

Appendix I

Ann Arbor

Lower Town Mobility Study

Existing Conditions

Modeling Printouts

HCM Unsignalized Intersection Capacity Analysis
 1002: Barton Dr & US-23 NB

Existing AM Peak
 09/28/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	13	314	236	63	424	89
Future Volume (vph)	13	314	236	63	424	89
Peak Hour Factor	0.81	1.00	0.95	0.95	0.88	0.88
Hourly flow rate (vph)	16	314	248	66	482	101

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	330	314	583
Volume Left (vph)	16	0	482
Volume Right (vph)	0	66	101
Hadj (s)	0.04	-0.13	0.10
Departure Headway (s)	6.5	6.4	6.0
Degree Utilization, x	0.60	0.56	0.97
Capacity (veh/h)	547	555	595
Control Delay (s)	18.9	17.3	54.4
Approach Delay (s)	18.9	17.3	54.4
Approach LOS	C	C	F

Intersection Summary			
Delay		35.4	
Level of Service		E	
Intersection Capacity Utilization	62.7%		ICU Level of Service B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 1002: Barton Dr & US-23 NB

Existing PM Peak
 09/28/2021



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	13	94	540	132	183	136
Future Volume (vph)	13	94	540	132	183	136
Peak Hour Factor	0.81	1.00	0.95	0.95	0.88	0.88
Hourly flow rate (vph)	16	94	568	139	208	155

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	110	707	363
Volume Left (vph)	16	0	208
Volume Right (vph)	0	139	155
Hadj (s)	0.06	-0.12	-0.11
Departure Headway (s)	6.1	5.2	5.9
Degree Utilization, x	0.19	1.01	0.59
Capacity (veh/h)	559	696	604
Control Delay (s)	10.5	59.5	17.2
Approach Delay (s)	10.5	59.5	17.2
Approach LOS	B	F	C

Intersection Summary			
Delay		41.9	
Level of Service		E	
Intersection Capacity Utilization		61.6%	ICU Level of Service
Analysis Period (min)		15	B

Lanes, Volumes, Timings
1012: Broadway St & Barton Dr

Existing AM Peak
09/28/2021



Lane Group	SEL	SER	NEL	NET	SWT	SWR	Ø12
Lane Configurations	↖	↗	↖	↕	↕	↖	
Traffic Volume (vph)	388	83	27	822	716	150	
Future Volume (vph)	388	83	27	822	716	150	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	100	115			150	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		100				
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Ped Bike Factor	0.98					0.91	
Frt		0.850				0.850	
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1805	1615	1770	3539	3574	1599	
Flt Permitted	0.950		0.322				
Satd. Flow (perm)	1765	1615	600	3539	3574	1452	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		42				123	
Link Speed (mph)	25			30	30		
Link Distance (ft)	377			1804	1251		
Travel Time (s)	10.3			41.0	28.4		
Confl. Peds. (#/hr)	18	10				22	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.95	0.95	
Heavy Vehicles (%)	0%	0%	2%	2%	1%	1%	
Adj. Flow (vph)	436	93	30	924	754	158	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	436	93	30	924	754	158	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			12	12		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane				Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Number of Detectors	1	1	1	2	2	1	
Detector Template	Left	Right	Left	Thru	Thru	Right	
Leading Detector (ft)	20	20	20	100	100	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94		
Detector 2 Size(ft)				6	6		
Detector 2 Type				Cl+Ex	Cl+Ex		
Detector 2 Channel							
Detector 2 Extend (s)				0.0	0.0		

