SM ROCHA, LLC
TRAFFIC AND TRANSPORTATION CONSULTANTS

Please add PCD File No. MS227

Also please include the El Paso County standard signature block. See attached file.

November 11, 2022

David Spratlen II
Commercial Building Services, Inc.
7561 S Grant Street, Suite A-4
Littleton, Colorado 80122

RE: Space Village Filing No. 4 / Traffic Memorandum
El Paso County, Colorado

Dear David,

SM ROCHA, LLC is pleased to provide traffic generation information for the development entitled Space Village Filing No. 4. This development is located near the southeast corner of Space Village Avenue and Peterson Boulevard in El Paso County, Colorado.

The intent of this analysis is to present traffic volumes likely generated by the proposed development and consider potential impacts to the adjacent roadway network. This analysis is also provided to address the capacity, geometric, and control requirements associated with the development in accordance with Section B.2.4.D of the County's Engineering Criteria Manual (ECM)[1].

The following is a summary of analysis results.

Site Description and Access

Land for the development is currently vacant and surrounded by open space and a mix of military, commercial, industrial, and residential land uses. The proposed development is understood to entail the new construction of a contractor yard outdoor storage, on two lots totaling approximately 22.82 acres of land.

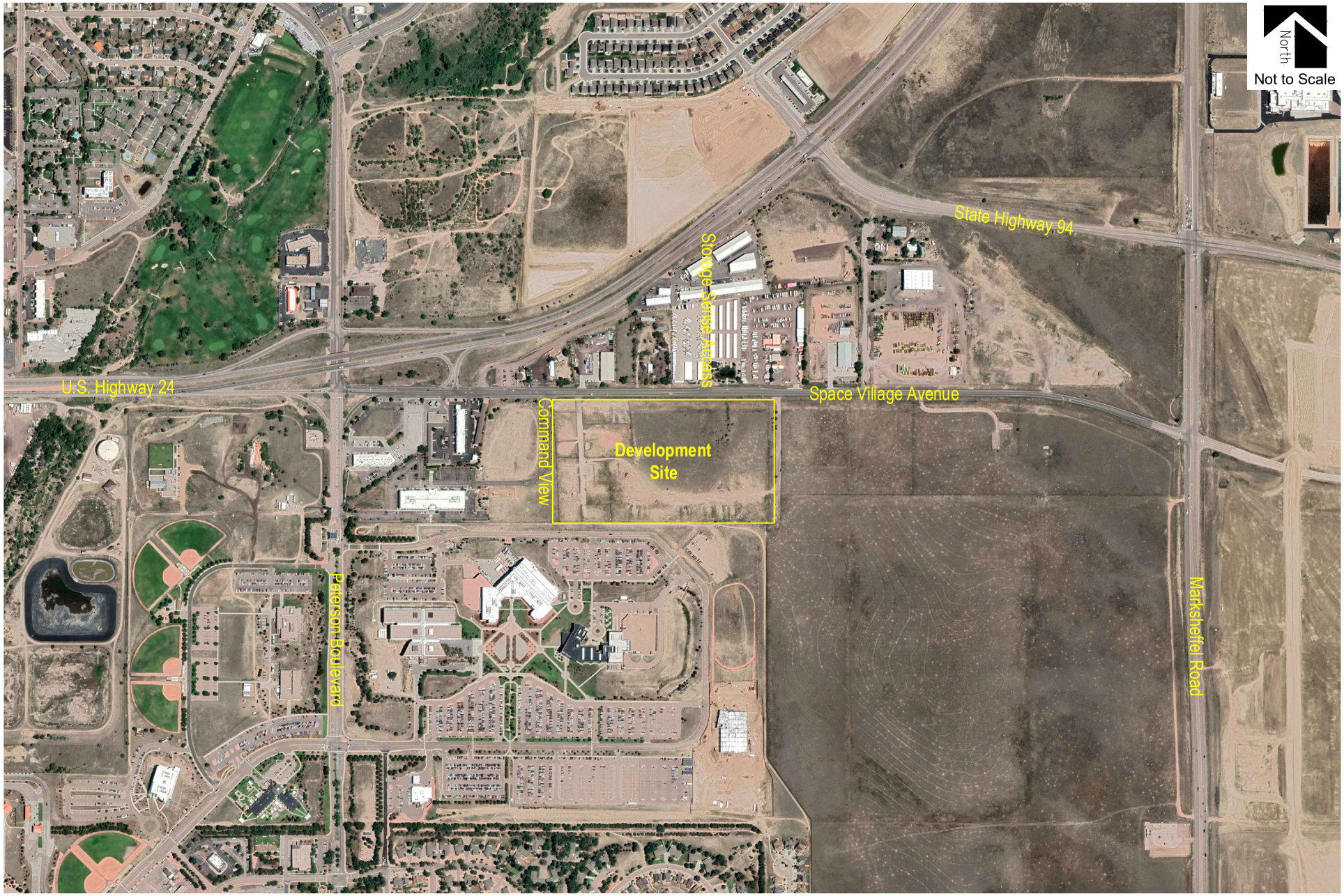
Proposed access to the development is provided via two full-movement accesses onto Space Village Avenue (referred to as Access A and Access B). It is understood that Access A will provide sole access to Lot 1 (11.23 acres) and Access B will serve Lot 2 (11.59 acres).

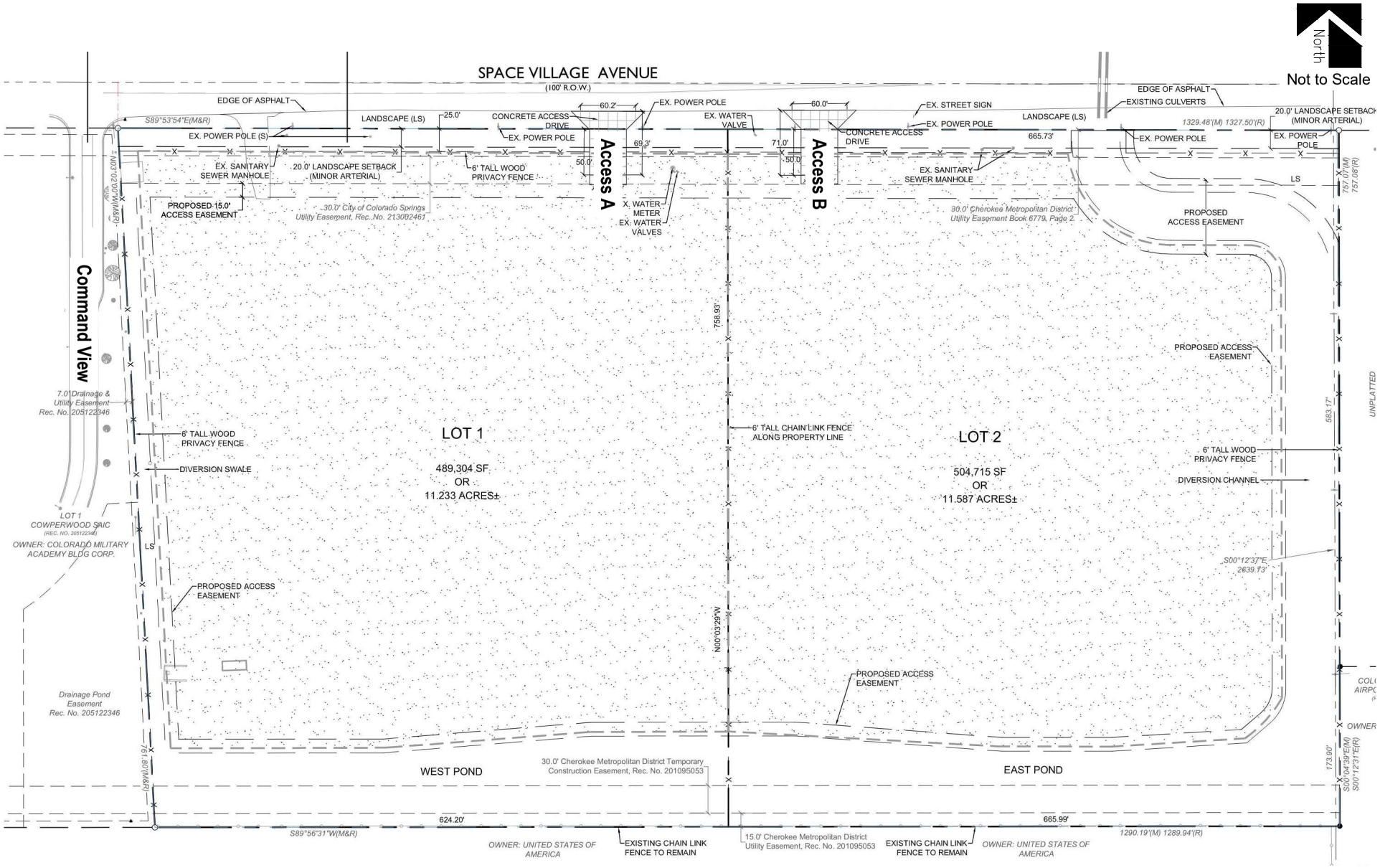
For purposed of this study, it is anticipated that development construction would be completed by end of Year 2024.

General site and access locations are shown on Figure 1.

A site plan, as prepared by Sterling Design Associates, is shown on Figure 2. This plan is provided for illustrative purposes only.

[1] El Paso County Engineering Criteria Manual, El Paso County, October 2020.


