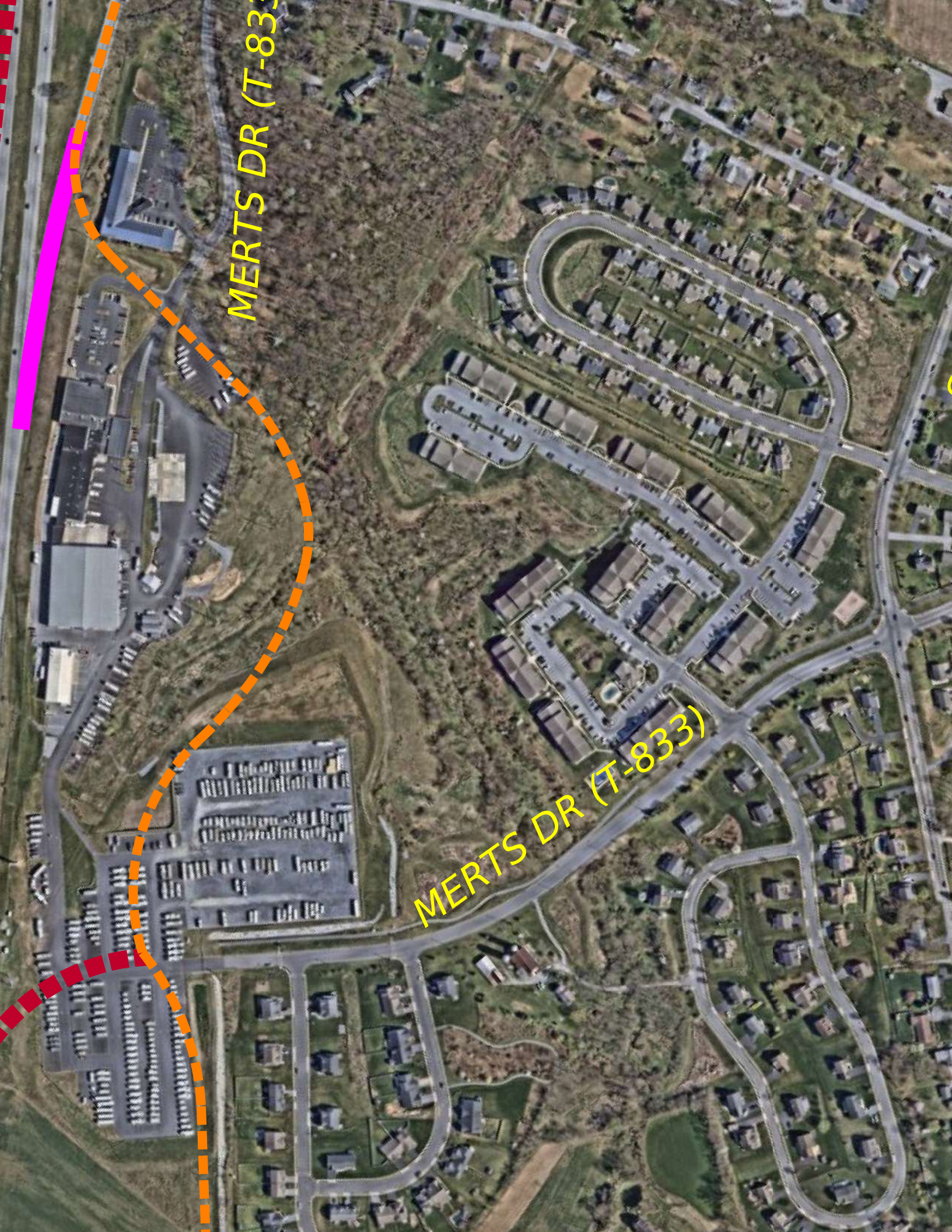


Attachment 3:

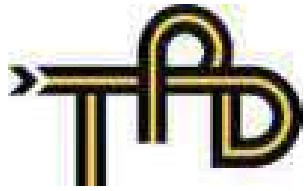
Schematic figure identifying Township's
CIP





MERTS DR (T-833)

MERTS DR (T-833)



Attachment 4:

**Graphic illustrating likely off-site
PennDOT HOP improvements**



ME

POSSIBLE PROHIBITION OF LEFT TURN
MOVEMENTS FROM MERTS DR

EAFF RD (SR 4025)



INSTALL NEW TRAFFIC SIGNAL

IG CHANGES AND POSSIBLE
D RIGHT TURN LANE ON
ROAD



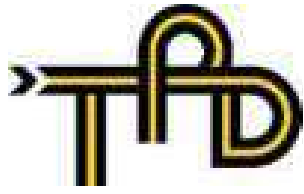
Attachment 5:

**Alternative Site Driveway/Archer Lane
Design to Promote Truck Route
Compliance**





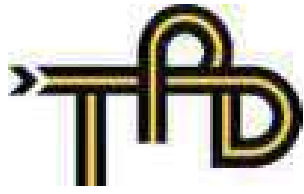




Attachment 6:

Response Letter Technical Appendices

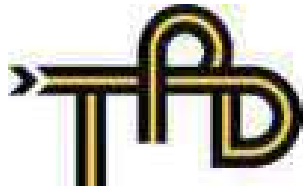




Trip Generation

Alternative Scenarios





ITE 150 Unfiltered - Alternative Analysis





Trip Generation Calculations - Equation (All Vehicle Trips & Truck Trips)

ITE 12th Ed.: LU 150 - Warehousing Filtered to Northeast & Mid-Atlantic less than 500ksf

ITE 12th Ed.: LU 150 - Warehousing Filtered to Northeast & Mid-Atlantic less than 500ksf					Trips: All Vehicles		
Condition	Rate	X (ksf)	a	% enter	Total	Enter	Exit
Average Weekday	T = a*(X)	378.000	2.52	50%	953	476	477
Weekday AM Peak Hour of Adjacent Street Traffic	T = a*(X)		0.24	71%	91	64	27
Weekday PM Peak Hour of Adjacent Street Traffic	T = a*(X)		0.27	27%	102	28	74

ITE 11th Ed.: LU 150 - Warehousing Filtered to Northeast & Mid-Atlantic less than 500ksf

ITE 11th Ed.: LU 150 - Warehousing Filtered to Northeast & Mid-Atlantic less than 500ksf					Trips: Trucks		
Condition	Rate	X (ksf)	a	% enter	Total	Enter	Exit
Average Weekday	T = a*(X)	378.000	0.40	50%	151	76	75
Weekday AM Peak Hour of Adjacent Street Traffic	T = a*(X)		0.05	56%	19	11	8
Weekday PM Peak Hour of Adjacent Street Traffic	T = a*(X)		0.06	53%	23	12	11

Condition	Trips: All Vehicles			Trips: Trucks			Trips: Passenger Cars		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday	953	476	477	151	76	75	802	400	402
Weekday AM Peak Hour of Adjacent Street Traffic	91	64	27	19	11	8	72	53	19
Weekday PM Peak Hour of Adjacent Street Traffic	102	28	74	23	12	11	79	16	63



Trip Generation Calculations - Equation (All Vehicle Trips & Truck Trips)

ITE 12th Ed.: LU 150 - Warehousing Filtered to Northeast & Mid-Atlantic less than 500ksf

Condition	Rate	X (ksf)	a	% enter	Trips: All Vehicles		
					Total	Enter	Exit
Average Weekday	$T = a*(X)$	248.000	2.52	50%	625	312	313
Weekday AM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.24	71%	60	42	18
Weekday PM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.27	27%	67	18	49

ITE 11th Ed.: LU 150 - Warehousing Filtered to Northeast & Mid-Atlantic less than 500ksf

Condition	Rate	X (ksf)	a	% enter	Trips: Trucks		
					Total	Enter	Exit
Average Weekday	$T = a*(X)$	248.000	0.40	50%	99	50	49
Weekday AM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.05	56%	12	7	5
Weekday PM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.06	53%	15	8	7

Condition	Trips: All Vehicles			Trips: Trucks			Trips: Passenger Cars		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday	625	312	313	99	50	49	526	262	264
Weekday AM Peak Hour of Adjacent Street Traffic	60	42	18	12	7	5	48	35	13
Weekday PM Peak Hour of Adjacent Street Traffic	67	18	49	15	8	7	52	10	42



Trip Generation Calculations - Equation (All Vehicle Trips & Truck Trips)

ITE 12th Ed.: LU 150 - Warehousing Nonfiltered

Condition	Rate	X (ksf)	a	% enter	Trips: All Vehicles		
					Total	Enter	Exit
Average Weekday	$T = a*(X)$	603.200	1.38	50%	832	416	416
Weekday AM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.12	77%	72	55	17
Weekday PM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.15	28%	90	25	65

ITE 12th Ed.: LU 150 - Warehousing Nonfiltered

Condition	Rate	X (ksf)	a	% enter	Trips: Trucks		
					Total	Enter	Exit
Average Weekday	$T = a*(X)$	603.200	0.43	50%	259	130	129
Weekday AM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.02	52%	12	6	6
Weekday PM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.02	53%	12	6	6

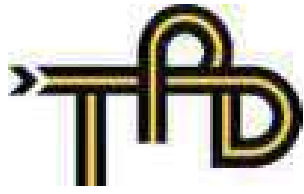
Condition	Trips: All Vehicles			Trips: Trucks			Trips: Passenger Cars		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday	832	416	416	259	130	129	573	286	287
Weekday AM Peak Hour of Adjacent Street Traffic	72	55	17	12	6	6	60	49	11
Weekday PM Peak Hour of Adjacent Street Traffic	90	25	65	12	6	6	78	19	59



Trip Generation Calculations - Combined Total

150 (Unfiltered) & 150 (Filtered)

Condition	Trips: All Vehicles			Trips: Trucks			Trips: Passenger Cars		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday	2410	1204	1206	509	256	253	1901	948	953
Weekday AM Peak Hour of Adjacent Street Traffic	223	161	62	43	24	19	180	137	43
Weekday PM Peak Hour of Adjacent Street Traffic	259	71	188	50	26	24	209	45	164



ITE 130 Industrial Park - Alternative Analysis





Trip Generation Calculations - Equation (All Vehicle Trips & Truck Trips)

ITE 12th Ed.: LU 154 - High-Cube Transload And Short-Term Storage Warehouse

Condition	Rate	X (ksf)	a	% enter	Trips: All Vehicles		
					Total	Enter	Exit
Average Weekday	$T = a*(X)$	603.200	1.40	50%	844	422	422
Weekday AM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.08	77%	48	37	11
Weekday PM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.10	28%	60	17	43

ITE 12th Ed.: LU 154 - High-Cube Transload And Short-Term Storage Warehouse

Condition	Rate	X (ksf)	a	% enter	Trips: Trucks		
					Total	Enter	Exit
Average Weekday	$T = a*(X)$	603.200	0.22	50%	133	66	67
Weekday AM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.02	49%	12	6	6
Weekday PM Peak Hour of Adjacent Street Traffic	$T = a*(X)$		0.01	47%	6	3	3

Condition	Trips: All Vehicles			Trips: Trucks			Trips: Passenger Cars		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday	844	422	422	133	66	67	711	356	355
Weekday AM Peak Hour of Adjacent Street Traffic	48	37	11	12	6	6	36	31	5
Weekday PM Peak Hour of Adjacent Street Traffic	60	17	43	6	3	3	54	14	40



Trip Generation Calculations - Equation (All Vehicle Trips & Truck Trips)

ITE 12th Ed.: LU 130 - Industrial Park

Condition	Rate	X (ksf)	a	b	% enter	Trips: All Vehicles		
						Total	Enter	Exit
Average Weekday	$T = a*(X)+b$	626.000	2.04	808.48	50%	2086	1043	1043
Weekday AM Peak Hour of Adjacent Street Traffic	$T = a*(X)+b$		0.14	125.84	77%	213	164	49
Weekday PM Peak Hour of Adjacent Street Traffic	$T = a*(X)+b$		0.16	114.29	28%	214	60	154

ITE 12th Ed.: LU 130 - Industrial Park

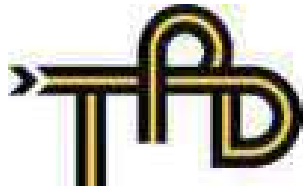
Condition	Rate	X (ksf)	a	b	% enter	Trips: Trucks		
						Total	Enter	Exit
Average Weekday	$\ln(T) = a*\ln(X)-b$	626.000	0.92	0.18	50%	312	156	156
Weekday AM Peak Hour of Adjacent Street Traffic	$\ln(T) = a*\ln(X)-b$		0.84	2.41	52%	20	10	10
Weekday PM Peak Hour of Adjacent Street Traffic	$T = a*(X)+b$		0.02	11.34	56%	24	13	11

Condition	Trips: All Vehicles			Trips: Trucks			Trips: Passenger Cars		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday	2086	1043	1043	312	156	156	1774	887	887
Weekday AM Peak Hour of Adjacent Street Traffic	213	164	49	20	10	10	193	154	39
Weekday PM Peak Hour of Adjacent Street Traffic	214	60	154	24	13	11	190	47	143



Trip Generation Calculations - Combined Total

Condition	Trips: All Vehicles			Trips: Trucks			Trips: Passenger Cars		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday	2930	1465	1465	445	222	223	2485	1243	1242
Weekday AM Peak Hour of Adjacent Street Traffic	261	201	60	32	16	16	229	185	44
Weekday PM Peak Hour of Adjacent Street Traffic	274	77	197	30	16	14	244	61	183



TIS + 20% - Alternative Analysis





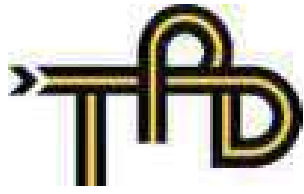
Trip Generation Calculations - Combined Total

154 & 150 (Filtered)

Condition	Trips: All Vehicles			Trips: Trucks			Trips: Passenger Cars		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday	2422	1210	1212	383	192	191	2039	1018	1021
Weekday AM Peak Hour of Adjacent Street Traffic	199	143	56	43	24	19	156	119	37
Weekday PM Peak Hour of Adjacent Street Traffic	229	63	166	44	23	21	185	40	145

154 & 150 (Filtered) + 20%

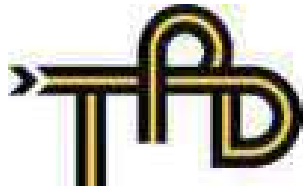
Condition	Trips: All Vehicles			Trips: Trucks			Trips: Passenger Cars		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Average Weekday	2906	1452	1454	460	230	229	2447	1222	1225
Weekday AM Peak Hour of Adjacent Street Traffic	239	172	67	52	29	23	187	143	44
Weekday PM Peak Hour of Adjacent Street Traffic	275	76	199	53	28	25	222	48	174



Volume Development

Alternative Scenarios





ITE 150 Unfiltered - Alternative Analysis



TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Mt. Pleasant Road (SR 4010)

1

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts				42		6		140	15	21	216		440
Heavy Vehicles				7				27	4	5	17		60
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	42	0	6	0	140	15	21	216	0	440
Base Growth (0.46% compounded for 5 yrs)	0	0	0	1	0	0	0	3	0	0	5	0	9
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	43	0	6	0	143	15	21	221	0	449
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								2			6		8
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential								2			1		3
Westmount Residential								2			1		3
1376 Campus Road Development								14			5		19
1925 Sheaffer Road Development								7			2		9
Mount Joy Town Center								13			20		33
Raffensperger Tract								4			2		6
Total Background Development Trips	0	0	0	0	0	0	0	44	0	0	37	0	81
2030 Base (No-Build) Volumes	0	0	0	43	0	6	0	187	15	21	258	0	530
SITE TRIPS													
New Passenger Vehicle Trips				19		3			60	11			93
New Truck Trips													0
Total Site Trip Distribution	0	0	0	19	0	3	0	0	60	11	0	0	93
2030 Projected (Build) Volumes	0	0	0	62	0	9	0	187	75	32	258	0	623
Base Growth (0.46% compounded for 10 yrs)	0	0	0	2	0	0	0	7	1	1	10	0	21
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	44	0	6	0	147	16	22	226	0	461
2035 Base (No-Build) Volumes	0	0	0	44	0	6	0	191	16	22	263	0	542
2035 Projected (Build) Volumes	0	0	0	63	0	9	0	191	76	33	263	0	635
Existing Condition HV%	0%	0%	0%	17%	0%	0%	0%	19%	27%	24%	8%	0%	0.92
Base Condition HV%	0%	0%	0%	17%	0%	0%	0%	19%	27%	24%	8%	0%	
Projected HV %	0%	0%	0%	17%	0%	0%	0%	19%	27%	24%	8%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts				15		15		273	49	19	165		536
Heavy Vehicles				3		2		14	1		5		25
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	15	0	15	0	273	49	19	165	0	536
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	0	0	6	1	0	4	0	11
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	15	0	15	0	279	50	19	169	0	547
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								6			2		8
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential								1			2		3
Westmount Residential								2			3		5
1376 Campus Road Development								9			16		25
1925 Sheaffer Road Development								5			7		12
Mount Joy Town Center								22			21		43
Raffensperger Tract								3			5		8
Total Background Development Trips	0	0	0	0	0	0	0	48	0	0	56	0	104
2030 Base (No-Build) Volumes	0	0	0	15	0	15	0	327	50	19	225	0	651
SITE TRIPS													
New Passenger Vehicle Trips				73		13			20	3			109
New Truck Trips													0
Total Site Trip Distribution	0	0	0	73	0	13	0	0	20	3	0	0	109
2030 Projected (Build) Volumes	0	0	0	88	0	28	0	327	70	22	225	0	760
Base Growth (0.46% compounded for 10 yrs)	0	0	0	1	0	1	0	13	2	1	8	0	26
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	16	0	16	0	286	51	20	173	0	562
2035 Base (No-Build) Volumes	0	0	0	16	0	16	0	334	51	20	229	0	666
2035 Projected (Build) Volumes	0	0	0	89	0	29	0	334	71	23	229	0	775
Existing Condition HV%	0%	0%	0%	20%	0%	13%	0%	5%	2%	0%	3%	0%	0.94
Base Condition HV%	0%	0%	0%	20%	0%	13%	0%	5%	2%	0%	3%	0%	
Projected HV %	0%	0%	0%	20%	0%	13%	0%	5%	2%	0%	3%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Steel Way

