

**Intersection Level Of Service Report**  
**Intersection 1: Alder Ave/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	77.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

**Intersection Setup**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	5	2	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	1	45	18	2	9	8	918	20	19	705	13
Peak Hour Factor	0.7740	0.7740	0.7740	0.6670	0.6670	0.6670	0.9540	0.9540	0.9540	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	0	15	7	1	3	2	241	5	6	207	4
Total Analysis Volume [veh/h]	30	1	58	27	3	13	8	962	21	22	826	15
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.34	0.01	0.11	0.29	0.04	0.02	0.01	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	67.28	77.13	12.52	63.28	75.47	11.20	9.53	0.00	0.00	10.23	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.38	1.38	0.36	1.29	1.29	0.07	0.03	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	34.61	34.61	9.03	32.32	32.32	1.68	0.75	0.00	0.00	2.39	0.00	0.00
d_A, Approach Delay [s/veh]	31.70			48.39			0.08			0.26		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	2.62											
Intersection LOS	F											

**Intersection Level Of Service Report  
Intersection 2: Proj Dwy 1/Slover Ave**

Control Type: Two-way stop  
 Analysis Method: HCM 6th Edition  
 Analysis Period: 15 minutes

Delay (sec / veh): 21.4  
 Level Of Service: C  
 Volume to Capacity (v/c): 0.018

**Intersection Setup**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			TT			TT		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

**Volumes**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	976	0	0	976	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	3	2	0	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	0	0	0	0	0	979	2	0	983	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	0	0	0	0	258	1	0	259	0
Total Analysis Volume [veh/h]	4	0	0	0	0	0	0	1031	2	0	1035	0
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	21.43	0.00	12.37	21.19	0.00	12.08	10.30	0.00	0.00	10.29	0.00	0.00
Movement LOS	C		B	C		B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.37	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	21.43			16.64			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.04											
Intersection LOS	C											

**Intersection Level Of Service Report  
Intersection 3: Proj Dwy 2/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	0	976	0	0	976
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	13	0	3	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	13	976	3	6	976
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	257	1	2	257
Total Analysis Volume [veh/h]	7	14	1027	3	6	1027
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.03	0.03	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	18.83	12.57	0.00	0.00	10.32	0.00
Movement LOS	C	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	4.21	4.21	0.00	0.00	0.67	0.00
d_A, Approach Delay [s/veh]	14.66		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 4: Alder Ave/Proj Dwy 3**

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

Name	Alder Ave		Alder Ave		Westbound	
Approach	Northbound		Southbound			
Lane Configuration	↩		↪		↔	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Alder Ave		Alder Ave		Westbound	
Base Volume Input [veh/h]	39	0	39	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	2	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	0	41	0	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	11	0	0	1
Total Analysis Volume [veh/h]	41	0	43	0	0	4
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.26	8.49
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.08	0.08	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.10	2.10	0.29	0.29
d_A, Approach Delay [s/veh]	0.00		7.34		8.49	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.97					
Intersection LOS	A					

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Scenario 4 Existing PM Plus Project

Report File: C:\...\Existing PM plus Project.pdf

3/21/2022

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Alder Ave/Slover Ave	23	1	45	18	2	9	8	918	20	19	705	13	1781

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	4	0	0	0	0	979	2	0	983	0	1968

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	7	13	976	3	6	976	1981

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	39	0	41	0	0	4	84

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Scenario 7 Opening AM Plus Project

Report File: C:\...\Opening AM plus Project.pdf

3/21/2022

**Intersection Analysis Summary**

<b>ID</b>	<b>Intersection Name</b>	<b>Control Type</b>	<b>Method</b>	<b>Worst Mvmt</b>	<b>V/C</b>	<b>Delay (s/veh)</b>	<b>LOS</b>
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.052	715.6	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.002	12.4	B
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.004	11.9	B
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.001	9.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Alder Ave/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	715.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

