

DRAFT

Taco Bell / Retail Development Snow Vista Blvd SW Albuquerque, NM

Traffic Impact Assessment

Prepared for:
Wallace Design Collective

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EXECUTIVE SUMMARY

A development is being proposed on a parcel located on the west side of Snow Vista Blvd SW south of DeVargas Rd SW in Albuquerque, New Mexico. The proposed development is a 1,950 sf Taco Bell with drive thru and 7,645 sf of retail space. There are 46 parking spaces proposed, with space for 14 vehicles to queue in the drive-thru lane and additional storage on-site for an additional 8+ cars. One existing right-in, right out access is proposed to Snow Vista Blvd (Access #1). In addition, one full movement access is proposed to Snow Vista Blvd, and a right-in, right-out to DeVargas Rd within the rest of the corner development.

The purpose of this study is to evaluate the impact of the vehicular trips projected to be generated by the proposed development on the study area intersections and roadway system. The study includes 2025 (implementation year) and 2035 (horizon year). A 1% annual growth rate was approved by the City of Albuquerque to forecast to the implementation and horizon years. Trips were also estimated for the other three parcels on this corner site. The study area was approved by the city during the scoping process and includes DeVargas Rd SW/Snow Vista Blvd SW, Benavides Rd SW/Snow Vista Blvd SW, and the proposed Site Access #1.

The following table summarizes the proposed Trip Generation for the site:

Trip Generation	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
1.95 ksf Fast Food w/Drive Thru (LU 934)	44	43	87	33	31	64
Pass-By Trips (50%)	22	22	44	16	16	32
7.645 ksf Strip Retail (LU 822)	14	10	24	32	32	64
Pass-By Trips (25%)	3	3	6	8	8	16
TOTAL TRIPS	83	78	161	89	87	176
NEW TRIPS	58	53	111	65	63	128

Summary of Findings

The proposed 1,950 sf Taco Bell with drive thru and 7,645 sf of retail space will not have a significant impact on the adjacent road system. No decreases in level of service to unacceptable levels are forecasts under both 2025 and 2035 build conditions. Delays are forecast to increase on the northbound and southbound Snow Vista Blvd approaches to Benevides Rd, which operate at levels of service E/F under existing conditions. The City of Albuquerque should consider alternate traffic control and intersection configurations to improve operations to acceptable levels.

Southbound Snow Vista Blvd at Access #1 meets the requirement for a right turn deceleration lane. However, since most of the right turning volumes will come from the Sage Ranch Ct. connector between the two directions of the divided Snow Vista Blvd, located less than 100 feet north of Access #1, construction of a southbound deceleration lane is not recommended as it would increase the crossing distance by 12 feet or more, creating an increased safety hazard.

Recommendations and Mitigation Measures

Based on the analyses, no improvements are needed to the existing roadway system.

I. INTRODUCTION

A. Purpose of Study

A development is being proposed on a parcel located on the west side of Snow Vista Blvd SW south of DeVargas Rd SW in Albuquerque, New Mexico. The proposed development is a 1,950 sf Taco Bell with drive thru and 7,645 sf of retail space. This development is one portion of an overall four parcel development on this corner. There are 46 parking spaces proposed, with space for 14 vehicles to queue in the drive-thru lane and additional storage on-site for an additional 8+ cars. One existing right-in, right out access is proposed to Snow Vista Blvd. In addition, one full movement access is proposed to Snow Vista Blvd, and a right-in, right-out to DeVargas Rd within the rest of the corner development.

The purpose of this study is to evaluate the impact of the vehicular trips projected to be generated by the proposed development on the study area intersections and roadway system.

B. Study Procedures

Information Sources – Trip Generation, 11th edition, by the Institute of Transportation Engineers (ITE) was used for trip generation estimates.

The City of Albuquerque specified a 1% annual growth rate to the implementation year of 2025 and horizon year of 2035, a site traffic distribution based on existing area travel patterns, and data concerning the other three proposed developments on this corner parcel.

The study area encompasses the existing roadway system in the vicinity of the project site and was approved by the City of Albuquerque during the scoping process.

- DeVargas Rd SW / Snow Vista Blvd SW
- Benavides Rd SW / Snow Vista Blvd SW
- Snow Vista Blvd SW / Access #1
- DeVargas Rd SW / Access #2

Level of Service (LOS) – LOS D-E is considered acceptable in the study area.

II. DESCRIPTION OF PROPOSED DEVELOPMENT

A. Site Development Characteristics

The proposed development is a 1,950 sf Taco Bell with drive thru and 7,645 sf of retail space. There are 46 parking spaces proposed, with space for 14 vehicles to queue in the drive-thru lane and additional storage on-site for an additional 8+ cars. One existing right-in, right out access is proposed to Snow Vista Blvd. In addition, one full movement access is proposed to Snow Vista Blvd, and a right-in, right-out to DeVargas Rd within the rest of the corner development. The Site Concept Plan is included in Figure 3.

III. STUDY AREA CONDITIONS

A. General Area Characteristics

Figure 1 illustrates the location of the development site. Existing land uses around the site consist of a mix of retail/commercial and residential.

B. Area Street Network

The existing transportation network in the vicinity of the proposed development is illustrated in Figure 1.

Study Area Roadways:

- **Snow Vista Blvd SW** – Snow Vista Blvd SW is classified as a Principal Arterial – Other. By the site, the roadway section consists of two travel lanes in each direction with a wide dirt median. There are paved shoulders and detached sidewalks on both sides. The posted speed limit is 35 mph.
- **DeVargas Rd SW** – DeVargas Rd SW is classified as a Major Collector. East of Snow Vista Blvd SW, this road is called Sage Rd SW. By the site, the roadway section consists of two travel lanes in each direction. There are paved shoulders and attached sidewalks on both sides. The posted speed limit is 30/35 mph.
- **Benavides Rd SW** – Benavides Rd is classified as a local road. By the site, the roadway section consists of one travel lane in each direction. There are no shoulders and detached sidewalks on both sides. The posted speed limit is 25 mph.

Study Area Intersections:

- **DeVargas Rd SW / Snow Vista Blvd SW** – The intersection consists of one left turn lane, one thru and one shared thru-right turn lane on each approach. Control consists of an 8-phase traffic signal with protected left turns.
- **Benavides Rd SW / Snow Vista Blvd SW** – These function as two separate intersections, separated by a wide dirt median. Both intersections are under “all-way stop” control. The western intersection consists of one lane per direction eastbound and westbound, and one left turn, one thru and one thru-right lane southbound. The eastern intersection also consists of one lane per direction eastbound and westbound, but with one left-thru and one thru-right lane northbound.

IV. ANALYSIS of EXISTING CONDITION

A. Existing Traffic Volumes

Turning movement AM and PM peak period traffic count data was collected on Tuesday, December 17, 2024. A summary of the existing peak hour traffic volumes is illustrated in Figure 4. Detailed traffic count data is provided in Appendix “A”. Peak hours were determined to be 7:15 – 8:15 am and 3:45 – 4:45 pm

B. Existing Levels of Service

The capacity analyses in this study utilized the methodologies contained in the Highway Capacity Manual 6th edition (HCM) employing “Synchro 11” software and resulted in a qualitative measure of the operational characteristics of each intersection described by a letter designation ranging from “A” to “F” known as “Level of Service” (LOS). LOS “A” represents free-flow operating conditions, whereas LOS “F” represents excessive congestion and delay. Unsignalized intersection capacity analysis reports a LOS designation for each impeded intersection movement.

Table 3 presents the existing levels of service, by movement. All movements at the DeVargas/Snow Vista intersection currently operate at acceptable levels of service. However, at the two Benavides/Snow Vista intersections, the southbound movements at the western intersection and the northbound movements at the eastern intersection operate at level of service E/F. The thru volumes are too high for the existing all-way stop control to process.

C. Existing Transit Service

Bus Route 198 travels north/south along Snow Vista Blvd SW. Bus Route 54 travels east/west along Benavides Rd SW.

D. Bicycle and Pedestrian Considerations

There are sidewalks along both sides of all the study area roads. The Amole Arroyo Trail runs north/south and connects to the Snow Vista Trail at DeVargas Rd SW. It continues south for several miles.

V. ANALYSIS of IMPLEMENTATION YEAR CONDITIONS

A. Project Implementation Year/ Horizon Year

The project development is forecast to open and be operating in 2025.

B. Growth in Through Traffic

A 1% annual growth rate was specified by the city to project volumes to the implementation year of 2025 and horizon year of 2035. Figure 6 shows the 2025 no-build volumes.

C. Other Planned Development

Three other developments are proposed for other parcels on this corner site. Figure 2 illustrates the locations and proposed access points of these three parcels. Parcel A is proposed to have a 104 ksf storage facility. Parcel B is proposed for a 1.7 ksf oil change business. Finally, Parcel C is proposed to have a 1 tunnel carwash. Three access points are proposed for the site that can be used by all parcels, including the proposed taco bell/retail on Parcel D.

Table 1 shows the forecast trip generation and Figure 4 presents the forecast peak hour trips for the three parcels. Figure 7 shows the 2035 no-build volumes.

**TABLE 1
 OTHER DEVELOPMENT TRIP GENERATION**

Trip Generation	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
A - 104 ksf Storage (LU 150)	28	8	36	11	28	39
B - 1.7 ksf Oil Change (LU 941)	7	3	10	6	9	15
Pass-By Trips (25%)	2	2	4	2	2	4
C - Car Wash - 1 Tunnel (LU 948)	0	0	0	39	39	78
Pass-By Trips (25%)	0	0	0	10	10	20
TOTAL TRIPS	37	13	50	68	88	156
NEW TRIPS	35	11	46	56	76	132

D. Consideration of Planned Roadway Improvements

No planned roadway improvements were specified by the city for the study area.

E. Site Access and Circulation Plan

The proposed site concept plan is included in Figure 3.

F. Trip Generation

Trip Generation, 11th Edition, by ITE was used for trip generation estimates. Land Use 934 – Fast Food with Drive-Thru is the best land use match for the Taco Bell, and Land Use 822 – Strip Retail was used for the retail portion. As indicated in ITE Trip Generation, 50% pass-by trips were assumed for the Taco Bell and 25% for the Strip Retail. Trip generation projections are provided in Table 2.

**TABLE 2
 SITE TRIP GENERATION**

Trip Generation	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
1.95 ksf Fast Food w/Drive Thru (LU 934)	44	43	87	33	31	64
Pass-By Trips (50%)	22	22	44	16	16	32
7.645 ksf Strip Retail (LU 822)	14	10	24	32	32	64
Pass-By Trips (25%)	3	3	6	8	8	16
TOTAL TRIPS	83	78	161	89	87	176
NEW TRIPS	58	53	111	65	63	128

G. Trip Distribution

The distribution of the projected vehicle trips generated by the development was established based on an examination of travel patterns through the study intersections. Figure 8 illustrates the new trip distribution patterns for the development.

H. Trip Assignment

Figure 9 illustrates the proposed new site trips, while Figure 10 presents the pass-by trips.

I. Build Future Traffic

The site generated new and pass-by trips were added to the existing volumes to form the build traffic volumes. Figure 11 presents the 2025 build traffic volumes. Figure 12 shows the 2035 build traffic volumes.

J. Intersection Analysis

All traffic scenarios (AM and PM peaks, existing, no-build and build volumes, 2025 and 2035) were analyzed to assess the traffic effects of the proposed development. Capacity analysis results are presented in Table 3. Traffic operational conditions for the various scenarios are illustrated in Figures 13 - 17. All movements will continue to operate at acceptable levels of service with the proposed growth and the proposed Taco Bell and strip retail. Delays will increase on the northbound and southbound movements on Snow Vista Blvd at Benavides. Detailed “Synchro 11” intersection capacity analysis reports are provided in Appendix “B”.

**TABLE 3
 SUMMARY OF RESULTS – INTERSECTION CAPACITY ANALYSIS**

INTERSECTION	2024 EXISTING TRAFFIC		2025 NO BUILD TRAFFIC		2025 BUILD TRAFFIC		2035 NO BUILD TRAFFIC		2035 BUILD TRAFFIC	
	AM PEAK LOS	PM PEAK LOS	AM PEAK LOS	PM PEAK LOS	AM PEAK LOS	PM PEAK LOS	AM PEAK LOS	PM PEAK LOS	AM PEAK LOS	PM PEAK LOS
1. DeVargas / Sage / Snow Vista										
a. NB L	A	B	B	B	B	B	B	C	B	C
b. NB TR	B	C	B	C	B	C	C	C	C	C
c. SB L	B	B	B	B	B	B	B	C	B	C
d. SB TR	B	C	B	C	B	C	B	C	C	C
f. EB L	D	D	D	D	D	D	D	D	D	D
g. EB TR	D	D	D	D	D	D	D	D	D	D
h. WB L	D	C	D	D	D	D	D	D	D	D
i. WB TR	D	D	D	D	D	D	D	D	D	D
j. Intersection	C	C	C	C	C	C	C	C	C	C
2. Snow Vista NB / Benavides										
a. NB LTR	E	C	F	C	F	C	F	C	F	C
b. EB LT	C	B	C	B	C	B	C	B	C	B
c. WB TR	B	A	B	A	B	A	B	A	B	A
3. Snow Vista SB / Benavides										
a. SB L	A	A	A	A	B	A	B	A	B	A
b. SB TR	B	F	B	F	B	F	B	F	B	F
c. EB TR	B	B	B	B	B	B	B	B	B	B
d. WB LT	A	B	A	B	A	B	B	B	B	B
4. DeVargas / Access #2										
a. NB R	-	-	A	A	B	A	B	B	B	B
5. Snow Vista SB / Access #1										
a. EB R	-	-	A	A	A	C	A	C	A	C

K. Queuing Analysis

Queue lengths at the study area intersections were calculated for each traffic scenario utilizing the “Synchro 11” HCM 6th edition 95th percentile reported queues for unsignalized intersections and 50th percentile queues for the signalized intersection. The queue length calculations are based on a 25-foot vehicle length. Table 4 provides a summary of this analysis for each of the study area intersections. All turning storage bay lengths are long enough to handle forecast maximum queue lengths in 2025 with the development.

**TABLE 4
 SUMMARY OF QUEUING ANALYSIS**

INTERSECTION	EXISTING STORAGE (FT/LN)	2024 EXISTING TRAFFIC		2025 NO BUILD TRAFFIC		2025 BUILD TRAFFIC		2035 NO BUILD TRAFFIC		2035 BUILD TRAFFIC	
		Queue Length		Queue Length		Queue Length		Queue Length		Queue Length	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK
1. DeVargas / Sage / Snow Vista											
a. NB L	125'	25'	25'	25'	50'	25'	50'	25'	50'	25'	50'
b. NB TR		200'	525'	250'	125'	250'	225'	325'	275'	325'	275'
c. SB L	250'	25'	75'	50'	75'	50'	75'	50'	100'	50'	100'
d. SB TR		100'	275'	125'	300'	125'	325'	150'	375'	150'	375'
f. EB L	325'	150'	125'	150'	125'	175'	150'	175'	175'	200'	150'
g. EB TR		75'	75'	100'	75'	100'	75'	100'	100'	100'	100'
h. WB L	75'	50'	75'	50'	100'	50'	100'	50'	100'	50'	100'
i. WB TR		75'	150'	100'	150'	100'	150'	100'	175'	100'	175'
2. Snow Vista NB / Benavides											
a. NB LTR		250'	100'	375'	100'	400'	100'	525'	150'	550'	150'
b. EB LT		75'	25'	100'	25'	100'	25'	100'	25'	125'	25'
c. WB TR		25'	25'	25'	25'	25'	25'	25'	25'	25'	25'
3. Snow Vista SB / Benavides											
a. SB L	125'	25'	25'	25'	25'	25'	25'	25'	25'	25'	25'
b. SB TR		50'	475'	50'	525'	50'	550'	75'	700'	75'	700'
c. EB TR		50'	50'	50'	50'	50'	50'	50'	50'	50'	50'
d. WB LT		25'	25'	25'	25'	25'	25'	25'	25'	25'	25'
4. DeVargas / Access #2											
a. NB R		-	-	25'	25'	25'	25'	25'	25'	25'	25'
5. Snow Vista SB / Access #1											
a. EB R		-	-	25'	25'	25'	25'	25'	25'	25'	25'

* - 95th percentile queue for unsignalized, 50th percentile queues for signalized intersections.

L. Auxiliary Lanes and Roadway Improvements

Speed Change Lane requirements, as stated in the NMDOT “SAMM” (2001), were checked to see if a right turn deceleration lane is needed on Snow Vista Blvd southbound at Access #1. SAMM, Table 17.B.2 – Criteria for Deceleration Lanes on Urban Multi-Lane Highways was checked. On roads with a speed limit of 35 mph and 554 vehicles estimated in the adjacent thru lane (2025 build PM peak hour), a right turn deceleration lane is normally required for right turning volumes of 10 vph or more. However, Access #1 is a special situation. Most of the right turning volumes will come from the Sage Ranch Ct. connector between the two directions of the divided Snow Vista Blvd, located less than 100 feet north of Access #1. Most traffic traveling

northbound on Snow Vista Blvd. would turn left and use this connector to access the site. Due to the short distance to cross lanes to get to Access #1, construction of a southbound deceleration lane is not recommended as it would increase the crossing distance by 12 feet or more, creating an increased safety hazard.

M. Drive-Thru Queuing Assessment

Several studies have been performed on queuing at drive-thru windows. "Drive-Through Queue Generation", published in February 2012 by Mike Spack, PE, PTOE, et.al., collected queue data at several fast-food restaurants over a twelve to fourteen-day period. The average maximum queue was 11 vehicles, with an 85th-percentile queue of 14 vehicles. The drive-thru lane in the proposed site plan provides enough space to queue 14 vehicles, with space for an additional 8 vehicles in the parking lot. The stacking proposed on the site plan is adequate.

N. Transit and Pedestrian/Bicycle Connectivity

Bus stops exist on Snow Vista Blvd SW adjacent to the larger corner parcels. An internal connection should be included on the site plan to provide pedestrian access to the sidewalk. A pedestrian/bicycle connection should also be made to Amole Arroyo Trail on the southwest side of the site.

VI. ANALYSIS OF HORIZON YEAR

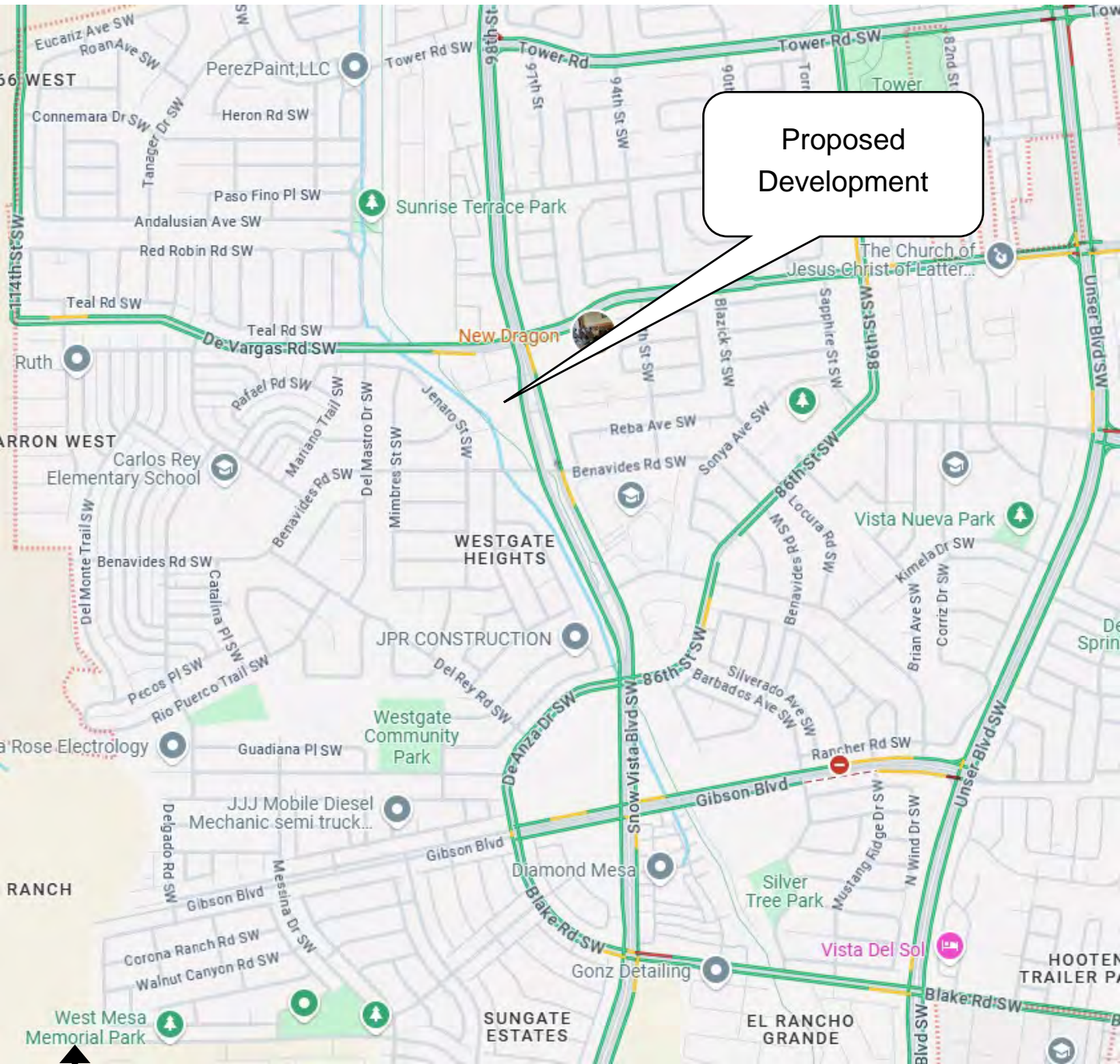
The 2035 horizon year build traffic conditions are forecast to be similar levels to 2025 build conditions. Review of Tables 3 and 4 show similar levels of service and adequate turn lane queue storage to handle forecasts traffic volumes.

VII. SUMMARY OF DEFICIENCIES, IMPACTS and RECOMMENDATIONS

The proposed 1,950 sf Taco Bell with drive thru and 7,645 sf of retail space will not have a significant impact on the adjacent road system. No decreases in level of service to unacceptable levels are forecasts under both 2025 and 2035 build conditions. Delays are forecast to increase on the northbound and southbound Snow Vista Blvd approaches to Benevides Rd, which operate at levels of service E/F under existing conditions. The City of Albuquerque should consider alternate traffic control and intersection configurations to improve operations to acceptable levels.