2

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts			320	12	4		529	156	56	7	177	69	1330
Heavy Vehicles			21	4	1		19	32	1		20	8	106
Balancing													0
2025 Existing Volumes (Balanced)	0	0	320	12	4	0	529	156	56	7	177	69	1330
Base Growth (0.46% compounded for 5 yrs)	0	0	7	0	0	0	12	4	1	0	4	2	30
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	327	12	4	0	541	160	57	7	181	71	1360
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			8				3	2			6		19
156 W. Harrisburg Ave Warehouse - Truck Trips			2				2						4
Pennmark Full Build-Out													0
Westbrooke Residential			3				8	2			1		14
Westmount Residential			6				10	2			1		19
1376 Campus Road Development			11				33	14			5		63
1925 Sheaffer Road Development			6				16	7			2		31
Mount Joy Town Center			64				30	13			20		127
Raffensperger Tract			3				10	4			2		19
Total Background Development Trips	0	0	103	0	0	0	112	44	0	0	37	0	296
2030 Base (No-Build) Volumes	0	0	430	12	4	0	653	204	57	7	218	71	1656
SITE TRIPS													
New Passenger Vehicle Trips				10	3			60	41		14	5	133
New Truck Trips				11	8				24				43
Total Site Trip Distribution	0	0	0	21	11	0	0	60	65	0	14	5	176
2030 Projected (Build) Volumes	0	0	430	33	15	0	653	264	122	7	232	76	1832
Base Growth (0.46% compounded for 10 yrs)	0	0	15	1	0	0	25	7	3	0	8	3	62
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	335	13	4	0	554	163	59	7	185	72	1392
2035 Base (No-Build) Volumes	0	0	438	13	4	0	666	207	59	7	222	72	1688
2035 Projected (Build) Volumes	0	0	438	34	15	0	666	267	124	7	236	77	1864
Existing Condition HV%	0%	0%	7%	33%	25%	0%	4%	21%	2%	0%	11%	12%	0.91
Base Condition HV%	0%	0%	7%	33%	25%	0%	4%	21%	2%	0%	11%	12%	
Projected HV %	0%	0%	7%	45%	60%	0%	4%	21%	20%	0%	11%	12%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts			566	54	14	22	275	292	21	2	127	34	1407
Heavy Vehicles			16	3			16	19	2		8	1	65
Balancing													0
2025 Existing Volumes (Balanced)	0	0	566	54	14	22	275	292	21	2	127	34	1407
Base Growth (0.46% compounded for 5 yrs)	0	0	13	1	0	1	6	7	0	0	3	1	32
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	579	55	14	23	281	299	21	2	130	35	1439
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			3				13	6			2		24
156 W. Harrisburg Ave Warehouse - Truck Trips			4				2						6
Pennmark Full Build-Out													0
Westbrooke Residential			12				6	1			2		21
Westmount Residential			13				6	2			3		24
1376 Campus Road Development			35				22	9			16		82
1925 Sheaffer Road Development			16				10	5			7		38
Mount Joy Town Center			71				54	22			21		168
Raffensperger Tract			11				6	3			5		25
Total Background Development Trips	0	0	165	0	0	0	119	48	0	0	56	0	388
2030 Base (No-Build) Volumes	0	0	744	55	14	23	400	347	21	2	186	35	1827
SITE TRIPS													
New Passenger Vehicle Trips				37	12			20	14		54	19	156
New Truck Trips				13	11				26				50
Total Site Trip Distribution	0	0	0	50	23	0	0	20	40	0	54	19	206
2030 Projected (Build) Volumes	0	0	744	105	37	23	400	367	61	2	240	54	2033
Base Growth (0.46% compounded for 10 yrs)	0	0	27	3	1	1	13	14	1	0	6	2	68
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	593	57	15	23	288	306	22	2	133	36	1475
2035 Base (No-Build) Volumes	0	0	758	57	15	23	407	354	22	2	189	36	1863
2035 Projected (Build) Volumes	0	0	758	107	38	23	407	374	62	2	243	55	2069
Existing Condition HV%	0%	0%	3%	6%	0%	0%	6%	7%	10%	0%	6%	3%	0.98
Base Condition HV%	0%	0%	3%	6%	0%	0%	6%	7%	10%	0%	6%	3%	
Projected HV %	0%	0%	3%	15%	30%	0%	6%	7%	46%	0%	6%	3%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Route 283 West Ramps

3

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts						103		640			511		1254
Heavy Vehicles						15		38			47		100
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	0	0	103	0	640	0	0	511	0	1254
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	2	0	15	0	0	12	0	29
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	105	0	655	0	0	523	0	1283
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								5			14		19
156 W. Harrisburg Ave Warehouse - Truck Trips								2			2		4
Pennmark Full Build-Out													0
Westbrooke Residential								10			4		14
Westmount Residential								12			7		19
1376 Campus Road Development								47			16		63
1925 Sheaffer Road Development								23			8		31
Mount Joy Town Center								43			84		127
Raffensperger Tract								14			5		19
Total Background Development Trips	0	0	0	0	0	0	0	156	0	0	140	0	296
2030 Base (No-Build) Volumes	0	0	0	0	0	105	0	811	0	0	663	0	1579
SITE TRIPS													
New Passenger Vehicle Trips						44		57			24		125
New Truck Trips						13		11			11		35
Total Site Trip Distribution	0	0	0	0	0	57	0	68	0	0	35	0	160
2030 Projected (Build) Volumes	0	0	0	0	0	162	0	879	0	0	698	0	1739
Base Growth (0.46% compounded for 10 yrs)	0	0	0	0	0	5	0	30	0	0	24	0	59
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	108	0	670	0	0	535	0	1313
2035 Base (No-Build) Volumes	0	0	0	0	0	108	0	826	0	0	675	0	1609
2035 Projected (Build) Volumes	0	0	0	0	0	165	0	894	0	0	710	0	1769
Existing Condition HV%	0%	0%	0%	0%	0%	15%	0%	6%	0%	0%	9%	0%	0.92
Base Condition HV%	0%	0%	0%	0%	0%	15%	0%	6%	0%	0%	9%	0%	
Projected HV %	0%	0%	0%	0%	0%	17%	0%	6%	0%	0%	9%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts						143		445			751		1339
Heavy Vehicles						8		28			22		58
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	0	0	143	0	445	0	0	751	0	1339
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	3	0	10	0	0	17	0	30
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	146	0	455	0	0	768	0	1369
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								19			5		24
156 W. Harrisburg Ave Warehouse - Truck Trips								2			4		6
Pennmark Full Build-Out											0		0
Westbrooke Residential								7			14		21
Westmount Residential								8			16		24
1376 Campus Road Development								31			51		82
1925 Sheaffer Road Development								15			23		38
Mount Joy Town Center								76			92		168
Raffensperger Tract								9			16		25
Total Background Development Trips	0	0	0	0	0	0	0	167	0	0	221	0	388
2030 Base (No-Build) Volumes	0	0	0	0	0	146	0	622	0	0	989	0	1757
SITE TRIPS													
New Passenger Vehicle Trips						15		19			91		125
New Truck Trips						15		11			13		39
Total Site Trip Distribution	0	0	0	0	0	30	0	30	0	0	104	0	164
2030 Projected (Build) Volumes	0	0	0	0	0	176	0	652	0	0	1093	0	1921
Base Growth (0.46% compounded for 10 yrs)	0	0	0	0	0	7	0	21	0	0	35	0	63
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	150	0	466	0	0	786	0	1402
2035 Base (No-Build) Volumes	0	0	0	0	0	150	0	633	0	0	1007	0	1790
2035 Projected (Build) Volumes	0	0	0	0	0	180	0	663	0	0	1111	0	1954
Existing Condition HV%	0%	0%	0%	0%	0%	6%	0%	6%	0%	0%	3%	0%	0.95
Base Condition HV%	0%	0%	0%	0%	0%	6%	0%	6%	0%	0%	3%	0%	
Projected HV %	0%	0%	0%	0%	0%	13%	0%	6%	0%	0%	4%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Route 283 East Ramps

4

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	32		245					647	558	127	396		2005
Heavy Vehicles	7		18					30	15	15	25		110
Balancing			29										29
2025 Existing Volumes (Balanced)	32	0	274	0	0	0	0	647	558	127	396	0	2034
Base Growth (0.46% compounded for 5 yrs)	1	0	6	0	0	0	0	15	13	3	9	0	47
2030 Base (No-Build) Volumes - Growth Rate Only	33	0	280	0	0	0	0	662	571	130	405	0	2081
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			14					5	2		14		35
156 W. Harrisburg Ave Warehouse - Truck Trips			2					2	2		2		8
Pennmark Full Build-Out													0
Westbrooke Residential			3					10	12		4		29
Westmount Residential			4					12	14		7		37
1376 Campus Road Development			8					39	33		16		96
1925 Sheaffer Road Development			4					19	16		8		47
Mount Joy Town Center			46					43	44		84		217
Raffensperger Tract			3					12	10		5		30
Total Background Development Trips	0	0	84	0	0	0	0	142	133	0	140	0	499
2030 Base (No-Build) Volumes	33	0	364	0	0	0	0	804	704	130	545	0	2580
SITE TRIPS													
New Passenger Vehicle Trips	26							31		14	10		81
New Truck Trips	11									11			22
Total Site Trip Distribution	37	0	0	0	0	0	0	31	0	25	10	0	103
2030 Projected (Build) Volumes	70	0	364	0	0	0	0	835	704	155	555	0	2683
Base Growth (0.46% compounded for 10 yrs)	2	0	13	0	0	0	0	30	26	6	19	0	96
2035 Base (No-Build) Volumes - Growth Rate Only	34	0	287	0	0	0	0	677	584	133	415	0	2130
2035 Base (No-Build) Volumes	34	0	371	0	0	0	0	819	717	133	555	0	2629
2035 Projected (Build) Volumes	71	0	371	0	0	0	0	850	717	158	565	0	2732
Existing Condition HV%	22%	0%	7%	0%	0%	0%	0%	5%	3%	12%	6%	0%	0.89
Base Condition HV%	22%	0%	7%	0%	0%	0%	0%	5%	3%	12%	6%	0%	
Projected HV %	26%	0%	7%	0%	0%	0%	0%	5%	3%	17%	6%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	70		495					393	413	84	674		2129
Heavy Vehicles	5		6					24	13	2	16		66
Balancing			11										11
2025 Existing Volumes (Balanced)	70	0	506	0	0	0	0	393	413	84	674	0	2140
Base Growth (0.46% compounded for 5 yrs)	2	0	12	0	0	0	0	9	10	2	16	0	51
2030 Base (No-Build) Volumes - Growth Rate Only	72	0	518	0	0	0	0	402	423	86	690	0	2191
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			4					19	7		5		35
156 W. Harrisburg Ave Warehouse - Truck Trips			2					2	4		4		12
Pennmark Full Build-Out													0
Westbrooke Residential			8					7	5		14		34
Westmount Residential			9					8	10		16		43
1376 Campus Road Development			28					26	22		51		127
1925 Sheaffer Road Development			13					13	10		23		59
Mount Joy Town Center			49					76	77		92		294
Raffensperger Tract			8					8	6		16		38
Total Background Development Trips	0	0	121	0	0	0	0	159	141	0	221	0	642
2030 Base (No-Build) Volumes	72	0	639	0	0	0	0	561	564	86	911	0	2833
SITE TRIPS													
New Passenger Vehicle Trips	9							10		53	38		110
New Truck Trips	11									13			24
Total Site Trip Distribution	20	0	0	0	0	0	0	10	0	66	38	0	134
2030 Projected (Build) Volumes	92	0	639	0	0	0	0	571	564	152	949	0	2967
Base Growth (0.46% compounded for 10 yrs)	3	0	24	0	0	0	0	18	19	4	32	0	100
2035 Base (No-Build) Volumes - Growth Rate Only	73	0	530	0	0	0	0	411	432	88	706	0	2240
2035 Base (No-Build) Volumes	73	0	651	0	0	0	0	570	573	88	927	0	2882
2035 Projected (Build) Volumes	93	0	651	0	0	0	0	580	573	154	965	0	3016
Existing Condition HV%	7%	0%	1%	0%	0%	0%	0%	6%	3%	2%	2%	0%	0.98
Base Condition HV%	7%	0%	1%	0%	0%	0%	0%	6%	3%	2%	2%	0%	
Projected HV %	17%	0%	1%	0%	0%	0%	0%	6%	3%	10%	2%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Merts Drive

5

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	4		9				8	1189			653	17	1880
Heavy Vehicles			1					61			58	1	121
Balancing								12					12
2025 Existing Volumes (Balanced)	4	0	9	0	0	0	8	1201	0	0	653	17	1892
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	0	0	28	0	0	15	0	43
2030 Base (No-Build) Volumes - Growth Rate Only	4	0	9	0	0	0	8	1229	0	0	668	17	1935
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								7			28		35
156 W. Harrisburg Ave Warehouse - Truck Trips								4			4		8
Pennmark Full Build-Out													0
Westbrooke Residential								22			7		29
Westmount Residential								26			11		37
1376 Campus Road Development								72			24		96
1925 Sheaffer Road Development								35			12		47
Mount Joy Town Center								87			130		217
Raffensperger Tract								22			8		30
Total Background Development Trips	0	0	0	0	0	0	0	275	0	0	224	0	499
2030 Base (No-Build) Volumes	4	0	9	0	0	0	8	1504	0	0	892	17	2434
SITE TRIPS													
New Passenger Vehicle Trips								31			10		41
New Truck Trips													0
Total Site Trip Distribution	0	0	0	0	0	0	0	31	0	0	10	0	41
2030 Projected (Build) Volumes	4	0	9	0	0	0	8	1535	0	0	902	17	2475
Base Growth (0.46% compounded for 10 yrs)	0	0	0	0	0	0	0	56	0	0	31	1	88
2035 Base (No-Build) Volumes - Growth Rate Only	4	0	9	0	0	0	8	1257	0	0	684	18	1980
2035 Base (No-Build) Volumes	4	0	9	0	0	0	8	1532	0	0	908	18	2479
2035 Projected (Build) Volumes	4	0	9	0	0	0	8	1563	0	0	918	18	2520
Existing Condition HV%	0%	0%	11%	0%	0%	0%	0%	5%	0%	0%	9%	6%	0.93
Base Condition HV%	0%	0%	11%	0%	0%	0%	0%	5%	0%	0%	9%	6%	
Projected HV %	0%	0%	11%	0%	0%	0%	0%	5%	0%	0%	9%	6%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	15		12				4	770			1179	1	1981
Heavy Vehicles	2							34			41		77
Balancing								21					21
2025 Existing Volumes (Balanced)	15	0	12	0	0	0	4	791	0	0	1179	1	2002
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	0	0	18	0	0	27	0	45
2030 Base (No-Build) Volumes - Growth Rate Only	15	0	12	0	0	0	4	809	0	0	1206	1	2047
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								26			9		35
156 W. Harrisburg Ave Warehouse - Truck Trips								6			6		12
Pennmark Full Build-Out													0
Westbrooke Residential								12			22		34
Westmount Residential								18			25		43
1376 Campus Road Development								48			79		127
1925 Sheaffer Road Development								23			36		59
Mount Joy Town Center								153			141		294
Raffensperger Tract								14			24		38
Total Background Development Trips	0	0	0	0	0	0	0	300	0	0	342	0	642
2030 Base (No-Build) Volumes	15	0	12	0	0	0	4	1109	0	0	1548	1	2689
SITE TRIPS													
New Passenger Vehicle Trips								10			38		48
New Truck Trips													0
Total Site Trip Distribution	0	0	0	0	0	0	0	10	0	0	38	0	48
2030 Projected (Build) Volumes	15	0	12	0	0	0	4	1119	0	0	1586	1	2737
Base Growth (0.46% compounded for 10 yrs)	1	0	1	0	0	0	0	37	0	0	55	0	94
2035 Base (No-Build) Volumes - Growth Rate Only	16	0	13	0	0	0	4	828	0	0	1234	1	2096
2035 Base (No-Build) Volumes	16	0	13	0	0	0	4	1128	0	0	1576	1	2738
2035 Projected (Build) Volumes	16	0	13	0	0	0	4	1138	0	0	1614	1	2786
Existing Condition HV%	13%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	0.95
Base Condition HV%	13%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	
Projected HV %	13%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Schwanger Road