**Intersection Setup**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	← →			← →			← → ←			← → ←		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	9	3	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	1	75	4	1	12	9	374	52	223	664	6
Peak Hour Factor	0.5490	0.5490	0.5490	0.6070	0.6070	0.6070	0.6420	0.6420	0.6420	0.7780	0.7780	0.7780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	0	34	2	0	5	4	146	20	72	213	2
Total Analysis Volume [veh/h]	102	2	137	7	2	20	14	583	81	287	853	8
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	2.07	0.05	0.19	0.21	0.06	0.03	0.02	0.01	0.00	0.31	0.01	0.00
d_M, Delay for Movement [s/veh]	695.33	715.59	11.27	150.96	144.90	11.41	9.64	0.00	0.00	10.55	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	10.56	10.56	0.71	0.87	0.87	0.11	0.05	0.00	0.00	1.31	0.00	0.00
95th-Percentile Queue Length [ft/ln]	264.01	264.01	17.73	21.67	21.67	2.67	1.35	0.00	0.00	32.71	0.00	0.00
d_A, Approach Delay [s/veh]	306.63			54.30			0.20			2.64		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	37.52											
Intersection LOS	F											

**Intersection Level Of Service Report  
Intersection 2: Proj Dwy 1/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

**Intersection Setup**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			TT			TT		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

**Volumes**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	427	0	0	427	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	6	3	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	0	0	0	0	450	3	0	446	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	118	1	0	117	0
Total Analysis Volume [veh/h]	1	0	0	0	0	0	0	474	3	0	469	0
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.43	0.00	9.70	12.36	0.00	9.65	8.26	0.00	0.00	8.29	0.00	0.00
Movement LOS	B		A	B		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.15	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.43			11.01			0.00			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.01											
Intersection LOS	B											

**Intersection Level Of Service Report  
Intersection 3: Proj Dwy 2/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	0	427	0	0	427
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	0	6	12	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	3	444	6	12	444
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	117	2	3	117
Total Analysis Volume [veh/h]	2	3	467	6	13	467
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.87	9.71	0.00	0.00	8.31	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	0.58	0.58	0.00	0.00	0.90	0.00
d_A, Approach Delay [s/veh]	10.58		0.00		0.23	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	B					

**Intersection Level Of Service Report  
Intersection 4: Alder Ave/Proj Dwy 3**

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

**Intersection Setup**

Name	Alder Ave		Alder Ave		Westbound	
Approach	Northbound		Southbound			
Lane Configuration	↩		↪		↔	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Alder Ave		Alder Ave		Westbound	
Base Volume Input [veh/h]	262	0	0	262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	272	0	3	272	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	0	1	72	0	0
Total Analysis Volume [veh/h]	286	0	3	286	0	1
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.80	0.00	12.51	9.76
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.18	0.18	0.10	0.10
d_A, Approach Delay [s/veh]	0.00		0.08		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover\_Whyyyyy.vistro

Scenario 7 Opening AM Plus Project

Report File: C:\...\Opening AM plus Project.pdf

3/21/2022

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Alder Ave/Slover Ave	56	1	75	4	1	12	9	374	52	223	664	6	1477

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	1	0	0	0	0	450	3	0	446	0	900

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	2	3	444	6	12	444	911

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	272	0	3	272	0	1	548

Vistro File: C:\...\Alder and Slover\_Whyyyyy.vistro

Scenario 8 Opening PM Plus Project

Report File: C:\...\Opening PM plus Project.pdf

3/21/2022

**Intersection Analysis Summary**

<b>ID</b>	<b>Intersection Name</b>	<b>Control Type</b>	<b>Method</b>	<b>Worst Mvmt</b>	<b>V/C</b>	<b>Delay (s/veh)</b>	<b>LOS</b>
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.016	90.4	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.019	22.4	C
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.027	19.5	C
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.004	8.5	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Alder Ave/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	90.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

