Appendix K

Ann Arbor
Lower Town Mobility Study

Alternative Modeling Printouts
& Signal Warrant Evaluations

(2020 & 2040 Traffic Conditions)

Alternative Modeling for:

1. **Pontiac Trail at Longshore St / Moore St**
    a. **One-way on Moore (Rodel)**
    b. **Two-way on Moore (Rodel)**
2. **Pontiac Trail at Barton Dr**
    a. **Signalized (Synchro)**
    b. **Roundabout (Rodel)**
3. **Pontiac Trail at Dhu Varren Rd**
    a. **Signalized (Synchro)**
    b. **Roundabout (Rodel)**
4. **Broadway St at Maiden Ln / Moore St**
    a. **Signalized (Synchro)**
        i. **One-way Moore**
        ii. **Two-way Moore**
    b. **Roundabout (Rodel)**
        i. **One-way Moore**
        ii. **Two-way Moore**
5. **Plymouth Rd at Barton Dr (Synchro)**
    a. **Single left turn lane for Barton**
    b. **Dual left turn lane for Barton**
6. **Barton Dr at M-14 EB Off Ramp Signal (Synchro)**

Signal Warrant Evaluations

A. **Pontiac Trail at Dhu Varren Rd**
B. **Barton Dr at M-14 EB Off Ramp**
C. **Pontiac Trail at Arrowwood Trail (full report)**

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Longshore EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Moore WB	230	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Longshore EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Moore WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Longshore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Moore WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2020 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	0	796	0	0	1.0	1.00	0.950
2	Longshore EB	0	3	0	10	0	1.0	1.00	0.650
3	Pontiac Trail NB	0	0	0	0	0	2.0	1.00	0.920
4	Moore WB	0	28	12	160	0	4.0	1.00	0.780

Operational Results

2020 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	796		40		163	1201		0.6627	
2	Longshore EB	None	13		824		12	759		0.0171	
3	Pontiac Trail NB	None	0		0		834	0		0.0000	
4	Moore WB	None	200		3		0	1153		0.1734	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	12.76		12.76	5.47		B		B
2	Longshore EB	None	4.75		4.75	0.07		A		A
3	Pontiac Trail NB	None	0.00		0.00	0.00		A		A
4	Moore WB	None	5.24		5.24	0.71		A		A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Longshore EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Moore WB	230	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Longshore EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Moore WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Longshore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Moore WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2020 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	0	259	2	0	1.0	1.00	0.950
2	Longshore EB	0	5	0	6	0	1.0	1.00	0.650
3	Pontiac Trail NB	0	0	0	0	0	2.0	1.00	0.920
4	Moore WB	0	13	23	592	0	4.0	1.00	0.780

Operational Results

2020 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	261		36		597	1204		0.2169	
2	Longshore EB	None	11		272		25	1071		0.0103	
3	Pontiac Trail NB	None	0		0		278	0		0.0000	
4	Moore WB	None	628		5		0	1152		0.5450	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	5.82		5.82	0.77		A		A
2	Longshore EB	None	1.41		1.41	0.04		A		A
3	Pontiac Trail NB	None	0.00		0.00	0.00		A		A
4	Moore WB	None	10.18		10.18	4.98		B		B

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Longshore EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Moore WB	230	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Longshore EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Moore WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Longshore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Moore WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	0	1065	0	0	1.0	1.00	0.950
2	Longshore EB	0	3	0	11	0	1.0	1.00	0.650
3	Pontiac Trail NB	0	0	0	0	0	2.0	1.00	0.920
4	Moore WB	0	30	13	236	0	4.0	1.00	0.780

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	1065		43		239	1199		0.8879	
2	Longshore EB	None	14		1093		13	606		0.0231	
3	Pontiac Trail NB	None	0		0		1104	0		0.0000	
4	Moore WB	None	279		3		0	1153		0.2419	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	28.21		28.21	20.64		D		D
2	Longshore EB	None	6.02		6.02	0.10		A		A
3	Pontiac Trail NB	None	0.00		0.00	0.00		A		A
4	Moore WB	None	6.03		6.03	1.10		A		A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Longshore EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Moore WB	230	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Longshore EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Moore WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Longshore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Moore WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	0	393	2	0	1.0	1.00	0.950
2	Longshore EB	0	5	0	6	0	1.0	1.00	0.650
3	Pontiac Trail NB	0	0	0	0	0	2.0	1.00	0.920
4	Moore WB	0	14	24	876	0	4.0	1.00	0.780

Operational Results

2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	395		38		880	1202		0.3285	
2	Longshore EB	None	11		407		26	994		0.0111	
3	Pontiac Trail NB	None	0		0		413	0		0.0000	
4	Moore WB	None	914		5		0	1152		0.7933	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	6.98		6.98	1.36		A		A
2	Longshore EB	None	1.53		1.53	0.05		A		A
3	Pontiac Trail NB	None	0.00		0.00	0.00		A		A
4	Moore WB	None	23.16		23.16	29.03		C		C

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Longshore EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Moore WB	230	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Longshore EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Moore WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Longshore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Moore WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	139	254	2	0	1.0	1.00	0.950
2	Longshore EB	0	5	0	6	0	1.0	1.00	0.650
3	Pontiac Trail NB	0	0	0	0	0	2.0	1.00	0.920
4	Moore WB	0	14	24	876	0	4.0	1.00	0.780

Operational Results

2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	395		38		880	1202		0.3285	
2	Longshore EB	None	11		407		26	994		0.0111	
3	Pontiac Trail NB	None	0		0		274	0		0.0000	
4	Moore WB	None	914		5		139	1152		0.7933	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	6.98		6.98	1.36		A		A
2	Longshore EB	None	1.53		1.53	0.05		A		A
3	Pontiac Trail NB	None	0.00		0.00	0.00		A		A
4	Moore WB	None	23.16		23.16	29.03		C		C

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Longshore EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Moore WB	230	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Longshore EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Moore WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Longshore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Moore WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	530	535	0	0	1.0	1.00	0.950
2	Longshore EB	0	3	0	11	0	1.0	1.00	0.650
3	Pontiac Trail NB	0	0	0	0	0	2.0	1.00	0.920
4	Moore WB	0	30	13	236	0	4.0	1.00	0.780

Operational Results

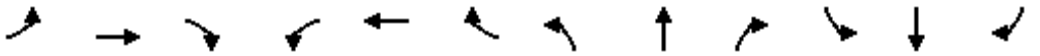
2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	1065		43		239	1199		0.8879	
2	Longshore EB	None	14		1093		13	606		0.0231	
3	Pontiac Trail NB	None	0		0		575	0		0.0000	
4	Moore WB	None	279		3		529	1153		0.2419	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	28.21		28.21	20.64		D		D
2	Longshore EB	None	6.02		6.02	0.10		A		A
3	Pontiac Trail NB	None	0.00		0.00	0.00		A		A
4	Moore WB	None	6.03		6.03	1.10		A		A



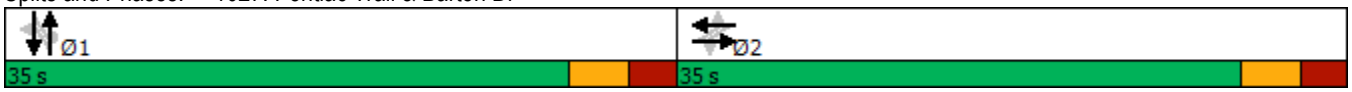
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	324	212	14	93	70	57	195	7	173	700	123
Future Volume (vph)	78	324	212	14	93	70	57	195	7	173	700	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage 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			0.947			0.994			0.978	
Flt Protected		0.994			0.996		0.950			0.950		
Satd. Flow (prot)	0	1750	0	0	1775	0	1787	1867	0	1719	1757	0
Flt Permitted		0.929			0.939		0.136			0.622		
Satd. Flow (perm)	0	1635	0	0	1674	0	256	1867	0	1126	1757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47			58			3			16	
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)	87	360	236	15	100	75	61	210	8	219	886	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	683	0	0	190	0	61	218	0	219	1042	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	

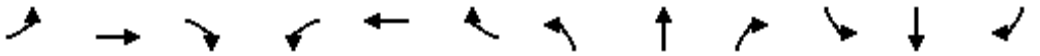
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Detector Phase	2	2		2	2		1	1		1	1	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum 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		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)		29.1			29.1		29.4	29.4		29.4	29.4	
Actuated g/C Ratio		0.42			0.42		0.42	0.42		0.42	0.42	
v/c Ratio		0.96			0.26		0.57	0.28		0.46	1.39	
Control Delay		46.9			10.1		41.3	14.3		18.6	205.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		46.9			10.1		41.3	14.3		18.6	205.9	
LOS		D			B		D	B		B	F	
Approach Delay		46.9			10.1			20.2			173.4	
Approach LOS		D			B			C			F	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 69.7
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.39
Intersection Signal Delay: 107.0 Intersection LOS: F
Intersection Capacity Utilization 116.7% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 1027: Pontiac Trail & Barton Dr





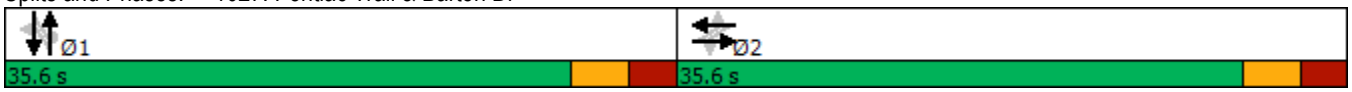
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	140	59	14	386	223	221	677	9	98	282	73
Future Volume (vph)	163	140	59	14	386	223	221	677	9	98	282	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage 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		0.978			0.952			0.998			0.969	
Flt Protected		0.978			0.999		0.950			0.950		
Satd. Flow (prot)	0	1784	0	0	1791	0	1787	1876	0	1719	1736	0
Flt Permitted		0.431			0.988		0.368			0.133		
Satd. Flow (perm)	0	786	0	0	1772	0	692	1876	0	241	1736	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			49			1			23	
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)	181	156	66	15	415	240	238	728	10	124	357	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	403	0	0	670	0	238	738	0	124	449	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	

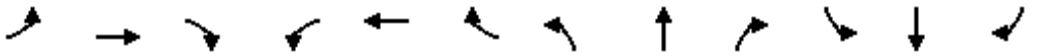
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Detector Phase	2	2		2	2		1	1		1	1	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum 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)		30.0			30.0		30.0	30.0		30.0	30.0	
Actuated g/C Ratio		0.42			0.42		0.42	0.42		0.42	0.42	
v/c Ratio		1.18			0.87		0.82	0.93		1.23	0.60	
Control Delay		131.4			31.5		43.8	41.2		190.2	19.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		131.4			31.5		43.8	41.2		190.2	19.3	
LOS		F			C		D	D		F	B	
Approach Delay		131.4			31.5			41.9			56.3	
Approach LOS		F			C			D			E	

Intersection Summary

Area Type: Other
Cycle Length: 71.2
Actuated Cycle Length: 71.2
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 56.1 Intersection LOS: E
Intersection Capacity Utilization 118.2% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 1027: Pontiac Trail & Barton Dr





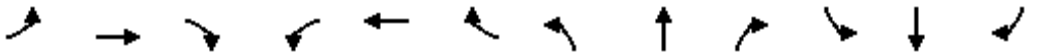
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	305	199	13	87	38	54	129	7	68	477	83
Future Volume (vph)	64	305	199	13	87	38	54	129	7	68	477	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	90		0	130		0
Storage Lanes	0		1	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			0.95		0.99			1.00			0.99	
Frt			0.850		0.963			0.992			0.978	
Flt Protected		0.991			0.995		0.950			0.950		
Satd. Flow (prot)	0	1864	1599	0	1809	0	1787	1862	0	1719	1757	0
Flt Permitted		0.914			0.946		0.197			0.663		
Satd. Flow (perm)	0	1719	1515	0	1719	0	371	1862	0	1200	1757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			203		30			6			18	
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	410	221	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	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	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	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	0.0	
Detector 1 Queue (s)	0.0	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	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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2		2	2			1			1		
Detector Phase	2	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	10.0	
Minimum Split (s)	23.6	23.6	23.6	23.6	23.6		23.6	23.6		23.6	23.6	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	42.9%	42.9%	42.9%	42.9%	42.9%		57.1%	57.1%		57.1%	57.1%	
Maximum Green (s)	24.4	24.4	24.4	24.4	24.4		34.4	34.4		34.4	34.4	
Yellow Time (s)	3.1	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	2.5	
Lost Time Adjust (s)		0.0	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	5.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag		Lead	Lead		Lead	Lead	
Lead-Lag Optimize?	Yes	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	3.0	
Recall Mode	None	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	7.0	
Flash Dont Walk (s)	10.0	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	0	
Act Effct Green (s)		19.8	19.8		19.8		29.0	29.0		29.0	29.0	
Actuated g/C Ratio		0.33	0.33		0.33		0.48	0.48		0.48	0.48	
v/c Ratio		0.73	0.35		0.26		0.33	0.16		0.15	0.84	
Control Delay		27.6	5.4		14.6		16.9	9.8		10.4	24.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		27.6	5.4		14.6		16.9	9.8		10.4	24.8	
LOS		C	A		B		B	A		B	C	
Approach Delay		19.8			14.6			11.8			23.2	
Approach LOS		B			B			B			C	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 60.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 20.0 Intersection LOS: B
Intersection Capacity Utilization 84.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1027: Pontiac Trail & Barton Dr



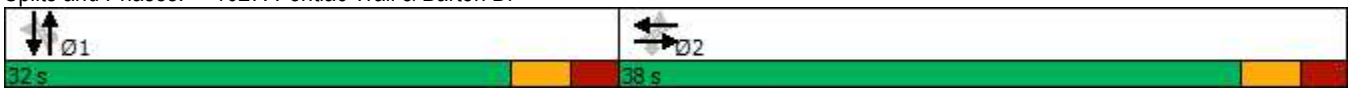
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	132	55	13	363	110	208	437	8	35	165	49
Future Volume (vph)	119	132	55	13	363	110	208	437	8	35	165	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	90		0	130		0
Storage Lanes	0		1	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			0.95		0.99			1.00			0.99	
Frt			0.850		0.969			0.997			0.966	
Flt Protected		0.977			0.999		0.950			0.950		
Satd. Flow (prot)	0	1838	1599	0	1829	0	1787	1874	0	1719	1729	0
Flt Permitted		0.562			0.988		0.580			0.331		
Satd. Flow (perm)	0	1057	1515	0	1809	0	1091	1874	0	599	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			61		28			2			24	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		494			771			491			709	
Travel Time (s)		13.5			21.0			13.4			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	279	61	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	
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	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	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	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	0.0	
Detector 1 Queue (s)	0.0	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	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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2		2	2			1			1		
Detector Phase	2	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	10.0	
Minimum Split (s)	23.6	23.6	23.6	23.6	23.6		23.6	23.6		23.6	23.6	
Total Split (s)	38.0	38.0	38.0	38.0	38.0		32.0	32.0		32.0	32.0	
Total Split (%)	54.3%	54.3%	54.3%	54.3%	54.3%		45.7%	45.7%		45.7%	45.7%	
Maximum Green (s)	32.4	32.4	32.4	32.4	32.4		26.4	26.4		26.4	26.4	
Yellow Time (s)	3.1	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	2.5	
Lost Time Adjust (s)		0.0	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	5.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag		Lead	Lead		Lead	Lead	
Lead-Lag Optimize?	Yes	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	3.0	
Recall Mode	None	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	7.0	
Flash Dont Walk (s)	10.0	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	0	
Act Effct Green (s)		22.9	22.9		22.9		20.9	20.9		20.9	20.9	
Actuated g/C Ratio		0.41	0.41		0.41		0.37	0.37		0.37	0.37	
v/c Ratio		0.64	0.09		0.69		0.55	0.68		0.20	0.41	
Control Delay		21.8	3.8		18.6		21.4	21.6		16.5	15.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		21.8	3.8		18.6		21.4	21.6		16.5	15.1	
LOS		C	A		B		C	C		B	B	
Approach Delay		18.6			18.6			21.5			15.3	
Approach LOS		B			B			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 55.9
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 19.1 Intersection LOS: B
Intersection Capacity Utilization 90.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1027: Pontiac Trail & Barton Dr



Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Barton EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Barton WB	270	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Barton EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Barton WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Barton EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Barton WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2020 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	68	477	83	0	5.0	1.00	0.790
2	Barton EB	0	64	305	199	0	3.0	1.00	0.900
3	Pontiac Trail NB	0	54	129	7	0	1.0	1.00	0.930
4	Barton WB	0	13	87	38	0	1.0	1.00	0.930

Operational Results

2020 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	628		154		231	1052		0.5967	
2	Barton EB	None	568		558		224	863		0.6583	
3	Pontiac Trail NB	None	190		437		689	972		0.1954	
4	Barton WB	None	138		247		380	1084		0.1273	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	11.78		11.78	6.16		B		B
2	Barton EB	None	16.06		16.06	7.98		C		C
3	Pontiac Trail NB	None	6.43		6.43	0.72		A		A
4	Barton WB	None	5.00		5.00	0.42		A		A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Barton EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Barton WB	270	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Barton EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Barton WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Barton EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Barton WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2020 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	35	165	49	0	5.0	1.00	0.790
2	Barton EB	0	119	132	55	0	1.0	1.00	0.900
3	Pontiac Trail NB	0	208	437	8	0	1.0	1.00	0.930
4	Barton WB	0	13	363	110	0	1.0	1.00	0.930

Operational Results

2020 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	249		584		666	828		0.3007	
2	Barton EB	None	306		213		620	1100		0.2782	
3	Pontiac Trail NB	None	653		286		233	1062		0.6148	
4	Barton WB	None	486		764		175	793		0.6128	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	8.21		8.21	1.53		A		A
2	Barton EB	None	6.81		6.81	1.19		A		A
3	Pontiac Trail NB	None	12.51		12.51	4.87		B		B
4	Barton WB	None	15.33		15.33	5.10		C		C

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Barton EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Barton WB	270	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Barton EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Barton WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Barton EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Barton WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	173	700	123	0	5.0	1.00	0.790
2	Barton EB	0	78	324	212	0	3.0	1.00	0.900
3	Pontiac Trail NB	0	57	195	7	0	1.0	1.00	0.930
4	Barton WB	0	14	93	70	0	1.0	1.00	0.930