6

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	291	26	55	7	14	69	24	844	7	16	511	144	2008
Heavy Vehicles	1		4			2		56	3		54	5	125
Balancing													0
2025 Existing Volumes (Balanced)	291	26	55	7	14	69	24	844	7	16	511	144	2008
Base Growth (0.46% compounded for 5 yrs)	7	1	1	0	0	2	1	20	0	0	12	3	47
2030 Base (No-Build) Volumes - Growth Rate Only	298	27	56	7	14	71	25	864	7	16	523	147	2055
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			1					7			28		36
156 W. Harrisburg Ave Warehouse - Truck Trips								4			4		8
Pennmark Full Build-Out													0
Westbrooke Residential								22			7		29
Westmount Residential								26			11		37
1376 Campus Road Development	72	10	13		3		5					24	127
1925 Sheaffer Road Development	35	5	6		2		2					12	62
Mount Joy Town Center			16				10	87			130		243
Raffensperger Tract	22	3	4		1		1					8	39
Total Background Development Trips	129	18	40	0	6	0	18	146	0	0	180	44	581
2030 Base (No-Build) Volumes	427	45	96	7	20	71	43	1010	7	16	703	191	2636
SITE TRIPS													
New Passenger Vehicle Trips	4	4		5	1			27	14		9	1	65
New Truck Trips													0
Total Site Trip Distribution	4	4	0	5	1	0	0	27	14	0	9	1	65
2030 Projected (Build) Volumes	431	49	96	12	21	71	43	1037	21	16	712	192	2701
Base Growth (0.46% compounded for 10 yrs)	14	1	3	0	1	3	1	40	0	1	24	7	95
2035 Base (No-Build) Volumes - Growth Rate Only	305	27	58	7	15	72	25	884	7	17	535	151	2103
2035 Base (No-Build) Volumes	434	45	98	7	21	72	43	1030	7	17	715	195	2684
2035 Projected (Build) Volumes	438	49	98	12	22	72	43	1057	21	17	724	196	2749
Existing Condition HV%	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%	0.94
Base Condition HV%	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%	
Projected HV %	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	178	38	47	12	39	25	44	579	12	59	813	284	2130
Heavy Vehicles	2							29		2	30	3	66
Balancing													0
2025 Existing Volumes (Balanced)	178	38	47	12	39	25	44	579	12	59	813	284	2130
Base Growth (0.46% compounded for 5 yrs)	4	1	1	0	1	1	1	13	0	1	19	7	49
2030 Base (No-Build) Volumes - Growth Rate Only	182	39	48	12	40	26	45	592	12	60	832	291	2179
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips							1	26			9		36
156 W. Harrisburg Ave Warehouse - Truck Trips								6			6		12
Pennmark Full Build-Out													0
Westbrooke Residential								12			22		34
Westmount Residential								18			25		43
1376 Campus Road Development	48	6	9		10		15					79	167
1925 Sheaffer Road Development	23	3	4		5		7					36	78
Mount Joy Town Center			18				19	153			141		331
Raffensperger Tract	14	2	2		3		5					24	50
Background Trips To Compare Growth	85	11	33	0	18	0	46	153	0	0	141	139	626
Total Background Development Trips	85	11	33	0	18	0	47	215	0	0	203	139	751
2030 Base (No-Build) Volumes	267	50	81	12	58	26	92	807	12	60	1035	430	2930
SITE TRIPS													
New Passenger Vehicle Trips	1	1		16	5			9	5		33	5	75
New Truck Trips													0
Total Site Trip Distribution	1	1	0	16	5	0	0	9	5	0	33	5	75
2030 Projected (Build) Volumes	268	51	81	28	63	26	92	816	17	60	1068	435	3005
Base Growth (0.46% compounded for 10 yrs)	8	2	2	1	2	1	2	27	1	3	38	13	100
2035 Base (No-Build) Volumes - Growth Rate Only	186	40	49	13	41	26	46	606	13	62	851	297	2230
2035 Base (No-Build) Volumes	271	51	82	13	59	26	93	821	13	62	1054	436	2981
2035 Projected (Build) Volumes	272	52	82	29	64	26	93	830	18	62	1087	441	3056
Existing Condition HV%	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%	0.95
Base Condition HV%	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%	
Projected HV %	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Schwanger Road/Campus Road & Merts Drive/Schwanger Road

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	12	216	1	19	161	4	0	4	34	38	4	23	516
Heavy Vehicles	2	4		1	2				1	2		1	13
Balancing													0
2025 Existing Volumes (Balanced)	12	216	1	19	161	4	0	4	34	38	4	23	516
Base Growth (0.46% compounded for 5 yrs)	0	5	0	0	4	0	0	0	1	1	0	1	12
2030 Base (No-Build) Volumes - Growth Rate Only	12	221	1	19	165	4	0	4	35	39	4	24	528
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips		1											1
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development		95			32								127
1925 Sheaffer Road Development		46			16								62
Mount Joy Town Center		16			10								26
Raffensperger Tract				10					29				39
Total Background Development Trips	0	158	0	10	58	0	0	0	29	0	0	0	255
2030 Base (No-Build) Volumes	12	379	1	29	223	4	0	4	64	39	4	24	783
SITE TRIPS													
New Passenger Vehicle Trips		8			2								10
New Truck Trips													0
Total Site Trip Distribution	0	8	0	0	2	0	0	0	0	0	0	0	10
2030 Projected (Build) Volumes	12	387	1	29	225	4	0	4	64	39	4	24	793
Base Growth (0.46% compounded for 10 yrs)	1	10	0	1	8	0	0	0	2	2	0	1	25
2035 Base (No-Build) Volumes - Growth Rate Only	13	226	1	20	169	4	0	4	36	40	4	24	541
2035 Base (No-Build) Volumes	13	384	1	30	227	4	0	4	65	40	4	24	796
2035 Projected (Build) Volumes	13	392	1	30	229	4	0	4	65	40	4	24	806
Existing Condition HV%	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%	0.88
Base Condition HV%	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%	
Projected HV %	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	23	258	4	79	210	41	1	8	33	17	8	16	698
Heavy Vehicles		4		1	2	1		1	1	1	1	1	13
Balancing													0
2025 Existing Volumes (Balanced)	23	258	4	79	210	41	1	8	33	17	8	16	698
Base Growth (0.46% compounded for 5 yrs)	1	6	0	2	5	1	0	0	1	0	0	0	16
2030 Base (No-Build) Volumes - Growth Rate Only	24	264	4	81	215	42	1	8	34	17	8	16	714
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development		63			104								167
1925 Sheaffer Road Development		30			48								78
Mount Joy Town Center		18			19								37
Raffensperger Tract				32					18				50
Total Background Development Trips	0	111	0	32	171	0	0	0	18	0	0	0	332
2030 Base (No-Build) Volumes	24	375	4	113	386	42	1	8	52	17	8	16	1046
SITE TRIPS													
New Passenger Vehicle Trips		2			10								12
New Truck Trips													0
Total Site Trip Distribution	0	2	0	0	10	0	0	0	0	0	0	0	12
2030 Projected (Build) Volumes	24	377	4	113	396	42	1	8	52	17	8	16	1058
Base Growth (0.46% compounded for 10 yrs)	1	12	0	4	10	2	0	0	2	1	0	1	33
2035 Base (No-Build) Volumes - Growth Rate Only	24	270	4	83	220	43	1	8	35	18	8	17	731
2035 Base (No-Build) Volumes	24	381	4	115	391	43	1	8	53	18	8	17	1063
2035 Projected (Build) Volumes	24	383	4	115	401	43	1	8	53	18	8	17	1075
Existing Condition HV%	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%	0.90
Base Condition HV%	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%	
Projected HV %	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Mt. Pleasant Road (SR 4010) & Schwanger Road
8

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		31	4	16	43		2		20				116
Heavy Vehicles		5		3	3				1				12
Balancing													0
2025 Existing Volumes (Balanced)	0	31	4	16	43	0	2	0	20	0	0	0	116
Base Growth (0.46% compounded for 5 yrs)	0	1	0	0	1	0	0	0	0	0	0	0	2
2030 Base (No-Build) Volumes - Growth Rate Only	0	32	4	16	44	0	2	0	20	0	0	0	118
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development				3					10				13
1925 Sheaffer Road Development				2					5				7
Mount Joy Town Center													0
Raffensperger Tract				1					3				4
Total Background Development Trips	0	0	0	6	0	0	0	0	18	0	0	0	24
2030 Base (No-Build) Volumes	0	32	4	22	44	0	2	0	38	0	0	0	142
SITE TRIPS													
New Passenger Vehicle Trips		2	6		7		18						33
New Truck Trips													0
Total Site Trip Distribution	0	2	6	0	7	0	18	0	0	0	0	0	33
2030 Projected (Build) Volumes	0	34	10	22	51	0	20	0	38	0	0	0	175
Base Growth (0.46% compounded for 10 yrs)	0	1	0	1	2	0	0	0	1	0	0	0	5
2035 Base (No-Build) Volumes - Growth Rate Only	0	32	4	17	45	0	2	0	21	0	0	0	121
2035 Base (No-Build) Volumes	0	32	4	23	45	0	2	0	39	0	0	0	145
2035 Projected (Build) Volumes	0	34	10	23	52	0	20	0	39	0	0	0	178
Existing Condition HV%	0%	16%	0%	19%	7%	0%	0%	0%	5%	0%	0%	0%	0.74
Base Condition HV%	0%	16%	0%	19%	7%	0%	0%	0%	5%	0%	0%	0%	
Projected HV %	0%	16%	0%	19%	7%	0%	0%	0%	5%	0%	0%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		69	6	26	30		4		23				158
Heavy Vehicles		6		4	1		1		1				13
Balancing													0
2025 Existing Volumes (Balanced)	0	69	6	26	30	0	4	0	23	0	0	0	158
Base Growth (0.46% compounded for 5 yrs)	0	2	0	1	1	0	0	0	1	0	0	0	5
2030 Base (No-Build) Volumes - Growth Rate Only	0	71	6	27	31	0	4	0	24	0	0	0	163
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development				10					6				16
1925 Sheaffer Road Development				5					3				8
Mount Joy Town Center													0
Raffensperger Tract				3					2				5
Total Background Development Trips	0	0	0	18	0	0	0	0	11	0	0	0	29
2030 Base (No-Build) Volumes	0	71	6	45	31	0	4	0	35	0	0	0	192
SITE TRIPS													
New Passenger Vehicle Trips		8	21		2		6						37
New Truck Trips													0
Total Site Trip Distribution	0	8	21	0	2	0	6	0	0	0	0	0	37
2030 Projected (Build) Volumes	0	79	27	45	33	0	10	0	35	0	0	0	229
Base Growth (0.46% compounded for 10 yrs)	0	3	0	1	1	0	0	0	1	0	0	0	6
2035 Base (No-Build) Volumes - Growth Rate Only	0	72	6	27	31	0	4	0	24	0	0	0	164
2035 Base (No-Build) Volumes	0	72	6	45	31	0	4	0	35	0	0	0	193
2035 Projected (Build) Volumes	0	80	27	45	33	0	10	0	35	0	0	0	230
Existing Condition HV%	0%	9%	0%	15%	3%	0%	25%	0%	4%	0%	0%	0%	0.88
Base Condition HV%	0%	9%	0%	15%	3%	0%	25%	0%	4%	0%	0%	0%	
Projected HV %	0%	9%	0%	15%	3%	0%	25%	0%	4%	0%	0%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Mt. Pleasant Road (SR 4010) & Proposed Eastern Driveway

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		36			48								84
Heavy Vehicles		9			7								16
Balancing													0
2025 Existing Volumes (Balanced)	0	36	0	0	48	0	0	0	0	0	0	0	84
Base Growth (0.46% compounded for 5 yrs)	0	1	0	0	1	0	0	0	0	0	0	0	2
2030 Base (No-Build) Volumes - Growth Rate Only	0	37	0	0	49	0	0	0	0	0	0	0	86
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	37	0	0	49	0	0	0	0	0	0	0	86
SITE TRIPS													
New Passenger Vehicle Trips	30					25				8		9	72
New Truck Trips													0
Total Site Trip Distribution	30	0	0	0	0	25	0	0	0	8	0	9	72
2030 Projected (Build) Volumes	30	37	0	0	49	25	0	0	0	8	0	9	158
Base Growth (0.46% compounded for 10 yrs)	0	2	0	0	2	0	0	0	0	0	0	0	4
2035 Base (No-Build) Volumes - Growth Rate Only	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Base (No-Build) Volumes	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Projected (Build) Volumes	30	38	0	0	50	25	0	0	0	8	0	9	160
Existing Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	25%	0%	0%	15%	2%	0%	0%	0%	2%	0%	2%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		75			34								109
Heavy Vehicles		6			5								11
Balancing													0
2025 Existing Volumes (Balanced)	0	75	0	0	34	0	0	0	0	0	0	0	109
Base Growth (0.46% compounded for 5 yrs)	0	2	0	0	1	0	0	0	0	0	0	0	3
2030 Base (No-Build) Volumes - Growth Rate Only	0	77	0	0	35	0	0	0	0	0	0	0	112
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	77	0	0	35	0	0	0	0	0	0	0	112
SITE TRIPS													
New Passenger Vehicle Trips	10					8				29		36	83
New Truck Trips													0
Total Site Trip Distribution	10	0	0	0	0	8	0	0	0	29	0	36	83
2030 Projected (Build) Volumes	10	77	0	0	35	8	0	0	0	29	0	36	195
Base Growth (0.46% compounded for 10 yrs)	0	4	0	0	2	0	0	0	0	0	0	0	6
2035 Base (No-Build) Volumes - Growth Rate Only	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Base (No-Build) Volumes	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Projected (Build) Volumes	10	79	0	0	36	8	0	0	0	29	0	36	198
Existing Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	8%	0%	0%	15%	2%	0%	0%	0%	2%	0%	2%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

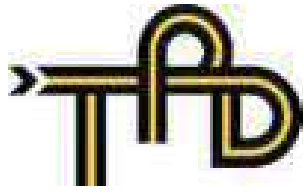
Mt. Pleasant Road (SR 4010) & Proposed Western Driveway/Proposed Archers Lane
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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		36			48								84
Heavy Vehicles		9			7								16
Balancing													0
2025 Existing Volumes (Balanced)	0	36	0	0	48	0	0	0	0	0	0	0	84
Base Growth (0.46% compounded for 5 yrs)	0	1	0	0	1	0	0	0	0	0	0	0	2
2030 Base (No-Build) Volumes - Growth Rate Only	0	37	0	0	49	0	0	0	0	0	0	0	86
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	37	0	0	49	0	0	0	0	0	0	0	86
SITE TRIPS													
New Passenger Vehicle Trips	55	16		4	5			27	14		9	17	147
New Truck Trips								24			19		43
Total Site Trip Distribution	55	16	0	4	5	0	0	51	14	0	28	17	190
2030 Projected (Build) Volumes	55	53	0	4	54	0	0	51	14	0	28	17	276
Base Growth (0.46% compounded for 10 yrs)	0	2	0	0	2	0	0	0	0	0	0	0	4
2035 Base (No-Build) Volumes - Growth Rate Only	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Base (No-Build) Volumes	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Projected (Build) Volumes	55	54	0	4	55	0	0	51	14	0	28	17	278
Existing Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	25%	0%	2%	15%	0%	0%	47%	2%	0%	68%	2%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		75			34								109
Heavy Vehicles		6			5								11
Balancing													0
2025 Existing Volumes (Balanced)	0	75	0	0	34	0	0	0	0	0	0	0	109
Base Growth (0.46% compounded for 5 yrs)	0	2	0	0	1	0	0	0	0	0	0	0	3
2030 Base (No-Build) Volumes - Growth Rate Only	0	77	0	0	35	0	0	0	0	0	0	0	112
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	77	0	0	35	0	0	0	0	0	0	0	112
SITE TRIPS													
New Passenger Vehicle Trips	18	5		16	20			9	5		33	66	172
New Truck Trips								26			24		50
Total Site Trip Distribution	18	5	0	16	20	0	0	35	5	0	57	66	222
2030 Projected (Build) Volumes	18	82	0	16	55	0	0	35	5	0	57	66	334
Base Growth (0.46% compounded for 10 yrs)	0	4	0	0	2	0	0	0	0	0	0	0	6
2035 Base (No-Build) Volumes - Growth Rate Only	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Base (No-Build) Volumes	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Projected (Build) Volumes	18	84	0	16	56	0	0	35	5	0	57	66	337
Existing Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	8%	0%	2%	15%	0%	0%	74%	2%	0%	42%	2%	



ITE 130 Industrial Park - Alternative Analysis



TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Mt. Pleasant Road (SR 4010)

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts				42		6		140	15	21	216		440
Heavy Vehicles				7				27	4	5	17		60
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	42	0	6	0	140	15	21	216	0	440
Base Growth (0.46% compounded for 5 yrs)	0	0	0	1	0	0	0	3	0	0	5	0	9
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	43	0	6	0	143	15	21	221	0	449
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								2			6		8
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential								2			1		3
Westmount Residential								2			1		3
1376 Campus Road Development								14			5		19
1925 Sheaffer Road Development								7			2		9
Mount Joy Town Center								13			20		33
Raffensperger Tract								4			2		6
Total Background Development Trips	0	0	0	0	0	0	0	44	0	0	37	0	81
2030 Base (No-Build) Volumes	0	0	0	43	0	6	0	187	15	21	258	0	530
SITE TRIPS													
New Passenger Vehicle Trips				19		3			81	15			118
New Truck Trips													0
Total Site Trip Distribution	0	0	0	19	0	3	0	0	81	15	0	0	118
2030 Projected (Build) Volumes	0	0	0	62	0	9	0	187	96	36	258	0	648
Base Growth (0.46% compounded for 10 yrs)	0	0	0	2	0	0	0	7	1	1	10	0	21
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	44	0	6	0	147	16	22	226	0	461
2035 Base (No-Build) Volumes	0	0	0	44	0	6	0	191	16	22	263	0	542
2035 Projected (Build) Volumes	0	0	0	63	0	9	0	191	97	37	263	0	660
Existing Condition HV%	0%	0%	0%	17%	0%	0%	0%	19%	27%	24%	8%	0%	0.92
Base Condition HV%	0%	0%	0%	17%	0%	0%	0%	19%	27%	24%	8%	0%	
Projected HV %	0%	0%	0%	17%	0%	0%	0%	19%	27%	24%	8%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts				15		15		273	49	19	165		536
Heavy Vehicles				3		2		14	1		5		25
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	15	0	15	0	273	49	19	165	0	536
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	0	0	6	1	0	4	0	11
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	15	0	15	0	279	50	19	169	0	547
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								6			2		8
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential								1			2		3
Westmount Residential								2			3		5
1376 Campus Road Development								9			16		25
1925 Sheaffer Road Development								5			7		12
Mount Joy Town Center								22			21		43
Raffensperger Tract								3			5		8
Total Background Development Trips	0	0	0	0	0	0	0	48	0	0	56	0	104
2030 Base (No-Build) Volumes	0	0	0	15	0	15	0	327	50	19	225	0	651
SITE TRIPS													
New Passenger Vehicle Trips				80		15			27	5			127
New Truck Trips													0
Total Site Trip Distribution	0	0	0	80	0	15	0	0	27	5	0	0	127
2030 Projected (Build) Volumes	0	0	0	95	0	30	0	327	77	24	225	0	778
Base Growth (0.46% compounded for 10 yrs)	0	0	0	1	0	1	0	13	2	1	8	0	26
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	16	0	16	0	286	51	20	173	0	562
2035 Base (No-Build) Volumes	0	0	0	16	0	16	0	334	51	20	229	0	666
2035 Projected (Build) Volumes	0	0	0	96	0	31	0	334	78	25	229	0	793
Existing Condition HV%	0%	0%	0%	20%	0%	13%	0%	5%	2%	0%	3%	0%	0.94
Base Condition HV%	0%	0%	0%	20%	0%	13%	0%	5%	2%	0%	3%	0%	
Projected HV %	0%	0%	0%	20%	0%	13%	0%	5%	2%	0%	3%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Steel Way

