



ALDRIDGE TRANSPORTATION CONSULTANTS, LLC

Advanced Transportation Planning and Traffic Engineering

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October 26, 2020

Mr. Jim Godwin
Wilson & Company, Inc., Engineers & Architects
1675 Broadway, Suite 200
Denver, CO 80202

RE: Traffic Impact Analysis - Revised
7190 Colorado Blvd.

Dear Mr. Godwin:

This technical letter provides a traffic study of the potential impact occasioned by the development of a 60-unit multi-family project located just East of the 72nd Avenue commuter rail facility on the southwest corner of 72nd Ave. and Colorado Blvd. in Commerce City. This is an affordable housing project. The site plan shows a current surface parking lot serving an 85,000 square foot office building. The housing project will remove some of the existing parking and share 35 parking stalls with the office building. Figure 1 shows the site plan, access locations, and the adjacent streets and intersections.

EXISTING CONDITIONS

72nd Ave. is a two-lane roadway with a two-way center turn lane. It currently carries approximately 2,500 ADT on the east leg, and less than 1,000 on the west leg. It is posted at 30 mph. Colorado Blvd. is an undivided two-lane roadway that currently carries approximately 5,000 ADT on the south leg and 7,000 ADT on the north leg. It is posted at 35 mph. The intersection is two-way stop sign controlled with 72nd Ave. stopped. The intersection currently operates at LOS B/C in the AM and PM peak hours, respectively.

AM and PM peak hour counts at the intersection of Colorado Blvd. and 72nd Ave. were taken by All Traffic Data on Tuesday, July 23, 2020. They are attached in the appendix. Although these were taken during the COVID-19 crisis and possibly show lower counts than normal, it has been observed on major highways with continuous count stations that traffic volumes have increased from lows in March, April, and May to near normal in July and August. It would be speculative at best to assign a percentage increase to achieve a normal recording. Moreover, with the potential extended period of COVID-19, the present traffic may well become the new normal. We are confident that the current traffic counts provide a reasonably accurate level of service analysis.



There are two existing full movement accesses. One on 72nd Ave. and the other on Colorado Blvd. On 72nd Ave. left turns can be made to/from the center left turn lane. On Colorado Blvd. there are auxiliary turn lanes for the right turn in and left turn in.



Figure 1 Site Plan, Access Locations, and Adjacent Streets and Intersections

TRIP GENERATION

The trip generation for the 60-unit housing is based on the ITE Trip Generation Manual, 10th Edition. The following table presents the AM and PM peak hour trip generation. Please note that for this land use category there is limited data. There are no observations on average daily trips (ADT). And as the RTD Light Rail Station is within easy walking distance a reduction can be taken for the mode shift. In this case though, the reduction is too small to be significant.



Trip Generation Worksheet								
ITE CODE	LAND USE	UNIT	QUANTITY	ADT	AM		PM	
					IN	OUT	IN	OUT
223	Affordable Housing	DU	60	n/a	0.30	0.70	0.63	0.37
					18	42	38	22
Total Trips					18	42	38	22

The trip distribution and assignment assume that 75 percent to/from the north and 25 percent to/from the south on Colorado Blvd. No trips were assigned to the access on 72nd Ave. as it would require awkward movement through the office building parking lot. The Synchro graphics in the appendix depict the AM and PM peak hour movements.

PROJECTED CONDITIONS

A review of the DRCOG FOCUS Travel model assigned volumes for 2015 and 2040 shows a 25-year growth factor of 1.23. That equates to a 20-year growth factor of 1.18 (rounded up to 1.2). This is consistent with the area's current development and generally built out condition.