Lanes, Volumes, Timings
1012: Broadway St & Barton Dr

Existing AM Peak
09/28/2021

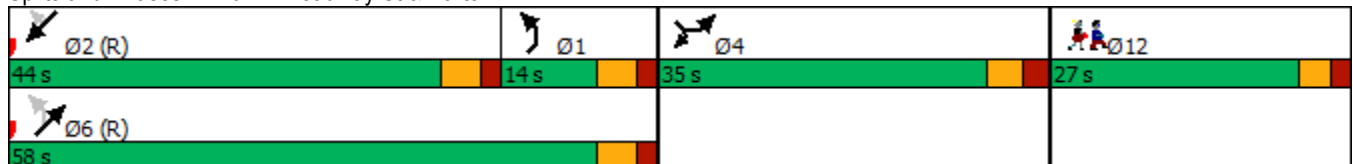


Lane Group	SEL	SER	NEL	NET	SWT	SWR	Ø12
Turn Type	Prot	Prot	pm+pt	NA	NA	Perm	
Protected Phases	4	4	1	6	2		12
Permitted Phases			6			2	
Detector Phase	4	4	1	6	2	2	
Switch Phase							
Minimum Initial (s)	10.0	10.0	5.0	8.0	10.0	10.0	1.0
Minimum Split (s)	22.5	22.5	10.5	22.5	31.5	31.5	22.9
Total Split (s)	35.0	35.0	14.0	58.0	44.0	44.0	27.0
Total Split (%)	29.2%	29.2%	11.7%	48.3%	36.7%	36.7%	23%
Maximum Green (s)	29.4	29.4	8.5	52.5	38.5	38.5	22.1
Yellow Time (s)	3.1	3.1	3.6	3.6	3.6	3.6	3.0
All-Red Time (s)	2.5	2.5	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.5	5.5	5.5	5.5	
Lead/Lag			Lag		Lead	Lead	
Lead-Lag Optimize?			Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max	None
Walk Time (s)					7.0	7.0	7.0
Flash Dont Walk (s)					11.0	11.0	11.0
Pedestrian Calls (#/hr)					0	0	0
Act Effct Green (s)	29.4	29.4	79.5	79.5	71.1	71.1	
Actuated g/C Ratio	0.24	0.24	0.66	0.66	0.59	0.59	
v/c Ratio	0.99	0.22	0.06	0.39	0.36	0.17	
Control Delay	85.2	22.3	12.9	12.7	14.1	4.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	85.2	22.3	12.9	12.7	14.1	4.3	
LOS	F	C	B	B	B	A	
Approach Delay	74.1			12.7	12.4		
Approach LOS	E			B	B		

Intersection Summary

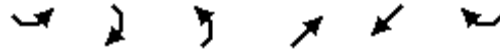
Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 20 (17%), Referenced to phase 2:SWT and 6:NETL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 26.2
 Intersection LOS: C
 Intersection Capacity Utilization 53.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1012: Broadway St & Barton Dr



Lanes, Volumes, Timings
1012: Plymouth Rd & Barton Dr

Existing PM Peak
09/28/2021



Lane Group	SEL	SER	NEL	NET	SWT	SWR	Ø12
Lane Configurations							
Traffic Volume (vph)	176	38	100	824	968	322	
Future Volume (vph)	176	38	100	824	968	322	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	100	115			150	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		100				
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	
Ped Bike Factor	0.97					0.91	
Frt		0.850				0.850	
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1805	1615	1770	3539	3574	1599	
Flt Permitted	0.950		0.203				
Satd. Flow (perm)	1757	1615	378	3539	3574	1452	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		41				176	
Link Speed (mph)	25			35	35		
Link Distance (ft)	377			1804	1251		
Travel Time (s)	10.3			35.1	24.4		
Confl. Peds. (#/hr)	18	10				22	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.95	0.95	
Heavy Vehicles (%)	0%	0%	2%	2%	1%	1%	
Adj. Flow (vph)	198	43	112	926	1019	339	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	198	43	112	926	1019	339	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12			12	12		
Link Offset(ft)	0			0	0		
Crosswalk Width(ft)	16			16	16		
Two way Left Turn Lane				Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15			9	
Number of Detectors	1	1	1	2	2	1	
Detector Template	Left	Right	Left	Thru	Thru	Right	
Leading Detector (ft)	20	20	20	100	100	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	6	6	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)				94	94		
Detector 2 Size(ft)				6	6		
Detector 2 Type				Cl+Ex	Cl+Ex		
Detector 2 Channel							
Detector 2 Extend (s)				0.0	0.0		