2

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts			320	12	4		529	156	56	7	177	69	1330
Heavy Vehicles			21	4	1		19	32	1		20	8	106
Balancing													0
2025 Existing Volumes (Balanced)	0	0	320	12	4	0	529	156	56	7	177	69	1330
Base Growth (0.46% compounded for 5 yrs)	0	0	7	0	0	0	12	4	1	0	4	2	30
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	327	12	4	0	541	160	57	7	181	71	1360
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			8				3	2			6		19
156 W. Harrisburg Ave Warehouse - Truck Trips			2				2						4
Pennmark Full Build-Out													0
Westbrooke Residential			3				8	2			1		14
Westmount Residential			6				10	2			1		19
1376 Campus Road Development			11				33	14			5		63
1925 Sheaffer Road Development			6				16	7			2		31
Mount Joy Town Center			64				30	13			20		127
Raffensperger Tract			3				10	4			2		19
Total Background Development Trips	0	0	103	0	0	0	112	44	0	0	37	0	296
2030 Base (No-Build) Volumes	0	0	430	12	4	0	653	204	57	7	218	71	1656
SITE TRIPS													
New Passenger Vehicle Trips				10	4			81	56		14	5	170
New Truck Trips				9	7				16				32
Total Site Trip Distribution	0	0	0	19	11	0	0	81	72	0	14	5	202
2030 Projected (Build) Volumes	0	0	430	31	15	0	653	285	129	7	232	76	1858
Base Growth (0.46% compounded for 10 yrs)	0	0	15	1	0	0	25	7	3	0	8	3	62
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	335	13	4	0	554	163	59	7	185	72	1392
2035 Base (No-Build) Volumes	0	0	438	13	4	0	666	207	59	7	222	72	1688
2035 Projected (Build) Volumes	0	0	438	32	15	0	666	288	131	7	236	77	1890
Existing Condition HV%	0%	0%	7%	33%	25%	0%	4%	21%	2%	0%	11%	12%	0.91
Base Condition HV%	0%	0%	7%	33%	25%	0%	4%	21%	2%	0%	11%	12%	
Projected HV %	0%	0%	7%	42%	53%	0%	4%	21%	13%	0%	11%	12%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts			566	54	14	22	275	292	21	2	127	34	1407
Heavy Vehicles			16	3			16	19	2		8	1	65
Balancing													0
2025 Existing Volumes (Balanced)	0	0	566	54	14	22	275	292	21	2	127	34	1407
Base Growth (0.46% compounded for 5 yrs)	0	0	13	1	0	1	6	7	0	0	3	1	32
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	579	55	14	23	281	299	21	2	130	35	1439
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			3				13	6			2		24
156 W. Harrisburg Ave Warehouse - Truck Trips			4				2						6
Pennmark Full Build-Out													0
Westbrooke Residential			12				6	1			2		21
Westmount Residential			13				6	2			3		24
1376 Campus Road Development			35				22	9			16		82
1925 Sheaffer Road Development			16				10	5			7		38
Mount Joy Town Center			71				54	22			21		168
Raffensperger Tract			11				6	3			5		25
Total Background Development Trips	0	0	165	0	0	0	119	48	0	0	56	0	388
2030 Base (No-Build) Volumes	0	0	744	55	14	23	400	347	21	2	186	35	1827
SITE TRIPS													
New Passenger Vehicle Trips				41	14			27	18		59	21	180
New Truck Trips				8	6				16				30
Total Site Trip Distribution	0	0	0	49	20	0	0	27	34	0	59	21	210
2030 Projected (Build) Volumes	0	0	744	104	34	23	400	374	55	2	245	56	2037
Base Growth (0.46% compounded for 10 yrs)	0	0	27	3	1	1	13	14	1	0	6	2	68
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	593	57	15	23	288	306	22	2	133	36	1475
2035 Base (No-Build) Volumes	0	0	758	57	15	23	407	354	22	2	189	36	1863
2035 Projected (Build) Volumes	0	0	758	106	35	23	407	381	56	2	248	57	2073
Existing Condition HV%	0%	0%	3%	6%	0%	0%	6%	7%	10%	0%	6%	3%	0.98
Base Condition HV%	0%	0%	3%	6%	0%	0%	6%	7%	10%	0%	6%	3%	
Projected HV %	0%	0%	3%	11%	18%	0%	6%	7%	33%	0%	6%	3%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Route 283 West Ramps

3

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts						103		640			511		1254
Heavy Vehicles						15		38			47		100
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	0	0	103	0	640	0	0	511	0	1254
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	2	0	15	0	0	12	0	29
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	105	0	655	0	0	523	0	1283
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								5			14		19
156 W. Harrisburg Ave Warehouse - Truck Trips								2			2		4
Pennmark Full Build-Out													0
Westbrooke Residential								10			4		14
Westmount Residential								12			7		19
1376 Campus Road Development								47			16		63
1925 Sheaffer Road Development								23			8		31
Mount Joy Town Center								43			84		127
Raffensperger Tract								14			5		19
Total Background Development Trips	0	0	0	0	0	0	0	156	0	0	140	0	296
2030 Base (No-Build) Volumes	0	0	0	0	0	105	0	811	0	0	663	0	1579
SITE TRIPS													
New Passenger Vehicle Trips						59		78			24		161
New Truck Trips						9		7			8		24
Total Site Trip Distribution	0	0	0	0	0	68	0	85	0	0	32	0	185
2030 Projected (Build) Volumes	0	0	0	0	0	173	0	896	0	0	695	0	1764
Base Growth (0.46% compounded for 10 yrs)	0	0	0	0	0	5	0	30	0	0	24	0	59
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	108	0	670	0	0	535	0	1313
2035 Base (No-Build) Volumes	0	0	0	0	0	108	0	826	0	0	675	0	1609
2035 Projected (Build) Volumes	0	0	0	0	0	176	0	911	0	0	707	0	1794
Existing Condition HV%	0%	0%	0%	0%	0%	15%	0%	6%	0%	0%	9%	0%	0.92
Base Condition HV%	0%	0%	0%	0%	0%	15%	0%	6%	0%	0%	9%	0%	
Projected HV %	0%	0%	0%	0%	0%	15%	0%	6%	0%	0%	9%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts						143		445			751		1339
Heavy Vehicles						8		28			22		58
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	0	0	143	0	445	0	0	751	0	1339
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	3	0	10	0	0	17	0	30
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	146	0	455	0	0	768	0	1369
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								19			5		24
156 W. Harrisburg Ave Warehouse - Truck Trips								2			4		6
Pennmark Full Build-Out											0		0
Westbrooke Residential								7			14		21
Westmount Residential								8			16		24
1376 Campus Road Development								31			51		82
1925 Sheaffer Road Development								15			23		38
Mount Joy Town Center								76			92		168
Raffensperger Tract								9			16		25
Total Background Development Trips	0	0	0	0	0	0	0	167	0	0	221	0	388
2030 Base (No-Build) Volumes	0	0	0	0	0	146	0	622	0	0	989	0	1757
SITE TRIPS													
New Passenger Vehicle Trips						19		26			100		145
New Truck Trips						9		7			8		24
Total Site Trip Distribution	0	0	0	0	0	28	0	33	0	0	108	0	169
2030 Projected (Build) Volumes	0	0	0	0	0	174	0	655	0	0	1097	0	1926
Base Growth (0.46% compounded for 10 yrs)	0	0	0	0	0	7	0	21	0	0	35	0	63
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	150	0	466	0	0	786	0	1402
2035 Base (No-Build) Volumes	0	0	0	0	0	150	0	633	0	0	1007	0	1790
2035 Projected (Build) Volumes	0	0	0	0	0	178	0	666	0	0	1115	0	1959
Existing Condition HV%	0%	0%	0%	0%	0%	6%	0%	6%	0%	0%	3%	0%	0.95
Base Condition HV%	0%	0%	0%	0%	0%	6%	0%	6%	0%	0%	3%	0%	
Projected HV %	0%	0%	0%	0%	0%	10%	0%	6%	0%	0%	3%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Route 283 East Ramps

4

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	32		245					647	558	127	396		2005
Heavy Vehicles	7		18					30	15	15	25		110
Balancing			29										29
2025 Existing Volumes (Balanced)	32	0	274	0	0	0	0	647	558	127	396	0	2034
Base Growth (0.46% compounded for 5 yrs)	1	0	6	0	0	0	0	15	13	3	9	0	47
2030 Base (No-Build) Volumes - Growth Rate Only	33	0	280	0	0	0	0	662	571	130	405	0	2081
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			14					5	2		14		35
156 W. Harrisburg Ave Warehouse - Truck Trips			2					2	2		2		8
Pennmark Full Build-Out													0
Westbrooke Residential			3					10	12		4		29
Westmount Residential			4					12	14		7		37
1376 Campus Road Development			8					39	33		16		96
1925 Sheaffer Road Development			4					19	16		8		47
Mount Joy Town Center			46					43	44		84		217
Raffensperger Tract			3					12	10		5		30
Total Background Development Trips	0	0	84	0	0	0	0	142	133	0	140	0	499
2030 Base (No-Build) Volumes	33	0	364	0	0	0	0	804	704	130	545	0	2580
SITE TRIPS													
New Passenger Vehicle Trips	35							43		14	10		102
New Truck Trips	7									9			16
Total Site Trip Distribution	42	0	0	0	0	0	0	43	0	23	10	0	118
2030 Projected (Build) Volumes	75	0	364	0	0	0	0	847	704	153	555	0	2698
Base Growth (0.46% compounded for 10 yrs)	2	0	13	0	0	0	0	30	26	6	19	0	96
2035 Base (No-Build) Volumes - Growth Rate Only	34	0	287	0	0	0	0	677	584	133	415	0	2130
2035 Base (No-Build) Volumes	34	0	371	0	0	0	0	819	717	133	555	0	2629
2035 Projected (Build) Volumes	76	0	371	0	0	0	0	862	717	156	565	0	2747
Existing Condition HV%	22%	0%	7%	0%	0%	0%	0%	5%	3%	12%	6%	0%	0.89
Base Condition HV%	22%	0%	7%	0%	0%	0%	0%	5%	3%	12%	6%	0%	
Projected HV %	22%	0%	7%	0%	0%	0%	0%	5%	3%	16%	6%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	70		495					393	413	84	674		2129
Heavy Vehicles	5		6					24	13	2	16		66
Balancing			11										11
2025 Existing Volumes (Balanced)	70	0	506	0	0	0	0	393	413	84	674	0	2140
Base Growth (0.46% compounded for 5 yrs)	2	0	12	0	0	0	0	9	10	2	16	0	51
2030 Base (No-Build) Volumes - Growth Rate Only	72	0	518	0	0	0	0	402	423	86	690	0	2191
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			4					19	7		5		35
156 W. Harrisburg Ave Warehouse - Truck Trips			2					2	4		4		12
Pennmark Full Build-Out													0
Westbrooke Residential			8					7	5		14		34
Westmount Residential			9					8	10		16		43
1376 Campus Road Development			28					26	22		51		127
1925 Sheaffer Road Development			13					13	10		23		59
Mount Joy Town Center			49					76	77		92		294
Raffensperger Tract			8					8	6		16		38
Total Background Development Trips	0	0	121	0	0	0	0	159	141	0	221	0	642
2030 Base (No-Build) Volumes	72	0	639	0	0	0	0	561	564	86	911	0	2833
SITE TRIPS													
New Passenger Vehicle Trips	12							14		58	42		126
New Truck Trips	7									8			15
Total Site Trip Distribution	19	0	0	0	0	0	0	14	0	66	42	0	141
2030 Projected (Build) Volumes	91	0	639	0	0	0	0	575	564	152	953	0	2974
Base Growth (0.46% compounded for 10 yrs)	3	0	24	0	0	0	0	18	19	4	32	0	100
2035 Base (No-Build) Volumes - Growth Rate Only	73	0	530	0	0	0	0	411	432	88	706	0	2240
2035 Base (No-Build) Volumes	73	0	651	0	0	0	0	570	573	88	927	0	2882
2035 Projected (Build) Volumes	92	0	651	0	0	0	0	584	573	154	969	0	3023
Existing Condition HV%	7%	0%	1%	0%	0%	0%	0%	6%	3%	2%	2%	0%	0.98
Base Condition HV%	7%	0%	1%	0%	0%	0%	0%	6%	3%	2%	2%	0%	
Projected HV %	13%	0%	1%	0%	0%	0%	0%	6%	3%	7%	2%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Merts Drive

5

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	4		9				8	1189			653	17	1880
Heavy Vehicles			1					61			58	1	121
Balancing								12					12
2025 Existing Volumes (Balanced)	4	0	9	0	0	0	8	1201	0	0	653	17	1892
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	0	0	28	0	0	15	0	43
2030 Base (No-Build) Volumes - Growth Rate Only	4	0	9	0	0	0	8	1229	0	0	668	17	1935
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								7			28		35
156 W. Harrisburg Ave Warehouse - Truck Trips								4			4		8
Pennmark Full Build-Out													0
Westbrooke Residential								22			7		29
Westmount Residential								26			11		37
1376 Campus Road Development								72			24		96
1925 Sheaffer Road Development								35			12		47
Mount Joy Town Center								87			130		217
Raffensperger Tract								22			8		30
Total Background Development Trips	0	0	0	0	0	0	0	275	0	0	224	0	499
2030 Base (No-Build) Volumes	4	0	9	0	0	0	8	1504	0	0	892	17	2434
SITE TRIPS													
New Passenger Vehicle Trips								43			10		53
New Truck Trips													0
Total Site Trip Distribution	0	0	0	0	0	0	0	43	0	0	10	0	53
2030 Projected (Build) Volumes	4	0	9	0	0	0	8	1547	0	0	902	17	2487
Base Growth (0.46% compounded for 10 yrs)	0	0	0	0	0	0	0	56	0	0	31	1	88
2035 Base (No-Build) Volumes - Growth Rate Only	4	0	9	0	0	0	8	1257	0	0	684	18	1980
2035 Base (No-Build) Volumes	4	0	9	0	0	0	8	1532	0	0	908	18	2479
2035 Projected (Build) Volumes	4	0	9	0	0	0	8	1575	0	0	918	18	2532
Existing Condition HV%	0%	0%	11%	0%	0%	0%	0%	5%	0%	0%	9%	6%	0.93
Base Condition HV%	0%	0%	11%	0%	0%	0%	0%	5%	0%	0%	9%	6%	
Projected HV %	0%	0%	11%	0%	0%	0%	0%	5%	0%	0%	9%	6%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	15		12				4	770			1179	1	1981
Heavy Vehicles	2							34			41		77
Balancing								21					21
2025 Existing Volumes (Balanced)	15	0	12	0	0	0	4	791	0	0	1179	1	2002
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	0	0	18	0	0	27	0	45
2030 Base (No-Build) Volumes - Growth Rate Only	15	0	12	0	0	0	4	809	0	0	1206	1	2047
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								26			9		35
156 W. Harrisburg Ave Warehouse - Truck Trips								6			6		12
Pennmark Full Build-Out													0
Westbrooke Residential								12			22		34
Westmount Residential								18			25		43
1376 Campus Road Development								48			79		127
1925 Sheaffer Road Development								23			36		59
Mount Joy Town Center								153			141		294
Raffensperger Tract								14			24		38
Total Background Development Trips	0	0	0	0	0	0	0	300	0	0	342	0	642
2030 Base (No-Build) Volumes	15	0	12	0	0	0	4	1109	0	0	1548	1	2689
SITE TRIPS													
New Passenger Vehicle Trips								14			42		56
New Truck Trips													0
Total Site Trip Distribution	0	0	0	0	0	0	0	14	0	0	42	0	56
2030 Projected (Build) Volumes	15	0	12	0	0	0	4	1123	0	0	1590	1	2745
Base Growth (0.46% compounded for 10 yrs)	1	0	1	0	0	0	0	37	0	0	55	0	94
2035 Base (No-Build) Volumes - Growth Rate Only	16	0	13	0	0	0	4	828	0	0	1234	1	2096
2035 Base (No-Build) Volumes	16	0	13	0	0	0	4	1128	0	0	1576	1	2738
2035 Projected (Build) Volumes	16	0	13	0	0	0	4	1142	0	0	1618	1	2794
Existing Condition HV%	13%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	0.95
Base Condition HV%	13%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	
Projected HV %	13%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Schwanger Road