**Intersection Setup**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	← →			← →			← → ←			← → ←		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	5	2	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	1	47	19	2	9	8	955	21	20	733	14
Peak Hour Factor	0.7740	0.7740	0.7740	0.6670	0.6670	0.6670	0.9540	0.9540	0.9540	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	0	15	7	1	3	2	250	6	6	215	4
Total Analysis Volume [veh/h]	31	1	61	28	3	13	8	1001	22	23	859	16
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.39	0.02	0.12	0.34	0.05	0.02	0.01	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	79.11	90.36	12.82	74.28	88.07	11.36	9.66	0.00	0.00	10.43	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.62	1.62	0.39	1.51	1.51	0.07	0.03	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	40.42	40.42	9.87	37.86	37.86	1.72	0.78	0.00	0.00	2.60	0.00	0.00
d_A, Approach Delay [s/veh]	35.75			56.63			0.07			0.27		
Approach LOS	E			F			A			A		
d_I, Intersection Delay [s/veh]	2.97											
Intersection LOS	F											

**Intersection Level Of Service Report**  
**Intersection 2: Proj Dwy 1/Slover Ave**

Control Type: Two-way stop  
 Analysis Method: HCM 6th Edition  
 Analysis Period: 15 minutes

Delay (sec / veh): 22.4  
 Level Of Service: C  
 Volume to Capacity (v/c): 0.019

**Intersection Setup**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			TT			TT		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

**Volumes**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	976	0	0	976	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	3	2	0	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	0	0	0	0	0	1018	2	0	1022	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	0	0	0	0	268	1	0	269	0
Total Analysis Volume [veh/h]	4	0	0	0	0	0	0	1072	2	0	1076	0
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0




**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	22.41	0.00	12.62	22.13	0.00	12.31	10.49	0.00	0.00	10.48	0.00	0.00
Movement LOS	C		B	C		B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.45	0.00	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.41			17.22			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.04											
Intersection LOS	C											

**Intersection Level Of Service Report  
Intersection 3: Proj Dwy 2/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	19.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	0	976	0	0	976
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	13	0	3	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	13	1015	3	6	1015
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	267	1	2	267
Total Analysis Volume [veh/h]	7	14	1068	3	6	1068
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.03	0.03	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	19.54	12.84	0.00	0.00	10.52	0.00
Movement LOS	C	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.18	0.18	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	4.39	4.39	0.00	0.00	0.69	0.00
d_A, Approach Delay [s/veh]	15.07		0.00		0.06	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

**Intersection Level Of Service Report  
Intersection 4: Alder Ave/Proj Dwy 3**

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

Name	Alder Ave		Alder Ave		Westbound	
Approach	Northbound		Southbound			
Lane Configuration	↩		↪		↔	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Alder Ave		Alder Ave		Westbound	
Base Volume Input [veh/h]	39	0	39	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	2	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	0	43	0	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	0	11	0	0	1
Total Analysis Volume [veh/h]	43	0	45	0	0	4
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.35	0.00	9.29	8.50
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.09	0.09	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.20	2.20	0.29	0.29
d_A, Approach Delay [s/veh]	0.00		7.35		8.50	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.96					
Intersection LOS	A					

Vistro File: C:\...\Alder and Slover\_Whyyyyy.vistro

Scenario 8 Opening PM Plus Project

Report File: C:\...\Opening PM plus Project.pdf

3/21/2022

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Alder Ave/Slover Ave	24	1	47	19	2	9	8	955	21	20	733	14	1853

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	4	0	0	0	0	1018	2	0	1022	0	2046

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	7	13	1015	3	6	1015	2059

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	41	0	43	0	0	4	88

Version 2022 (SP 0-0)

Option 1: Signal

Number	1											
Intersection	Alder Ave/Slover Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
Total Analysis Volume [veh/h]	98	2	131	7	2	20	14	561	78	275	821	8

Intersection Settings

Cycle Length [s]	80											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	0	5	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	19	0	0	19	0	0	19	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			Yes			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.11	0.11	0.04	0.04	0.19	0.19	0.19	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.08	0.00	0.01	0.01	0.16	0.05	0.15	0.23	0.00
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3			3		
s, saturation flow rate [veh/h]	1811	1615	1829	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	201	179	80	71	345	690	308	487	973	434
X, volume / capacity	0.50	0.73	0.11	0.28	0.04	0.81	0.25	0.57	0.84	0.02
d, Delay for Lane Group [s/veh]	35.38	40.09	37.36	39.18	26.44	33.37	27.94	26.24	29.75	21.50
Lane Group LOS	D	D	D	D	C	C	C	C	C	C