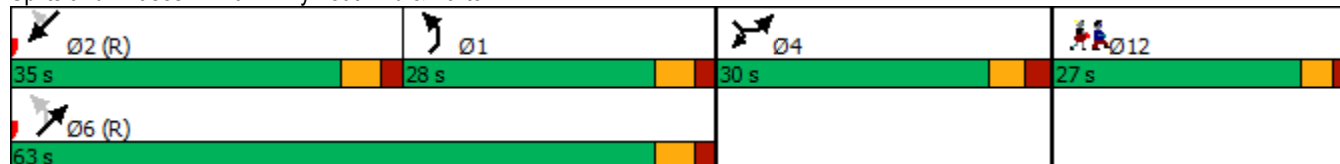


Lane Group	SEL	SER	NEL	NET	SWT	SWR	Ø12
Turn Type	Prot	Prot	pm+pt	NA	NA	Perm	
Protected Phases	4	4	1	6	2		12
Permitted Phases			6			2	
Detector Phase	4	4	1	6	2	2	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	10.5	22.5	23.5	23.5	22.9
Total Split (s)	30.0	30.0	28.0	63.0	35.0	35.0	27.0
Total Split (%)	25.0%	25.0%	23.3%	52.5%	29.2%	29.2%	23%
Maximum Green (s)	24.4	24.4	22.5	57.5	29.5	29.5	22.1
Yellow Time (s)	3.1	3.1	3.6	3.6	3.6	3.6	3.0
All-Red Time (s)	2.5	2.5	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.6	5.5	5.5	5.5	5.5	
Lead/Lag			Lag		Lead	Lead	
Lead-Lag Optimize?			Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max	None
Walk Time (s)					7.0	7.0	7.0
Flash Dont Walk (s)					11.0	11.0	11.0
Pedestrian Calls (#/hr)					0	0	0
Act Effct Green (s)	18.3	18.3	90.6	90.6	62.6	62.6	
Actuated g/C Ratio	0.15	0.15	0.76	0.76	0.52	0.52	
v/c Ratio	0.72	0.15	0.21	0.35	0.55	0.40	
Control Delay	62.8	14.2	5.3	4.1	21.3	10.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	62.8	14.2	5.3	4.1	21.3	10.1	
LOS	E	B	A	A	C	B	
Approach Delay	54.1			4.2	18.5		
Approach LOS	D			A	B		

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 35 (29%), Referenced to phase 2:SWT and 6:NETL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 16.1
 Intersection Capacity Utilization 55.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 1012: Plymouth Rd & Barton Dr



Lanes, Volumes, Timings
1027: Pontiac Trail & Barton Dr

Existing AM Peak
09/28/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (vph)	64	305	199	13	87	38	54	129	7	68	477	83
Future Volume (vph)	64	305	199	13	87	38	54	129	7	68	477	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	130		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			90			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.99			1.00			0.99	
Frt		0.953			0.963			0.992			0.978	
Flt Protected		0.994			0.995		0.950			0.950		
Satd. Flow (prot)	0	1749	0	0	1809	0	1787	1862	0	1719	1757	0
Flt Permitted		0.946			0.932		0.140			0.663		
Satd. Flow (perm)	0	1665	0	0	1694	0	263	1862	0	1200	1757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			34			5			15	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		494			771			982			709	
Travel Time (s)		13.5			21.0			26.8			19.3	
Confl. Peds. (#/hr)			16			2			10			14
Peak Hour Factor	0.90	0.90	0.90	0.93	0.93	0.93	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	5%	5%	5%
Adj. Flow (vph)	71	339	221	14	94	41	58	139	8	86	604	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	631	0	0	149	0	58	147	0	86	709	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
1027: Pontiac Trail & Barton Dr