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	996		164		343	1047		0.9510	
2	Barton EB	None	614		870		271	687		0.8940	
3	Pontiac Trail NB	None	259		570		911	894		0.2896	
4	Barton WB	None	177		330		499	1037		0.1706	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	64.08		64.08	96.75		F		F
2	Barton EB	None	47.43		47.43	29.59		E		E
3	Pontiac Trail NB	None	7.94		7.94	1.19		A		A
4	Barton WB	None	5.79		5.79	0.59		A		A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Barton EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Barton WB	270	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Barton EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Barton WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Barton EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Barton WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	98	282	73	0	5.0	1.00	0.790
2	Barton EB	0	163	140	59	0	1.0	1.00	0.900
3	Pontiac Trail NB	0	221	677	9	0	1.0	1.00	0.930
4	Barton WB	0	14	386	223	0	1.0	1.00	0.930

Operational Results

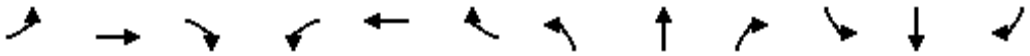
2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	453		607		1052	816		0.5553	
2	Barton EB	None	362		393		666	994		0.3642	
3	Pontiac Trail NB	None	907		401		354	996		0.9107	
4	Barton WB	None	623		1056		247	628		0.9922	

Delays, Queues and Level of Service

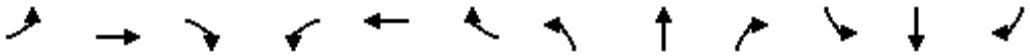
Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	12.77		12.77	4.90		B		B
2	Barton EB	None	8.39		8.39	1.89		A		A
3	Pontiac Trail NB	None	39.27		39.27	34.24		E		E
4	Barton WB	None	103.81		103.81	55.27		F		F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	3	3	220	2	23	1	94	247	68	378	0
Future Volume (Veh/h)	0	3	3	220	2	23	1	94	247	68	378	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	244	2	26	1	107	281	83	461	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	904	1017	461	884	876	248	461			388		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	904	1017	461	884	876	248	461			388		
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	0	99	97	100			93		
cM capacity (veh/h)	237	222	605	245	267	791	1105			1176		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	272	389	544
Volume Left	0	244	1	83
Volume Right	5	26	281	0
cSH	325	263	1105	1176
Volume to Capacity	0.03	1.04	0.00	0.07
Queue Length 95th (ft)	2	268	0	6
Control Delay (s)	16.4	107.0	0.0	1.9
Lane LOS	C	F	A	A
Approach Delay (s)	16.4	107.0	0.0	1.9
Approach LOS	C	F		

Intersection Summary				
Average Delay	25.0			
Intersection Capacity Utilization	74.2%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	2	250	5	65	2	363	238	18	81	2
Future Volume (Veh/h)	1	1	2	250	5	65	2	363	238	18	81	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	278	6	72	2	412	270	22	99	2
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	770	830	100	699	696	547	101			682		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	770	830	100	699	696	547	101			682		
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	19	98	87	100			98		
cM capacity (veh/h)	268	300	961	345	356	537	1498			916		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	7	356	684	123
Volume Left	2	278	2	22
Volume Right	3	72	270	2
cSH	406	372	1498	916
Volume to Capacity	0.02	0.96	0.00	0.02
Queue Length 95th (ft)	1	265	0	2
Control Delay (s)	14.0	70.4	0.0	1.8
Lane LOS	B	F	A	A
Approach Delay (s)	14.0	70.4	0.0	1.8
Approach LOS	B	F		

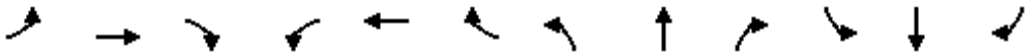
Intersection Summary				
Average Delay	21.7			
Intersection Capacity Utilization	65.3%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	3	220	2	23	1	94	247	68	378	0
Future Volume (vph)	0	3	3	220	2	23	1	94	247	68	378	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Frt		0.932			0.987			0.902				
Flt Protected					0.957						0.992	
Satd. Flow (prot)	0	1771	0	0	1759	0	0	1697	0	0	1866	0
Flt Permitted					0.741			0.999			0.890	
Satd. Flow (perm)	0	1771	0	0	1362	0	0	1695	0	0	1674	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			9			281				
Link Speed (mph)		35			35			35			45	
Link Distance (ft)		823			586			1414			928	
Travel Time (s)		16.0			11.4			27.5			14.1	
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
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	5	5	244	2	26	1	107	281	83	461	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	272	0	0	389	0	0	544	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	24.0	24.0		24.0	24.0		36.0	36.0		36.0	36.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	19.5	19.5		19.5	19.5		31.5	31.5		31.5	31.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		19.5			19.5			31.5			31.5	
Actuated g/C Ratio		0.32			0.32			0.52			0.52	
v/c Ratio		0.02			0.61			0.38			0.62	
Control Delay		11.2			23.3			3.7			13.9	
Queue Delay		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		11.2			23.3			3.7			13.9	
LOS		B			C			A			B	
Approach Delay		11.2			23.3			3.7			13.9	
Approach LOS		B			C			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Pretimed			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1004: Pontiac Trail & Dhu Varen Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	2	250	5	65	2	363	238	18	81	2
Future Volume (vph)	1	1	2	250	5	65	2	363	238	18	81	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Frt		0.942			0.973			0.947			0.998	
Flt Protected		0.986			0.962						0.991	
Satd. Flow (prot)	0	1765	0	0	1744	0	0	1781	0	0	1861	0
Flt Permitted		0.930			0.769						0.877	
Satd. Flow (perm)	0	1665	0	0	1394	0	0	1781	0	0	1647	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			23			79			2	
Link Speed (mph)		35			35			35			45	
Link Distance (ft)		823			586			1414			928	
Travel Time (s)		16.0			11.4			27.5			14.1	
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
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	2	2	3	278	6	72	2	413	270	22	99	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	356	0	0	685	0	0	123	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
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
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	25.0	25.0		25.0	25.0		35.0	35.0		35.0	35.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%		58.3%	58.3%		58.3%	58.3%	
Maximum Green (s)	20.5	20.5		20.5	20.5		30.5	30.5		30.5	30.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		20.5			20.5			30.5			30.5	
Actuated g/C Ratio		0.34			0.34			0.51			0.51	
v/c Ratio		0.01			0.73			0.73			0.15	
Control Delay		11.2			26.9			15.6			8.3	
Queue Delay		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		11.2			26.9			15.6			8.3	
LOS		B			C			B			A	
Approach Delay		11.3			26.9			15.6			8.3	
Approach LOS		B			C			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Pretimed			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 18.2		Intersection LOS: B	
Intersection Capacity Utilization 66.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1004: Pontiac Trail & Dhu Varen Rd

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Dhu Varren EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Dhu Varren WB	270	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Dhu Varren EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Dhu Varren WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Dhu Varren EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Dhu Varren WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2020 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	64	332	0	0	1.0	1.00	0.820
2	Dhu Varren EB	0	0	3	3	0	1.0	1.00	0.600
3	Pontiac Trail NB	0	1	76	179	0	1.0	1.00	0.880
4	Dhu Varren WB	0	174	2	22	0	2.0	1.00	0.900

Operational Results

2020 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	396		177		98	1124		0.3525	
2	Dhu Varren EB	None	6		570		3	902		0.0067	
3	Pontiac Trail NB	None	256		67		509	1187		0.2157	
4	Dhu Varren WB	None	198		77		246	1158		0.1710	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	7.59		7.59	1.93		A		A
2	Dhu Varren EB	None	1.85		1.85	0.03		A		A
3	Pontiac Trail NB	None	5.84		5.84	0.84		A		A
4	Dhu Varren WB	None	5.32		5.32	0.60		A		A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Dhu Varren EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Dhu Varren WB	270	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Dhu Varren EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Dhu Varren WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Dhu Varren EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Dhu Varren WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2020 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Pontiac Trail SB	0	17	63	2	0	1.0	1.00	0.820
2	Dhu Varren EB	0	1	1	2	0	1.0	1.00	0.600
3	Pontiac Trail NB	0	2	303	179	0	1.0	1.00	0.880
4	Dhu Varren WB	0	181	5	61	0	2.0	1.00	0.900

Operational Results

2020 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	82		188		365	1117		0.0734	
2	Dhu Varren EB	None	4		261		9	1076		0.0037	
3	Pontiac Trail NB	None	484		19		246	1214		0.3988	
4	Dhu Varren WB	None	247		306		197	1031		0.2395	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	4.13		4.13	0.26		A		A
2	Dhu Varren EB	None	0.04		0.04	0.00		A		A
3	Pontiac Trail NB	None	7.77		7.77	2.09		A		A
4	Dhu Varren WB	None	6.60		6.60	0.95		A		A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Dhu Varren EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Dhu Varren WB	270	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Dhu Varren EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Dhu Varren WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Dhu Varren EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Dhu Varren WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	446		223		117	1097		0.4064	
2	Dhu Varren EB	None	6		666		3	847		0.0071	
3	Pontiac Trail NB	None	342		71		601	1184		0.2888	
4	Dhu Varren WB	None	245		95		318	1148		0.2134	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	8.44		8.44	2.51		A		A
2	Dhu Varren EB	None	2.00		2.00	0.03		A		A
3	Pontiac Trail NB	None	6.60		6.60	1.26		A		A
4	Dhu Varren WB	None	5.89		5.89	0.80		A		A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Pontiac Trail SB	0	0	12.00	1	16.50	1	40.00	70.00	30.00
2	Dhu Varren EB	90	0	12.00	1	16.50	1	40.00	70.00	30.00
3	Pontiac Trail NB	180	0	12.00	1	16.50	1	40.00	70.00	30.00
4	Dhu Varren WB	270	0	12.00	1	16.50	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Pontiac Trail SB	80.00	18.00	1	16.50	1	12.00	1
2	Dhu Varren EB	80.00	18.00	1	16.50	1	12.00	1
3	Pontiac Trail NB	80.00	18.00	1	16.50	1	12.00	1
4	Dhu Varren WB	80.00	18.00	1	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Pontiac Trail SB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Dhu Varren EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Pontiac Trail NB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Dhu Varren WB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Operational Results

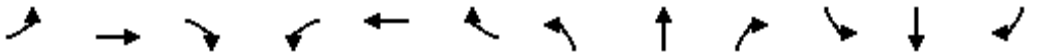
2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Pontiac Trail SB	None	101		257		429	1078		0.0937	
2	Dhu Varren EB	None	4		349		9	1026		0.0039	
3	Pontiac Trail NB	None	603		20		333	1213		0.4970	
4	Dhu Varren WB	None	320		366		257	998		0.3207	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Pontiac Trail SB	None	4.53		4.53	0.34		A		A
2	Dhu Varren EB	None	0.04		0.04	0.00		A		A
3	Pontiac Trail NB	None	9.19		9.19	3.20		A		A
4	Dhu Varren WB	None	7.68		7.68	1.45		A		A



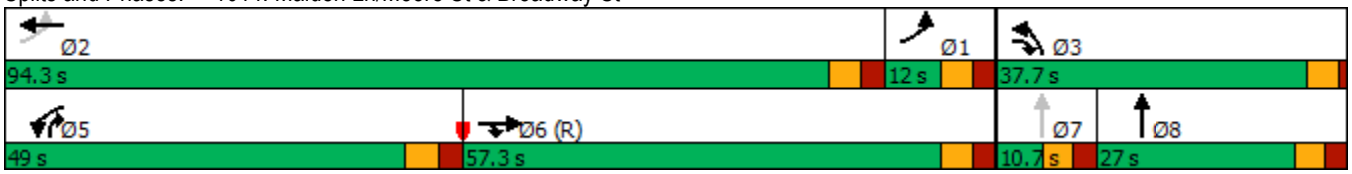
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	752	242	319	473	8	43	41	142	0	0	0
Future Volume (vph)	124	752	242	319	473	8	43	41	142	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		75	200		0	250		250	0		0
Storage Lanes	1		1	0		0	1		1	0		0
Taper Length (ft)	25			75			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00		0.99					
Frt			0.850		0.998				0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	3539	1583	1770	3530	0	1770	1863	1583	0	0	0
Flt Permitted	0.466			0.950			0.950					
Satd. Flow (perm)	868	3539	1583	1770	3530	0	1751	1863	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160		2				165			
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		217			357			1543			126	
Travel Time (s)		4.9			8.1			42.1			3.4	
Confl. Peds. (#/hr)			19			9	8		31			
Peak Hour Factor	0.86	0.86	0.86	0.95	0.95	0.95	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	144	874	281	336	498	8	50	48	165	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	874	281	336	506	0	50	48	165	0	0	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)		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	1	2		1	2	1			
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right			
Leading Detector (ft)	20	100	20	20	100		20	100	20			
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	20	6		20	6	20			
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				
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	D.P+P	NA	pt+ov	Prot	NA		Prot	NA	Over			

Lane Group	Ø7
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6	6 3	5	2		3	8	5			
Permitted Phases	2							8 7				
Detector Phase	1	6	6 3	5	2		3	8	5			
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0		5.0	5.0	7.0			
Minimum Split (s)	12.0	24.1		14.0	24.1		9.5	26.7	14.0			
Total Split (s)	12.0	57.3		49.0	94.3		37.7	27.0	49.0			
Total Split (%)	8.3%	39.8%		34.0%	65.5%		26.2%	18.8%	34.0%			
Maximum Green (s)	5.9	51.2		42.9	88.2		33.2	21.3	42.9			
Yellow Time (s)	3.6	3.6		3.6	3.6		3.5	3.2	3.6			
All-Red Time (s)	2.5	2.5		2.5	2.5		1.0	2.5	2.5			
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0			
Total Lost Time (s)	6.1	6.1		6.1	6.1		4.5	5.7	6.1			
Lead/Lag	Lag	Lag		Lead	Lead			Lag	Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0			
Recall Mode	None	C-Max		None	Max		None	None	None			
Walk Time (s)		6.0			5.0			5.0				
Flash Dont Walk (s)		12.0			13.0			16.0				
Pedestrian Calls (#/hr)		0			0			0				
Act Effct Green (s)	117.2	84.6	99.1	32.7	111.3		10.1	9.1	32.7			
Actuated g/C Ratio	0.81	0.59	0.69	0.23	0.77		0.07	0.06	0.23			
v/c Ratio	0.19	0.42	0.25	0.84	0.19		0.41	0.41	0.34			
Control Delay	1.8	13.9	4.2	70.3	4.7		72.9	74.4	7.4			
Queue Delay	0.0	0.4	0.2	2.4	0.3		0.0	0.0	0.0			
Total Delay	1.8	14.3	4.4	72.6	4.9		72.9	74.4	7.4			
LOS	A	B	A	E	A		E	E	A			
Approach Delay		10.7			31.9			32.1				
Approach LOS		B			C			C				

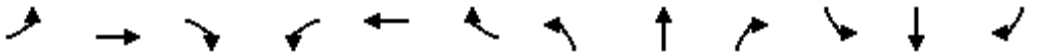
Intersection Summary			
Area Type:	Other		
Cycle Length: 144			
Actuated Cycle Length: 144			
Offset: 4 (3%), Referenced to phase 6:EBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 66.1%		ICU Level of Service C	
Analysis Period (min) 15			

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



Lane Group	Ø7
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	10.7
Total Split (s)	10.7
Total Split (%)	7%
Maximum Green (s)	5.0
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)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

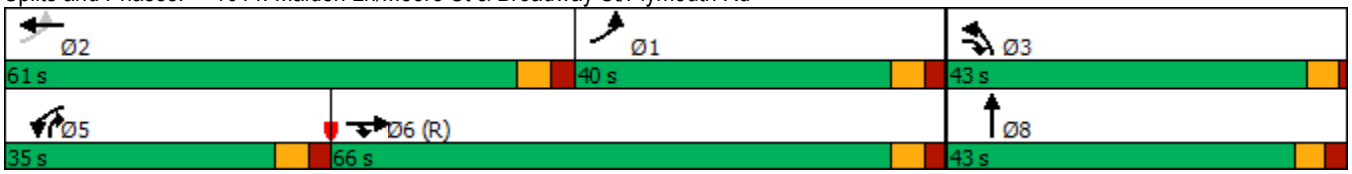


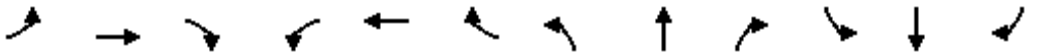
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	297	665	88	157	850	18	125	253	286	0	0	0
Future Volume (vph)	297	665	88	157	850	18	125	253	286	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		75	200		0	250		250	0		0
Storage Lanes	1		1	0		0	1		1	0		0
Taper Length (ft)	25			75			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00		0.99					
Frt			0.850		0.997				0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	3539	1583	1770	3526	0	1770	1863	1583	0	0	0
Flt Permitted	0.201			0.950			0.950					
Satd. Flow (perm)	374	3539	1583	1770	3526	0	1754	1863	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			88		2				333			
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		217			357			1543			126	
Travel Time (s)		4.9			8.1			42.1			3.4	
Confl. Peds. (#/hr)			19			9	8		31			
Peak Hour Factor	0.86	0.86	0.86	0.95	0.95	0.95	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	345	773	102	165	895	19	145	294	333	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	345	773	102	165	914	0	145	294	333	0	0	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)		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	1	2		1	2	1			
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right			
Leading Detector (ft)	20	100	20	20	100		20	100	20			
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	20	6		20	6	20			
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				
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	D.P+P	NA	pt+ov	Prot	NA		Prot	NA	Over			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6	6 3	5	2		3	8	5			
Permitted Phases	2											
Detector Phase	1	6	6 3	5	2		3	8	5			
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0		5.0	5.0	7.0			
Minimum Split (s)	12.0	24.1		14.0	24.1		9.5	26.7	14.0			
Total Split (s)	40.0	66.0		35.0	61.0		43.0	43.0	35.0			
Total Split (%)	27.8%	45.8%		24.3%	42.4%		29.9%	29.9%	24.3%			
Maximum Green (s)	33.9	59.9		28.9	54.9		38.5	37.3	28.9			
Yellow Time (s)	3.6	3.6		3.6	3.6		3.5	3.2	3.6			
All-Red Time (s)	2.5	2.5		2.5	2.5		1.0	2.5	2.5			
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0			
Total Lost Time (s)	6.1	6.1		6.1	6.1		4.5	5.7	6.1			
Lead/Lag	Lag	Lag		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0			
Recall Mode	None	C-Max		None	Max		None	None	None			
Walk Time (s)		6.0			5.0			5.0				
Flash Dont Walk (s)		12.0			13.0			16.0				
Pedestrian Calls (#/hr)		0			0			0				
Act Effct Green (s)	98.2	79.5	113.1	18.7	64.3		29.1	27.9	18.7			
Actuated g/C Ratio	0.68	0.55	0.79	0.13	0.45		0.20	0.19	0.13			
v/c Ratio	0.59	0.40	0.08	0.72	0.58		0.41	0.81	0.67			
Control Delay	31.9	21.7	2.8	74.1	31.0		52.1	72.8	12.5			
Queue Delay	0.0	0.0	0.0	0.0	1.1		0.0	0.0	0.0			
Total Delay	31.9	21.7	2.8	74.1	32.1		52.1	72.8	12.5			
LOS	C	C	A	E	C		D	E	B			
Approach Delay		23.0			38.5			42.9				
Approach LOS		C			D			D				

