

**COLORADO SPRINGS APARTMENTS
BRADLEY RD AT LEGACY HILL RD
TRAFFIC CONFORMANCE LETTER**

Prepared for:

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INTRODUCTION

Bowman Consulting Group Ltd. is submitting this Colorado Springs Apartment Bradley Rd at Legacy Road (Colorado Springs Apartment) Traffic Conformance Letter on behalf of Dominion for the proposed Colorado Spring Apartment development. This letter is based on the *Villages At Waterview North Preliminary Plan Traffic Impact and Access Analysis Study (WNTIS)*, dated October 27, 2022, that includes a 116-acre Village at Waterview North master development being planned in Colorado Springs.

The Colorado Springs Apartments project is within the property boundaries of the Villages At Waterview North Preliminary Plan and is located at approximately the center to the development parcel. The project area is 9.5 acres which approximately 8% of the planned Village at Waterview North master development. The Colorado Springs Apartments primary access is proposed through two access driveways that intersection a proposed east/west roadway, Waterview Drive (Dr). Waterview Dr connects to Legacy Hill Dr to the west and Blackmer Street (St) to the east. These two north/south roadways connect to Bradley Road (Rd) which intersects with Powers Boulevard (Blvd) to the west and Marksheffel Rd to the east.

Purpose of Letter

This conformance letter compares the traffic condition of the Colorado Springs Apartment to that of the WNTIS traffic condition. This conformance letter analyzes the near term total traffic condition. Figure 1 presents the land use area, access locations, and internal residential development and internal roadway system.

Colorado Springs Apartment Description

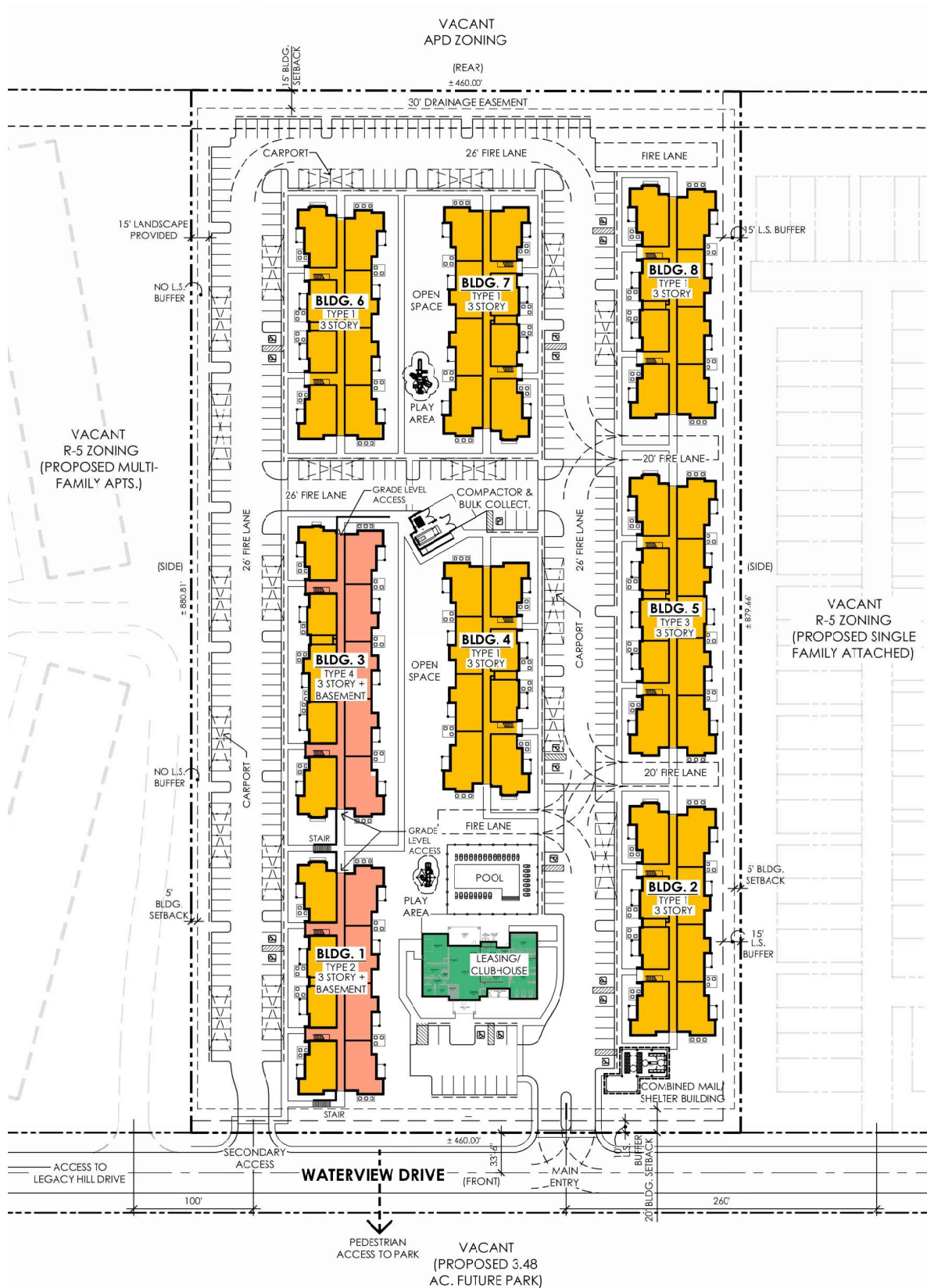
The Colorado Springs Apartment Bradley Rd at Legacy Rd development is proposed as multi-family attached apartments with eight, 3-story walk-up buildings with a total of 213 dwelling units. The proposed two access driveways are connected to an internal circulation driveway that fronts the individual buildings and common facilities.

Vicinity Roadway Network

The WMTIS identifies the vicinity roadway network and are summarized below.

- Powers Boulevard (State Highway 21) is classified as a Freeway. Powers Boulevard (Blvd) is one of the region's corridors. Powers Blvd has a center median and a posted speed limit of 60 miles per hour (mph)
- Bradley Road (Rd) is a Minor Arterial roadway and is a primary east/west corridor through the overall Village at Waterview North development. Bradley Rd is a four-lane roadway with a 50-mph speed limit. It has median that accommodates left turn lanes and asphalt paved shoulders.
- Marksheffel Road is a major north/south corridor and planned as a four-lane highway. The speed limit is 55 mph in vicinity of Village at Waterview North- development.

Figure 1: Site Plan



SITE TRIP GENERATION

The land use in ITE Trip Generation Manual, Twelfth Edition that represents the intended development is “Multifamily Housing (Low Rise) (ITE Code 220)” with a proposed dwelling unit count of 213 units. The neighborhood character is defined as General Urban/Suburban. In establishing the morning and afternoon peak hour trip generation the Fitted Curve calculation method is used. The tables below present the AM and PM peak hour site trip directional distribution.

Table 1: Multifamily Housing (Low-Rise)

Land Use	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out
Multifamily Housing	87	21	66	110	68	42
Total	87	21	66	110	68	42

*Volumes per the ITE Online Traffic Impact Software.

Multifamily Housing – 213 Units – ITE Land Code 220

The Multifamily Housing (Low Rise) in the morning peak hour totals 87 site trips, with 66 site trips exiting and 21 site trips entering. In the afternoon peak hour there are 110 total trips with 68 site trips entering and 42 site trips exiting.

Site Access

The site is access constrained on the north, east, and west of the lot only allowing access through the south side of the lot along Waterview Dr. Below is a detailed description of the access locations.

- East Access - The east driveway intersects with Waterview Dr in a three-leg “Tee” configuration. The access driveway includes one exiting left and one exiting right turn. There is one entering lane. The access is located at the eastern portion of the lot. The East Access is the primary access since it fronts approximately 60% of the residential units.
- West Access - The west driveway intersects with Waterview Dr in a three-leg “Tee” configuration. The access driveway includes one exiting left/right turn lane and one entering lane. The access is located at the western portion of the lot. The West Access is the secondary access since it fronts approximately 40% of the residential units.

Site Trip Distribution/ Traffic Assignment

The corridor traffic directional distribution is based on the traffic pattern identified in the WNTIS which indicates approximately 72% to/from the west, and 28% to/from the east in both the AM and PM peak periods.

Regional Traffic Distribution/Trip Assignment

Trip assignment is based on the directional distribution presented in the WMTIS which indicates 72% of the overall development traffic arrive/depart from the west towards Powers Blvd and 28% to the east towards Marksheffel Rd. Figure 2 presents the Colorado Springs Apartment site traffic volumes at the study area intersections.

TRAFFIC OPERATIONAL ANALYSIS

Background Traffic Volumes

The background traffic for the near term traffic conditions is based on the WMTIS and are developed for comparison purposed to establish the site traffic impacts to the vicinity roadway network.

Background Traffic Operational Analysis

The results of the near term background traffic conditions operational analysis are summarized in Table 2. The background traffic conditions analysis and detailed Synchro 12 software intersection capacity analysis reports are provided in Appendix “A”.

Background Traffic Queue Analysis

The 95th percentile queue length versus turn lane storage length is used to establish operational efficiency. All references made to LOS or 95th percentile queue lengths are assumed to be determined by HCM methodology. Queue length calculations are based on a 25-foot vehicle. The computed queue lengths for all traffic lanes are presented by lane group.