North
Not to Scale
State Highway 94
Storage Service Access
U.S. Highway 24
Space Village Avenue
Command View
Development Site
Peterson Boulevard
Marksheffel Road


North
Not to Scale
SPACE VILLAGE AVENUE
(100' R.O.W.)
Command View
EDGE OF ASPHALT
EX. POWER POLE (S)
LANDSCAPE (LS)
25.0'
CONCRETE ACCESS DRIVE
60.2'
EX. POWER POLE
EX. WATER VALVE
60.0'
EX. STREET SIGN
EDGE OF ASPHALT
EXISTING CULVERTS
20.0' LANDSCAPE SETBACK (MINOR ARTERIAL)
EX. SANITARY SEWER MANHOLE
20.0' LANDSCAPE SETBACK (MINOR ARTERIAL)
6' TALL WOOD PRIVACY FENCE
Access A
Access B
69.3'
71.0'
50.0'
665.73'
PROPOSED 15.0' ACCESS EASEMENT
30.0' City of Colorado Springs Utility Easement, Rec. No. 213002461
X. WATER METER
EX. WATER VALVES
30.0' Cherokee Metropolitan District Utility Easement Book 6779, Page 2
PROPOSED ACCESS EASEMENT
LS
7.0' Drainage & Utility Easement Rec. No. 205122346
6' TALL WOOD PRIVACY FENCE
DIVERSION SWALE
LOT 1
489,304 SF
OR
11.233 ACRES±
6' TALL CHAIN LINK FENCE ALONG PROPERTY LINE
LOT 2
504,715 SF
OR
11.587 ACRES±
PROPOSED ACCESS EASEMENT
6' TALL WOOD PRIVACY FENCE
DIVERSION CHANNEL
LOT 1 COWPERWOOD SAIC (REC. NO. 205122346)
OWNER: COLORADO MILITARY ACADEMY BLDG CORP.
LS
PROPOSED ACCESS EASEMENT
S00°12'37"E 2639.73'
758.93'
N00°03'29"W
Drainage Pond Easement Rec. No. 205122346
PROPOSED ACCESS EASEMENT
WEST POND
30.0' Cherokee Metropolitan District Temporary Construction Easement, Rec. No. 201095053
EAST POND
624.20'
665.99'
S89°56'31"W(M&R)
OWNER: UNITED STATES OF AMERICA
EXISTING CHAIN LINK FENCE TO REMAIN
15.0' Cherokee Metropolitan District Utility Easement, Rec. No. 201095053
EXISTING CHAIN LINK FENCE TO REMAIN
OWNER: UNITED STATES OF AMERICA
1290.19'(M) 1289.94'(R)
UNPLATTED
583.17'
173.96'

Existing and Background Traffic Volumes

Existing morning (AM) and afternoon (PM) peak hour traffic counts were collected at the Space Village Avenue intersections with Peterson Boulevard, the U.S. Highway 24 eastbound on/off ramps, Marksheffel Road, and the Storage Sense access drive. Average daily traffic (ADT) volumes were collected over a 24-hour period on Space Village Avenue. Counts were collected on Wednesday, October 26, 2022, with AM peak hour counts being collected during the period of 7:00 a.m. to 9:00 a.m. and PM peak hour counts being collected during the period of 4:00 p.m. to 6:00 p.m. Traffic count data is included for reference in Attachment A.

It is important to note that at the time of count collection, the east leg of the Space Village Avenue and Marksheffel Road intersection was closed. Therefore, existing traffic volumes for Space Village Avenue, east of Marksheffel Road, were obtained from the Reagan Ranch Traffic Impact Study[2].

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by the development of vacant parcels in the area.

To account for projected increases in background traffic by Year 2024, a compounded annual growth rate was determined using historical traffic data for the surrounding area provided by CDOT's Online Transportation Information System (OTIS), which anticipates a 20-year growth rate between one and two percent. Therefore, in order to provide for a conservative analysis, a growth rate of two percent was applied to existing traffic volumes. This annual growth rate provides for a conservative analysis and is assumed to account for regional growth projections and the level of in-fill development expected within the area.

[2] Reagan Ranch Traffic Impact Study, Kimley-Horn and Associates, Inc., November 2020.

Vehicle Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were considered for the proposed land use in order to estimate the average daily traffic (ADT) and peak hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from point of origin to point of destination.

However, ITE's Trip Generation Manual does not provide traffic generation information for this particular land use. As such, trip generation data was gathered from previous studies for similar land use projects[3, 4, 5] and used to estimate average daily and weekday peak hour trip information. Table 1 presents trip generation rates from the referenced studies.

Table 1 – Trip Generation Rates

ITE CODE	LAND USE	UNIT	TRIP GENERATION RATES						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Count Data Research									
-	165 Remington Contractor Yard (Mesa Cty, CO)	ACRE	16.92	1.49	0.50	1.99	0.99	0.50	1.49
-	Small Contractors Yard - US 6 and CR 240 (Garfield Cty, CO)	ACRE	10.14	-	-	-	-	-	-
-	Ute Creek Industrial Storage Yard (Eagle Cty, CO)	ACRE	-	-	-	-	0.50	0.85	1.35
		Average Rates:	13.53	1.49	0.50	1.99	0.75	0.67	1.42

Key: ACRE = Acres.
Note: All data and calculations above are subject to being rounded to nearest value.

Table 2 applies average rates from Table 1 and summarizes the projected ADT and peak hour traffic volumes likely generated by the land use area proposed.

Table 2 – Trip Generation Summary

ITE CODE	LAND USE	SIZE	TOTAL TRIPS GENERATED						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Site Development - Proposed									
-	Hampton Partners Contractor Yard and Storage (El Paso County, CO)	22.8 ACRE	309	34	11	45	17	15	32
		Proposed Total:	*309*	*34*	*11*	*45*	*17*	*15*	*32*

Key: ACRE = Acres.
Note: All data and calculations above are subject to being rounded to nearest value.

As Table 2 shows, the development area has the potential to generate approximately 309 daily trips with 45 of those occurring during the morning peak hour and 32 during the afternoon peak hour.

[3] SH 141 & Springfield Road Transportation Impact Study, McDowell Engineering, LLC, January 2019.
[4] Small Contractors Yard Land Use Application, US Hwy 6 and County Road 240 (Bruce Road), Timberline Energy Inc., November 2013.
[5] Ute Creek Industrial Storage Facility Expansion Traffic Impact Assessment, TDA Colorado, Inc., November 2010.

Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

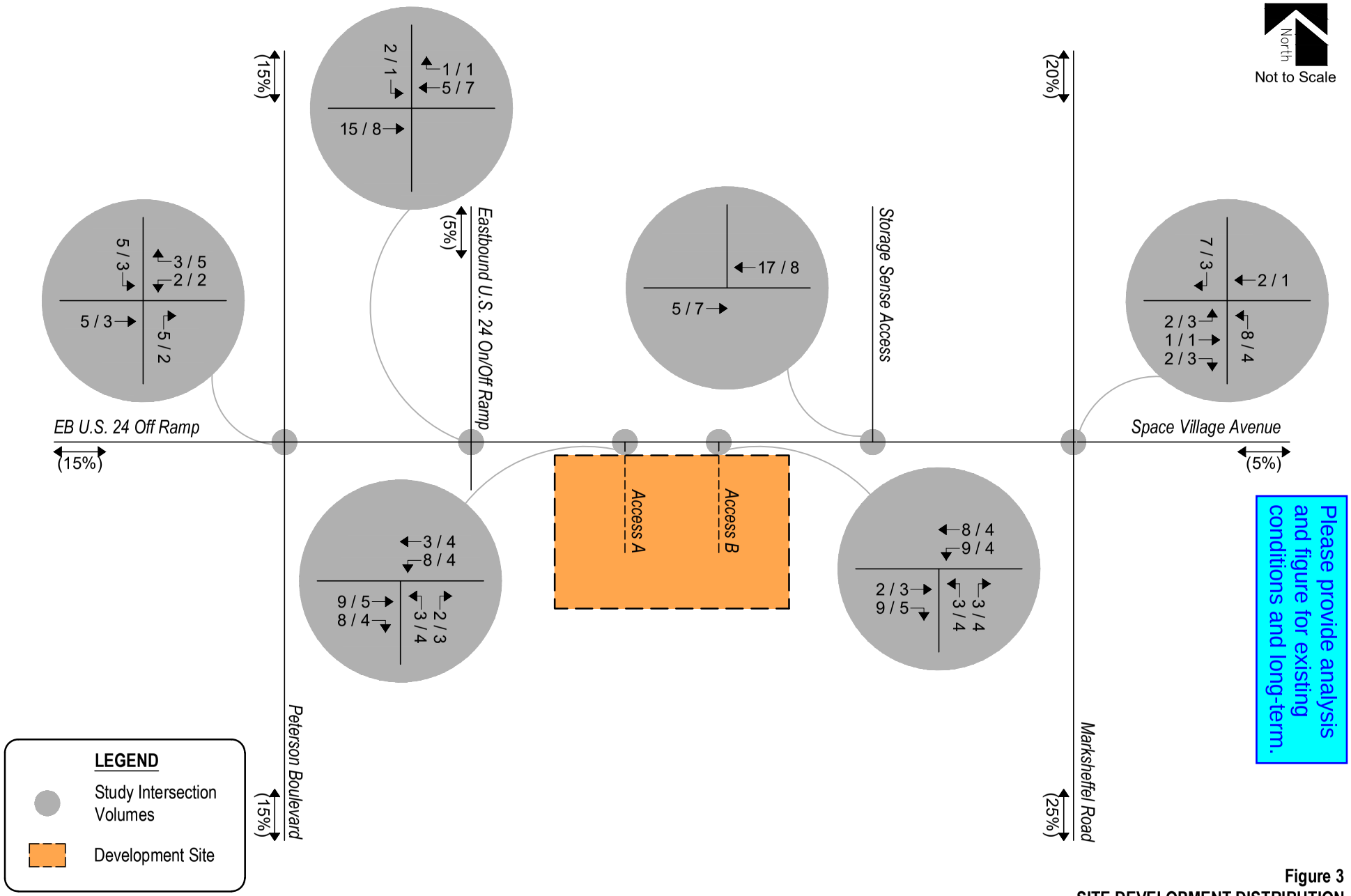
Trip Generation Distribution and Assignment

The overall directional distribution of site-generated traffic was determined based on the location of development within the County, proposed and existing area land uses, allowed turning movements, available road network, and in reference to historical traffic count data provided by CDOT's Traffic Count Database System (TCDS)[6].

