



ALDRIDGE TRANSPORTATION CONSULTANTS, LLC
Advanced Transportation Planning and Traffic Engineering

John M.W. Aldridge, P.E.
Colorado Licensed Professional Engineer

1082 Chimney Rock Road
Highlands Ranch, CO 80126
303-703-9112

April 8, 2022

Mr. Matt Buono, PE
Centerpoint Engineering
1626 Cole Blvd. Suite 125
Lakewood, CO 80401

RE: Abbreviated Transportation Impact Study
19503 E. College Dr. – Aurora, CO

Dear Mr. Buono:

Aldridge Transportation Consultants (ATC) is pleased to present this traffic impact study for the proposed construction of a residential development in Aurora.

ATC is professional service firm specializing in traffic engineering and transportation planning. ATC's principal, John M.W. Aldridge is a Colorado licensed professional engineer. In the past 20 years, ATC has prepared over 1,000 traffic impact studies, designed over 100 traffic signals, and has provided expert witness testimony on engineering design and access issues on multi-million-dollar interchange and highway projects in Kansas and Colorado.

We acknowledge that City of Aurora's review of this study is only for general performance with submittal requirements, current design criteria, and standard engineering principles and practice.

ATC appreciates the opportunity to be of service. Please call if you have any questions. We can be reached at 303-703-9112.

Respectfully submitted,

Aldridge Transportation Consultants, LLC

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





INTRODUCTION

This Traffic Impact Study examines the potential impact on traffic that would be caused by the development of 103 apartments at 19503 E. College Dr. in Aurora. Figure 1 shows the site vicinity and the surrounding streets and intersections.



Figure 1 Site Location and Surrounding Streets and Intersections

The site is located on the southwest corner of E. Villanova Pl. and S. Flanders St. in Aurora. The apartments will be accessed via E. College Dr. and E. Villanova Pl. on the north side. There is also a connection of E. College Dr. through the Balterra Apartment complex to S. Danube St.

EXISTING CONDITIONS

E. Villanova Pl. is a two-lane Collector roadway it is developed with detached sidewalks and curb and gutter on both sides. It carries approximately 2,500 ADT and is posted at 30 mph.

S. Flanders St./E. Vassar Ave. is a two-lane Collector roadway. The speed limit is 30 mph and it carries approximately 2,000 ADT on the Flanders section and less than 1,000 ADT on the Vassar Section. It is developed with detached sidewalks on the Flanders section and attached sidewalks on the Vassar section.

The intersection of E. Villanova Pl. and S. Flanders St./E. Vassar Ave. is two-way stop sign controlled. E. Villanova Pl. is stopped.

E. College Dr. is a two-lane Local roadway. It extends from S. Danube Way on the west end and then to E. Villanova Pl. It primarily serves as access to the Balterra Apartments.

Traffic counts at E. Villanova Pl. and S. Flanders St./E. Vassar Ave. were taken on May 5, 2022 by All Traffic Data. The count worksheets are attached.



LAND USE and TRIP GENERATION

The property will be developed with 103 apartments. The trip generation rates are from the *ITE Trip Generation Manual, 11th Edition*. The following worksheet Table 1 provides the ADT and AM/PM Peak Hour traffic volumes.

Table 1

Trip Generation Worksheet										
ITE CODE	LAND USE	UNIT	QUANTITY	ADT	AM			PM		
					IN	OUT	TOTAL	IN	OUT	TOTAL
221	Mid-Rise Multifamily Not Close to Rail Transit	DU	103	4.54	0.08	0.28		0.24	0.15	
				468	8	29	38	25	16	40
Total Trips				468	8	29	38	25	16	40

TRAFFIC DISTRIBUTION & ASSIGNMENT

The trip distribution is expected to be split 90 percent to/from the west on E. Villanova Pl. and 10 to/from the south on S. Flanders St. Based on the distribution only 3 trips will be assigned to the EB to SB right turn and 1 trip to the NB to WB left turn during the AM Peak Hour and 2 EB to SB trips and 3 NB to WB trips during the PM Peak Hour.