Table 2: Near Term Background Traffic LOS/Queue Summary

Node	Streets & Movement	Storage Length (ft)	Near Term Total Traffic			
			AM LOS	AM Queue	PM LOS	PM Queue
5	Bradley Rd at Legacy Hill Dr		C	-	C	-
	Eastbound Thru		C	514	D	882
	Eastbound Right	150	B	41	B	131
	Westbound Left	200	C	29	D	178
	Westbound Thru		C	520	B	388
	Northbound Left	325	C	290	C	313
	Northbound Right		B	0	C	10
6	Bradley Rd at Powers Blvd		C	-	B	-
	Westbound Left	200	D	195	D	180
	Northbound Thru		B	230	A	44
	Southbound Left	400	D	313	B	399
	Southbound Thru		A	52	A	67
7	Bradley Rd at Blackmer St		A	-	B	-
	Northbound Thru		A	195	D	121
	Eastbound Left	100	A	0	D	54
	Westbound Left	250	A	230	B	152
	Southbound Thru		A	52	A	250

Source: Synchro 12 software analysis

Near Term Background Traffic Results

As shown in Table 2, the Colorado Springs Apartment study area intersections analysis results indicate acceptable overall levels of service LOS C. The individual turning movements operate at and acceptable LOS D or better. The queue results indicate that the auxiliary lane queues lengths are within the available storage length.

Total Traffic Volumes

The total traffic condition is established by adding the site traffic to the background traffic.

Total Traffic Operational Analysis

The results of the near term total traffic conditions operational analysis and the queue analysis are summarized in Table 3. The total traffic conditions analysis and detailed Synchro 12 software intersection capacity analysis reports are provided in Appendix "A".

Table 3: Near Term Total Traffic LOS/Queue Summary

Node	Streets & Movement	Storage Length (ft)	Near Term Total Traffic			
			AM LOS	AM Queue	PM LOS	PM Queue
1	Waterview Dr at East Access		B	-	B	-
	Eastbound Left		A	-	A	-
	Eastbound Thru		A	-	A	-
	Southbound Left	50	B	25	B	25
	Southbound Right	50	B	25	A	25
2	Waterview Dr at West Access		A	-	A	-
	Eastbound Left		A	-	A	-
	Eastbound Thru		A	-	A	-
	Southbound Left/Right	50	A	25	B	25
3	Legacy Hill Dr at Waterview Dr		A	-	A	-
	Northbound Right	25	A	25	A	25
	Westbound Left	50	A	50	A	25
5	Bradley Rd at Legacy Hill Dr		C	-	C	-
	Eastbound Thru		D	534	D	778
	Eastbound Right	100	B	5	B	78
	Westbound Left	175	C	29	D	156
	Westbound Thru		D	642	B	326
	Northbound Left	275	C	258	C	187
	Northbound Right		B	0	C	0
6	Bradley Rd at Powers Blvd		C	-	B	-
	Westbound Left	200	D	193	D	186
	Northbound Thru		A	77	A	44
	Southbound Left	400	B	257	B	399
	Southbound Thru		A	44	A	67
7	Bradley Rd at Blackmer St		A	-	A	-
	Northbound Thru		A	-	A	-
	Eastbound Left	100	A	0	A	0
	Westbound Left	100	A	0	A	0
	Southbound Thru		A	-	A	-

Source: Synchro 12 software analysis

Near Term Total Traffic Results

As shown in Table 3, the Colorado Springs Apartment access locations; East Access and West Access operate at an acceptable overall intersection LOS B or better. The individual turning movements operate at an acceptable LOS B or better. The queue results indicate that the auxiliary lane queue lengths are within the available storage length.

Also as presented in Table 3, the Colorado Springs Apartment study area offsite intersections analysis results indicate acceptable overall intersection LOS C in both the AM and PM peak periods. The individual turning movements operate at an acceptable LOS D or better. The queue results indicate that the auxiliary lane queue lengths are within the available storage length.

CONCLUSIONS

The Colorado Springs Apartments project is within the property boundaries of the Villages At Waterview North master development plan. The project is proposed as multi-family attached apartments with a total of 213 dwelling units. The Colorado Springs Apartments primary access is proposed through two access driveways that intersect a proposed east/west roadway, Waterview Dr.

Two vehicular access locations to the external roadway network are proposed as presented below:

- East Access - A three-leg intersection with Waterview Dr. The stop sign controlled access driveway includes one exiting left lane and one exiting right turn lane. There is one entering lane
- West Access - A three-leg intersection with Waterview Dr. The stop sign controlled access driveway includes one exiting left/right turn lane and one entering lane.

The Waterview Dr/East Access and the Waterview Dr/West Access intersections are proposed to be controlled by stop signs on the driveway approaches. The study analysis indicates that in the Near Term Total Traffic condition the intersections operate at LOS B or better in both the AM and PM peak periods. The queue analysis results indicate that the onsite vehicle queues are minimal and within available lane geometry.

The offsite signalized intersections (Powers Blvd at Bradley Rd and Bradley Rd at Legacy Hills Dr) are analyzed with the WNTIS traffic signal cycle length and timing plans. In the Near Term Total Traffic condition the analysis results indicated that both intersections operate at an acceptable LOS C or better in both the AM and PM peak periods.

The offsite unsignalized intersections (Legacy Hills Dr at Waterview Dr and Bradley Rd at Blackmer St) are analyzed with side street stop sign control. In the Near Term Total Traffic condition, the analysis results indicated that both intersections operate at an acceptable LOS A in both the AM and PM peak periods.

These results indicate that Colorado Springs Apartment development is in general conformance with the *Villages At Waterview North Preliminary Plan Traffic Impact and Access Analysis Study (WNTIS)*, dated October 27, 2022.