Traffic assignment is how the site-generated and distributed trips are expected to be loaded onto the available roadway network. Applying assumed trip distribution patterns to site-generated traffic provides the peak hour trip volume assignments for proposed access drives.

Overall site-generated trip distribution patterns and assignments are shown on Figure 3.

[6] Transportation Data Management System, MS2, 2022.



Please provide analysis and figure for existing conditions and long-term.

Figure 3
SITE DEVELOPMENT DISTRIBUTION
(%) : Overall
SITE-GENERATED
AM / PM Peak Hour

Total Traffic Volumes

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Year 2024 with consideration of site-generated traffic. For analysis purposes, it was assumed that development construction would be completed by end of Year 2024.

Projected Year 2024 total traffic volumes and intersection geometry are shown in Figure 4.

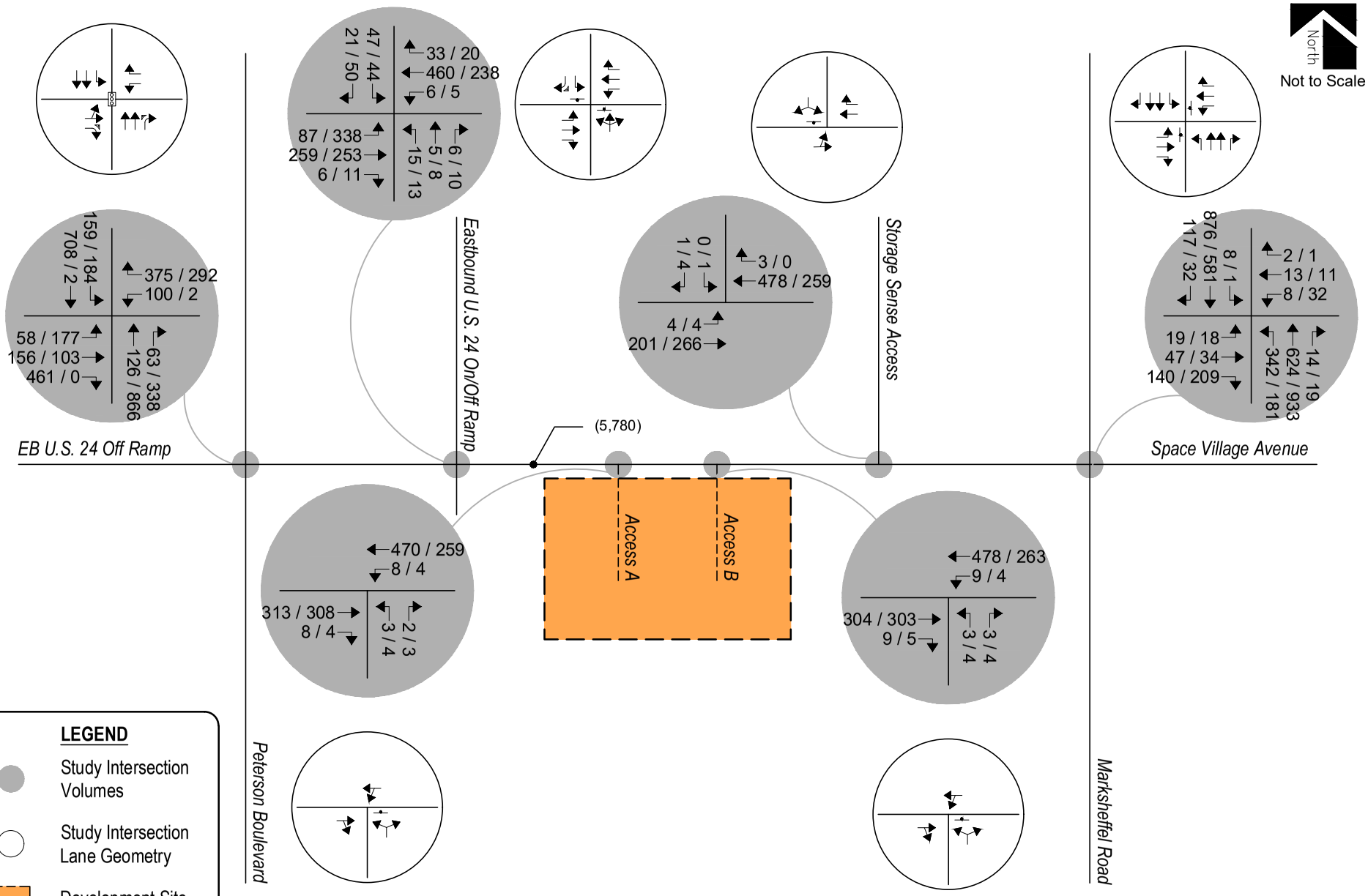


Figure 4
TOTAL TRAFFIC - YEAR 2024
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Total Traffic

The Signalized and Unsignalized Intersection Analysis techniques, as published in the Highway Capacity Manual (HCM), 6th Edition, by the Transportation Research Board and as incorporated into the SYNCHRO computer program, were used to analyze the study intersections for total traffic conditions. These nationally accepted techniques allow for the determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement.

Definitions of levels of service are given in Attachment B. Intersection capacity worksheets are provided in Attachment C.

Table 3 – Intersection Capacity Analysis Summary – Total Traffic – Year 2024

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
Peterson Boulevard / Space Village Avenue (Signalized)	C (29.4)	C (30.9)
EB US 24 On/Off Ramp / Space Village Avenue (Stop-Controlled)		
Eastbound Left	A	A
Westbound Left	A	A
Northbound Left, Through and Right	C	E
Southbound Left	D	F
Storage Sense Access / Space Village Avenue (Stop-Controlled)		
Eastbound Left and Through	A	A
Southbound Left and Right	B	B
Marksheffel Road / Space Village Avenue (Stop-Controlled)		
Eastbound Left	F	F
Eastbound Through	F	F
Eastbound Right	B	B
Westbound Left	F	F
Westbound Through	F	F
Westbound Right	B	B
Northbound Left	C	A
Southbound Left	A	B
Access A / Space Village Avenue (Stop-Controlled)		
Westbound Left and Through	A	A
Northbound Left and Right	B	B
Access B / Space Village Avenue (Stop-Controlled)		
Westbound Left and Through	A	A
Northbound Left and Right	B	B

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Stop-Controlled Intersection: Level of Service

Table 3 illustrates how, by Year 2024 and upon development build-out, the signalized intersection of Space Village Avenue with Peterson Boulevard shows an overall LOS C operation during both the morning and afternoon peak traffic hours.

The stop-controlled intersection of Space Village Avenue with the eastbound U.S. 24 On/Off Ramp predicts turning movement operations of LOS D or better for the morning peak traffic hour and LOS A for the afternoon peak traffic hour. Exceptions would include the northbound and southbound turning movements which operate at LOS E and LOS F, respectively, during the PM peak traffic hour. The LOS E and F operations are attributed to through traffic volumes along Space Village Avenue and the stop-controlled nature of the intersection.

The stop-controlled intersection of Space Village Avenue with the Storage Sense Access drive expects turning movement operations of LOS B or better during both peak traffic hours.

The stop-controlled intersection of Marksheffel Road with Space Village Avenue anticipates turning movement operations of LOS C or better during the AM peak traffic hour and LOS B or better during the PM peak traffic hour. Exceptions include the eastbound and westbound left and through turning movements which predict operations of LOS F for both peak traffic hours. The LOS F operations are attributed to the through traffic volume along Marksheffel Road and the stop-controlled nature of the intersection. To mitigate poor operations along the minor approach, signalization is shown to provide acceptable levels of service, as described within the Reagan Ranch Traffic Impact Study.

The stop-controlled intersections of Space Village Avenue with Access A and Access B predict turning movement operations at or better than LOS B during both the AM and PM peak traffic hours.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along Marksheffel Road will tend to create additional gaps in the traffic stream for turning movements at Space Village Avenue and will most likely provide mitigation to the LOS F operation projected during both peak traffic hours.

Auxiliary Lane Analysis

Auxiliary lanes for site development accesses were based on the County's ECM.

Considering development build-out, an evaluation of auxiliary lane requirements, pursuant to Section 2.3.7 of the County's ECM, reveals that this development does not warrant the need for right or left turn lane deceleration lanes along Space Village Avenue since ingress traffic volumes do not exceed design hourly volume thresholds.

State the expected turn volumes and how they compare to the criteria

Conclusion

This analysis assessed traffic generation for the Space Village Filing No. 4 development and potential impacts to the adjacent roadway network.

It is our professional opinion that the proposed site-generated traffic resulting from the development is expected to create no negative impact to traffic operations for the surrounding roadway network and proposed site accesses, nor at the Space Village Avenue intersections with Peterson Boulevard and Marksheffel Road. Analysis of site-generated traffic concludes that proposed development traffic volumes are minor.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system upon roadway and intersection control improvements assumed within the analysis. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at LOS D or better during peak traffic periods and upon build-out. Exceptions include the northbound and southbound turning movements at the Eastbound U.S. Highway 24 On/Off Ramp intersection with Space Village Avenue as well as the eastbound and westbound left and through turning movements at the intersection of Space Village Avenue and Marksheffel Road, which predict LOS E and F operations for their respective peak traffic hours.

We trust that our findings will assist in the planning and approval of the Space Village Filing No. 4 development. Please contact us should further assistance be needed.