Southbound Snow Vista Blvd at Access #1 meets the requirement for a right turn deceleration lane. However, since most of the right turning volumes will come from the Sage Ranch Ct. connector between the two directions of the divided Snow Vista Blvd, located less than 100 feet north of Access #1, construction of a southbound deceleration lane is not recommended as it would increase the crossing distance by 12 feet or more, creating an increased safety hazard.

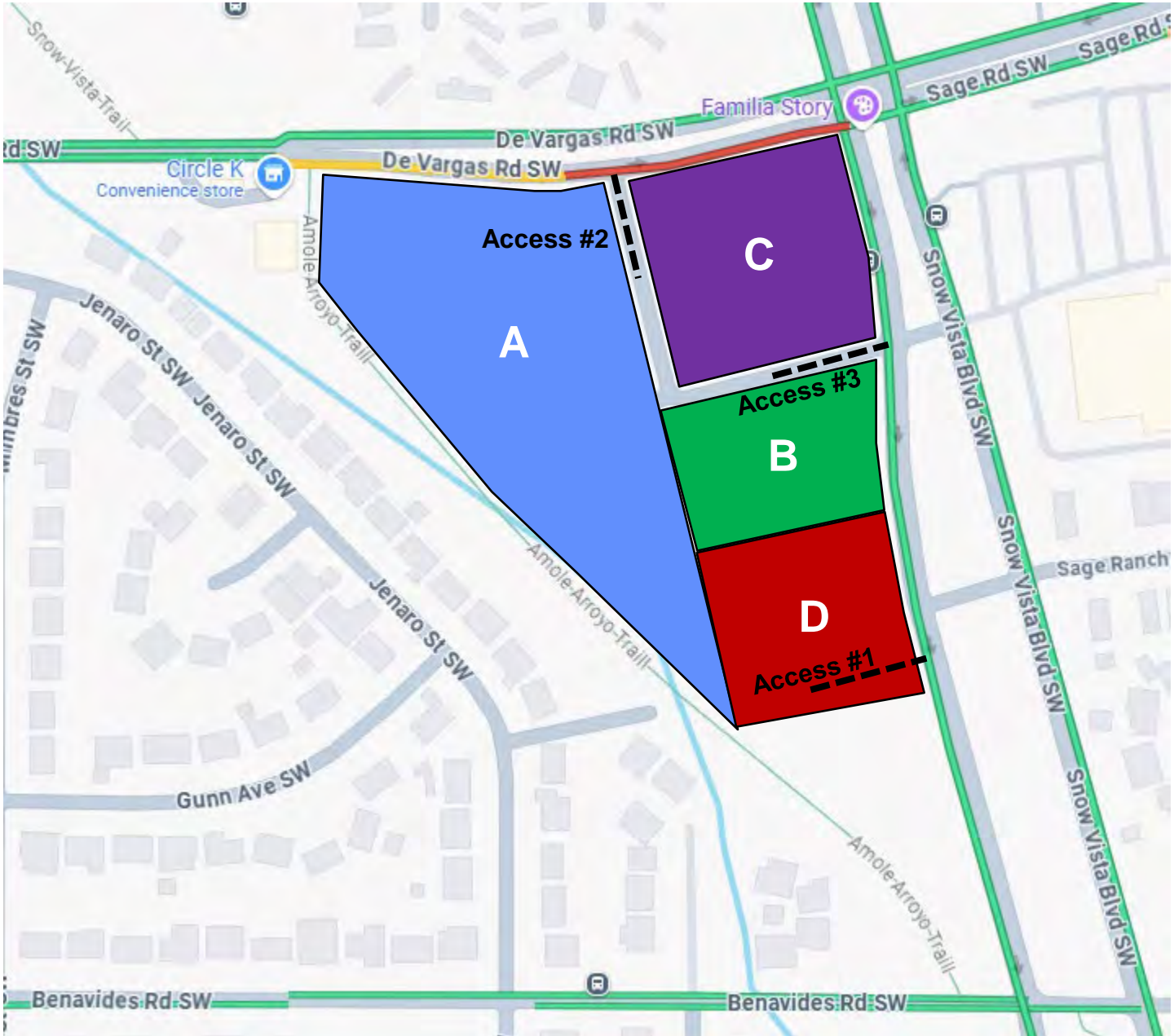
Based on the analyses contained herein, no improvements are needed to the existing roadway system.



Taco Bell / Retail, Snow Vista

Vicinity Map

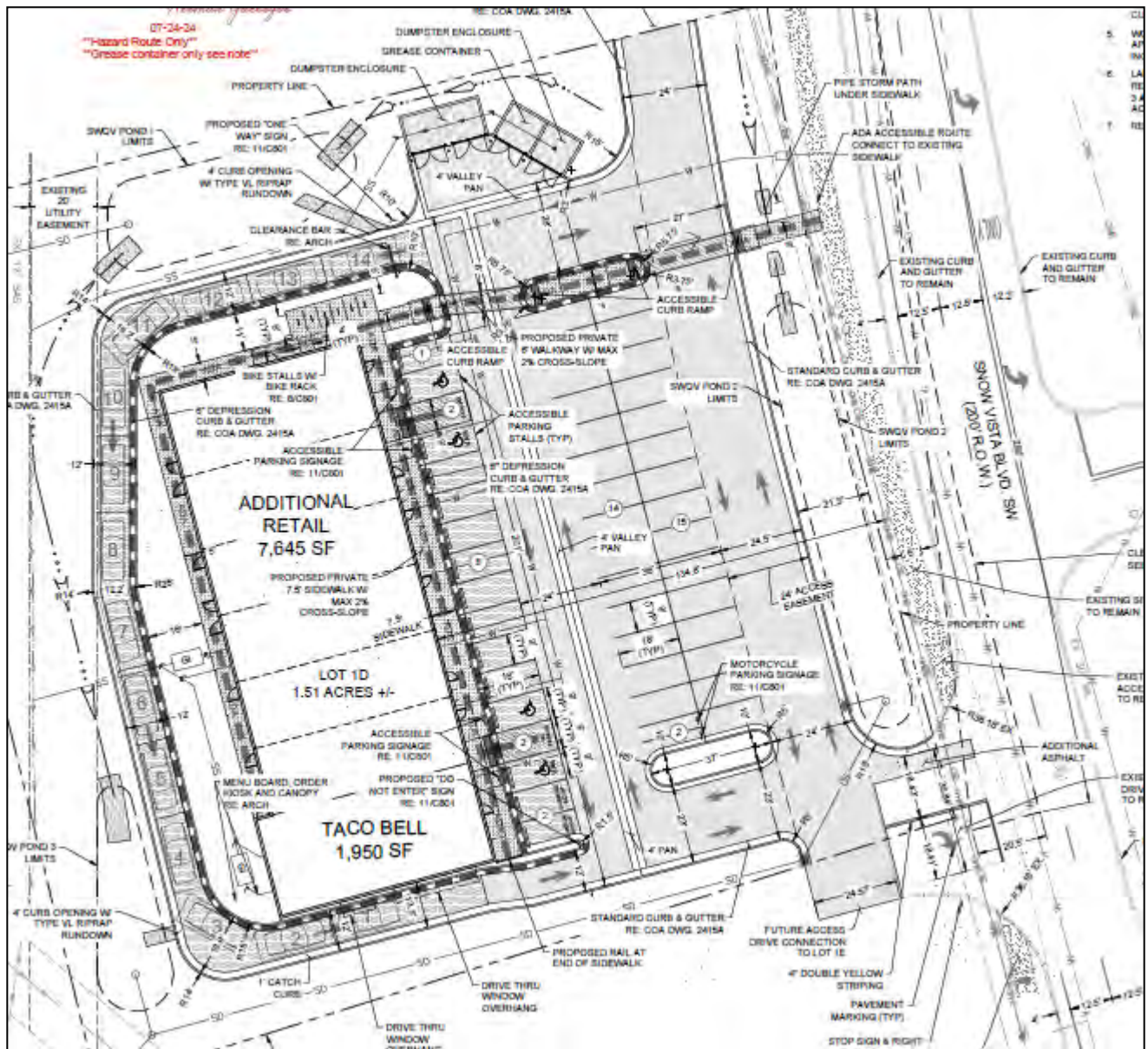
Figure 1

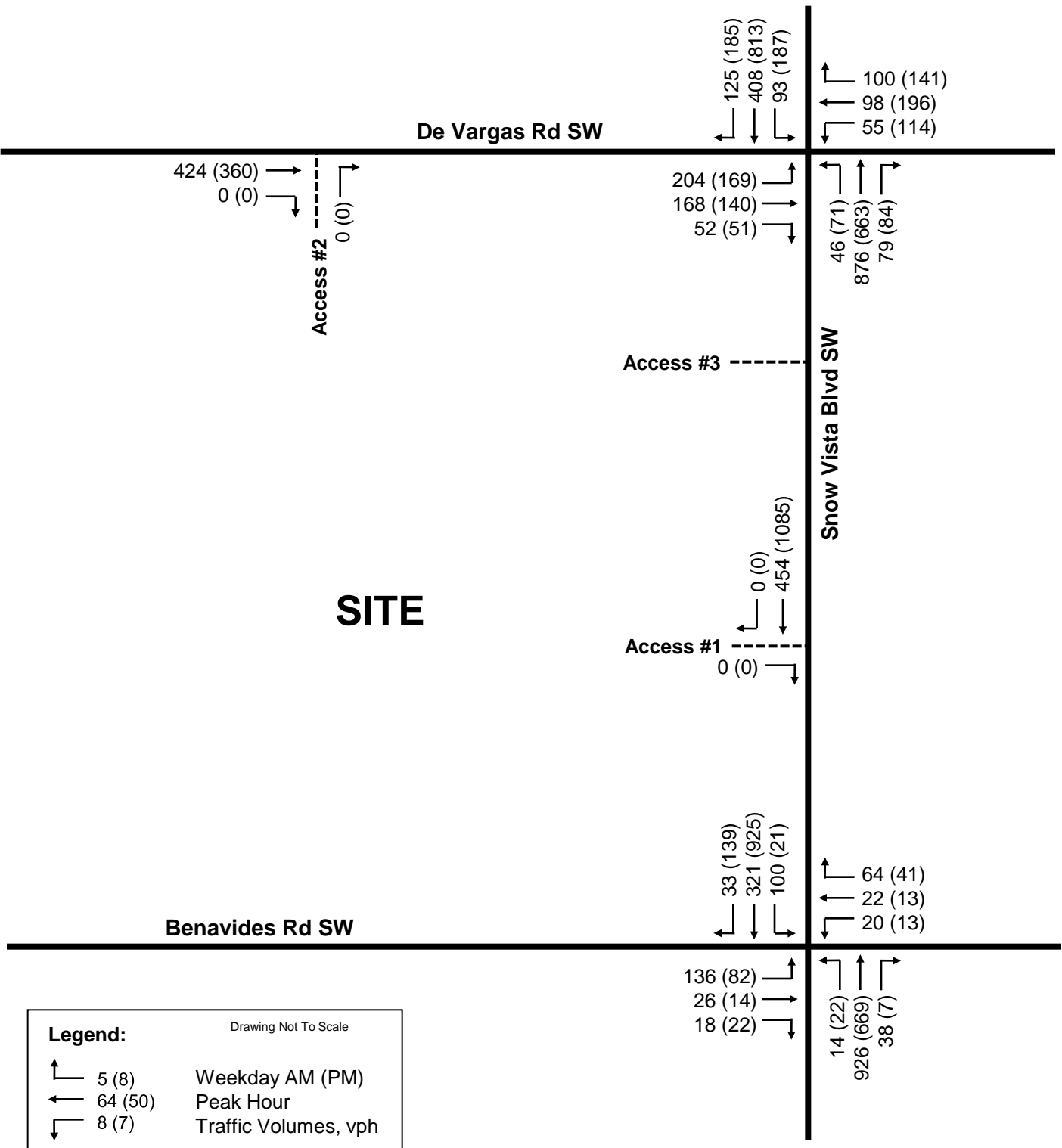


- A. 104,000 sf Storage
- B. 1,700 sf Oil Change
- C. 5,200 sf Car Wash
- D. 1,950 sf Taco Bell,
7,645 sf Retail

Trip Generation	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
A - 104 ksf Storage (LU 150)	28	8	36	11	28	39
B - 1.7 ksf Oil Change (LU 941)	7	3	10	6	9	15
Pass-By Trips (25%)	2	2	4	2	2	4
C - Car Wash - 1 Tunnel (LU 948)	0	0	0	39	39	78
Pass-By Trips (25%)	0	0	0	10	10	20
TOTAL TRIPS	37	13	50	68	88	156
NEW TRIPS	35	11	46	56	76	132

Taco Bell / Retail, Snow Vista





Legend: Drawing Not To Scale

↗ 5 (8) Weekday AM (PM)
 ← 64 (50) Peak Hour
 ↘ 8 (7) Traffic Volumes, vph

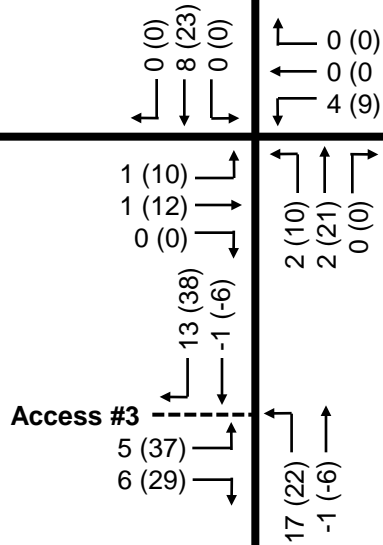
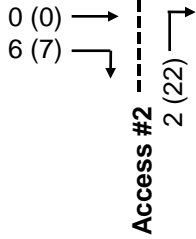
Taco Bell / Retail, Snow Vista



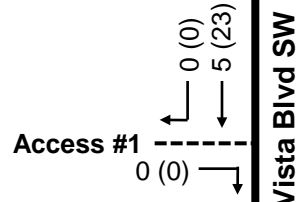
2024 Existing Traffic Volumes

Figure 4

De Vargas Rd SW



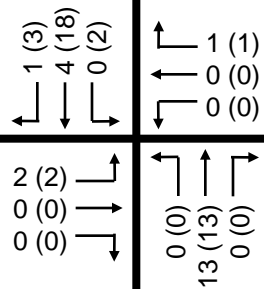
SITE



Snow Vista Blvd SW

Trip Generation	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
A - 104 ksf Storage (LU 150)	28	8	36	11	28	39
B - 1.7 ksf Oil Change (LU 941)	7	3	10	6	9	15
Pass-By Trips (25%)	2	2	4	2	2	4
C - Car Wash - 1 Tunnel (LU 948)	0	0	0	39	39	78
Pass-By Trips (25%)	0	0	0	10	10	20
TOTAL TRIPS	37	13	50	68	88	156
NEW TRIPS	35	11	46	56	76	132

Benavides Rd SW



Legend: Drawing Not To Scale

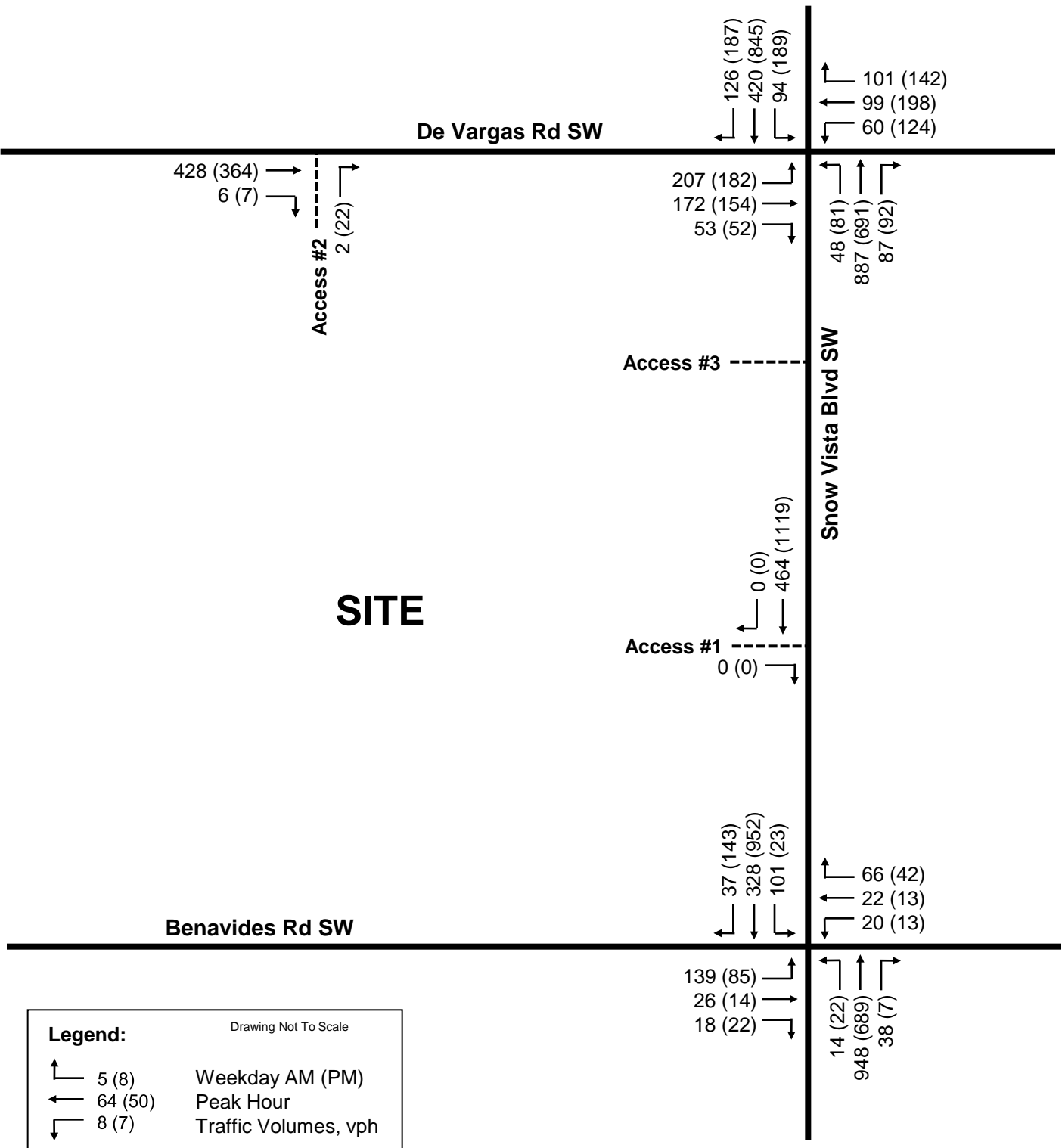
- 5 (8) Weekday AM (PM)
- 64 (50) Peak Hour
- 8 (7) Traffic Volumes, vph

Taco Bell / Retail, Snow Vista



Remaining Site Development Traffic

Figure 5



Legend: Drawing Not To Scale

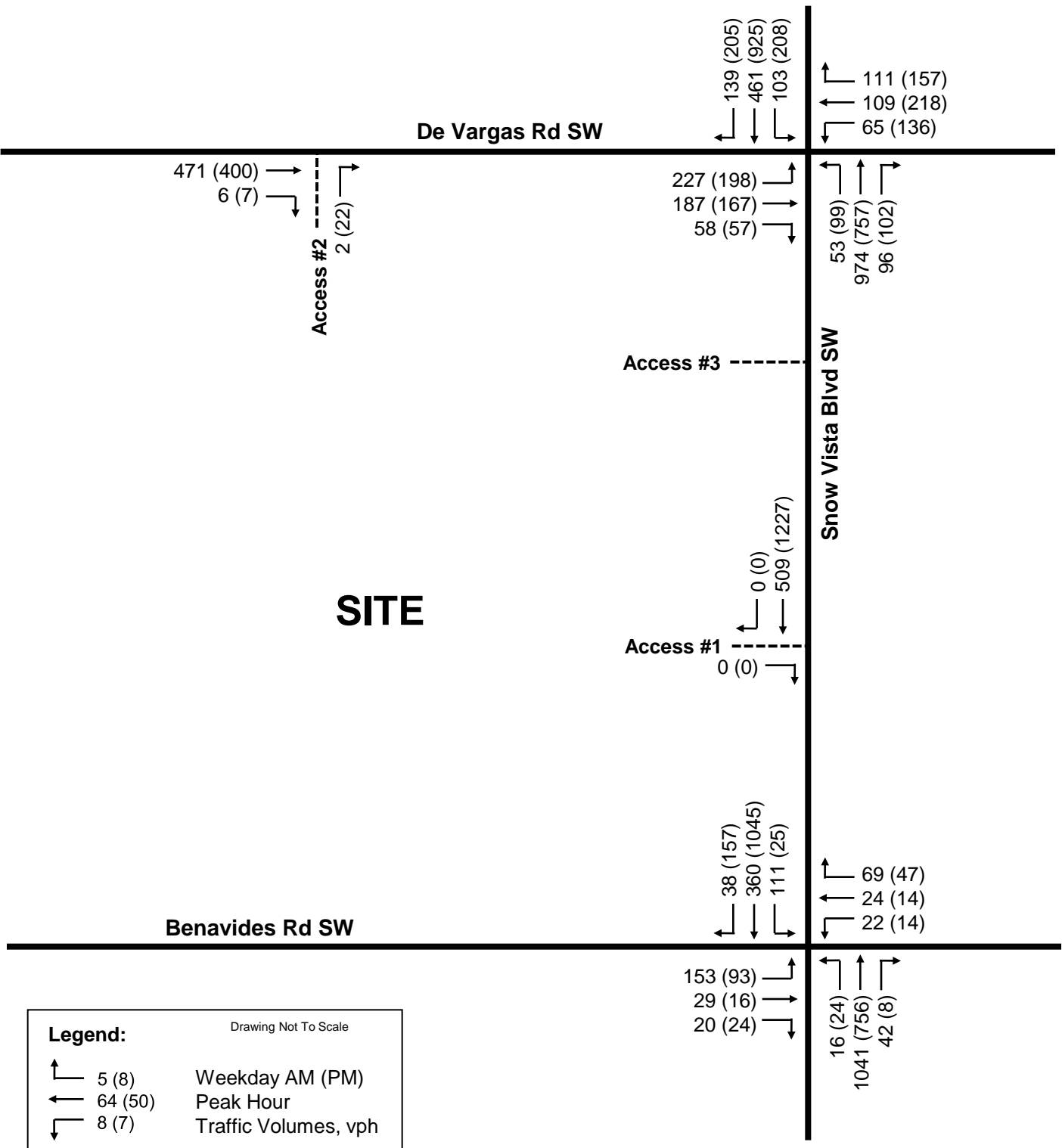
- ↖ 5 (8) Weekday AM (PM)
- ← 64 (50) Peak Hour
- ↙ 8 (7) Traffic Volumes, vph