FUTURE TRAFFIC VOLUMES

No growth other than what is generated by the project is expected on E. Villanova Pl. and S. Flanders St.

PEAK HOUR INTERSECTION LEVEL OF SERVICE

ATC uses Synchro v.10 for operations analyses. The Synchro methodology is based on the 6th Edition of the Highway Capacity Manual (HCM). The table summarizes the AM and PM peak hour LOS for the Existing, and the Existing plus Site Generated Traffic.

The HCM states that, "LOS is used to translate complex numerical performance rating into a simple A-F system representative of the travelers' perception of the quality of service provided by a facility or service. Practitioners and decision makers alike must understand that the LOS letter result hides much of the complexity of facility performance¹." LOS is a 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. The critical movement, not the overall, indicates the LOS rating for unsignalized intersections, which is generally a left turn out from the minor street approach. Caution must be used when evaluating the LOS at unsignalized intersections particularly when LOS F is shown. In case of LOS F, the HCM recommends that other evaluation methods should be considered such as the volume over capacity ratios, the 95th percentile queue length, and duration of LOS F to make the most effective traffic control decision². LOS F at unsignalized intersections is typically normal during the weekday peak hours as the duration of the LOS F condition is relatively short.

¹ HCM version 6, Chapter 5, pages 5-3 – 5-6.

² ditto



Table 2 LOS Summary (AM/PM)

Intersection	Existing LOS	Existing + Site Generated
E. Villanova/S. Flanders	B/B	B/B

The intersection currently operates at LOS B/B in the AM/PM Peak Hours, respectively. As there is no growth on the adjacent roadways, the intersection will continue to operate at LOS B/B in the 5- and 20-year futures.

The access location E. Villanova Pl. and E. College Dr. will also operate at LOS B/B or better during the same time periods. Realistically, the volumes are too small to be evaluated meaningfully by the standard procedures and methodology in the Synchro operations model.

PEDESTRIAN CONNECTIVITY

Sidewalks are available on all street frontages. These provide connectivity to area schools and parks but shopping and employment centers are over a mile away.

SITE CIRCULATION

There is an internal roadway named E. Water Pl. This will provide access to the 90° parking spaces on both sides of the roadway. Both ends of the roadway connect to E. College Dr. Both ends will be two-way stop sign controlled.

TRAFFIC CALMING

There are a considerable number of traffic calming techniques to address a myriad of traffic related problems including speeding, cut-through traffic, and pedestrian safety. Calming options to reduce speed include, but not limited to, automated speed radar signs, curb extensions, speed humps, roundabouts, chicanes, and raised crosswalks. These vary in effectiveness. Speed humps (cushions, tables, etc.) can be very effective, but also dangerous if not used properly. Automated speed radar signs are only marginally effective and unenforceable.

The city has a Neighborhood Traffic Calming Program that allows neighborhoods to apply for traffic calming program that aims to reduce speeding and cut-through traffic on residential streets and improve the neighborhood's quality of life. The application requires a neighborhood organization to list the exact location of the concern and to describe issues to be resolved such as speeding, cut-through traffic, problems crossing the street, drivers not obeying regulatory signs, etc. Once an application is received the City has a 10-step process to work with the neighbors, determine eligibility, get support from all affected neighbors, develop cost estimates, identify effectiveness, determine impact on traffic patterns, and identify funding for the implementation of the approved measure.

In this case, though, the only proactive traffic calming measure that could be reasonably deployed are speed humps/bumps on E. College Dr. However, given the shortness/narrowness of the street a speeding issue is not foreseen.



CONCLUSIONS & RECOMMENDATIONS

Based on the analysis, traffic from the site can be absorbed by the adjacent streets and intersections and not cause a safety or operational problem. The proposed access locations are the best engineering fit for the parcel's configuration and accessibility to the streets.