Sincerely,

SM ROCHA, LLC
Traffic and Transportation Consultants

Megan Bock, EIT
Traffic Engineer

COLORADO REGISTERED
FREDERICK C. LANTZ
23410
11/11/2022
PROFESSIONAL ENGINEER

Fred Lantz, PE
Traffic Engineer

Unresolved Review 1 Comment:
Per ECM Appendix B.8 please state the current applicable Road Impact Fees and the developer's time of payment.
https://publicworks.elpasoco.com/road-impact-fees/

Unresolved Review 1 Comment:
Space Village Avenue is anticipated to be improved to an Urban Minor Arterial road classification. Per ECM Table 2-6 access spacing shall meet spacing requirements shown in Table 2-35. Please discuss if the proposed access locations meet criteria. If access spacing criteria is not met please provide alternative locations or submit a deviation request for review. Refer to ECM Chapter 2.4 for criteria.

Unresolved Review 1 Comment:
- Provide recommendations for the curb return radius at the access points for the vehicles that will utilize the site. Per ECM table 2-36 the typical design vehicle for industrial lots is a multi-unit truck.
- Provide the classification of all adjacent roadways per the MTCP.
- Per ECM B.2.4D discuss the requirement for pedestrian and bicycle facilities. Sidewalk and curb/gutter is required along Space Village Avenue.
- State what the sight distance is for every affected access and whether it can be met. If it cannot be met, state the required modifications so that it can be met.
-If an intersection does not meet LOS D or better, discuss what steps can be taken to bring the intersection to a satisfactory level.
-State whether the MTCP or other approved corridor study calls for the construction of improvements in the immediate area.
-State whether or not any improvements affected by the project are reimbursable under the current Major Transportation Corridors Plan (MTCP).

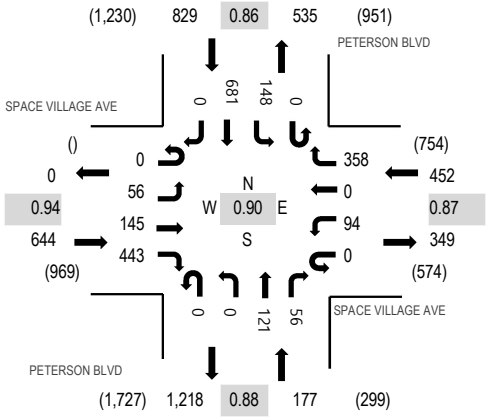
ATTACHMENT A

Traffic Count Data
Signal Timing Information

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

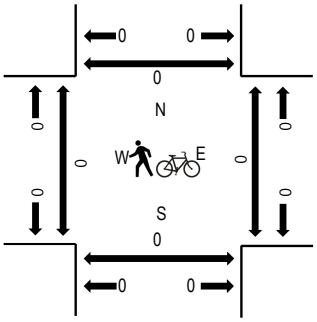
Location: 1 PETERSON BLVD & SPACE VILLAGE AVE AM
Date: Wednesday, October 26, 2022
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



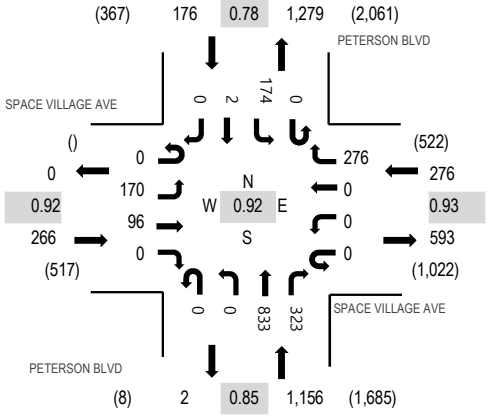
Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				PETERSON BLVD Northbound				PETERSON BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	9	33	114	0	20	0	62	0	0	26	10	0	28	165	0	467	2,102	0	0	0	0
7:15 AM	0	18	43	111	0	23	0	85	0	0	31	16	0	34	180	0	541	2,020	0	0	0	0
7:30 AM	0	14	45	109	0	25	0	101	0	0	32	19	0	52	189	0	586	1,760	0	0	0	0
7:45 AM	0	15	24	109	0	26	0	110	0	0	32	11	0	34	147	0	508	1,443	0	0	0	0
8:00 AM	0	18	21	71	0	14	0	87	0	0	24	15	0	28	107	0	385	1,150	0	0	0	0
8:15 AM	0	18	14	52	0	10	0	70	0	0	15	8	0	28	66	0	281		0	0	0	0
8:30 AM	0	19	16	37	0	5	0	60	0	0	18	11	0	26	77	0	269		0	0	0	0
8:45 AM	0	18	12	29	0	6	0	50	0	0	19	12	0	34	35	0	215		0	0	0	0
Count Total	0	129	208	632	0	129	0	625	0	0	197	102	0	264	966	0	3,252		0	0	0	0
Peak Hour	0	56	145	443	0	94	0	358	0	0	121	56	0	148	681	0	2,102		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

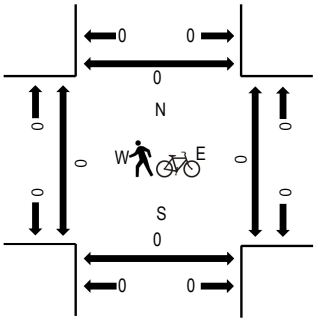
Location: 1 PETERSON BLVD & SPACE VILLAGE AVE PM
Date: Wednesday, October 26, 2022
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



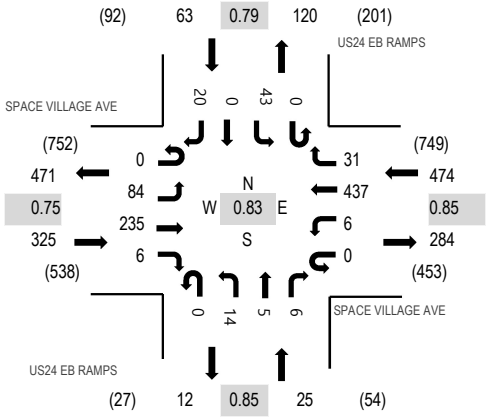
Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				PETERSON BLVD Northbound				PETERSON BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	33	28	0	0	0	0	70	0	0	241	99	0	32	0	0	503	1,874	0	0	0	0
4:15 PM	0	47	25	0	0	0	0	67	0	0	204	79	0	54	1	0	477	1,752	0	0	0	0
4:30 PM	0	48	20	0	0	0	0	75	0	0	225	93	0	45	1	0	507	1,592	0	0	0	0
4:45 PM	0	42	23	0	0	0	0	64	0	0	163	52	0	43	0	0	387	1,368	0	0	0	0
5:00 PM	0	33	19	0	0	0	0	72	0	0	137	52	0	68	0	0	381	1,217	0	0	0	0
5:15 PM	0	43	31	2	0	0	0	53	0	0	95	42	0	51	0	0	317		0	0	0	0
5:30 PM	0	43	23	2	0	0	0	59	0	0	88	28	0	40	0	0	283		0	0	0	0
5:45 PM	0	38	15	2	0	0	0	62	0	0	59	28	0	32	0	0	236		0	0	0	0
Count Total	0	327	184	6	0	0	0	522	0	0	1,212	473	0	365	2	0	3,091		0	0	0	0
Peak Hour	0	170	96	0	0	0	0	276	0	0	833	323	0	174	2	0	1,874		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

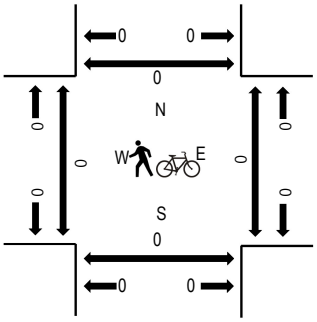
Location: 2 US24 EB RAMPS & SPACE VILLAGE AVE AM
Date: Wednesday, October 26, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



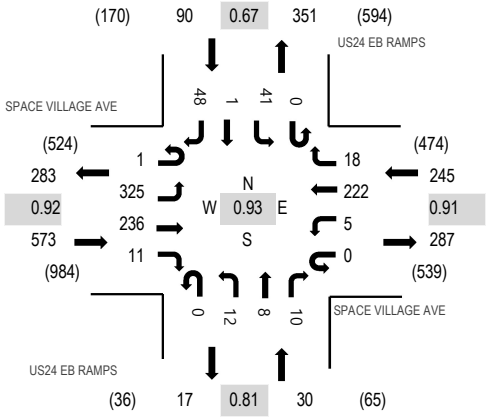
Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				US24 EB RAMPS Northbound				US24 EB RAMPS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	15	53	1	0	0	82	7	0	4	1	2	0	8	0	1	174	881	0	0	0	0
7:15 AM	0	23	63	2	0	1	102	6	0	2	0	0	0	8	0	6	213	887	0	0	0	0
7:30 AM	0	18	93	1	0	1	120	5	0	4	1	3	0	14	0	6	266	815	0	0	0	0
7:45 AM	0	16	48	1	0	2	128	9	0	3	1	2	0	12	0	6	228	664	0	0	0	0
8:00 AM	0	27	31	2	0	2	87	11	0	5	3	1	0	9	0	2	180	552	0	0	0	0
8:15 AM	0	19	27	1	0	1	70	1	0	7	1	2	0	7	0	5	141		0	0	0	0
8:30 AM	0	14	24	3	0	3	58	0	0	4	0	5	0	4	0	0	115		0	0	0	0
8:45 AM	0	19	34	3	0	3	47	3	0	1	1	1	0	2	0	2	116		0	0	0	0
Count Total	0	151	373	14	0	13	694	42	0	30	8	16	0	64	0	28	1,433		0	0	0	0
Peak Hour	0	84	235	6	0	6	437	31	0	14	5	6	0	43	0	20	887		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