Taco Bell / Retail, Snow Vista



2025 No-Build Traffic Volumes

Figure 6



Legend: Drawing Not To Scale

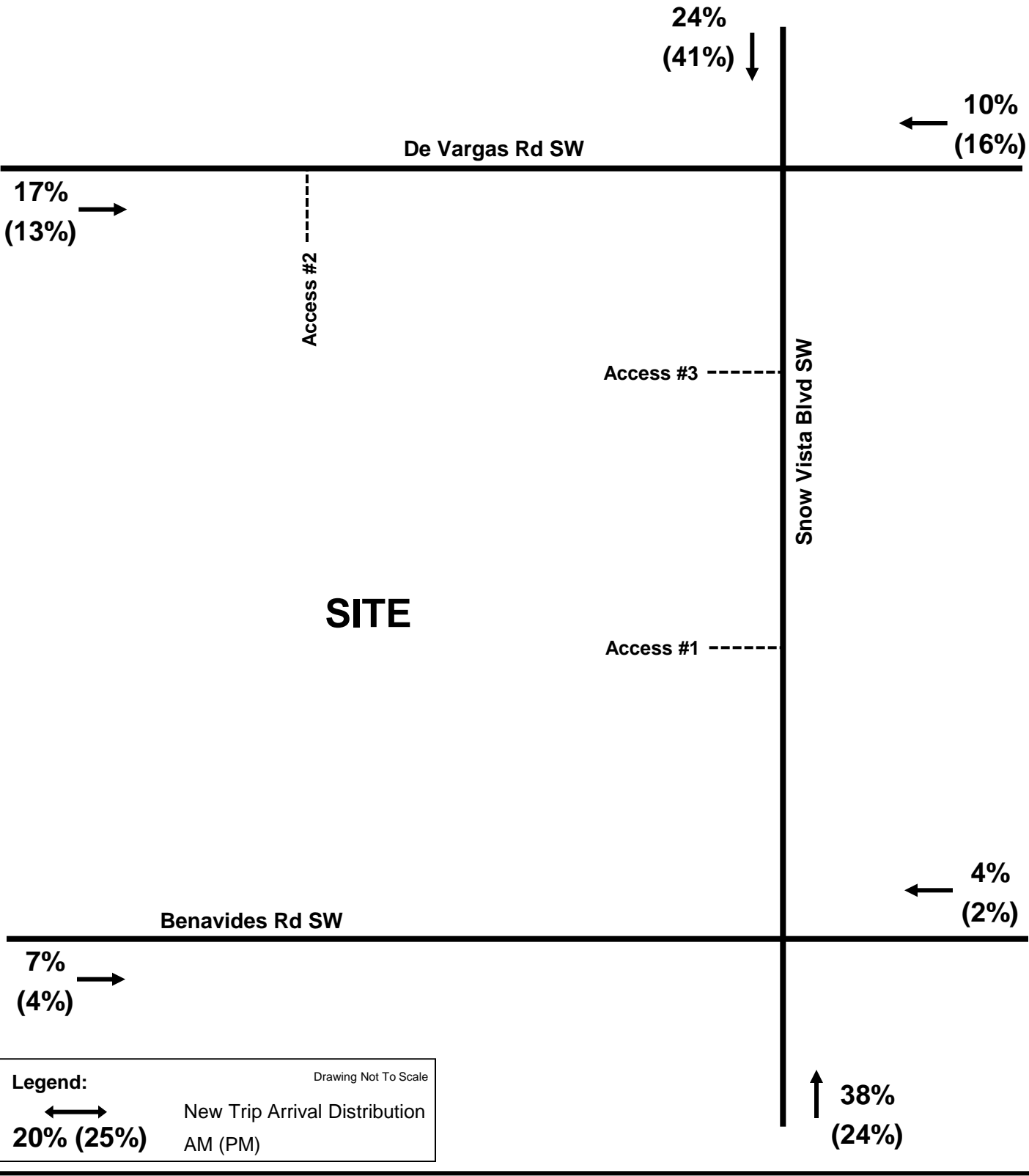
5 (8) Weekday AM (PM)
 64 (50) Peak Hour
 8 (7) Traffic Volumes, vph

Taco Bell / Retail, Snow Vista



2035 No-Build Traffic Volumes

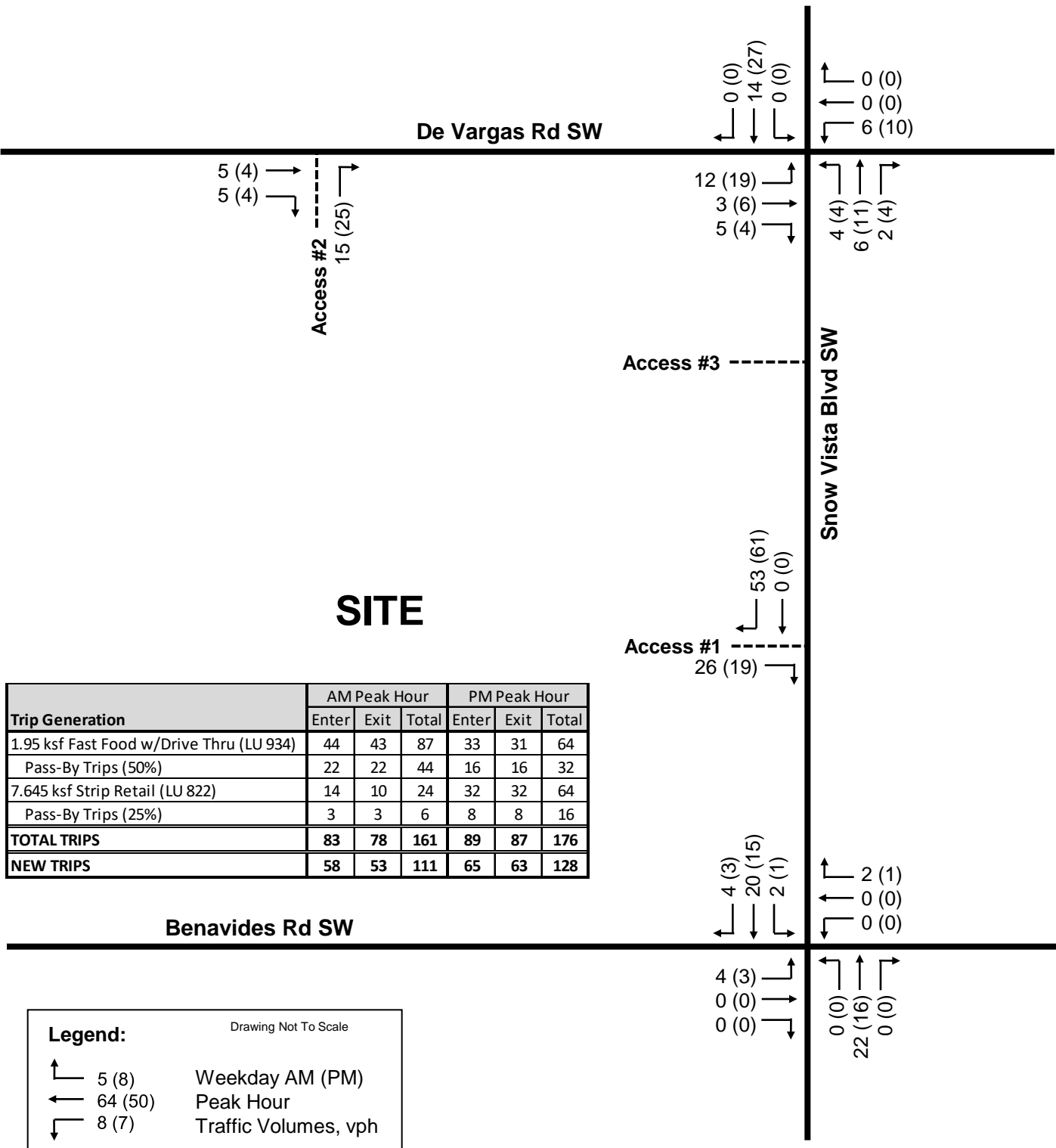
Figure 7



Taco Bell / Retail, Snow Vista

New Trip Distribution

Figure 8



SITE

Trip Generation	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
1.95 ksf Fast Food w/Drive Thru (LU 934)	44	43	87	33	31	64
Pass-By Trips (50%)	22	22	44	16	16	32
7.645 ksf Strip Retail (LU 822)	14	10	24	32	32	64
Pass-By Trips (25%)	3	3	6	8	8	16
TOTAL TRIPS	83	78	161	89	87	176
NEW TRIPS	58	53	111	65	63	128

Legend: Drawing Not To Scale

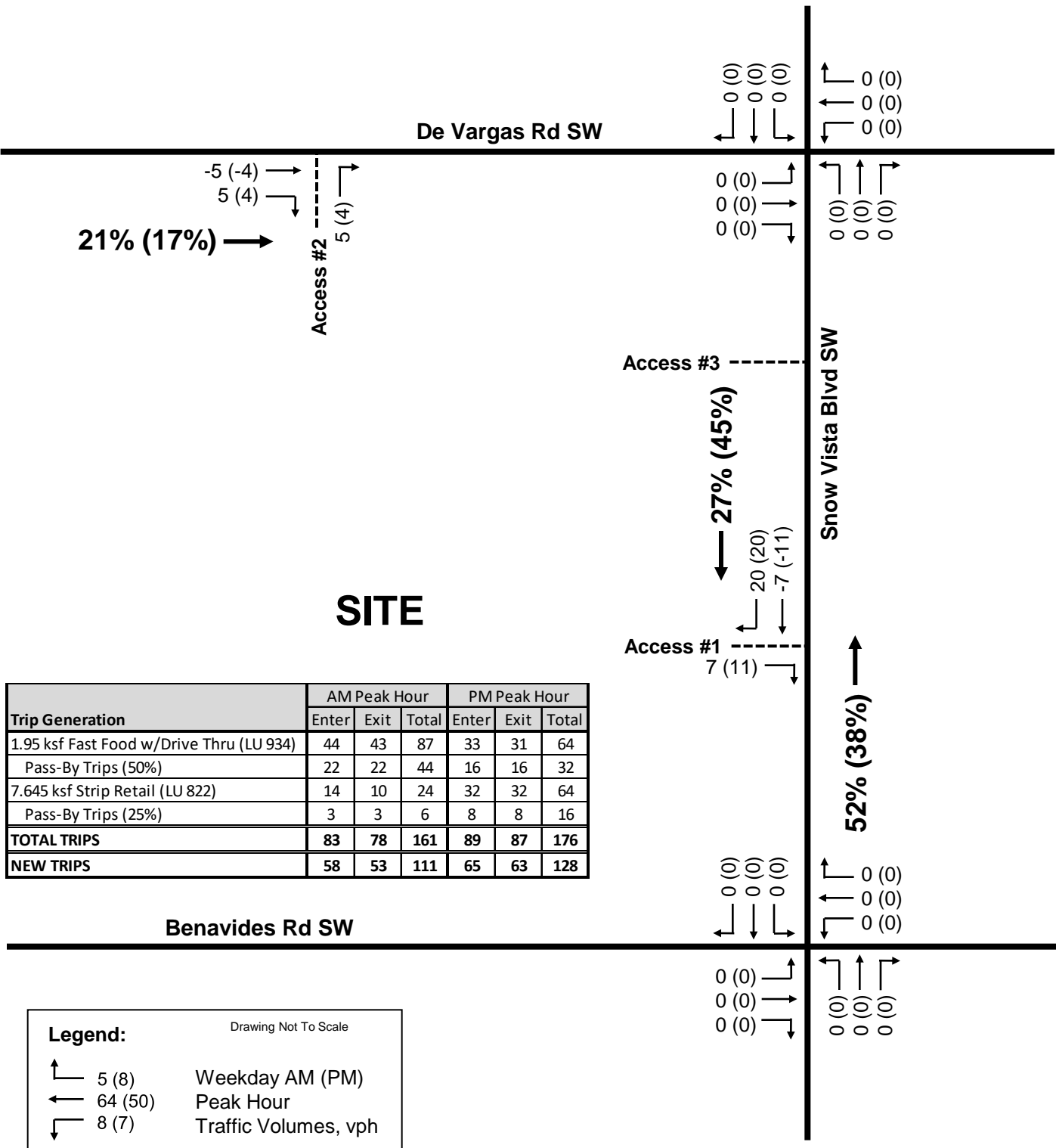
- 5 (8) Weekday AM (PM)
- 64 (50) Peak Hour
- 8 (7) Traffic Volumes, vph

Taco Bell / Retail, Snow Vista



Site Generated New Trips

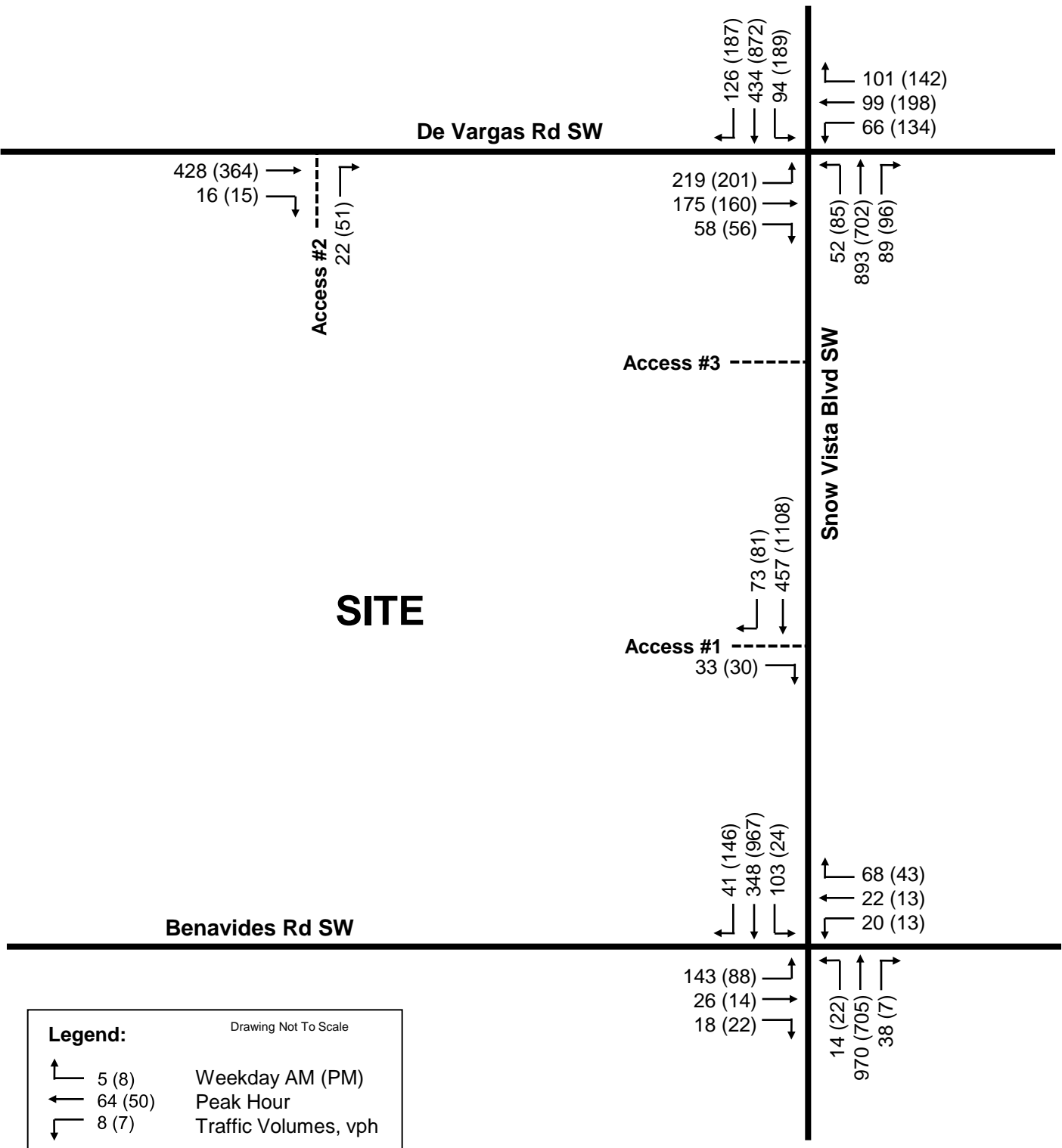
Figure 9



Legend: Drawing Not To Scale

- 5 (8) Weekday AM (PM)
- 64 (50) Peak Hour
- 8 (7) Traffic Volumes, vph

Taco Bell / Retail, Snow Vista



Legend: Drawing Not To Scale

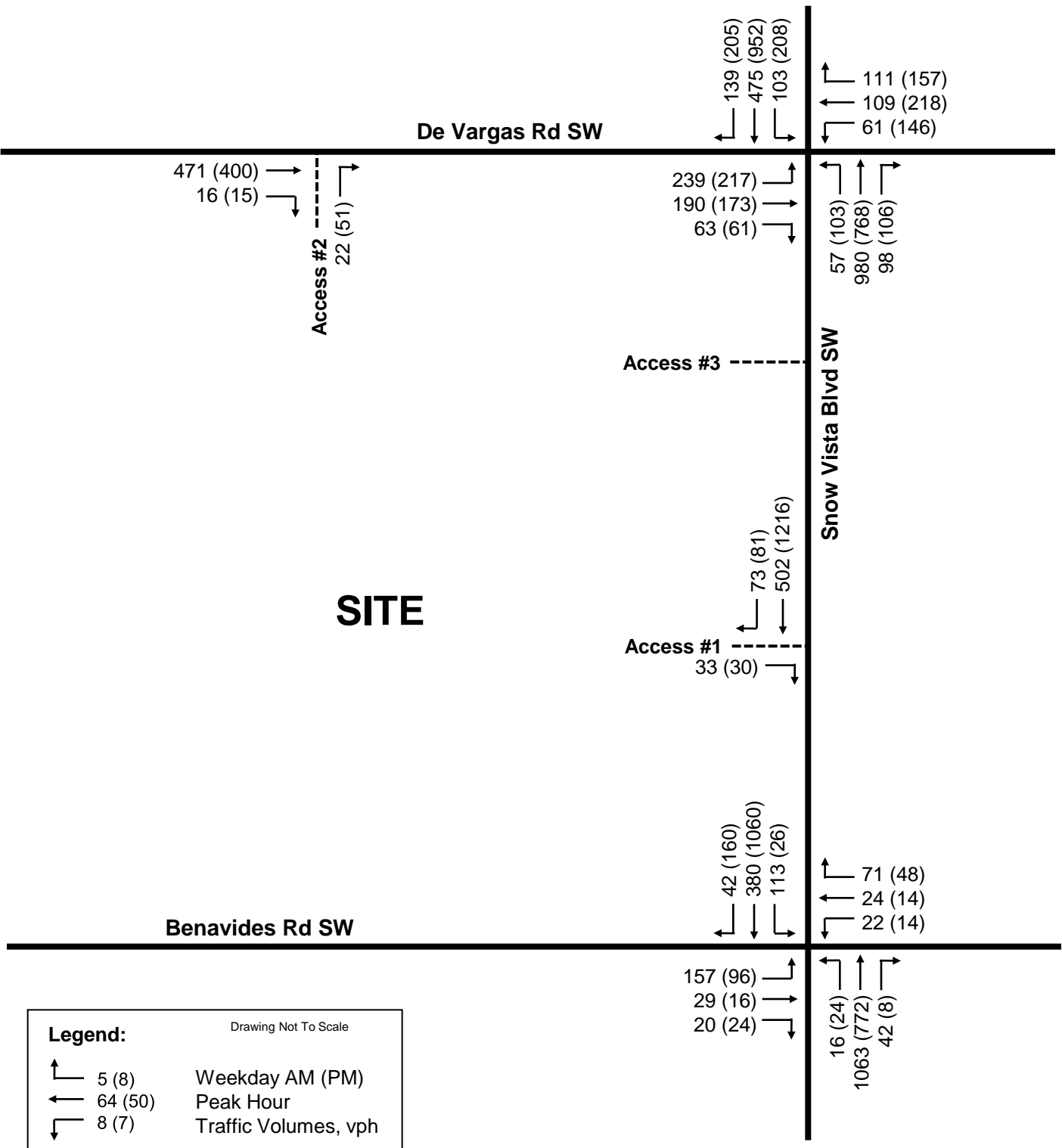
- 5 (8) Weekday AM (PM)
- 64 (50) Peak Hour
- 8 (7) Traffic Volumes, vph