Intersection Summary			
Area Type:	Other		
Cycle Length: 144			
Actuated Cycle Length: 144			
Offset: 4 (3%), Referenced to phase 6:EBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 33.4		Intersection LOS: C	
Intersection Capacity Utilization 71.5%		ICU Level of Service C	
Analysis Period (min) 15			

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



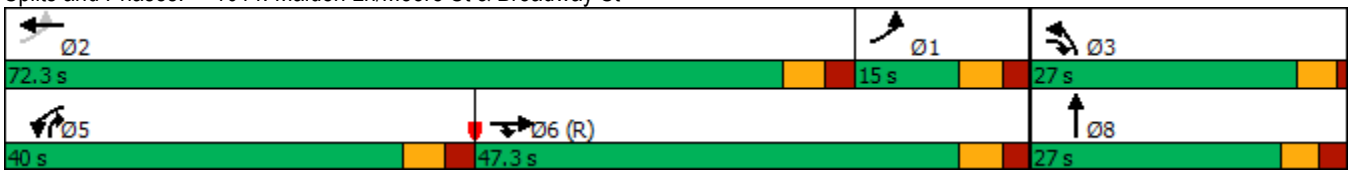


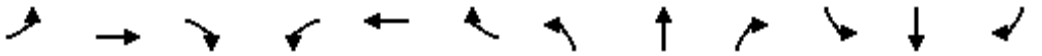
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	822	264	350	607	15	201	66	187	0	0	0
Future Volume (vph)	172	822	264	350	607	15	201	66	187	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		75	200		0	250		250	0		0
Storage Lanes	1		1	0		0	1		1	0		0
Taper Length (ft)	25			75			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00		0.99					
Frt			0.850		0.996				0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	3539	1583	1770	3523	0	1770	1863	1583	0	0	0
Flt Permitted	0.377			0.950			0.950					
Satd. Flow (perm)	702	3539	1583	1770	3523	0	1748	1863	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191		4				217			
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		217			357			539			126	
Travel Time (s)		4.9			8.1			14.7			3.4	
Confl. Peds. (#/hr)			19			9	8		31			
Peak Hour Factor	0.86	0.86	0.86	0.95	0.95	0.95	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	200	956	307	368	639	16	234	77	217	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	200	956	307	368	655	0	234	77	217	0	0	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)		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	1	2		1	2	1			
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right			
Leading Detector (ft)	20	100	20	20	100		20	100	20			
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	20	6		20	6	20			
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				
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	D.P+P	NA	pt+ov	Prot	NA		Prot	NA	Over			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6	6 3	5	2		3	8	5			
Permitted Phases	2											
Detector Phase	1	6	6 3	5	2		3	8	5			
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0		5.0	5.0	7.0			
Minimum Split (s)	12.0	24.1		14.0	24.1		9.5	26.7	14.0			
Total Split (s)	15.0	47.3		40.0	72.3		27.0	27.0	40.0			
Total Split (%)	13.1%	41.4%		35.0%	63.3%		23.6%	23.6%	35.0%			
Maximum Green (s)	8.9	41.2		33.9	66.2		22.5	21.3	33.9			
Yellow Time (s)	3.6	3.6		3.6	3.6		3.5	3.2	3.6			
All-Red Time (s)	2.5	2.5		2.5	2.5		1.0	2.5	2.5			
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0			
Total Lost Time (s)	6.1	6.1		6.1	6.1		4.5	5.7	6.1			
Lead/Lag	Lag	Lag		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0			
Recall Mode	None	C-Max		None	Max		None	None	None			
Walk Time (s)		6.0			5.0			5.0				
Flash Dont Walk (s)		12.0			13.0			16.0				
Pedestrian Calls (#/hr)		0			0			0				
Act Effct Green (s)	78.4	50.2	73.9	28.2	69.5		19.2	16.8	28.2			
Actuated g/C Ratio	0.69	0.44	0.65	0.25	0.61		0.17	0.15	0.25			
v/c Ratio	0.35	0.61	0.28	0.84	0.31		0.79	0.28	0.39			
Control Delay	8.4	28.5	4.4	58.3	11.6		64.3	44.0	6.3			
Queue Delay	0.0	2.1	0.5	4.6	0.8		0.0	0.0	0.0			
Total Delay	8.4	30.6	4.9	62.9	12.4		64.3	44.0	6.3			
LOS	A	C	A	E	B		E	D	A			
Approach Delay		22.1			30.6			37.5				
Approach LOS		C			C			D				

Intersection Summary			
Area Type:	Other		
Cycle Length: 114.3			
Actuated Cycle Length: 114.3			
Offset: 0 (0%), Referenced to phase 6:EBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 27.7		Intersection LOS: C	
Intersection Capacity Utilization 69.8%		ICU Level of Service C	
Analysis Period (min) 15			

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



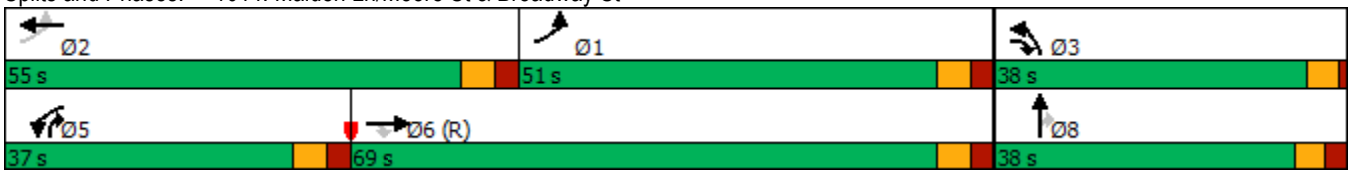


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	485	813	115	187	931	26	159	339	374	0	0	0
Future Volume (vph)	485	813	115	187	931	26	159	339	374	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		75	200		0	250		250	0		0
Storage Lanes	1		1	0		0	1		1	0		0
Taper Length (ft)	25			75			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00		0.99					
Frt			0.850		0.996				0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	3539	1583	1770	3522	0	1770	1863	1583	0	0	0
Flt Permitted	0.092			0.950			0.950					
Satd. Flow (perm)	171	3539	1583	1770	3522	0	1751	1863	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90		2				387			
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		217			357			539			126	
Travel Time (s)		4.9			8.1			14.7			3.4	
Confl. Peds. (#/hr)			19			9	8		31			
Peak Hour Factor	0.86	0.86	0.86	0.95	0.95	0.95	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	564	945	134	197	980	27	185	394	435	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	564	945	134	197	1007	0	185	394	435	0	0	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)		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	1	2		1	2	1			
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right			
Leading Detector (ft)	20	100	20	20	100		20	100	20			
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	20	6		20	6	20			
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				
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	D.P+P	NA	pm+ov	Prot	NA		Prot	NA	pm+ov			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6	3	5	2		3	8	5			
Permitted Phases	2		6						8			
Detector Phase	1	6	6 3	5	2		3	8	5			
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	7.0	10.0		5.0	5.0	7.0			
Minimum Split (s)	12.0	24.1	9.5	14.0	24.1		9.5	26.7	14.0			
Total Split (s)	51.0	69.0	38.0	37.0	55.0		38.0	38.0	37.0			
Total Split (%)	35.4%	47.9%	26.4%	25.7%	38.2%		26.4%	26.4%	25.7%			
Maximum Green (s)	44.9	62.9	33.5	30.9	48.9		33.5	32.3	30.9			
Yellow Time (s)	3.6	3.6	3.5	3.6	3.6		3.5	3.2	3.6			
All-Red Time (s)	2.5	2.5	1.0	2.5	2.5		1.0	2.5	2.5			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Total Lost Time (s)	6.1	6.1	4.5	6.1	6.1		4.5	5.7	6.1			
Lead/Lag	Lag	Lag		Lead	Lead				Lead			
Lead-Lag Optimize?	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	C-Max	None	None	Max		None	None	None			
Walk Time (s)		6.0			5.0			5.0				
Flash Dont Walk (s)		12.0			13.0			16.0				
Pedestrian Calls (#/hr)		0			0			0				
Act Effct Green (s)	94.3	72.7	111.8	21.6	49.4		33.0	31.8	21.6			
Actuated g/C Ratio	0.65	0.50	0.78	0.15	0.34		0.23	0.22	0.15			
v/c Ratio	0.92	0.53	0.11	0.74	0.83		0.46	0.96	0.77			
Control Delay	66.0	27.5	5.2	69.5	47.3		51.8	90.1	18.0			
Queue Delay	0.0	0.8	0.0	0.3	22.2		0.0	0.0	0.0			
Total Delay	66.0	28.3	5.2	69.7	69.5		51.8	90.1	18.0			
LOS	E	C	A	E	E		D	F	B			
Approach Delay		39.4			69.5			52.2				
Approach LOS		D			E			D				

Intersection Summary			
Area Type:	Other		
Cycle Length: 144			
Actuated Cycle Length: 144			
Offset: 13 (9%), Referenced to phase 6:EBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 52.1		Intersection LOS: D	
Intersection Capacity Utilization 86.2%		ICU Level of Service E	
Analysis Period (min) 15			

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

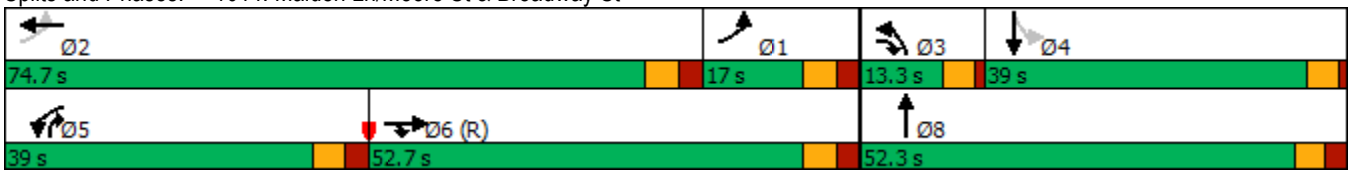


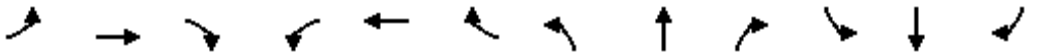
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	800	177	330	607	15	60	66	187	20	303	5
Future Volume (vph)	160	800	177	330	607	15	60	66	187	20	303	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		75	200		0	250		250	0		0
Storage Lanes	1		1	0		0	1		1	0		0
Taper Length (ft)	25			0			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00		0.99					
Frt			0.850		0.996				0.850		0.998	
Flt Protected	0.950			0.950			0.950				0.997	
Satd. Flow (prot)	1770	3539	1583	1770	3520	0	1770	1863	1583	0	1853	0
Flt Permitted	0.341			0.950			0.950				0.980	
Satd. Flow (perm)	635	3539	1583	1770	3520	0	1749	1863	1583	0	1822	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			72		2				217			
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		217			357			539			126	
Travel Time (s)		4.9			8.1			14.7			3.4	
Confl. Peds. (#/hr)			19			9	8		31			
Peak Hour Factor	0.86	0.86	0.86	0.95	0.95	0.95	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	186	930	206	347	639	16	70	77	217	22	329	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	930	206	347	655	0	70	77	217	0	356	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)		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	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	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	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	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	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	
Turn Type	D.P+P	NA	pt+ov	Prot	NA		Prot	NA	Over	Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6	6 3	5	2		3	8	5		4	
Permitted Phases	2									4		
Detector Phase	1	6	6 3	5	2		3	8	5	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0		5.0	5.0	7.0	5.0	5.0	
Minimum Split (s)	12.0	24.1		14.0	24.1		9.5	26.7	14.0	22.5	22.5	
Total Split (s)	17.0	52.7		39.0	74.7		13.3	52.3	39.0	39.0	39.0	
Total Split (%)	11.8%	36.6%		27.1%	51.9%		9.2%	36.3%	27.1%	27.1%	27.1%	
Maximum Green (s)	10.9	46.6		32.9	68.6		8.8	46.6	32.9	34.5	34.5	
Yellow Time (s)	3.6	3.6		3.6	3.6		3.5	3.2	3.6	3.5	3.5	
All-Red Time (s)	2.5	2.5		2.5	2.5		1.0	2.5	2.5	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.1	6.1		6.1	6.1		4.5	5.7	6.1		4.5	
Lead/Lag	Lag	Lag		Lead	Lead		Lead		Lead	Lag	Lag	
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	3.0	
Recall Mode	None	C-Max		None	Max		None	None	None	None	None	
Walk Time (s)		6.0			5.0			5.0		7.0	7.0	
Flash Dont Walk (s)		12.0			13.0			16.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0			0		0	0	
Act Effct Green (s)	82.8	51.7	64.7	31.1	71.9		8.5	43.3	31.1		31.5	
Actuated g/C Ratio	0.58	0.36	0.45	0.22	0.50		0.06	0.30	0.22		0.22	
v/c Ratio	0.41	0.73	0.27	0.91	0.37		0.67	0.14	0.42		0.89	
Control Delay	12.0	38.0	11.3	78.3	21.2		96.2	36.2	8.1		79.3	
Queue Delay	0.0	1.9	0.0	31.6	0.5		0.0	0.0	0.0		0.0	
Total Delay	12.0	39.9	11.3	109.9	21.7		96.2	36.2	8.1		79.3	
LOS	B	D	B	F	C		F	D	A		E	
Approach Delay		31.5			52.2			31.0			79.3	
Approach LOS		C			D			C			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 144			
Actuated Cycle Length: 144			
Offset: 136 (94%), Referenced to phase 6:EBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 43.9		Intersection LOS: D	
Intersection Capacity Utilization 81.4%		ICU Level of Service D	
Analysis Period (min) 15			

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



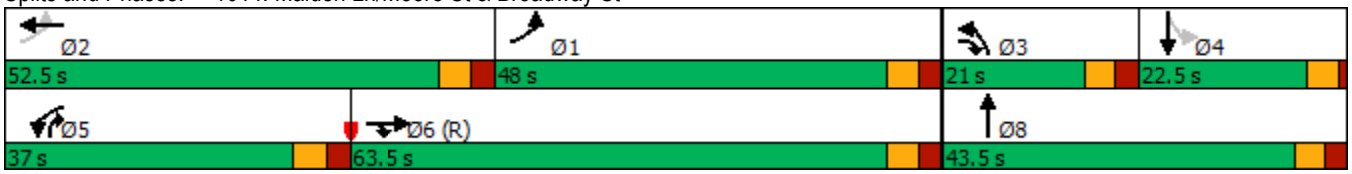


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	485	813	75	187	931	26	159	339	374	15	79	5
Future Volume (vph)	485	813	75	187	931	26	159	339	374	15	79	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		75	200		0	250		250	0		0
Storage Lanes	1		1	0		0	1		1	0		0
Taper Length (ft)	25			75			50			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00		0.98					
Frt			0.850		0.996				0.850		0.994	
Flt Protected	0.950			0.950			0.950				0.993	
Satd. Flow (prot)	1770	3539	1583	1770	3520	0	1770	1863	1583	0	1839	0
Flt Permitted	0.095			0.950			0.950				0.839	
Satd. Flow (perm)	177	3539	1583	1770	3520	0	1740	1863	1583	0	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			67		2				387		1	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		217			357			539			126	
Travel Time (s)		4.9			8.1			14.7			3.4	
Confl. Peds. (#/hr)			19			9	8		31			
Peak Hour Factor	0.86	0.86	0.86	0.95	0.95	0.95	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	564	945	87	197	980	27	185	394	435	16	86	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	564	945	87	197	1007	0	185	394	435	0	107	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)		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	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	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	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	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	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	
Turn Type	D.P+P	NA	pt+ov	Prot	NA		Prot	NA	Over	Perm	NA	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6	6 3	5	2		3	8	5		4	
Permitted Phases	2									4		
Detector Phase	1	6	6 3	5	2		3	8	5	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		7.0	10.0		5.0	5.0	7.0	5.0	5.0	
Minimum Split (s)	12.0	24.1		14.0	24.1		12.0	22.5	14.0	22.5	22.5	
Total Split (s)	48.0	63.5		37.0	52.5		21.0	43.5	37.0	22.5	22.5	
Total Split (%)	33.3%	44.1%		25.7%	36.5%		14.6%	30.2%	25.7%	15.6%	15.6%	
Maximum Green (s)	41.9	57.4		30.9	46.4		15.3	37.8	30.9	18.0	18.0	
Yellow Time (s)	3.6	3.6		3.6	3.6		3.2	3.2	3.6	3.5	3.5	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5	2.5	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.1	6.1		6.1	6.1		5.7	5.7	6.1		4.5	
Lead/Lag	Lag	Lag		Lead	Lead		Lead		Lead	Lag	Lag	
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	3.0	
Recall Mode	None	C-Max		None	Max		None	None	None	None	None	
Walk Time (s)		6.0			5.0		5.0	5.0		7.0	7.0	
Flash Dont Walk (s)		12.0			13.0		16.0	16.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	91.7	70.1	91.1	21.6	49.8		15.3	34.4	21.6		14.6	
Actuated g/C Ratio	0.64	0.49	0.63	0.15	0.35		0.11	0.24	0.15		0.10	
v/c Ratio	0.98	0.55	0.08	0.74	0.83		0.98	0.89	0.77		0.68	
Control Delay	74.6	26.3	8.0	70.4	46.9		124.8	74.5	18.0		81.9	
Queue Delay	0.0	0.7	0.0	0.3	15.8		0.0	0.0	0.0		0.0	
Total Delay	74.6	26.9	8.0	70.7	62.6		124.8	74.5	18.0		81.9	
LOS	E	C	A	E	E		F	E	B		F	
Approach Delay		42.7			64.0			59.4			81.9	
Approach LOS		D			E			E			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 144			
Actuated Cycle Length: 144			
Offset: 12 (8%), Referenced to phase 6:EBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 54.6		Intersection LOS: D	
Intersection Capacity Utilization 86.2%		ICU Level of Service E	
Analysis Period (min) 15			