Existing AM Peak
09/28/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1				1
Permitted Phases	2			2			1			1		
Detector Phase	2	2		2	2		1	1		1		1
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0		10.0
Minimum Split (s)	23.6	23.6		23.6	23.6		23.6	23.6		23.6		23.6
Total Split (s)	35.0	35.0		35.0	35.0		35.0	35.0		35.0		35.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%		50.0%
Maximum Green (s)	29.4	29.4		29.4	29.4		29.4	29.4		29.4		29.4
Yellow Time (s)	3.1	3.1		3.1	3.1		3.1	3.1		3.1		3.1
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5		2.5
Lost Time Adjust (s)		0.0			0.0			0.0				0.0
Total Lost Time (s)		5.6			5.6			5.6				5.6
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lead		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		None	None		None		None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0		10.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0		0
Act Effct Green (s)		27.4			27.4			28.5				28.5
Actuated g/C Ratio		0.41			0.41			0.42				0.42
v/c Ratio		0.89			0.21			0.52				0.19
Control Delay		34.9			10.9			36.5				13.0
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		34.9			10.9			36.5				13.0
LOS		C			B			D				B
Approach Delay		34.9			10.9			19.7				39.3
Approach LOS		C			B			B				D

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 67.2

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 33.1

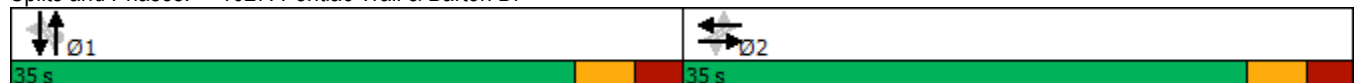
Intersection LOS: C

Intersection Capacity Utilization 97.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1027: Pontiac Trail & Barton Dr



Lanes, Volumes, Timings
1027: Pontiac Trail & Barton Dr

Existing PM Peak
09/28/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	119	132	55	13	363	110	208	437	8	35	165	49
Future Volume (vph)	119	132	55	13	363	110	208	437	8	35	165	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	130		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			90			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99			1.00			0.99	
Frt		0.976			0.969			0.997			0.966	
Flt Protected		0.981			0.999		0.950			0.950		
Satd. Flow (prot)	0	1784	0	0	1829	0	1787	1874	0	1719	1729	0
Flt Permitted		0.597			0.987		0.577			0.337		
Satd. Flow (perm)	0	1086	0	0	1807	0	1085	1874	0	610	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			26			2			26	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		494			771			982			709	
Travel Time (s)		13.5			21.0			26.8			19.3	
Confl. Peds. (#/hr)			16			2			10			14
Peak Hour Factor	0.90	0.90	0.90	0.93	0.93	0.93	0.93	0.93	0.93	0.79	0.79	0.79
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	5%	5%	5%
Adj. Flow (vph)	132	147	61	14	390	118	224	470	9	44	209	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	340	0	0	522	0	224	479	0	44	271	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lanes, Volumes, Timings
1027: Pontiac Trail & Barton Dr

Existing PM Peak
09/28/2021

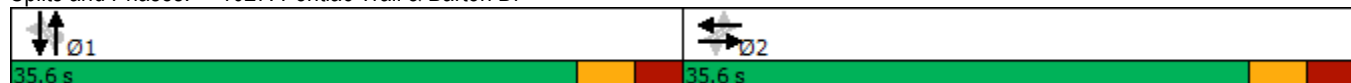


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1				1
Permitted Phases	2			2			1			1		
Detector Phase	2	2		2	2		1	1		1		1
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0		10.0
Minimum Split (s)	23.6	23.6		23.6	23.6		23.6	23.6		23.6		23.6
Total Split (s)	35.6	35.6		35.6	35.6		35.6	35.6		35.6		35.6
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%		50.0%
Maximum Green (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0		30.0
Yellow Time (s)	3.1	3.1		3.1	3.1		3.1	3.1		3.1		3.1
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5		2.5
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)		5.6			5.6		5.6	5.6		5.6		5.6
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lead		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		None	None		None		None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0		10.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0		0
Act Effct Green (s)		23.8			23.8		22.7	22.7		22.7		22.7
Actuated g/C Ratio		0.41			0.41		0.39	0.39		0.39		0.39
v/c Ratio		0.75			0.70		0.53	0.66		0.19		0.40
Control Delay		27.8			20.3		20.2	20.3		15.3		14.3
Queue Delay		0.0			0.0		0.0	0.0		0.0		0.0
Total Delay		27.8			20.3		20.2	20.3		15.3		14.3
LOS		C			C		C	C		B		B
Approach Delay		27.8			20.3			20.3				14.4
Approach LOS		C			C			C				B