Figure 2 – Site Generated Traffic

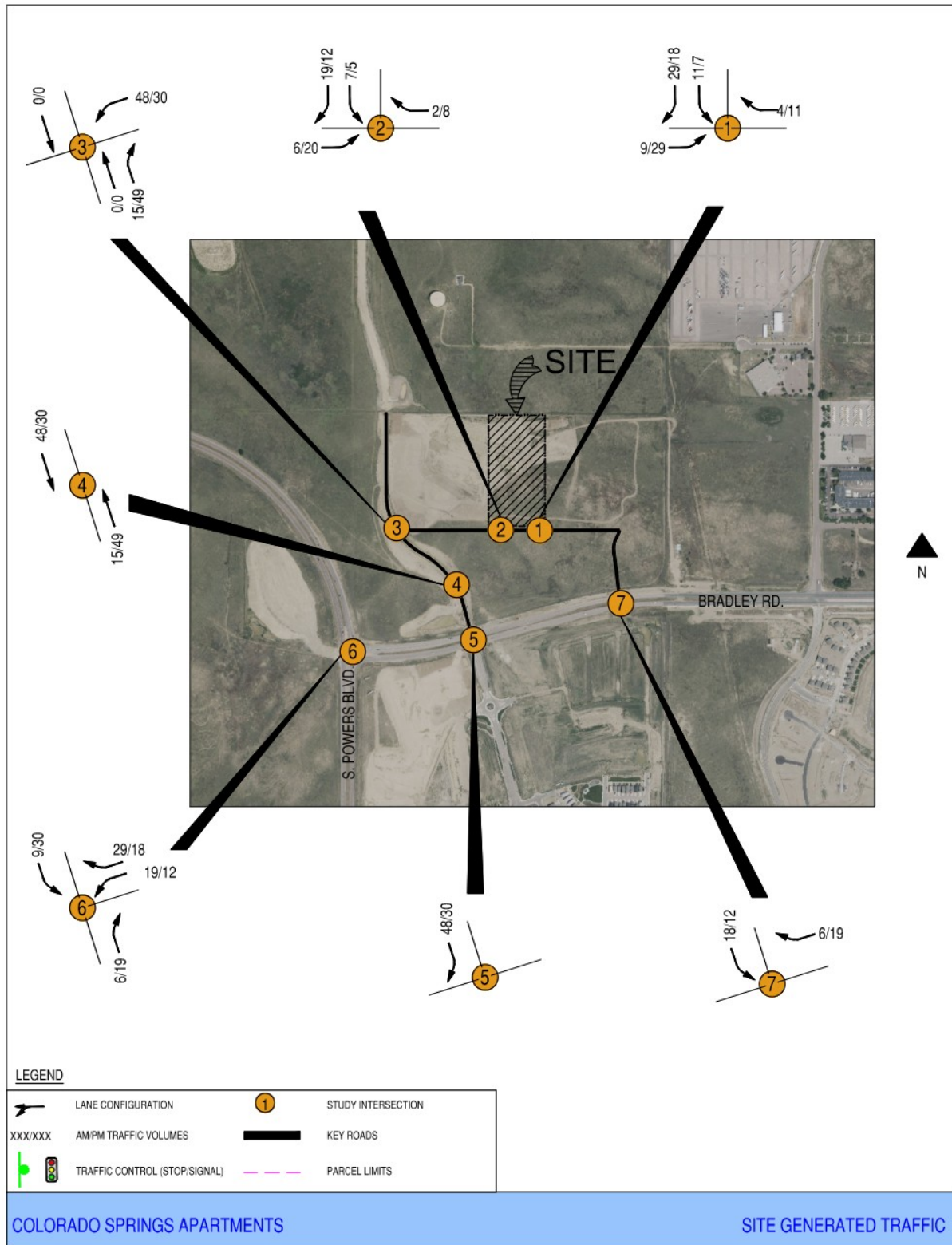


Figure 3 – Near Term Background Traffic

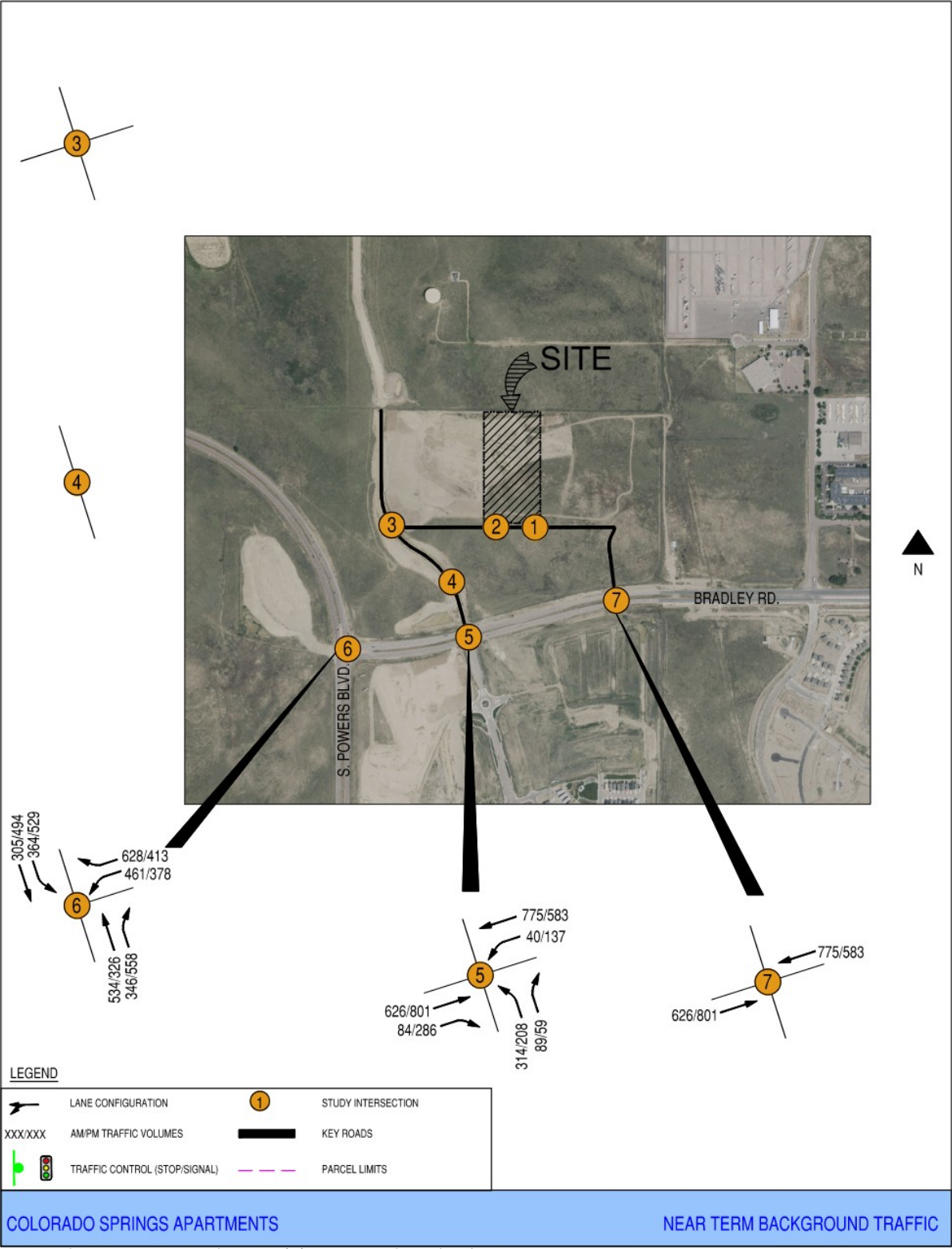
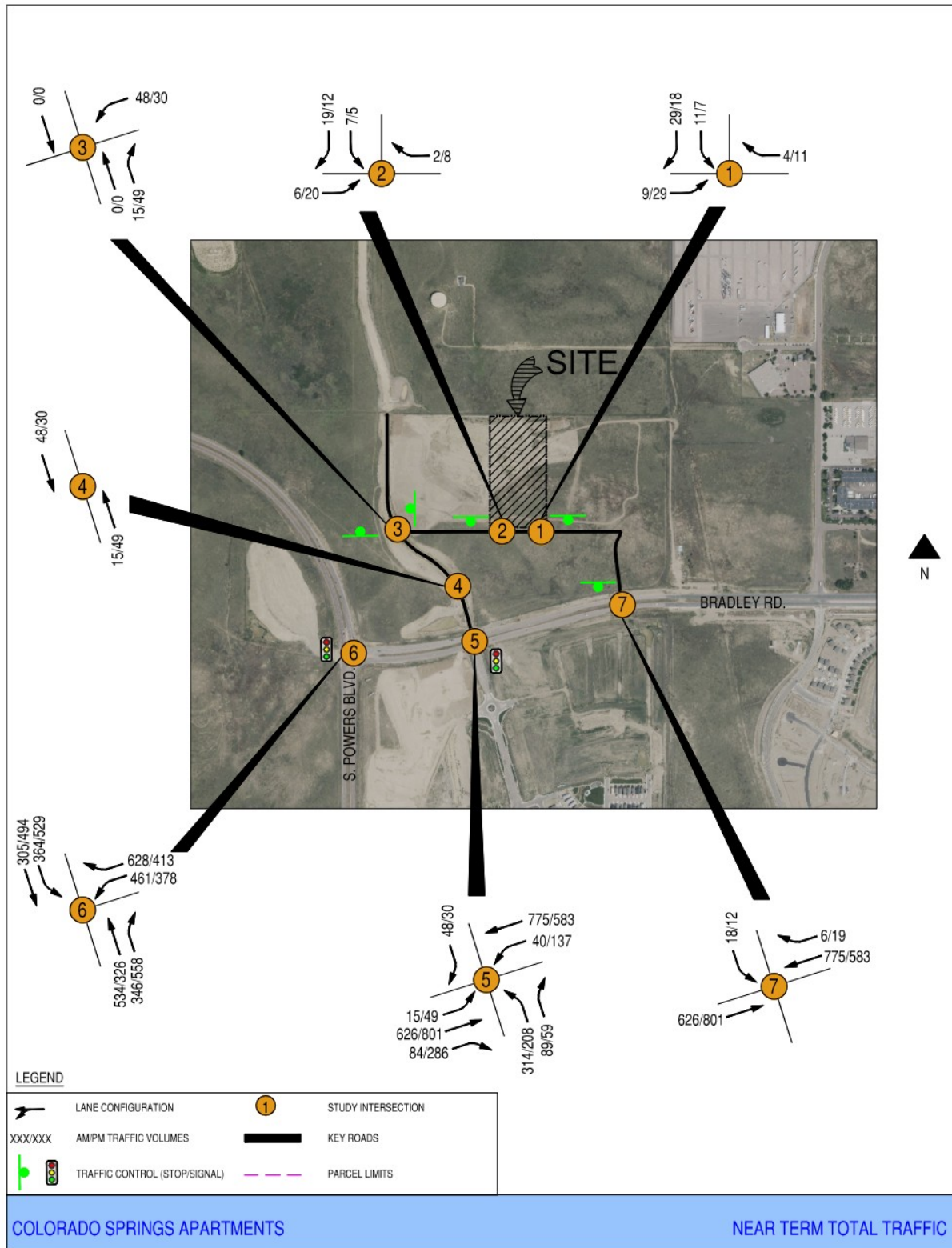


Figure 4 – Near Term Total Traffic



Appendix

A. Synchro Output Reports

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	200		100	200		100	200		0	200		0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.850						0.850					
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1863	1863	1583	1770	1863	1863	1770	1583	0	1863	0	1863
Flt Permitted				0.240			0.950					
Satd. Flow (perm)	1863	1863	1583	447	1863	1863	1770	1583	0	1863	0	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				65			319					
Link Speed (mph)	30						30			30		
Link Distance (ft)	1030						472			784		
Travel Time (s)	23.4						10.7			17.8		

Intersection Summary

Area Type: Other

	→	↘	↙	←	↖	↑	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	Ø1
Lane Configurations	↑	↑	↑	↑	↑	↑	
Traffic Volume (vph)	626	84	40	775	314	0	
Future Volume (vph)	626	84	40	775	314	0	
Turn Type	NA	Perm	Perm	NA	Prot	NA	
Protected Phases	4			8	5	2	1
Permitted Phases		4	8				
Detector Phase	4	4	8	8	5	2	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	9.5
Total Split (s)	65.5	65.5	65.5	65.5	34.5	25.0	9.5
Total Split (%)	65.5%	65.5%	65.5%	65.5%	34.5%	25.0%	10%
Yellow Time (s)	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
Lost Time Adjust (s)	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	
Lead/Lag						Lag	Lead
Lead-Lag Optimize?						Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None
Act Effect Green (s)	55.3	55.3	55.3	55.3	35.7	35.7	
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.36	0.36	
v/c Ratio	0.66	0.10	0.17	0.82	0.54	0.13	
Control Delay (s/veh)	27.6	7.3	11.2	25.1	31.4	0.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	27.6	7.3	11.2	25.1	31.4	0.3	
LOS	C	A	B	C	C	A	
Approach Delay (s/veh)	25.2			24.4		24.5	
Approach LOS	C			C		C	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 84.5 (85%), Referenced to phase 2:NBT and 6:, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay (s/veh): 24.7
 Intersection Capacity Utilization 65.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 5: Bradley Rd & Legacy Hill Dr

#5 Ø1	#5 Ø2 (R)	#5 Ø4
9.5 s	25 s	65.5 s
#5 Ø5	#5 Ø8	
34.5 s	65.5 s	

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	680	91	43	842	341	97
v/c Ratio	0.66	0.10	0.17	0.82	0.54	0.13
Control Delay (s/veh)	27.6	7.3	11.2	25.1	31.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.6	7.3	11.2	25.1	31.4	0.3
Queue Length 50th (ft)	403	26	12	393	181	0
Queue Length 95th (ft)	514	m41	29	520	290	0
Internal Link Dist (ft)	950			108		392
Turn Bay Length (ft)		100	200		200	
Base Capacity (vph)	1136	990	272	1136	631	770
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.09	0.16	0.74	0.54	0.13
Intersection Summary						
m Volume for 95th percentile queue is metered by upstream signal.						