IMPACT ANALYSIS

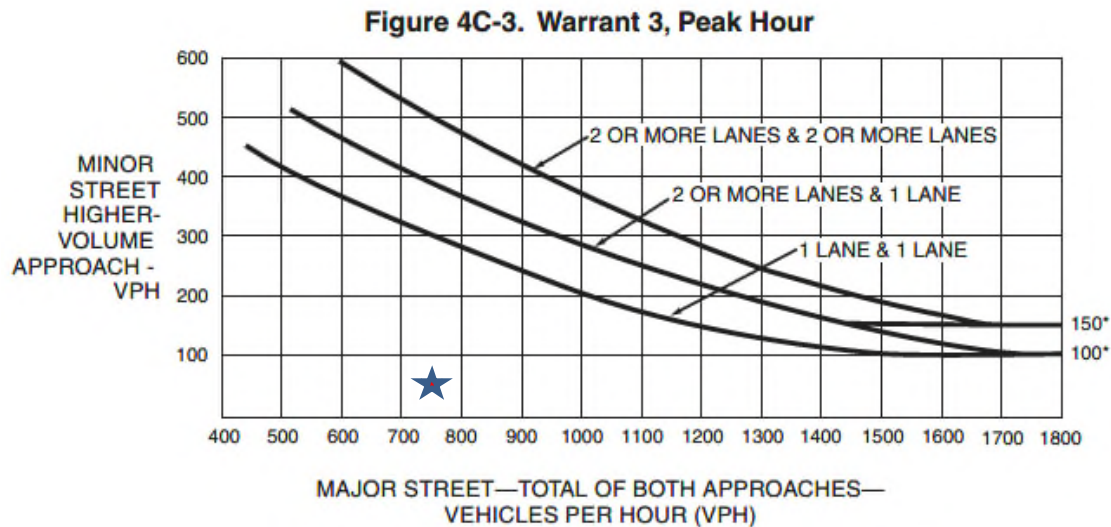
ATC uses the Synchro v10 traffic-modeling program for operational analyses. Level of Service (LOS) is letter rating from A to F. LOS A indicates free-flow traffic conditions and no delay at intersections. LOS F is heavy traffic congestion with significant delay. LOS is provided for the overall operations at signalized intersections. LOS D is generally the benchmark for acceptable signalized intersection operations during the weekday peak hours in urban areas. The critical movement, not the overall, which is generally a minor street left turn out, provides the LOS rating for unsignalized intersections. Caution must be used when evaluating the LOS at unsignalized intersections particularly when LOS F is shown. Note that LOS F can show for even just one vehicle per hour on the minor approach when the volumes on the major approaches exceed 1,500 per hour. In case of LOS F, the HCM¹ suggests that other evaluation measures should be considered such as the volume over capacity ratio and 95th percentile queue length to make the most effective traffic control decision. LOS F at unsignalized intersections is considered normal for the weekday peak hour.

¹ Highway Capacity Manual 6th Edition page 20-48



Unsignalized Intersection LOS Summary						
LOS/Control Delay (secs) A=0-10, B=>10-15, C=>15-25, D=>25-35, E=>35-50, F=>50						
Intersection	Existing		2022 Total		2040 Total	
	AM	PM	AM	PM	AM	PM
72nd/Colorado	B	C	B	C	C	D
Colorado Access	n/a	n/a	A	B	B	B

The Synchro analysis demonstrates that the current stop sign control at Colorado Blvd. and 72nd Ave. functions with acceptable ranges of LOS. The access on Colorado will function a high LOS with two-way stop sign control. Traffic signal control is not warranted per the MUTCD Peak Hour Warrant 3. The blue star on the chart below shows where the forecast 2040 PM peak hour stands in relation to the warrant threshold. This may change with the new RTD station traffic that opens in September, but new counts will be necessary to make a determination.



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.



SIGHT DISTANCE

A review of the sight distance for vehicles entering and exiting the access on Colorado Blvd. reveals that presently the sight distance requirement per Table 3-14 in the City's construction standards of 430 feet for the left turning out vehicle 350 feet for the right turning out vehicle is available but currently compromised by mature trees. The site plan shows a revised landscaping plan that removes the trees which should improve the sight distance considerably. There are no sight distance issues at the access on 72nd Ave.

MITIGATION

No mitigation is required either at the access locations or at the intersection of 72nd and Colorado Blvd.

CONCLUSIONS

Based on this analysis, the present roadway surface, geometric design, and traffic control will adequately manage, without any additional improvements, the traffic generated by the affordable housing project.

Should you have any questions or need additional information please call me at 303-703-9112.

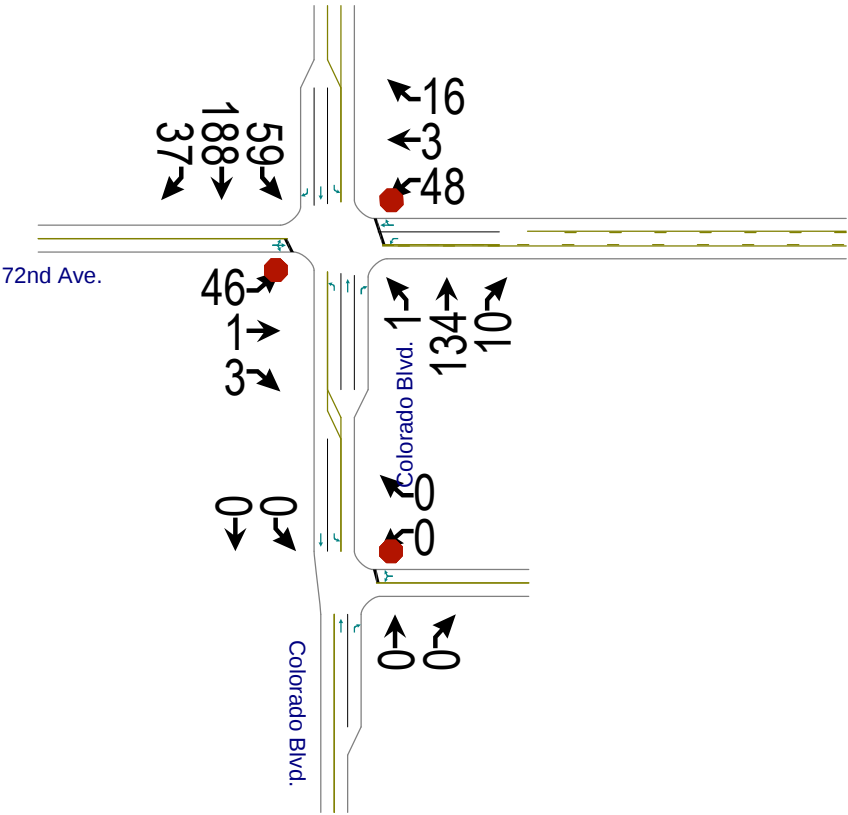
Respectfully submitted:

Aldridge Transportation Consultants, LLC

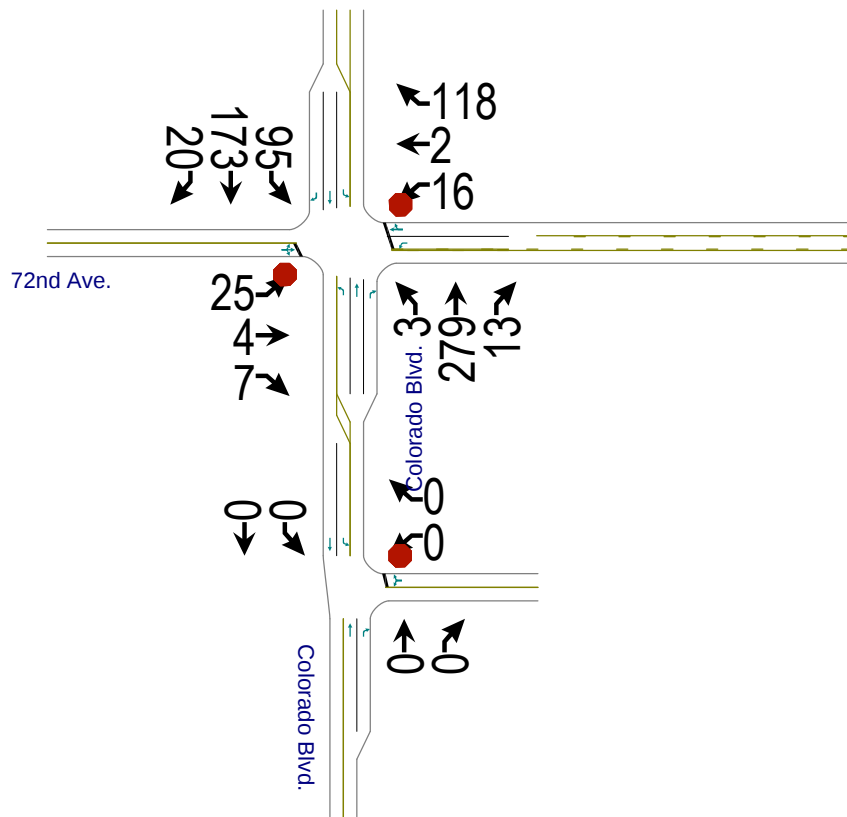
John M.W. Aldridge, P.E.
Principal

JMWA/me

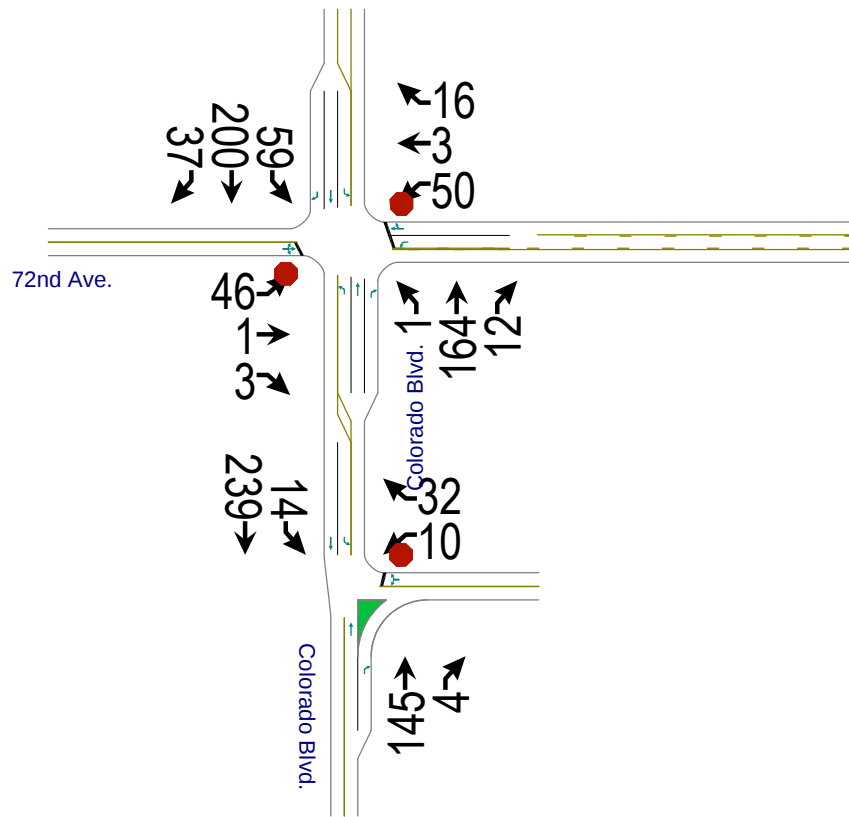




Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	1	3	48	3	16	1	134	10	59	188	37
Future Vol, veh/h	46	1	3	48	3	16	1	134	10	59	188	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	100	100	-	100
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	50	1	3	52	3	17	1	146	11	64	204	40
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	496	491	204	502	520	146	244	0	0	157	0	0
Stage 1	332	332	-	148	148	-	-	-	-	-	-	-
Stage 2	164	159	-	354	372	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	484	478	837	480	461	901	1322	-	-	1423	-	-
Stage 1	681	644	-	855	775	-	-	-	-	-	-	-
Stage 2	838	766	-	663	619	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	455	456	837	461	440	901	1322	-	-	1423	-	-
Mov Cap-2 Maneuver	455	456	-	461	440	-	-	-	-	-	-	-
Stage 1	680	615	-	854	774	-	-	-	-	-	-	-
Stage 2	818	765	-	630	591	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	13.7		12.7		0.1		1.6					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	1322	-	-	468 461 773	1423	-	-					
HCM Lane V/C Ratio	0.001	-	-	0.116 0.113 0.027	0.045	-	-					
HCM Control Delay (s)	7.7	-	-	13.7 13.8 9.8	7.6	-	-					
HCM Lane LOS	A	-	-	B B A	A	-	-					
HCM 95th %tile Q(veh)	0	-	-	0.4 0.4 0.1	0.1	-	-					



Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	4	7	16	2	118	3	279	13	95	173	20
Future Vol, veh/h	25	4	7	16	2	118	3	279	13	95	173	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	100	100	-	100
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	27	4	8	17	2	128	3	303	14	103	188	22
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	775	717	188	720	725	303	210	0	0	317	0	0