6

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	291	26	55	7	14	69	24	844	7	16	511	144	2008
Heavy Vehicles	1		4			2		56	3		54	5	125
Balancing													0
2025 Existing Volumes (Balanced)	291	26	55	7	14	69	24	844	7	16	511	144	2008
Base Growth (0.46% compounded for 5 yrs)	7	1	1	0	0	2	1	20	0	0	12	3	47
2030 Base (No-Build) Volumes - Growth Rate Only	298	27	56	7	14	71	25	864	7	16	523	147	2055
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			1					7			28		36
156 W. Harrisburg Ave Warehouse - Truck Trips								4			4		8
Pennmark Full Build-Out													0
Westbrooke Residential								22			7		29
Westmount Residential								26			11		37
1376 Campus Road Development	72	10	13		3		5					24	127
1925 Sheaffer Road Development	35	5	6		2		2					12	62
Mount Joy Town Center			16				10	87			130		243
Raffensperger Tract	22	3	4		1		1					8	39
Total Background Development Trips	129	18	40	0	6	0	18	146	0	0	180	44	581
2030 Base (No-Build) Volumes	427	45	96	7	20	71	43	1010	7	16	703	191	2636
SITE TRIPS													
New Passenger Vehicle Trips	6	6		5	1			37	18		9	1	83
New Truck Trips													0
Total Site Trip Distribution	6	6	0	5	1	0	0	37	18	0	9	1	83
2030 Projected (Build) Volumes	433	51	96	12	21	71	43	1047	25	16	712	192	2719
Base Growth (0.46% compounded for 10 yrs)	14	1	3	0	1	3	1	40	0	1	24	7	95
2035 Base (No-Build) Volumes - Growth Rate Only	305	27	58	7	15	72	25	884	7	17	535	151	2103
2035 Base (No-Build) Volumes	434	45	98	7	21	72	43	1030	7	17	715	195	2684
2035 Projected (Build) Volumes	440	51	98	12	22	72	43	1067	25	17	724	196	2767
Existing Condition HV%	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%	0.94
Base Condition HV%	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%	
Projected HV %	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	178	38	47	12	39	25	44	579	12	59	813	284	2130
Heavy Vehicles	2							29		2	30	3	66
Balancing													0
2025 Existing Volumes (Balanced)	178	38	47	12	39	25	44	579	12	59	813	284	2130
Base Growth (0.46% compounded for 5 yrs)	4	1	1	0	1	1	1	13	0	1	19	7	49
2030 Base (No-Build) Volumes - Growth Rate Only	182	39	48	12	40	26	45	592	12	60	832	291	2179
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips							1	26			9		36
156 W. Harrisburg Ave Warehouse - Truck Trips								6			6		12
Pennmark Full Build-Out													0
Westbrooke Residential								12			22		34
Westmount Residential								18			25		43
1376 Campus Road Development	48	6	9		10		15					79	167
1925 Sheaffer Road Development	23	3	4		5		7					36	78
Mount Joy Town Center			18				19	153			141		331
Raffensperger Tract	14	2	2		3		5					24	50
Background Trips To Compare Growth	85	11	33	0	18	0	46	153	0	0	141	139	626
Total Background Development Trips	85	11	33	0	18	0	47	215	0	0	203	139	751
2030 Base (No-Build) Volumes	267	50	81	12	58	26	92	807	12	60	1035	430	2930
SITE TRIPS													
New Passenger Vehicle Trips	2	2		18	6			12	6		37	5	88
New Truck Trips													0
Total Site Trip Distribution	2	2	0	18	6	0	0	12	6	0	37	5	88
2030 Projected (Build) Volumes	269	52	81	30	64	26	92	819	18	60	1072	435	3018
Base Growth (0.46% compounded for 10 yrs)	8	2	2	1	2	1	2	27	1	3	38	13	100
2035 Base (No-Build) Volumes - Growth Rate Only	186	40	49	13	41	26	46	606	13	62	851	297	2230
2035 Base (No-Build) Volumes	271	51	82	13	59	26	93	821	13	62	1054	436	2981
2035 Projected (Build) Volumes	273	53	82	31	65	26	93	833	19	62	1091	441	3069
Existing Condition HV%	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%	0.95
Base Condition HV%	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%	
Projected HV %	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%	

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8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Schwanger Road/Campus Road & Merts Drive/Schwanger Road

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	12	216	1	19	161	4	0	4	34	38	4	23	516
Heavy Vehicles	2	4		1	2				1	2		1	13
Balancing													0
2025 Existing Volumes (Balanced)	12	216	1	19	161	4	0	4	34	38	4	23	516
Base Growth (0.46% compounded for 5 yrs)	0	5	0	0	4	0	0	0	1	1	0	1	12
2030 Base (No-Build) Volumes - Growth Rate Only	12	221	1	19	165	4	0	4	35	39	4	24	528
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips		1											1
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development		95			32								127
1925 Sheaffer Road Development		46			16								62
Mount Joy Town Center		16			10								26
Raffensperger Tract				10					29				39
Total Background Development Trips	0	158	0	10	58	0	0	0	29	0	0	0	255
2030 Base (No-Build) Volumes	12	379	1	29	223	4	0	4	64	39	4	24	783
SITE TRIPS													
New Passenger Vehicle Trips		6			2								8
New Truck Trips													0
Total Site Trip Distribution	0	6	0	0	2	0	0	0	0	0	0	0	8
2030 Projected (Build) Volumes	12	385	1	29	225	4	0	4	64	39	4	24	791
Base Growth (0.46% compounded for 10 yrs)	1	10	0	1	8	0	0	0	2	2	0	1	25
2035 Base (No-Build) Volumes - Growth Rate Only	13	226	1	20	169	4	0	4	36	40	4	24	541
2035 Base (No-Build) Volumes	13	384	1	30	227	4	0	4	65	40	4	24	796
2035 Projected (Build) Volumes	13	390	1	30	229	4	0	4	65	40	4	24	804
Existing Condition HV%	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%	0.88
Base Condition HV%	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%	
Projected HV %	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	23	258	4	79	210	41	1	8	33	17	8	16	698
Heavy Vehicles		4		1	2	1		1	1	1	1	1	13
Balancing													0
2025 Existing Volumes (Balanced)	23	258	4	79	210	41	1	8	33	17	8	16	698
Base Growth (0.46% compounded for 5 yrs)	1	6	0	2	5	1	0	0	1	0	0	0	16
2030 Base (No-Build) Volumes - Growth Rate Only	24	264	4	81	215	42	1	8	34	17	8	16	714
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development		63			104								167
1925 Sheaffer Road Development		30			48								78
Mount Joy Town Center		18			19								37
Raffensperger Tract				32					18				50
Total Background Development Trips	0	111	0	32	171	0	0	0	18	0	0	0	332
2030 Base (No-Build) Volumes	24	375	4	113	386	42	1	8	52	17	8	16	1046
SITE TRIPS													
New Passenger Vehicle Trips		2			11								13
New Truck Trips													0
Total Site Trip Distribution	0	2	0	0	11	0	0	0	0	0	0	0	13
2030 Projected (Build) Volumes	24	377	4	113	397	42	1	8	52	17	8	16	1059
Base Growth (0.46% compounded for 10 yrs)	1	12	0	4	10	2	0	0	2	1	0	1	33
2035 Base (No-Build) Volumes - Growth Rate Only	24	270	4	83	220	43	1	8	35	18	8	17	731
2035 Base (No-Build) Volumes	24	381	4	115	391	43	1	8	53	18	8	17	1063
2035 Projected (Build) Volumes	24	383	4	115	402	43	1	8	53	18	8	17	1076
Existing Condition HV%	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%	0.90
Base Condition HV%	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%	
Projected HV %	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%	

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8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Mt. Pleasant Road (SR 4010) & Schwanger Road
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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		31	4	16	43		2		20				116
Heavy Vehicles		5		3	3				1				12
Balancing													0
2025 Existing Volumes (Balanced)	0	31	4	16	43	0	2	0	20	0	0	0	116
Base Growth (0.46% compounded for 5 yrs)	0	1	0	0	1	0	0	0	0	0	0	0	2
2030 Base (No-Build) Volumes - Growth Rate Only	0	32	4	16	44	0	2	0	20	0	0	0	118
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development				3					10				13
1925 Sheaffer Road Development				2					5				7
Mount Joy Town Center													0
Raffensperger Tract				1					3				4
Total Background Development Trips	0	0	0	6	0	0	0	0	18	0	0	0	24
2030 Base (No-Build) Volumes	0	32	4	22	44	0	2	0	38	0	0	0	142
SITE TRIPS													
New Passenger Vehicle Trips		2	6		9		24						41
New Truck Trips													0
Total Site Trip Distribution	0	2	6	0	9	0	24	0	0	0	0	0	41
2030 Projected (Build) Volumes	0	34	10	22	53	0	26	0	38	0	0	0	183
Base Growth (0.46% compounded for 10 yrs)	0	1	0	1	2	0	0	0	1	0	0	0	5
2035 Base (No-Build) Volumes - Growth Rate Only	0	32	4	17	45	0	2	0	21	0	0	0	121
2035 Base (No-Build) Volumes	0	32	4	23	45	0	2	0	39	0	0	0	145
2035 Projected (Build) Volumes	0	34	10	23	54	0	26	0	39	0	0	0	186
Existing Condition HV%	0%	16%	0%	19%	7%	0%	0%	0%	5%	0%	0%	0%	0.74
Base Condition HV%	0%	16%	0%	19%	7%	0%	0%	0%	5%	0%	0%	0%	
Projected HV %	0%	16%	0%	19%	7%	0%	0%	0%	5%	0%	0%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		69	6	26	30		4		23				158
Heavy Vehicles		6		4	1		1		1				13
Balancing													0
2025 Existing Volumes (Balanced)	0	69	6	26	30	0	4	0	23	0	0	0	158
Base Growth (0.46% compounded for 5 yrs)	0	2	0	1	1	0	0	0	1	0	0	0	5
2030 Base (No-Build) Volumes - Growth Rate Only	0	71	6	27	31	0	4	0	24	0	0	0	163
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development				10					6				16
1925 Sheaffer Road Development				5					3				8
Mount Joy Town Center													0
Raffensperger Tract				3					2				5
Total Background Development Trips	0	0	0	18	0	0	0	0	11	0	0	0	29
2030 Base (No-Build) Volumes	0	71	6	45	31	0	4	0	35	0	0	0	192
SITE TRIPS													
New Passenger Vehicle Trips		9	24		3		8						44
New Truck Trips													0
Total Site Trip Distribution	0	9	24	0	3	0	8	0	0	0	0	0	44
2030 Projected (Build) Volumes	0	80	30	45	34	0	12	0	35	0	0	0	236
Base Growth (0.46% compounded for 10 yrs)	0	3	0	1	1	0	0	0	1	0	0	0	6
2035 Base (No-Build) Volumes - Growth Rate Only	0	72	6	27	31	0	4	0	24	0	0	0	164
2035 Base (No-Build) Volumes	0	72	6	45	31	0	4	0	35	0	0	0	193
2035 Projected (Build) Volumes	0	81	30	45	34	0	12	0	35	0	0	0	237
Existing Condition HV%	0%	9%	0%	15%	3%	0%	25%	0%	4%	0%	0%	0%	0.88
Base Condition HV%	0%	9%	0%	15%	3%	0%	25%	0%	4%	0%	0%	0%	
Projected HV %	0%	9%	0%	15%	3%	0%	25%	0%	4%	0%	0%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Mt. Pleasant Road (SR 4010) & Proposed Eastern Driveway

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		36			48								84
Heavy Vehicles		9			7								16
Balancing													0
2025 Existing Volumes (Balanced)	0	36	0	0	48	0	0	0	0	0	0	0	84
Base Growth (0.46% compounded for 5 yrs)	0	1	0	0	1	0	0	0	0	0	0	0	2
2030 Base (No-Build) Volumes - Growth Rate Only	0	37	0	0	49	0	0	0	0	0	0	0	86
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	37	0	0	49	0	0	0	0	0	0	0	86
SITE TRIPS													
New Passenger Vehicle Trips	41					33				8		10	92
New Truck Trips													0
Total Site Trip Distribution	41	0	0	0	0	33	0	0	0	8	0	10	92
2030 Projected (Build) Volumes	41	37	0	0	49	33	0	0	0	8	0	10	178
Base Growth (0.46% compounded for 10 yrs)	0	2	0	0	2	0	0	0	0	0	0	0	4
2035 Base (No-Build) Volumes - Growth Rate Only	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Base (No-Build) Volumes	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Projected (Build) Volumes	41	38	0	0	50	33	0	0	0	8	0	10	180
Existing Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	25%	0%	0%	15%	2%	0%	0%	0%	2%	0%	2%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		75			34								109
Heavy Vehicles		6			5								11
Balancing													0
2025 Existing Volumes (Balanced)	0	75	0	0	34	0	0	0	0	0	0	0	109
Base Growth (0.46% compounded for 5 yrs)	0	2	0	0	1	0	0	0	0	0	0	0	3
2030 Base (No-Build) Volumes - Growth Rate Only	0	77	0	0	35	0	0	0	0	0	0	0	112
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	77	0	0	35	0	0	0	0	0	0	0	112
SITE TRIPS													
New Passenger Vehicle Trips	14					11				33		40	98
New Truck Trips													0
Total Site Trip Distribution	14	0	0	0	0	11	0	0	0	33	0	40	98
2030 Projected (Build) Volumes	14	77	0	0	35	11	0	0	0	33	0	40	210
Base Growth (0.46% compounded for 10 yrs)	0	4	0	0	2	0	0	0	0	0	0	0	6
2035 Base (No-Build) Volumes - Growth Rate Only	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Base (No-Build) Volumes	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Projected (Build) Volumes	14	79	0	0	36	11	0	0	0	33	0	40	213
Existing Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	8%	0%	0%	15%	2%	0%	0%	0%	2%	0%	2%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

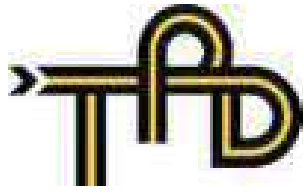
Mt. Pleasant Road (SR 4010) & Proposed Western Driveway/Proposed Archers Lane
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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		36			48								84
Heavy Vehicles		9			7								16
Balancing													0
2025 Existing Volumes (Balanced)	0	36	0	0	48	0	0	0	0	0	0	0	84
Base Growth (0.46% compounded for 5 yrs)	0	1	0	0	1	0	0	0	0	0	0	0	2
2030 Base (No-Build) Volumes - Growth Rate Only	0	37	0	0	49	0	0	0	0	0	0	0	86
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	37	0	0	49	0	0	0	0	0	0	0	86
SITE TRIPS													
New Passenger Vehicle Trips	74	22		5	5			37	19		9	17	188
New Truck Trips								16			16		32
Total Site Trip Distribution	74	22	0	5	5	0	0	53	19	0	25	17	220
2030 Projected (Build) Volumes	74	59	0	5	54	0	0	53	19	0	25	17	306
Base Growth (0.46% compounded for 10 yrs)	0	2	0	0	2	0	0	0	0	0	0	0	4
2035 Base (No-Build) Volumes - Growth Rate Only	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Base (No-Build) Volumes	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Projected (Build) Volumes	74	60	0	5	55	0	0	53	19	0	25	17	308
Existing Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	25%	0%	2%	15%	0%	0%	30%	2%	0%	64%	2%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		75			34								109
Heavy Vehicles		6			5								11
Balancing													0
2025 Existing Volumes (Balanced)	0	75	0	0	34	0	0	0	0	0	0	0	109
Base Growth (0.46% compounded for 5 yrs)	0	2	0	0	1	0	0	0	0	0	0	0	3
2030 Base (No-Build) Volumes - Growth Rate Only	0	77	0	0	35	0	0	0	0	0	0	0	112
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	77	0	0	35	0	0	0	0	0	0	0	112
SITE TRIPS													
New Passenger Vehicle Trips	24	8		18	22			12	6		37	73	200
New Truck Trips								16			14		30
Total Site Trip Distribution	24	8	0	18	22	0	0	28	6	0	51	73	230
2030 Projected (Build) Volumes	24	85	0	18	57	0	0	28	6	0	51	73	342
Base Growth (0.46% compounded for 10 yrs)	0	4	0	0	2	0	0	0	0	0	0	0	6
2035 Base (No-Build) Volumes - Growth Rate Only	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Base (No-Build) Volumes	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Projected (Build) Volumes	24	87	0	18	58	0	0	28	6	0	51	73	345
Existing Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	8%	0%	2%	15%	0%	0%	57%	2%	0%	27%	2%	



TIS + 20% - Alternative Analysis



TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Mt. Pleasant Road (SR 4010)

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts				42		6		140	15	21	216		440
Heavy Vehicles				7				27	4	5	17		60
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	42	0	6	0	140	15	21	216	0	440
Base Growth (0.46% compounded for 5 yrs)	0	0	0	1	0	0	0	3	0	0	5	0	9
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	43	0	6	0	143	15	21	221	0	449
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								2			6		8
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential								2			1		3
Westmount Residential								2			1		3
1376 Campus Road Development								14			5		19
1925 Sheaffer Road Development								7			2		9
Mount Joy Town Center								13			20		33
Raffensperger Tract								4			2		6
Total Background Development Trips	0	0	0	0	0	0	0	44	0	0	37	0	81
2030 Base (No-Build) Volumes	0	0	0	43	0	6	0	187	15	21	258	0	530
SITE TRIPS													
New Passenger Vehicle Trips				19		3			63	11			96
New Truck Trips													0
Total Site Trip Distribution	0	0	0	19	0	3	0	0	63	11	0	0	96
2030 Projected (Build) Volumes	0	0	0	62	0	9	0	187	78	32	258	0	626
Base Growth (0.46% compounded for 10 yrs)	0	0	0	2	0	0	0	7	1	1	10	0	21
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	44	0	6	0	147	16	22	226	0	461
2035 Base (No-Build) Volumes	0	0	0	44	0	6	0	191	16	22	263	0	542
2035 Projected (Build) Volumes	0	0	0	63	0	9	0	191	79	33	263	0	638
Existing Condition HV%	0%	0%	0%	17%	0%	0%	0%	19%	27%	24%	8%	0%	0.92
Base Condition HV%	0%	0%	0%	17%	0%	0%	0%	19%	27%	24%	8%	0%	
Projected HV %	0%	0%	0%	17%	0%	0%	0%	19%	27%	24%	8%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts				15		15		273	49	19	165		536
Heavy Vehicles				3		2		14	1		5		25
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	15	0	15	0	273	49	19	165	0	536
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	0	0	6	1	0	4	0	11
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	15	0	15	0	279	50	19	169	0	547
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								6			2		8
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential								1			2		3
Westmount Residential								2			3		5
1376 Campus Road Development								9			16		25
1925 Sheaffer Road Development								5			7		12
Mount Joy Town Center								22			21		43
Raffensperger Tract								3			5		8
Total Background Development Trips	0	0	0	0	0	0	0	48	0	0	56	0	104
2030 Base (No-Build) Volumes	0	0	0	15	0	15	0	327	50	19	225	0	651
SITE TRIPS													
New Passenger Vehicle Trips				64		11			18	3			96
New Truck Trips													0
Total Site Trip Distribution	0	0	0	64	0	11	0	0	18	3	0	0	96
2030 Projected (Build) Volumes	0	0	0	79	0	26	0	327	68	22	225	0	747
Base Growth (0.46% compounded for 10 yrs)	0	0	0	1	0	1	0	13	2	1	8	0	26
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	16	0	16	0	286	51	20	173	0	562
2035 Base (No-Build) Volumes	0	0	0	16	0	16	0	334	51	20	229	0	666
2035 Projected (Build) Volumes	0	0	0	80	0	27	0	334	69	23	229	0	762
Existing Condition HV%	0%	0%	0%	20%	0%	13%	0%	5%	2%	0%	3%	0%	0.94
Base Condition HV%	0%	0%	0%	20%	0%	13%	0%	5%	2%	0%	3%	0%	
Projected HV %	0%	0%	0%	20%	0%	13%	0%	5%	2%	0%	3%	0%	