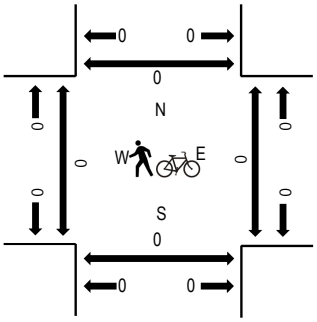
Location: 2 US24 EB RAMPS & SPACE VILLAGE AVE PM
Date: Wednesday, October 26, 2022
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				US24 EB RAMPS Northbound				US24 EB RAMPS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	95	56	4	0	1	58	8	0	3	2	1	0	11	0	10	249	938	0	0	0	0
4:15 PM	0	75	73	1	0	0	55	4	0	3	3	2	0	14	1	20	251	911	0	0	0	0
4:30 PM	0	101	53	2	0	1	51	3	0	4	1	2	0	10	0	11	239	866	0	0	0	0
4:45 PM	1	54	54	4	0	3	58	3	0	2	2	5	0	6	0	7	199	803	0	0	0	0
5:00 PM	0	74	49	7	0	2	52	1	0	6	1	5	0	12	0	13	222	755	0	0	0	0
5:15 PM	0	60	54	3	0	2	41	12	0	2	4	4	0	18	0	6	206		0	0	0	0
5:30 PM	0	40	44	1	0	1	53	13	0	3	2	3	0	10	0	6	176		0	0	0	0
5:45 PM	0	33	43	3	0	0	49	3	0	2	0	3	0	7	0	8	151		0	0	0	0
Count Total	1	532	426	25	0	10	417	47	0	25	15	25	0	88	1	81	1,693		0	0	0	0
Peak Hour	1	325	236	11	0	5	222	18	0	12	8	10	0	41	1	48	938		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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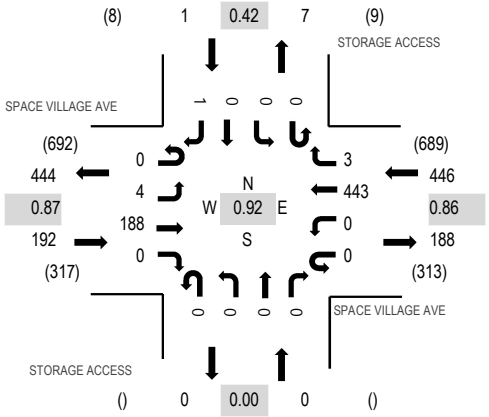
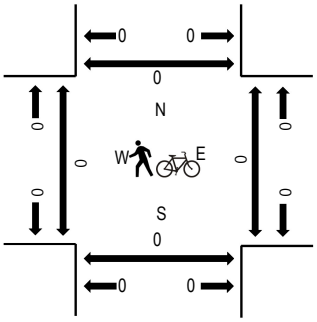
Location: 3 STORAGE ACCESS & SPACE VILLAGE AVE AM
Date: Wednesday, October 26, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				STORAGE ACCESS Northbound				STORAGE ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	21	0	0	0	77	0	0	0	0	0	0	0	0	2	101	605	0	0	0	0
7:15 AM	0	0	32	0	0	0	129	0	0	0	0	0	0	0	0	0	161	639	0	0	0	0
7:30 AM	0	0	52	0	0	0	119	2	0	0	0	0	0	0	0	0	173	562	0	0	0	0
7:45 AM	0	1	50	0	0	0	118	0	0	0	0	0	0	0	0	1	170	482	0	0	0	0
8:00 AM	0	3	54	0	0	0	77	1	0	0	0	0	0	0	0	0	135	409	0	0	0	0
8:15 AM	0	0	38	0	0	0	46	0	0	0	0	0	0	0	0	0	84		0	0	0	0
8:30 AM	0	0	27	0	0	0	62	1	0	0	0	0	0	0	0	3	93		0	0	0	0
8:45 AM	0	0	38	0	0	0	57	0	0	0	0	0	0	1	0	1	97		0	0	0	0
Count Total	0	5	312	0	0	0	685	4	0	0	0	0	0	1	0	7	1,014		0	0	0	0
Peak Hour	0	4	188	0	0	0	443	3	0	0	0	0	0	0	0	1	639		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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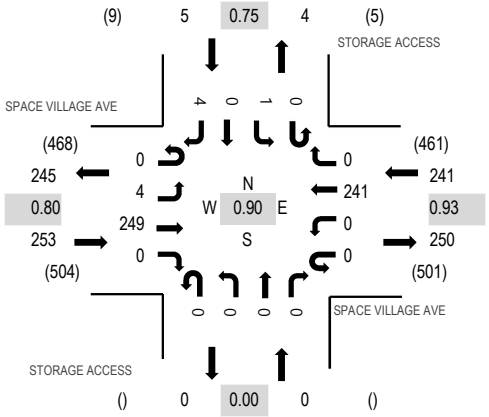
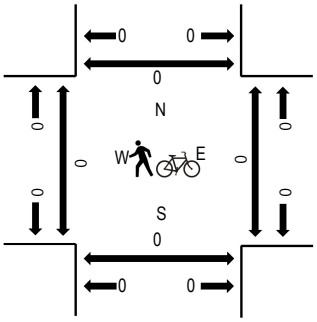
Location: 3 STORAGE ACCESS & SPACE VILLAGE AVE PM
Date: Wednesday, October 26, 2022
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				STORAGE ACCESS Northbound				STORAGE ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	67	0	0	0	60	0	0	0	0	0	0	0	0	1	128	488	0	0	0	0
4:15 PM	0	0	64	0	0	0	60	0	0	0	0	0	0	0	0	1	125	499	0	0	0	0
4:30 PM	0	3	52	0	0	0	66	0	0	0	0	0	0	0	0	2	123	488	0	0	0	0
4:45 PM	0	1	50	0	0	0	59	0	0	0	0	0	0	1	0	1	112	494	0	0	0	0
5:00 PM	0	0	83	0	0	0	56	0	0	0	0	0	0	0	0	0	139	486	0	0	0	0
5:15 PM	0	0	60	0	0	0	54	0	0	0	0	0	0	0	0	0	114		0	0	0	0
5:30 PM	0	1	68	0	0	0	58	0	0	0	0	0	0	1	0	1	129		0	0	0	0
5:45 PM	0	0	55	0	0	0	48	0	0	0	0	0	0	0	0	1	104		0	0	0	0
Count Total	0	5	499	0	0	0	461	0	0	0	0	0	0	2	0	7	974		0	0	0	0
Peak Hour	0	4	249	0	0	0	241	0	0	0	0	0	0	1	0	4	499		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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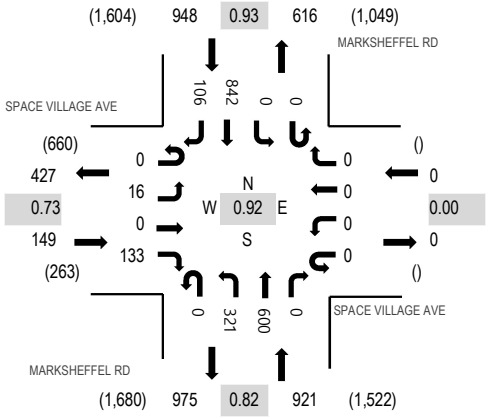
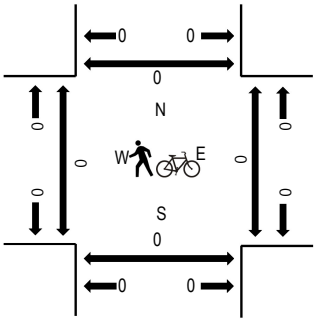
Location: 4 MARKSHEFFEL RD & SPACE VILLAGE AVE AM
Date: Wednesday, October 26, 2022
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				MARKSHEFFEL RD Northbound				MARKSHEFFEL RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	4	0	25	0	0	0	0	0	65	126	0	0	0	214	17	451	2,018	0	0	0	0
7:15 AM	0	4	0	15	0	0	0	0	0	90	156	0	0	0	225	26	516	1,950	0	0	0	0
7:30 AM	0	4	0	52	0	0	0	0	0	95	185	0	0	0	184	28	548	1,812	0	0	0	0
7:45 AM	0	4	0	41	0	0	0	0	0	71	133	0	0	0	219	35	503	1,597	0	0	0	0
8:00 AM	0	3	0	20	0	0	0	0	0	52	114	0	0	0	172	22	383	1,371	0	0	0	0
8:15 AM	0	8	0	32	0	0	0	0	0	47	114	0	0	0	165	12	378		0	0	0	0
8:30 AM	0	2	0	17	0	0	0	0	0	53	98	0	0	0	153	10	333		0	0	0	0
8:45 AM	0	6	0	26	0	0	0	0	0	35	88	0	0	0	120	2	277		0	0	0	0
Count Total	0	35	0	228	0	0	0	0	0	508	1,014	0	0	0	1,452	152	3,389		0	0	0	0
Peak Hour	0	16	0	133	0	0	0	0	0	321	600	0	0	0	842	106	2,018		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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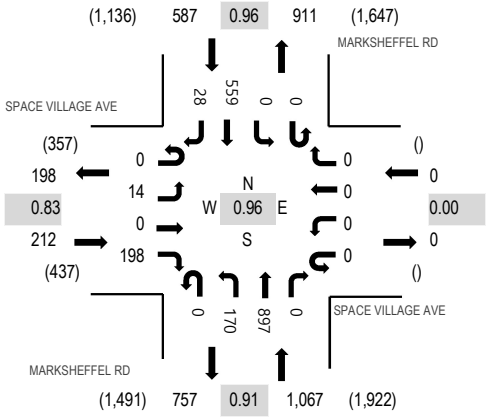
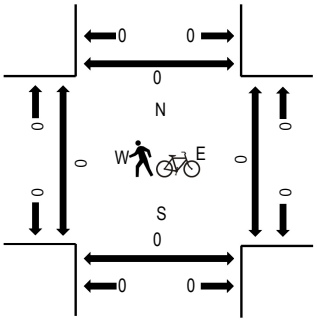
Location: 4 MARKSHEFFEL RD & SPACE VILLAGE AVE PM
Date: Wednesday, October 26, 2022
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	SPACE VILLAGE AVE Eastbound				SPACE VILLAGE AVE Westbound				MARKSHEFFEL RD Northbound				MARKSHEFFEL RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	7	0	48	0	0	0	0	0	43	194	0	0	0	140	5	437	1,866	0	0	0	0
4:15 PM	0	3	0	61	0	0	0	0	0	36	234	0	0	0	138	15	487	1,866	0	0	0	0
4:30 PM	0	2	0	43	0	0	0	0	0	44	223	0	0	0	145	6	463	1,804	0	0	0	0
4:45 PM	0	2	0	46	0	0	0	0	0	47	246	0	0	0	136	2	479	1,753	0	0	0	0
5:00 PM	0	7	0	61	0	0	0	0	0	27	198	0	0	0	138	6	437	1,629	0	0	0	0
5:15 PM	0	7	0	63	0	0	0	0	1	28	200	0	0	0	119	7	425		0	0	0	0
5:30 PM	0	3	0	38	0	0	0	0	0	41	176	0	0	0	145	9	412		0	0	0	0
5:45 PM	0	2	0	44	0	0	0	0	0	41	143	0	0	0	125	0	355		0	0	0	0
Count Total	0	33	0	404	0	0	0	0	1	307	1,614	0	0	0	1,086	50	3,495		0	0	0	0
Peak Hour	0	14	0	198	0	0	0	0	0	170	897	0	0	0	559	28	1,866		0	0	0	0