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



Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Plymouth SB	0	0	24.00	2	28.00	2	40.00	70.00	30.00
2	Moore EB	90	0	12.00	1	14.00	1	40.00	70.00	30.00
3	Broadway NB	180	0	24.00	2	28.00	2	40.00	70.00	30.00
4	Maiden Ln WB	270	0	12.00	1	14.00	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Plymouth SB	120.00	18.00	1	28.00	2	24.00	2
2	Moore EB	120.00	28.00	2	16.50	1	12.00	1
3	Broadway NB	120.00	18.00	1	28.00	2	24.00	2
4	Maiden Ln WB	120.00	28.00	2	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Plymouth SB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
2	Moore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Broadway NB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
4	Maiden Ln WB	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
4	Maiden Ln WB	Yield	142	12	1	12	1	12	1

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
4	Maiden Ln WB	12	1	0	130	66.00007603	30	1	Plymouth SB	2	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
4	Maiden Ln WB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2020 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Plymouth SB	0	319	473	8	0	2.0	1.00	0.950
2	Moore EB	0	0	0	0	0	2.0	1.00	0.920
3	Broadway NB	0	124	752	242	0	2.0	1.00	0.860
4	Maiden Ln WB	0	43	41	0	142	2.0	1.00	0.860

Operational Results

2020 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Plymouth SB	None	800		208		894	2179		0.3672	
2	Moore EB	None	0		0		173	0		0.0000	
3	Broadway NB	None	1118		319		516	2057		0.5436	
4	Maiden Ln WB	Yield	84	142	876	876	561	852	758	0.0985	0.1875

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Plymouth SB	None	6.97		6.97	2.66		A		A
2	Moore EB	None	0.00		0.00	0.00		A		A
3	Broadway NB	None	8.36		8.36	5.21		A		A
4	Maiden Ln WB	Yield	5.52	7.65	6.86	0.36	0.80	A	A	A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Plymouth SB	0	0	24.00	2	28.00	2	40.00	70.00	30.00
2	Moore EB	90	0	12.00	1	14.00	1	40.00	70.00	30.00
3	Broadway NB	180	0	24.00	2	28.00	2	40.00	70.00	30.00
4	Maiden Ln WB	270	0	12.00	1	14.00	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Plymouth SB	120.00	18.00	1	28.00	2	24.00	2
2	Moore EB	120.00	28.00	2	16.50	1	12.00	1
3	Broadway NB	120.00	18.00	1	28.00	2	24.00	2
4	Maiden Ln WB	120.00	28.00	2	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Plymouth SB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
2	Moore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Broadway NB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
4	Maiden Ln WB	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
4	Maiden Ln WB	Yield	286	12	1	12	1	12	1

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
4	Maiden Ln WB	12	1	0	130	66.00008237	30	1	Plymouth SB	2	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
4	Maiden Ln WB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2020 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Plymouth SB	0	157	850	18	0	2.0	1.00	0.950
2	Moore EB	0	0	0	0	0	2.0	1.00	0.920
3	Broadway NB	0	297	665	88	0	2.0	1.00	0.860
4	Maiden Ln WB	0	125	253	0	286	2.0	1.00	0.860

Operational Results

2020 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Plymouth SB	None	1025		675		951	1666		0.6151	
2	Moore EB	None	0		0		568	0		0.0000	
3	Broadway NB	None	1050		157		975	2234		0.4699	
4	Maiden Ln WB	Yield	378	286	962	962	245	818	725	0.4620	0.3944

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Plymouth SB	None	10.35		10.35	6.12		B		B
2	Moore EB	None	0.00		0.00	0.00		A		A
3	Broadway NB	None	7.36		7.36	4.05		A		A
4	Maiden Ln WB	Yield	11.28	11.25	11.26	3.28	2.50	B	B	B

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Plymouth SB	0	0	24.00	2	28.00	2	40.00	70.00	30.00
2	Moore EB	90	0	12.00	1	14.00	1	40.00	70.00	30.00
3	Broadway NB	180	0	24.00	2	28.00	2	40.00	70.00	30.00
4	Maiden Ln WB	270	0	12.00	1	14.00	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Plymouth SB	120.00	18.00	1	28.00	2	24.00	2
2	Moore EB	120.00	28.00	2	16.50	1	12.00	1
3	Broadway NB	120.00	18.00	1	28.00	2	24.00	2
4	Maiden Ln WB	120.00	28.00	2	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Plymouth SB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
2	Moore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Broadway NB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
4	Maiden Ln WB	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
4	Maiden Ln WB	Yield	187	12	1	12	1	12	1

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
4	Maiden Ln WB	12	1	0	130	66.00010 138	30	1	Plymouth SB	2	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
4	Maiden Ln WB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Plymouth SB	0	350	607	15	0	2.0	1.00	0.950
2	Moore EB	0	0	0	0	0	2.0	1.00	0.920
3	Broadway NB	0	172	822	264	0	2.0	1.00	0.860
4	Maiden Ln WB	0	201	66	0	187	2.0	1.00	0.860

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Plymouth SB	None	972		439		1009	1925		0.5049	
2	Moore EB	None	0		0		253	0		0.0000	
3	Broadway NB	None	1258		350		808	2023		0.6219	
4	Maiden Ln WB	Yield	267	187	994	994	614	806	713	0.3315	0.2622

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Plymouth SB	None	9.10		9.10	4.59		A		A
2	Moore EB	None	0.00		0.00	0.00		A		A
3	Broadway NB	None	9.80		9.80	7.52		A		A
4	Maiden Ln WB	Yield	9.13	9.15	9.14	1.78	1.29	A	A	A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Plymouth SB	0	0	24.00	2	28.00	2	40.00	70.00	30.00
2	Moore EB	90	0	12.00	1	14.00	1	40.00	70.00	30.00
3	Broadway NB	180	0	24.00	2	28.00	2	40.00	70.00	30.00
4	Maiden Ln WB	270	0	12.00	1	14.00	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Plymouth SB	120.00	18.00	1	28.00	2	24.00	2
2	Moore EB	120.00	28.00	2	16.50	1	12.00	1
3	Broadway NB	120.00	18.00	1	28.00	2	24.00	2
4	Maiden Ln WB	120.00	28.00	2	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Plymouth SB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
2	Moore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Broadway NB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
4	Maiden Ln WB	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
4	Maiden Ln WB	Yield	374	12	1	12	1	12	1

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
4	Maiden Ln WB	12	1	0	130	66.00010982	30	1	Plymouth SB	2	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
4	Maiden Ln WB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Plymouth SB	0	187	931	26	0	2.0	1.00	0.950
2	Moore EB	0	0	0	0	0	2.0	1.00	0.920
3	Broadway NB	0	485	813	115	0	2.0	1.00	0.860
4	Maiden Ln WB	0	159	339	0	374	2.0	1.00	0.860

Operational Results

2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Plymouth SB	None	1144		982		1186	1330		0.8602	
2	Moore EB	None	0		0		849	0		0.0000	
3	Broadway NB	None	1413		187		1087	2202		0.6417	
4	Maiden Ln WB	Yield	498	374	1297	1297	301	671	581	0.7417	0.6443

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Plymouth SB	None	28.79		28.79	37.47		D		D
2	Moore EB	None	0.00		0.00	0.00		A		A
3	Broadway NB	None	10.81		10.81	9.54		B		B
4	Maiden Ln WB	Yield	29.48	24.60	27.39	20.19	11.19	D	C	D

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Plymouth SB	0	0	24.00	2	28.00	2	40.00	70.00	30.00
2	Moore EB	90	0	12.00	1	14.00	1	40.00	70.00	30.00
3	Broadway NB	180	0	24.00	2	28.00	2	40.00	70.00	30.00
4	Maiden Ln WB	270	0	12.00	1	14.00	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Plymouth SB	120.00	18.00	1	28.00	2	24.00	2
2	Moore EB	120.00	28.00	2	16.50	1	12.00	1
3	Broadway NB	120.00	18.00	1	28.00	2	24.00	2
4	Maiden Ln WB	120.00	28.00	2	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Plymouth SB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
2	Moore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Broadway NB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
4	Maiden Ln WB	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
4	Maiden Ln WB	Yield	187	12	1	12	1	12	1

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
4	Maiden Ln WB	12	1	0	130	66.00011616	30	1	Plymouth SB	2	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
4	Maiden Ln WB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Plymouth SB	0	350	607	15	0	2.0	1.00	0.950
2	Moore EB	0	227	303	5	0	2.0	1.00	0.920
3	Broadway NB	0	172	537	172	0	2.0	1.00	0.860
4	Maiden Ln WB	0	201	66	0	187	2.0	1.00	0.860

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Plymouth SB	None	972		439		950	1925		0.5048	
2	Moore EB	None	535		1158		253	740		0.7226	
3	Broadway NB	None	881		879		813	1442		0.6108	
4	Maiden Ln WB	Yield	267	187	935	935	824	829	735	0.3221	0.2544

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Plymouth SB	None	9.10		9.10	4.58		A		A
2	Moore EB	None	20.79		20.79	8.82		C		C
3	Broadway NB	None	11.84		11.84	7.78		B		B
4	Maiden Ln WB	Yield	8.78	8.80	8.79	1.65	1.20	A	A	A

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Plymouth SB	0	0	24.00	2	28.00	2	40.00	70.00	30.00
2	Moore EB	90	0	12.00	1	14.00	1	40.00	70.00	30.00
3	Broadway NB	180	0	24.00	2	28.00	2	40.00	70.00	30.00
4	Maiden Ln WB	270	0	12.00	1	14.00	1	40.00	70.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Plymouth SB	120.00	18.00	1	28.00	2	24.00	2
2	Moore EB	120.00	28.00	2	16.50	1	12.00	1
3	Broadway NB	120.00	18.00	1	28.00	2	24.00	2
4	Maiden Ln WB	120.00	28.00	2	16.50	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Plymouth SB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
2	Moore EB	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Broadway NB	0	1.000	0	1.000	20.00	3584	0	24.00	3584	0
4	Maiden Ln WB	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0

Bypass Geometry

Bypass Approach Geometry (ft)

Leg	Leg Names	Bypass Type	Bypass Flows	V	nv	Vb	nvb	Vt	nvt
4	Maiden Ln WB	Yield	374	12	1	12	1	12	1

Bypass Entry and Exit Geometry (ft)

Leg	Leg Names	Entry Geometry						Leg	Leg Names	Exit Lanes	
		Eb	neb	Lb	Lt	Rb	Phib			nex	Nmx
4	Maiden Ln WB	12	1	0	130	66.00010771	30	1	Plymouth SB	2	2

Bypass Entry Capacity Modifiers and Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Calibration	
		Capacity + or -	Cross Walk Factor	Intercept + or -	Slope Factor
4	Maiden Ln WB	0	1.000	0	1.000

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers		
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor	Peak Hour Factor
1	Plymouth SB	0	187	931	26	0	2.0	1.00	0.950
2	Moore EB	0	120	14	5	0	2.0	1.00	0.920
3	Broadway NB	0	485	713	100	0	2.0	1.00	0.860
4	Maiden Ln WB	0	159	339	0	374	2.0	1.00	0.860

Operational Results

2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Plymouth SB	None	1144		981		1206	1330		0.8601	
2	Moore EB	None	139		1274		849	694		0.2002	
3	Broadway NB	None	1298		321		1092	2055		0.6316	
4	Maiden Ln WB	Yield	498	374	1317	1317	300	658	565	0.7571	0.6618

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Plymouth SB	None	28.58		28.58	36.37		D		D
2	Moore EB	None	8.20		8.20	0.72		A		A
3	Broadway NB	None	11.38		11.38	9.63		B		B
4	Maiden Ln WB	Yield	31.84	26.58	29.59	22.39	12.48	D	D	D

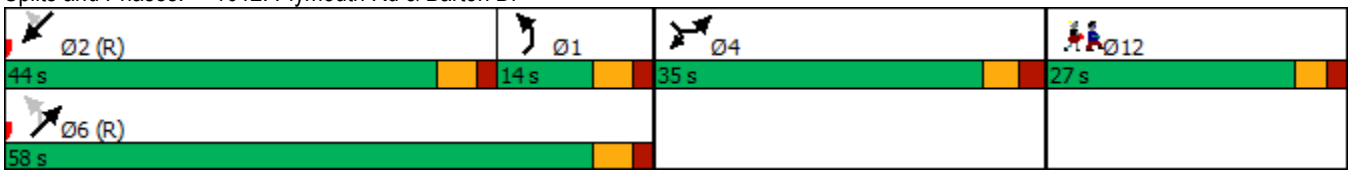
Lane Group	SEL	SER	NEL	NET	SWT	SWR	Ø12
Lane Configurations							
Traffic Volume (vph)	514	88	29	937	860	190	
Future Volume (vph)	514	88	29	937	860	190	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	100	115			150	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		100				
Lane Util. 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		0.260				
Satd. Flow (perm)	1765	1615	484	3539	3574	1452	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		34				130	
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)	578	99	33	1053	905	200	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	578	99	33	1053	905	200	
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)	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	1.31	0.24	0.08	0.45	0.43	0.22	
Control Delay	191.3	25.6	20.1	23.1	15.0	5.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	191.3	25.6	20.1	23.1	15.0	5.6	
LOS	F	C	C	C	B	A	
Approach Delay	167.1			23.0	13.3		
Approach LOS	F			C	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: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 53.3 Intersection LOS: D
Intersection Capacity Utilization 63.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1012: Plymouth Rd & Barton Dr

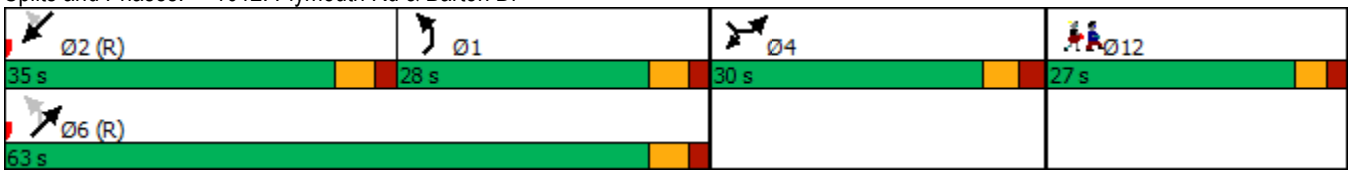


Lane Group	SEL	SER	NEL	NET	SWT	SWR	Ø12
Lane Configurations							
Traffic Volume (vph)	248	40	106	983	1092	449	
Future Volume (vph)	248	40	106	983	1092	449	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	100	115			150	
Storage Lanes	1	1	1			1	
Taper Length (ft)	25		100				
Lane 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		0.149				
Satd. Flow (perm)	1757	1615	278	3539	3574	1452	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		30				218	
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)	279	45	119	1104	1149	473	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	279	45	119	1104	1149	473	
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)	22.1	22.1	86.8	86.8	58.8	58.8	
Actuated g/C Ratio	0.18	0.18	0.72	0.72	0.49	0.49	
v/c Ratio	0.84	0.14	0.25	0.43	0.66	0.57	
Control Delay	69.2	20.1	14.9	10.8	25.7	14.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	69.2	20.1	14.9	10.8	25.7	14.6	
LOS	E	C	B	B	C	B	
Approach Delay	62.4			11.2	22.4		
Approach LOS	E			B	C		

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: 0.84			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 63.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1012: Plymouth Rd & Barton Dr

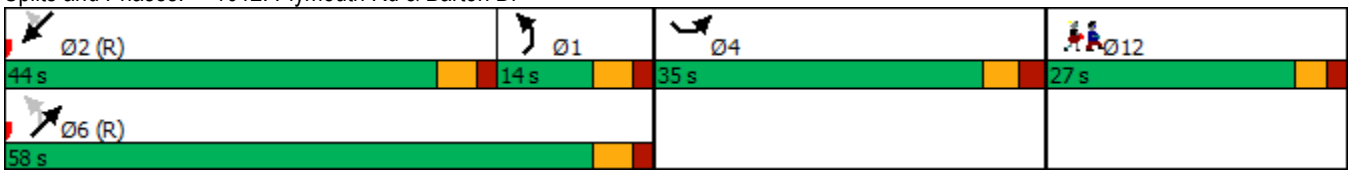


Lane Group	SEL	SER	NEL	NET	SWT	SWR	Ø12
Lane Configurations							
Traffic Volume (vph)	514	88	29	937	860	190	
Future Volume (vph)	514	88	29	937	860	190	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	100	115			150	
Storage Lanes	2	0	1			1	
Taper Length (ft)	25		100				
Lane Util. Factor	0.97	0.95	1.00	0.95	0.95	1.00	
Ped Bike Factor	0.96					0.91	
Frt	0.978					0.850	
Flt Protected	0.959		0.950				
Satd. Flow (prot)	3437	0	1770	3539	3574	1599	
Flt Permitted	0.959		0.266				
Satd. Flow (perm)	3329	0	495	3539	3574	1452	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)	16					130	
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)	578	99	33	1053	905	200	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	677	0	33	1053	905	200	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	24			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	2	2	1	
Detector Template	Left		Left	Thru	Thru	Right	
Leading Detector (ft)	20		20	100	100	20	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		20	6	6	20	
Detector 1 Type	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	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	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		pm+pt	NA	NA	Perm	
Protected Phases	4		1	6	2		12
Permitted Phases			6			2	
Detector Phase	4		1	6	2	2	
Switch Phase							
Minimum Initial (s)	10.0		5.0	8.0	10.0	10.0	1.0
Minimum Split (s)	22.5		10.5	22.5	31.5	31.5	22.9
Total Split (s)	35.0		14.0	58.0	44.0	44.0	27.0
Total Split (%)	29.2%		11.7%	48.3%	36.7%	36.7%	23%
Maximum Green (s)	29.4		8.5	52.5	38.5	38.5	22.1
Yellow Time (s)	3.1		3.6	3.6	3.6	3.6	3.0
All-Red Time (s)	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	
Total Lost Time (s)	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
Recall Mode	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)	27.0		81.9	81.9	73.5	73.5	
Actuated g/C Ratio	0.22		0.68	0.68	0.61	0.61	
v/c Ratio	0.86		0.08	0.44	0.41	0.21	
Control Delay	55.7		19.7	22.3	14.1	5.5	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	55.7		19.7	22.3	14.1	5.5	
LOS	E		B	C	B	A	
Approach Delay	55.7			22.2	12.6		
Approach LOS	E			C	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: 0.86			
Intersection Signal Delay: 26.4		Intersection LOS: C	
Intersection Capacity Utilization 52.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1012: Plymouth Rd & Barton Dr