Version 2022 (SP 0-0)

Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.92	2.72	0.18	0.42	0.21	5.01	1.22	4.25	7.01	0.10
50th-Percentile Queue Length [ft/ln]	47.95	68.05	4.55	10.48	5.20	125.34	30.45	106.24	175.34	2.60
95th-Percentile Queue Length [veh/ln]	3.45	4.90	0.33	0.75	0.37	8.69	2.19	7.63	11.36	0.19
95th-Percentile Queue Length [ft/ln]	86.31	122.49	8.19	18.86	9.36	217.14	54.81	190.76	283.92	4.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.38	35.38	40.09	37.36	37.36	39.18	26.44	33.37	27.94	26.24	29.75	21.50
Movement LOS	D	D	D	D	D	D	C	C	C	C	C	C
Critical Movement	No	No	Yes	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	38.05			38.61			32.57			28.82		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	31.23											
Intersection LOS	C											
Intersection V/C	0.476											

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Scenario 4 Existing PM Plus Project

Report File: C:\...MIT Existing PM plus proj.pdf

3/21/2022

**Intersection Analysis Summary**

<b>ID</b>	<b>Intersection Name</b>	<b>Control Type</b>	<b>Method</b>	<b>Worst Mvmt</b>	<b>V/C</b>	<b>Delay (s/veh)</b>	<b>LOS</b>
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.014	77.1	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.018	21.4	C
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.026	18.8	C
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.004	8.5	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Alder Ave/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	77.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

**Intersection Setup**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			No		

**Volumes**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	5	2	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	1	45	18	2	9	8	918	20	19	705	13
Peak Hour Factor	0.7740	0.7740	0.7740	0.6670	0.6670	0.6670	0.9540	0.9540	0.9540	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	0	15	7	1	3	2	241	5	6	207	4
Total Analysis Volume [veh/h]	30	1	58	27	3	13	8	962	21	22	826	15
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.34	0.01	0.11	0.29	0.04	0.02	0.01	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	67.28	77.13	12.52	63.28	75.47	11.20	9.53	0.00	0.00	10.23	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.38	1.38	0.36	1.29	1.29	0.07	0.03	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	34.61	34.61	9.03	32.32	32.32	1.68	0.75	0.00	0.00	2.39	0.00	0.00
d_A, Approach Delay [s/veh]	31.70			48.39			0.08			0.26		
Approach LOS	D			E			A			A		
d_I, Intersection Delay [s/veh]	2.62											
Intersection LOS	F											

**Intersection Level Of Service Report  
Intersection 2: Proj Dwy 1/Slover Ave**

Control Type: Two-way stop  
 Analysis Method: HCM 6th Edition  
 Analysis Period: 15 minutes

Delay (sec / veh): 21.4  
 Level Of Service: C  
 Volume to Capacity (v/c): 0.018

**Intersection Setup**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			TT			TT		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

**Volumes**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	976	0	0	976	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	0	0	3	2	0	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	0	0	0	0	0	979	2	0	983	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	0	0	0	0	258	1	0	259	0
Total Analysis Volume [veh/h]	4	0	0	0	0	0	0	1031	2	0	1035	0
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	21.43	0.00	12.37	21.19	0.00	12.08	10.30	0.00	0.00	10.29	0.00	0.00
Movement LOS	C		B	C		B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.37	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	21.43			16.64			0.00			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.04											
Intersection LOS	C											

**Intersection Level Of Service Report  
Intersection 3: Proj Dwy 2/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

**Intersection Setup**

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	0	976	0	0	976
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	13	0	3	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	13	976	3	6	976
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	3	257	1	2	257
Total Analysis Volume [veh/h]	7	14	1027	3	6	1027
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.03	0.03	0.01	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	18.83	12.57	0.00	0.00	10.32	0.00
Movement LOS	C	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	4.21	4.21	0.00	0.00	0.67	0.00
d_A, Approach Delay [s/veh]	14.66		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