Intersection Summary




















Area Type: Other
 Cycle Length: 71.2
 Actuated Cycle Length: 58.6
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 20.7
 Intersection LOS: C
 Intersection Capacity Utilization 94.2%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 1027: Pontiac Trail & Barton Dr



Lanes, Volumes, Timings
1014: Broadway St & Maiden Ln/Moore St

Existing AM Peak
09/28/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	124	752	242	319	473	8	0	0	0	43	41	142
Future Volume (vph)	124	752	242	319	473	8	0	0	0	43	41	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	200		0	0		0	250		250
Storage Lanes	1		0	1		0	0		0	1		1
Taper Length (ft)	25			75			25			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			1.00					0.99		
Fr _t		0.964			0.998							0.850
Fl _t Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	3344	0	1770	3530	0	0	0	0	1770	1863	1583
Fl _t Permitted	0.466			0.118						0.950		
Satd. Flow (perm)	868	3344	0	220	3530	0	0	0	0	1752	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			2							165
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		217			357			126			1543	
Travel Time (s)		4.9			8.1			3.4			42.1	
Confl. Peds. (#/hr)			19			9				8		31
Peak Hour Factor	0.86	0.86	0.86	0.95	0.95	0.95	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	144	874	281	336	498	8	0	0	0	50	48	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	1155	0	336	506	0	0	0	0	50	48	165
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2					1	2	1
Detector Template	Left	Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)	20	100		20	100					20	100	20
Trailing Detector (ft)	0	0		0	0					0	0	0
Detector 1 Position(ft)	0	0		0	0					0	0	0
Detector 1 Size(ft)	20	6		20	6					20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type	pm+pt	NA		pm+pt	NA					custom	NA	custom

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	

Lanes, Volumes, Timings
 1014: Broadway St & Maiden Ln/Moore St

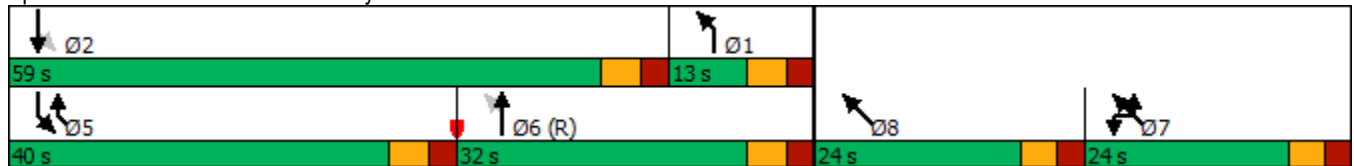
Existing AM Peak
 09/28/2021

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	1	6		5	2					7	8 7	5 7
Permitted Phases	6			2						7	8 7	
Detector Phase	1	6		5	2					7	8 7	5 7
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0					5.0		
Minimum Split (s)	12.0	24.1		14.0	24.1					10.7		
Total Split (s)	13.0	32.0		40.0	59.0					24.0		
Total Split (%)	10.8%	26.7%		33.3%	49.2%					20.0%		
Maximum Green (s)	6.9	25.9		33.9	52.9					18.3		
Yellow Time (s)	3.6	3.6		3.6	3.6					3.2		
All-Red Time (s)	2.5	2.5		2.5	2.5					2.5		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0		
Total Lost Time (s)	6.1	6.1		6.1	6.1					5.7		
Lead/Lag	Lag	Lag		Lead	Lead					Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0		
Recall Mode	None	C-Max		None	Max					None		
Walk Time (s)		6.0			5.0							
Flash Dont Walk (s)		12.0			13.0							
Pedestrian Calls (#/hr)		0			0							
Act Effct Green (s)	64.2	64.2		74.8	74.8					9.0	20.4	32.1
Actuated g/C Ratio	0.54	0.54		0.62	0.62					0.08	0.17	0.27
v/c Ratio	0.28	0.64		0.93	0.23					0.38	0.15	0.30
Control Delay	22.1	24.3		50.9	3.8					60.1	39.6	5.4
Queue Delay	0.0	2.9		0.3	0.3					0.0	0.0	0.0
Total Delay	22.1	27.2		51.2	4.1					60.1	39.6	5.4
LOS	C	C		D	A					E	D	A
Approach Delay		26.6			22.9						22.1	
Approach LOS		C			C						C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 4 (3%), Referenced to phase 6:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 24.8
 Intersection LOS: C
 Intersection Capacity Utilization 74.3%
 ICU Level of Service D
 Analysis Period (min) 15




