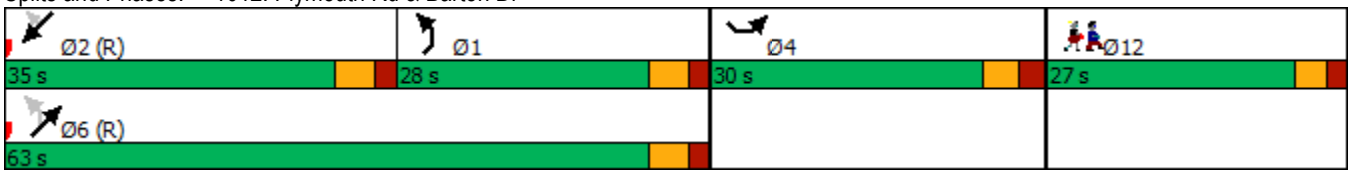


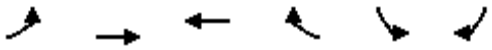
Lane Group	SEL	SER	NEL	NET	SWT	SWR	Ø12
Lane Configurations							
Traffic Volume (vph)	248	40	106	983	1092	449	
Future Volume (vph)	248	40	106	983	1092	449	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	100	115			150	
Storage Lanes	2	0	1			1	
Taper Length (ft)	25		100				
Lane Util. Factor	0.97	0.95	1.00	0.95	0.95	1.00	
Ped Bike Factor	0.96					0.91	
Frt	0.979					0.850	
Flt Protected	0.959		0.950				
Satd. Flow (prot)	3439	0	1770	3539	3574	1599	
Flt Permitted	0.959		0.168				
Satd. Flow (perm)	3308	0	313	3539	3574	1452	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)	14					218	
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)	279	45	119	1104	1149	473	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	324	0	119	1104	1149	473	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	24			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	2	2	1	
Detector Template	Left		Left	Thru	Thru	Right	
Leading Detector (ft)	20		20	100	100	20	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		20	6	6	20	
Detector 1 Type	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	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	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		pm+pt	NA	NA	Perm	
Protected Phases	4		1	6	2		12
Permitted Phases			6			2	
Detector Phase	4		1	6	2	2	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		10.5	22.5	23.5	23.5	22.9
Total Split (s)	30.0		28.0	63.0	35.0	35.0	27.0
Total Split (%)	25.0%		23.3%	52.5%	29.2%	29.2%	23%
Maximum Green (s)	24.4		22.5	57.5	29.5	29.5	22.1
Yellow Time (s)	3.1		3.6	3.6	3.6	3.6	3.0
All-Red Time (s)	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	
Total Lost Time (s)	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
Recall Mode	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)	16.1		92.8	92.8	64.8	64.8	
Actuated g/C Ratio	0.13		0.77	0.77	0.54	0.54	
v/c Ratio	0.68		0.23	0.40	0.60	0.54	
Control Delay	54.8		11.7	8.5	20.8	11.9	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	54.8		11.7	8.5	20.8	11.9	
LOS	D		B	A	C	B	
Approach Delay	54.8			8.9	18.2		
Approach LOS	D			A	B		

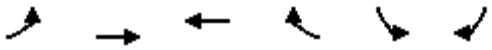
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 35 (29%), Referenced to phase 2:SWT and 6:NETL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 18.3		Intersection LOS: B	
Intersection Capacity Utilization 58.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1012: Plymouth Rd & Barton Dr





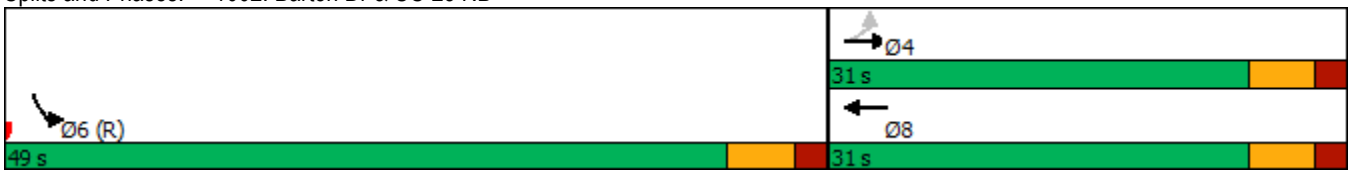
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	314	236	63	424	89
Future Volume (vph)	13	314	236	63	424	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.972		0.977	
Flt Protected		0.998			0.960	
Satd. Flow (prot)	0	1859	1847	0	1747	0
Flt Permitted		0.975			0.960	
Satd. Flow (perm)	0	1816	1847	0	1747	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			17		20	
Link Speed (mph)		25	25		25	
Link Distance (ft)		356	864		503	
Travel Time (s)		9.7	23.6		13.7	
Peak Hour Factor	0.81	1.00	0.95	0.95	0.88	0.88
Heavy Vehicles (%)	2%	2%	0%	0%	2%	2%
Adj. Flow (vph)	16	314	248	66	482	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	330	314	0	583	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Minimum Split (s)	24.0	24.0	29.0		24.0	
Total Split (s)	31.0	31.0	31.0		49.0	
Total Split (%)	38.8%	38.8%	38.8%		61.3%	
Maximum Green (s)	25.0	25.0	25.0		43.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		6.0	6.0		6.0	
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0		0	
Act Effct Green (s)		25.0	25.0		43.0	
Actuated g/C Ratio		0.31	0.31		0.54	
v/c Ratio		0.58	0.53		0.61	
Control Delay		28.1	25.4		15.8	
Queue Delay		0.0	0.0		0.0	

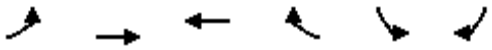


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Delay		28.1	25.4		15.8	
LOS		C	C		B	
Approach Delay		28.1	25.4		15.8	
Approach LOS		C	C		B	

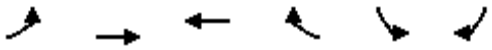
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 21.6		Intersection LOS: C	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1002: Barton Dr & US-23 NB





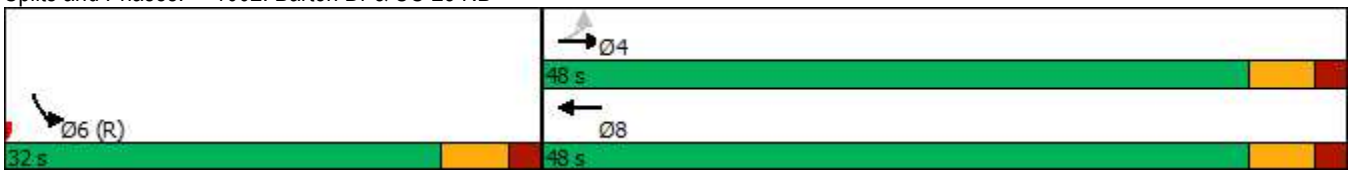
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	94	540	132	183	136
Future Volume (vph)	13	94	540	132	183	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.973		0.942	
Flt Protected		0.993			0.972	
Satd. Flow (prot)	0	1850	1849	0	1706	0
Flt Permitted		0.895			0.972	
Satd. Flow (perm)	0	1667	1849	0	1706	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			23		50	
Link Speed (mph)		25	25		25	
Link Distance (ft)		356	864		503	
Travel Time (s)		9.7	23.6		13.7	
Peak Hour Factor	0.81	1.00	0.95	0.95	0.88	0.88
Heavy Vehicles (%)	2%	2%	0%	0%	2%	2%
Adj. Flow (vph)	16	94	568	139	208	155
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	110	707	0	363	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Minimum Split (s)	24.0	24.0	24.0		24.0	
Total Split (s)	48.0	48.0	48.0		32.0	
Total Split (%)	60.0%	60.0%	60.0%		40.0%	
Maximum Green (s)	42.0	42.0	42.0		26.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		6.0	6.0		6.0	
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0		0	
Act Effct Green (s)		42.0	42.0		26.0	
Actuated g/C Ratio		0.52	0.52		0.32	
v/c Ratio		0.13	0.72		0.62	
Control Delay		10.2	19.3		24.9	
Queue Delay		0.0	0.0		0.0	

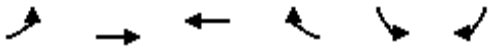


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Delay		10.2	19.3		24.9	
LOS		B	B		C	
Approach Delay		10.2	19.3		24.9	
Approach LOS		B	B		C	

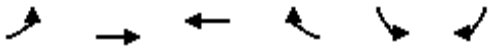
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 20.1		Intersection LOS: C	
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1002: Barton Dr & US-23 NB





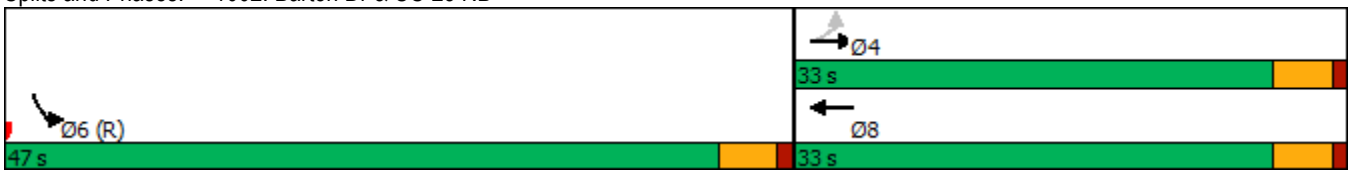
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	369	294	67	451	95
Future Volume (vph)	14	369	294	67	451	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.975		0.977	
Flt Protected		0.998			0.960	
Satd. Flow (prot)	0	1859	1852	0	1747	0
Flt Permitted		0.977			0.960	
Satd. Flow (perm)	0	1820	1852	0	1747	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			16		20	
Link Speed (mph)		25	25		25	
Link Distance (ft)		356	864		503	
Travel Time (s)		9.7	23.6		13.7	
Peak Hour Factor	0.81	1.00	0.95	0.95	0.88	0.88
Heavy Vehicles (%)	2%	2%	0%	0%	2%	2%
Adj. Flow (vph)	17	369	309	71	513	108
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	386	380	0	621	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Minimum Split (s)	22.5	22.5	22.5		22.5	
Total Split (s)	33.0	33.0	33.0		47.0	
Total Split (%)	41.3%	41.3%	41.3%		58.8%	
Maximum Green (s)	28.5	28.5	28.5		42.5	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5		4.5	
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0		0	
Act Effct Green (s)		28.5	28.5		42.5	
Actuated g/C Ratio		0.36	0.36		0.53	
v/c Ratio		0.60	0.57		0.66	
Control Delay		25.7	23.9		17.4	
Queue Delay		0.0	0.0		0.0	

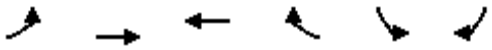


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Delay		25.7	23.9		17.4	
LOS		C	C		B	
Approach Delay		25.7	23.9		17.4	
Approach LOS		C	C		B	

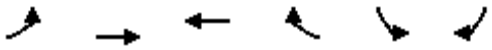
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green			
Natural Cycle: 50			
Control Type: Pretimed			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 21.5		Intersection LOS: C	
Intersection Capacity Utilization 69.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1002: Barton Dr & US-23 NB





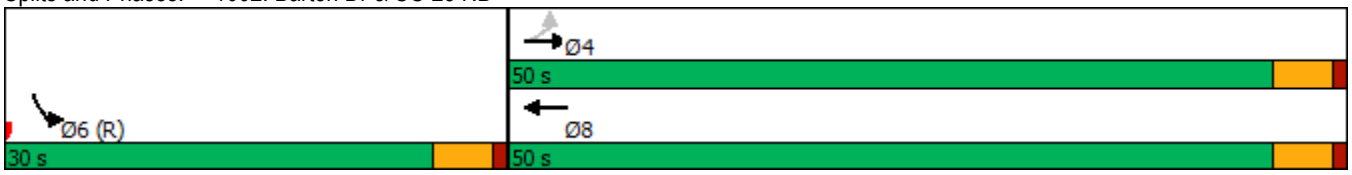
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	147	629	140	195	145
Future Volume (vph)	14	147	629	140	195	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.975		0.942	
Flt Protected		0.995			0.972	
Satd. Flow (prot)	0	1853	1852	0	1706	0
Flt Permitted		0.915			0.972	
Satd. Flow (perm)	0	1704	1852	0	1706	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			23		49	
Link Speed (mph)		25	25		25	
Link Distance (ft)		356	864		503	
Travel Time (s)		9.7	23.6		13.7	
Peak Hour Factor	0.81	1.00	0.95	0.95	0.88	0.88
Heavy Vehicles (%)	2%	2%	0%	0%	2%	2%
Adj. Flow (vph)	17	147	662	147	222	165
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	164	809	0	387	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Minimum Split (s)	22.5	22.5	22.5		22.5	
Total Split (s)	50.0	50.0	50.0		30.0	
Total Split (%)	62.5%	62.5%	62.5%		37.5%	
Maximum Green (s)	45.5	45.5	45.5		25.5	
Yellow Time (s)	3.5	3.5	3.5		3.5	
All-Red Time (s)	1.0	1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5		4.5	
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0		0	
Act Effct Green (s)		45.5	45.5		25.5	
Actuated g/C Ratio		0.57	0.57		0.32	
v/c Ratio		0.17	0.76		0.67	
Control Delay		8.8	18.6		27.2	
Queue Delay		0.0	0.0		0.0	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Delay		8.8	18.6		27.2	
LOS		A	B		C	
Approach Delay		8.8	18.6		27.2	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2: and 6:SBL, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 68.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1002: Barton Dr & US-23 NB



Summary of Warrants

Spot Number:	0		
Major Street:	Pontiac Trail	Minor Street:	Dhu Varren
Intersection:	Pontiac Trail at Dhu Varren		
City/Twp:	Ann Arbor		
Date Performed:	4/13/2021	Performed By:	Lauren Hull
Date Volumes Collected:	11/19/2019		

Warrant	Condition	Is Warrant Met
Data Validation Error		**NO**
WARRANT 1: Eight-Hour Vehicular Volume		**NO**
	Condition A	NO
	Condition B	NO
	Condition A&B	N/A
WARRANT 2: Four-Hour Vehicular Volume	(70%)	**YES**
WARRANT 3: Peak-Hour Vehicular Volume	(70%)	**#N/A**
	Condition A	**#N/A**
	Condition B	**YES**
WARRANT 4: Pedestrian Volume	(70%)	**NO**
	Four Hour	N/A
	Peak Hour	N/A
(Threshold)	HAWK	NO
(Threshold)	RRFB	NO
WARRANT 5: School Crossing		**NO**
WARRANT 6: Coordinated Signal System		**NO**
WARRANT 7: Crash Experience		**NO**
	Condition A	NO
	Condition B	NO
WARRANT 8: Roadway Network		**NO**
WARRANT 9: Intersection Near a Grade Crossing		**#N/A**

Issue to Be Addressed by Signalization:

0

Summary of Warrants

Spot Number:	0		
Major Street:	US-23	Minor Street:	Barton Drive
Intersection:	US-23 at Barton Drive		
City/Twp:	Ann Arbor		
Date Performed:	4/13/2021	Performed By:	Lauren Hull
Date Volumes Collected:	11/19/2019		

Warrant	Condition	Is Warrant Met
Data Validation Error		**NO**
Verify which is the Major Road		
WARRANT 1: Eight-Hour Vehicular Volume		**NO**
	Condition A	NO
	Condition B	NO
	Condition A&B	N/A
WARRANT 2: Four-Hour Vehicular Volume	(100%)	**YES**
WARRANT 3: Peak-Hour Vehicular Volume	(100%)	**#N/A**
	Condition A	**#N/A**
	Condition B	**YES**
WARRANT 4: Pedestrian Volume	(70%)	**NO**
	Four Hour	N/A
	Peak Hour	N/A
(Threshold)	HAWK	NO
(Threshold)	RRFB	NO
WARRANT 5: School Crossing		**NO**
WARRANT 6: Coordinated Signal System		**NO**
WARRANT 7: Crash Experience		**NO**
	Condition A	NO
	Condition B	NO
WARRANT 8: Roadway Network		**NO**
WARRANT 9: Intersection Near a Grade Crossing		**#N/A**

Issue to Be Addressed by Signalization:

0

memorandum

Date: February 18, 2020

To: Luke Liu, PE
cc: Steven Loveland, PE, PTOE
From: Stephan Maxe, PE

Re: Traffic Signal Warrant: Pontiac Trail and Arrowwood Trail

The intent of this memorandum is to provide a traffic signal warrant analysis for the intersection of Pontiac Trail and Arrowwood Trail in Ann Arbor, MI.

Location Description

Pontiac Trail is the major road at this intersection. Pontiac Trail is generally a 2-lane road with bike lanes in each direction. There is a right turn lane added at the south leg of the intersection. The speed limit on Pontiac Trail in the vicinity of this intersection is 30 mph. Arrowwood Trail is a 2-lane residential road with an assumed speed limit of 25 mph. The intersection is a T-intersection with Arrowwood Trail as the east leg, currently under stop control.

