- 13 EXISTING FENCE TO REMAIN, TYP. OWNER VERIFY.

VICINITY MAP

NOT TO SCALE



Drawing Status:

DEVELOPMENT PLAN

Revisions:

No. Description By Date

1			

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Date:

01/31/2025

Drawn by:

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Scale:

AS NOTED

Job No.:

Sheet No.:

DP1
Of

PCD FILE NO. _____

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑↑↑	↑↑	↱	↰	↱
Traffic Vol, veh/h	64	626	661	66	74	90
Future Vol, veh/h	64	626	661	66	74	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	275	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	680	718	72	80	98
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	790	0	-	0	1130	-
Stage 1	-	-	-	-	718	-
Stage 2	-	-	-	-	412	-
Critical Hdwy	4.14	-	-	-	6.29	-
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	-
Pot Cap-1 Maneuver	826	-	-	-	229	0
Stage 1	-	-	-	-	432	0
Stage 2	-	-	-	-	602	0
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	826	-	-	-	210	-
Mov Cap-2 Maneuver	-	-	-	-	210	-
Stage 1	-	-	-	-	395	-
Stage 2	-	-	-	-	602	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		32.4		
HCM LOS	D					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	826	-	-	-	210	-
HCM Lane V/C Ratio	0.084	-	-	-	0.383	-
HCM Control Delay (s)	9.8	-	-	-	32.4	0
HCM Lane LOS	A	-	-	-	D	A
HCM 95th %tile Q(veh)	0.3	-	-	-	1.7	-

HCM 6th TWSC
3: Akers Drive & Constitution Avenue

Total Traffic AM without South Leg
03/26/2025

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↑		↰	↑↑↑	↰	↰	↰		↰	↑	↰
Traffic Vol, veh/h	69	626	0	0	661	69	0	0	0	75	0	92
Future Vol, veh/h	69	626	0	0	661	69	0	0	0	75	0	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	275	-	-	275	-	0	150	-	-	375	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	680	0	0	718	75	0	0	0	82	0	100

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	793	0	-	680	0	0	1189	1623	340	1140	1548	-
Stage 1	-	-	-	-	-	-	830	830	-	718	718	-
Stage 2	-	-	-	-	-	-	359	793	-	422	830	-
Critical Hdwy	4.14	-	-	5.34	-	-	6.99	6.54	7.14	6.99	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.22	-	-	3.12	-	-	3.67	4.02	3.92	3.67	4.02	-
Pot Cap-1 Maneuver	824	-	0	557	-	-	168	102	560	181	113	0
Stage 1	-	-	0	-	-	-	268	383	-	375	431	0
Stage 2	-	-	0	-	-	-	610	398	-	548	383	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	824	-	-	557	-	-	156	93	560	168	103	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	156	93	-	168	103	-
Stage 1	-	-	-	-	-	-	244	348	-	341	431	-
Stage 2	-	-	-	-	-	-	610	398	-	498	348	-











Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	0	45.1
HCM LOS			A	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	-	824	-	557	-	-	168	-	-
HCM Lane V/C Ratio	-	-	0.091	-	-	-	-	0.485	-	-
HCM Control Delay (s)	0	0	9.8	-	0	-	-	45.1	0	0
HCM Lane LOS	A	A	A	-	A	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	0.3	-	0	-	-	2.3	-	-

HCM 6th TWSC
3: Akers Drive & Constitution Avenue

Existing AM + Citizen on Constitution

03/26/2025

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	626	10	10	661	66	28	0	17	74	0	90
Future Vol, veh/h	64	626	10	10	661	66	28	0	17	74	0	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	275	-	-	275	-	0	150	-	-	375	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	680	11	11	718	72	30	0	18	80	0	98

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	790	0	0	691	0	0	1207	1638	346	1152	1571	-
Stage 1	-	-	-	-	-	-	826	826	-	740	740	-
Stage 2	-	-	-	-	-	-	381	812	-	412	831	-
Critical Hdwy	4.14	-	-	5.34	-	-	6.99	6.54	7.14	6.99	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.22	-	-	3.12	-	-	3.67	4.02	3.92	3.67	4.02	-
Pot Cap-1 Maneuver	826	-	-	550	-	-	164	100	555	178	109	0
Stage 1	-	-	-	-	-	-	269	385	-	364	421	0
Stage 2	-	-	-	-	-	-	592	390	-	555	383	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	826	-	-	550	-	-	151	90	555	158	98	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	151	90	-	158	98	-
Stage 1	-	-	-	-	-	-	246	352	-	333	413	-
Stage 2	-	-	-	-	-	-	580	382	-	491	350	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			0.2			26.1			49.3		
HCM LOS							D			E		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	151	555	826	-	-	550	-	-	158	-	-
HCM Lane V/C Ratio	0.202	0.033	0.084	-	-	0.02	-	-	0.509	-	-
HCM Control Delay (s)	34.8	11.7	9.8	-	-	11.7	-	-	49.3	0	0
HCM Lane LOS	D	B	A	-	-	B	-	-	E	A	A
HCM 95th %tile Q(veh)	0.7	0.1	0.3	-	-	0.1	-	-	2.5	-	-