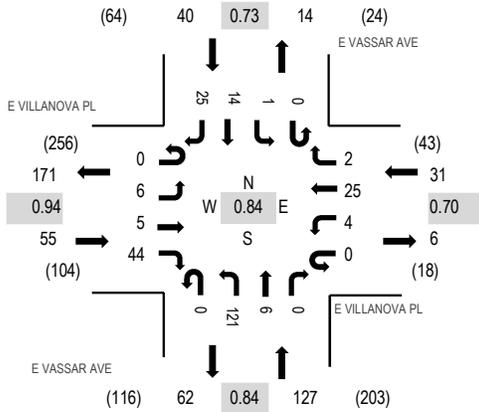
Location: 1 E VASSAR AVE & E VILLANOVA PL AM

Date: Thursday, May 5, 2022

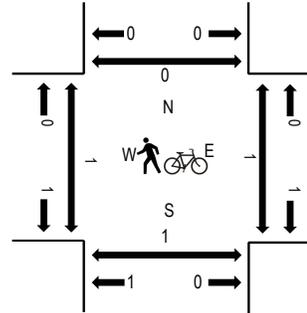
Peak Hour: 07:00 AM - 08:00 AM

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

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	E VILLANOVA PL Eastbound				E VILLANOVA PL Westbound				E VASSAR AVE Northbound				E VASSAR AVE 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	0	0	10	0	1	6	0	0	0	29	2	0	0	0	0	4	4	56	253	0	0	0	0
7:15 AM	0	2	1	8	0	1	7	1	0	0	36	2	0	0	0	1	7	66	251	0	0	0	0	
7:30 AM	0	3	3	12	0	1	10	0	0	0	31	1	0	0	0	3	11	75	233	1	0	1	0	
7:45 AM	0	1	1	14	0	1	2	1	0	0	25	1	0	0	1	6	3	56	195	0	1	0	0	
8:00 AM	0	1	3	14	0	1	3	0	0	0	22	0	1	0	0	4	5	54	161	0	0	0	0	
8:15 AM	0	1	3	12	0	1	3	0	0	0	18	1	1	0	0	3	5	48		0	0	0	0	
8:30 AM	0	0	2	8	0	1	2	0	0	0	15	4	1	0	0	3	1	37		0	0	0	0	
8:45 AM	0	0	0	5	0	0	1	0	0	0	9	3	1	0	0	2	1	22		1	0	0	0	
Count Total	0	8	13	83	0	7	34	2	0	0	185	14	4	0	1	26	37	414		2	1	1	0	
Peak Hour	0	6	5	44	0	4	25	2	0	0	121	6	0	0	1	14	25	253		1	1	1	0	



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

Location: 1 E VASSAR AVE & E VILLANOVA PL PM

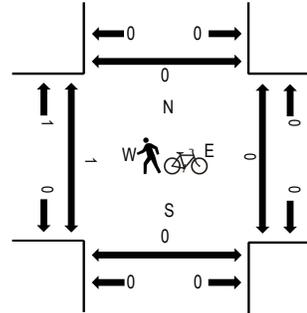
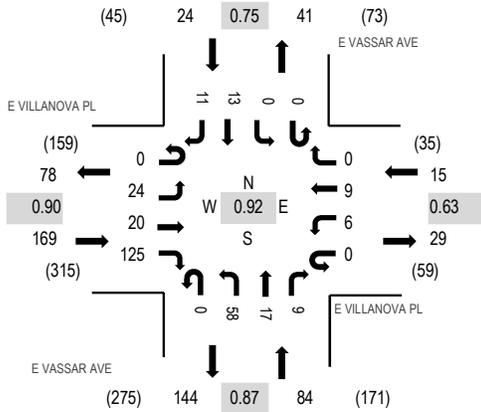
Date: Thursday, May 5, 2022