**Intersection Level Of Service Report  
Intersection 4: Alder Ave/Proj Dwy 3**

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

Name	Alder Ave		Alder Ave		Westbound	
Approach	Northbound		Southbound			
Lane Configuration	↩		↪		↔	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Alder Ave		Alder Ave		Westbound	
Base Volume Input [veh/h]	39	0	39	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	2	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	0	41	0	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	11	0	0	1
Total Analysis Volume [veh/h]	41	0	43	0	0	4
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.26	8.49
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.08	0.08	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.10	2.10	0.29	0.29
d_A, Approach Delay [s/veh]	0.00		7.34		8.49	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.97					
Intersection LOS	A					

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Scenario 4 Existing PM Plus Project

Report File: C:\...MIT Existing PM plus proj.pdf

3/21/2022

**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Alder Ave/Slover Ave	23	1	45	18	2	9	8	918	20	19	705	13	1781

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	4	0	0	0	0	979	2	0	983	0	1968

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	7	13	976	3	6	976	1981

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	39	0	41	0	0	4	84

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Scenario 7 Opening AM Plus Project

Report File: C:\...MIT Opening AM plus proj.pdf

3/21/2022

**Intersection Analysis Summary**

<b>ID</b>	<b>Intersection Name</b>	<b>Control Type</b>	<b>Method</b>	<b>Worst Mvmt</b>	<b>V/C</b>	<b>Delay (s/veh)</b>	<b>LOS</b>
1	Alder Ave/Slover Ave	Two-way stop	HCM 6th Edition	NB Thru	0.052	715.6	F
2	Proj Dwy 1/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.002	12.4	B
3	Proj Dwy 2/Slover Ave	Two-way stop	HCM 6th Edition	NB Left	0.004	11.9	B
4	Alder Ave/Proj Dwy 3	Two-way stop	HCM 6th Edition	WB Right	0.001	9.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 1: Alder Ave/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	715.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

**Intersection Setup**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←→			←→			←→			←→		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	55.00	100.00	100.00	45.00	150.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Base Volume Input [veh/h]	53	1	72	4	1	12	9	351	47	214	636	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	9	3	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	1	75	4	1	12	9	374	52	223	664	6
Peak Hour Factor	0.5490	0.5490	0.5490	0.6070	0.6070	0.6070	0.6420	0.6420	0.6420	0.7780	0.7780	0.7780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	0	34	2	0	5	4	146	20	72	213	2
Total Analysis Volume [veh/h]	102	2	137	7	2	20	14	583	81	287	853	8
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	2.07	0.05	0.19	0.21	0.06	0.03	0.02	0.01	0.00	0.31	0.01	0.00
d_M, Delay for Movement [s/veh]	695.33	715.59	11.27	150.96	144.90	11.41	9.64	0.00	0.00	10.55	0.00	0.00
Movement LOS	F	F	B	F	F	B	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	10.56	10.56	0.71	0.87	0.87	0.11	0.05	0.00	0.00	1.31	0.00	0.00
95th-Percentile Queue Length [ft/ln]	264.01	264.01	17.73	21.67	21.67	2.67	1.35	0.00	0.00	32.71	0.00	0.00
d_A, Approach Delay [s/veh]	306.63			54.30			0.20			2.64		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	37.52											
Intersection LOS	F											

**Intersection Level Of Service Report  
Intersection 2: Proj Dwy 1/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

**Intersection Setup**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			TT			TT		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

**Volumes**

Name	Northbound			Southbound			Slover Ave Eastbound			Slover Ave Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	427	0	0	427	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	6	3	0	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	0	0	0	0	450	3	0	446	0
Peak Hour Factor	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	118	1	0	117	0
Total Analysis Volume [veh/h]	1	0	0	0	0	0	0	474	3	0	469	0
Pedestrian Volume [ped/h]	0			0			0			0		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	Yes		
Number of Storage Spaces in Median	2	2	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.43	0.00	9.70	12.36	0.00	9.65	8.26	0.00	0.00	8.29	0.00	0.00
Movement LOS	B		A	B		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.15	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.43			11.01			0.00			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.01											
Intersection LOS	B											