HCM 6th TWSC
3: Akers Drive & Constitution Avenue























Total Traffic AM
03/26/2025

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↲	↰ ↱ ↲		↰ ↱ ↲	↰ ↱ ↲	↰ ↱ ↲	↰ ↱ ↲	↰ ↱ ↲		↰ ↱ ↲	↰ ↱ ↲	↰ ↱ ↲
Traffic Vol, veh/h	69	626	10	10	661	69	28	0	17	75	0	92
Future Vol, veh/h	69	626	10	10	661	69	28	0	17	75	0	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	275	-	-	275	-	0	150	-	-	375	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	680	11	11	718	75	30	0	18	82	0	100
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	793	0	0	691	0	0	1217	1651	346	1162	1581	-
Stage 1	-	-	-	-	-	-	836	836	-	740	740	-
Stage 2	-	-	-	-	-	-	381	815	-	422	841	-
Critical Hdwy	4.14	-	-	5.34	-	-	6.99	6.54	7.14	6.99	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.22	-	-	3.12	-	-	3.67	4.02	3.92	3.67	4.02	-
Pot Cap-1 Maneuver	824	-	-	550	-	-	161	98	555	175	108	0
Stage 1	-	-	-	-	-	-	265	381	-	364	421	0
Stage 2	-	-	-	-	-	-	592	389	-	548	379	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	824	-	-	550	-	-	147	87	555	155	96	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	147	87	-	155	96	-
Stage 1	-	-	-	-	-	-	241	346	-	331	413	-
Stage 2	-	-	-	-	-	-	580	381	-	482	345	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.2			26.7			51.5		
HCM LOS							D			F		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3	
Capacity (veh/h)	147	555	824	-	-	550	-	-	155	-	-	-
HCM Lane V/C Ratio	0.207	0.033	0.091	-	-	0.02	-	-	0.526	-	-	-
HCM Control Delay (s)	35.8	11.7	9.8	-	-	11.7	-	-	51.5	0	0	-
HCM Lane LOS	E	B	A	-	-	B	-	-	F	A	A	-
HCM 95th %tile Q(veh)	0.7	0.1	0.3	-	-	0.1	-	-	2.6	-	-	-

HCM 6th Signalized Intersection Summary







3: Akers Drive & Constitution Avenue

Total Traffic AM - Signalized
03/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	626	10	10	661	69	28	0	17	75	0	92
Future Volume (veh/h)	69	626	10	10	661	69	28	0	17	75	0	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	680	11	11	718	75	30	0	18	82	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	388	2904	47	452	1994	889	560	0	537	542	634	
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.34	0.00	0.34	0.34	0.00	0.00
Sat Flow, veh/h	684	5176	84	752	3554	1585	1418	0	1585	1395	1870	1585
Grp Volume(v), veh/h	75	447	244	11	718	75	30	0	18	82	0	0
Grp Sat Flow(s),veh/h/ln	684	1702	1855	752	1777	1585	1418	0	1585	1395	1870	1585
Q Serve(g_s), s	6.1	6.0	6.0	0.7	10.0	2.0	1.3	0.0	0.7	3.8	0.0	0.0
Cycle Q Clear(g_c), s	16.1	6.0	6.0	6.7	10.0	2.0	1.3	0.0	0.7	4.4	0.0	0.0
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	388	1910	1041	452	1994	889	560	0	537	542	634	
V/C Ratio(X)	0.19	0.23	0.23	0.02	0.36	0.08	0.05	0.00	0.03	0.15	0.00	
Avail Cap(c_a), veh/h	388	1910	1041	452	1994	889	560	0	537	542	634	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.3	10.0	10.0	11.7	10.9	9.1	20.1	0.0	19.9	21.4	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.3	0.5	0.1	0.5	0.2	0.2	0.0	0.1	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.0	2.2	0.1	3.5	0.6	0.4	0.0	0.3	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	10.3	10.5	11.8	11.4	9.3	20.3	0.0	20.0	22.0	0.0	0.0
LnGrp LOS	B	B	B	B	B	A	C	A	C	C	A	
Approach Vol, veh/h	766			804			48			82		
Approach Delay, s/veh	10.9			11.2			20.2			22.0		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.0			55.0			35.0			55.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	30.5			50.5			30.5			50.5		
Max Q Clear Time (g_c+I1), s	3.3			18.1			6.4			12.0		
Green Ext Time (p_c), s	0.1			5.1			0.2			5.4		
Intersection Summary												
HCM 6th Ctrl Delay	11.8											
HCM 6th LOS	B											