All Traffic Data Services, LLC

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Site Code: 5
Station ID:
SPACE VILLAGE AVE W.O. STORAGE SPACE ACC

Latitude: 0' 0.0000 Undefined

Start Time	26-Oct-22 Wed	EB	WB							Total
12:00 AM		6	4							10
01:00		10	2							12
02:00		3	8							11
03:00		1	7							8
04:00		4	21							25
05:00		33	66							99
06:00		105	182							287
07:00		157	**446**							**603**
08:00		**160**	246							406
09:00		147	130							277
10:00		118	146							264
11:00		158	166							324
12:00 PM		169	127							296
01:00		152	139							291
02:00		173	154							327
03:00		**278**	**267**							**545**
04:00		237	250							487
05:00		267	218							485
06:00		140	105							245
07:00		103	63							166
08:00		73	46							119
09:00		37	23							60
10:00		32	11							43
11:00		14	6							20
Total		2577	2833							5410
Percent		47.6%	52.4%							
AM Peak	-	08:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	160	446	-	-	-	-	-	-	603
PM Peak	-	15:00	15:00	-	-	-	-	-	-	15:00
Vol.	-	278	267	-	-	-	-	-	-	545
Grand Total		2577	2833							5410
Percent		47.6%	52.4%							
ADT		ADT 5,410		AADT 5,410						

Intersection 266 at Highway 24 and Peterson Rd S - Timing table, page 1

Page 1	Phases											
	1	2	3	4	5	6	7	8	9	10	11	12
Min Green	4	4	4	4	0	4	0	0	0	0	0	0
Passage Time I	3.0	2.0	1.0	3.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Passage Time II	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Green I	8	15	30	20	0	15	0	0	0	0	0	0
Max Green II	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Clearance	4.0	4.0	4.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clearance	2.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0
Min Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Green Time	0	0	0	0	0	0	0	0	0	0	0	0
Red Revert Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk Time	0	0	0	7	0	0	0	0	0	0	0	0
Pedestrian Clearance	0	0	0	20	0	0	0	0	0	0	0	0
Handicap Walk	0	0	0	0	0	0	0	0	0	0	0	0
Handicap Ped Clearance	0	0	0	0	0	0	0	0	0	0	0	0
Highway 24			X	X								
Peterson Rd S	X	X				X						
Compass Direction	S	N	W	E		S						
Through, Turn or XPed	Left,p/p	Thru	Thru	Thru		Thru						

Intersection 266 at Highway 24 and Peterson Rd S - Sequence table, page 1

Page 1	Ring 1 Phases				Ring 2 Phases				Ring 3 Phases			
	1	2	3	4	5	6	7	8	9	10	11	12
State 1		Vehicle										
Barrier 1												
State 2	Vehicle					Vehicle						
Barrier 2	XXXXXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXXXXX							
State 3			Vehicle									
Barrier 3												
State 4				V & P								
Barrier 4	XXXXXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXXXXX							
State 5												
Barrier 5												
State 6												
Barrier 6												
State 7												
Barrier 7												
State 8												
Barrier 8												
State 9												
Barrier 9												
State 10												
Barrier 10												
State 11												
Barrier 11												
State 12												
Barrier 12												

Intersection 266 at Highway 24 and Peterson Rd S - Phases control table, page 1

Page 1	Vehicle Phases 111 123456789012		Ped Phases 111 123456789012
Min Recalls	2 6	Ped Recalls	
Max Recalls	2 6	Handicap Ped Recalls	
Recall If Maxed		Soft Ped Recalls	
Dual Entry		Do Not Recall Ped	2 4 6 8
Do Not Skip		Allow Walk Reduction	
Simultaneous Gap Out		Hold In Walk	
Restricted Phases		Allow Ped Re-service	
Sequential Initial Timing		Rest In Walk	No
Max Timer Starts For Call			
Reduction Starts For Call			
Red To Avoid Left Turn Trap			
Rest In Red	No		

Intersection 266 at Highway 24 and Peterson Rd S - Schedule table, events 1-25

Event	Ena-		Event Parameters		Start					Duration	Stop		Repetition		
Num	bled	Event Type	Param 1	Param 2	Mon	Day	Hour	Min	Sec	Minutes	Mon	Day	Repeat	Intervals	Priority
1	Yes	Run Plan	Plan 1	Ofst #1	1	1	06	30	00	210	12	31	Weekly	_MTWTF_	Low
2	Yes	Run Plan	Plan 2	Ofst #1	1	1	10	00	00	330	12	31	Weekly	_MTWTF_	Low
3	Yes	Run Plan	Plan 4	Ofst #1	1	1	15	30	00	150	12	31	Weekly	_MTWTF	Low
4	Yes	Run Plan	Plan 2	Ofst #1	1	1	18	00	00	122	12	31	Weekly	_MTWTF	Low
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Intersection 266 at Highway 24 and Peterson Rd S - Coordination table, plans 1-2

	_____111	Cycle Length	100			Alternate	Alternate	Alternate
Plan 1	123456789012	Offset 1	20	Phases	Splits	Mins	Passages	Maxes
Coordinated		Offset 2	0	1	18	0	0.0	17
Phases	2 6	Offset 3	0	2	30	0	0.0	32
Secondary		Offset 4	0	3	26	0	0.0	27
Coordinated		Relative Secondary Offset	0	4	26	0	0.0	27
Phases		Permissive Period	Auto	5	0	0	0.0	0
Extra Time		Max Cycle Addition	25	6	48	0	0.0	55
Phases		Max Cycle Subtraction	25	7	0	0	0.0	0
Additional		Coord Actuated Period	0	8	0	0	0.0	0
Max Recalls		Top Of Cycle Green Point	End	9	0	0	0.0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0
	_____111	Cycle Length	100			Alternate	Alternate	Alternate
Plan 2	123456789012	Offset 1	1	Phases	Splits	Mins	Passages	Maxes
Coordinated		Offset 2	0	1	18	0	0.0	17
Phases	2 6	Offset 3	0	2	34	0	0.0	37
Secondary		Offset 4	0	3	21	0	0.0	21
Coordinated		Relative Secondary Offset	0	4	27	0	0.0	28
Phases		Permissive Period	Auto	5	0	0	0.0	0
Extra Time		Max Cycle Addition	25	6	52	0	0.0	60
Phases		Max Cycle Subtraction	25	7	0	0	0.0	0
Additional		Coord Actuated Period	0	8	0	0	0.0	0
Max Recalls		Top Of Cycle Green Point	End	9	0	0	0.0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0

Intersection 266 at Highway 24 and Peterson Rd S - Coordination table, plans 3-4

	_____111	Cycle Length	0			Alternate	Alternate	Alternate
Plan 3	123456789012	Offset 1	0	Phases	Splits	Mins	Passages	Maxes
Coordinated		Offset 2	0	1	0	0	0.0	0
Phases	_____	Offset 3	0	2	0	0	0.0	0
Secondary		Offset 4	0	3	0	0	0.0	0
Coordinated		Relative Secondary Offset	0	4	0	0	0.0	0
Phases		Permissive Period	Auto	5	0	0	0.0	0
Extra Time		Max Cycle Addition	0	6	0	0	0.0	0
Phases		Max Cycle Subtraction	0	7	0	0	0.0	0
Additional		Coord Actuated Period	0	8	0	0	0.0	0
Max Recalls		Top Of Cycle Green Point	End	9	0	0	0.0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0
	_____111	Cycle Length	125			Alternate	Alternate	Alternate
Plan 4	123456789012	Offset 1	1	Phases	Splits	Mins	Passages	Maxes
Coordinated		Offset 2	0	1	24	0	0.0	25
Phases	2 6	Offset 3	0	2	47	0	0.0	53
Secondary		Offset 4	0	3	25	0	0.0	26
Coordinated		Relative Secondary Offset	0	4	29	0	0.0	31
Phases		Permissive Period	Auto	5	0	0	0.0	0
Extra Time		Max Cycle Addition	31	6	71	0	0.0	83
Phases		Max Cycle Subtraction	31	7	0	0	0.0	0
Additional		Coord Actuated Period	0	8	0	0	0.0	0
Max Recalls		Top Of Cycle Green Point	End	9	0	0	0.0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0

ATTACHMENT B

Level of Service Definitions

The following information can be found in the Highway Capacity Manual, Transportation Research Board, 2016: Chapter 19 – Signalized Intersections and Chapter 20 – Two-Way Stop Controlled Intersections.