Stage 1	394	394	-	309	309	-	-	-	-	-	-	-
Stage 2	381	323	-	411	416	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	315	355	854	343	352	737	1361	-	-	1243	-	-
Stage 1	631	605	-	701	660	-	-	-	-	-	-	-
Stage 2	641	650	-	618	592	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	242	325	854	315	322	737	1361	-	-	1243	-	-
Mov Cap-2 Maneuver	242	325	-	315	322	-	-	-	-	-	-	-
Stage 1	630	555	-	700	659	-	-	-	-	-	-	-
Stage 2	527	649	-	557	543	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	19.3		11.8		0.1		2.7					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	1361	-	-	291 315 722	1243	-	-					
HCM Lane V/C Ratio	0.002	-	-	0.134 0.055 0.181	0.083	-	-					
HCM Control Delay (s)	7.7	-	-	19.3 17.1 11.1	8.2	-	-					
HCM Lane LOS	A	-	-	C C B	A	-	-					
HCM 95th %tile Q(veh)	0	-	-	0.5 0.2 0.7	0.3	-	-					



Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔		↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	46	1	3	50	3	16	1	164	12	59	200	37
Future Vol, veh/h	46	1	3	50	3	16	1	164	12	59	200	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	100	100	-	100
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	50	1	3	54	3	17	1	178	13	64	217	40

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	542	538	217	547	565	178	257	0	0	191	0	0
Stage 1	345	345	-	180	180	-	-	-	-	-	-	-
Stage 2	197	193	-	367	385	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	451	450	823	448	434	865	1308	-	-	1383	-	-
Stage 1	671	636	-	822	750	-	-	-	-	-	-	-
Stage 2	805	741	-	653	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	423	429	823	429	414	865	1308	-	-	1383	-	-
Mov Cap-2 Maneuver	423	429	-	429	414	-	-	-	-	-	-	-
Stage 1	670	607	-	821	749	-	-	-	-	-	-	-
Stage 2	785	740	-	619	583	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.4		13.3		0		1.5	
HCM LOS	B		B					