HCM 6th TWSC
3: Constitution Avenue & Akers Drive

Existing Traffic PM
03/26/2025

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	845	892	130	34	78
Future Vol, veh/h	66	845	892	130	34	78
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Free
Storage Length	275	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	918	970	141	37	85
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1111	0	-	0	1481	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	511	-
Critical Hdwy	4.14	-	-	-	6.29	-
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	-
Pot Cap-1 Maneuver	624	-	-	-	143	0
Stage 1	-	-	-	-	320	0
Stage 2	-	-	-	-	534	0
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	624	-	-	-	127	-
Mov Cap-2 Maneuver	-	-	-	-	127	-
Stage 1	-	-	-	-	283	-
Stage 2	-	-	-	-	534	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.8	0		44.6		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	624	-	-	-	127	-
HCM Lane V/C Ratio	0.115	-	-	-	0.291	-
HCM Control Delay (s)	11.5	-	-	-	44.6	0
HCM Lane LOS	B	-	-	-	E	A
HCM 95th %tile Q(veh)	0.4	-	-	-	1.1	-

HCM 6th TWSC
3: Akers Drive & Constitution Avenue

Total Traffic PM without South Leg
03/26/2025

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	69	845	0	0	892	132	0	0	0	37	0	83
Future Vol, veh/h	69	845	0	0	892	132	0	0	0	37	0	83
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	275	-	-	275	-	0	150	-	-	375	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	918	0	0	970	143	0	0	0	40	0	90

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1113	0	-	918	0	0	1553	2181	459	1487	2038	-
Stage 1	-	-	-	-	-	-	1068	1068	-	970	970	-
Stage 2	-	-	-	-	-	-	485	1113	-	517	1068	-
Critical Hdwy	4.14	-	-	5.34	-	-	6.99	6.54	7.14	6.99	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.22	-	-	3.12	-	-	3.67	4.02	3.92	3.67	4.02	-
Pot Cap-1 Maneuver	623	-	0	429	-	-	96	45	470	106	56	0
Stage 1	-	-	0	-	-	-	182	296	-	265	330	0
Stage 2	-	-	0	-	-	-	515	282	-	479	296	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	623	-	-	429	-	-	87	40	470	96	49	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	87	40	-	96	49	-
Stage 1	-	-	-	-	-	-	160	260	-	233	330	-
Stage 2	-	-	-	-	-	-	515	282	-	421	260	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	0	67.2
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	-	623	-	429	-	-	96	-	-
HCM Lane V/C Ratio	-	-	0.12	-	-	-	-	0.419	-	-
HCM Control Delay (s)	0	0	11.6	-	0	-	-	67.2	0	0
HCM Lane LOS	A	A	B	-	A	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	0.4	-	0	-	-	1.7	-	-

HCM 6th TWSC
3: Akers Drive & Constitution Avenue

Existing PM + Citizen on Constitution

03/26/2025

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↑		↰	↑↑↑	↰	↰	↰		↰	↑	↰
Traffic Vol, veh/h	66	845	30	30	892	130	19	0	11	34	0	78
Future Vol, veh/h	66	845	30	30	892	130	19	0	11	34	0	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	275	-	-	275	-	0	150	-	-	375	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	918	33	33	970	141	21	0	12	37	0	85
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1111	0	0	951	0	0	1630	2256	476	1547	2131	-
Stage 1	-	-	-	-	-	-	1079	1079	-	1036	1036	-
Stage 2	-	-	-	-	-	-	551	1177	-	511	1095	-
Critical Hdwy	4.14	-	-	5.34	-	-	6.99	6.54	7.14	6.99	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.22	-	-	3.12	-	-	3.67	4.02	3.92	3.67	4.02	-
Pot Cap-1 Maneuver	624	-	-	413	-	-	85	41	458	97	49	0
Stage 1	-	-	-	-	-	-	179	293	-	242	307	0
Stage 2	-	-	-	-	-	-	471	263	-	483	288	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	624	-	-	413	-	-	73	33	458	81	40	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	73	33	-	81	40	-
Stage 1	-	-	-	-	-	-	158	259	-	214	282	-
Stage 2	-	-	-	-	-	-	433	242	-	416	255	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.4			50.8			82.3		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3	
Capacity (veh/h)	73	458	624	-	-	413	-	-	81	-	-	-
HCM Lane V/C Ratio	0.283	0.026	0.115	-	-	0.079	-	-	0.456	-	-	-
HCM Control Delay (s)	72.7	13.1	11.5	-	-	14.5	-	-	82.3	0	0	-
HCM Lane LOS	F	B	B	-	-	B	-	-	F	A	A	-
HCM 95th %tile Q(veh)	1	0.1	0.4	-	-	0.3	-	-	1.9	-	-	-