HCM 7th Signalized Intersection Summary
5: Bradley Rd & Legacy Hill Dr

Colorado Springs Apartments
09/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	626	84	40	775	0	314	0	89	0	0	0
Future Volume (veh/h)	0	626	84	40	775	0	314	0	89	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	0	1870
Adj Flow Rate, veh/h	0	680	91	43	842	0	341	0	97	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	0	2
Cap, veh/h	72	929	787	218	929	787	736	0	655	2	0	0
Arrive On Green	0.00	0.50	0.50	0.50	0.50	0.00	0.41	0.00	0.41	0.00	0.00	0.00
Sat Flow, veh/h	653	1870	1585	698	1870	1585	1781	0	1585	1781	0	
Grp Volume(v), veh/h	0	680	91	43	842	0	341	0	97	0	0.0	
Grp Sat Flow(s),veh/h/ln	653	1870	1585	698	1870	1585	1781	0	1585	1781		
Q Serve(g_s), s	0.0	28.8	3.1	5.2	41.2	0.0	13.9	0.0	3.8	0.0		
Cycle Q Clear(g_c), s	0.0	28.8	3.1	33.9	41.2	0.0	13.9	0.0	3.8	0.0		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	72	929	787	218	929	787	736	0	655	2		
V/C Ratio(X)	0.00	0.73	0.12	0.20	0.91	0.00	0.46	0.00	0.15	0.00		
Avail Cap(c_a), veh/h	146	1141	967	297	1141	967	736	0	655	89		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	0.79	0.79	1.00	1.00	0.00	1.00	0.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	19.9	13.4	33.3	23.0	0.0	21.3	0.0	18.3	0.0		
Incr Delay (d2), s/veh	0.0	1.5	0.1	0.4	9.1	0.0	0.5	0.0	0.5	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	12.3	1.1	0.9	19.4	0.0	5.7	0.0	1.5	0.0		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	21.4	13.5	33.8	32.1	0.0	21.7	0.0	18.8	0.0		
LnGrp LOS		C	B	C	C		C		B			
Approach Vol, veh/h		771			885			438				
Approach Delay, s/veh		20.5			32.2			21.1				
Approach LOS		C			C			C				
Timer - Assigned Phs	1	2		4	5			8				
Phs Duration (G+Y+Rc), s	0.0	45.8		54.2	45.8			54.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5			4.5				
Max Green Setting (Gmax), s	5.0	20.5		61.0	30.0			61.0				
Max Q Clear Time (g_c+I1), s	0.0	5.8		30.8	15.9			43.2				
Green Ext Time (p_c), s	0.0	0.4		5.7	0.9			6.4				
Intersection Summary												
HCM 7th Control Delay, s/veh			25.6									
HCM 7th LOS			C									

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	100		100	200	
Storage Lanes	2	0		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	3539	1583	1770	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		683		266		
Link Speed (mph)	30		30			30
Link Distance (ft)	1030		1456			3763
Travel Time (s)	23.4		33.1			85.5

Intersection Summary

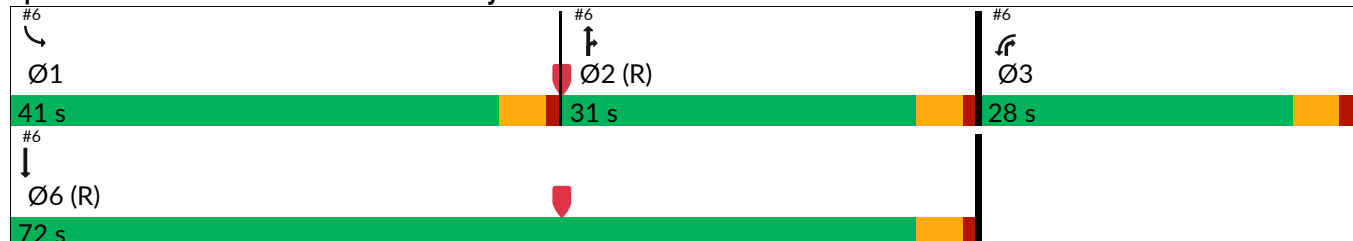
Area Type: Other

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 			 
Traffic Volume (vph)	461	628	534	346	364	305
Future Volume (vph)	461	628	534	346	364	305
Turn Type	Prot	Free	NA	pt+ov	Prot	NA
Protected Phases	3		2	2 3	1	6
Permitted Phases		Free				
Detector Phase	3		2	2 3	1	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	9.5		22.5		9.5	22.5
Total Split (s)	28.0		31.0		41.0	72.0
Total Split (%)	28.0%		31.0%		41.0%	72.0%
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.5		4.5		4.5	4.5
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		C-Max		None	C-Max
Act Effect Green (s)	20.2	100.0	38.6	63.3	27.7	70.8
Actuated g/C Ratio	0.20	1.00	0.39	0.63	0.28	0.71
v/c Ratio	0.72	0.43	0.42	0.34	0.81	0.13
Control Delay (s/veh)	43.6	0.6	25.9	4.0	46.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.6	0.6	25.9	4.0	46.3	5.2
LOS	D	A	C	A	D	A
Approach Delay (s/veh)	18.8		17.3			27.6
Approach LOS	B		B			C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay (s/veh): 20.5
 Intersection LOS: C
 Intersection Capacity Utilization 59.3%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 6: Powers Blvd & Bradley Rd



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	501	683	580	376	396	332
v/c Ratio	0.72	0.43	0.42	0.34	0.81	0.13
Control Delay (s/veh)	43.6	0.6	25.9	4.0	46.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.6	0.6	25.9	4.0	46.3	5.2
Queue Length 50th (ft)	137	0	144	26	238	32
Queue Length 95th (ft)	195	0	230	82	313	52
Internal Link Dist (ft)	950		1376			3683
Turn Bay Length (ft)	200	100		100	200	
Base Capacity (vph)	806	1583	1365	1142	646	2506
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.43	0.42	0.33	0.61	0.13
Intersection Summary						

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	461	628	534	346	364	305
Future Volume (veh/h)	461	628	534	346	364	305
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	501	0	580	0	396	332
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	595		1588		438	2622
Arrive On Green	0.17	0.00	0.45	0.00	0.25	0.74
Sat Flow, veh/h	3456	1585	3647	1585	1781	3647
Grp Volume(v), veh/h	501	0	580	0	396	332
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1781	1777
Q Serve(g_s), s	14.0	0.0	10.8	0.0	21.6	2.7
Cycle Q Clear(g_c), s	14.0	0.0	10.8	0.0	21.6	2.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	595		1588		438	2622
V/C Ratio(X)	0.84		0.37		0.90	0.13
Avail Cap(c_a), veh/h	812		1588		650	2622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	0.0	18.3	0.0	36.6	3.8
Incr Delay (d2), s/veh	3.7	0.0	0.7	0.0	11.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	4.5	0.0	10.6	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	43.7	0.0	18.9	0.0	48.3	3.9
LnGrp LOS	D		B		D	A
Approach Vol, veh/h	501		580			728
Approach Delay, s/veh	43.7		18.9			28.0
Approach LOS	D		B			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	29.1	49.2			78.3	21.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	36.5	26.5			67.5	23.5
Max Q Clear Time (g_c+l1), s	23.6	12.8			4.7	16.0
Green Ext Time (p_c), s	1.0	3.3			2.4	1.2

Intersection Summary

HCM 7th Control Delay, s/veh	29.5
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		258			301			205			372	
Travel Time (s)		5.9			6.8			4.7			8.5	
Intersection Summary												
Area Type:	Other											

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	626	0	0	775	0	0	0	0	0	0	0
Future Vol, veh/h	0	626	0	0	775	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	680	0	0	842	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	842	0	0	680	0	0	1523	1523	680	1523	1523	842
Stage 1	-	-	-	-	-	-	680	680	-	842	842	-
Stage 2	-	-	-	-	-	-	842	842	-	680	680	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	793	-	-	912	-	-	97	118	451	97	118	364
Stage 1	-	-	-	-	-	-	441	451	-	359	380	-
Stage 2	-	-	-	-	-	-	359	380	-	441	451	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	793	-	-	912	-	-	97	118	451	97	118	364
Mov Cap-2 Maneuver	-	-	-	-	-	-	97	118	-	97	118	-
Stage 1	-	-	-	-	-	-	441	451	-	359	380	-
Stage 2	-	-	-	-	-	-	359	380	-	441	451	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	793	-	-	912	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	200		100	200		100	200		0	200		0
Storage Lanes	1		1	1		1	0		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.850								0.850			
Flt Protected					0.950				0.950			
Satd. Flow (prot)	1863	1863	1583	1770	1863	1863	1770	0	1583	1863	0	1863
Flt Permitted					0.070				0.950			
Satd. Flow (perm)	1863	1863	1583	130	1863	1863	1770	0	1583	1863	0	1863
Right Turn on Red					Yes				Yes			
Satd. Flow (RTOR)					149				104			
Link Speed (mph)	30				30				30			
Link Distance (ft)	1030				188				472			
Travel Time (s)	23.4				4.3				10.7			

Intersection Summary

Area Type: Other

	→	↘	↙	←	↖	↗			
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø6	Ø7
Lane Configurations	↑	↑	↑	↑	↑	↑			
Traffic Volume (vph)	801	286	137	583	208	59			
Future Volume (vph)	801	286	137	583	208	59			
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm			
Protected Phases	4		3	8	5		1	6	7
Permitted Phases		4	8			2			
Detector Phase	4	4	3	8	5	2			
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5	9.5
Total Split (s)	57.0	57.0	10.9	58.4	19.5	32.6	9.5	22.6	9.5
Total Split (%)	51.8%	51.8%	9.9%	53.1%	17.7%	29.6%	9%	21%	9%
Yellow Time (s)	3.5	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	1.0
Lost Time Adjust (s)	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			
Lead/Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	None
Act Effect Green (s)	52.5	52.5	63.4	63.4	15.0	37.6			
Actuated g/C Ratio	0.48	0.48	0.58	0.58	0.14	0.34			
v/c Ratio	0.98	0.37	0.88	0.59	0.94	0.11			
Control Delay (s/veh)	54.9	10.5	64.5	17.8	92.0	1.8			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	54.9	10.5	64.5	17.8	92.0	1.8			
LOS	D	B	E	B	F	A			
Approach Delay (s/veh)	43.2			26.7					
Approach LOS	D			C					