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8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Steel Way

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts			320	12	4		529	156	56	7	177	69	1330
Heavy Vehicles			21	4	1		19	32	1		20	8	106
Balancing													0
2025 Existing Volumes (Balanced)	0	0	320	12	4	0	529	156	56	7	177	69	1330
Base Growth (0.46% compounded for 5 yrs)	0	0	7	0	0	0	12	4	1	0	4	2	30
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	327	12	4	0	541	160	57	7	181	71	1360
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			8				3	2			6		19
156 W. Harrisburg Ave Warehouse - Truck Trips			2				2						4
Pennmark Full Build-Out													0
Westbrooke Residential			3				8	2			1		14
Westmount Residential			6				10	2			1		19
1376 Campus Road Development			11				33	14			5		63
1925 Sheaffer Road Development			6				16	7			2		31
Mount Joy Town Center			64				30	13			20		127
Raffensperger Tract			3				10	4			2		19
Total Background Development Trips	0	0	103	0	0	0	112	44	0	0	37	0	296
2030 Base (No-Build) Volumes	0	0	430	12	4	0	653	204	57	7	218	71	1656
SITE TRIPS													
New Passenger Vehicle Trips				10	4			63	43		14	5	139
New Truck Trips				13	10				29				52
Total Site Trip Distribution	0	0	0	23	14	0	0	63	72	0	14	5	191
2030 Projected (Build) Volumes	0	0	430	35	18	0	653	267	129	7	232	76	1847
Base Growth (0.46% compounded for 10 yrs)	0	0	15	1	0	0	25	7	3	0	8	3	62
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	335	13	4	0	554	163	59	7	185	72	1392
2035 Base (No-Build) Volumes	0	0	438	13	4	0	666	207	59	7	222	72	1688
2035 Projected (Build) Volumes	0	0	438	36	18	0	666	270	131	7	236	77	1879
Existing Condition HV%	0%	0%	7%	33%	25%	0%	4%	21%	2%	0%	11%	12%	0.91
Base Condition HV%	0%	0%	7%	33%	25%	0%	4%	21%	2%	0%	11%	12%	
Projected HV %	0%	0%	7%	49%	61%	0%	4%	21%	23%	0%	11%	12%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts			566	54	14	22	275	292	21	2	127	34	1407
Heavy Vehicles			16	3			16	19	2		8	1	65
Balancing													0
2025 Existing Volumes (Balanced)	0	0	566	54	14	22	275	292	21	2	127	34	1407
Base Growth (0.46% compounded for 5 yrs)	0	0	13	1	0	1	6	7	0	0	3	1	32
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	579	55	14	23	281	299	21	2	130	35	1439
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			3				13	6			2		24
156 W. Harrisburg Ave Warehouse - Truck Trips			4				2						6
Pennmark Full Build-Out													0
Westbrooke Residential			12				6	1			2		21
Westmount Residential			13				6	2			3		24
1376 Campus Road Development			35				22	9			16		82
1925 Sheaffer Road Development			16				10	5			7		38
Mount Joy Town Center			71				54	22			21		168
Raffensperger Tract			11				6	3			5		25
Total Background Development Trips	0	0	165	0	0	0	119	48	0	0	56	0	388
2030 Base (No-Build) Volumes	0	0	744	55	14	23	400	347	21	2	186	35	1827
SITE TRIPS													
New Passenger Vehicle Trips				39	13			21	15		57	20	165
New Truck Trips				14	11				28				53
Total Site Trip Distribution	0	0	0	53	24	0	0	21	43	0	57	20	218
2030 Projected (Build) Volumes	0	0	744	108	38	23	400	368	64	2	243	55	2045
Base Growth (0.46% compounded for 10 yrs)	0	0	27	3	1	1	13	14	1	0	6	2	68
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	593	57	15	23	288	306	22	2	133	36	1475
2035 Base (No-Build) Volumes	0	0	758	57	15	23	407	354	22	2	189	36	1863
2035 Projected (Build) Volumes	0	0	758	110	39	23	407	375	65	2	246	56	2081
Existing Condition HV%	0%	0%	3%	6%	0%	0%	6%	7%	10%	0%	6%	3%	0.98
Base Condition HV%	0%	0%	3%	6%	0%	0%	6%	7%	10%	0%	6%	3%	
Projected HV %	0%	0%	3%	16%	29%	0%	6%	7%	47%	0%	6%	3%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Route 283 West Ramps

3

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts						103		640			511		1254
Heavy Vehicles						15		38			47		100
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	0	0	103	0	640	0	0	511	0	1254
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	2	0	15	0	0	12	0	29
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	105	0	655	0	0	523	0	1283
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								5			14		19
156 W. Harrisburg Ave Warehouse - Truck Trips								2			2		4
Pennmark Full Build-Out													0
Westbrooke Residential								10			4		14
Westmount Residential								12			7		19
1376 Campus Road Development								47			16		63
1925 Sheaffer Road Development								23			8		31
Mount Joy Town Center								43			84		127
Raffensperger Tract								14			5		19
Total Background Development Trips	0	0	0	0	0	0	0	156	0	0	140	0	296
2030 Base (No-Build) Volumes	0	0	0	0	0	105	0	811	0	0	663	0	1579
SITE TRIPS													
New Passenger Vehicle Trips						46		60			24		130
New Truck Trips						16		13			13		42
Total Site Trip Distribution	0	0	0	0	0	62	0	73	0	0	37	0	172
2030 Projected (Build) Volumes	0	0	0	0	0	167	0	884	0	0	700	0	1751
Base Growth (0.46% compounded for 10 yrs)	0	0	0	0	0	5	0	30	0	0	24	0	59
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	108	0	670	0	0	535	0	1313
2035 Base (No-Build) Volumes	0	0	0	0	0	108	0	826	0	0	675	0	1609
2035 Projected (Build) Volumes	0	0	0	0	0	170	0	899	0	0	712	0	1781
Existing Condition HV%	0%	0%	0%	0%	0%	15%	0%	6%	0%	0%	9%	0%	0.92
Base Condition HV%	0%	0%	0%	0%	0%	15%	0%	6%	0%	0%	9%	0%	
Projected HV %	0%	0%	0%	0%	0%	19%	0%	6%	0%	0%	9%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts						143		445			751		1339
Heavy Vehicles						8		28			22		58
Balancing													0
2025 Existing Volumes (Balanced)	0	0	0	0	0	143	0	445	0	0	751	0	1339
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	3	0	10	0	0	17	0	30
2030 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	146	0	455	0	0	768	0	1369
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								19			5		24
156 W. Harrisburg Ave Warehouse - Truck Trips								2			4		6
Pennmark Full Build-Out											0		0
Westbrooke Residential								7			14		21
Westmount Residential								8			16		24
1376 Campus Road Development								31			51		82
1925 Sheaffer Road Development								15			23		38
Mount Joy Town Center								76			92		168
Raffensperger Tract								9			16		25
Total Background Development Trips	0	0	0	0	0	0	0	167	0	0	221	0	388
2030 Base (No-Build) Volumes	0	0	0	0	0	146	0	622	0	0	989	0	1757
SITE TRIPS													
New Passenger Vehicle Trips						16		20			96		132
New Truck Trips						16		12			14		42
Total Site Trip Distribution	0	0	0	0	0	32	0	32	0	0	110	0	174
2030 Projected (Build) Volumes	0	0	0	0	0	178	0	654	0	0	1099	0	1931
Base Growth (0.46% compounded for 10 yrs)	0	0	0	0	0	7	0	21	0	0	35	0	63
2035 Base (No-Build) Volumes - Growth Rate Only	0	0	0	0	0	150	0	466	0	0	786	0	1402
2035 Base (No-Build) Volumes	0	0	0	0	0	150	0	633	0	0	1007	0	1790
2035 Projected (Build) Volumes	0	0	0	0	0	182	0	665	0	0	1117	0	1964
Existing Condition HV%	0%	0%	0%	0%	0%	6%	0%	6%	0%	0%	3%	0%	0.95
Base Condition HV%	0%	0%	0%	0%	0%	6%	0%	6%	0%	0%	3%	0%	
Projected HV %	0%	0%	0%	0%	0%	13%	0%	6%	0%	0%	4%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Route 283 East Ramps

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	32		245					647	558	127	396		2005
Heavy Vehicles	7		18					30	15	15	25		110
Balancing			29										29
2025 Existing Volumes (Balanced)	32	0	274	0	0	0	0	647	558	127	396	0	2034
Base Growth (0.46% compounded for 5 yrs)	1	0	6	0	0	0	0	15	13	3	9	0	47
2030 Base (No-Build) Volumes - Growth Rate Only	33	0	280	0	0	0	0	662	571	130	405	0	2081
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			14					5	2		14		35
156 W. Harrisburg Ave Warehouse - Truck Trips			2					2	2		2		8
Pennmark Full Build-Out													0
Westbrooke Residential			3					10	12		4		29
Westmount Residential			4					12	14		7		37
1376 Campus Road Development			8					39	33		16		96
1925 Sheaffer Road Development			4					19	16		8		47
Mount Joy Town Center			46					43	44		84		217
Raffensperger Tract			3					12	10		5		30
Total Background Development Trips	0	0	84	0	0	0	0	142	133	0	140	0	499
2030 Base (No-Build) Volumes	33	0	364	0	0	0	0	804	704	130	545	0	2580
SITE TRIPS													
New Passenger Vehicle Trips	27							33		14	10		84
New Truck Trips	13									13			26
Total Site Trip Distribution	40	0	0	0	0	0	0	33	0	27	10	0	110
2030 Projected (Build) Volumes	73	0	364	0	0	0	0	837	704	157	555	0	2690
Base Growth (0.46% compounded for 10 yrs)	2	0	13	0	0	0	0	30	26	6	19	0	96
2035 Base (No-Build) Volumes - Growth Rate Only	34	0	287	0	0	0	0	677	584	133	415	0	2130
2035 Base (No-Build) Volumes	34	0	371	0	0	0	0	819	717	133	555	0	2629
2035 Projected (Build) Volumes	74	0	371	0	0	0	0	852	717	160	565	0	2739
Existing Condition HV%	22%	0%	7%	0%	0%	0%	0%	5%	3%	12%	6%	0%	0.89
Base Condition HV%	22%	0%	7%	0%	0%	0%	0%	5%	3%	12%	6%	0%	
Projected HV %	27%	0%	7%	0%	0%	0%	0%	5%	3%	18%	6%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	70		495					393	413	84	674		2129
Heavy Vehicles	5		6					24	13	2	16		66
Balancing			11										11
2025 Existing Volumes (Balanced)	70	0	506	0	0	0	0	393	413	84	674	0	2140
Base Growth (0.46% compounded for 5 yrs)	2	0	12	0	0	0	0	9	10	2	16	0	51
2030 Base (No-Build) Volumes - Growth Rate Only	72	0	518	0	0	0	0	402	423	86	690	0	2191
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			4					19	7		5		35
156 W. Harrisburg Ave Warehouse - Truck Trips			2					2	4		4		12
Pennmark Full Build-Out													0
Westbrooke Residential			8					7	5		14		34
Westmount Residential			9					8	10		16		43
1376 Campus Road Development			28					26	22		51		127
1925 Sheaffer Road Development			13					13	10		23		59
Mount Joy Town Center			49					76	77		92		294
Raffensperger Tract			8					8	6		16		38
Total Background Development Trips	0	0	121	0	0	0	0	159	141	0	221	0	642
2030 Base (No-Build) Volumes	72	0	639	0	0	0	0	561	564	86	911	0	2833
SITE TRIPS													
New Passenger Vehicle Trips	9							11		56	40		116
New Truck Trips	12									14			26
Total Site Trip Distribution	21	0	0	0	0	0	0	11	0	70	40	0	142
2030 Projected (Build) Volumes	93	0	639	0	0	0	0	572	564	156	951	0	2975
Base Growth (0.46% compounded for 10 yrs)	3	0	24	0	0	0	0	18	19	4	32	0	100
2035 Base (No-Build) Volumes - Growth Rate Only	73	0	530	0	0	0	0	411	432	88	706	0	2240
2035 Base (No-Build) Volumes	73	0	651	0	0	0	0	570	573	88	927	0	2882
2035 Projected (Build) Volumes	94	0	651	0	0	0	0	581	573	158	967	0	3024
Existing Condition HV%	7%	0%	1%	0%	0%	0%	0%	6%	3%	2%	2%	0%	0.98
Base Condition HV%	7%	0%	1%	0%	0%	0%	0%	6%	3%	2%	2%	0%	
Projected HV %	18%	0%	1%	0%	0%	0%	0%	6%	3%	10%	2%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Merts Drive

5

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	4		9				8	1189			653	17	1880
Heavy Vehicles			1					61			58	1	121
Balancing								12					12
2025 Existing Volumes (Balanced)	4	0	9	0	0	0	8	1201	0	0	653	17	1892
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	0	0	28	0	0	15	0	43
2030 Base (No-Build) Volumes - Growth Rate Only	4	0	9	0	0	0	8	1229	0	0	668	17	1935
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								7			28		35
156 W. Harrisburg Ave Warehouse - Truck Trips								4			4		8
Pennmark Full Build-Out													0
Westbrooke Residential								22			7		29
Westmount Residential								26			11		37
1376 Campus Road Development								72			24		96
1925 Sheaffer Road Development								35			12		47
Mount Joy Town Center								87			130		217
Raffensperger Tract								22			8		30
Total Background Development Trips	0	0	0	0	0	0	0	275	0	0	224	0	499
2030 Base (No-Build) Volumes	4	0	9	0	0	0	8	1504	0	0	892	17	2434
SITE TRIPS													
New Passenger Vehicle Trips								33			10		43
New Truck Trips													0
Total Site Trip Distribution	0	0	0	0	0	0	0	33	0	0	10	0	43
2030 Projected (Build) Volumes	4	0	9	0	0	0	8	1537	0	0	902	17	2477
Base Growth (0.46% compounded for 10 yrs)	0	0	0	0	0	0	0	56	0	0	31	1	88
2035 Base (No-Build) Volumes - Growth Rate Only	4	0	9	0	0	0	8	1257	0	0	684	18	1980
2035 Base (No-Build) Volumes	4	0	9	0	0	0	8	1532	0	0	908	18	2479
2035 Projected (Build) Volumes	4	0	9	0	0	0	8	1565	0	0	918	18	2522
Existing Condition HV%	0%	0%	11%	0%	0%	0%	0%	5%	0%	0%	9%	6%	0.93
Base Condition HV%	0%	0%	11%	0%	0%	0%	0%	5%	0%	0%	9%	6%	
Projected HV %	0%	0%	11%	0%	0%	0%	0%	5%	0%	0%	9%	6%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	15		12				4	770			1179	1	1981
Heavy Vehicles	2							34			41		77
Balancing								21					21
2025 Existing Volumes (Balanced)	15	0	12	0	0	0	4	791	0	0	1179	1	2002
Base Growth (0.46% compounded for 5 yrs)	0	0	0	0	0	0	0	18	0	0	27	0	45
2030 Base (No-Build) Volumes - Growth Rate Only	15	0	12	0	0	0	4	809	0	0	1206	1	2047
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips								26			9		35
156 W. Harrisburg Ave Warehouse - Truck Trips								6			6		12
Pennmark Full Build-Out													0
Westbrooke Residential								12			22		34
Westmount Residential								18			25		43
1376 Campus Road Development								48			79		127
1925 Sheaffer Road Development								23			36		59
Mount Joy Town Center								153			141		294
Raffensperger Tract								14			24		38
Total Background Development Trips	0	0	0	0	0	0	0	300	0	0	342	0	642
2030 Base (No-Build) Volumes	15	0	12	0	0	0	4	1109	0	0	1548	1	2689
SITE TRIPS													
New Passenger Vehicle Trips								11			40		51
New Truck Trips													0
Total Site Trip Distribution	0	0	0	0	0	0	0	11	0	0	40	0	51
2030 Projected (Build) Volumes	15	0	12	0	0	0	4	1120	0	0	1588	1	2740
Base Growth (0.46% compounded for 10 yrs)	1	0	1	0	0	0	0	37	0	0	55	0	94
2035 Base (No-Build) Volumes - Growth Rate Only	16	0	13	0	0	0	4	828	0	0	1234	1	2096
2035 Base (No-Build) Volumes	16	0	13	0	0	0	4	1128	0	0	1576	1	2738
2035 Projected (Build) Volumes	16	0	13	0	0	0	4	1139	0	0	1616	1	2789
Existing Condition HV%	13%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	0.95
Base Condition HV%	13%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	
Projected HV %	13%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Cloverleaf Road (SR 4025) & Schwanger Road