HCM 6th TWSC
3: Akers Drive & Constitution Avenue























Total Traffic PM
03/26/2025

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↑		↰	↑↑↑	↰	↰	↰		↰	↑	↰
Traffic Vol, veh/h	69	845	30	30	892	132	19	0	11	37	0	83
Future Vol, veh/h	69	845	30	30	892	132	19	0	11	37	0	83
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	275	-	-	275	-	0	150	-	-	375	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	918	33	33	970	143	21	0	12	40	0	90
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1113	0	0	951	0	0	1636	2264	476	1553	2137	-
Stage 1	-	-	-	-	-	-	1085	1085	-	1036	1036	-
Stage 2	-	-	-	-	-	-	551	1179	-	517	1101	-
Critical Hdwy	4.14	-	-	5.34	-	-	6.99	6.54	7.14	6.99	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-	7.34	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.22	-	-	3.12	-	-	3.67	4.02	3.92	3.67	4.02	-
Pot Cap-1 Maneuver	623	-	-	413	-	-	84	40	458	96	48	0
Stage 1	-	-	-	-	-	-	177	291	-	242	307	0
Stage 2	-	-	-	-	-	-	471	262	-	479	286	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	623	-	-	413	-	-	72	32	458	80	39	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	72	32	-	80	39	-
Stage 1	-	-	-	-	-	-	156	256	-	213	282	-
Stage 2	-	-	-	-	-	-	433	241	-	410	252	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.4			51.7			88.8		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3	
Capacity (veh/h)	72	458	623	-	-	413	-	-	80	-	-	-
HCM Lane V/C Ratio	0.287	0.026	0.12	-	-	0.079	-	-	0.503	-	-	-
HCM Control Delay (s)	74	13.1	11.6	-	-	14.5	-	-	88.8	0	0	-
HCM Lane LOS	F	B	B	-	-	B	-	-	F	A	A	-
HCM 95th %tile Q(veh)	1	0.1	0.4	-	-	0.3	-	-	2.1	-	-	-

HCM 6th Signalized Intersection Summary

3: Akers Drive & Constitution Avenue

Total Traffic PM - Signalized
03/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	845	30	30	892	132	19	0	11	37	0	83
Future Volume (veh/h)	69	845	30	30	892	132	19	0	11	37	0	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	918	33	33	970	143	21	0	12	40	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	319	3120	112	394	2191	977	482	0	449	470	530	
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.28	0.00	0.28	0.28	0.00	0.00
Sat Flow, veh/h	506	5060	182	590	3554	1585	1418	0	1585	1402	1870	1585
Grp Volume(v), veh/h	75	617	334	33	970	143	21	0	12	40	0	0
Grp Sat Flow(s),veh/h/ln	506	1702	1838	590	1777	1585	1418	0	1585	1402	1870	1585
Q Serve(g_s), s	8.3	7.6	7.7	2.5	13.0	3.4	1.0	0.0	0.5	1.9	0.0	0.0
Cycle Q Clear(g_c), s	21.2	7.6	7.7	10.2	13.0	3.4	1.0	0.0	0.5	2.4	0.0	0.0
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	2099	1133	394	2191	977	482	0	449	470	530	
V/C Ratio(X)	0.23	0.29	0.29	0.08	0.44	0.15	0.04	0.00	0.03	0.09	0.00	
Avail Cap(c_a), veh/h	319	2099	1133	394	2191	977	482	0	449	470	530	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.7	8.1	8.1	10.5	9.1	7.3	23.5	0.0	23.3	24.2	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.4	0.7	0.4	0.7	0.3	0.2	0.0	0.1	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.4	2.7	0.3	4.2	1.0	0.3	0.0	0.2	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	8.4	8.7	10.9	9.7	7.6	23.6	0.0	23.4	24.5	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	C	C	A	
Approach Vol, veh/h	1026			1146			33			40		
Approach Delay, s/veh	9.1			9.5			23.5			24.5		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	30.0			60.0			30.0			60.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	25.5			55.5			25.5			55.5		
Max Q Clear Time (g_c+I1), s	3.0			23.2			4.4			15.0		
Green Ext Time (p_c), s	0.1			7.7			0.1			8.7		
Intersection Summary												
HCM 6th Ctrl Delay	9.8											
HCM 6th LOS	A											