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

Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles

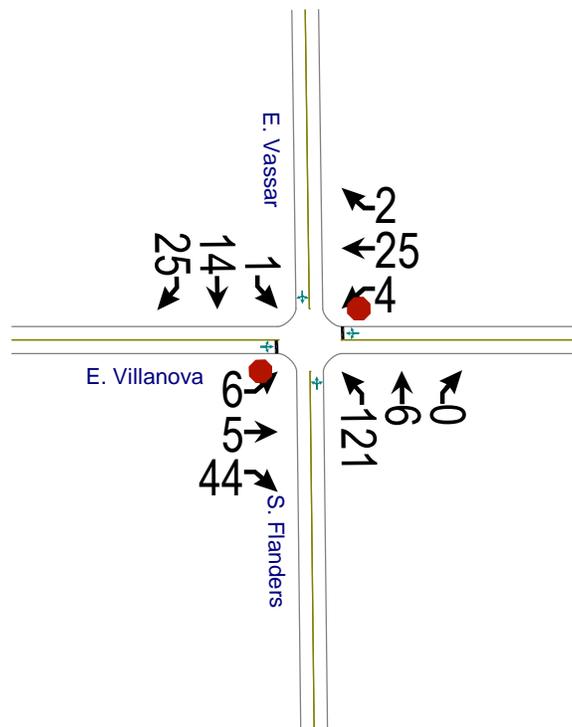
Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	E VILLANOVA PL Eastbound				E VILLANOVA PL Westbound				E VASSAR AVE Northbound				E VASSAR AVE 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	5	2	29	0	1	1	0	0	12	8	4	0	0	3	3	68	292	1	0	0	0
4:15 PM	0	7	7	30	0	1	3	0	0	12	0	2	0	0	2	2	66	278	0	0	0	0
4:30 PM	0	7	7	33	0	3	2	0	0	15	5	1	0	0	3	3	79	290	0	0	0	0
4:45 PM	0	5	4	33	0	1	3	0	0	19	4	2	0	0	5	3	79	288	0	0	0	0
5:00 PM	0	6	5	21	0	3	0	0	0	8	5	2	0	0	2	2	54	274	0	0	0	1
5:15 PM	0	3	8	29	0	4	3	1	0	18	4	3	0	0	4	1	78		0	0	0	0
5:30 PM	0	3	6	38	0	2	3	0	0	17	4	1	0	0	1	2	77		0	0	0	0
5:45 PM	0	3	2	22	0	1	3	0	0	19	3	3	0	0	4	5	65		0	0	0	0
Count Total	0	39	41	235	0	16	18	1	0	120	33	18	0	0	24	21	566		1	0	0	1
Peak Hour	0	24	20	125	0	6	9	0	0	58	17	9	0	0	13	11	292		1	0	0	0

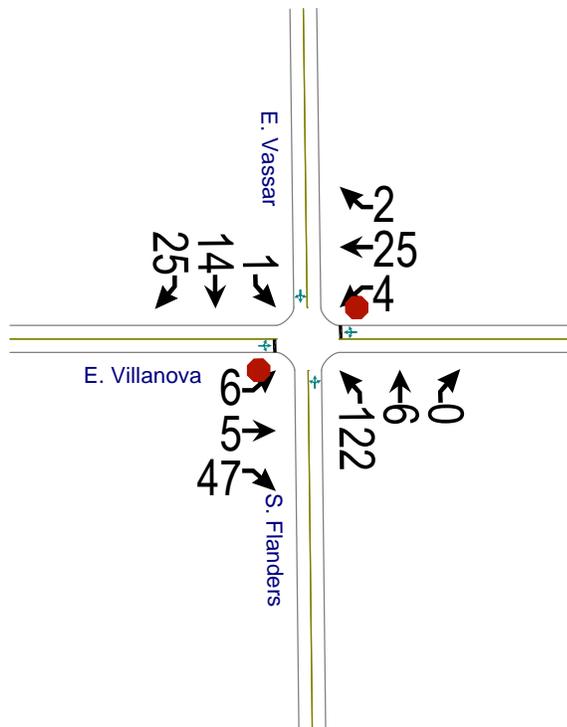


Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	5	44	4	25	2	121	6	0	1	14	25
Future Vol, veh/h	6	5	44	4	25	2	121	6	0	1	14	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
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	7	5	48	4	27	2	132	7	0	1	15	27