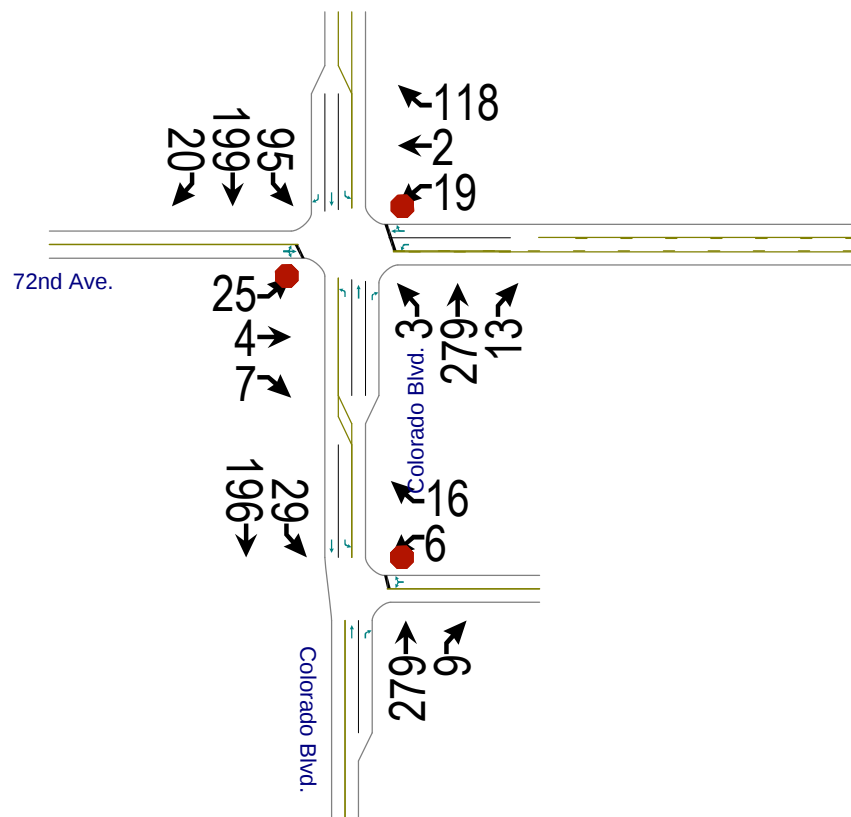
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1308	-	-	436 429 738	1383	-	-
HCM Lane V/C Ratio	0.001	-	-	0.125 0.127 0.028	0.046	-	-
HCM Control Delay (s)	7.8	-	-	14.4 14.6 10	7.7	-	-
HCM Lane LOS	A	-	-	B B B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4 0.4 0.1	0.1	-	-

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑	↑	↔	↑
Traffic Vol, veh/h	10	32	145	4	14	239
Future Vol, veh/h	10	32	145	4	14	239
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	Free
Storage Length	0	-	-	100	100	-
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	11	35	158	4	15	260

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	448	158	0	-	158
Stage 1	158	-	-	-	-
Stage 2	290	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	568	887	-	0	1422
Stage 1	871	-	-	0	-
Stage 2	759	-	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	562	887	-	-	1422
Mov Cap-2 Maneuver	562	-	-	-	-
Stage 1	871	-	-	-	-
Stage 2	751	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBTWBLn1	SBL	SBT
Capacity (veh/h)	- 780	1422	-
HCM Lane V/C Ratio	- 0.059	0.011	-
HCM Control Delay (s)	- 9.9	7.6	-
HCM Lane LOS	- A	A	-
HCM 95th %tile Q(veh)	- 0.2	0	-