Taco Bell / Retail, Snow Vista



2025 Build Traffic Volumes

Figure 11



Legend: Drawing Not To Scale

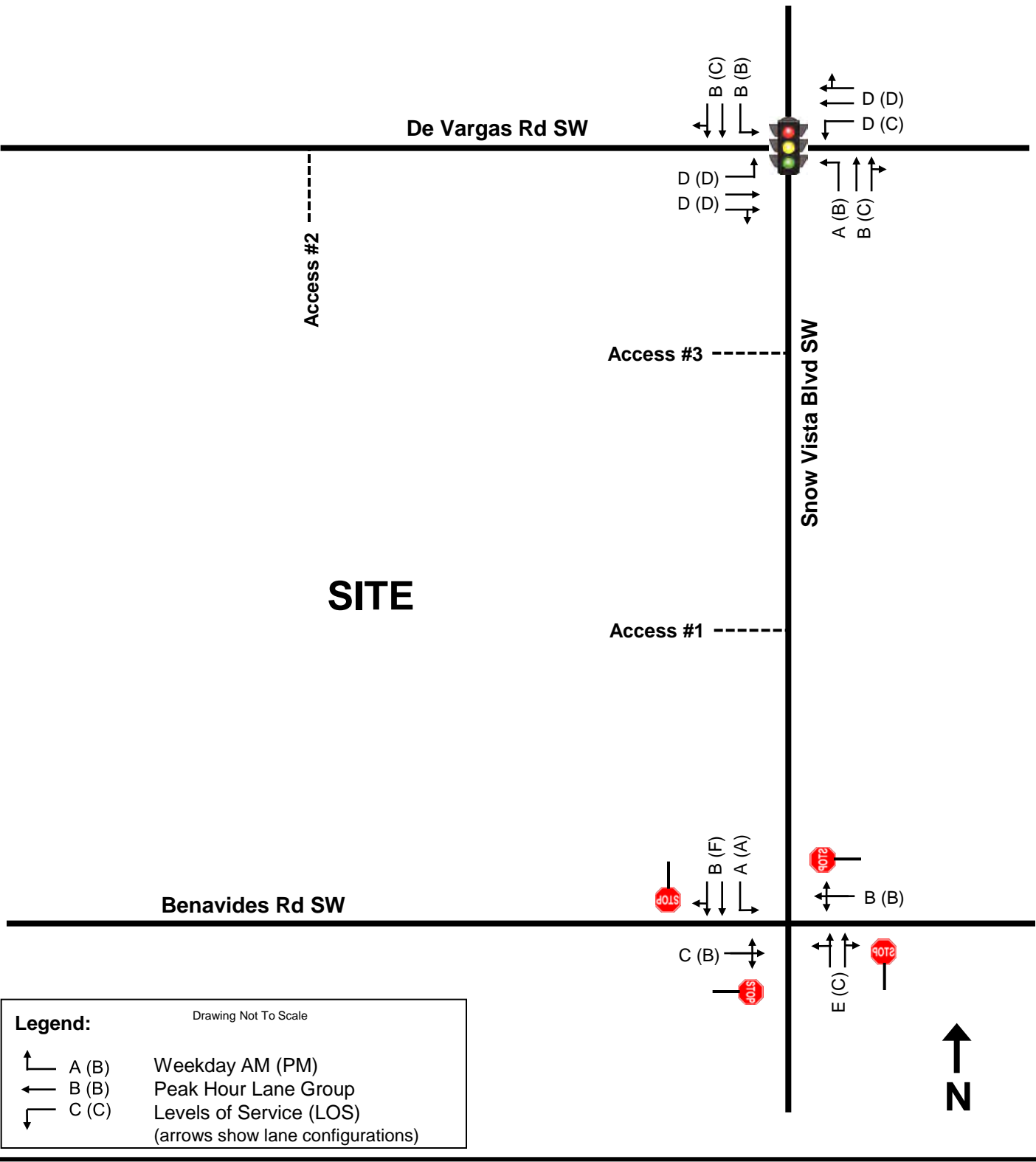
↗ 5 (8) Weekday AM (PM)
 → 64 (50) Peak Hour
 ↘ 8 (7) Traffic Volumes, vph

Taco Bell / Retail, Snow Vista



2035 Build Traffic Volumes

Figure 12



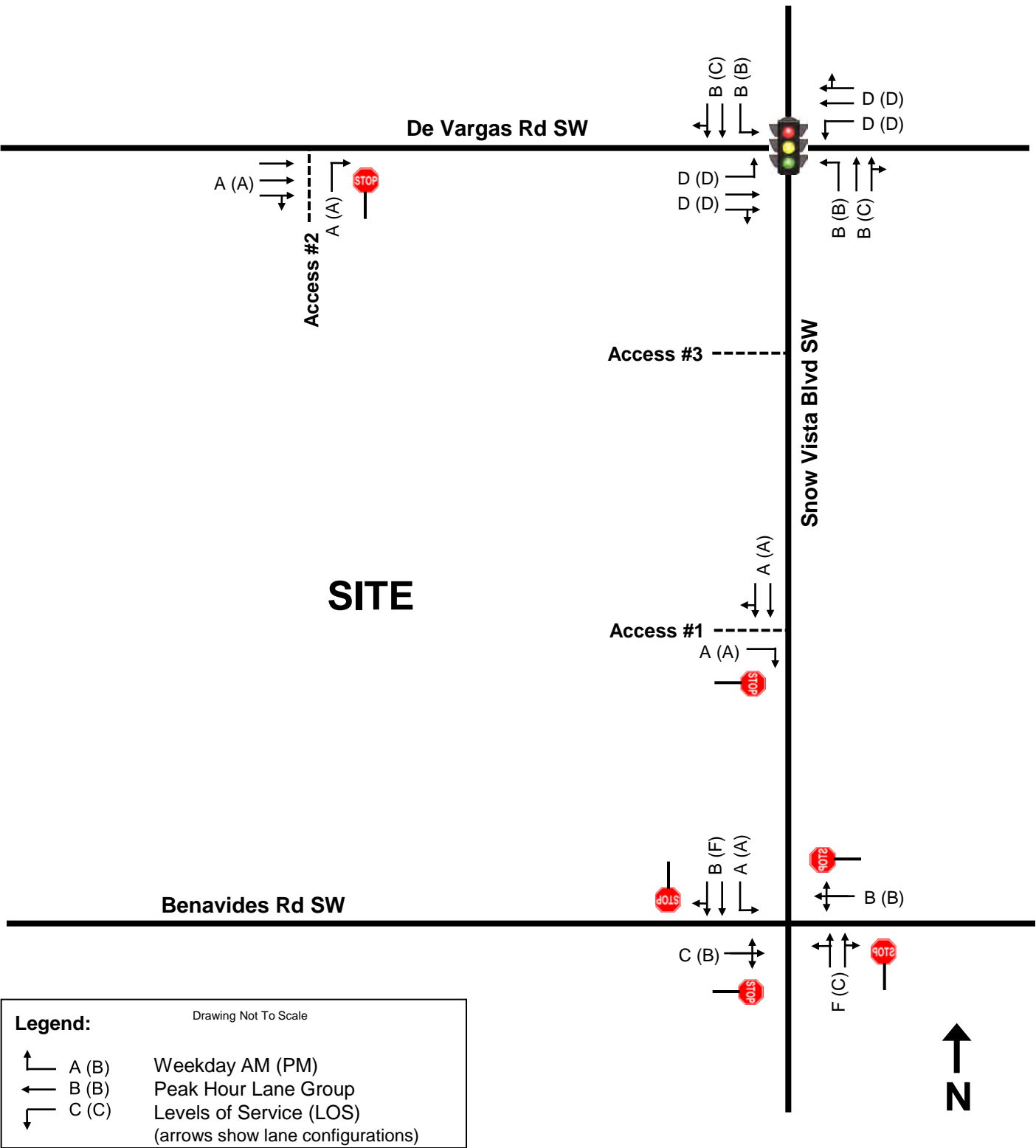
Legend:	
Drawing Not To Scale	
	A (B) Weekday AM (PM)
	B (B) Peak Hour Lane Group
	C (C) Levels of Service (LOS)
(arrows show lane configurations)	

Taco Bell / Retail, Snow Vista



2024 Existing Traffic Operational Conditions

Figure 13



Legend: Drawing Not To Scale

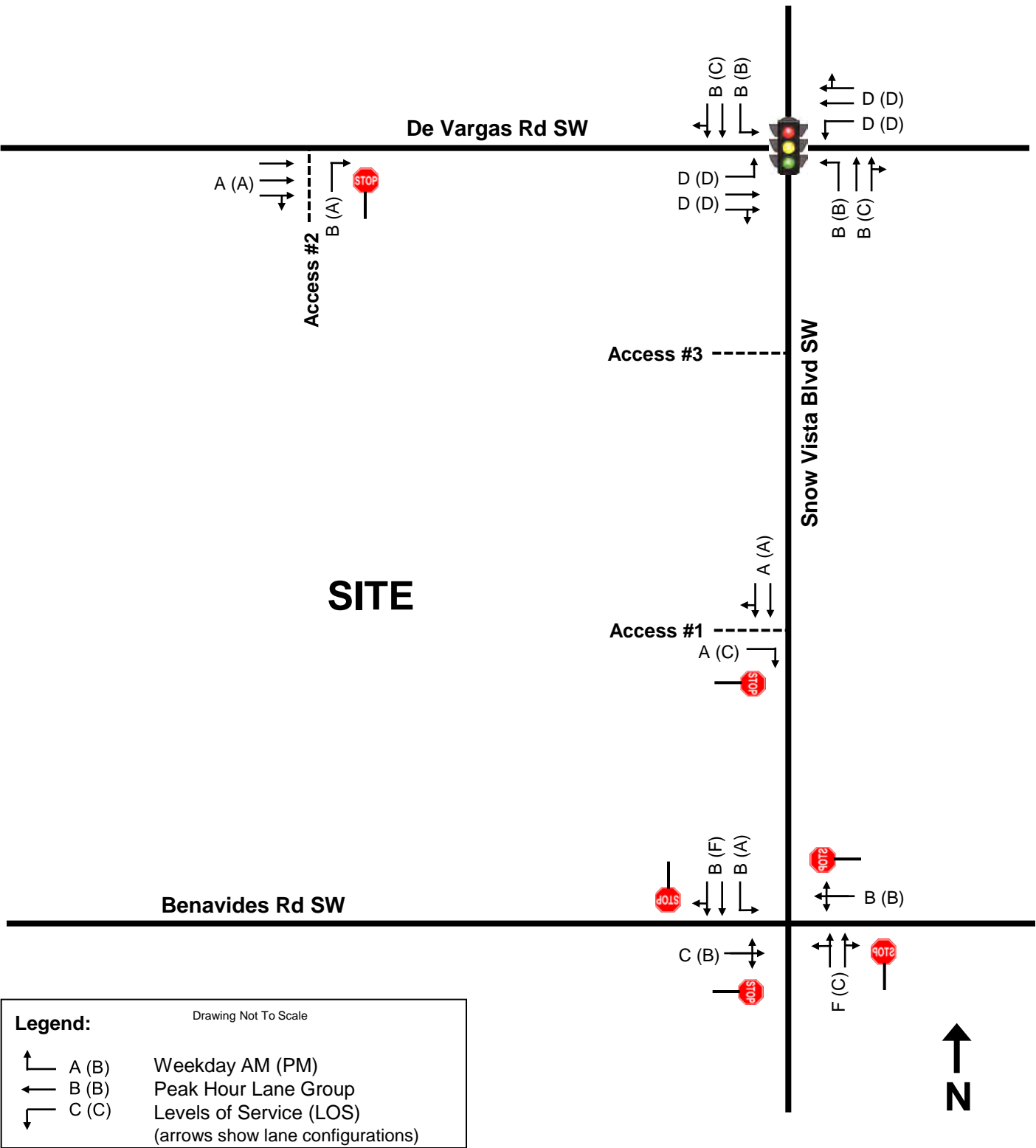
	A (B)	Weekday AM (PM)
	B (B)	Peak Hour Lane Group
	C (C)	Levels of Service (LOS)
(arrows show lane configurations)		

Taco Bell / Retail, Snow Vista

2025 No-Build Traffic Operational Conditions



Figure 14

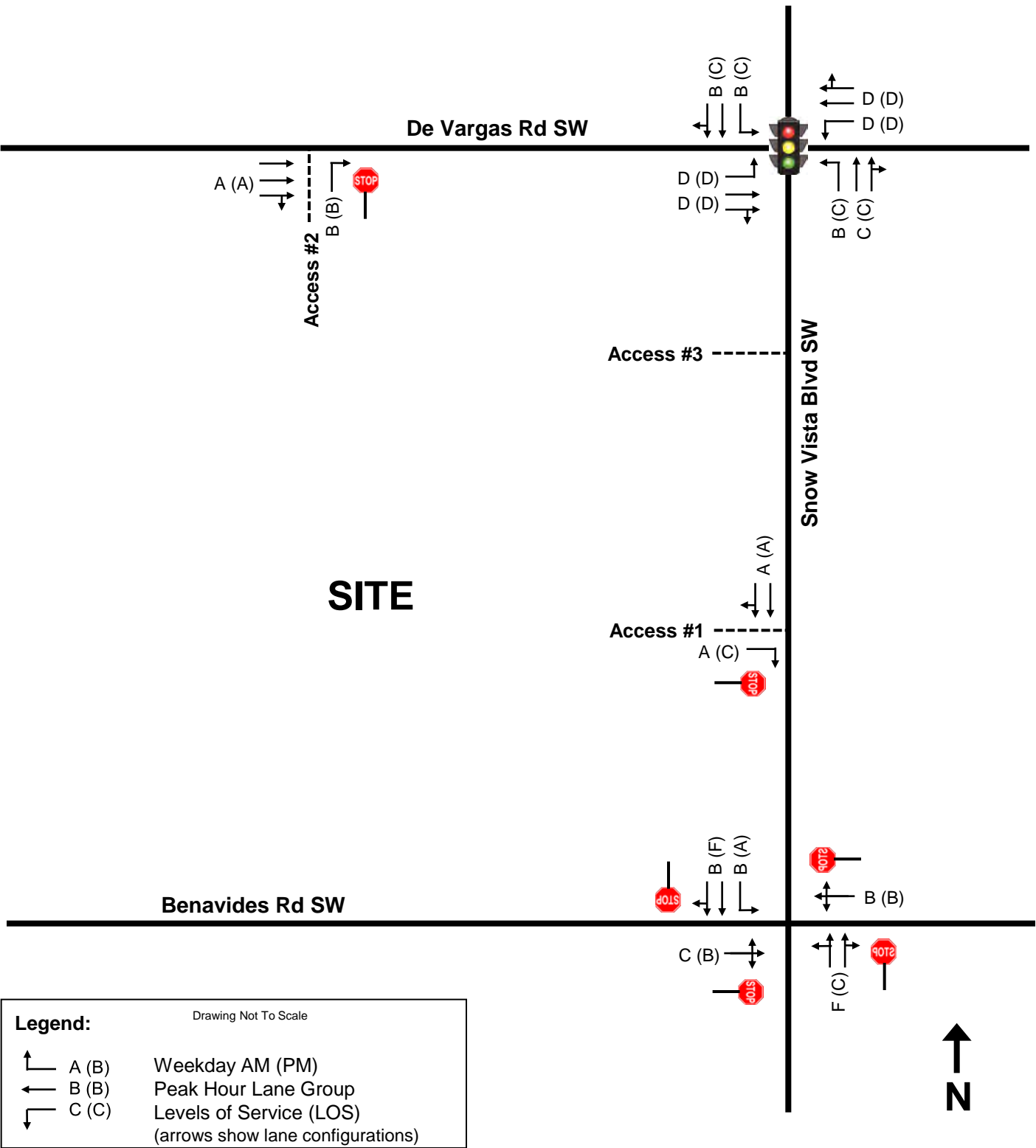


Taco Bell / Retail, Snow Vista



2025 Build Traffic Operational Conditions

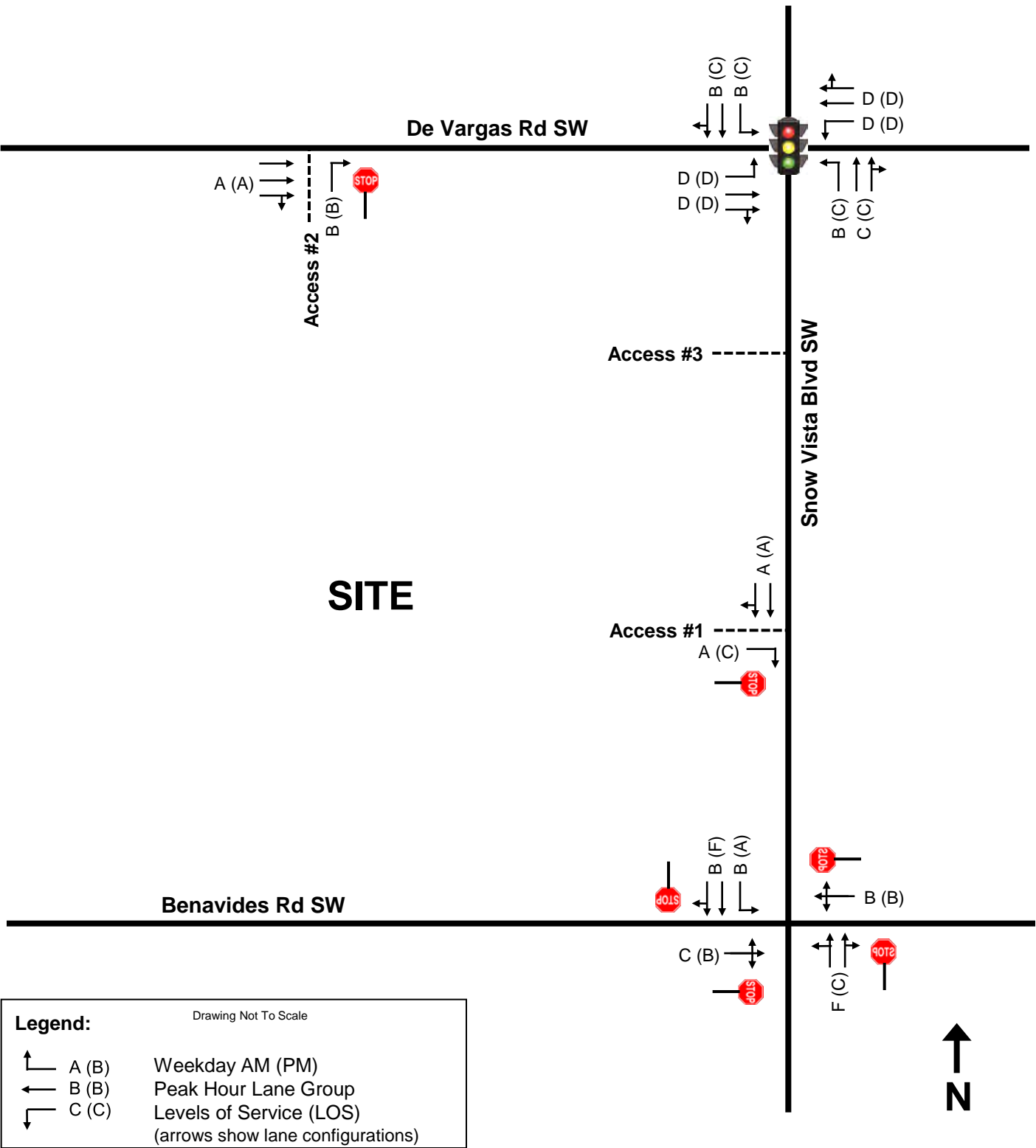
Figure 15



Taco Bell / Retail, Snow Vista

2035 No-Build Traffic Operational Conditions

Figure 16



Taco Bell / Retail, Snow Vista



2035 Build Traffic Operational Conditions

Figure 17

Appendix A

TRAFFIC COUNT DATA

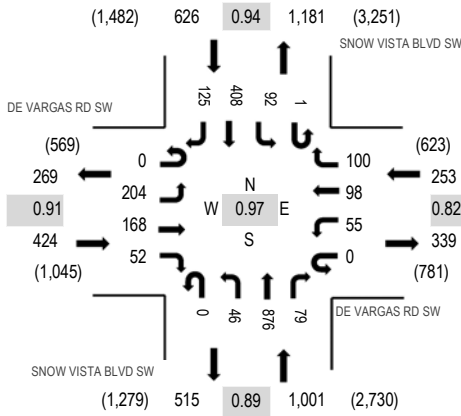
Location: 1 SNOW VISTA BLVD SW & DE VARGAS RD SW AM

Date: Tuesday, December 17, 2024

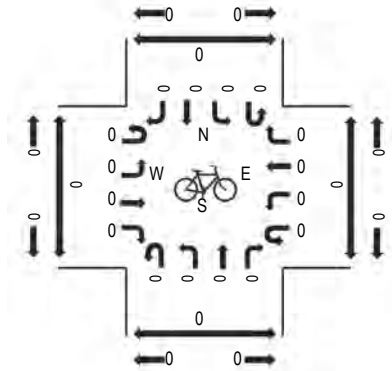
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

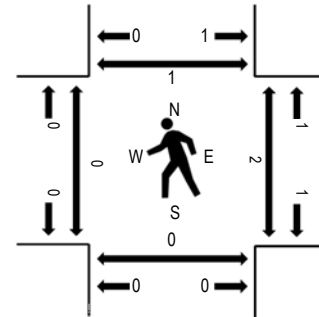
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	DE VARGAS RD SW Eastbound				DE VARGAS RD SW Westbound				SNOW VISTA BLVD SW Northbound				SNOW VISTA BLVD SW 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
6:30 AM	0	49	24	9	0	8	8	20	0	5	255	12	0	8	50	4	452	1,971	0	0	0	0
6:45 AM	0	44	24	7	0	11	11	18	0	8	222	7	1	12	71	16	452	2,104	2	0	0	0
7:00 AM	0	44	35	12	0	13	13	18	0	10	253	16	1	17	57	17	506	2,248	0	0	0	0
7:15 AM	0	40	40	13	0	5	16	26	0	10	280	19	0	21	75	16	561	2,304	0	0	0	0
7:30 AM	0	39	37	23	0	12	21	18	0	18	238	17	0	23	110	29	585	2,245	0	0	0	0
7:45 AM	0	53	50	12	0	17	39	24	0	10	189	27	1	28	103	43	596	2,136	0	0	0	1
8:00 AM	0	72	41	4	0	21	22	32	0	8	169	16	0	20	120	37	562	1,984	0	2	0	0
8:15 AM	0	47	29	13	0	15	11	25	0	11	176	24	0	22	115	14	502	1,774	0	0	0	0
8:30 AM	0	46	23	9	0	15	19	21	0	8	197	14	0	16	90	18	476	1,664	0	0	0	0
8:45 AM	0	45	29	4	0	16	18	17	0	4	169	17	0	16	95	14	444		0	0	0	0
9:00 AM	0	43	24	3	0	12	14	18	0	5	139	12	0	12	54	16	352		0	0	0	0
9:15 AM	0	35	18	5	0	8	25	16	0	6	151	8	0	23	72	25	392		0	0	0	0
Count Total	0	557	374	114	0	153	217	253	0	103	2,438	189	3	218	1,012	249	5,880		2	2	0	1
Peak Hour	0	204	168	52	0	55	98	100	0	46	876	79	1	92	408	125	2,304		0	2	0	1