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	317	302	29	328	315	7	42	0	0	7	0	0
Stage 1	31	31	-	271	271	-	-	-	-	-	-	-
Stage 2	286	271	-	57	44	-	-	-	-	-	-	-
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	636	611	1046	625	601	1075	1567	-	-	1614	-	-
Stage 1	986	869	-	735	685	-	-	-	-	-	-	-
Stage 2	721	685	-	955	858	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	571	558	1046	553	549	1075	1567	-	-	1614	-	-
Mov Cap-2 Maneuver	571	558	-	553	549	-	-	-	-	-	-	-
Stage 1	902	868	-	673	627	-	-	-	-	-	-	-
Stage 2	630	627	-	905	857	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.3		11.8		7.2		0.2	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1567	-	-	894	567	1614	-	-
HCM Lane V/C Ratio	0.084	-	-	0.067	0.059	0.001	-	-
HCM Control Delay (s)	7.5	0	-	9.3	11.8	7.2	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	0.2	0	-	-

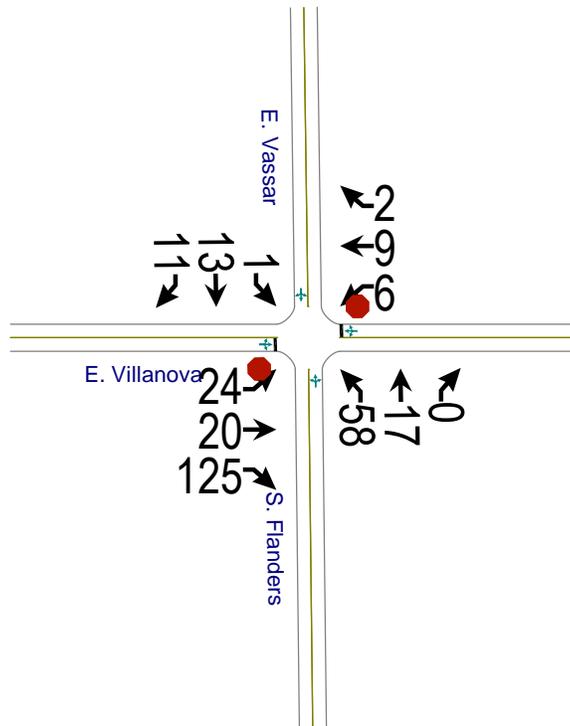


Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	5	47	4	25	2	122	6	0	1	14	25
Future Vol, veh/h	6	5	47	4	25	2	122	6	0	1	14	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
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	7	5	51	4	27	2	133	7	0	1	15	27

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	319	304	29	332	317	7	42	0	0	7	0	0
Stage 1	31	31	-	273	273	-	-	-	-	-	-	-
Stage 2	288	273	-	59	44	-	-	-	-	-	-	-
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	634	609	1046	621	599	1075	1567	-	-	1614	-	-
Stage 1	986	869	-	733	684	-	-	-	-	-	-	-
Stage 2	720	684	-	953	858	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	569	557	1046	548	547	1075	1567	-	-	1614	-	-
Mov Cap-2 Maneuver	569	557	-	548	547	-	-	-	-	-	-	-
Stage 1	902	868	-	671	626	-	-	-	-	-	-	-
Stage 2	629	626	-	900	857	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.3		11.8		7.2		0.2	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1567	-	-	900	565	1614	-
HCM Lane V/C Ratio	0.085	-	-	0.07	0.06	0.001	-
HCM Control Delay (s)	7.5	0	-	9.3	11.8	7.2	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.2	0.2	0	-