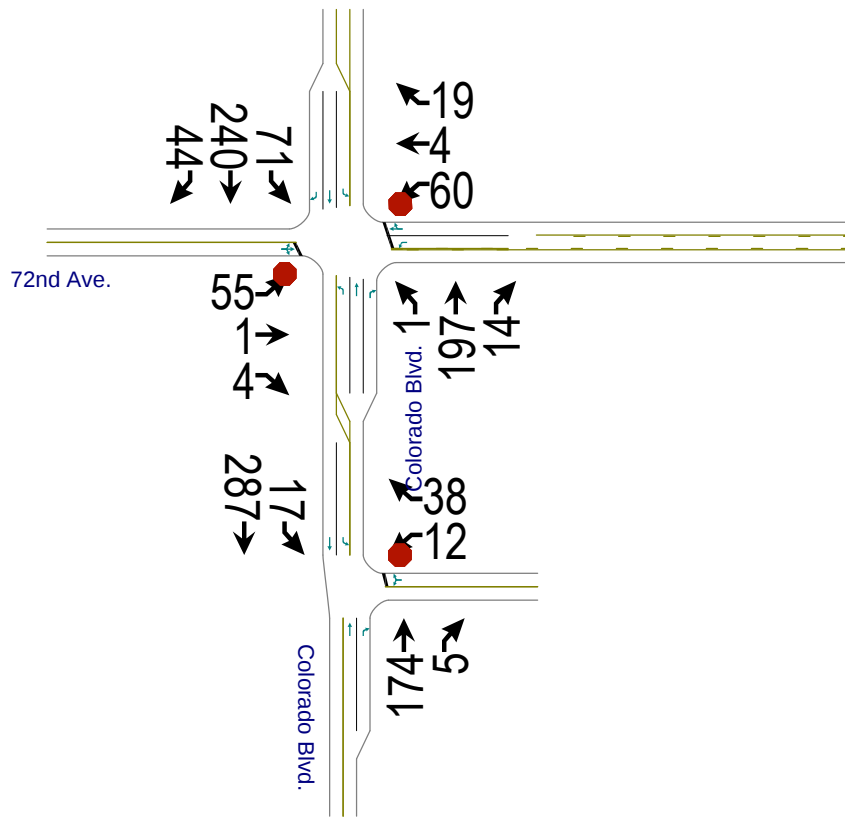
Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔		↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	25	4	7	19	2	118	3	279	13	95	199	20
Future Vol, veh/h	25	4	7	19	2	118	3	279	13	95	199	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	100	100	-	100
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	27	4	8	21	2	128	3	303	14	103	216	22

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	803	745	216	748	753	303	238	0	0	317	0	0
Stage 1	422	422	-	309	309	-	-	-	-	-	-	-
Stage 2	381	323	-	439	444	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	302	342	824	329	339	737	1329	-	-	1243	-	-
Stage 1	609	588	-	701	660	-	-	-	-	-	-	-
Stage 2	641	650	-	597	575	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	232	313	824	302	310	737	1329	-	-	1243	-	-
Mov Cap-2 Maneuver	232	313	-	302	310	-	-	-	-	-	-	-
Stage 1	608	539	-	700	659	-	-	-	-	-	-	-
Stage 2	527	649	-	538	527	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20	12	0.1	2.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1329	-	-	279 302 720	1243	-	-
HCM Lane V/C Ratio	0.002	-	-	0.14 0.068 0.181	0.083	-	-
HCM Control Delay (s)	7.7	-	-	20 17.8 11.1	8.2	-	-
HCM Lane LOS	A	-	-	C C B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5 0.2 0.7	0.3	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	16	279	9	29	196
Future Vol, veh/h	6	16	279	9	29	196
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	100	-
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	17	303	10	32	213
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	580	303	0	0	313	0
Stage 1	303	-	-	-	-	-
Stage 2	277	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	477	737	-	-	1247	-
Stage 1	749	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	465	737	-	-	1247	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	750	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.9	0	1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	636	1247	-	
HCM Lane V/C Ratio	-	-	0.038	0.025	-	
HCM Control Delay (s)	-	-	10.9	8	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	



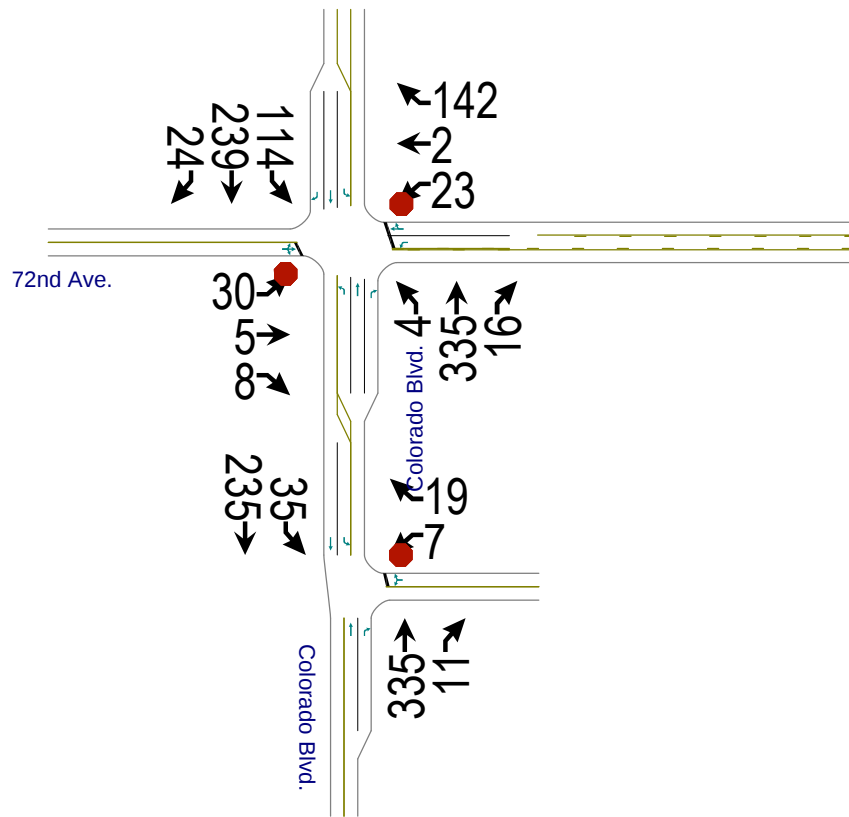
Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕	↕	↕	↕	↕
Traffic Vol, veh/h	46	1	3	50	3	16	1	164	12	59	200	37
Future Vol, veh/h	46	1	3	50	3	16	1	164	12	59	200	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	100	100	-	100
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	60	1	4	65	4	21	1	214	16	77	261	48