Automobile Level of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A

Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B

Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C

Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D

Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E

Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F

Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Level of Service (LOS) for Unsignalized TWSC Intersections

Level of Service (v/c ≤ 1.0)	Average Control Delay (s/veh)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

ATTACHMENT C

Capacity Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	156	461	100	0	375	0	126	63	159	708	0
Future Volume (vph)	58	156	461	100	0	375	0	126	63	159	708	0
Satd. Flow (prot)	0	1839	1583	1770	0	1583	0	3539	1583	1770	3539	0
Flt Permitted		0.987		0.613						0.558		
Satd. Flow (perm)	0	1839	1583	1142	0	1583	0	3539	1583	1039	3539	0
Satd. Flow (RTOR)			255			408			164			
Lane Group Flow (vph)	0	233	501	109	0	408	0	137	68	173	770	0
Turn Type	Split	NA	Perm	Perm		Perm		NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4	8		8			2	6		
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	10.0	10.0	10.0		10.0		10.0	10.0	10.0	10.0	
Total Split (s)	26.0	26.0	26.0	26.0		26.0		30.0	30.0	18.0	48.0	
Total Split (%)	26.0%	26.0%	26.0%	26.0%		26.0%		30.0%	30.0%	18.0%	48.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0		2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0	6.0	6.0		6.0		6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Act Effct Green (s)		19.6	19.6	14.5		14.5		31.3	31.3	47.9	47.9	
Actuated g/C Ratio		0.20	0.20	0.14		0.14		0.31	0.31	0.48	0.48	
v/c Ratio		0.65	0.97	0.66		0.71		0.12	0.11	0.30	0.45	
Control Delay		46.2	54.3	58.5		11.0		27.4	0.4	18.0	19.3	
Queue Delay		0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay		46.2	54.3	58.5		11.0		27.4	0.4	18.0	19.3	
LOS		D	D	E		B		C	A	B	B	
Approach Delay		51.7			21.0			18.4			19.1	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)		137	170	66		0		33	0	62	168	
Queue Length 95th (ft)		219	#382	118		83		62	0	117	243	
Internal Link Dist (ft)		419			647			421			121	
Turn Bay Length (ft)									250	280		
Base Capacity (vph)		367	520	228		643		1107	608	587	1695	
Starvation Cap Reductn		0	0	0		0		0	0	0	0	
Spillback Cap Reductn		0	0	0		0		0	0	0	0	
Storage Cap Reductn		0	0	0		0		0	0	0	0	
Reduced v/c Ratio		0.63	0.96	0.48		0.63		0.12	0.11	0.29	0.45	

Intersection Summary

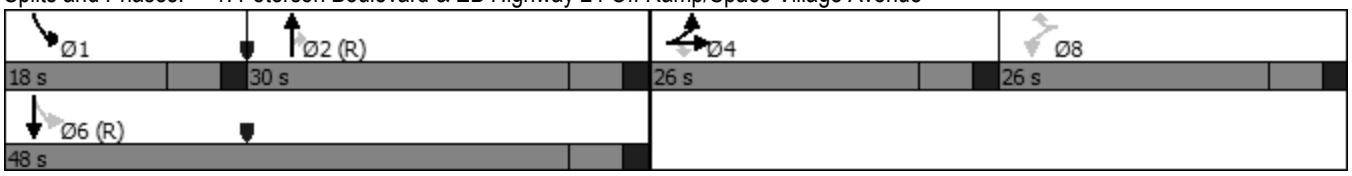
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 20 (20%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 29.4	Intersection LOS: C
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Peterson Boulevard & EB Highway 24 Off Ramp/Space Village Avenue



Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	87	259	6	6	460	33	15	5	6	47	0	21
Future Vol, veh/h	87	259	6	6	460	33	15	5	6	47	0	21
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	295	-	155	720	-	105	-	-	-	65	-	-
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	95	282	7	7	500	36	16	5	7	51	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	536	0	0	289	0	0	1004	1022	282	996	-	-
Stage 1	-	-	-	-	-	-	472	472	-	514	-	-
Stage 2	-	-	-	-	-	-	532	550	-	482	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	-	-
Pot Cap-1 Maneuver	1032	-	-	1273	-	-	220	236	757	223	0	0
Stage 1	-	-	-	-	-	-	573	559	-	543	0	0
Stage 2	-	-	-	-	-	-	531	516	-	565	0	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1032	-	-	1273	-	-	204	213	757	201	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	204	213	-	201	-	-
Stage 1	-	-	-	-	-	-	520	508	-	493	-	-
Stage 2	-	-	-	-	-	-	528	513	-	503	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0.1	21.4	28.9
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	248	1032	-	-	1273	-	-	201	-
HCM Lane V/C Ratio	0.114	0.092	-	-	0.005	-	-	0.254	-
HCM Control Delay (s)	21.4	8.8	-	-	7.8	-	-	28.9	0
HCM Lane LOS	C	A	-	-	A	-	-	D	A
HCM 95th %tile Q(veh)	0.4	0.3	-	-	0	-	-	1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	201	478	3	0	1
Future Vol, veh/h	4	201	478	3	0	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	-	-	-	125	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	4	218	520	3	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	523	0	-	0	746	520
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	226	-
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	1043	-	-	-	381	556
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1043	-	-	-	379	556
Mov Cap-2 Maneuver	-	-	-	-	379	-
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	812	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1043	-	-	-	556
HCM Lane V/C Ratio	0.004	-	-	-	0.002
HCM Control Delay (s)	8.5	0	-	-	11.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	47	140	8	13	2	342	624	14	8	876	117
Future Vol, veh/h	19	47	140	8	13	2	342	624	14	8	876	117
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	250	290	-	220	390	-	430	390	-	415
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	21	51	152	9	14	2	372	678	15	9	952	127

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2060	2407	476	1942	2519	339	1079	0	0	693	0	0
Stage 1	970	970	-	1422	1422	-	-	-	-	-	-	-
Stage 2	1090	1437	-	520	1097	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	32	~ 33	535	39	28	657	642	-	-	898	-	-
Stage 1	272	330	-	143	200	-	-	-	-	-	-	-
Stage 2	230	197	-	507	287	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 14	535	-	~ 12	657	642	-	-	898	-	-
Mov Cap-2 Maneuver	-	~ 14	-	-	~ 12	-	-	-	-	-	-	-
Stage 1	115	327	-	60	84	-	-	-	-	-	-	-
Stage 2	80	83	-	303	284	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			6.3	0.1
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	642	-	-	-	14	535	-	12	657	898	-	-
HCM Lane V/C Ratio	0.579	-	-	-	3.649	0.284	-	1.178	0.003	0.01	-	-
HCM Control Delay (s)	18	-	-	-	$ 1740	14.4	-	$ 745.6	10.5	9	-	-
HCM Lane LOS	C	-	-	-	F	B	-	F	B	A	-	-
HCM 95th %tile Q(veh)	3.7	-	-	-	7.3	1.2	-	2.4	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	313	8	8	470	3	2
Future Vol, veh/h	313	8	8	470	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	340	9	9	511	3	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	349	0	874	345
Stage 1	-	-	-	-	345	-
Stage 2	-	-	-	-	529	-
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	-	-	1210	-	320	698
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	591	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1210	-	317	698
Mov Cap-2 Maneuver	-	-	-	-	317	-
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	406	-	-	1210	-
HCM Lane V/C Ratio	0.013	-	-	0.007	-
HCM Control Delay (s)	14	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	304	9	9	478	3	3
Future Vol, veh/h	304	9	9	478	3	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	330	10	10	520	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	340	0	875	335
Stage 1	-	-	-	-	335	-
Stage 2	-	-	-	-	540	-
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	-	-	1219	-	320	707
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	584	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1219	-	316	707
Mov Cap-2 Maneuver	-	-	-	-	316	-
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	577	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	437	-	-	1219	-
HCM Lane V/C Ratio	0.015	-	-	0.008	-
HCM Control Delay (s)	13.4	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	103	0	2	0	292	0	866	338	184	2	0
Future Volume (vph)	177	103	0	2	0	292	0	866	338	184	2	0
Satd. Flow (prot)	0	1805	1863	1770	0	1583	0	3539	1583	1770	3539	0
Flt Permitted		0.969		0.575						0.177		
Satd. Flow (perm)	0	1805	1863	1071	0	1583	0	3539	1583	330	3539	0
Satd. Flow (RTOR)						317			350			
Lane Group Flow (vph)	0	304	0	2	0	317	0	941	367	200	2	0
Turn Type	Split	NA	Perm	Perm		Perm		NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4	8		8			2	6		
Detector Phase	4	4	4	8		8		2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	10.0	10.0	10.0		10.0		10.0	10.0	10.0	10.0	
Total Split (s)	29.0	29.0	29.0	25.0		25.0		47.0	47.0	24.0	71.0	
Total Split (%)	23.2%	23.2%	23.2%	20.0%		20.0%		37.6%	37.6%	19.2%	56.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0		2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0	6.0	6.0		6.0		6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None	None		None		C-Max	C-Max	None	C-Max	
Act Effct Green (s)		22.6		8.8		8.8		56.3	56.3	75.6	75.6	
Actuated g/C Ratio		0.18		0.07		0.07		0.45	0.45	0.60	0.60	
v/c Ratio		0.93		0.03		0.78		0.59	0.41	0.57	0.00	
Control Delay		86.1		50.5		19.5		29.5	5.0	18.6	12.0	
Queue Delay		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay		86.1		50.5		19.5		29.5	5.0	18.6	12.0	
LOS		F		D		B		C	A	B	B	
Approach Delay		86.1			19.7			22.6			18.5	
Approach LOS		F			B			C			B	
Queue Length 50th (ft)		244		2		0		277	7	64	0	
Queue Length 95th (ft)		#414		9		88		449	82	127	2	
Internal Link Dist (ft)		419			647			421			121	
Turn Bay Length (ft)									250	280		
Base Capacity (vph)		332		162		509		1593	904	411	2139	
Starvation Cap Reductn		0		0		0		0	0	0	0	
Spillback Cap Reductn		0		0		0		0	0	0	0	
Storage Cap Reductn		0		0		0		0	0	0	0	
Reduced v/c Ratio		0.92		0.01		0.62		0.59	0.41	0.49	0.00	