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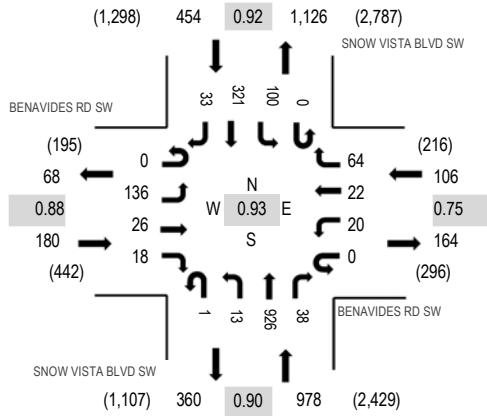
Location: 2 SNOW VISTA BLVD SW & BENAVIDES RD SW AM

Date: Tuesday, December 17, 2024

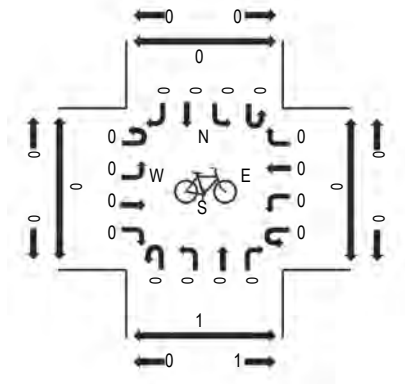
Peak Hour: 07:00 AM - 08:00 AM

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

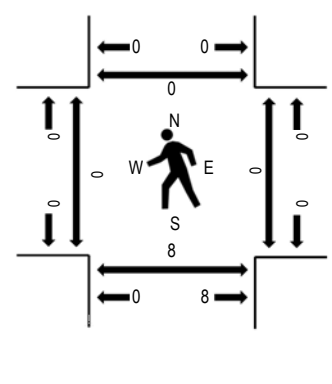
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BENAVIDES RD SW Eastbound				BENAVIDES RD SW Westbound				SNOW VISTA BLVD SW Northbound				SNOW VISTA BLVD SW 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
	6:30 AM	0	29	3	0	0	2	0	5	0	2	241	1	0	7	49			6	345	1,496	0
6:45 AM	0	31	3	2	0	0	3	3	0	1	194	1	0	12	71	5	326	1,611	0	0	0	0
7:00 AM	0	32	6	7	0	0	1	11	1	2	266	3	0	11	69	9	418	1,718	0	0	0	0
7:15 AM	0	37	2	4	0	1	2	7	0	3	253	3	0	15	79	1	407	1,704	0	0	1	0
7:30 AM	0	30	6	4	0	6	7	23	0	5	240	10	0	29	87	13	460	1,702	0	0	0	0
7:45 AM	0	37	12	3	0	13	12	23	0	3	167	22	0	45	86	10	433	1,577	0	0	7	0
8:00 AM	0	28	11	9	0	15	8	20	1	3	151	13	0	17	114	14	404	1,468	0	0	0	0
8:15 AM	0	28	6	9	0	5	2	10	0	5	184	2	0	10	129	15	405	1,325	0	0	0	0
8:30 AM	0	27	4	3	0	3	0	4	0	2	179	2	0	7	99	5	335	1,187	0	0	0	1
8:45 AM	0	29	0	4	0	2	2	5	0	6	161	1	0	11	89	14	324		0	0	0	0
9:00 AM	0	17	3	1	0	3	2	9	0	4	135	2	0	9	62	14	261		0	1	0	0
9:15 AM	0	12	1	2	0	3	1	3	0	2	156	2	0	4	70	11	267		0	0	0	0
Count Total	0	337	57	48	0	53	40	123	2	38	2,327	62	0	177	1,004	117	4,385		0	1	8	1
Peak Hour	0	136	26	18	0	20	22	64	1	13	926	38	0	100	321	33	1,718		0	0	8	0

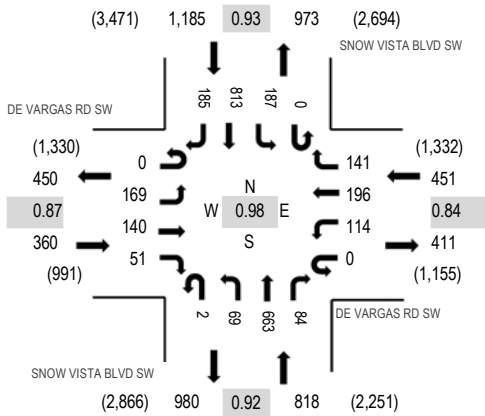
Location: 1 SNOW VISTA BLVD SW & DE VARGAS RD SW PM

Date: Tuesday, December 17, 2024

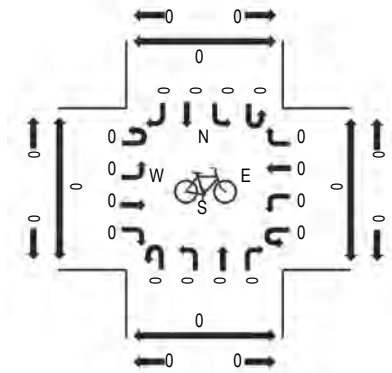
Peak Hour: 03:45 PM - 04:45 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

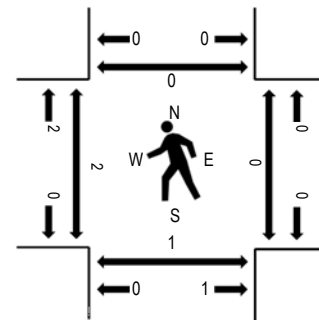
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	DE VARGAS RD SW Eastbound				DE VARGAS RD SW Westbound				SNOW VISTA BLVD SW Northbound				SNOW VISTA BLVD SW 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
	3:30 PM	0	44	42	20	0	24	42	34	0	20	163	15	0	36	187			45	672	2,799	0
3:45 PM	0	51	36	10	0	31	47	41	0	15	175	34	0	38	191	35	704	2,814	2	0	1	0
4:00 PM	0	34	34	13	0	24	37	31	1	26	168	16	0	60	216	57	717	2,782	0	0	0	0
4:15 PM	0	35	37	14	0	26	58	38	0	13	154	21	0	50	208	52	706	2,763	0	0	0	0
4:30 PM	0	49	33	14	0	33	54	31	1	15	166	13	0	39	198	41	687	2,750	0	0	0	0
4:45 PM	0	27	39	12	0	26	40	33	0	16	143	16	0	58	205	57	672	2,736	0	0	0	0
5:00 PM	0	44	32	20	0	29	52	38	0	15	154	13	0	46	217	38	698	2,673	0	0	1	0
5:15 PM	0	27	24	17	0	29	46	35	1	23	184	13	0	45	193	56	693	2,649	1	0	0	2
5:30 PM	0	30	31	13	0	36	48	41	0	17	129	15	0	52	214	47	673	2,496	0	0	1	1
5:45 PM	0	31	30	10	1	23	33	31	1	21	142	17	0	47	182	40	609		0	0	0	0
6:00 PM	0	32	32	16	1	39	59	39	0	13	148	13	0	43	187	52	674		0	0	0	0
6:15 PM	0	18	29	11	0	26	42	34	0	13	120	8	0	46	148	45	540		0	0	0	0
Count Total	0	422	399	170	2	346	558	426	4	207	1,846	194	0	560	2,346	565	8,045		3	0	4	3
Peak Hour	0	169	140	51	0	114	196	141	2	69	663	84	0	187	813	185	2,814		2	0	1	0

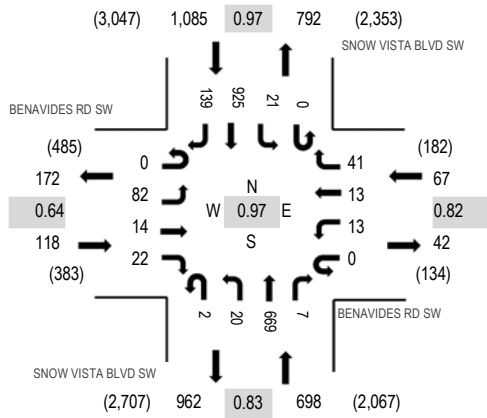
Location: 2 SNOW VISTA BLVD SW & BENAVIDES RD SW PM

Date: Tuesday, December 17, 2024

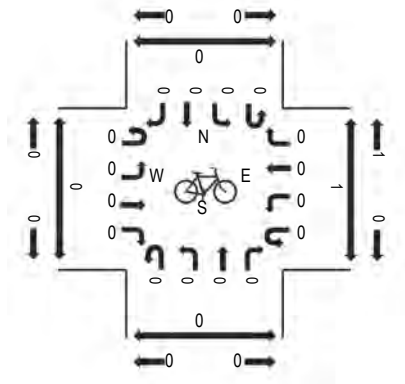
Peak Hour: 04:15 PM - 05:15 PM

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

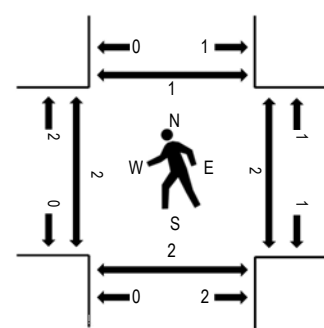
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BENAVIDES RD SW Eastbound				BENAVIDES RD SW Westbound				SNOW VISTA BLVD SW Northbound				SNOW VISTA BLVD SW 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
	3:30 PM	0	21	4	11	0	3	4	12	1	9	170	7	0	7	205			21	475	1,964	0
3:45 PM	0	37	5	15	0	2	0	16	0	6	212	5	0	4	209	36	547	1,965	0	1	1	0
4:00 PM	0	16	3	4	0	2	3	22	0	2	155	3	0	9	196	34	449	1,910	0	0	0	0
4:15 PM	0	23	2	4	0	2	5	17	0	7	162	3	0	5	224	39	493	1,968	0	1	0	1
4:30 PM	0	23	3	3	0	4	1	15	0	5	157	2	0	6	227	30	476	1,935	0	1	0	0
4:45 PM	0	19	5	6	0	3	3	5	1	1	176	0	0	3	231	39	492	1,941	2	0	0	0
5:00 PM	0	17	4	9	0	4	4	4	1	7	174	2	0	7	243	31	507	1,936	0	0	2	0
5:15 PM	0	24	2	2	0	2	1	5	0	4	174	3	0	5	203	35	460	1,867	0	0	0	0
5:30 PM	0	27	2	5	0	3	3	7	0	8	147	1	0	5	240	34	482	1,780	0	0	0	0
5:45 PM	0	30	5	5	0	3	3	6	0	9	158	3	0	2	237	26	487		0	0	1	0
6:00 PM	0	14	3	2	0	3	3	6	0	3	157	3	0	1	206	37	438		0	0	0	0
6:15 PM	0	21	1	6	0	1	1	4	0	9	120	0	0	9	179	22	373		0	0	0	0
Count Total	0	272	39	72	0	32	31	119	3	70	1,962	32	0	63	2,600	384	5,679		2	3	4	1
Peak Hour	0	82	14	22	0	13	13	41	2	20	669	7	0	21	925	139	1,968		2	2	2	1

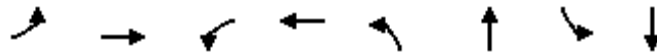
Appendix B

INTERSECTION CAPACITY/QUEUE ANALYSIS WORKSHEETS

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025

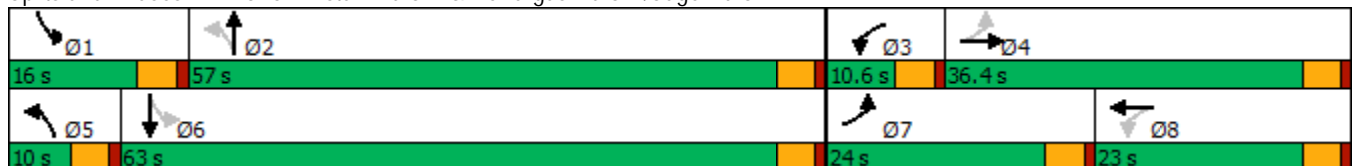


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	204	168	55	98	46	876	93	408
Future Volume (vph)	204	168	55	98	46	876	93	408
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	24.0	36.4	10.6	23.0	10.0	57.0	16.0	63.0
Total Split (%)	20.0%	30.3%	8.8%	19.2%	8.3%	47.5%	13.3%	52.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	30.3	22.0	15.1	9.1	60.6	55.1	66.4	59.8
Actuated g/C Ratio	0.28	0.21	0.14	0.09	0.57	0.52	0.62	0.56
v/c Ratio	0.64	0.34	0.31	0.58	0.10	0.59	0.34	0.31
Control Delay	40.3	33.2	33.9	30.2	9.5	20.5	11.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	50.5	0.0	0.0
Total Delay	40.3	33.2	33.9	30.2	9.5	71.0	11.9	13.1
LOS	D	C	C	C	A	E	B	B
Approach Delay		36.6		31.0		68.2		13.0
Approach LOS		D		C		E		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 106.9	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 43.3	Intersection LOS: D
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary
 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘		↗	↗↘	
Traffic Volume (veh/h)	204	168	52	55	98	100	46	876	79	93	408	125
Future Volume (veh/h)	204	168	52	55	98	100	46	876	79	93	408	125
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	227	187	58	61	109	111	51	973	88	103	453	139
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	500	151	251	169	151	525	1826	165	346	1510	460
Arrive On Green	0.13	0.19	0.19	0.04	0.10	0.10	0.04	0.55	0.55	0.05	0.56	0.56
Sat Flow, veh/h	1781	2691	811	1781	1777	1585	1781	3296	298	1781	2683	817
Grp Volume(v), veh/h	227	122	123	61	109	111	51	525	536	103	299	293
Grp Sat Flow(s),veh/h/ln	1781	1777	1724	1781	1777	1585	1781	1777	1817	1781	1777	1723
Q Serve(g_s), s	11.4	6.2	6.5	3.2	6.2	7.1	1.3	19.4	19.4	2.6	9.2	9.3
Cycle Q Clear(g_c), s	11.4	6.2	6.5	3.2	6.2	7.1	1.3	19.4	19.4	2.6	9.2	9.3
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.16	1.00		0.47
Lane Grp Cap(c), veh/h	336	330	321	251	169	151	525	984	1006	346	1000	969
V/C Ratio(X)	0.68	0.37	0.38	0.24	0.65	0.74	0.10	0.53	0.53	0.30	0.30	0.30
Avail Cap(c_a), veh/h	434	545	529	282	316	282	553	984	1006	461	1000	969
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	37.0	37.1	40.2	45.4	45.8	9.3	14.7	14.7	11.1	12.0	12.0
Incr Delay (d2), s/veh	2.8	0.7	0.8	0.5	4.1	6.8	0.1	2.1	2.0	0.5	0.8	0.8
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	5.2	2.8	2.8	1.4	2.9	3.1	0.5	8.0	8.2	1.0	3.7	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	37.7	37.9	40.7	49.5	52.6	9.4	16.7	16.7	11.6	12.7	12.8
LnGrp LOS	D	D	D	D	D	D	A	B	B	B	B	B
Approach Vol, veh/h		472			281			1112			695	
Approach Delay, s/veh		37.4			48.8			16.4			12.6	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	62.1	8.8	23.8	8.4	63.0	18.3	14.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	52.5	6.1	31.9	5.5	58.5	19.5	18.5				
Max Q Clear Time (g_c+I1), s	4.6	21.4	5.2	8.5	3.3	11.3	13.4	9.1				
Green Ext Time (p_c), s	0.1	8.4	0.0	1.4	0.0	4.2	0.3	0.8				
Intersection Summary												
HCM 6th Ctrl Delay				22.8								
HCM 6th LOS				C								

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/01/2025

Intersection	
Intersection Delay, s/veh	30
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	136	126	0	0	42	64	14	926	38	0	0	0
Future Vol, veh/h	136	126	0	0	42	64	14	926	38	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	151	140	0	0	47	71	16	1029	42	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	15.1	10.6	36.1
HCM LOS	C	B	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	3%	0%	52%	0%
Vol Thru, %	97%	92%	48%	40%
Vol Right, %	0%	8%	0%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	477	501	262	106
LT Vol	14	0	136	0
Through Vol	463	463	126	42
RT Vol	0	38	0	64
Lane Flow Rate	530	557	291	118
Geometry Grp	7	7	2	2
Degree of Util (X)	0.86	0.892	0.495	0.2
Departure Headway (Hd)	5.839	5.77	6.118	6.105
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	625	629	585	590
Service Time	3.545	3.477	4.214	4.115
HCM Lane V/C Ratio	0.848	0.886	0.497	0.2
HCM Control Delay	34.1	38.1	15.1	10.6
HCM Lane LOS	D	E	C	B
HCM 95th-tile Q	9.7	10.8	2.7	0.7

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/01/2025

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔					↔	↔	
Traffic Vol, veh/h	0	162	18	20	36	0	0	0	0	100	321	33
Future Vol, veh/h	0	162	18	20	36	0	0	0	0	100	321	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	180	20	22	40	0	0	0	0	111	357	37
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

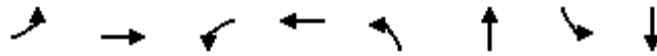
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	11.2	9.7	10.2
HCM LOS	B	A	B

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	36%	100%	0%	0%
Vol Thru, %	90%	64%	0%	100%	76%
Vol Right, %	10%	0%	0%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	56	100	214	140
LT Vol	0	20	100	0	0
Through Vol	162	36	0	214	107
RT Vol	18	0	0	0	33
Lane Flow Rate	200	62	111	238	156
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.318	0.106	0.179	0.349	0.221
Departure Headway (Hd)	5.721	6.155	5.785	5.282	5.116
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	624	577	618	678	698
Service Time	3.491	3.943	3.547	3.043	2.877
HCM Lane V/C Ratio	0.321	0.107	0.18	0.351	0.223
HCM Control Delay	11.2	9.7	9.8	10.9	9.3
HCM Lane LOS	B	A	A	B	A
HCM 95th-tile Q	1.4	0.4	0.6	1.6	0.8

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025

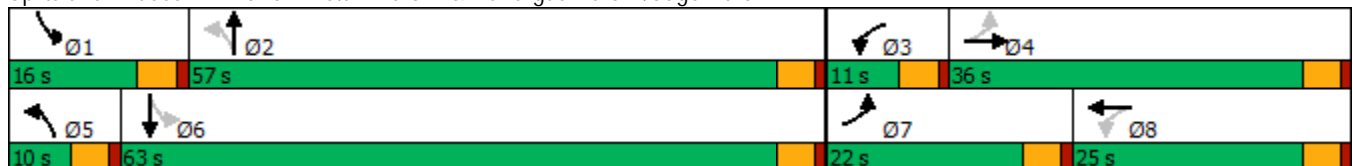


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	207	172	60	99	48	887	94	420
Future Volume (vph)	207	172	60	99	48	887	94	420
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	22.0	36.0	11.0	25.0	10.0	57.0	16.0	63.0
Total Split (%)	18.3%	30.0%	9.2%	20.8%	8.3%	47.5%	13.3%	52.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	29.9	21.4	15.7	9.3	60.4	54.8	66.4	59.8
Actuated g/C Ratio	0.28	0.20	0.15	0.09	0.57	0.51	0.62	0.56
v/c Ratio	0.71	0.37	0.35	0.60	0.12	0.64	0.40	0.33
Control Delay	44.3	34.5	34.7	29.8	9.3	21.3	12.7	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	50.2	0.0	0.0
Total Delay	44.3	34.5	34.7	29.8	9.3	71.5	12.7	13.2
LOS	D	C	C	C	A	E	B	B
Approach Delay		39.2		30.9		68.6		13.1
Approach LOS		D		C		E		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 106.5	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 44.0	Intersection LOS: D
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary
 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	207	172	53	60	99	101	48	887	87	94	420	126
Future Volume (veh/h)	207	172	53	60	99	101	48	887	87	94	420	126
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	244	202	62	71	116	119	56	1044	102	111	494	148
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	347	517	154	265	179	160	492	1783	174	312	1491	444
Arrive On Green	0.14	0.19	0.19	0.05	0.10	0.10	0.04	0.55	0.55	0.05	0.55	0.55
Sat Flow, veh/h	1781	2697	805	1781	1777	1585	1781	3270	319	1781	2699	804
Grp Volume(v), veh/h	244	131	133	71	116	119	56	567	579	111	324	318
Grp Sat Flow(s),veh/h/ln	1781	1777	1725	1781	1777	1585	1781	1777	1813	1781	1777	1726
Q Serve(g_s), s	12.5	6.8	7.1	3.7	6.6	7.7	1.4	22.6	22.6	2.9	10.6	10.7
Cycle Q Clear(g_c), s	12.5	6.8	7.1	3.7	6.6	7.7	1.4	22.6	22.6	2.9	10.6	10.7
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.18	1.00		0.47
Lane Grp Cap(c), veh/h	347	341	331	265	179	160	492	969	988	312	982	954
V/C Ratio(X)	0.70	0.39	0.40	0.27	0.65	0.74	0.11	0.59	0.59	0.36	0.33	0.33
Avail Cap(c_a), veh/h	394	529	513	290	344	307	516	969	988	424	982	954
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	37.3	37.5	40.0	45.8	46.3	10.0	16.1	16.1	12.6	13.0	13.0
Incr Delay (d2), s/veh	4.8	0.7	0.8	0.5	3.9	6.7	0.1	2.6	2.5	0.7	0.9	0.9
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	5.8	3.0	3.1	1.7	3.1	3.3	0.6	9.4	9.6	1.1	4.3	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	38.1	38.3	40.5	49.7	53.0	10.1	18.7	18.6	13.3	13.9	13.9
LnGrp LOS	D	D	D	D	D	D	B	B	B	B	B	B
Approach Vol, veh/h		508			306			1202			753	
Approach Delay, s/veh		38.6			48.8			18.2			13.8	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	62.2	9.5	24.8	8.5	63.0	19.2	15.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	52.5	6.5	31.5	5.5	58.5	17.5	20.5				
Max Q Clear Time (g_c+I1), s	4.9	24.6	5.7	9.1	3.4	12.7	14.5	9.7				
Green Ext Time (p_c), s	0.1	9.1	0.0	1.5	0.0	4.6	0.2	0.9				
Intersection Summary												
HCM 6th Ctrl Delay				24.2								
HCM 6th LOS				C								