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	652	647	261	658	679	214	309	0	0	230	0	0
Stage 1	415	415	-	216	216	-	-	-	-	-	-	-
Stage 2	237	232	-	442	463	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	381	390	778	378	374	826	1252	-	-	1338	-	-
Stage 1	615	592	-	786	724	-	-	-	-	-	-	-
Stage 2	766	713	-	594	564	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	352	367	778	358	352	826	1252	-	-	1338	-	-
Mov Cap-2 Maneuver	352	367	-	358	352	-	-	-	-	-	-	-
Stage 1	614	558	-	785	723	-	-	-	-	-	-	-
Stage 2	742	712	-	556	531	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17	15.4	0	1.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1252	-	-	364 358 681	1338	-	-
HCM Lane V/C Ratio	0.001	-	-	0.179 0.182 0.036	0.058	-	-
HCM Control Delay (s)	7.9	-	-	17 17.3 10.5	7.9	-	-
HCM Lane LOS	A	-	-	C C B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6 0.7 0.1	0.2	-	-

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑	↑	↔	↑
Traffic Vol, veh/h	10	32	145	4	14	239
Future Vol, veh/h	10	32	145	4	14	239
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	100	-
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	13	42	189	5	18	312
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	537	189	0	0	194	0
Stage 1	189	-	-	-	-	-
Stage 2	348	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	505	853	-	-	1379	-
Stage 1	843	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	498	853	-	-	1379	-
Mov Cap-2 Maneuver	498	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	706	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.3	0	0.4			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	729	1379	-	
HCM Lane V/C Ratio	-	-	0.075	0.013	-	
HCM Control Delay (s)	-	-	10.3	7.6	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	



Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔		↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	25	4	7	19	2	118	3	279	13	95	199	20
Future Vol, veh/h	25	4	7	19	2	118	3	279	13	95	199	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	100	-	100	100	-	100
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	33	5	9	25	3	154	4	364	17	124	260	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	967	897	260	900	906	364	286	0	0	381	0	0
Stage 1	508	508	-	372	372	-	-	-	-	-	-	-
Stage 2	459	389	-	528	534	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	234	279	779	259	276	681	1276	-	-	1177	-	-
Stage 1	547	539	-	648	619	-	-	-	-	-	-	-
Stage 2	582	608	-	534	524	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	165	249	779	231	246	681	1276	-	-	1177	-	-
Mov Cap-2 Maneuver	165	249	-	231	246	-	-	-	-	-	-	-
Stage 1	545	482	-	646	617	-	-	-	-	-	-	-
Stage 2	447	606	-	467	469	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	27.8		13.5		0.1		2.5	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1276	-	-	204 231 662	1177	-	-
HCM Lane V/C Ratio	0.003	-	-	0.23 0.107 0.236	0.105	-	-
HCM Control Delay (s)	7.8	-	-	27.8 22.4 12.1	8.4	-	-
HCM Lane LOS	A	-	-	D C B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9 0.4 0.9	0.4	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	16	279	9	29	196
Future Vol, veh/h	6	16	279	9	29	196
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	100	-
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	8	21	364	12	38	256
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	696	364	0	0	376	0
Stage 1	364	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	408	681	-	-	1182	-
Stage 1	703	-	-	-	-	-
Stage 2	727	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	395	681	-	-	1182	-
Mov Cap-2 Maneuver	395	-	-	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	704	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.7	0		1		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		569	1182	
HCM Lane V/C Ratio	-	-		0.05	0.032	
HCM Control Delay (s)	-	-		11.7	8.1	
HCM Lane LOS	-	-		B	A	
HCM 95th %tile Q(veh)	-	-		0.2	0.1	



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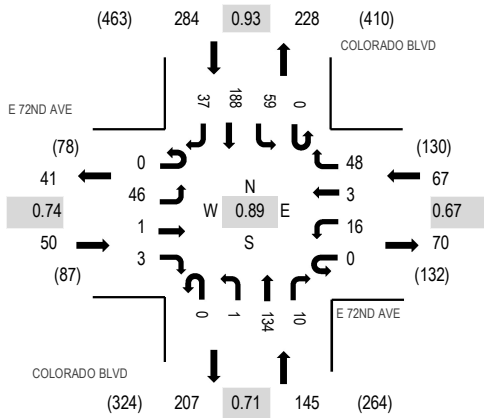
Location: 2 COLORADO BLVD & E 72ND AVE AM