Traffic Counts

The data used in this analysis was collected by Traffic Data Collection LLC for the Lower Town Study. The traffic data included traffic volumes and classification, as well as pedestrian and bicycle counts. The data was collected on November 19, 2019. The traffic count data used for this analysis is attached.

Traffic Signal Warrants

The traffic data was evaluated against the various warrants for the installation of a traffic signal. Traffic signals should not be considered for installation unless one or more of the signal warrants defined in the MMUTCD are met.

The evaluations of Warrants #1 Eight Hour Vehicular Volume, Warrant #2 Four Hour Vehicular Volume and Warrant #3 Peak Hour Vehicular Volume are attached to this document. None of these warrants were met.

Warrant #4 Pedestrian Volume may be met when the pedestrian volume crossing the major street during an average day is 100 or more for any four hours or 190 or more during any one hour of an average day and few gaps in traffic flow provide adequate time to cross the street. Only three pedestrians crossed Pontiac Trail at this location in the entire day. This intersection does not meet the requirements of Warrant #4.

Warrant #5 School Crossing is not met as this is not a school crossing. Warrant #6 Coordinated Signal System is not met as this intersection is not located between signalized intersections.

OHM Advisors
34000 PLYMOUTH ROAD
LIVONIA, MICHIGAN 48150
T 734.522.6711
F 734.522.6427
OHM-Advisors.com

Warrant #7 Crash Experience may be met when five or more reported crashes have occurred within a 12-month period, where those crashes were susceptible to correction by a traffic signal. Traffic crash data was obtained from the Traffic Improvement Association (TIA) for this location for the last 5 years. There were only 5 crashes in this time and only one rear-end which may be correctable by signalization. This intersection does not meet the requirements of Warrant #7.

Warrant #8 Roadway Network is not met as this is not the intersection of 2 major routes. Warrant #9 Intersection Near a Grade Crossing is not met as this intersection is not near a grade crossing.

Recommendations

Based on the analysis, this intersection does not meet any traffic signal warrants and a traffic signal is not recommended to be installed here.

If you have any questions or require any additional information, please feel free to contact me.

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OHM-Advisors.com

TRAFFIC SIGNAL WARRANT SUMMARY

Summary of Warrants

Spot Number:	0		
Major Street:	Pontiac Trail	Minor Street:	Arrowwood
Intersection:	Pontiac Trail at Arrowwood		
City/Twp:	Ann Arbor		
Date Performed:	2/12/2020	Performed By:	SGM
Date Volumes Collected:	11/19/2019		

Warrant	Condition	Is Warrant Met
Data Has Been Validated		**YES**
WARRANT 1: Eight-Hour Vehicular Volume		**NO**
	Condition A	NO
	Condition B	NO
	Condition A&B	NO
WARRANT 2: Four-Hour Vehicular Volume	(100%)	**NO**
WARRANT 3: Peak-Hour Vehicular Volume	(100%)	**#N/A**
	Condition A	**#N/A**
	Condition B	**NO**
WARRANT 4: Pedestrian Volume	(100%)	**NO**
	Four Hour	NO
	Peak Hour	NO
(Threshold)	HAWK	NO
(Threshold)	RRFB	NO
WARRANT 5: School Crossing		**NO**
WARRANT 6: Coordinated Signal System		**0**
WARRANT 7: Crash Experience		**NO**
	Condition A	NO
	Condition B	NO
WARRANT 8: Roadway Network		**0**
WARRANT 9: Intersection Near a Grade Crossing		**#N/A**

Issue to Be Addressed by Signalization:

0

Michigan Manual of Uniform Traffic Control Devices
Worksheet for Signal Warrants (Section 4C)
WARRANT 1: Eight-Hour Vehicular Volume

Intersection:	Pontiac Trail @ Arrowwood		
Date	2/12/2020	by	SGM

2	**: No. of Lanes on Major St?**
1	**: No. of Lanes on Minor St?**
30	**: Speed limit or 85th Percentile? (MPH)**
NO	**: Is the intersection within an Isolated community?**
0	**: if answer 4 is Yes, then what is the of the population isolated community?**
YES	**: Have other remedial measures been tried?**

USE 100% FOR WARRANTS 1A AND 1B. USE 80% FOR WARRANT 1A&B

	Major Volume (Both Apr.)	Minor Volume (One Apr.)	Condition A Major Volume	Condition A Minor Volume	Warrant Condition A Met?	Condition B Major Volume	Condition B Minor Volume	Warrant Condition B Met?	Combination Major A	Combination Minor A	Combination Major B	Combination Minor B	Warrant Condition A&B met?
Time	**N-S**	E-W											
00:01 - 01:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
01:00 - 02:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
02:00 - 03:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
03:00 - 04:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
04:00 - 05:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
05:00 - 06:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
06:00 - 07:00	207	38	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
07:00 - 08:00	636	88	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
08:00 - 09:00	735	77	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
09:00 - 10:00	336	57	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
10:00 - 11:00	254	38	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
11:00 - 12:00	302	46	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
12:00 - 13:00	283	44	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
13:00 - 14:00	265	51	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
14:00 - 15:00	340	58	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
15:00 - 16:00	504	68	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
16:00 - 17:00	688	58	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
17:00 - 18:00	716	56	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
18:00 - 19:00	479	61	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
19:00 - 20:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
20:00 - 21:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
21:00 - 22:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
22:00 - 23:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**
23:00 - 00:00	0	0	600	150	**NO**	900	75	**NO**	480	120	720	60	**NO**

Number of Hours that met the warrant 1A =	**0**
Number of Hours that met the warrant 1B =	**0**
Number of Hours that met the warrant 1 A & B =	**0**

A. Is the Minimum Vehicular Volume Warrant Met? (Condition A)	**NO**
B. Is the Interruption of Continuous Traffic Met? (Condition B)	**NO**
C. Combination of Warrants A and B Criteria Met?	**NO**

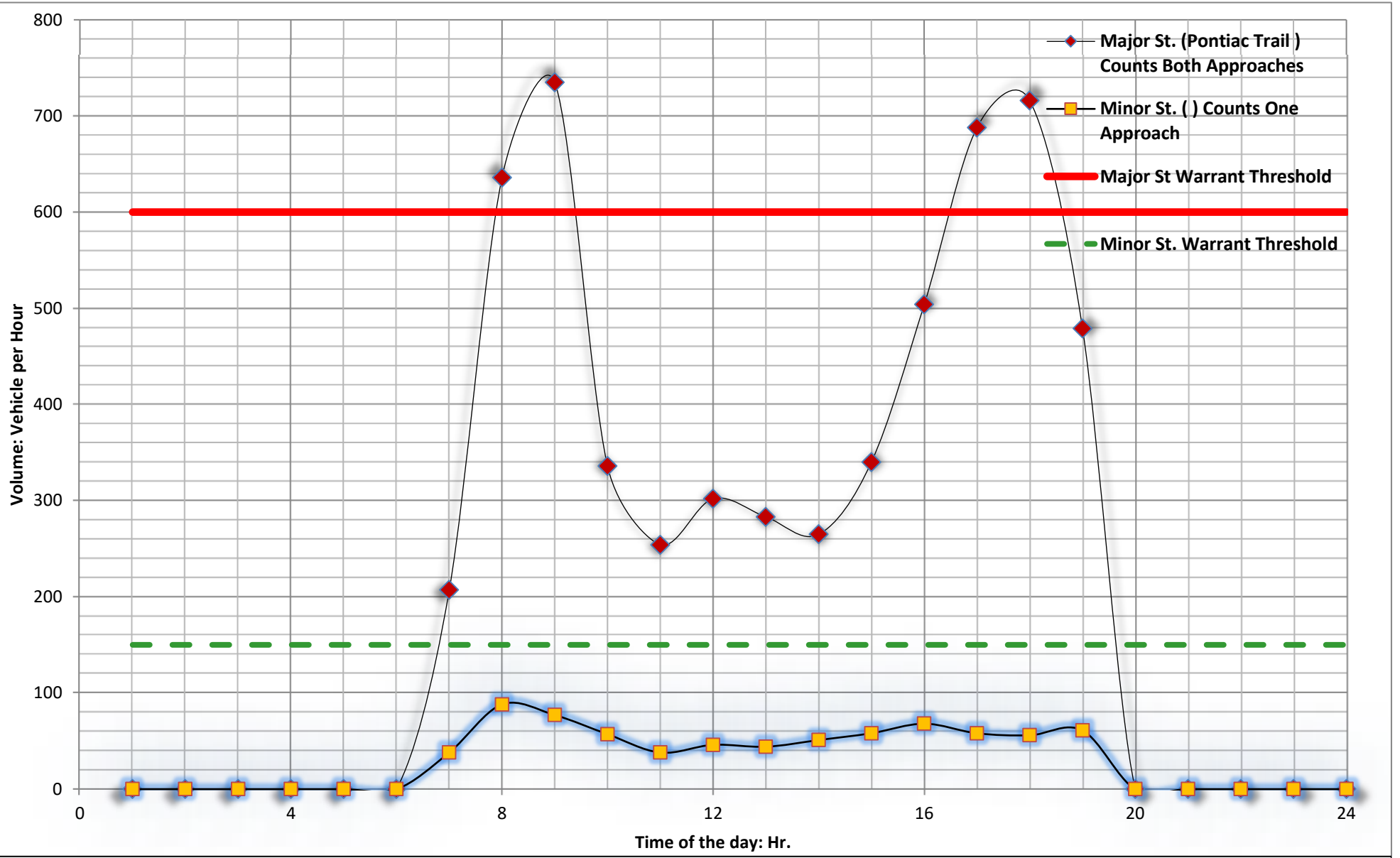


FIGURE 1: WARRANT **1A**

IS THERE A REDUCTION IN THE WARRANT THRESHOLDS TO 70% ...

1- DUE TO SPEED? **NO**

2- DUE TO ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000? **NO**

Spot Number:

Pontiac Trail @ Arrowwood

NO. OF LANES ON MAJOR ST.? **2**

NO. OF LANES ON MINOR ST.? **1**

Number of Hours that met the Warrant: **0**

Does this intersection meet Warrant 1A for signal installation? **NO**

Data Collection Date: **11/19/2019**

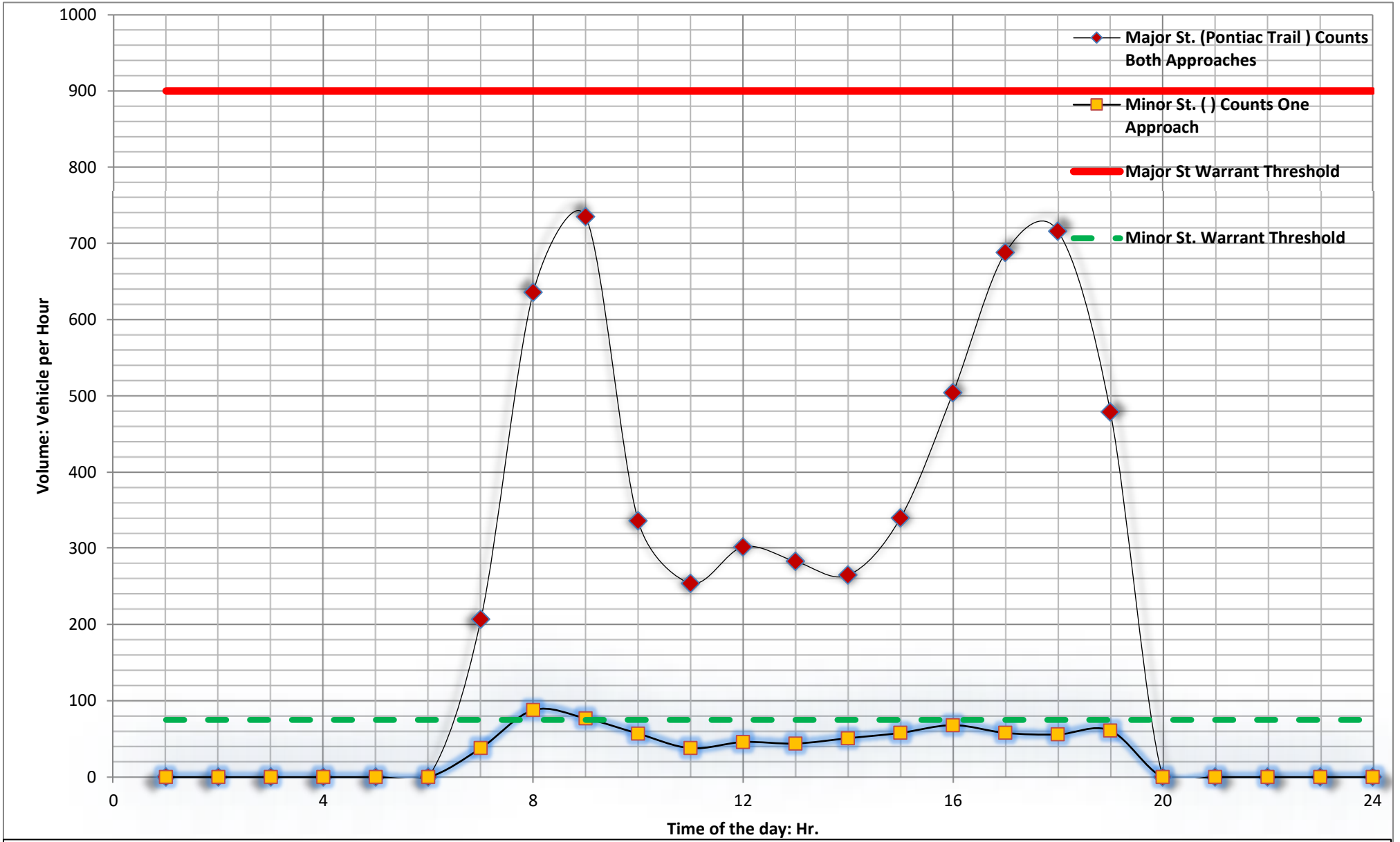


FIGURE 1: WARRANT **1B**

IS THERE A REDUCTION IN THE WARRANT THRESHOLDS TO 70% ...

1- DUE TO SPEED? **NO**

2- DUE TO ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000? **NO**

Spot Number:

Pontiac Trail @ Arrowwood

NO. OF LANES ON MAJOR ST.? **2**

NO. OF LANES ON MINOR ST.? **1**

Number of Hours that met the Warrant: **0**

Does this intersection meet Warrant 1B for signal installation? **NO**

Data Collection Date: **11/19/2019**

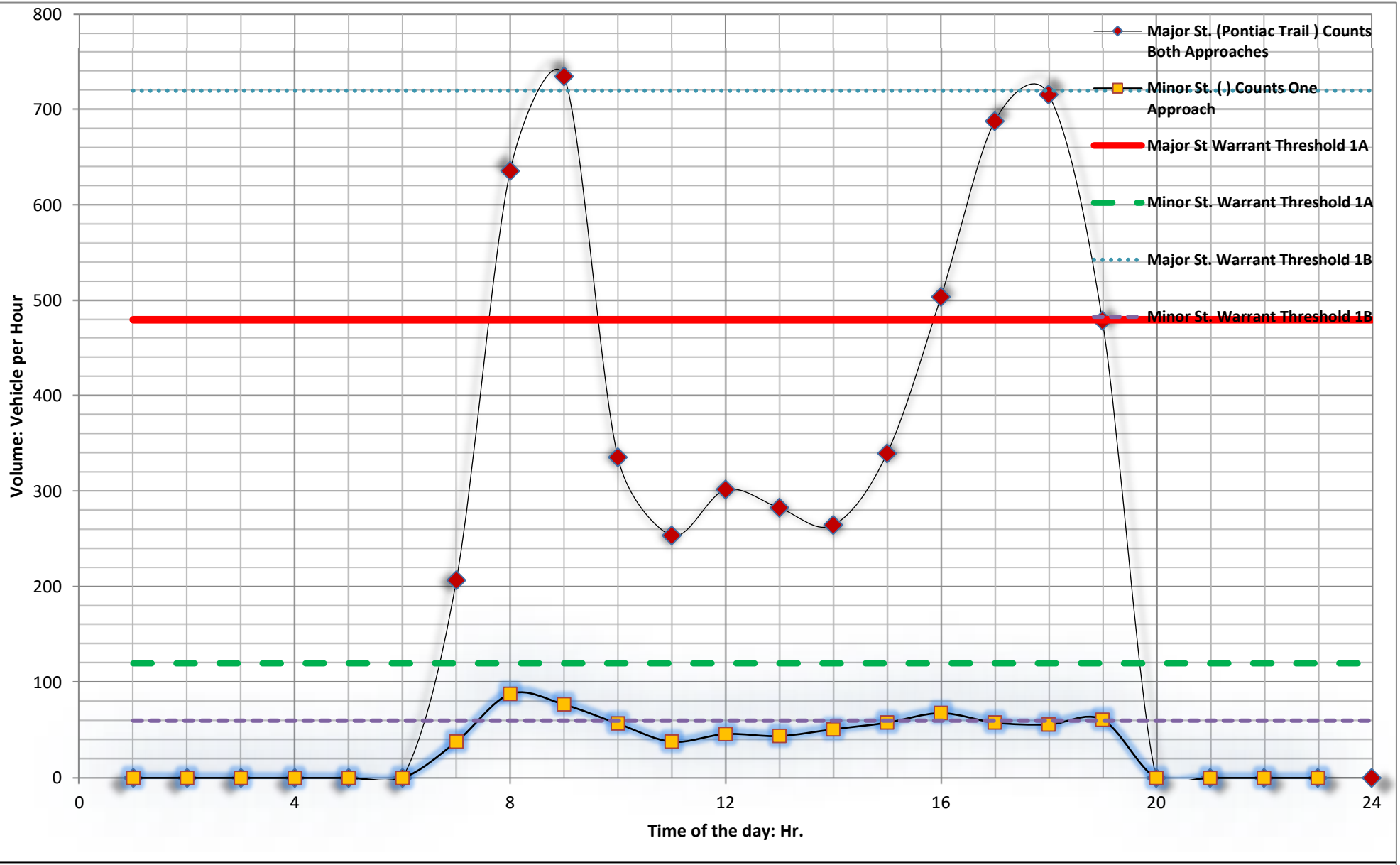


FIGURE 3: WARRANT **1A&B**

IS THERE A REDUCTION IN THE WARRANT THRESHOLDS TO 56% ...