HCM 6th TWSC
 2: Access #2 & DeVargas Rd SW

01/01/2025

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	428	6	0	273	0	2
Future Vol, veh/h	428	6	0	273	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	504	7	0	321	0	2

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	748	-	-
HCM Lane V/C Ratio	0.003	-	-
HCM Control Delay (s)	9.8	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑			↑↑	
Traffic Vol, veh/h	0	0	0	0	464	0
Future Vol, veh/h	0	0	0	0	464	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	546	0
Number of Lanes	0	1	0	0	2	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	2	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	1
HCM Control Delay	0	8
HCM LOS	-	A

Lane	EBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	232	232
LT Vol	0	0	0
Through Vol	0	232	232
RT Vol	0	0	0
Lane Flow Rate	0	273	273
Geometry Grp	2	7	7
Degree of Util (X)	0	0.344	0.212
Departure Headway (Hd)	4.872	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes
Cap	0	797	1291
Service Time	2.872	2.234	0.5
HCM Lane V/C Ratio	0	0.343	0.211
HCM Control Delay	7.9	9.6	6.3
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	1.5	0.8

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/01/2025

Intersection

Intersection Delay, s/veh 42.3

Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	139	127	0	0	42	66	14	948	38	0	0	0
Future Vol, veh/h	139	127	0	0	42	66	14	948	38	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	164	149	0	0	49	78	16	1115	45	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	16.3	10.9	52.6
HCM LOS	C	B	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	3%	0%	52%	0%
Vol Thru, %	97%	93%	48%	39%
Vol Right, %	0%	7%	0%	61%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	488	512	266	108
LT Vol	14	0	139	0
Through Vol	474	474	127	42
RT Vol	0	38	0	66
Lane Flow Rate	574	602	313	127
Geometry Grp	7	7	2	2
Degree of Util (X)	0.949	0.984	0.538	0.215
Departure Headway (Hd)	5.948	5.881	6.193	6.1
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	614	620	579	583
Service Time	3.648	3.581	4.264	4.197
HCM Lane V/C Ratio	0.935	0.971	0.541	0.218
HCM Control Delay	48.9	56.1	16.3	10.9
HCM Lane LOS	E	F	C	B
HCM 95th-tile Q	12.9	14.4	3.2	0.8

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/01/2025

Intersection

Intersection Delay, s/veh10.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻					↻	↻↻	
Traffic Vol, veh/h	0	165	18	20	36	0	0	0	0	101	328	37
Future Vol, veh/h	0	165	18	20	36	0	0	0	0	101	328	37
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	194	21	24	42	0	0	0	0	119	386	44
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

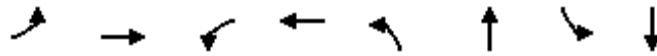
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	11.7	9.9	10.5
HCM LOS	B	A	B

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	36%	100%	0%	0%
Vol Thru, %	90%	64%	0%	100%	75%
Vol Right, %	10%	0%	0%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	183	56	101	219	146
LT Vol	0	20	101	0	0
Through Vol	165	36	0	219	109
RT Vol	18	0	0	0	37
Lane Flow Rate	215	66	119	257	172
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.348	0.115	0.193	0.382	0.247
Departure Headway (Hd)	5.824	6.279	5.849	5.345	5.167
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	614	565	610	669	690
Service Time	3.603	4.079	3.619	3.116	2.937
HCM Lane V/C Ratio	0.35	0.117	0.195	0.384	0.249
HCM Control Delay	11.7	9.9	10	11.4	9.6
HCM Lane LOS	B	A	A	B	A
HCM 95th-tile Q	1.6	0.4	0.7	1.8	1

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025

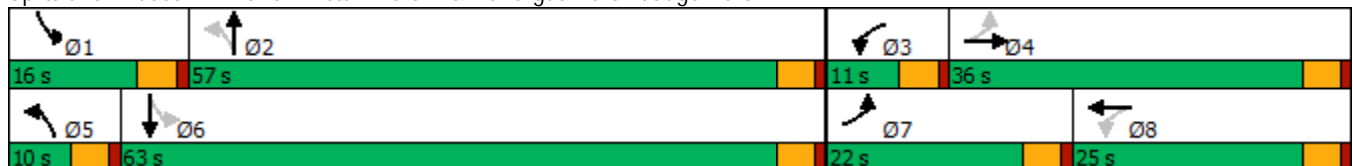


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	207	172	60	99	48	887	94	420
Future Volume (vph)	207	172	60	99	48	887	94	420
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	22.0	36.0	11.0	25.0	10.0	57.0	16.0	63.0
Total Split (%)	18.3%	30.0%	9.2%	20.8%	8.3%	47.5%	13.3%	52.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	29.9	21.4	15.7	9.3	60.4	54.8	66.4	59.8
Actuated g/C Ratio	0.28	0.20	0.15	0.09	0.57	0.51	0.62	0.56
v/c Ratio	0.71	0.37	0.35	0.60	0.12	0.64	0.40	0.33
Control Delay	44.3	34.5	34.7	29.8	9.3	21.3	12.7	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	50.2	0.0	0.0
Total Delay	44.3	34.5	34.7	29.8	9.3	71.5	12.7	13.2
LOS	D	C	C	C	A	E	B	B
Approach Delay		39.2		30.9		68.6		13.1
Approach LOS		D		C		E		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 106.5	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 44.0	Intersection LOS: D
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary
 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘		↗	↗↘	
Traffic Volume (veh/h)	207	172	53	60	99	101	48	887	87	94	420	126
Future Volume (veh/h)	207	172	53	60	99	101	48	887	87	94	420	126
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	244	202	62	71	116	119	56	1044	102	111	494	148
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	347	517	154	265	179	160	492	1783	174	312	1491	444
Arrive On Green	0.14	0.19	0.19	0.05	0.10	0.10	0.04	0.55	0.55	0.05	0.55	0.55
Sat Flow, veh/h	1781	2697	805	1781	1777	1585	1781	3270	319	1781	2699	804
Grp Volume(v), veh/h	244	131	133	71	116	119	56	567	579	111	324	318
Grp Sat Flow(s),veh/h/ln	1781	1777	1725	1781	1777	1585	1781	1777	1813	1781	1777	1726
Q Serve(g_s), s	12.5	6.8	7.1	3.7	6.6	7.7	1.4	22.6	22.6	2.9	10.6	10.7
Cycle Q Clear(g_c), s	12.5	6.8	7.1	3.7	6.6	7.7	1.4	22.6	22.6	2.9	10.6	10.7
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.18	1.00		0.47
Lane Grp Cap(c), veh/h	347	341	331	265	179	160	492	969	988	312	982	954
V/C Ratio(X)	0.70	0.39	0.40	0.27	0.65	0.74	0.11	0.59	0.59	0.36	0.33	0.33
Avail Cap(c_a), veh/h	394	529	513	290	344	307	516	969	988	424	982	954
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	37.3	37.5	40.0	45.8	46.3	10.0	16.1	16.1	12.6	13.0	13.0
Incr Delay (d2), s/veh	4.8	0.7	0.8	0.5	3.9	6.7	0.1	2.6	2.5	0.7	0.9	0.9
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	5.8	3.0	3.1	1.7	3.1	3.3	0.6	9.4	9.6	1.1	4.3	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	38.1	38.3	40.5	49.7	53.0	10.1	18.7	18.6	13.3	13.9	13.9
LnGrp LOS	D	D	D	D	D	D	B	B	B	B	B	B
Approach Vol, veh/h		508			306			1202			753	
Approach Delay, s/veh		38.6			48.8			18.2			13.8	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	62.2	9.5	24.8	8.5	63.0	19.2	15.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	52.5	6.5	31.5	5.5	58.5	17.5	20.5				
Max Q Clear Time (g_c+I1), s	4.9	24.6	5.7	9.1	3.4	12.7	14.5	9.7				
Green Ext Time (p_c), s	0.1	9.1	0.0	1.5	0.0	4.6	0.2	0.9				
Intersection Summary												
HCM 6th Ctrl Delay				24.2								
HCM 6th LOS				C								

HCM 6th TWSC
 2: Access #2 & DeVargas Rd SW

01/01/2025

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	428	6	0	273	0	2
Future Vol, veh/h	428	6	0	273	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	504	7	0	321	0	2

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	748	-	-
HCM Lane V/C Ratio	0.003	-	-
HCM Control Delay (s)	9.8	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑			↑↑	
Traffic Vol, veh/h	0	0	0	0	464	0
Future Vol, veh/h	0	0	0	0	464	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	546	0
Number of Lanes	0	1	0	0	2	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	2	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	1
HCM Control Delay	0	8
HCM LOS	-	A

Lane	EBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	232	232
LT Vol	0	0	0
Through Vol	0	232	232
RT Vol	0	0	0
Lane Flow Rate	0	273	273
Geometry Grp	2	7	7
Degree of Util (X)	0	0.344	0.212
Departure Headway (Hd)	4.872	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes
Cap	0	797	1291
Service Time	2.872	2.234	0.5
HCM Lane V/C Ratio	0	0.343	0.211
HCM Control Delay	7.9	9.6	6.3
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	1.5	0.8

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/01/2025

Intersection

Intersection Delay, s/veh 42.3

Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	139	127	0	0	42	66	14	948	38	0	0	0
Future Vol, veh/h	139	127	0	0	42	66	14	948	38	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	164	149	0	0	49	78	16	1115	45	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	16.3	10.9	52.6
HCM LOS	C	B	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	3%	0%	52%	0%
Vol Thru, %	97%	93%	48%	39%
Vol Right, %	0%	7%	0%	61%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	488	512	266	108
LT Vol	14	0	139	0
Through Vol	474	474	127	42
RT Vol	0	38	0	66
Lane Flow Rate	574	602	313	127
Geometry Grp	7	7	2	2
Degree of Util (X)	0.949	0.984	0.538	0.215
Departure Headway (Hd)	5.948	5.881	6.193	6.1
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	614	620	579	583
Service Time	3.648	3.581	4.264	4.197
HCM Lane V/C Ratio	0.935	0.971	0.541	0.218
HCM Control Delay	48.9	56.1	16.3	10.9
HCM Lane LOS	E	F	C	B
HCM 95th-tile Q	12.9	14.4	3.2	0.8

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/01/2025

Intersection

Intersection Delay, s/veh10.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻					↻	↻↻	
Traffic Vol, veh/h	0	165	18	20	36	0	0	0	0	101	328	37
Future Vol, veh/h	0	165	18	20	36	0	0	0	0	101	328	37
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	194	21	24	42	0	0	0	0	119	386	44
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

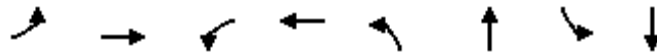
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	11.7	9.9	10.5
HCM LOS	B	A	B

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	36%	100%	0%	0%
Vol Thru, %	90%	64%	0%	100%	75%
Vol Right, %	10%	0%	0%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	183	56	101	219	146
LT Vol	0	20	101	0	0
Through Vol	165	36	0	219	109
RT Vol	18	0	0	0	37
Lane Flow Rate	215	66	119	257	172
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.348	0.115	0.193	0.382	0.247
Departure Headway (Hd)	5.824	6.279	5.849	5.345	5.167
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	614	565	610	669	690
Service Time	3.603	4.079	3.619	3.116	2.937
HCM Lane V/C Ratio	0.35	0.117	0.195	0.384	0.249
HCM Control Delay	11.7	9.9	10	11.4	9.6
HCM Lane LOS	B	A	A	B	A
HCM 95th-tile Q	1.6	0.4	0.7	1.8	1

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025

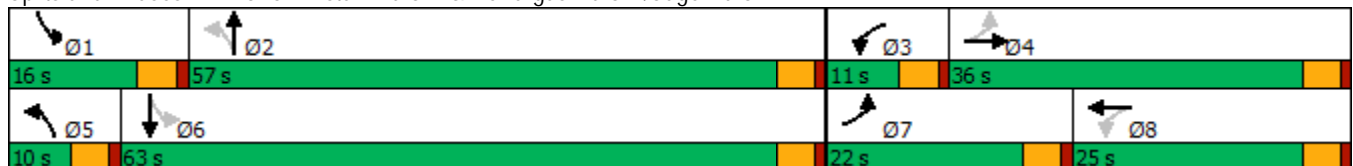


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	227	187	65	109	53	974	103	461
Future Volume (vph)	227	187	65	109	53	974	103	461
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	22.0	36.0	11.0	25.0	10.0	57.0	16.0	63.0
Total Split (%)	18.3%	30.0%	9.2%	20.8%	8.3%	47.5%	13.3%	52.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	30.9	22.3	16.2	9.7	59.8	54.3	66.8	59.8
Actuated g/C Ratio	0.29	0.21	0.15	0.09	0.56	0.51	0.62	0.56
v/c Ratio	0.78	0.39	0.38	0.62	0.15	0.71	0.49	0.37
Control Delay	49.1	35.0	35.2	30.1	9.8	24.1	15.8	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	49.8	0.0	0.0
Total Delay	49.1	35.0	35.2	30.1	9.8	73.9	15.8	14.0
LOS	D	C	D	C	A	E	B	B
Approach Delay		41.8		31.2		70.9		14.3
Approach LOS		D		C		E		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 107.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 45.8	Intersection LOS: D
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary
 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘		↗	↗↘	
Traffic Volume (veh/h)	227	187	58	65	109	111	53	974	96	103	461	139
Future Volume (veh/h)	227	187	58	65	109	111	53	974	96	103	461	139
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	267	220	68	76	128	131	62	1146	113	121	542	164
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	360	553	166	274	192	171	449	1729	170	275	1451	437
Arrive On Green	0.15	0.21	0.21	0.05	0.11	0.11	0.04	0.53	0.53	0.05	0.54	0.54
Sat Flow, veh/h	1781	2691	810	1781	1777	1585	1781	3268	322	1781	2690	811
Grp Volume(v), veh/h	267	143	145	76	128	131	62	622	637	121	357	349
Grp Sat Flow(s),veh/h/ln	1781	1777	1724	1781	1777	1585	1781	1777	1812	1781	1777	1724
Q Serve(g_s), s	13.9	7.6	7.9	4.1	7.5	8.7	1.7	27.5	27.6	3.3	12.6	12.7
Cycle Q Clear(g_c), s	13.9	7.6	7.9	4.1	7.5	8.7	1.7	27.5	27.6	3.3	12.6	12.7
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.18	1.00		0.47
Lane Grp Cap(c), veh/h	360	365	354	274	192	171	449	940	959	275	958	930
V/C Ratio(X)	0.74	0.39	0.41	0.28	0.67	0.76	0.14	0.66	0.66	0.44	0.37	0.37
Avail Cap(c_a), veh/h	385	516	501	291	336	300	470	940	959	376	958	930
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	37.2	37.4	40.1	46.5	47.0	11.1	18.5	18.5	15.2	14.4	14.4
Incr Delay (d2), s/veh	7.0	0.7	0.8	0.5	3.9	6.9	0.1	3.7	3.6	1.1	1.1	1.2
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	6.6	3.3	3.4	1.8	3.5	3.8	0.7	11.8	12.1	1.4	5.2	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	37.9	38.1	40.7	50.4	54.0	11.3	22.2	22.1	16.3	15.5	15.6
LnGrp LOS	D	D	D	D	D	D	B	C	C	B	B	B
Approach Vol, veh/h		555			335			1321			827	
Approach Delay, s/veh		39.6			49.6			21.6			15.7	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	61.9	10.0	26.8	8.7	63.0	20.5	16.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	52.5	6.5	31.5	5.5	58.5	17.5	20.5				
Max Q Clear Time (g_c+I1), s	5.3	29.6	6.1	9.9	3.7	14.7	15.9	10.7				
Green Ext Time (p_c), s	0.1	9.6	0.0	1.6	0.0	5.2	0.1	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			26.4									
HCM 6th LOS			C									

HCM 6th TWSC
2: Access #2 & DeVargas Rd SW

01/01/2025

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	471	6	0	301	0	2
Future Vol, veh/h	471	6	0	301	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	554	7	0	354	0	2

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	720	-	-
HCM Lane V/C Ratio	0.003	-	-
HCM Control Delay (s)	10	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑			↑↑	
Traffic Vol, veh/h	0	0	0	0	509	0
Future Vol, veh/h	0	0	0	0	509	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	599	0
Number of Lanes	0	1	0	0	2	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	2	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	1
HCM Control Delay	0	8.2
HCM LOS	-	A

Lane	EBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	255	255
LT Vol	0	0	0
Through Vol	0	255	255
RT Vol	0	0	0
Lane Flow Rate	0	299	299
Geometry Grp	2	7	7
Degree of Util (X)	0	0.377	0.233
Departure Headway (Hd)	4.948	4.534	2.8
Convergence, Y/N	Yes	Yes	Yes
Cap	0	799	1290
Service Time	2.948	2.234	0.5
HCM Lane V/C Ratio	0	0.374	0.232
HCM Control Delay	7.9	10	6.3
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	1.8	0.9

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/01/2025

Intersection

Intersection Delay, s/veh 67.4

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	153	140	0	0	46	69	16	1041	42	0	0	0
Future Vol, veh/h	153	140	0	0	46	69	16	1041	42	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	180	165	0	0	54	81	19	1225	49	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	18.2	11.2	86.4
HCM LOS	C	B	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	3%	0%	52%	0%
Vol Thru, %	97%	93%	48%	40%
Vol Right, %	0%	7%	0%	60%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	537	563	293	115
LT Vol	16	0	153	0
Through Vol	521	521	140	46
RT Vol	0	42	0	69
Lane Flow Rate	631	662	345	135
Geometry Grp	7	7	2	2
Degree of Util (X)	1.067	1.107	0.599	0.234
Departure Headway (Hd)	6.088	6.02	6.253	6.221
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	600	609	579	576
Service Time	3.788	3.72	4.275	4.268
HCM Lane V/C Ratio	1.052	1.087	0.596	0.234
HCM Control Delay	80	92.6	18.2	11.2
HCM Lane LOS	F	F	C	B
HCM 95th-tile Q	18.1	20.3	3.9	0.9

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/01/2025

Intersection

Intersection Delay, s/veh11.5

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻					↻	↻↻	
Traffic Vol, veh/h	0	182	20	22	40	0	0	0	0	111	360	38
Future Vol, veh/h	0	182	20	22	40	0	0	0	0	111	360	38
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	214	24	26	47	0	0	0	0	131	424	45
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

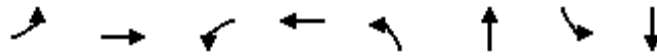
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	12.6	10.3	11.2
HCM LOS	B	B	B

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	35%	100%	0%	0%
Vol Thru, %	90%	65%	0%	100%	76%
Vol Right, %	10%	0%	0%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	62	111	240	158
LT Vol	0	22	111	0	0
Through Vol	182	40	0	240	120
RT Vol	20	0	0	0	38
Lane Flow Rate	238	73	131	282	186
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.393	0.133	0.216	0.427	0.272
Departure Headway (Hd)	5.946	6.554	5.945	5.441	5.272
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	599	551	598	655	675
Service Time	3.745	4.254	3.735	3.231	3.061
HCM Lane V/C Ratio	0.397	0.132	0.219	0.431	0.276
HCM Control Delay	12.6	10.3	10.4	12.3	10.1
HCM Lane LOS	B	B	B	B	B
HCM 95th-tile Q	1.9	0.5	0.8	2.1	1.1

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025

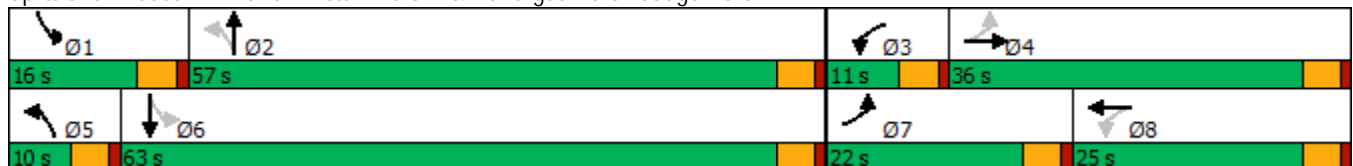


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	239	190	61	109	57	980	103	475
Future Volume (vph)	239	190	61	109	57	980	103	475
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	22.0	36.0	11.0	25.0	10.0	57.0	16.0	63.0
Total Split (%)	18.3%	30.0%	9.2%	20.8%	8.3%	47.5%	13.3%	52.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	31.0	22.5	16.1	9.7	59.8	54.3	66.7	59.7
Actuated g/C Ratio	0.29	0.21	0.15	0.09	0.56	0.50	0.62	0.55
v/c Ratio	0.82	0.40	0.36	0.63	0.16	0.72	0.49	0.38
Control Delay	52.4	34.9	34.7	30.1	9.9	24.3	16.3	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	49.8	0.0	0.0
Total Delay	52.4	34.9	34.7	30.1	9.9	74.1	16.3	14.2
LOS	D	C	C	C	A	E	B	B
Approach Delay		43.4		31.1		70.9		14.5
Approach LOS		D		C		E		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 107.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 46.1	Intersection LOS: D
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary
 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘		↗	↗↘	
Traffic Volume (veh/h)	239	190	63	61	109	111	57	980	98	103	475	139
Future Volume (veh/h)	239	190	63	61	109	111	57	980	98	103	475	139
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	281	224	74	72	128	131	67	1153	115	121	559	164
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	565	182	268	191	171	438	1713	171	269	1449	424
Arrive On Green	0.15	0.21	0.21	0.05	0.11	0.11	0.04	0.52	0.52	0.05	0.53	0.53
Sat Flow, veh/h	1781	2644	850	1781	1777	1585	1781	3264	325	1781	2712	793
Grp Volume(v), veh/h	281	149	149	72	128	131	67	627	641	121	366	357
Grp Sat Flow(s),veh/h/ln	1781	1777	1717	1781	1777	1585	1781	1777	1812	1781	1777	1728
Q Serve(g_s), s	14.8	7.9	8.2	3.9	7.6	8.8	1.9	28.4	28.5	3.4	13.2	13.3
Cycle Q Clear(g_c), s	14.8	7.9	8.2	3.9	7.6	8.8	1.9	28.4	28.5	3.4	13.2	13.3
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.18	1.00		0.46
Lane Grp Cap(c), veh/h	370	380	367	268	191	171	438	932	951	269	949	923
V/C Ratio(X)	0.76	0.39	0.41	0.27	0.67	0.77	0.15	0.67	0.67	0.45	0.39	0.39
Avail Cap(c_a), veh/h	381	511	494	288	333	297	457	932	951	368	949	923
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	36.9	37.1	40.7	47.0	47.5	11.5	19.1	19.1	15.8	14.9	15.0
Incr Delay (d2), s/veh	8.3	0.7	0.7	0.5	4.0	7.0	0.2	3.9	3.8	1.2	1.2	1.2
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	7.2	3.5	3.5	1.7	3.6	3.8	0.7	12.2	12.5	1.4	5.5	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	37.6	37.8	41.2	50.9	54.5	11.7	23.0	22.9	17.0	16.1	16.2
LnGrp LOS	D	D	D	D	D	D	B	C	C	B	B	B
Approach Vol, veh/h		579			331			1335			844	
Approach Delay, s/veh		40.2			50.2			22.4			16.3	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	62.0	9.7	27.9	8.8	63.0	21.3	16.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	52.5	6.5	31.5	5.5	58.5	17.5	20.5				
Max Q Clear Time (g_c+I1), s	5.4	30.5	5.9	10.2	3.9	15.3	16.8	10.8				
Green Ext Time (p_c), s	0.1	9.5	0.0	1.7	0.0	5.4	0.1	1.0				
Intersection Summary												
HCM 6th Ctrl Delay				27.0								
HCM 6th LOS				C								