Splits and Phases: 1014: Broadway St & Maiden Ln/Moore St



Lane Group	Ø8
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	26.7
Total Split (s)	24.0
Total Split (%)	20%
Maximum Green (s)	18.3
Yellow Time (s)	3.2
All-Red Time (s)	2.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	5.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings
 1014: Broadway St/Plymouth Rd & Maiden Ln/Moore St

Existing PM Peak
 09/28/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	297	665	88	157	850	18	0	0	0	125	253	286
Future Volume (vph)	297	665	88	157	850	18	0	0	0	125	253	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	200		0	0		0	250		250
Storage Lanes	1		0	1		0	0		0	1		1
Taper Length (ft)	25			75			25			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00					0.99		
Frt		0.983			0.997							0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	3446	0	1770	3526	0	0	0	0	1770	1863	1583
Flt Permitted	0.292			0.122						0.950		
Satd. Flow (perm)	544	3446	0	227	3526	0	0	0	0	1747	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			2							333
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		217			357			126			1543	
Travel Time (s)		4.9			8.1			3.4			42.1	
Confl. Peds. (#/hr)			19			9				8		31
Peak Hour Factor	0.86	0.86	0.86	0.95	0.95	0.95	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	345	773	102	165	895	19	0	0	0	145	294	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	345	875	0	165	914	0	0	0	0	145	294	333
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2					1	2	1
Detector Template	Left	Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)	20	100		20	100					20	100	20
Trailing Detector (ft)	0	0		0	0					0	0	0
Detector 1 Position(ft)	0	0		0	0					0	0	0
Detector 1 Size(ft)	20	6		20	6					20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type	pm+pt	NA		pm+pt	NA					custom	NA	custom