1- DUE TO SPEED? NO

2- DUE TO ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000? NO

Spot Number:

Pontiac Trail @ Arrowwood

NO. OF LANES ON MAJOR ST.? 2

NO. OF LANES ON MINOR ST.? 1

Number of Hours that met the Warrant: 0

Does this intersection meet Warrant 1A&B for signal installation? NO

Data Collection Date: 11/19/2019

Michigan Manual of Uniform Traffic Control Devices
Worksheet for Signal Warrants (Section 4C)
WARRANT 2: Four-Hour Vehicular Volume

Spot Number:	0		
Intersection:	Pontiac Trail @ Arrowwood		
Date	2/12/2020	by	SGM

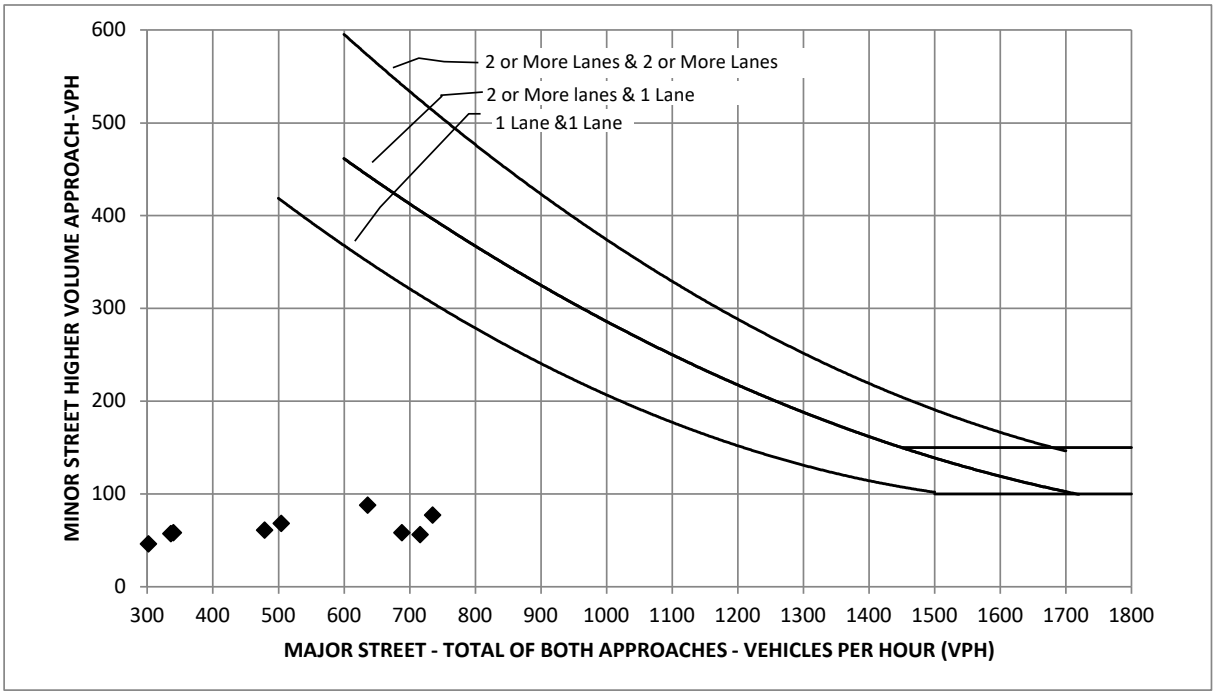
2	**: No. of Lanes on Major St.**
1	**: No. of Lanes on Minor St.**
30	**: Speed limit or 85th Percentile? (MPH)**
NO	**: Is the intersection within an Isolated community?**
0	**: What is the of the population isolated community?**

How Many Hours Are Met	**0**
Is Warrant 2 (100%) Met?	**NO**

Michigan Manual of Uniform Traffic Control Devices
Worksheet for Signal Warrants (Section 4C)
WARRANT 3 B(100%): Peak-Hour Vehicular Volume

Spot Number:	0		
Intersection:	Pontiac Trail @ Arrowwood		
Date	2/12/2020	by	SGM

2	**: No. of Lanes on Major St.**
1	**: No. of Lanes on Minor St.**
30	**: Speed limit or 85th Percentile? (MPH)**
NO	**: Is the intersection within an Isolated community?**
0	**: What is the of the population isolated community?**



How Many Hours Are Met	**0**
Is Warrant 3 B (100%) Met?	**NO**

TRAFFIC COUNTS

Traffic Data Collection

Traffic Data Collection, LLC
7504 Sawgrass Drive
www.tdccounts.com
Washington, Michigan, United States 48094
Ph. (586) 786-5407
Reliable Traffic Data

Project: Lower Town Area Mobility Study
Corridor: Pontiac Trail
Weather: Cloudy, Dry
Temp. 40's
Video VCU ID#: SCU3DQ NE

Count Name: TMC_ 26
Pontiac Trail & Arrowwood Trail_11-19-19
Site Code: TMC_26
Traffic Data Collection, LLC
Start Date: 11/19/2019

Turning Movement Data

Start Time	Pontiac Trail Southbound				Arrowwood Trail Westbound				Pontiac Trail Northbound				
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
6:00 AM	27	1	0	28	2	3	0	5	0	3	0	3	36
6:15 AM	44	2	0	46	3	7	0	10	0	3	0	3	59
6:30 AM	44	1	0	45	3	10	0	13	0	18	0	18	76
6:45 AM	48	2	0	50	3	7	0	10	2	12	0	14	74
Hourly Total	163	6	0	169	11	27	0	38	2	36	0	38	245
7:00 AM	72	0	0	72	5	13	0	18	3	18	0	21	111
7:15 AM	116	2	0	118	8	8	2	16	5	28	0	33	167
7:30 AM	120	3	0	123	8	22	2	30	3	66	0	69	222
7:45 AM	142	0	0	142	16	8	2	24	6	52	0	58	224
Hourly Total	450	5	0	455	37	51	6	88	17	164	0	181	724
8:00 AM	165	1	0	166	3	15	2	18	8	42	0	50	234
8:15 AM	122	4	0	126	10	11	1	21	7	56	0	63	210
8:30 AM	119	6	0	125	8	14	1	22	4	38	0	42	189
8:45 AM	101	3	0	104	6	10	1	16	8	51	0	59	179
Hourly Total	507	14	0	521	27	50	5	77	27	187	0	214	812
9:00 AM	78	5	0	83	7	5	0	12	5	26	0	31	126
9:15 AM	54	5	0	59	4	7	0	11	1	29	0	30	100
9:30 AM	42	3	0	45	8	8	1	16	7	22	0	29	90
9:45 AM	32	1	0	33	8	10	1	18	1	25	0	26	77
Hourly Total	206	14	0	220	27	30	2	57	14	102	0	116	393
10:00 AM	33	6	0	39	2	9	0	11	5	29	0	34	84
10:15 AM	29	3	0	32	3	5	2	8	5	21	0	26	66
10:30 AM	27	2	0	29	4	8	0	12	3	20	0	23	64
10:45 AM	33	6	1	39	5	2	1	7	2	30	0	32	78
Hourly Total	122	17	1	139	14	24	3	38	15	100	0	115	292
11:00 AM	37	3	0	40	5	9	0	14	3	26	0	29	83
11:15 AM	40	1	0	41	1	5	0	6	7	30	0	37	84
11:30 AM	40	2	0	42	5	7	0	12	17	24	0	41	95
11:45 AM	38	1	0	39	9	5	2	14	9	24	0	33	86
Hourly Total	155	7	0	162	20	26	2	46	36	104	0	140	348
12:00 PM	23	5	0	28	4	9	0	13	2	31	0	33	74
12:15 PM	27	2	0	29	2	6	1	8	15	29	0	44	81
12:30 PM	31	3	0	34	8	2	0	10	8	26	0	34	78
12:45 PM	34	7	0	41	3	10	2	13	7	33	0	40	94
Hourly Total	115	17	0	132	17	27	3	44	32	119	0	151	327
1:00 PM	29	1	0	30	5	14	1	19	9	37	2	46	95
1:15 PM	19	3	0	22	5	6	0	11	8	23	0	31	64
1:30 PM	28	5	0	33	9	5	0	14	8	25	0	33	80
1:45 PM	28	7	0	35	1	6	0	7	4	31	0	35	77
Hourly Total	104	16	0	120	20	31	1	51	29	116	2	145	316
2:00 PM	26	4	0	30	6	11	0	17	8	27	0	35	82
2:15 PM	32	1	0	33	3	8	0	11	5	45	0	50	94
2:30 PM	36	5	0	41	7	9	2	16	7	37	0	44	101
2:45 PM	39	5	0	44	2	12	2	14	14	49	0	63	121
Hourly Total	133	15	0	148	18	40	4	58	34	158	0	192	398
3:00 PM	46	1	0	47	6	20	2	26	9	56	0	65	138
3:15 PM	48	6	0	54	6	11	4	17	12	61	0	73	144
3:30 PM	31	6	0	37	2	9	9	11	11	97	0	108	156
3:45 PM	29	6	0	35	5	9	2	14	11	74	0	85	134
Hourly Total	154	19	0	173	19	49	17	68	43	288	0	331	572
4:00 PM	42	7	0	49	1	6	0	7	6	82	0	88	144
4:15 PM	38	7	0	45	4	6	0	10	8	114	0	122	177
4:30 PM	33	9	0	42	1	15	0	16	20	104	0	124	182
4:45 PM	56	8	0	64	7	18	0	25	15	139	0	154	243
Hourly Total	169	31	0	200	13	45	0	58	49	439	0	488	746
5:00 PM	49	6	0	55	8	7	1	15	12	120	0	132	202
5:15 PM	57	10	0	67	2	8	0	10	15	119	0	134	211

5:30 PM	50	10	0	60	4	7	0	11	17	97	0	114	185
5:45 PM	48	11	0	59	10	10	0	20	4	91	0	95	174
Hourly Total	204	37	0	241	24	32	1	56	48	427	0	475	772
6:00 PM	40	10	0	50	9	12	1	21	19	79	0	98	169
6:15 PM	34	11	0	45	9	10	2	19	8	61	0	69	133
6:30 PM	45	6	0	51	5	8	0	13	10	53	0	63	127
6:45 PM	30	5	0	35	2	6	0	8	10	58	0	68	111
Hourly Total	149	32	0	181	25	36	3	61	47	251	0	298	540
Grand Total	2631	230	1	2861	272	468	47	740	393	2491	2	2884	6485
Approach %	92.0	8.0	-	-	36.8	63.2	-	-	13.6	86.4	-	-	-
Total %	40.6	3.5	-	44.1	4.2	7.2	-	11.4	6.1	38.4	-	44.5	-
Motorcycles	0	0	-	0	0	2	-	2	0	0	-	0	2
% Motorcycles	0.0	0.0	-	0.0	0.0	0.4	-	0.3	0.0	0.0	-	0.0	0.0
Cars & Light Goods	2559	220	-	2779	262	448	-	710	378	2406	-	2784	6273
% Cars & Light Goods	97.3	95.7	-	97.1	96.3	95.7	-	95.9	96.2	96.6	-	96.5	96.7
Buses	49	8	-	57	7	11	-	18	8	52	-	60	135
% Buses	1.9	3.5	-	2.0	2.6	2.4	-	2.4	2.0	2.1	-	2.1	2.1
Single-Unit Trucks	14	2	-	16	3	5	-	8	7	27	-	34	58
% Single-Unit Trucks	0.5	0.9	-	0.6	1.1	1.1	-	1.1	1.8	1.1	-	1.2	0.9
Articulated Trucks	2	0	-	2	0	0	-	0	0	3	-	3	5
% Articulated Trucks	0.1	0.0	-	0.1	0.0	0.0	-	0.0	0.0	0.1	-	0.1	0.1
Bicycles on Road	7	0	-	7	0	2	-	2	0	3	-	3	12
% Bicycles on Road	0.3	0.0	-	0.2	0.0	0.4	-	0.3	0.0	0.1	-	0.1	0.2
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	0.0	-	-	-	0.0	-	-	-	0.0	-	-
Pedestrians	-	-	1	-	-	-	47	-	-	-	2	-	-
% Pedestrians	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

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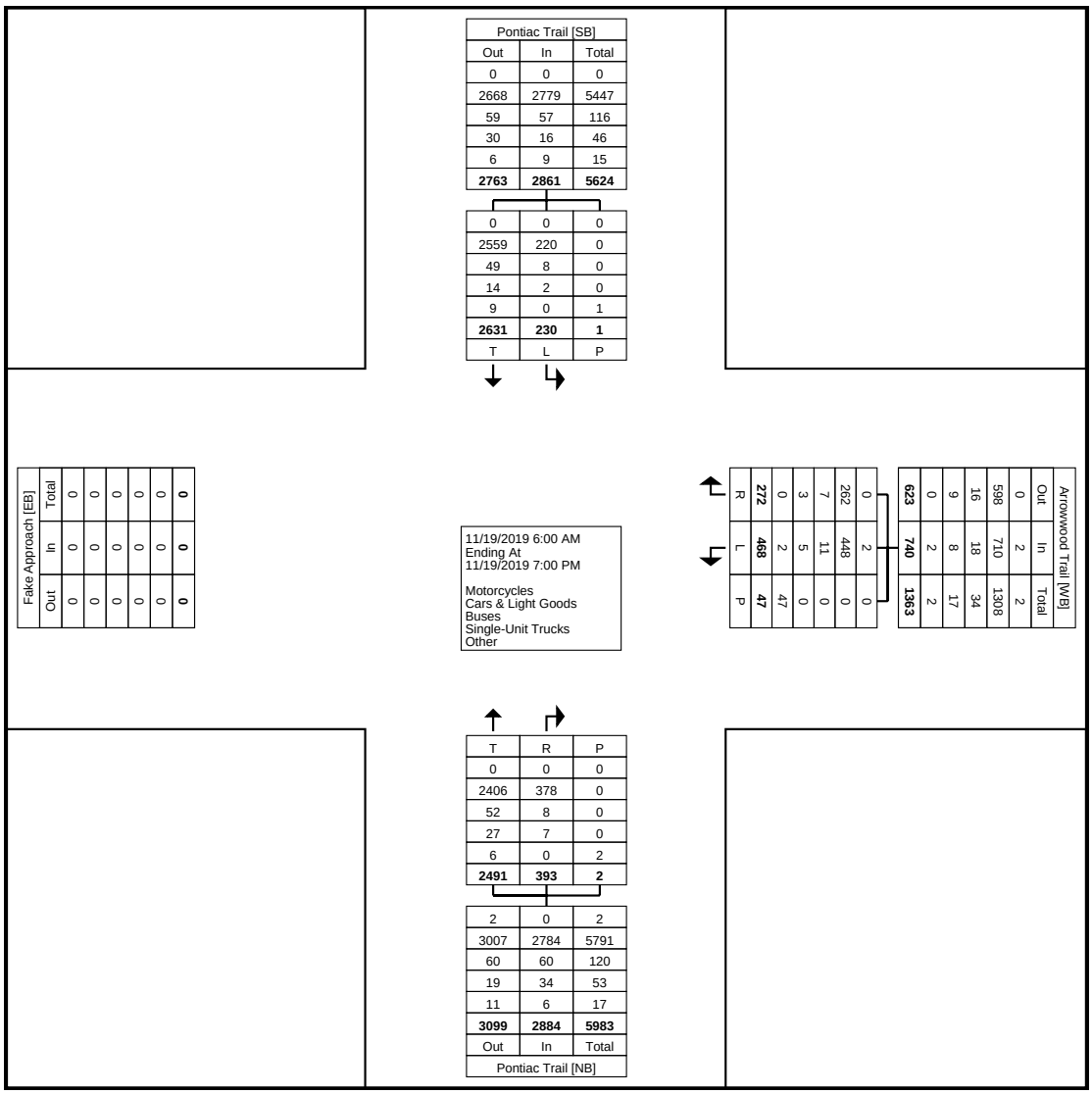

Turning Movement Data Plot

Traffic Data Collection

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Project: Lower Town Area Mobility Study
Corridor: Pontiac Trail
Weather: Cloudy, Dry
Temp. 40's
Video VCU ID#: SCU3DQ NE

Count Name: TMC_ 26
Pontiac Trail & Arrowwood Trail_11-19-19
Site Code: TMC_26
Traffic Data Collection, LLC
Start Date: 11/19/2019

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Pontiac Trail Southbound				Arrowwood Trail Westbound				Pontiac Trail Northbound				
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
7:30 AM	120	3	0	123	8	22	2	30	3	66	0	69	222
7:45 AM	142	0	0	142	16	8	2	24	6	52	0	58	224
8:00 AM	165	1	0	166	3	15	2	18	8	42	0	50	234
8:15 AM	122	4	0	126	10	11	1	21	7	56	0	63	210
Total	549	8	0	557	37	56	7	93	24	216	0	240	890
Approach %	98.6	1.4	-	-	39.8	60.2	-	-	10.0	90.0	-	-	-
Total %	61.7	0.9	-	62.6	4.2	6.3	-	10.4	2.7	24.3	-	27.0	-
PHF	0.832	0.500	-	0.839	0.578	0.636	-	0.775	0.750	0.818	-	0.870	0.951
Motorcycles	0	0	-	0	0	0	-	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Cars & Light Goods	542	6	-	548	35	54	-	89	21	202	-	223	860
% Cars & Light Goods	98.7	75.0	-	98.4	94.6	96.4	-	95.7	87.5	93.5	-	92.9	96.6
Buses	5	2	-	7	2	2	-	4	3	9	-	12	23
% Buses	0.9	25.0	-	1.3	5.4	3.6	-	4.3	12.5	4.2	-	5.0	2.6
Single-Unit Trucks	1	0	-	1	0	0	-	0	0	5	-	5	6
% Single-Unit Trucks	0.2	0.0	-	0.2	0.0	0.0	-	0.0	0.0	2.3	-	2.1	0.7
Articulated Trucks	0	0	-	0	0	0	-	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	1	0	-	1	0	0	-	0	0	0	-	0	1
% Bicycles on Road	0.2	0.0	-	0.2	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-
Pedestrians	-	-	0	-	-	-	7	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-