Intersection Summary

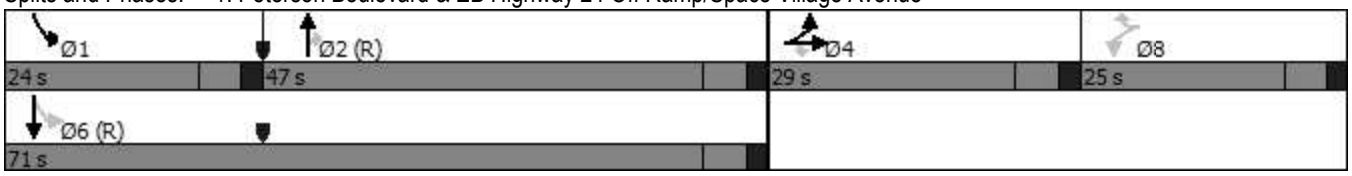
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 30.9	Intersection LOS: C
Intersection Capacity Utilization 72.2%	ICU Level of Service C
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Peterson Boulevard & EB Highway 24 Off Ramp/Space Village Avenue



Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	338	253	11	5	238	20	13	8	10	44	0	50
Future Vol, veh/h	338	253	11	5	238	20	13	8	10	44	0	50
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	295	-	155	720	-	105	-	-	-	65	-	-
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	367	275	12	5	259	22	14	9	11	48	0	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	281	0	0	287	0	0	1289	1300	275	1294	-	-
Stage 1	-	-	-	-	-	-	1009	1009	-	269	-	-
Stage 2	-	-	-	-	-	-	280	291	-	1025	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	-	-
Pot Cap-1 Maneuver	1282	-	-	1275	-	-	141	161	764	139	0	0
Stage 1	-	-	-	-	-	-	290	318	-	737	0	0
Stage 2	-	-	-	-	-	-	727	672	-	284	0	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1282	-	-	1275	-	-	109	114	764	100	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	114	-	100	-	-
Stage 1	-	-	-	-	-	-	207	227	-	526	-	-
Stage 2	-	-	-	-	-	-	724	669	-	192	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	0.1	35.1	70.3
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	153	1282	-	-	1275	-	-	100	-
HCM Lane V/C Ratio	0.22	0.287	-	-	0.004	-	-	0.478	-
HCM Control Delay (s)	35.1	8.9	-	-	7.8	-	-	70.3	0
HCM Lane LOS	E	A	-	-	A	-	-	F	A
HCM 95th %tile Q(veh)	0.8	1.2	-	-	0	-	-	2.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	266	259	0	1	4
Future Vol, veh/h	4	266	259	0	1	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	-	-	-	125	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	4	289	282	0	1	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	282	0	-	0	579	282
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	297	-
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	1280	-	-	-	477	757
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	754	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1280	-	-	-	475	757
Mov Cap-2 Maneuver	-	-	-	-	475	-
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	754	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1280	-	-	-	677
HCM Lane V/C Ratio	0.003	-	-	-	0.008
HCM Control Delay (s)	7.8	0	-	-	10.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	45.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	34	209	32	11	1	181	933	19	1	581	32
Future Vol, veh/h	18	34	209	32	11	1	181	933	19	1	581	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	250	290	-	220	390	-	430	390	-	415
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	20	37	227	35	12	1	197	1014	21	1	632	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1541	2063	316	1745	2077	507	667	0	0	1035	0	0
Stage 1	634	634	-	1408	1408	-	-	-	-	-	-	-
Stage 2	907	1429	-	337	669	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	79	54	680	55	53	511	919	-	-	667	-	-
Stage 1	434	471	-	146	204	-	-	-	-	-	-	-
Stage 2	297	199	-	651	454	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	52	42	680	~ 8	42	511	919	-	-	667	-	-
Mov Cap-2 Maneuver	52	42	-	~ 8	42	-	-	-	-	-	-	-
Stage 1	341	471	-	115	160	-	-	-	-	-	-	-
Stage 2	215	156	-	399	454	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	50.5	$ 1784.5	1.6	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	919	-	-	52	42	680	8	42	511	667	-	-
HCM Lane V/C Ratio	0.214	-	-	0.376	0.88	0.334	4.348	0.285	0.002	0.002	-	-
HCM Control Delay (s)	10	-	-	111.1	249.9	12.9	$ 2411.5	121.8	12.1	10.4	-	-
HCM Lane LOS	A	-	-	F	F	B	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.8	-	-	1.4	3.4	1.5	5.7	1	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	308	4	4	259	4	3
Future Vol, veh/h	308	4	4	259	4	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	335	4	4	282	4	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	339	0	627	337
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	290	-
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	-	-	1220	-	447	705
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	759	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1220	-	445	705
Mov Cap-2 Maneuver	-	-	-	-	445	-
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	756	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	529	-	-	1220	-
HCM Lane V/C Ratio	0.014	-	-	0.004	-
HCM Control Delay (s)	11.9	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	303	5	4	263	4	4
Future Vol, veh/h	303	5	4	263	4	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	329	5	4	286	4	4

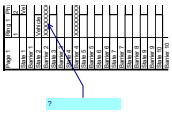
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	334	0	626	332
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	294	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1225	-	448	710
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	756	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1225	-	446	710
Mov Cap-2 Maneuver	-	-	-	-	446	-
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	753	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	548	-	-	1225	-
HCM Lane V/C Ratio	0.016	-	-	0.004	-
HCM Control Delay (s)	11.7	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

V2_Traffic Memo Redlines.pdf Markup Summary

Callout (1)



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Page Label: 24
Author: Daniel Torres
Date: 1/30/2023 3:33:29 PM
Length: 0
Area: 0
Volume: 0

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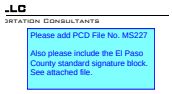
File Attachment (1)

Subject: File Attachment
Page Label: 1
Author: Carlos
Date: 1/19/2023 1:25:20 PM
Length: 0
Area: 0
Volume: 0

Text Box (7)



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Author: Carlos
Date: 1/19/2023 1:25:13 PM
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Area: 0
Volume: 0

Please add PCD File No. MS227

Also please include the El Paso County standard signature block. See attached file.

Subject: Text Box
Page Label: 12
Author: Carlos
Date: 1/19/2023 2:07:30 PM
Length: 0
Area: 0
Volume: 0

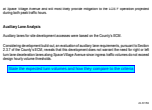
Unresolved Review 1 Comment:
Per ECM Appendix B.8 please state the current applicable Road Impact Fees and the developer's time of payment.
https://publicworks.elpasoco.com/road-impact-fees/

Subject: Text Box
Page Label: 12
Author: Carlos
Date: 1/30/2023 4:16:00 PM
Length: 0
Area: 0
Volume: 0

Unresolved Review 1 Comment:
Space Village Avenue is anticipated to be improved to an Urban Minor Arterial road classification. Per ECM Table 2-6 access spacing shall meet spacing requirements shown in Table 2-35. Please discuss if the proposed access locations meet criteria. If access spacing criteria is not met please provide alternative locations or submit a deviation request for review. Refer to ECM Chapter 2.4 for criteria.

Subject: Text Box
Page Label: 13
Author: Carlos
Date: 2/7/2023 3:00:39 PM
Length: 0
Area: 0
Volume: 0

Unresolved Review 1 Comment:
- Provide recommendations for the curb return radius at the access points for the vehicles that will utilize the site. Per ECM table 2-36 the typical design vehicle for industrial lots is a multi-unit truck.
- Provide the classification of all adjacent roadways per the MTCP.
- Per ECM B.2.4D discuss the requirement for pedestrian and bicycle facilities. Sidewalk and curb/gutter is required along Space Village Avenue.
- State what the sight distance is for every affected access and whether it can be met. If it cannot be met, state the required modifications so that it can be met.
-If an intersection does not meet LOS D or better, discuss what steps can be taken to bring the intersection to a satisfactory level.
-State whether the MTCP or other approved corridor study calls for the construction of improvements in the immediate area.
-State whether or not any improvements affected by the project are reimbursable under the current Major Transportation Corridors Plan (MTCP).



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Date: 1/30/2023 4:09:42 PM
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State the expected turn volumes and how they compare to the criteria

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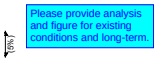

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Author: Carlos
Date: 2/9/2023 2:38:16 PM
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Area: 0
Volume: 0

Please provide analysis and figure for existing conditions and long-term.

Subject: Text Box
Page Label: 10
Author: Carlos
Date: 2/9/2023 2:41:06 PM
Length: 0
Area: 0
Volume: 0

- Provide discussion on LOS for existing and long-term conditions.
- Discuss any changes in LOS due to the development's traffic.