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	

Lanes, Volumes, Timings
 1014: Broadway St/Plymouth Rd & Maiden Ln/Moore St

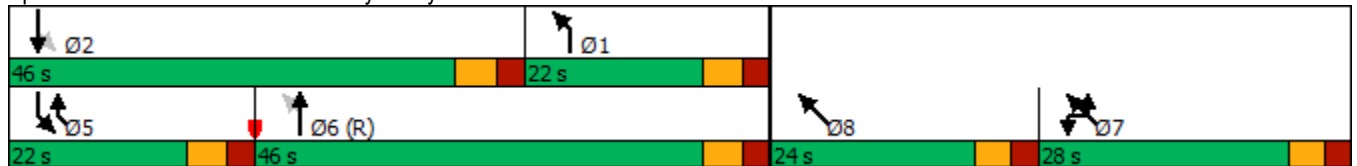
Existing PM Peak
 09/28/2021

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Protected Phases	1	6		5	2					7	8 7	5 7
Permitted Phases	6			2						7	8 7	
Detector Phase	1	6		5	2					7	8 7	5 7
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0					5.0		
Minimum Split (s)	12.0	24.1		14.0	24.1					10.7		
Total Split (s)	22.0	46.0		22.0	46.0					28.0		
Total Split (%)	18.3%	38.3%		18.3%	38.3%					23.3%		
Maximum Green (s)	15.9	39.9		15.9	39.9					22.3		
Yellow Time (s)	3.6	3.6		3.6	3.6					3.2		
All-Red Time (s)	2.5	2.5		2.5	2.5					2.5		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0		
Total Lost Time (s)	6.1	6.1		6.1	6.1					5.7		
Lead/Lag	Lag	Lag		Lead	Lead					Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0		
Recall Mode	None	C-Max		None	Max					None		
Walk Time (s)		6.0			5.0							
Flash Dont Walk (s)		12.0			13.0							
Pedestrian Calls (#/hr)		0			0							
Act Effct Green (s)	48.8	48.8		45.7	45.7					17.2	40.5	35.7
Actuated g/C Ratio	0.41	0.41		0.38	0.38					0.14	0.34	0.30
v/c Ratio	0.90	0.62		0.66	0.68					0.57	0.47	0.47
Control Delay	68.4	31.9		36.8	21.0					56.1	33.1	5.1
Queue Delay	0.0	0.0		0.0	1.5					0.0	0.0	0.0
Total Delay	68.4	31.9		36.8	22.5					56.1	33.1	5.1
LOS	E	C		D	C					E	C	A
Approach Delay		42.2			24.7						25.3	
Approach LOS		D			C						C	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 6:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 31.8
 Intersection LOS: C
 Intersection Capacity Utilization 71.5%
 ICU Level of Service C
 Analysis Period (min) 15

















Splits and Phases: 1014: Broadway St/Plymouth Rd & Maiden Ln/Moore St



Lane Group	Ø8
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	26.7
Total Split (s)	24.0
Total Split (%)	20%
Maximum Green (s)	18.3
Yellow Time (s)	3.2
All-Red Time (s)	2.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	5.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

















HCM Unsignalized Intersection Capacity Analysis
 1004: Pontiac Trail & Dhu Varen Rd

Existing AM Peak
 09/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	3	3	174	2	22	1	76	179	64	332	0
Future Volume (Veh/h)	0	3	3	174	2	22	1	76	179	64	332	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.60	0.60	0.60	0.90	0.90	0.90	0.88	0.88	0.88	0.82	0.82	0.82
Hourly flow rate (vph)	0	5	5	193	2	24	1	86	203	78	405	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	776	852	405	758	750	188	405			289		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	776	852	405	758	750	188	405			289		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	99	36	99	97	100			94		
cM capacity (veh/h)	292	280	650	302	319	855	1159			1279		
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	10	219	290	483								
Volume Left	0	193	1	78								
Volume Right	5	24	203	0								
cSH	392	325	1159	1279								
Volume to Capacity	0.03	0.67	0.00	0.06								
Queue Length 95th (ft)	2	115	0	5								
Control Delay (s)	14.4	36.2	0.0	1.8								
Lane LOS	B	E	A	A								
Approach Delay (s)	14.4	36.2	0.0	1.8								
Approach LOS	B	E										
Intersection Summary												
Average Delay			9.0									
Intersection Capacity Utilization			63.8%	ICU Level of Service						B		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
1004: Pontiac Trail & Dhu Varen Rd

Existing PM Peak
09/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	2	181	5	61	2	303	179	17	63	2
Future Volume (Veh/h)	1	1	2	181	5	61	2	303	179	17	63	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.60	0.60	0.60	0.90	0.90	0.90	0.88	0.88	0.88	0.82	0.82	0.82
Hourly flow rate (vph)	2	2	3	201	6	68	2	344	203	21	77	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	640	671	78	574	570	446	79			547		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	640	671	78	574	570	446	79			547		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	100	52	99	89	100			98		
cM capacity (veh/h)	338	372	988	420	422	613	1526			1027		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	7	275	549	100								
Volume Left	2	201	2	21								
Volume Right	3	68	203	2								
cSH	488	455	1526	1027								
Volume to Capacity	0.01	0.60	0.00	0.02								
Queue Length 95th (ft)	1	98	0	2								
Control Delay (s)	12.5	24.2	0.0	1.9								
Lane LOS	B	C	A	A								
Approach Delay (s)	12.5	24.2	0.0	1.9								
Approach LOS	B	C										
Intersection Summary												
Average Delay			7.5									
Intersection Capacity Utilization			54.4%		ICU Level of Service					A		
Analysis Period (min)			15									