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	291	26	55	7	14	69	24	844	7	16	511	144	2008
Heavy Vehicles	1		4			2		56	3		54	5	125
Balancing													0
2025 Existing Volumes (Balanced)	291	26	55	7	14	69	24	844	7	16	511	144	2008
Base Growth (0.46% compounded for 5 yrs)	7	1	1	0	0	2	1	20	0	0	12	3	47
2030 Base (No-Build) Volumes - Growth Rate Only	298	27	56	7	14	71	25	864	7	16	523	147	2055
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips			1					7			28		36
156 W. Harrisburg Ave Warehouse - Truck Trips								4			4		8
Pennmark Full Build-Out													0
Westbrooke Residential								22			7		29
Westmount Residential								26			11		37
1376 Campus Road Development	72	10	13		3		5					24	127
1925 Sheaffer Road Development	35	5	6		2		2					12	62
Mount Joy Town Center			16				10	87			130		243
Raffensperger Tract	22	3	4		1		1					8	39
Total Background Development Trips	129	18	40	0	6	0	18	146	0	0	180	44	581
2030 Base (No-Build) Volumes	427	45	96	7	20	71	43	1010	7	16	703	191	2636
SITE TRIPS													
New Passenger Vehicle Trips	4	4		5	1			29	15		9	1	68
New Truck Trips													0
Total Site Trip Distribution	4	4	0	5	1	0	0	29	15	0	9	1	68
2030 Projected (Build) Volumes	431	49	96	12	21	71	43	1039	22	16	712	192	2704
Base Growth (0.46% compounded for 10 yrs)	14	1	3	0	1	3	1	40	0	1	24	7	95
2035 Base (No-Build) Volumes - Growth Rate Only	305	27	58	7	15	72	25	884	7	17	535	151	2103
2035 Base (No-Build) Volumes	434	45	98	7	21	72	43	1030	7	17	715	195	2684
2035 Projected (Build) Volumes	438	49	98	12	22	72	43	1059	22	17	724	196	2752
Existing Condition HV%	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%	0.94
Base Condition HV%	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%	
Projected HV %	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	178	38	47	12	39	25	44	579	12	59	813	284	2130
Heavy Vehicles	2							29		2	30	3	66
Balancing													0
2025 Existing Volumes (Balanced)	178	38	47	12	39	25	44	579	12	59	813	284	2130
Base Growth (0.46% compounded for 5 yrs)	4	1	1	0	1	1	1	13	0	1	19	7	49
2030 Base (No-Build) Volumes - Growth Rate Only	182	39	48	12	40	26	45	592	12	60	832	291	2179
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips							1	26			9		36
156 W. Harrisburg Ave Warehouse - Truck Trips								6			6		12
Pennmark Full Build-Out													0
Westbrooke Residential								12			22		34
Westmount Residential								18			25		43
1376 Campus Road Development	48	6	9		10		15					79	167
1925 Sheaffer Road Development	23	3	4		5		7					36	78
Mount Joy Town Center			18				19	153			141		331
Raffensperger Tract	14	2	2		3		5					24	50
Background Trips To Compare Growth	85	11	33	0	18	0	46	153	0	0	141	139	626
Total Background Development Trips	85	11	33	0	18	0	47	215	0	0	203	139	751
2030 Base (No-Build) Volumes	267	50	81	12	58	26	92	807	12	60	1035	430	2930
SITE TRIPS													
New Passenger Vehicle Trips	1	1		17	5			10	5		35	5	79
New Truck Trips													0
Total Site Trip Distribution	1	1	0	17	5	0	0	10	5	0	35	5	79
2030 Projected (Build) Volumes	268	51	81	29	63	26	92	817	17	60	1070	435	3009
Base Growth (0.46% compounded for 10 yrs)	8	2	2	1	2	1	2	27	1	3	38	13	100
2035 Base (No-Build) Volumes - Growth Rate Only	186	40	49	13	41	26	46	606	13	62	861	297	2230
2035 Base (No-Build) Volumes	271	51	82	13	59	26	93	821	13	62	1054	436	2981
2035 Projected (Build) Volumes	272	52	82	30	64	26	93	831	18	62	1089	441	3060
Existing Condition HV%	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%	0.95
Base Condition HV%	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%	
Projected HV %	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Schwanger Road/Campus Road & Merts Drive/Schwanger Road

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	12	216	1	19	161	4	0	4	34	38	4	23	516
Heavy Vehicles	2	4		1	2				1	2		1	13
Balancing													0
2025 Existing Volumes (Balanced)	12	216	1	19	161	4	0	4	34	38	4	23	516
Base Growth (0.46% compounded for 5 yrs)	0	5	0	0	4	0	0	0	1	1	0	1	12
2030 Base (No-Build) Volumes - Growth Rate Only	12	221	1	19	165	4	0	4	35	39	4	24	528
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips		1											1
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development		95			32								127
1925 Sheaffer Road Development		46			16								62
Mount Joy Town Center		16			10								26
Raffensperger Tract				10					29				39
Total Background Development Trips	0	158	0	10	58	0	0	0	29	0	0	0	255
2030 Base (No-Build) Volumes	12	379	1	29	223	4	0	4	64	39	4	24	783
SITE TRIPS													
New Passenger Vehicle Trips		8			2								10
New Truck Trips													0
Total Site Trip Distribution	0	8	0	0	2	0	0	0	0	0	0	0	10
2030 Projected (Build) Volumes	12	387	1	29	225	4	0	4	64	39	4	24	793
Base Growth (0.46% compounded for 10 yrs)	1	10	0	1	8	0	0	0	2	2	0	1	25
2035 Base (No-Build) Volumes - Growth Rate Only	13	226	1	20	169	4	0	4	36	40	4	24	541
2035 Base (No-Build) Volumes	13	384	1	30	227	4	0	4	65	40	4	24	796
2035 Projected (Build) Volumes	13	392	1	30	229	4	0	4	65	40	4	24	806
Existing Condition HV%	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%	0.88
Base Condition HV%	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%	
Projected HV %	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts	23	258	4	79	210	41	1	8	33	17	8	16	698
Heavy Vehicles		4		1	2	1		1	1	1	1	1	13
Balancing													0
2025 Existing Volumes (Balanced)	23	258	4	79	210	41	1	8	33	17	8	16	698
Base Growth (0.46% compounded for 5 yrs)	1	6	0	2	5	1	0	0	1	0	0	0	16
2030 Base (No-Build) Volumes - Growth Rate Only	24	264	4	81	215	42	1	8	34	17	8	16	714
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development		63			104								167
1925 Sheaffer Road Development		30			48								78
Mount Joy Town Center		18			19								37
Raffensperger Tract				32					18				50
Total Background Development Trips	0	111	0	32	171	0	0	0	18	0	0	0	332
2030 Base (No-Build) Volumes	24	375	4	113	386	42	1	8	52	17	8	16	1046
SITE TRIPS													
New Passenger Vehicle Trips		2			10								12
New Truck Trips													0
Total Site Trip Distribution	0	2	0	0	10	0	0	0	0	0	0	0	12
2030 Projected (Build) Volumes	24	377	4	113	396	42	1	8	52	17	8	16	1058
Base Growth (0.46% compounded for 10 yrs)	1	12	0	4	10	2	0	0	2	1	0	1	33
2035 Base (No-Build) Volumes - Growth Rate Only	24	270	4	83	220	43	1	8	35	18	8	17	731
2035 Base (No-Build) Volumes	24	381	4	115	391	43	1	8	53	18	8	17	1063
2035 Projected (Build) Volumes	24	383	4	115	401	43	1	8	53	18	8	17	1075
Existing Condition HV%	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%	0.90
Base Condition HV%	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%	
Projected HV %	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Mt. Pleasant Road (SR 4010) & Schwanger Road
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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		31	4	16	43		2		20				116
Heavy Vehicles		5		3	3				1				12
Balancing													0
2025 Existing Volumes (Balanced)	0	31	4	16	43	0	2	0	20	0	0	0	116
Base Growth (0.46% compounded for 5 yrs)	0	1	0	0	1	0	0	0	0	0	0	0	2
2030 Base (No-Build) Volumes - Growth Rate Only	0	32	4	16	44	0	2	0	20	0	0	0	118
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development				3					10				13
1925 Sheaffer Road Development				2					5				7
Mount Joy Town Center													0
Raffensperger Tract				1					3				4
Total Background Development Trips	0	0	0	6	0	0	0	0	18	0	0	0	24
2030 Base (No-Build) Volumes	0	32	4	22	44	0	2	0	38	0	0	0	142
SITE TRIPS													
New Passenger Vehicle Trips		2	6		7		19						34
New Truck Trips													0
Total Site Trip Distribution	0	2	6	0	7	0	19	0	0	0	0	0	34
2030 Projected (Build) Volumes	0	34	10	22	51	0	21	0	38	0	0	0	176
Base Growth (0.46% compounded for 10 yrs)	0	1	0	1	2	0	0	0	1	0	0	0	5
2035 Base (No-Build) Volumes - Growth Rate Only	0	32	4	17	45	0	2	0	21	0	0	0	121
2035 Base (No-Build) Volumes	0	32	4	23	45	0	2	0	39	0	0	0	145
2035 Projected (Build) Volumes	0	34	10	23	52	0	21	0	39	0	0	0	179
Existing Condition HV%	0%	16%	0%	19%	7%	0%	0%	0%	5%	0%	0%	0%	0.74
Base Condition HV%	0%	16%	0%	19%	7%	0%	0%	0%	5%	0%	0%	0%	
Projected HV %	0%	16%	0%	19%	7%	0%	0%	0%	5%	0%	0%	0%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		69	6	26	30		4		23				158
Heavy Vehicles		6		4	1		1		1				13
Balancing													0
2025 Existing Volumes (Balanced)	0	69	6	26	30	0	4	0	23	0	0	0	158
Base Growth (0.46% compounded for 5 yrs)	0	2	0	1	1	0	0	0	1	0	0	0	5
2030 Base (No-Build) Volumes - Growth Rate Only	0	71	6	27	31	0	4	0	24	0	0	0	163
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development				10					6				16
1925 Sheaffer Road Development				5					3				8
Mount Joy Town Center													0
Raffensperger Tract				3					2				5
Total Background Development Trips	0	0	0	18	0	0	0	0	11	0	0	0	29
2030 Base (No-Build) Volumes	0	71	6	45	31	0	4	0	35	0	0	0	192
SITE TRIPS													
New Passenger Vehicle Trips		9	22		3		6						40
New Truck Trips													0
Total Site Trip Distribution	0	9	22	0	3	0	6	0	0	0	0	0	40
2030 Projected (Build) Volumes	0	80	28	45	34	0	10	0	35	0	0	0	232
Base Growth (0.46% compounded for 10 yrs)	0	3	0	1	1	0	0	0	1	0	0	0	6
2035 Base (No-Build) Volumes - Growth Rate Only	0	72	6	27	31	0	4	0	24	0	0	0	164
2035 Base (No-Build) Volumes	0	72	6	45	31	0	4	0	35	0	0	0	193
2035 Projected (Build) Volumes	0	81	28	45	34	0	10	0	35	0	0	0	233
Existing Condition HV%	0%	9%	0%	15%	3%	0%	25%	0%	4%	0%	0%	0%	0.88
Base Condition HV%	0%	9%	0%	15%	3%	0%	25%	0%	4%	0%	0%	0%	
Projected HV %	0%	9%	0%	15%	3%	0%	25%	0%	4%	0%	0%	0%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

Mt. Pleasant Road (SR 4010) & Proposed Eastern Driveway

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Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		36			48								84
Heavy Vehicles		9			7								16
Balancing													0
2025 Existing Volumes (Balanced)	0	36	0	0	48	0	0	0	0	0	0	0	84
Base Growth (0.46% compounded for 5 yrs)	0	1	0	0	1	0	0	0	0	0	0	0	2
2030 Base (No-Build) Volumes - Growth Rate Only	0	37	0	0	49	0	0	0	0	0	0	0	86
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	37	0	0	49	0	0	0	0	0	0	0	86
SITE TRIPS													
New Passenger Vehicle Trips	31					26				8		10	75
New Truck Trips													0
Total Site Trip Distribution	31	0	0	0	0	26	0	0	0	8	0	10	75
2030 Projected (Build) Volumes	31	37	0	0	49	26	0	0	0	8	0	10	161
Base Growth (0.46% compounded for 10 yrs)	0	2	0	0	2	0	0	0	0	0	0	0	4
2035 Base (No-Build) Volumes - Growth Rate Only	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Base (No-Build) Volumes	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Projected (Build) Volumes	31	38	0	0	50	26	0	0	0	8	0	10	163
Existing Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	25%	0%	0%	15%	2%	0%	0%	0%	2%	0%	2%	

Time Period: Weekday P.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		75			34								109
Heavy Vehicles		6			5								11
Balancing													0
2025 Existing Volumes (Balanced)	0	75	0	0	34	0	0	0	0	0	0	0	109
Base Growth (0.46% compounded for 5 yrs)	0	2	0	0	1	0	0	0	0	0	0	0	3
2030 Base (No-Build) Volumes - Growth Rate Only	0	77	0	0	35	0	0	0	0	0	0	0	112
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	77	0	0	35	0	0	0	0	0	0	0	112
SITE TRIPS													
New Passenger Vehicle Trips	10					9				31		38	88
New Truck Trips													0
Total Site Trip Distribution	10	0	0	0	0	9	0	0	0	31	0	38	88
2030 Projected (Build) Volumes	10	77	0	0	35	9	0	0	0	31	0	38	200
Base Growth (0.46% compounded for 10 yrs)	0	4	0	0	2	0	0	0	0	0	0	0	6
2035 Base (No-Build) Volumes - Growth Rate Only	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Base (No-Build) Volumes	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Projected (Build) Volumes	10	79	0	0	36	9	0	0	0	31	0	38	203
Existing Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	8%	0%	0%	15%	2%	0%	0%	0%	2%	0%	2%	

TPD# ETHD.00004
8/20/2026
Traffic Volumes Worksheet
Intersection:
Synchro Node:

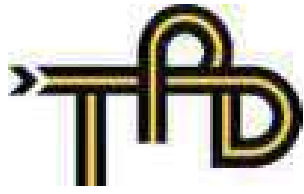
Mt. Pleasant Road (SR 4010) & Proposed Western Driveway/Proposed Archers Lane
10

Time Period: Weekday A.M. Peak Hour ADJ

	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		36			48								84
Heavy Vehicles		9			7								16
Balancing													0
2025 Existing Volumes (Balanced)	0	36	0	0	48	0	0	0	0	0	0	0	84
Base Growth (0.46% compounded for 5 yrs)	0	1	0	0	1	0	0	0	0	0	0	0	2
2030 Base (No-Build) Volumes - Growth Rate Only	0	37	0	0	49	0	0	0	0	0	0	0	86
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	37	0	0	49	0	0	0	0	0	0	0	86
SITE TRIPS													
New Passenger Vehicle Trips	57	17		5	5			29	14		9	17	153
New Truck Trips								29			23		52
Total Site Trip Distribution	57	17	0	5	5	0	0	58	14	0	32	17	205
2030 Projected (Build) Volumes	57	54	0	5	54	0	0	58	14	0	32	17	291
Base Growth (0.46% compounded for 10 yrs)	0	2	0	0	2	0	0	0	0	0	0	0	4
2035 Base (No-Build) Volumes - Growth Rate Only	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Base (No-Build) Volumes	0	38	0	0	50	0	0	0	0	0	0	0	88
2035 Projected (Build) Volumes	57	55	0	5	55	0	0	58	14	0	32	17	293
Existing Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	25%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	25%	0%	2%	15%	0%	0%	50%	2%	0%	72%	2%	

Time Period: Weekday P.M. Peak Hour ADJ

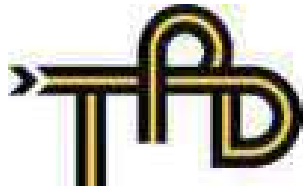
	Eastbound			Westbound			Northbound			Southbound			Intersection
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Volume
2025 Existing Counts		75			34								109
Heavy Vehicles		6			5								11
Balancing													0
2025 Existing Volumes (Balanced)	0	75	0	0	34	0	0	0	0	0	0	0	109
Base Growth (0.46% compounded for 5 yrs)	0	2	0	0	1	0	0	0	0	0	0	0	3
2030 Base (No-Build) Volumes - Growth Rate Only	0	77	0	0	35	0	0	0	0	0	0	0	112
BACKGROUND DEVELOPMENTS													
156 W. Harrisburg Ave Warehouse - Car Trips													0
156 W. Harrisburg Ave Warehouse - Truck Trips													0
Pennmark Full Build-Out													0
Westbrooke Residential													0
Westmount Residential													0
1376 Campus Road Development													0
1925 Sheaffer Road Development													0
Mount Joy Town Center													0
Raffensperger Tract													0
Total Background Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
2030 Base (No-Build) Volumes	0	77	0	0	35	0	0	0	0	0	0	0	112
SITE TRIPS													
New Passenger Vehicle Trips	19	5		17	21			10	5		35	70	182
New Truck Trips								28			25		53
Total Site Trip Distribution	19	5	0	17	21	0	0	38	5	0	60	70	235
2030 Projected (Build) Volumes	19	82	0	17	56	0	0	38	5	0	60	70	347
Base Growth (0.46% compounded for 10 yrs)	0	4	0	0	2	0	0	0	0	0	0	0	6
2035 Base (No-Build) Volumes - Growth Rate Only	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Base (No-Build) Volumes	0	79	0	0	36	0	0	0	0	0	0	0	115
2035 Projected (Build) Volumes	19	84	0	17	57	0	0	38	5	0	60	70	350
Existing Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0.90
Base Condition HV%	0%	8%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	
Projected HV %	2%	8%	0%	2%	15%	0%	0%	74%	2%	0%	42%	2%	