Date: Thursday, July 23, 2020

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

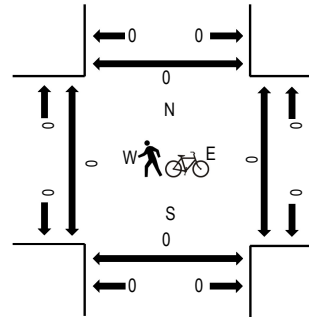
Peak 15-Minutes: 07:00 AM - 07:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	E 72ND AVE Eastbound				E 72ND AVE Westbound				COLORADO BLVD Northbound				COLORADO BLVD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	11	0	1	0	3	2	9	0	0	48	3	0	10	49	17	153	546	0	0	0	0
7:15 AM	0	8	1	0	0	6	1	8	0	1	31	2	0	14	51	8	131	487	0	0	0	0
7:30 AM	0	16	0	1	0	4	0	21	0	0	28	3	0	17	42	4	136	463	0	0	0	0
7:45 AM	0	11	0	1	0	3	0	10	0	0	27	2	0	18	46	8	126	422	0	0	0	0
8:00 AM	0	6	0	0	0	5	1	6	0	0	23	6	0	8	28	11	94	398	0	0	0	0
8:15 AM	0	14	1	0	0	2	1	10	0	1	28	3	0	12	28	7	107		0	0	0	0
8:30 AM	0	5	0	1	0	3	2	15	0	1	27	2	0	10	21	8	95		0	0	0	0
8:45 AM	0	10	0	0	1	6	0	11	0	0	27	1	0	18	23	5	102		0	0	0	0
Count Total	0	81	2	4	1	32	7	90	0	3	239	22	0	107	288	68	944		0	0	0	0
Peak Hour	0	46	1	3	0	16	3	48	0	1	134	10	0	59	188	37	546		0	0	0	0



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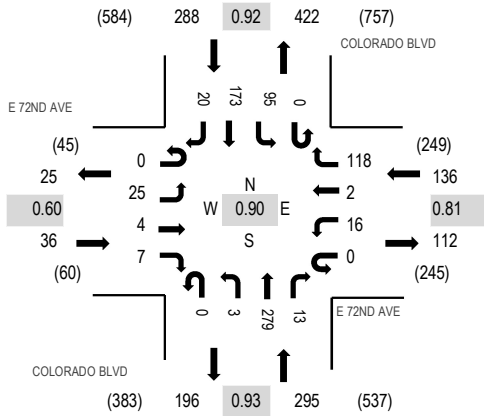
Location: 2 COLORADO BLVD & E 72ND AVE PM

Date: Thursday, July 23, 2020

Peak Hour: 04:00 PM - 05:00 PM

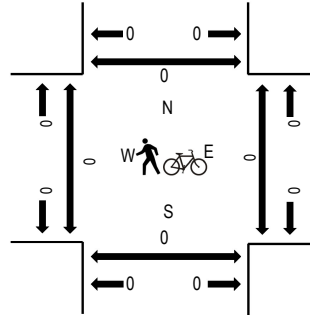
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	E 72ND AVE Eastbound				E 72ND AVE Westbound				COLORADO BLVD Northbound				COLORADO BLVD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	13	1	1	0	5	0	33	0	1	69	5	0	22	50	9	209	755	0	0	0	0
4:15 PM	0	3	1	2	0	4	2	15	0	0	73	6	0	20	41	2	169	730	0	0	0	0
4:30 PM	0	6	1	2	0	5	0	40	0	0	77	0	0	25	34	3	193	733	0	0	0	0
4:45 PM	0	3	1	2	0	2	0	30	0	2	60	2	0	28	48	6	184	706	0	0	0	0
5:00 PM	0	2	2	0	0	4	1	34	0	0	62	4	0	30	44	1	184	675	0	0	0	0
5:15 PM	0	3	1	0	0	3	0	26	0	2	59	4	0	27	43	4	172		0	2	0	0
5:30 PM	0	2	5	2	0	4	1	22	0	1	56	1	0	30	37	5	166		0	0	0	0
5:45 PM	0	4	2	1	0	3	1	14	0	1	51	1	0	26	46	3	153		0	0	0	0
Count Total	0	36	14	10	0	30	5	214	0	7	507	23	0	208	343	33	1,430		0	2	0	0
Peak Hour	0	25	4	7	0	16	2	118	0	3	279	13	0	95	173	20	755		0	0	0	0