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBR and 6:SBR, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay (s/veh): 41.2

Intersection LOS: D

Intersection Capacity Utilization 72.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Bradley Rd & Legacy Hill Dr

#5 Ø1	#5 Ø2 (R)	#5 Ø3	#5 Ø4
9.5 s	32.6 s	10.9 s	57 s
#5 Ø5	#5 Ø6 (R)	#5 Ø7	#5 Ø8
19.5 s	22.6 s	9.5 s	58.4 s

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	871	311	149	634	226	64
v/c Ratio	0.98	0.37	0.88	0.59	0.94	0.11
Control Delay (s/veh)	54.9	10.5	64.5	17.8	92.0	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.9	10.5	64.5	17.8	92.0	1.8
Queue Length 50th (ft)	595	66	55	275	163	0
Queue Length 95th (ft)	#882	131	#178	388	#313	10
Internal Link Dist (ft)	950			108		
Turn Bay Length (ft)		100	200		200	
Base Capacity (vph)	889	833	170	1073	241	609
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.37	0.88	0.59	0.94	0.11

Intersection Summary

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

HCM 7th Signalized Intersection Summary
5: Bradley Rd & Legacy Hill Dr

Colorado Springs Apartments
09/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	801	286	137	583	0	208	0	59	0	0	0
Future Volume (veh/h)	0	801	286	137	583	0	208	0	59	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	0	1870	1870	0	1870
Adj Flow Rate, veh/h	0	871	311	149	634	0	226	0	64	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	351	891	755	179	1077	912	610	0	0	610	0	0
Arrive On Green	0.00	0.48	0.48	0.06	0.58	0.00	0.34	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	226		1781	0	
Grp Volume(v), veh/h	0	871	311	149	634	0	226	27.6		0	0.0	
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	C		1781		
Q Serve(g_s), s	0.0	50.2	14.1	4.5	23.9	0.0	10.5			0.0		
Cycle Q Clear(g_c), s	0.0	50.2	14.1	4.5	23.9	0.0	10.5			0.0		
Prop In Lane	1.00		1.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	351	891	755	179	1077	912	610			610		
V/C Ratio(X)	0.00	0.98	0.41	0.83	0.59	0.00	0.37			0.00		
Avail Cap(c_a), veh/h	430	893	757	179	1077	912	610			610		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	0.00	0.81	0.81	1.00	1.00	0.00	1.00			0.00		
Uniform Delay (d), s/veh	0.0	28.2	18.8	25.4	15.0	0.0	27.2			0.0		
Incr Delay (d2), s/veh	0.0	21.7	0.3	27.4	0.8	0.0	0.4			0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	0.0	26.7	5.1	3.2	9.9	0.0	4.5			0.0		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	49.9	19.0	52.8	15.8	0.0	27.6			0.0		
LnGrp LOS		D	B	D	B		C					
Approach Vol, veh/h	1182			783								
Approach Delay, s/veh	41.8			22.9								
Approach LOS	D			C								
Timer - Assigned Phs	1		3	4	5		7	8				
Phs Duration (G+Y+Rc), s	42.2		10.9	56.9	42.2		0.0	67.8				
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5		4.5	4.5				
Max Green Setting (Gmax), s	5.0		6.4	52.5	15.0		5.0	53.9				
Max Q Clear Time (g_c+I1), s	0.0		6.5	52.2	12.5		0.0	25.9				
Green Ext Time (p_c), s	0.0		0.0	0.2	0.2		0.0	4.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	33.6											
HCM 7th LOS	C											

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	100		100	200	
Storage Lanes	2	0		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	1770	3539
Flt Permitted	0.950				0.540	
Satd. Flow (perm)	3433	1583	3539	1583	1006	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		449				
Link Speed (mph)	30		30			30
Link Distance (ft)	1030		1456			3763
Travel Time (s)	23.4		33.1			85.5

Intersection Summary

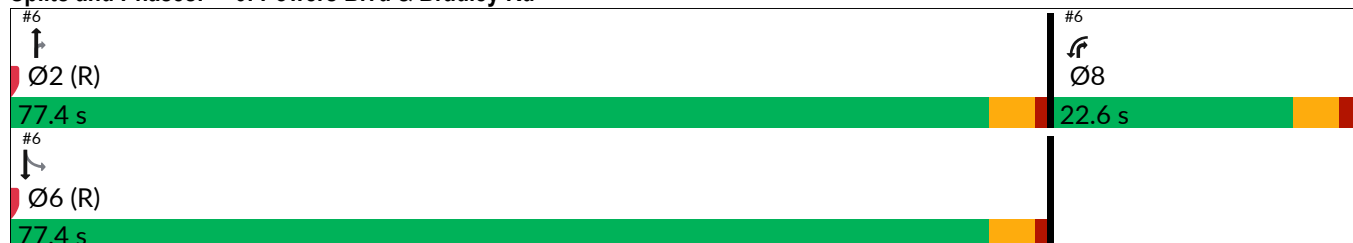
Area Type: Other

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	378	413	326	346	529	494
Future Volume (vph)	378	413	326	346	529	494
Turn Type	Prot	Free	NA	pm+ov	Perm	NA
Protected Phases	8		2	8		6
Permitted Phases		Free		2	6	
Detector Phase	8		2	8	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	22.6		77.4	22.6	77.4	77.4
Total Split (%)	22.6%		77.4%	22.6%	77.4%	77.4%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Max	None	C-Max	C-Max
Act Effect Green (s)	16.4	100.0	74.6	100.0	74.6	74.6
Actuated g/C Ratio	0.16	1.00	0.75	1.00	0.75	0.75
v/c Ratio	0.73	0.28	0.13	0.24	0.77	0.20
Control Delay (s/veh)	47.6	0.5	3.9	0.4	17.0	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.6	0.5	3.9	0.4	17.0	4.2
LOS	D	A	A	A	B	A
Approach Delay (s/veh)	23.0		2.1			10.8
Approach LOS	C		A			B

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay (s/veh): 12.3
 Intersection LOS: B
 Intersection Capacity Utilization 60.4%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 6: Powers Blvd & Bradley Rd



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	411	449	354	376	575	537
v/c Ratio	0.73	0.28	0.13	0.24	0.77	0.20
Control Delay (s/veh)	47.6	0.5	3.9	0.4	17.0	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.6	0.5	3.9	0.4	17.0	4.2
Queue Length 50th (ft)	128	0	30	0	199	49
Queue Length 95th (ft)	180	0	44	0	399	67
Internal Link Dist (ft)	950		1376			3683
Turn Bay Length (ft)	200	100		100	200	
Base Capacity (vph)	621	1583	2638	1564	750	2638
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.28	0.13	0.24	0.77	0.20
Intersection Summary						

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	378	413	326	346	529	494
Future Volume (veh/h)	378	413	326	346	529	494
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	411	0	354	0	575	537
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	492		2728		834	2728
Arrive On Green	0.14	0.00	0.77	0.00	0.77	0.77
Sat Flow, veh/h	3456	1585	3647	1585	1027	3647
Grp Volume(v), veh/h	411	0	354	0	575	537
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1027	1777
Q Serve(g_s), s	11.6	0.0	2.6	0.0	32.8	4.1
Cycle Q Clear(g_c), s	11.6	0.0	2.6	0.0	35.4	4.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	492		2728		834	2728
V/C Ratio(X)	0.84		0.13		0.69	0.20
Avail Cap(c_a), veh/h	625		2728		834	2728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	0.0	3.0	0.0	7.6	3.2
Incr Delay (d2), s/veh	5.4	0.0	0.1	0.0	4.6	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	0.7	0.0	6.7	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	47.1	0.0	3.1	0.0	12.2	3.3
LnGrp LOS	D		A		B	A
Approach Vol, veh/h	411		354			1112
Approach Delay, s/veh	47.1		3.1			7.9
Approach LOS	D		A			A
Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	81.3				81.3	18.7
Change Period (Y+Rc), s	4.5				4.5	4.5
Max Green Setting (Gmax), s	72.9				72.9	18.1
Max Q Clear Time (g_c+l1), s	4.6				37.4	13.6
Green Ext Time (p_c), s	2.6				8.2	0.7

Intersection Summary

HCM 7th Control Delay, s/veh	15.6
HCM 7th LOS	B

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		258			301			205			372	
Travel Time (s)		5.9			6.8			4.7			8.5	
Intersection Summary												
Area Type:	Other											

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	801	0	0	583	0	0	0	0	0	0	0
Future Vol, veh/h	0	801	0	0	583	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	871	0	0	634	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	634	0	0	871	0	0	1504	1504	871	1504	1504	634
Stage 1	-	-	-	-	-	-	871	871	-	634	634	-
Stage 2	-	-	-	-	-	-	634	634	-	871	871	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	949	-	-	774	-	-	100	121	351	100	121	479
Stage 1	-	-	-	-	-	-	346	369	-	467	473	-
Stage 2	-	-	-	-	-	-	467	473	-	346	369	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	949	-	-	774	-	-	100	121	351	100	121	479
Mov Cap-2 Maneuver	-	-	-	-	-	-	100	121	-	100	121	-
Stage 1	-	-	-	-	-	-	346	369	-	467	473	-
Stage 2	-	-	-	-	-	-	467	473	-	346	369	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	949	-	-	774	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998			0.850
Flt Protected		0.993			0.950	
Satd. Flow (prot)	0	1850	1859	0	1770	1583
Flt Permitted		0.993			0.950	
Satd. Flow (perm)	0	1850	1859	0	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		224	821		319	
Travel Time (s)		5.1	18.7		7.3	
Intersection Summary						
Area Type:	Other					