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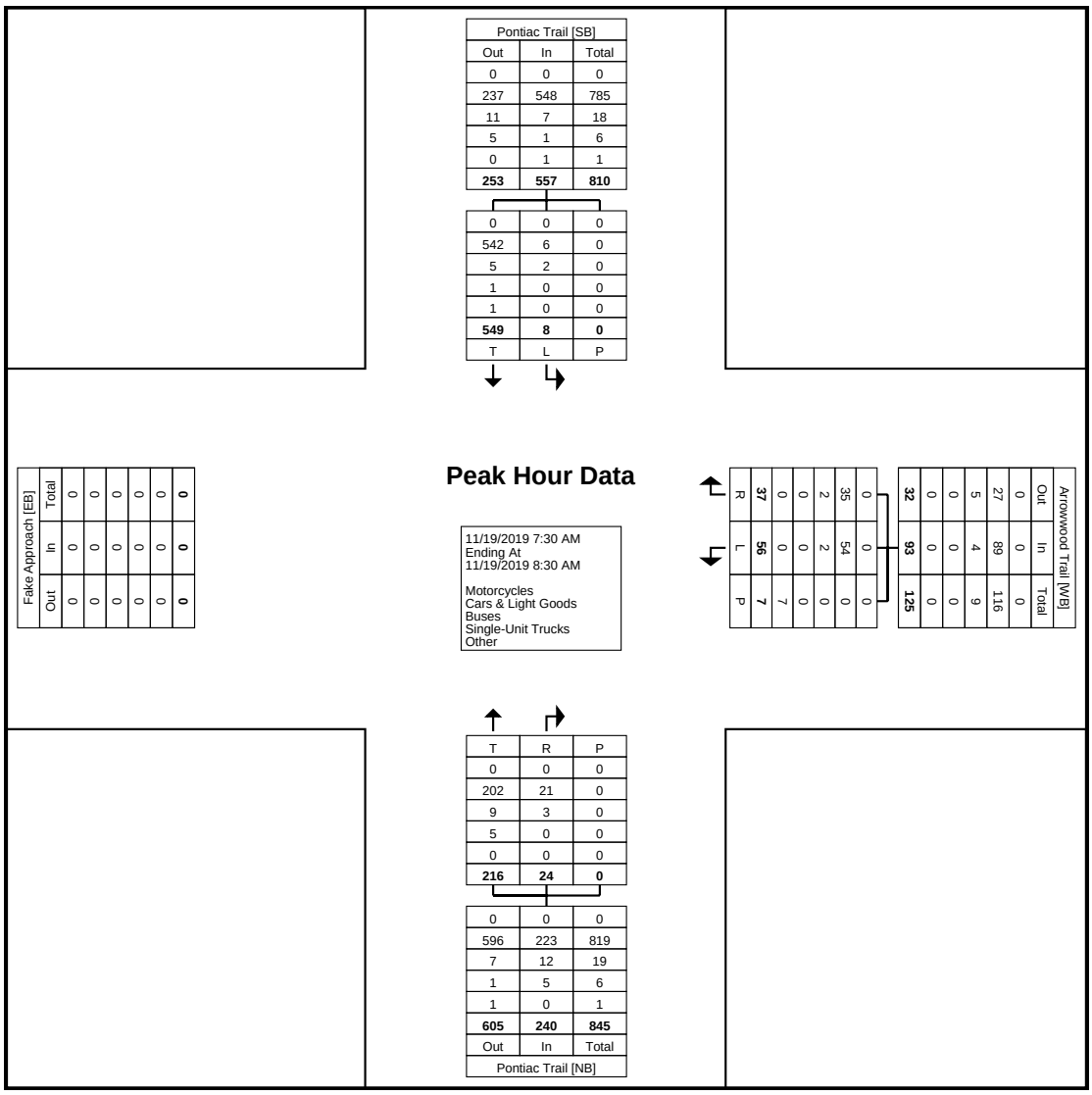
Project: Lower Town Area Mobility Study
Corridor: Pontiac Trail
Weather: Cloudy, Dry
Temp. 40's
Video VCU ID#: SCU3DQ NE

Count Name: TMC_ 26
Pontiac Trail & Arrowwood Trail_11-19-19
Site Code: TMC_26
Traffic Data Collection, LLC
Start Date: 11/19/2019
Page No: 5



Turning Movement Peak Hour Data Plot (7:30 AM)

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Corridor: Pontiac Trail
Weather: Cloudy, Dry
Temp. 40's
Video VCU ID#: SCU3DQ NE

Count Name: TMC_ 26
Pontiac Trail & Arrowwood Trail_11-19-19
Site Code: TMC_26
Traffic Data Collection, LLC
Start Date: 11/19/2019

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Pontiac Trail Southbound				Arrowwood Trail Westbound				Pontiac Trail Northbound				
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
11:00 AM	37	3	0	40	5	9	0	14	3	26	0	29	83
11:15 AM	40	1	0	41	1	5	0	6	7	30	0	37	84
11:30 AM	40	2	0	42	5	7	0	12	17	24	0	41	95
11:45 AM	38	1	0	39	9	5	2	14	9	24	0	33	86
Total	155	7	0	162	20	26	2	46	36	104	0	140	348
Approach %	95.7	4.3	-	-	43.5	56.5	-	-	25.7	74.3	-	-	-
Total %	44.5	2.0	-	46.6	5.7	7.5	-	13.2	10.3	29.9	-	40.2	-
PHF	0.969	0.583	-	0.964	0.556	0.722	-	0.821	0.529	0.867	-	0.854	0.916
Motorcycles	0	0	-	0	0	0	-	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Cars & Light Goods	149	7	-	156	19	24	-	43	35	99	-	134	333
% Cars & Light Goods	96.1	100.0	-	96.3	95.0	92.3	-	93.5	97.2	95.2	-	95.7	95.7
Buses	2	0	-	2	0	2	-	2	0	2	-	2	6
% Buses	1.3	0.0	-	1.2	0.0	7.7	-	4.3	0.0	1.9	-	1.4	1.7
Single-Unit Trucks	1	0	-	1	1	0	-	1	1	3	-	4	6
% Single-Unit Trucks	0.6	0.0	-	0.6	5.0	0.0	-	2.2	2.8	2.9	-	2.9	1.7
Articulated Trucks	1	0	-	1	0	0	-	0	0	0	-	0	1
% Articulated Trucks	0.6	0.0	-	0.6	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.3
Bicycles on Road	2	0	-	2	0	0	-	0	0	0	-	0	2
% Bicycles on Road	1.3	0.0	-	1.2	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.6
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-
Pedestrians	-	-	0	-	-	-	2	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-

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Weather: Cloudy, Dry
Temp. 40's
Video VCU ID#: SCU3DQ NE

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Pontiac Trail & Arrowwood Trail_11-19-19
Site Code: TMC_26
Traffic Data Collection, LLC
Start Date: 11/19/2019
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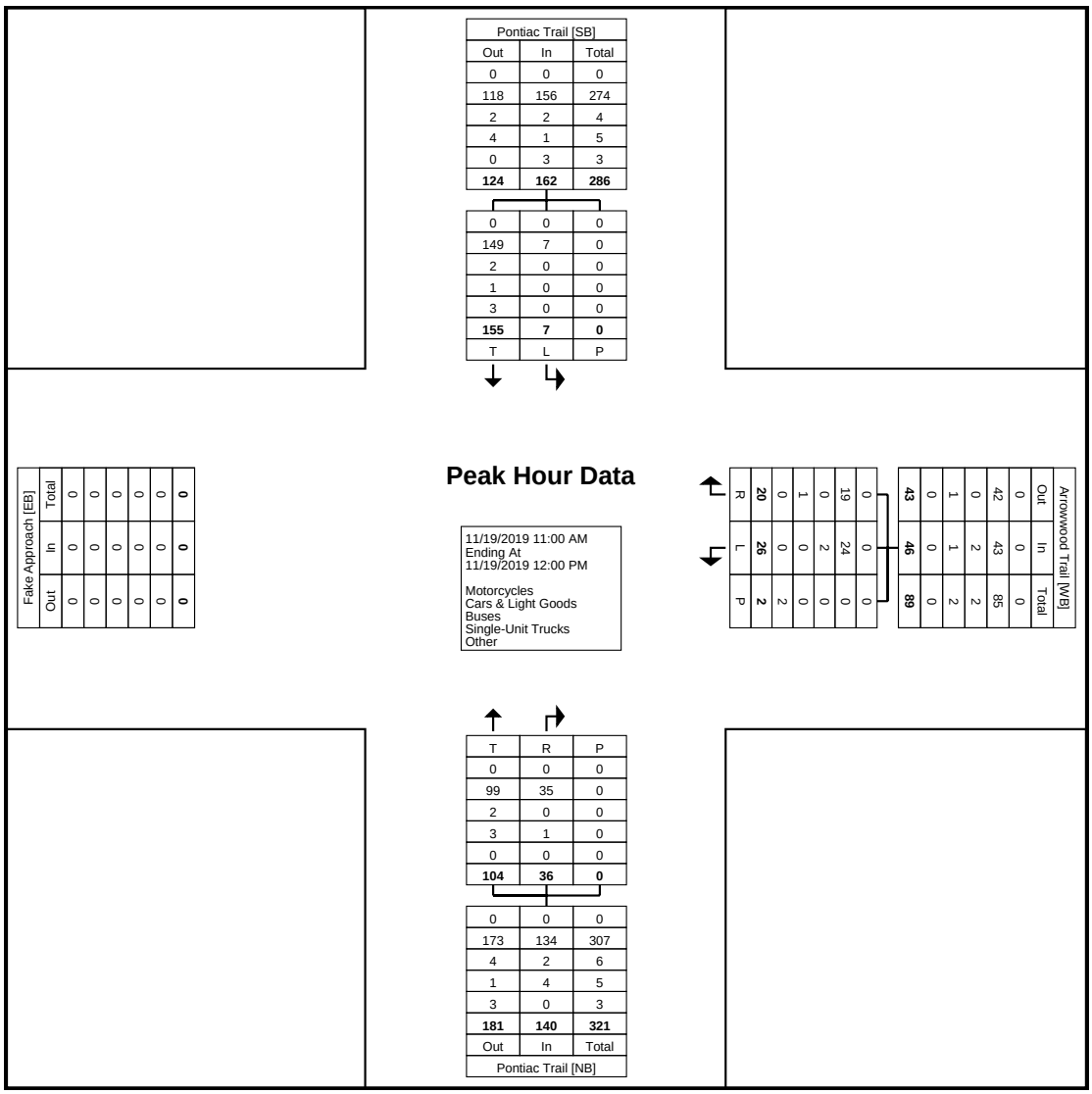

Turning Movement Peak Hour Data Plot (11:00 AM)

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Corridor: Pontiac Trail
Weather: Cloudy, Dry
Temp. 40's
Video VCU ID#: SCU3DQ NE

Count Name: TMC_ 26
Pontiac Trail & Arrowwood Trail_11-19-19
Site Code: TMC_26
Traffic Data Collection, LLC
Start Date: 11/19/2019

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Pontiac Trail Southbound				Arrowwood Trail Westbound				Pontiac Trail Northbound				
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
4:45 PM	56	8	0	64	7	18	0	25	15	139	0	154	243
5:00 PM	49	6	0	55	8	7	1	15	12	120	0	132	202
5:15 PM	57	10	0	67	2	8	0	10	15	119	0	134	211
5:30 PM	50	10	0	60	4	7	0	11	17	97	0	114	185
Total	212	34	0	246	21	40	1	61	59	475	0	534	841
Approach %	86.2	13.8	-	-	34.4	65.6	-	-	11.0	89.0	-	-	-
Total %	25.2	4.0	-	29.3	2.5	4.8	-	7.3	7.0	56.5	-	63.5	-
PHF	0.930	0.850	-	0.918	0.656	0.556	-	0.610	0.868	0.854	-	0.867	0.865
Motorcycles	0	0	-	0	0	0	-	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Cars & Light Goods	208	33	-	241	20	40	-	60	59	470	-	529	830
% Cars & Light Goods	98.1	97.1	-	98.0	95.2	100.0	-	98.4	100.0	98.9	-	99.1	98.7
Buses	4	1	-	5	1	0	-	1	0	4	-	4	10
% Buses	1.9	2.9	-	2.0	4.8	0.0	-	1.6	0.0	0.8	-	0.7	1.2
Single-Unit Trucks	0	0	-	0	0	0	-	0	0	1	-	1	1
% Single-Unit Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.2	-	0.2	0.1
Articulated Trucks	0	0	-	0	0	0	-	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	-	0	0	0	-	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	0	-	-	-	0	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-
Pedestrians	-	-	0	-	-	-	1	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-

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Weather: Cloudy, Dry
Temp. 40's
Video VCU ID#: SCU3DQ NE

Count Name: TMC_ 26
Pontiac Trail & Arrowwood Trail_11-19-19
Site Code: TMC_26
Traffic Data Collection, LLC
Start Date: 11/19/2019
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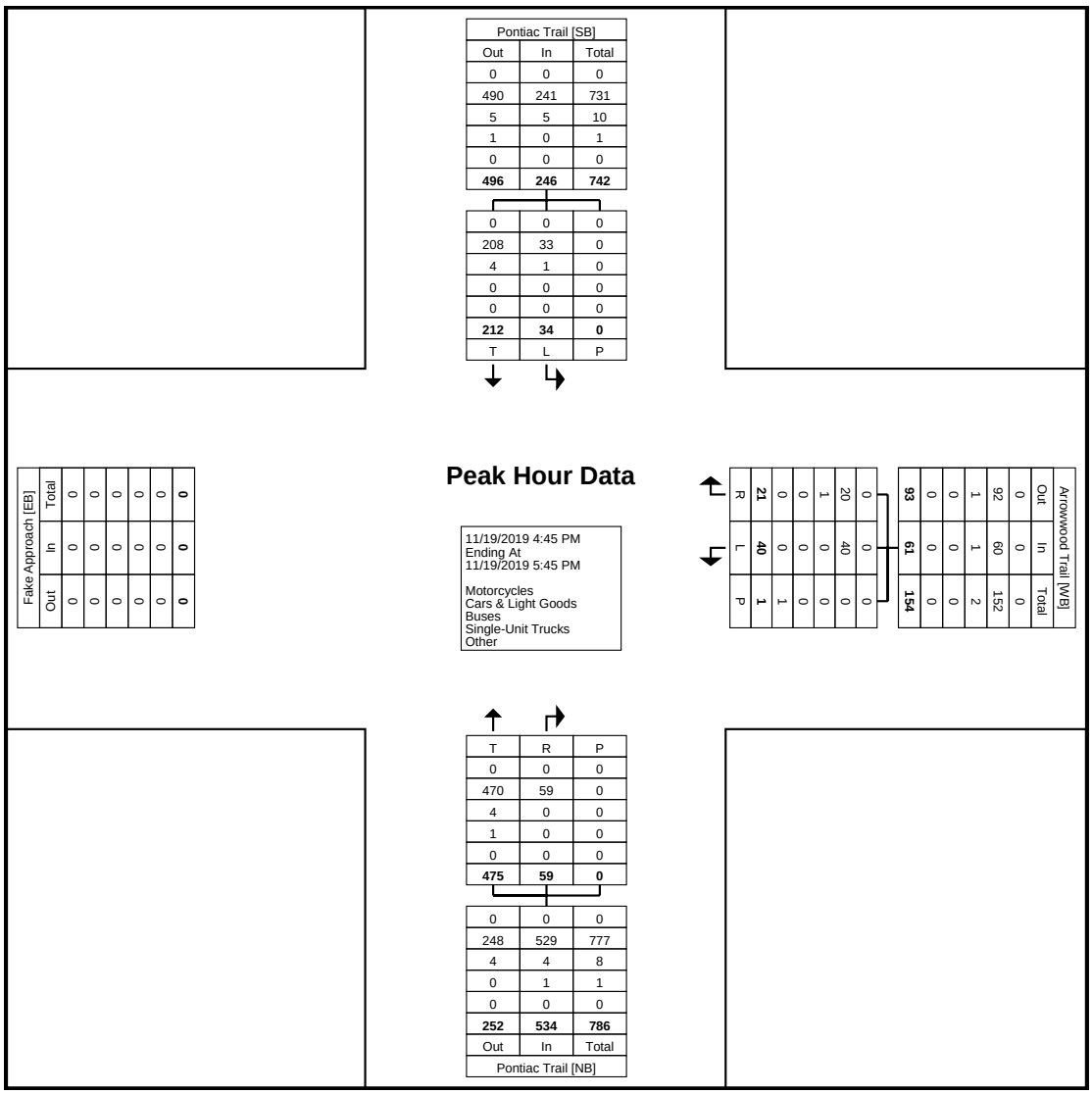

Turning Movement Peak Hour Data Plot (4:45 PM)

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TDC Traffic Comments: 13 hour video multi-modal intersection study includes premium vehicle classification turning movement count conducted during typical weekdays (Tuesday-Thursday) from 6:00 AM morning till 7:00 PM afternoon peak hours, while school was in session. Daily peak hour reports provided for morning, mid-day & afternoon peak hour study periods.

TMC was performed with Miovision video VCU scout recording cameras for City of Ann Arbor Lower Town Area Mobility Study for OHM / TDC Project Supplement No. 50.

Non-signalized intersection. Arrowwood Trail is stop controlled for Pontiac Trail at their intersection. Bike lanes exist on both sides of Pontiac Trail. VCU camera was located within NE intersection quadrant. All intersection shared video files have been uploaded to Miovision DataLink cloud platform.

Multi-Modal Classification Summary Details & Percentages: Eight (8) Groupings:

1) Motorcycles Includes: FHWA Classes 1 (Scooters & Motorcycles)

2) Lights Includes: FHWA Classes 2-3 (Motorcycles, Pick Up Trucks, Vans, Light Goods Vehicles)

3) Buses Includes: FHWA Class 4 (School Buses & Regional Transportation Metro Buses)

4) Single-Unit Trucks Includes: FHWA Classes 5-7 (2-4 Axle SU Medium Trucks)

5) Articulated Trucks Includes: FHWA Classes 8-12 (Heavy Trucks W/Single & Multi Unit Trailers)

6) Bicycles On Road Includes: All bicycles on the roadway

7) Bicycles On Crosswalk Includes: All bicycles using sidewalk

8) Pedestrians Includes: All pedestrians using crosswalk