**Intersection Level Of Service Report  
Intersection 3: Proj Dwy 2/Slover Ave**

Control Type:	Two-way stop	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

**Intersection Setup**

Name	Northbound		Slover Ave		Westbound	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Northbound		Slover Ave		Westbound	
Base Volume Input [veh/h]	0	0	427	0	0	427
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	0	6	12	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	3	444	6	12	444
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	117	2	3	117
Total Analysis Volume [veh/h]	2	3	467	6	13	467
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.87	9.71	0.00	0.00	8.31	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.00
95th-Percentile Queue Length [ft/ln]	0.58	0.58	0.00	0.00	0.90	0.00
d_A, Approach Delay [s/veh]	10.58		0.00		0.23	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	B					

**Intersection Level Of Service Report  
Intersection 4: Alder Ave/Proj Dwy 3**

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

**Intersection Setup**

Name	Alder Ave		Alder Ave		Westbound	
Approach	Northbound		Southbound			
Lane Configuration	┌		┐		└	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

**Volumes**

Name	Alder Ave		Alder Ave		Westbound	
Base Volume Input [veh/h]	262	0	0	262	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	272	0	3	272	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	0	1	72	0	0
Total Analysis Volume [veh/h]	286	0	3	286	0	1
Pedestrian Volume [ped/h]	0		0		0	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.80	0.00	12.51	9.76
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.18	0.18	0.10	0.10
d_A, Approach Delay [s/veh]	0.00		0.08		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	A					

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Scenario 7 Opening AM Plus Project

Report File: C:\...MIT Opening AM plus proj.pdf

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**Turning Movement Volume: Summary**

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	Alder Ave/Slover Ave	56	1	75	4	1	12	9	374	52	223	664	6	1477

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound			Total Volume
		Left	Right	Left	Right	Left	Thru	Right	Left	Thru	Right	
2	Proj Dwy 1/Slover Ave	1	0	0	0	0	450	3	0	446	0	900

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
3	Proj Dwy 2/Slover Ave	2	3	444	6	12	444	911

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Alder Ave/Proj Dwy 3	272	0	3	272	0	1	548

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Option 1: Signal

Number	1											
Intersection	Alder Ave/Slover Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Alder Ave			Alder Ave			Slover Ave			Slover Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	19	1	45	18	2	9	8	913	18	19	694	13
Total Analysis Volume [veh/h]	31	1	61	28	3	13	8	1001	22	23	859	16

Intersection Settings

Cycle Length [s]	80											
Coordination Type	Time of Day Pattern Isolated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	0	5	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	19	0	0	19	0	0	19	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.08	0.08	0.06	0.06	0.31	0.31	0.31	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.02	0.04	0.02	0.01	0.00	0.28	0.01	0.01	0.24	0.01
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3			3		
s, saturation flow rate [veh/h]	1812	1615	1818	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	141	125	101	90	565	1130	505	497	994	444
X, volume / capacity	0.23	0.49	0.31	0.14	0.01	0.89	0.04	0.05	0.86	0.04
d, Delay for Lane Group [s/veh]	35.45	38.26	37.98	36.69	19.01	28.69	19.21	21.35	30.00	21.29
Lane Group LOS	D	D	D	D	B	C	B	C	C	C

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Critical Lane Group	NO	Yes	Yes	NO	NO	Yes	NO	NO	Yes	NO
50th-Percentile Queue Length [veh/ln]	0.61	1.23	0.63	0.26	0.10	8.50	0.27	0.30	7.40	0.21
50th-Percentile Queue Length [ft/ln]	15.33	30.82	15.65	6.46	2.39	212.46	6.65	7.44	185.01	5.17
95th-Percentile Queue Length [veh/ln]	1.10	2.22	1.13	0.47	0.17	13.28	0.48	0.54	11.86	0.37
95th-Percentile Queue Length [ft/ln]	27.60	55.47	28.16	11.64	4.30	331.99	11.97	13.39	296.55	9.31

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.45	35.45	38.26	37.98	37.98	36.69	19.01	28.69	19.21	21.35	30.00	21.29
Movement LOS	D	D	D	D	D	D	B	C	B	C	C	C
Critical Movement	No	No	Yes	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	37.29			37.60			28.41			29.62		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	29.53											
Intersection LOS	C											
Intersection V/C	0.569											