HCM 6th TWSC
 2: Access #2 & DeVargas Rd SW

01/01/2025

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	471	16	0	305	0	22
Future Vol, veh/h	471	16	0	305	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	554	19	0	359	0	26

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	720	-	-
HCM Lane V/C Ratio	0.036	-	-
HCM Control Delay (s)	10.2	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑			↑↑	
Traffic Vol, veh/h	0	33	0	0	502	73
Future Vol, veh/h	0	33	0	0	502	73
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	0	0	591	86
Number of Lanes	0	1	0	0	2	0

Approach	EB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left	SB	
Conflicting Lanes Left	2	0
Conflicting Approach Right		EB
Conflicting Lanes Right	0	1
HCM Control Delay	7.9	10.9
HCM LOS	A	B

Lane	EBLn1	SBLn1	SBLn2
Vol Left, %	0%	0%	0%
Vol Thru, %	0%	100%	70%
Vol Right, %	100%	0%	30%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	33	335	240
LT Vol	0	0	0
Through Vol	0	335	167
RT Vol	33	0	73
Lane Flow Rate	39	394	283
Geometry Grp	2	7	7
Degree of Util (X)	0.05	0.503	0.345
Departure Headway (Hd)	4.638	4.603	4.39
Convergence, Y/N	Yes	Yes	Yes
Cap	777	784	820
Service Time	2.638	2.333	2.12
HCM Lane V/C Ratio	0.05	0.503	0.345
HCM Control Delay	7.9	11.9	9.4
HCM Lane LOS	A	B	A
HCM 95th-tile Q	0.2	2.9	1.5

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/01/2025

Intersection

Intersection Delay, s/veh 74

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	157	140	0	0	46	71	16	1063	42	0	0	0
Future Vol, veh/h	157	140	0	0	46	71	16	1063	42	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	185	165	0	0	54	84	19	1251	49	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	18.5	11.2	95.2
HCM LOS	C	B	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	3%	0%	53%	0%
Vol Thru, %	97%	93%	47%	39%
Vol Right, %	0%	7%	0%	61%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	548	574	297	117
LT Vol	16	0	157	0
Through Vol	532	532	140	46
RT Vol	0	42	0	71
Lane Flow Rate	644	675	349	138
Geometry Grp	7	7	2	2
Degree of Util (X)	1.093	1.133	0.608	0.238
Departure Headway (Hd)	6.111	6.044	6.262	6.233
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	599	607	580	577
Service Time	3.811	3.744	4.271	4.264
HCM Lane V/C Ratio	1.075	1.112	0.602	0.239
HCM Control Delay	88.4	101.7	18.5	11.2
HCM Lane LOS	F	F	C	B
HCM 95th-tile Q	19.3	21.6	4.1	0.9

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/01/2025

Intersection

Intersection Delay, s/veh 11.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻					↻	↻↻	
Traffic Vol, veh/h	0	185	20	22	40	0	0	0	0	113	380	42
Future Vol, veh/h	0	185	20	22	40	0	0	0	0	113	380	42
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	218	24	26	47	0	0	0	0	133	447	49
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

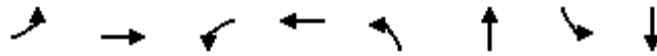
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	13	10.4	11.5
HCM LOS	B	B	B

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	35%	100%	0%	0%
Vol Thru, %	90%	65%	0%	100%	75%
Vol Right, %	10%	0%	0%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	205	62	113	253	169
LT Vol	0	22	113	0	0
Through Vol	185	40	0	253	127
RT Vol	20	0	0	0	42
Lane Flow Rate	241	73	133	298	198
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.409	0.134	0.22	0.452	0.291
Departure Headway (Hd)	6.11	6.629	6.067	5.562	5.387
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	593	543	596	653	671
Service Time	3.81	4.336	3.767	3.262	3.087
HCM Lane V/C Ratio	0.406	0.134	0.223	0.456	0.295
HCM Control Delay	13	10.4	10.5	12.8	10.3
HCM Lane LOS	B	B	B	B	B
HCM 95th-tile Q	2	0.5	0.8	2.3	1.2

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025

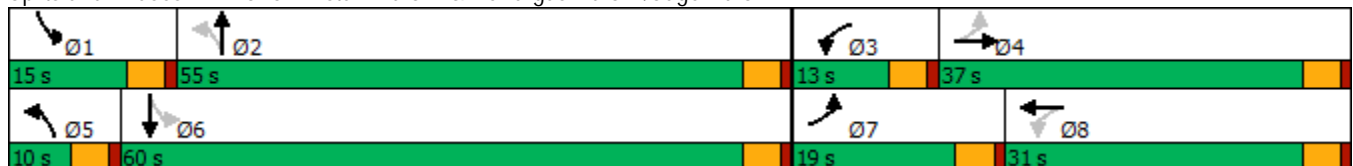


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↙	↕	↙	↕	↘	↕
Traffic Volume (vph)	169	140	114	196	71	663	187	813
Future Volume (vph)	169	140	114	196	71	663	187	813
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	19.0	37.0	13.0	31.0	10.0	55.0	15.0	60.0
Total Split (%)	15.8%	30.8%	10.8%	25.8%	8.3%	45.8%	12.5%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	31.4	19.0	22.4	14.0	56.3	50.8	65.2	57.4
Actuated g/C Ratio	0.30	0.18	0.21	0.13	0.53	0.48	0.61	0.54
v/c Ratio	0.69	0.35	0.46	0.71	0.35	0.53	0.59	0.63
Control Delay	41.7	31.7	34.3	35.9	14.1	21.2	16.8	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	51.2	0.0	0.0
Total Delay	41.7	31.7	34.3	35.9	14.1	72.4	16.8	19.8
LOS	D	C	C	D	B	E	B	B
Approach Delay		36.4		35.5		67.3		19.3
Approach LOS		D		D		E		B

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 106.1
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 38.0
 Intersection LOS: D
 Intersection Capacity Utilization 66.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary
 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	169	140	51	114	196	141	71	663	84	187	813	185
Future Volume (veh/h)	169	140	51	114	196	141	71	663	84	187	813	185
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	199	165	60	134	231	166	84	780	99	220	956	218
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	474	166	356	306	211	281	1546	196	411	1505	343
Arrive On Green	0.11	0.18	0.18	0.08	0.15	0.15	0.04	0.49	0.49	0.08	0.52	0.52
Sat Flow, veh/h	1781	2580	905	1781	2012	1386	1781	3172	403	1781	2875	654
Grp Volume(v), veh/h	199	112	113	134	203	194	84	437	442	220	590	584
Grp Sat Flow(s),veh/h/ln	1781	1777	1708	1781	1777	1621	1781	1777	1798	1781	1777	1753
Q Serve(g_s), s	9.7	5.8	6.1	6.6	11.6	12.2	2.5	17.7	17.7	6.3	25.1	25.2
Cycle Q Clear(g_c), s	9.7	5.8	6.1	6.6	11.6	12.2	2.5	17.7	17.7	6.3	25.1	25.2
Prop In Lane	1.00		0.53	1.00		0.86	1.00		0.22	1.00		0.37
Lane Grp Cap(c), veh/h	303	327	314	356	270	247	281	866	876	411	930	917
V/C Ratio(X)	0.66	0.34	0.36	0.38	0.75	0.79	0.30	0.50	0.50	0.53	0.63	0.64
Avail Cap(c_a), veh/h	348	545	523	356	444	405	297	866	876	446	930	917
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	37.7	37.8	33.9	43.0	43.3	14.9	18.5	18.5	13.3	18.0	18.1
Incr Delay (d2), s/veh	3.7	0.6	0.7	0.7	4.2	5.5	0.6	2.1	2.1	1.1	3.3	3.4
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	4.5	2.6	2.6	2.9	5.4	5.3	1.0	7.6	7.7	2.5	10.7	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	38.3	38.5	34.5	47.2	48.8	15.5	20.6	20.6	14.4	21.3	21.4
LnGrp LOS	D	D	D	C	D	D	B	C	C	B	C	C
Approach Vol, veh/h		424			531			963			1394	
Approach Delay, s/veh		37.4			44.6			20.1			20.3	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.9	56.2	13.0	24.0	9.1	60.0	16.3	20.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	50.5	8.5	32.5	5.5	55.5	14.5	26.5				
Max Q Clear Time (g_c+I1), s	8.3	19.7	8.6	8.1	4.5	27.2	11.7	14.2				
Green Ext Time (p_c), s	0.1	6.5	0.0	1.3	0.0	9.6	0.1	1.9				

Intersection Summary

HCM 6th Ctrl Delay	26.3
HCM 6th LOS	C

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/01/2025

Intersection	
Intersection Delay, s/veh	14
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	82	35	0	0	26	41	22	669	7	0	0	0
Future Vol, veh/h	82	35	0	0	26	41	22	669	7	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	41	0	0	31	48	26	787	8	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	10.5	9.2	15
HCM LOS	B	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	6%	0%	70%	0%
Vol Thru, %	94%	98%	30%	39%
Vol Right, %	0%	2%	0%	61%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	357	342	117	67
LT Vol	22	0	82	0
Through Vol	335	335	35	26
RT Vol	0	7	0	41
Lane Flow Rate	419	402	138	79
Geometry Grp	7	7	2	2
Degree of Util (X)	0.601	0.57	0.221	0.118
Departure Headway (Hd)	5.157	5.111	5.775	5.377
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	696	703	619	663
Service Time	2.913	2.867	3.833	3.442
HCM Lane V/C Ratio	0.602	0.572	0.223	0.119
HCM Control Delay	15.4	14.5	10.5	9.2
HCM Lane LOS	C	B	B	A
HCM 95th-tile Q	4	3.6	0.8	0.4

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/01/2025

Intersection	
Intersection Delay, s/veh	43
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↔					↑	↑↑	
Traffic Vol, veh/h	0	96	22	13	35	0	0	0	0	21	925	139
Future Vol, veh/h	0	96	22	13	35	0	0	0	0	21	925	139
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	113	26	15	41	0	0	0	0	25	1088	164
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

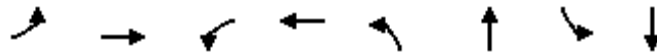
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	12.3	11.1	47.7
HCM LOS	B	B	E

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	27%	100%	0%	0%
Vol Thru, %	81%	73%	0%	100%	69%
Vol Right, %	19%	0%	0%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	48	21	617	447
LT Vol	0	13	21	0	0
Through Vol	96	35	0	617	308
RT Vol	22	0	0	0	139
Lane Flow Rate	139	56	25	725	526
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.267	0.115	0.039	1.046	0.727
Departure Headway (Hd)	7.045	7.459	5.695	5.192	4.974
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	514	483	625	696	721
Service Time	4.745	5.159	3.466	2.963	2.744
HCM Lane V/C Ratio	0.27	0.116	0.04	1.042	0.73
HCM Control Delay	12.3	11.1	8.7	69.2	20
HCM Lane LOS	B	B	A	F	C
HCM 95th-tile Q	1.1	0.4	0.1	18.5	6.3

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025

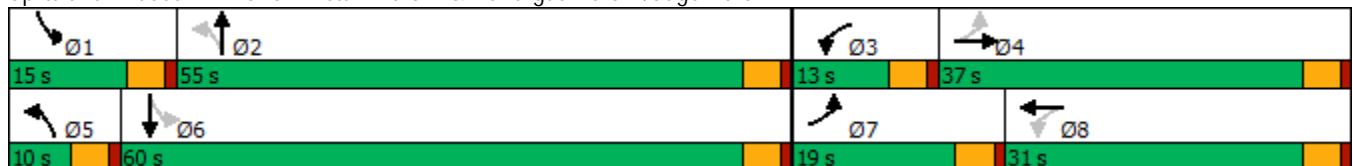


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	182	154	124	198	81	691	189	845
Future Volume (vph)	182	154	124	198	81	691	189	845
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	19.0	37.0	13.0	31.0	10.0	55.0	15.0	60.0
Total Split (%)	15.8%	30.8%	10.8%	25.8%	8.3%	45.8%	12.5%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	31.9	19.4	22.6	14.1	56.6	51.1	65.3	55.6
Actuated g/C Ratio	0.30	0.18	0.21	0.13	0.53	0.48	0.61	0.52
v/c Ratio	0.73	0.37	0.51	0.72	0.43	0.55	0.63	0.67
Control Delay	44.7	33.4	35.8	36.1	16.5	21.9	18.4	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	51.1	0.0	0.0
Total Delay	44.7	33.4	35.8	36.1	16.5	72.9	18.4	21.5
LOS	D	C	D	D	B	E	B	C
Approach Delay		38.7		36.1		67.6		21.0
Approach LOS		D		D		E		C

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 107	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 39.4	Intersection LOS: D
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	182	154	52	124	198	142	81	691	92	189	845	187
Future Volume (veh/h)	182	154	52	124	198	142	81	691	92	189	845	187
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	214	181	61	146	233	167	95	813	108	222	994	220
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	502	164	355	307	211	267	1519	202	393	1499	331
Arrive On Green	0.12	0.19	0.19	0.08	0.15	0.15	0.04	0.48	0.48	0.08	0.52	0.52
Sat Flow, veh/h	1781	2633	859	1781	2014	1384	1781	3153	419	1781	2893	639
Grp Volume(v), veh/h	214	120	122	146	204	196	95	458	463	222	610	604
Grp Sat Flow(s),veh/h/ln	1781	1777	1716	1781	1777	1621	1781	1777	1795	1781	1777	1755
Q Serve(g_s), s	10.5	6.3	6.6	7.3	11.8	12.5	2.9	19.3	19.3	6.5	27.0	27.1
Cycle Q Clear(g_c), s	10.5	6.3	6.6	7.3	11.8	12.5	2.9	19.3	19.3	6.5	27.0	27.1
Prop In Lane	1.00		0.50	1.00		0.85	1.00		0.23	1.00		0.36
Lane Grp Cap(c), veh/h	312	339	327	355	271	247	267	856	865	393	921	909
V/C Ratio(X)	0.69	0.36	0.37	0.41	0.75	0.79	0.36	0.54	0.54	0.56	0.66	0.66
Avail Cap(c_a), veh/h	344	539	521	355	440	401	281	856	865	425	921	909
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	37.6	37.8	34.4	43.5	43.7	15.9	19.4	19.4	14.2	18.9	19.0
Incr Delay (d2), s/veh	5.0	0.6	0.7	0.8	4.2	5.6	0.8	2.4	2.4	1.5	3.7	3.8
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	4.9	2.8	2.8	3.2	5.5	5.3	1.2	8.3	8.4	2.6	11.6	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	38.3	38.5	35.2	47.7	49.3	16.7	21.8	21.8	15.7	22.7	22.8
LnGrp LOS	D	D	D	D	D	D	B	C	C	B	C	C
Approach Vol, veh/h		456			546			1016			1436	
Approach Delay, s/veh		37.9			44.9			21.3			21.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.1	56.1	13.0	24.9	9.2	60.0	17.1	20.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	50.5	8.5	32.5	5.5	55.5	14.5	26.5				
Max Q Clear Time (g_c+I1), s	8.5	21.3	9.3	8.6	4.9	29.1	12.5	14.5				
Green Ext Time (p_c), s	0.1	6.9	0.0	1.4	0.0	9.8	0.1	1.9				
Intersection Summary												
HCM 6th Ctrl Delay				27.4								
HCM 6th LOS				C								

HCM 6th TWSC
2: Access #2 & DeVargas Rd SW

01/01/2025

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	364	7	0	466	0	22
Future Vol, veh/h	364	7	0	466	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	428	8	0	548	0	26

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	791	-	-
HCM Lane V/C Ratio	0.033	-	-
HCM Control Delay (s)	9.7	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-

HCM 6th TWSC
7: Snow Vista Blvd SB & Access #1

01/01/2025

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗			↖	
Traffic Vol, veh/h	0	0	0	0	1119	0
Future Vol, veh/h	0	0	0	0	1119	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	1316	0

Major/Minor	Minor2	Major2
Conflicting Flow All	- 658	- 0
Stage 1	- -	- -
Stage 2	- -	- -
Critical Hdwy	- 6.94	- -
Critical Hdwy Stg 1	- -	- -
Critical Hdwy Stg 2	- -	- -
Follow-up Hdwy	- 3.32	- -
Pot Cap-1 Maneuver	0 407	- -
Stage 1	0 -	- -
Stage 2	0 -	- -
Platoon blocked, %		- -
Mov Cap-1 Maneuver	- 407	- -
Mov Cap-2 Maneuver	- -	- -
Stage 1	- -	- -
Stage 2	- -	- -

Approach	EB	SB
HCM Control Delay, s	0	0
HCM LOS	A	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/01/2025

Intersection	
Intersection Delay, s/veh	14.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	85	37	0	0	26	42	22	689	7	0	0	0
Future Vol, veh/h	85	37	0	0	26	42	22	689	7	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	100	44	0	0	31	49	26	811	8	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	10.6	9.2	15.6
HCM LOS	B	A	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	6%	0%	70%	0%
Vol Thru, %	94%	98%	30%	38%
Vol Right, %	0%	2%	0%	62%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	367	352	122	68
LT Vol	22	0	85	0
Through Vol	345	345	37	26
RT Vol	0	7	0	42
Lane Flow Rate	431	414	144	80
Geometry Grp	7	7	2	2
Degree of Util (X)	0.62	0.59	0.232	0.12
Departure Headway (Hd)	5.18	5.136	5.808	5.416
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	694	699	616	658
Service Time	2.936	2.892	3.866	3.484
HCM Lane V/C Ratio	0.621	0.592	0.234	0.122
HCM Control Delay	16.1	15.1	10.6	9.2
HCM Lane LOS	C	C	B	A
HCM 95th-tile Q	4.3	3.9	0.9	0.4

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/01/2025

Intersection

Intersection Delay, s/veh48.7

Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↶			↷					↶	↷	
Traffic Vol, veh/h	0	99	22	13	35	0	0	0	0	23	952	143
Future Vol, veh/h	0	99	22	13	35	0	0	0	0	23	952	143
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	26	15	41	0	0	0	0	27	1120	168
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

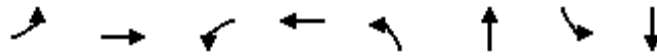
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	12.4	11.2	54.2
HCM LOS	B	B	F

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	27%	100%	0%	0%
Vol Thru, %	82%	73%	0%	100%	69%
Vol Right, %	18%	0%	0%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	121	48	23	635	460
LT Vol	0	13	23	0	0
Through Vol	99	35	0	635	317
RT Vol	22	0	0	0	143
Lane Flow Rate	142	56	27	747	542
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.273	0.114	0.043	1.08	0.751
Departure Headway (Hd)	7.099	7.513	5.712	5.209	4.991
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	510	480	624	694	720
Service Time	4.799	5.213	3.475	2.972	2.754
HCM Lane V/C Ratio	0.278	0.117	0.043	1.076	0.753
HCM Control Delay	12.4	11.2	8.7	79.7	21.3
HCM Lane LOS	B	B	A	F	C
HCM 95th-tile Q	1.1	0.4	0.1	20.4	6.9

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025

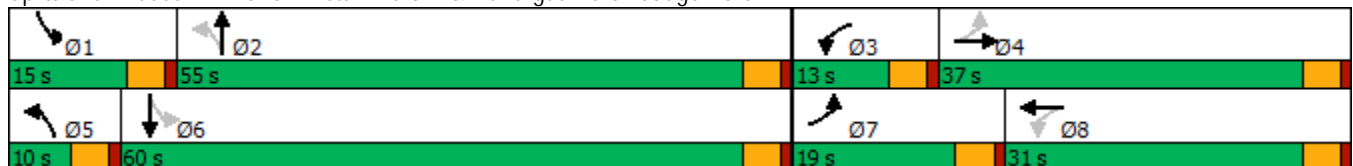


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	201	160	134	198	85	702	189	872
Future Volume (vph)	201	160	134	198	85	702	189	872
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	19.0	37.0	13.0	31.0	10.0	55.0	15.0	60.0
Total Split (%)	15.8%	30.8%	10.8%	25.8%	8.3%	45.8%	12.5%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	32.2	19.5	22.7	14.2	56.5	51.0	65.3	55.6
Actuated g/C Ratio	0.30	0.18	0.21	0.13	0.53	0.48	0.61	0.52
v/c Ratio	0.79	0.39	0.55	0.72	0.48	0.56	0.64	0.69
Control Delay	50.2	33.6	37.6	36.2	18.1	22.2	19.0	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	51.0	0.0	0.0
Total Delay	50.2	33.6	37.6	36.2	18.1	73.2	19.0	22.1
LOS	D	C	D	D	B	E	B	C
Approach Delay		41.6		36.6		67.9		21.6
Approach LOS		D		D		E		C