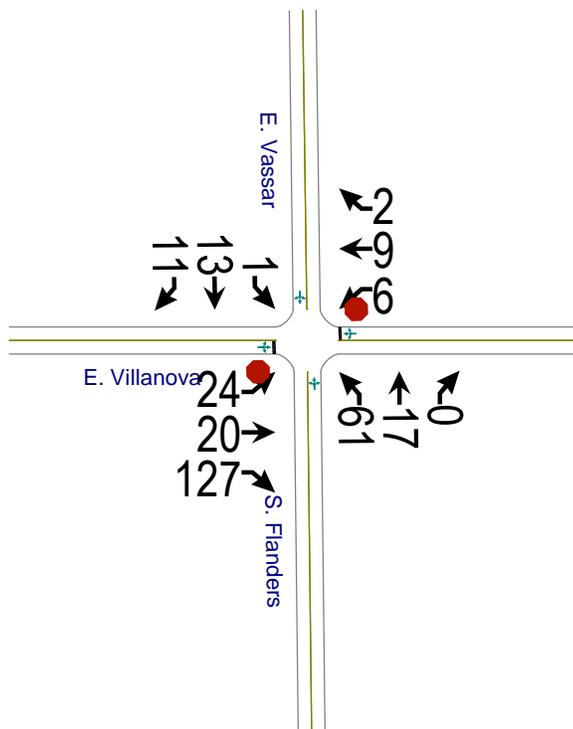


Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	20	125	6	9	2	58	17	0	1	13	11
Future Vol, veh/h	24	20	125	6	9	2	58	17	0	1	13	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
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	26	22	136	7	10	2	63	18	0	1	14	12

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	172	166	20	245	172	18	26	0	0	18	0	0
Stage 1	22	22	-	144	144	-	-	-	-	-	-	-
Stage 2	150	144	-	101	28	-	-	-	-	-	-	-
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	791	727	1058	709	721	1061	1588	-	-	1599	-	-
Stage 1	996	877	-	859	778	-	-	-	-	-	-	-
Stage 2	853	778	-	905	872	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	756	697	1058	584	691	1061	1588	-	-	1599	-	-
Mov Cap-2 Maneuver	756	697	-	584	691	-	-	-	-	-	-	-
Stage 1	956	876	-	825	747	-	-	-	-	-	-	-
Stage 2	807	747	-	768	871	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.7		10.5		5.7		0.3	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1588	-	-	946	675	1599	-
HCM Lane V/C Ratio	0.04	-	-	0.194	0.027	0.001	-
HCM Control Delay (s)	7.4	0	-	9.7	10.5	7.3	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.1	0	-



Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	20	127	6	9	2	61	17	0	1	13	11
Future Vol, veh/h	24	20	127	6	9	2	61	17	0	1	13	11
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									
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	26	22	138	7	10	2	66	18	0	1	14	12

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	178	172	20	252	178	18	26	0	0	18	0	0
Stage 1	22	22	-	150	150	-	-	-	-	-	-	-
Stage 2	156	150	-	102	28	-	-	-	-	-	-	-
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	784	721	1058	701	716	1061	1588	-	-	1599	-	-
Stage 1	996	877	-	853	773	-	-	-	-	-	-	-
Stage 2	846	773	-	904	872	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	749	690	1058	576	685	1061	1588	-	-	1599	-	-
Mov Cap-2 Maneuver	749	690	-	576	685	-	-	-	-	-	-	-
Stage 1	954	876	-	817	741	-	-	-	-	-	-	-
Stage 2	798	741	-	766	871	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.7		10.5		5.8		0.3	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1588	-	-	944	668	1599	-	-
HCM Lane V/C Ratio	0.042	-	-	0.197	0.028	0.001	-	-
HCM Control Delay (s)	7.4	0	-	9.7	10.5	7.3	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.1	0	-	-