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	60	297	4	11	29
Future Vol, veh/h	9	60	297	4	11	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	65	323	4	12	32

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	327	0	0 410 325
Stage 1	-	-	- - 325 -
Stage 2	-	-	- - 85 -
Critical Hdwy	4.12	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	2.218	-	- - 3.518 3.318
Pot Cap-1 Maneuver	1232	-	- - 598 716
Stage 1	-	-	- - 732 -
Stage 2	-	-	- - 939 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1232	-	- - 593 716
Mov Cap-2 Maneuver	-	-	- - 593 -
Stage 1	-	-	- - 726 -
Stage 2	-	-	- - 939 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.04	0	10.52
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	235	-	-	-	593	716
HCM Lane V/C Ratio	0.008	-	-	-	0.02	0.044
HCM Ctrl Dly (s/v)	7.9	0	-	-	11.2	10.3
HCM Lane LOS	A	A	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.902	
Flt Protected		0.999			0.986	
Satd. Flow (prot)	0	1861	1855	0	1657	0
Flt Permitted		0.999			0.986	
Satd. Flow (perm)	0	1861	1855	0	1657	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		660	224		393	
Travel Time (s)		15.0	5.1		8.9	
Intersection Summary						
Area Type:	Other					

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	297	60	2	7	19
Future Vol, veh/h	6	297	60	2	7	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	323	65	2	8	21

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	67	0	0 402 66
Stage 1	-	-	- 66 -
Stage 2	-	-	- 336 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1534	-	- 604 997
Stage 1	-	-	- 956 -
Stage 2	-	-	- 724 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1534	-	- 601 997
Mov Cap-2 Maneuver	-	-	- 601 -
Stage 1	-	-	- 951 -
Stage 2	-	-	- 724 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.15	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	36	-	-	-	847
HCM Lane V/C Ratio	0.004	-	-	-	0.033
HCM Ctrl Dly (s/v)	7.4	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%				0%				0%		0%	
Storage Length (ft)	0			0	0			0	0			0
Storage Lanes	0			0	0			0	0			0
Taper Length (ft)	25			25	25			25	25			25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.865											
Flt Protected	0.950											
Satd. Flow (prot)	0	1863	0	0	1770	0	0	1611	0	0	1863	0
Flt Permitted	0.950											
Satd. Flow (perm)	0	1863	0	0	1770	0	0	1611	0	0	1863	0
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	255			243			138			107		
Travel Time (s)	5.8			5.5			3.1			2.4		
Intersection Summary												
Area Type:	Other											

Intersection

Intersection Delay, s/veh 9.5
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	297	0	0	0	0	60	0	0	0
Future Vol, veh/h	0	0	0	297	0	0	0	0	60	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	323	0	0	0	0	65	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	9.9	7.4	0
HCM LOS	-	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	100%
Vol Right, %	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	0	297	0
LT Vol	0	0	297	0
Through Vol	0	0	0	0
RT Vol	60	0	0	0
Lane Flow Rate	65	0	323	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.074	0	0.381	0
Departure Headway (Hd)	4.079	4.403	4.248	4.756
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	884	0	846	0
Service Time	2.079	2.409	2.28	2.759
HCM Lane V/C Ratio	0.074	0	0.382	0
HCM Control Delay, s/veh	7.4	7.4	9.9	7.8
HCM Lane LOS	A	N	A	N
HCM 95th-tile Q	0.2	0	1.8	0

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	200		100	200		100	200		100	200		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.850								0.850			
Flt Protected				0.950				0.950				
Satd. Flow (prot)	1863	1863	1583	1770	1863	1863	1770	1863	1583	1863	1863	1863
Flt Permitted				0.132				0.618				
Satd. Flow (perm)	1863	1863	1583	246	1863	1863	1151	1863	1583	1863	1863	1863
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)				115					241			
Link Speed (mph)	30				30				30			
Link Distance (ft)	1030				188				472			
Travel Time (s)	23.4				4.3				10.7			

Intersection Summary

Area Type: Other

	→	↘	↙	←	↖	↗	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø6
Lane Configurations	↑	↑	↑	↑	↑	↑	
Traffic Volume (vph)	626	84	40	775	314	89	
Future Volume (vph)	626	84	40	775	314	89	
Turn Type	NA	Perm	pm+pt	NA	pm+pt	Perm	
Protected Phases	4		3	8	5		6
Permitted Phases		4	8		2	2	
Detector Phase	4	4	3	8	5	2	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	49.0	49.0	9.5	58.5	18.0	41.5	23.5
Total Split (%)	49.0%	49.0%	9.5%	58.5%	18.0%	41.5%	24%
Yellow Time (s)	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
Lost Time Adjust (s)	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	
Lead/Lag	Lag	Lag	Lead		Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max
Act Effect Green (s)	45.0	45.0	50.7	50.7	40.3	40.3	
Actuated g/C Ratio	0.45	0.45	0.51	0.51	0.40	0.40	
v/c Ratio	0.81	0.12	0.21	0.89	0.62	0.12	
Control Delay (s/veh)	28.6	1.2	13.7	34.8	29.3	0.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	28.6	1.2	13.7	34.8	29.3	0.3	
LOS	C	A	B	C	C	A	
Approach Delay (s/veh)	25.4			33.8			
Approach LOS	C			C			

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay (s/veh): 28.4
 Intersection LOS: C
 Intersection Capacity Utilization 65.7%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 5: Bradley Rd & Legacy Hill Dr

#5 ↖ Ø2 (R)	#5 ↖ Ø3	#5 ↖ Ø4
41.5 s	9.5 s	49 s
#5 ↖ Ø5	#5 ↖ Ø6 (R)	#5 ↖ Ø8
18 s	23.5 s	58.5 s

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	680	91	43	842	341	97
v/c Ratio	0.81	0.12	0.21	0.89	0.62	0.12
Control Delay (s/veh)	28.6	1.2	13.7	34.8	29.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.6	1.2	13.7	34.8	29.3	0.3
Queue Length 50th (ft)	383	1	13	446	167	0
Queue Length 95th (ft)	#534	m5	29	#642	258	0
Internal Link Dist (ft)	950			108		
Turn Bay Length (ft)		100	200		200	100
Base Capacity (vph)	849	784	201	1006	552	781
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.12	0.21	0.84	0.62	0.12
Intersection Summary						
# 95th percentile volume exceeds capacity, queue may be longer.						
Queue shown is maximum after two cycles.						
m Volume for 95th percentile queue is metered by upstream signal.						

HCM 7th Signalized Intersection Summary
5: Bradley Rd & Legacy Hill Dr

Colorado Springs Apartments
09/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	626	84	40	775	0	314	0	89	0	0	0
Future Volume (veh/h)	0	626	84	40	775	0	314	0	89	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	0	680	91	43	842	0	341	0	97	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	758	642	180	907	769	660	795	674	72	458	388
Arrive On Green	0.00	0.41	0.41	0.03	0.48	0.00	0.14	0.00	0.43	0.00	0.00	0.00
Sat Flow, veh/h	653	1870	1585	1781	1870	1585	1781	1870	1585	1298	1870	1585
Grp Volume(v), veh/h	0	680	91	43	842	0	341	0	97	0	0	0
Grp Sat Flow(s),veh/h/ln	653	1870	1585	1781	1870	1585	1781	1870	1585	1298	1870	1585
Q Serve(g_s), s	0.0	34.0	3.6	1.3	42.2	0.0	13.5	0.0	3.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	34.0	3.6	1.3	42.2	0.0	13.5	0.0	3.7	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	758	642	180	907	769	660	795	674	72	458	388
V/C Ratio(X)	0.00	0.90	0.14	0.24	0.93	0.00	0.52	0.00	0.14	0.00	0.00	0.00
Avail Cap(c_a), veh/h	98	832	705	207	1010	856	660	795	674	72	458	388
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)	0.00	0.88	0.88	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	27.8	18.8	21.8	24.1	0.0	22.4	0.0	17.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	10.6	0.1	0.7	13.4	0.0	0.7	0.0	0.4	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.8	1.3	0.6	20.9	0.0	5.9	0.0	1.4	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	38.4	18.9	22.5	37.6	0.0	23.1	0.0	18.1	0.0	0.0	0.0
LnGrp LOS		D	B	C	D		C		B			
Approach Vol, veh/h		771			885			438			0	
Approach Delay, s/veh		36.1			36.8			22.0			0.0	
Approach LOS		D			D			C				
Timer - Assigned Phs		2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s		47.0	8.0	45.0	18.0	29.0		53.0				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		37.0	5.0	44.5	13.5	19.0		54.0				
Max Q Clear Time (g_c+l1), s		5.7	3.3	36.0	15.5	0.0		44.2				
Green Ext Time (p_c), s		0.3	0.0	3.2	0.0	0.0		4.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			33.5									
HCM 7th LOS			C									

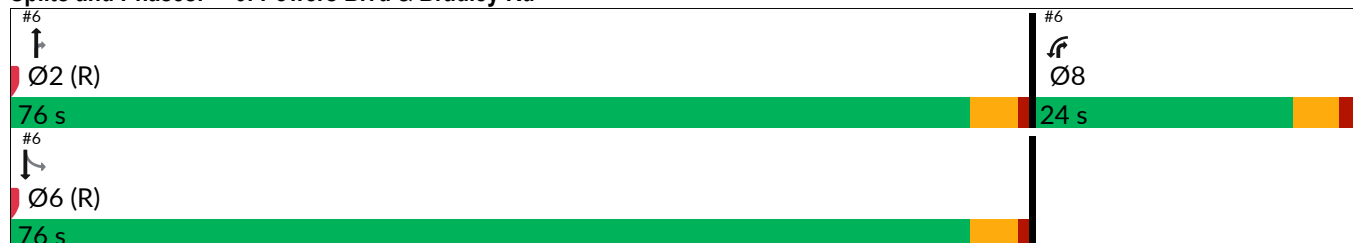
						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	100		100	200	
Storage Lanes	2	0		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	1770	3539
Flt Permitted	0.950				0.427	
Satd. Flow (perm)	3433	1583	3539	1583	795	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		534				
Link Speed (mph)	30		30			30
Link Distance (ft)	1030		1456			3763
Travel Time (s)	23.4		33.1			85.5