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 107.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 40.3	Intersection LOS: D
Intersection Capacity Utilization 70.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary
 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘		↗	↗↘	
Traffic Volume (veh/h)	201	160	56	134	198	142	85	702	96	189	872	187
Future Volume (veh/h)	201	160	56	134	198	142	85	702	96	189	872	187
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	236	188	66	158	233	167	100	826	113	222	1026	220
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	326	521	177	358	306	211	255	1492	204	382	1489	318
Arrive On Green	0.13	0.20	0.20	0.08	0.15	0.15	0.04	0.48	0.48	0.08	0.51	0.51
Sat Flow, veh/h	1781	2603	885	1781	2014	1384	1781	3140	430	1781	2912	623
Grp Volume(v), veh/h	236	126	128	158	204	196	100	467	472	222	625	621
Grp Sat Flow(s),veh/h/ln	1781	1777	1711	1781	1777	1621	1781	1777	1793	1781	1777	1758
Q Serve(g_s), s	11.7	6.7	7.0	8.1	12.0	12.6	3.1	20.3	20.3	6.7	28.8	29.0
Cycle Q Clear(g_c), s	11.7	6.7	7.0	8.1	12.0	12.6	3.1	20.3	20.3	6.7	28.8	29.0
Prop In Lane	1.00		0.52	1.00		0.85	1.00		0.24	1.00		0.35
Lane Grp Cap(c), veh/h	326	355	342	358	270	247	255	844	852	382	908	899
V/C Ratio(X)	0.72	0.36	0.37	0.44	0.76	0.79	0.39	0.55	0.55	0.58	0.69	0.69
Avail Cap(c_a), veh/h	339	532	512	358	434	396	265	844	852	410	908	899
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	37.4	37.5	35.3	44.1	44.4	17.0	20.3	20.3	15.0	20.0	20.1
Incr Delay (d2), s/veh	7.1	0.6	0.7	0.9	4.3	5.7	1.0	2.6	2.6	1.8	4.2	4.3
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	5.6	2.9	3.0	3.6	5.6	5.4	1.3	8.8	8.9	2.7	12.5	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	38.0	38.2	36.2	48.4	50.1	18.0	22.9	22.9	16.8	24.3	24.4
LnGrp LOS	D	D	D	D	D	D	B	C	C	B	C	C
Approach Vol, veh/h		490			558			1039			1468	
Approach Delay, s/veh		38.7			45.5			22.4			23.2	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	56.1	13.0	26.2	9.4	60.0	18.2	21.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	50.5	8.5	32.5	5.5	55.5	14.5	26.5				
Max Q Clear Time (g_c+I1), s	8.7	22.3	10.1	9.0	5.1	31.0	13.7	14.6				
Green Ext Time (p_c), s	0.1	7.0	0.0	1.4	0.0	9.8	0.1	1.9				
Intersection Summary												
HCM 6th Ctrl Delay				28.6								
HCM 6th LOS				C								

HCM 6th TWSC
2: Access #2 & DeVargas Rd SW

01/01/2025

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	364	15	0	470	0	51
Future Vol, veh/h	364	15	0	470	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	428	18	0	553	0	60

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	-	-	-	214
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	791
Stage 1	-	0	0	-	-
Stage 2	-	0	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	791
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	791	-	-
HCM Lane V/C Ratio	0.076	-	-
HCM Control Delay (s)	9.9	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-

HCM 6th TWSC
 7: Snow Vista Blvd SB & Access #1

01/01/2025

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗			↕	
Traffic Vol, veh/h	0	30	0	0	1108	81
Future Vol, veh/h	0	30	0	0	1108	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	35	0	0	1304	95

Major/Minor	Minor2		Major2	
Conflicting Flow All	-	700	-	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.32	-	-
Pot Cap-1 Maneuver	0	382	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	382	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	15.4	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	382	-	-
HCM Lane V/C Ratio	0.092	-	-
HCM Control Delay (s)	15.4	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/01/2025

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	85	38	0	0	26	43	22	705	7	0	0	0
Future Vol, veh/h	85	38	0	0	26	43	22	705	7	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	100	45	0	0	31	51	26	829	8	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	10.7	9.3	16.1
HCM LOS	B	A	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	6%	0%	69%	0%
Vol Thru, %	94%	98%	31%	38%
Vol Right, %	0%	2%	0%	62%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	375	360	123	69
LT Vol	22	0	85	0
Through Vol	353	353	38	26
RT Vol	0	7	0	43
Lane Flow Rate	441	423	145	81
Geometry Grp	7	7	2	2
Degree of Util (X)	0.635	0.605	0.234	0.123
Departure Headway (Hd)	5.189	5.146	5.832	5.439
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	692	698	614	655
Service Time	2.945	2.901	3.892	3.507
HCM Lane V/C Ratio	0.637	0.606	0.236	0.124
HCM Control Delay	16.6	15.5	10.7	9.3
HCM Lane LOS	C	C	B	A
HCM 95th-tile Q	4.6	4.1	0.9	0.4

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/01/2025

Intersection

Intersection Delay, s/veh 52

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻					↻	↻↻	
Traffic Vol, veh/h	0	99	22	13	35	0	0	0	0	24	967	146
Future Vol, veh/h	0	99	22	13	35	0	0	0	0	24	967	146
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	26	15	41	0	0	0	0	28	1138	172
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

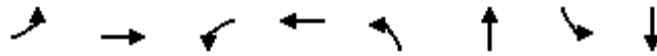
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	12.5	11.2	57.9
HCM LOS	B	B	F

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	27%	100%	0%	0%
Vol Thru, %	82%	73%	0%	100%	69%
Vol Right, %	18%	0%	0%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	121	48	24	645	468
LT Vol	0	13	24	0	0
Through Vol	99	35	0	645	322
RT Vol	22	0	0	0	146
Lane Flow Rate	142	56	28	758	551
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.274	0.115	0.045	1.098	0.764
Departure Headway (Hd)	7.126	7.538	5.716	5.213	4.994
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	507	478	623	690	722
Service Time	4.826	5.238	3.479	2.976	2.757
HCM Lane V/C Ratio	0.28	0.117	0.045	1.099	0.763
HCM Control Delay	12.5	11.2	8.8	85.6	22.2
HCM Lane LOS	B	B	A	F	C
HCM 95th-tile Q	1.1	0.4	0.1	21.5	7.2

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025

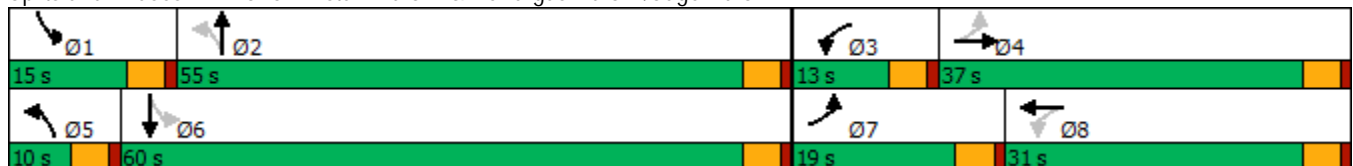


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	217	173	136	218	103	768	208	925
Future Volume (vph)	217	173	136	218	103	768	208	925
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	19.0	37.0	13.0	31.0	10.0	55.0	15.0	60.0
Total Split (%)	15.8%	30.8%	10.8%	25.8%	8.3%	45.8%	12.5%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	34.5	21.5	24.4	15.9	56.1	50.6	65.6	55.6
Actuated g/C Ratio	0.32	0.20	0.22	0.15	0.51	0.46	0.60	0.51
v/c Ratio	0.86	0.39	0.54	0.73	0.67	0.64	0.79	0.75
Control Delay	57.0	33.5	36.7	37.7	32.7	24.8	31.9	24.9
Queue Delay	0.0	0.0	0.0	0.0	4.6	50.9	0.0	0.0
Total Delay	57.0	33.5	36.7	37.7	37.3	75.6	31.9	24.9
LOS	E	C	D	D	D	E	C	C
Approach Delay		44.8		37.4		71.6		26.0
Approach LOS		D		D		E		C

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 109.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 44.0	Intersection LOS: D
Intersection Capacity Utilization 75.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary
 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/01/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕		↖	↕	
Traffic Volume (veh/h)	217	173	61	136	218	157	103	768	106	208	925	205
Future Volume (veh/h)	217	173	61	136	218	157	103	768	106	208	925	205
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	255	204	72	160	256	185	121	904	125	245	1088	241
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	563	193	363	327	228	231	1436	198	352	1438	317
Arrive On Green	0.13	0.22	0.22	0.08	0.16	0.16	0.05	0.46	0.46	0.09	0.50	0.50
Sat Flow, veh/h	1781	2598	889	1781	2001	1395	1781	3136	434	1781	2894	638
Grp Volume(v), veh/h	255	138	138	160	226	215	121	512	517	245	666	663
Grp Sat Flow(s),veh/h/ln	1781	1777	1710	1781	1777	1619	1781	1777	1792	1781	1777	1756
Q Serve(g_s), s	12.9	7.3	7.7	8.4	13.6	14.3	4.0	24.5	24.5	7.8	33.7	34.1
Cycle Q Clear(g_c), s	12.9	7.3	7.7	8.4	13.6	14.3	4.0	24.5	24.5	7.8	33.7	34.1
Prop In Lane	1.00		0.52	1.00		0.86	1.00		0.24	1.00		0.36
Lane Grp Cap(c), veh/h	329	385	371	363	290	264	231	813	821	352	883	872
V/C Ratio(X)	0.78	0.36	0.37	0.44	0.78	0.81	0.52	0.63	0.63	0.70	0.75	0.76
Avail Cap(c_a), veh/h	329	517	497	363	421	384	231	813	821	362	883	872
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	37.1	37.3	35.5	44.8	45.1	20.2	23.1	23.1	18.0	22.6	22.7
Incr Delay (d2), s/veh	11.0	0.6	0.6	0.8	5.7	8.3	2.2	3.7	3.7	5.5	5.9	6.2
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	6.5	3.2	3.3	3.7	6.4	6.3	1.7	10.9	11.0	3.6	15.0	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	37.7	37.9	36.4	50.5	53.4	22.3	26.8	26.7	23.6	28.6	28.9
LnGrp LOS	D	D	D	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h		531			601			1150			1574	
Approach Delay, s/veh		40.6			47.8			26.3			28.0	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	55.7	13.0	28.7	10.0	60.0	19.0	22.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	50.5	8.5	32.5	5.5	55.5	14.5	26.5				
Max Q Clear Time (g_c+I1), s	9.8	26.5	10.4	9.7	6.0	36.1	14.9	16.3				
Green Ext Time (p_c), s	0.1	7.5	0.0	1.6	0.0	9.5	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay				32.3								
HCM 6th LOS				C								

HCM 6th TWSC
2: Access #2 & DeVargas Rd SW

01/01/2025

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	400	15	0	526	0	51
Future Vol, veh/h	400	15	0	526	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	471	18	0	619	0	60

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	-	-	-	236
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	766
Stage 1	-	0	0	-	-
Stage 2	-	0	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	766
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	766	-	-
HCM Lane V/C Ratio	0.078	-	-
HCM Control Delay (s)	10.1	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-

HCM 6th TWSC
7: Snow Vista Blvd SB & Access #1

01/01/2025

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗			↖	
Traffic Vol, veh/h	0	30	0	0	1216	81
Future Vol, veh/h	0	30	0	0	1216	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	35	0	0	1431	95

Major/Minor	Minor2	Major2
Conflicting Flow All	- 763	- 0
Stage 1	- -	- -
Stage 2	- -	- -
Critical Hdwy	- 6.94	- -
Critical Hdwy Stg 1	- -	- -
Critical Hdwy Stg 2	- -	- -
Follow-up Hdwy	- 3.32	- -
Pot Cap-1 Maneuver	0 347	- -
Stage 1	0 -	- -
Stage 2	0 -	- -
Platoon blocked, %		- -
Mov Cap-1 Maneuver	- 347	- -
Mov Cap-2 Maneuver	- -	- -
Stage 1	- -	- -
Stage 2	- -	- -

Approach	EB	SB
HCM Control Delay, s	16.5	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	347	-	-
HCM Lane V/C Ratio	0.102	-	-
HCM Control Delay (s)	16.5	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/01/2025

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	96	42	0	0	28	48	24	772	8	0	0	0
Future Vol, veh/h	96	42	0	0	28	48	24	772	8	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	113	49	0	0	33	56	28	908	9	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	11.2	9.5	19
HCM LOS	B	A	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	6%	0%	70%	0%
Vol Thru, %	94%	98%	30%	37%
Vol Right, %	0%	2%	0%	63%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	410	394	138	76
LT Vol	24	0	96	0
Through Vol	386	386	42	28
RT Vol	0	8	0	48
Lane Flow Rate	482	464	162	89
Geometry Grp	7	7	2	2
Degree of Util (X)	0.706	0.673	0.268	0.138
Departure Headway (Hd)	5.269	5.225	5.942	5.566
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	680	686	602	639
Service Time	3.035	2.991	4.008	3.642
HCM Lane V/C Ratio	0.709	0.676	0.269	0.139
HCM Control Delay	19.8	18.2	11.2	9.5
HCM Lane LOS	C	C	B	A
HCM 95th-tile Q	5.8	5.2	1.1	0.5

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/01/2025

Intersection

Intersection Delay, s/veh75.6

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻					↻	↻↻	
Traffic Vol, veh/h	0	99	24	14	38	0	0	0	0	26	1060	160
Future Vol, veh/h	0	99	24	14	38	0	0	0	0	26	1060	160
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	28	16	45	0	0	0	0	31	1247	188
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

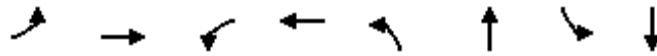
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	12.8	11.5	84.5
HCM LOS	B	B	F

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	27%	100%	0%	0%
Vol Thru, %	80%	73%	0%	100%	69%
Vol Right, %	20%	0%	0%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	123	52	26	707	513
LT Vol	0	14	26	0	0
Through Vol	99	38	0	707	353
RT Vol	24	0	0	0	160
Lane Flow Rate	145	61	31	831	604
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.28	0.125	0.049	1.212	0.844
Departure Headway (Hd)	7.274	7.679	5.753	5.25	5.03
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	498	470	620	690	719
Service Time	4.974	5.379	3.508	3.005	2.786
HCM Lane V/C Ratio	0.291	0.13	0.05	1.204	0.84
HCM Control Delay	12.8	11.5	8.8	127.6	28.9
HCM Lane LOS	B	B	A	F	D
HCM 95th-tile Q	1.1	0.4	0.2	28.7	9.6

Timings

1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/02/2025

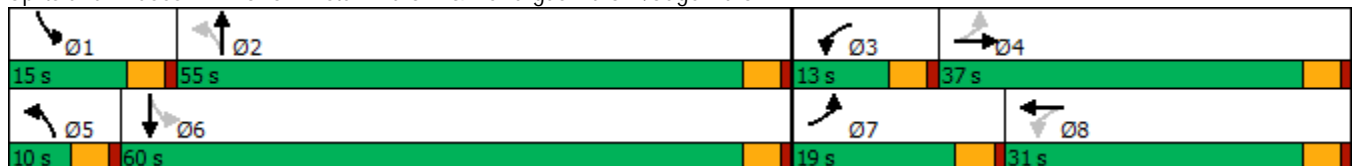


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	198	167	136	218	99	757	208	925
Future Volume (vph)	198	167	136	218	99	757	208	925
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	19.0	37.0	13.0	31.0	10.0	55.0	15.0	60.0
Total Split (%)	15.8%	30.8%	10.8%	25.8%	8.3%	45.8%	12.5%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effect Green (s)	33.9	21.2	24.4	15.8	56.1	50.6	65.6	55.6
Actuated g/C Ratio	0.31	0.19	0.22	0.15	0.52	0.46	0.60	0.51
v/c Ratio	0.80	0.38	0.54	0.73	0.64	0.62	0.77	0.75
Control Delay	50.1	33.4	36.5	37.6	29.8	24.4	29.3	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	50.9	0.0	0.0
Total Delay	50.1	33.4	36.5	37.6	29.8	75.3	29.3	24.7
LOS	D	C	D	D	C	E	C	C
Approach Delay		41.2		37.3		70.6		25.4
Approach LOS		D		D		E		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 108.9
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 42.8
 Intersection LOS: D
 Intersection Capacity Utilization 74.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW



HCM 6th Signalized Intersection Summary
 1: Snow Vista Blvd SW & DeVargas Rd SW/Sage Rd SW

01/02/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘		↗	↗↘	
Traffic Volume (veh/h)	198	167	57	136	218	157	99	757	102	208	925	205
Future Volume (veh/h)	198	167	57	136	218	157	99	757	102	208	925	205
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	233	196	67	160	256	185	116	891	120	245	1088	241
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	551	183	362	327	228	235	1457	196	361	1450	320
Arrive On Green	0.12	0.21	0.21	0.08	0.16	0.16	0.05	0.46	0.46	0.09	0.50	0.50
Sat Flow, veh/h	1781	2622	869	1781	2001	1395	1781	3147	424	1781	2894	638
Grp Volume(v), veh/h	233	131	132	160	226	215	116	503	508	245	666	663
Grp Sat Flow(s),veh/h/ln	1781	1777	1714	1781	1777	1619	1781	1777	1794	1781	1777	1756
Q Serve(g_s), s	11.6	7.0	7.3	8.3	13.5	14.2	3.8	23.5	23.5	7.7	33.1	33.6
Cycle Q Clear(g_c), s	11.6	7.0	7.3	8.3	13.5	14.2	3.8	23.5	23.5	7.7	33.1	33.6
Prop In Lane	1.00		0.51	1.00		0.86	1.00		0.24	1.00		0.36
Lane Grp Cap(c), veh/h	318	373	360	362	291	265	235	823	831	361	890	880
V/C Ratio(X)	0.73	0.35	0.37	0.44	0.78	0.81	0.49	0.61	0.61	0.68	0.75	0.75
Avail Cap(c_a), veh/h	332	521	503	362	425	387	235	823	831	374	890	880
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	37.3	37.4	35.1	44.4	44.7	19.5	22.3	22.3	17.2	22.0	22.2
Incr Delay (d2), s/veh	7.7	0.6	0.6	0.8	5.5	8.0	1.6	3.4	3.3	4.7	5.7	6.0
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	5.6	3.1	3.1	3.7	6.4	6.2	1.6	10.3	10.4	3.4	14.7	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	37.9	38.1	36.0	49.9	52.7	21.1	25.7	25.6	21.9	27.8	28.1
LnGrp LOS	D	D	D	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h		496			601			1127			1574	
Approach Delay, s/veh		39.0			47.2			25.2			27.0	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	55.8	13.0	27.8	10.0	60.0	18.1	22.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	50.5	8.5	32.5	5.5	55.5	14.5	26.5				
Max Q Clear Time (g_c+I1), s	9.7	25.5	10.3	9.3	5.8	35.6	13.6	16.2				
Green Ext Time (p_c), s	0.1	7.4	0.0	1.5	0.0	9.7	0.1	2.0				
Intersection Summary												
HCM 6th Ctrl Delay				31.2								
HCM 6th LOS				C								

HCM 6th TWSC
 2: Access #2 & DeVargas Rd SW

01/02/2025

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	400	7	0	522	0	22
Future Vol, veh/h	400	7	0	522	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	471	8	0	614	0	26

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	766	-	-
HCM Lane V/C Ratio	0.034	-	-
HCM Control Delay (s)	9.9	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-

HCM 6th TWSC
7: Snow Vista Blvd SB & Access #1

01/02/2025

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗			↕	
Traffic Vol, veh/h	0	30	0	0	1227	81
Future Vol, veh/h	0	30	0	0	1227	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	35	0	0	1444	95

Major/Minor	Minor2		Major2	
Conflicting Flow All	-	770	-	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.32	-	-
Pot Cap-1 Maneuver	0	343	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	343	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	16.7	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	343	-	-
HCM Lane V/C Ratio	0.103	-	-
HCM Control Delay (s)	16.7	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-

HCM 6th AWSC
 10: Snow Vista Blvd NB & Benavides Rd SW

01/02/2025

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Vol, veh/h	93	41	0	0	28	47	24	756	8	0	0	0
Future Vol, veh/h	93	41	0	0	28	47	24	756	8	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	109	48	0	0	33	55	28	889	9	0	0	0
Number of Lanes	0	1	0	0	1	0	0	2	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	11.1	9.5	18.3
HCM LOS	B	A	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	6%	0%	69%	0%
Vol Thru, %	94%	98%	31%	37%
Vol Right, %	0%	2%	0%	63%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	402	386	134	75
LT Vol	24	0	93	0
Through Vol	378	378	41	28
RT Vol	0	8	0	47
Lane Flow Rate	473	454	158	88
Geometry Grp	7	7	2	2
Degree of Util (X)	0.69	0.657	0.259	0.136
Departure Headway (Hd)	5.251	5.206	5.919	5.538
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	686	690	604	642
Service Time	3.015	2.971	3.984	3.613
HCM Lane V/C Ratio	0.69	0.658	0.262	0.137
HCM Control Delay	19	17.5	11.1	9.5
HCM Lane LOS	C	C	B	A
HCM 95th-tile Q	5.5	4.9	1	0.5

HCM 6th AWSC
 13: Benavides Rd SW & Snow Vista Blvd SB

01/02/2025

Intersection

Intersection Delay, s/veh71.6

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻					↻	↻↻	
Traffic Vol, veh/h	0	99	24	14	38	0	0	0	0	25	1045	157
Future Vol, veh/h	0	99	24	14	38	0	0	0	0	25	1045	157
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	28	16	45	0	0	0	0	29	1229	185
Number of Lanes	0	1	0	0	1	0	0	0	0	1	2	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	1
HCM Control Delay	12.7	11.4	80
HCM LOS	B	B	F

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	27%	100%	0%	0%
Vol Thru, %	80%	73%	0%	100%	69%
Vol Right, %	20%	0%	0%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	123	52	25	697	505
LT Vol	0	14	25	0	0
Through Vol	99	38	0	697	348
RT Vol	24	0	0	0	157
Lane Flow Rate	145	61	29	820	595
Geometry Grp	7	7	7	7	7
Degree of Util (X)	0.28	0.125	0.047	1.194	0.83
Departure Headway (Hd)	7.251	7.658	5.749	5.246	5.027
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	499	471	620	688	719
Service Time	4.951	5.358	3.508	3.005	2.786
HCM Lane V/C Ratio	0.291	0.13	0.047	1.192	0.828
HCM Control Delay	12.7	11.4	8.8	120.6	27.5
HCM Lane LOS	B	B	A	F	D
HCM 95th-tile Q	1.1	0.4	0.1	27.5	9.1