Intersection Summary

Area Type: Other

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	461	628	534	346	364	305
Future Volume (vph)	461	628	534	346	364	305
Turn Type	Prot	Free	NA	pm+ov	Perm	NA
Protected Phases	8		2	8		6
Permitted Phases		Free		2	6	
Detector Phase	8		2	8	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	24.0		76.0	24.0	76.0	76.0
Total Split (%)	24.0%		76.0%	24.0%	76.0%	76.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Max	None	C-Max	C-Max
Act Effct Green (s)	18.4	100.0	72.6	100.0	72.6	72.6
Actuated g/C Ratio	0.18	1.00	0.73	1.00	0.73	0.73
v/c Ratio	0.80	0.43	0.23	0.24	0.69	0.13
Control Delay (s/veh)	39.0	0.5	4.9	0.4	15.6	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.0	0.5	4.9	0.4	15.6	4.4
LOS	D	A	A	A	B	A
Approach Delay (s/veh)	16.8		3.1			10.5
Approach LOS	B		A			B
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green						
Natural Cycle: 70						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.80						
Intersection Signal Delay (s/veh): 10.6				Intersection LOS: B		
Intersection Capacity Utilization 59.3%				ICU Level of Service B		
Analysis Period (min) 15						

Splits and Phases: 6: Powers Blvd & Bradley Rd



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	501	683	580	376	396	332
v/c Ratio	0.80	0.43	0.23	0.24	0.69	0.13
Control Delay (s/veh)	39.0	0.5	4.9	0.4	15.6	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.0	0.5	4.9	0.4	15.6	4.4
Queue Length 50th (ft)	161	0	57	0	125	30
Queue Length 95th (ft)	m193	m0	77	0	257	44
Internal Link Dist (ft)	950		1376			3683
Turn Bay Length (ft)	200	100		100	200	
Base Capacity (vph)	669	1583	2570	1572	577	2570
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.43	0.23	0.24	0.69	0.13
Intersection Summary						
m Volume for 95th percentile queue is metered by upstream signal.						

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	461	628	534	346	364	305
Future Volume (veh/h)	461	628	534	346	364	305
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	501	0	580	0	396	332
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	580		2637		649	2637
Arrive On Green	0.17	0.00	0.74	0.00	0.74	0.74
Sat Flow, veh/h	3456	1585	3647	1585	834	3647
Grp Volume(v), veh/h	501	0	580	0	396	332
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	834	1777
Q Serve(g_s), s	14.1	0.0	5.0	0.0	27.9	2.7
Cycle Q Clear(g_c), s	14.1	0.0	5.0	0.0	32.9	2.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	580		2637		649	2637
V/C Ratio(X)	0.86		0.22		0.61	0.13
Avail Cap(c_a), veh/h	674		2637		649	2637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	0.0	4.0	0.0	9.0	3.7
Incr Delay (d2), s/veh	5.2	0.0	0.2	0.0	4.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	1.6	0.0	5.1	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	45.7	0.0	4.2	0.0	13.3	3.8
LnGrp LOS	D		A		B	A
Approach Vol, veh/h	501		580			728
Approach Delay, s/veh	45.7		4.2			8.9
Approach LOS	D		A			A
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		78.7			78.7	21.3
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		71.5			71.5	19.5
Max Q Clear Time (g_c+l1), s		7.0			34.9	16.1
Green Ext Time (p_c), s		4.6			5.7	0.7
Intersection Summary						
HCM 7th Control Delay, s/veh			17.6			
HCM 7th LOS			B			
Notes						
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.						

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		258			301			205			372	
Travel Time (s)		5.9			6.8			4.7			8.5	
Intersection Summary												
Area Type:	Other											

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	626	0	0	775	0	0	0	0	0	0	0
Future Vol, veh/h	0	626	0	0	775	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	680	0	0	842	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	842	0	0	680	0	0	1523	1523	680	1523	1523	842
Stage 1	-	-	-	-	-	-	680	680	-	842	842	-
Stage 2	-	-	-	-	-	-	842	842	-	680	680	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	793	-	-	912	-	-	97	118	451	97	118	364
Stage 1	-	-	-	-	-	-	441	451	-	359	380	-
Stage 2	-	-	-	-	-	-	359	380	-	441	451	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	793	-	-	912	-	-	97	118	451	97	118	364
Mov Cap-2 Maneuver	-	-	-	-	-	-	97	118	-	97	118	-
Stage 1	-	-	-	-	-	-	441	451	-	359	380	-
Stage 2	-	-	-	-	-	-	359	380	-	441	451	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	793	-	-	912	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.992			0.850
Flt Protected		0.994			0.950	
Satd. Flow (prot)	0	1852	1848	0	1770	1583
Flt Permitted		0.994			0.950	
Satd. Flow (perm)	0	1852	1848	0	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		224	821		319	
Travel Time (s)		5.1	18.7		7.3	
Intersection Summary						
Area Type:	Other					

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	202	183	11	7	18
Future Vol, veh/h	29	202	183	11	7	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	220	199	12	8	20

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	211	0	0 488 205
Stage 1	-	-	- 205 -
Stage 2	-	-	- 283 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1360	-	- 539 836
Stage 1	-	-	- 829 -
Stage 2	-	-	- 765 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1360	-	- 525 836
Mov Cap-2 Maneuver	-	-	- 525 -
Stage 1	-	-	- 808 -
Stage 2	-	-	- 765 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.97	0	10.12
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	226	-	-	-	525	836
HCM Lane V/C Ratio	0.023	-	-	-	0.014	0.023
HCM Ctrl Dly (s/v)	7.7	0	-	-	12	9.4
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.1

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.902	
Flt Protected					0.986	
Satd. Flow (prot)	0	1863	1863	0	1657	0
Flt Permitted					0.986	
Satd. Flow (perm)	0	1863	1863	0	1657	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		660	224		393	
Travel Time (s)		15.0	5.1		8.9	
Intersection Summary						
Area Type:	Other					

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	202	183	0	5	12
Future Vol, veh/h	0	202	183	0	5	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	220	199	0	5	13

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	199	0	0 418 199
Stage 1	-	-	- 199 -
Stage 2	-	-	- 220 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1373	-	- 591 842
Stage 1	-	-	- 835 -
Stage 2	-	-	- 817 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1373	-	- 591 842
Mov Cap-2 Maneuver	-	-	- 591 -
Stage 1	-	-	- 835 -
Stage 2	-	-	- 817 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	9.93
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1373	-	-	-	749
HCM Lane V/C Ratio	-	-	-	-	0.025
HCM Ctrl Dly (s/v)	0	-	-	-	9.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.865				
Flt Protected					0.950							
Satd. Flow (prot)	0	1863	0	0	1770	0	0	1611	0	0	1863	0
Flt Permitted					0.950							
Satd. Flow (perm)	0	1863	0	0	1770	0	0	1611	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		255			243			138			107	
Travel Time (s)		5.8			5.5			3.1			2.4	
Intersection Summary												
Area Type:	Other											

Intersection

Intersection Delay, s/veh 8.5
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	183	0	0	0	0	202	0	0	0
Future Vol, veh/h	0	0	0	183	0	0	0	0	202	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	199	0	0	0	0	220	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	9.1	8	0
HCM LOS	-	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	100%
Vol Right, %	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	0	183	0
LT Vol	0	0	183	0
Through Vol	0	0	0	0
RT Vol	202	0	0	0
Lane Flow Rate	220	0	199	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.233	0	0.25	0
Departure Headway (Hd)	3.823	4.608	4.518	4.638
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	944	0	788	0
Service Time	1.823	2.627	2.593	2.646
HCM Lane V/C Ratio	0.233	0	0.253	0
HCM Control Delay, s/veh	8	7.6	9.1	7.6
HCM Lane LOS	A	N	A	N
HCM 95th-tile Q	0.9	0	1	0

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	200		100	200		100	200		100	200		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.850									0.850		
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1863	1863	1583	1770	1863	1863	1770	1863	1583	1863	1863	1863
Flt Permitted				0.074			0.620					
Satd. Flow (perm)	1863	1863	1583	138	1863	1863	1155	1863	1583	1863	1863	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				130						211		
Link Speed (mph)	30						30			30		
Link Distance (ft)	1030						472			784		
Travel Time (s)	23.4						10.7			17.8		

Intersection Summary

Area Type: Other

	→	↘	↙	←	↖	↗	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø6
Lane Configurations	↑	↑	↑	↑	↑	↑	
Traffic Volume (vph)	801	286	137	583	208	59	
Future Volume (vph)	801	286	137	583	208	59	
Turn Type	NA	Perm	pm+pt	NA	pm+pt	Perm	
Protected Phases	4		3	8	5		6
Permitted Phases		4	8		2	2	
Detector Phase	4	4	3	8	5	2	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	55.0	55.0	10.2	65.2	10.0	34.8	24.8
Total Split (%)	55.0%	55.0%	10.2%	65.2%	10.0%	34.8%	25%
Yellow Time (s)	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
Lost Time Adjust (s)	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	
Lead/Lag	Lag	Lag	Lead		Lead		Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max
Act Effect Green (s)	49.6	49.6	59.8	59.8	31.2	31.2	
Actuated g/C Ratio	0.50	0.50	0.60	0.60	0.31	0.31	
v/c Ratio	0.94	0.37	0.85	0.57	0.57	0.10	
Control Delay (s/veh)	38.7	6.5	56.4	14.6	34.8	0.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.7	6.5	56.4	14.6	34.8	0.3	
LOS	D	A	E	B	C	A	
Approach Delay (s/veh)	30.2			22.5			
Approach LOS	C			C			

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay (s/veh): 27.1

Intersection LOS: C

Intersection Capacity Utilization 72.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 5: Bradley Rd & Legacy Hill Dr

#5 ↖ Ø2 (R) 34.8 s	#5 ↖ Ø3 10.2 s	#5 ↖ Ø4 55 s
#5 ↖ Ø5 10 s	#5 ↖ Ø6 (R) 24.8 s	#5 ↖ Ø8 65.2 s

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	871	311	149	634	226	64
v/c Ratio	0.94	0.37	0.85	0.57	0.57	0.10
Control Delay (s/veh)	38.7	6.5	56.4	14.6	34.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.7	6.5	56.4	14.6	34.8	0.3
Queue Length 50th (ft)	503	39	43	226	117	0
Queue Length 95th (ft)	#778	m78	#156	326	187	0
Internal Link Dist (ft)	950			108		
Turn Bay Length (ft)		100	200		200	100
Base Capacity (vph)	940	863	175	1130	399	638
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.36	0.85	0.56	0.57	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 7th Signalized Intersection Summary
5: Bradley Rd & Legacy Hill Dr

Colorado Springs Apartments
09/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	801	286	137	583	0	208	0	59	0	0	0
Future Volume (veh/h)	0	801	286	137	583	0	208	0	59	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	0	871	311	149	634	0	226	0	64	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	917	777	195	1108	939	479	594	504	72	407	345
Arrive On Green	0.00	0.49	0.49	0.06	0.59	0.00	0.05	0.00	0.32	0.00	0.00	0.00
Sat Flow, veh/h	793	1870	1585	1781	1870	1585	1781	1870	1585	1338	1870	1585
Grp Volume(v), veh/h	0	871	311	149	634	0	226	0	64	0	0	0
Grp Sat Flow(s),veh/h/ln	793	1870	1585	1781	1870	1585	1781	1870	1585	1338	1870	1585
Q Serve(g_s), s	0.0	44.4	12.4	4.0	20.9	0.0	5.5	0.0	2.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	44.4	12.4	4.0	20.9	0.0	5.5	0.0	2.9	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	917	777	195	1108	939	479	594	504	72	407	345
V/C Ratio(X)	0.00	0.95	0.40	0.76	0.57	0.00	0.47	0.00	0.13	0.00	0.00	0.00
Avail Cap(c_a), veh/h	84	945	800	195	1135	962	479	594	504	72	407	345
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)	0.00	0.81	0.81	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	24.3	16.2	22.9	12.6	0.0	29.7	0.0	24.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	15.6	0.3	16.2	0.7	0.0	0.7	0.0	0.5	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	22.3	4.4	2.6	8.3	0.0	1.9	0.0	1.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	39.9	16.4	39.1	13.2	0.0	30.4	0.0	24.8	0.0	0.0	0.0
LnGrp LOS	D		B	D	B	C			C			
Approach Vol, veh/h	1182				783				290			
Approach Delay, s/veh	33.8				18.2				29.2			
Approach LOS	C				B				C			
Timer - Assigned Phs	2		3	4	5	6	8					
Phs Duration (G+Y+Rc), s	36.3		10.2	53.5	10.0	26.3	63.7					
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	30.3		5.7	50.5	5.5	20.3	60.7					
Max Q Clear Time (g_c+l1), s	4.9		6.0	46.4	7.5	0.0	22.9					
Green Ext Time (p_c), s	0.2		0.0	2.6	0.0	0.0	5.0					
Intersection Summary												
HCM 7th Control Delay, s/veh	27.8											
HCM 7th LOS	C											

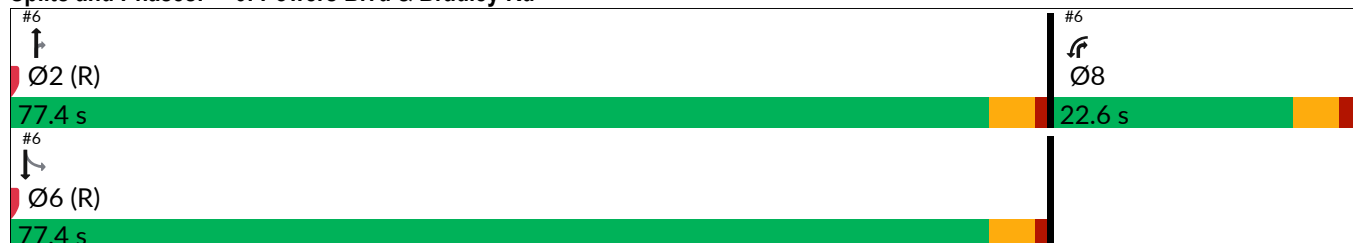
						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	200	100		100	200	
Storage Lanes	2	0		1	1	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	1583	3539	1583	1770	3539
Flt Permitted	0.950				0.540	
Satd. Flow (perm)	3433	1583	3539	1583	1006	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		449				
Link Speed (mph)	30		30			30
Link Distance (ft)	1030		1456			3763
Travel Time (s)	23.4		33.1			85.5

Intersection Summary

Area Type: Other

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	378	413	326	346	529	494
Future Volume (vph)	378	413	326	346	529	494
Turn Type	Prot	Free	NA	pm+ov	Perm	NA
Protected Phases	8		2	8		6
Permitted Phases		Free		2	6	
Detector Phase	8		2	8	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	22.6		77.4	22.6	77.4	77.4
Total Split (%)	22.6%		77.4%	22.6%	77.4%	77.4%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Max	None	C-Max	C-Max
Act Effct Green (s)	16.4	100.0	74.6	100.0	74.6	74.6
Actuated g/C Ratio	0.16	1.00	0.75	1.00	0.75	0.75
v/c Ratio	0.73	0.28	0.13	0.24	0.77	0.20
Control Delay (s/veh)	42.9	0.4	3.9	0.4	17.0	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.9	0.4	3.9	0.4	17.0	4.2
LOS	D	A	A	A	B	A
Approach Delay (s/veh)	20.7		2.1			10.8
Approach LOS	C		A			B
Intersection Summary						
Cycle Length: 100						
Actuated Cycle Length: 100						
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green						
Natural Cycle: 80						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.77						
Intersection Signal Delay (s/veh): 11.6				Intersection LOS: B		
Intersection Capacity Utilization 60.4%				ICU Level of Service B		
Analysis Period (min) 15						

Splits and Phases: 6: Powers Blvd & Bradley Rd



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	411	449	354	376	575	537
v/c Ratio	0.73	0.28	0.13	0.24	0.77	0.20
Control Delay (s/veh)	42.9	0.4	3.9	0.4	17.0	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.9	0.4	3.9	0.4	17.0	4.2
Queue Length 50th (ft)	135	0	30	0	199	49
Queue Length 95th (ft)	186	0	44	0	399	67
Internal Link Dist (ft)	950		1376			3683
Turn Bay Length (ft)	200	100		100	200	
Base Capacity (vph)	621	1583	2638	1564	750	2638
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.28	0.13	0.24	0.77	0.20
Intersection Summary						

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	378	413	326	346	529	494
Future Volume (veh/h)	378	413	326	346	529	494
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	411	0	354	0	575	537
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	492		2728		834	2728
Arrive On Green	0.14	0.00	0.77	0.00	0.77	0.77
Sat Flow, veh/h	3456	1585	3647	1585	1027	3647
Grp Volume(v), veh/h	411	0	354	0	575	537
Grp Sat Flow(s),veh/h/ln	1728	1585	1777	1585	1027	1777
Q Serve(g_s), s	11.6	0.0	2.6	0.0	32.8	4.1
Cycle Q Clear(g_c), s	11.6	0.0	2.6	0.0	35.4	4.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	492		2728		834	2728
V/C Ratio(X)	0.84		0.13		0.69	0.20
Avail Cap(c_a), veh/h	625		2728		834	2728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	0.0	3.0	0.0	7.6	3.2
Incr Delay (d2), s/veh	6.3	0.0	0.1	0.0	4.6	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	0.7	0.0	6.7	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	48.1	0.0	3.1	0.0	12.2	3.3
LnGrp LOS	D		A		B	A
Approach Vol, veh/h	411		354			1112
Approach Delay, s/veh	48.1		3.1			7.9
Approach LOS	D		A			A
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		81.3			81.3	18.7
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		72.9			72.9	18.1
Max Q Clear Time (g_c+l1), s		4.6			37.4	13.6
Green Ext Time (p_c), s		2.6			8.2	0.7
Intersection Summary						
HCM 7th Control Delay, s/veh			15.8			
HCM 7th LOS			B			
Notes						
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.						

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		258			301			205			372	
Travel Time (s)		5.9			6.8			4.7			8.5	
Intersection Summary												
Area Type:	Other											

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	801	0	0	583	0	0	0	0	0	0	0
Future Vol, veh/h	0	801	0	0	583	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	871	0	0	634	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	634	0	0	871	0	0	1504	1504	871	1504	1504	634
Stage 1	-	-	-	-	-	-	871	871	-	634	634	-
Stage 2	-	-	-	-	-	-	634	634	-	871	871	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	949	-	-	774	-	-	100	121	351	100	121	479
Stage 1	-	-	-	-	-	-	346	369	-	467	473	-
Stage 2	-	-	-	-	-	-	467	473	-	346	369	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	949	-	-	774	-	-	100	121	351	100	121	479
Mov Cap-2 Maneuver	-	-	-	-	-	-	100	121	-	100	121	-
Stage 1	-	-	-	-	-	-	346	369	-	467	473	-
Stage 2	-	-	-	-	-	-	467	473	-	346	369	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	949	-	-	774	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-