Synchro LOS/Queue

Alternative Scenarios





ITE 150 Unfiltered - Alternative Analysis



1: Cloverleaf Rd. (SR 4025) & Mt. Pleasant Rd. (SR 4010)

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	63	9	191	76	33	263
Future Volume (vph)	63	9	191	76	33	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		1%			-1%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	40		40			35
Link Distance (ft)	1309		1084			881
Travel Time (s)	22.3		18.5			17.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	17%	0%	19%	27%	24%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	78	0	291	0	0	322
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	9	191	76	33	263
Future Vol, veh/h	63	9	191	76	33	263
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	1	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	17	0	19	27	24	8
Mvmt Flow	68	10	208	83	36	286
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	607	249	0	0	290	0
Stage 1	249	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Critical Hdwy	6.37	6.1	-	-	4.5	-
Critical Hdwy Stg 1	5.37	-	-	-	-	-
Critical Hdwy Stg 2	5.37	-	-	-	-	-
Follow-up Hdwy	3.2	3.1	-	-	3.2	-
Pot Cap-1 Maneuver	498	846	-	-	888	-
Stage 1	865	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	474	846	-	-	888	-
Mov Cap-2 Maneuver	474	-	-	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Approach	WB	NB	SB			
HCM Ctrl Dly, s/v	13.51	0	1.03			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	501	201	-	
HCM Lane V/C Ratio	-	-	0.156	0.04	-	
HCM Ctrl Dly (s/v)	-	-	13.5	9.2	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	438	34	15	0	666	267	124	7	236	77
Future Volume (vph)	0	0	438	34	15	0	666	267	124	7	236	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	14	14	14	12	11	11	11	11	12
Grade (%)		0%			-5%			2%			-2%	
Storage Length (ft)	0		0	0		0	700		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Satd. Flow (prot)	0	0	1455	0	1271	0	1628	1359	0	1670	1521	0
Flt Permitted					0.966		0.276			0.513		
Satd. Flow (perm)	0	0	1455	0	1271	0	473	1359	0	902	1521	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			340					88			21	
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		523			1042			715			1084	
Travel Time (s)		14.3			23.7			12.2			18.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	7%	45%	60%	0%	4%	21%	20%	0%	11%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	481	0	53	0	732	429	0	8	344	0
Turn Type			pm+ov	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases			5		8		5	2			6	
Permitted Phases			4	8			2			6		
Detector Phase			5	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)			5.0	5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)			11.0	11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)			38.0	14.0	14.0		38.0	66.0		28.0	28.0	
Total Split (%)			47.5%	17.5%	17.5%		47.5%	82.5%		35.0%	35.0%	
Maximum Green (s)			32.0	8.0	8.0		32.0	60.0		22.0	22.0	
Yellow Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)			2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)			-1.0		-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)			5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode			None	None	None		None	Min		Min	Min	
Walk Time (s)												

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.0
Total Split (s)	14.0
Total Split (%)	18%
Maximum Green (s)	8.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)			38.8		8.4		55.9	58.7		19.0	19.0	
Actuated g/C Ratio			0.57		0.12		0.82	0.86		0.28	0.28	
v/c Ratio			0.49		0.34		0.80	0.36		0.03	0.79	
Control Delay (s/veh)			4.6		38.8		18.1	3.0		21.1	37.7	
Queue Delay			0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)			4.6		38.8		18.1	3.0		21.1	37.7	
LOS			A		D		B	A		C	D	
Approach Delay (s/veh)		4.6			38.8			12.6			37.3	
Approach LOS		A			D			B			D	
Queue Length 50th (ft)			31		37		219	48		3	160	
Queue Length 95th (ft)			85		89		#463	87		13	#300	
Internal Link Dist (ft)		443			962			635			1004	
Turn Bay Length (ft)							700			100		
Base Capacity (vph)			1028		177		978	1178		322	556	
Starvation Cap Reductn			0		0		0	0		0	0	
Spillback Cap Reductn			0		0		0	0		0	0	
Storage Cap Reductn			0		0		0	0		0	0	
Reduced v/c Ratio			0.47		0.30		0.75	0.36		0.02	0.62	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 68.4

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay (s/veh): 15.6

Intersection LOS: B

Intersection Capacity Utilization 73.7%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

#2  Ø2	#2  Ø4
66 s	14 s
#2  Ø5	#2  Ø6
38 s	28 s
#2  Ø8	
	14 s

Lane Group	Ø4
Flash Don't Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

HCM 7th Edition methodology does not support Non-NEMA phasing.

2035 Projected (Build) Conditions
 3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: A.M. Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	165	894	0	0	710
Future Volume (vph)	0	165	894	0	0	710
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	10	11	11	11	11
Grade (%)	-2%		2%			-2%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	25		40			40
Link Distance (ft)	831		554			715
Travel Time (s)	22.7		9.4			12.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	17%	6%	0%	0%	9%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	179	972	0	0	772
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2035 Projected (Build) Conditions
 3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: A.M. Peak Hour

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	165	894	0	0	710
Future Vol, veh/h	0	165	894	0	0	710
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	2	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	17	6	0	0	9
Mvmt Flow	0	179	972	0	0	772
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	972	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	2.6	-	-	-	-
Pot Cap-1 Maneuver	0	500	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	500	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	16.18	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	-		500			
HCM Lane V/C Ratio	-		0.359			
HCM Ctrl Dly (s/v)	-		16.2			
HCM Lane LOS	-		C			
HCM 95th %tile Q(veh)	-		1.6			

2035 Projected (Build) Conditions
4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	0	371	0	0	0	0	850	717	158	565	0
Future Volume (vph)	71	0	371	0	0	0	0	850	717	158	565	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	14	12	12	12	11	11	11	11	12	12
Grade (%)		-1%			0%			-1%			-2%	
Storage Length (ft)	0		350	0		0	0		75	200		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25		100	25		25	25		25	100		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		906			759			2459			554	
Travel Time (s)		24.7			20.7			41.9			9.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	26%	0%	7%	0%	0%	0%	0%	5%	3%	17%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	417	0	0	0	0	955	806	178	635	0
Turn Type	Prot	NA	Perm					NA	Perm	Perm	NA	
Protected Phases	7	4						2			6	
Permitted Phases			4						2	6		
Detector Phase	7	4	4					2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	10.0	10.0	
Minimum Split (s)	11.0	11.0	11.0					16.0	16.0	16.0	16.0	
Total Split (s)	14.0	14.0	14.0					46.0	46.0	46.0	46.0	
Total Split (%)	23.3%	23.3%	23.3%					76.7%	76.7%	76.7%	76.7%	
Maximum Green (s)	8.0	8.0	8.0					40.0	40.0	40.0	40.0	
Yellow Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0					-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)		5.0	5.0					5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Recall Mode	None	None	None					Min	Min	Min	Min	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio		0.37	0.81					0.85	0.68	0.97	0.55	
Control Delay (s/veh)		28.6	22.1					17.4	4.5	77.1	6.9	

2035 Projected (Build) Conditions
 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay (s/veh)		28.6	22.1					17.4	4.5	77.1	6.9	
Queue Length 50th (ft)		27	32					211	17	46	89	
Queue Length 95th (ft)		62	#167					#512	51	#89	133	
Internal Link Dist (ft)		826			679			2379			474	
Turn Bay Length (ft)			350						75	200		
Base Capacity (vph)		216	516					1193	1215	195	1229	
Starvation Cap Reductn		0	0					0	0	0	0	
Spillback Cap Reductn		0	0					0	0	0	0	
Storage Cap Reductn		0	0					0	0	0	0	
Reduced v/c Ratio		0.37	0.81					0.80	0.66	0.91	0.52	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 57.6

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

#4  Ø2		#4  Ø4
46 s		14 s
#4  Ø6		#4  Ø7
46 s		14 s

2035 Projected (Build) Conditions
4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: A.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	0	371	0	0	0	0	850	717	158	565	0
Future Volume (veh/h)	71	0	371	0	0	0	0	850	717	158	565	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1526	1911	1807				0	1766	1795	1633	1789	0
Adj Flow Rate, veh/h	80	0	0				0	955	0	178	635	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	26	0	7				0	5	3	17	6	0
Cap, veh/h	152	0					0	1290		346	1307	0
Arrive On Green	0.08	0.00	0.00				0.00	0.73	0.00	0.73	0.73	0.00
Sat Flow, veh/h	1820	0	1532				0	1766	1521	513	1789	0
Grp Volume(v), veh/h	80	0	0				0	955	0	178	635	0
Grp Sat Flow(s),veh/h/ln	1820	0	1532				0	1766	1521	513	1789	0
Q Serve(g_s), s	2.3	0.0	0.0				0.0	17.1	0.0	16.8	8.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	0.0				0.0	17.1	0.0	33.8	8.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	152	0					0	1290		346	1307	0
V/C Ratio(X)	0.53	0.00					0.00	0.74		0.51	0.49	0.00
Avail Cap(c_a), veh/h	305	0					0	1347		363	1365	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.6	0.0	0.0				0.0	4.3	0.0	14.2	3.0	0.0
Incr Delay (d2), s/veh	2.8	0.0	0.0				0.0	2.1	0.0	1.2	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	0.0				0.0	3.9	0.0	2.9	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.4	0.0	0.0				0.0	6.4	0.0	15.4	3.3	0.0
LnGrp LOS	C						A			B		
Approach Vol, veh/h	80						955			813		
Approach Delay, s/veh	26.4						6.4			5.9		
Approach LOS	C						A			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	44.3			9.5			44.3					
Change Period (Y+Rc), s	6.0			6.0			6.0					
Max Green Setting (Gmax), s	40.0			8.0			40.0					
Max Q Clear Time (g_c+I1), s	19.6			4.3			36.3					
Green Ext Time (p_c), s	7.3			0.1			2.0					
Intersection Summary												
HCM 7th Control Delay, s/veh				7.1								
HCM 7th LOS				A								
Notes												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	438	49	98	12	22	72	43	1057	21	17	724	196
Future Volume (vph)	438	49	98	12	22	72	43	1057	21	17	724	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	13	10	13	13	10	11	11	10	11	11
Grade (%)		-5%			3%			-3%			-4%	
Storage Length (ft)	225		0	75		0	100		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	75		25	75		25	75		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		2071			2145			626			2459	
Travel Time (s)		40.3			41.8			10.7			41.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	466	156	0	13	100	0	46	1146	0	18	979	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		18.5	18.5		18.5	18.5	
Total Split (s)	39.0	39.0		39.0	39.0		21.0	21.0		21.0	21.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%		35.0%	35.0%	
Maximum Green (s)	33.0	33.0		33.0	33.0		14.5	14.5		14.5	14.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		6.0	6.0		6.0	6.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.81	0.19		0.02	0.13		0.40	1.09		0.16	0.94	
Control Delay (s/veh)	24.6	6.9		6.1	7.1		34.5	82.4		21.7	40.9	

2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.6	6.9		6.1	7.1		34.5	82.4		21.7	40.9	
Queue Length 50th (ft)	122	23		2	16		13	~296		5	~219	
Queue Length 95th (ft)	215	44		8	32		#59	#448		22	#368	
Internal Link Dist (ft)		1991			2065			546			2379	
Turn Bay Length (ft)	225			75			100			75		
Base Capacity (vph)	668	937		617	897		114	1050		114	1044	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.70	0.17		0.02	0.11		0.40	1.09		0.16	0.94	

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 Yellow

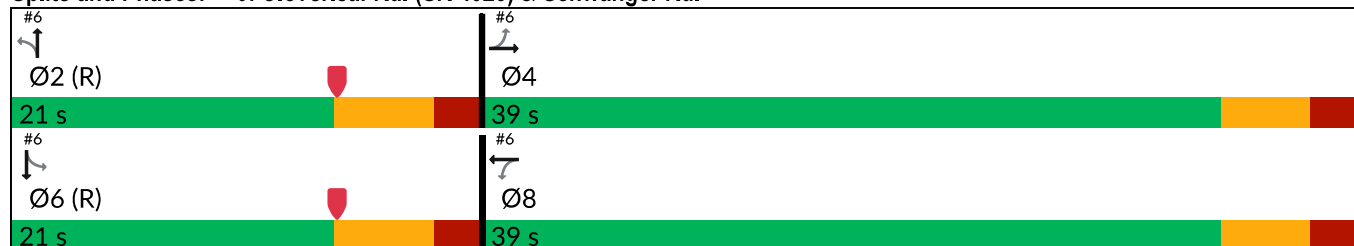
Natural Cycle: 70

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.



2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: A.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	438	49	98	12	22	72	43	1057	21	17	724	196
Future Volume (veh/h)	438	49	98	12	22	72	43	1057	21	17	724	196
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.04	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1972	2066	1962	1750	1820	1776	1912	1812	1300	1949	1793	1906
Adj Flow Rate, veh/h	466	52	73	13	23	62	46	1124	22	18	770	191
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	0	7	0	0	3	0	7	43	0	11	3
Cap, veh/h	666	326	458	576	182	492	221	1402	27	181	1097	272
Arrive On Green	0.42	0.42	0.40	0.42	0.42	0.40	0.41	0.41	0.39	0.41	0.41	0.39
Sat Flow, veh/h	1384	778	1092	1184	435	1173	597	3454	68	511	2704	671
Grp Volume(v), veh/h	466	0	125	13	0	85	46	560	586	18	485	476
Grp Sat Flow(s),veh/h/ln	1384	0	1869	1184	0	1609	597	1722	1800	511	1703	1672
Q Serve(g_s), s	18.4	0.0	2.5	0.4	0.0	2.0	4.2	17.2	17.2	1.9	14.2	14.3
Cycle Q Clear(g_c), s	19.9	0.0	2.5	2.4	0.0	2.0	18.4	17.2	17.2	19.1	14.2	14.3
Prop In Lane	1.00		0.58	1.00		0.73	1.00		0.04	1.00		0.40
Lane Grp Cap(c), veh/h	666	0	784	576	0	674	221	699	731	181	691	678
V/C Ratio(X)	0.70	0.00	0.16	0.02	0.00	0.13	0.21	0.80	0.80	0.10	0.70	0.70
Avail Cap(c_a), veh/h	870	0	1059	751	0	912	221	699	731	181	691	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71
Uniform Delay (d), s/veh	16.6	0.0	11.0	11.5	0.0	10.9	22.4	15.7	15.7	24.1	14.8	15.0
Incr Delay (d2), s/veh	1.7	0.0	0.1	0.0	0.0	0.1	2.1	9.4	9.1	0.8	4.2	4.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.0	0.0	1.7	0.2	0.0	1.1	1.2	11.7	12.1	0.5	8.4	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.3	0.0	11.1	11.5	0.0	11.0	24.6	25.1	24.8	24.9	19.0	19.3
LnGrp LOS	B		B	B		B	C	C	C	C	B	B
Approach Vol, veh/h	591					98	1192			979		
Approach Delay, s/veh	16.8					11.1	24.9			19.3		
Approach LOS	B					B	C			B		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	29.8		30.2			29.8		30.2				
Change Period (Y+Rc), s	6.5		6.0			6.5		6.0				
Max Green Setting (Gmax), s	14.5		33.0			14.5		33.0				
Max Q Clear Time (g_c+l1), s	19.7		22.4			16.7		4.9				
Green Ext Time (p_c), s	0.0		1.7			0.0		0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.8									
HCM 7th LOS			C									

7: Schwanger Rd. & Campus Dr. & Merts Dr.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	392	1	30	229	4	0	4	65	40	4	24
Future Volume (vph)	13	392	1	30	229	4	0	4	65	40	4	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	14	14	14	16	16	16
Grade (%)		0%			-1%			1%			-3%	
Storage Length (ft)	175		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		885			2071			354			527	
Travel Time (s)		17.2			40.3			6.9			10.3	
Confl. Peds. (#/hr)	1					1						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	446	0	34	265	0	0	79	0	0	77	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	392	1	30	229	4	0	4	65	40	4	24
Future Vol, veh/h	13	392	1	30	229	4	0	4	65	40	4	24
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175		-	150		-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-3	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	17	2	0	5	1	0	0	0	3	5	0	4
Mvmt Flow	15	445	1	34	260	5	0	5	74	45	5	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	266	0	0	447	0	0	806	810	446	809	808	264
Stage 1	-	-	-	-	-	-	476	476	-	332	332	-
Stage 2	-	-	-	-	-	-	331	334	-	477	476	-
Critical Hdwy	4.5	-	-	4.4	-	-	7.3	6.7	6.33	6.6	5.9	5.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.7	-	5.55	4.9	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.7	-	5.55	4.9	-
Follow-up Hdwy	3.2	-	-	3	-	-	3	4	3.1	3	4	3.1
Pot Cap-1 Maneuver	906	-	-	833	-	-	321	302	638	374	363	840
Stage 1	-	-	-	-	-	-	632	546	-	824	685	-
Stage 2	-	-	-	-	-	-	770	635	-	697	606	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	905	-	-	833	-	-	290	285	638	307	342	839
Mov Cap-2 Maneuver	-	-	-	-	-	-	290	285	-	307	342	-
Stage 1	-	-	-	-	-	-	622	537	-	789	656	-
Stage 2	-	-	-	-	-	-	709	608	-	601	596	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.29	1.08	11.96	16.18
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	596	905	-	-	833	-	-	399
HCM Lane V/C Ratio	0.132	0.016	-	-	0.041	-	-	0.194
HCM Ctrl Dly (s/v)	12	9	-	-	9.5	-	-	16.2
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.7

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	34	10	23	52	20	39
Future Volume (vph)	34	10	23	52	20	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	-2%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)		25	25		25	25
Link Speed (mph)	40			40	35	
Link Distance (ft)	2119			1252	852	
Travel Time (s)	36.1			21.3	16.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	16%	0%	19%	7%	0%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	0	101	80	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	34	10	23	52	20	39
Future Vol, veh/h	34	10	23	52	20	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	16	0	19	7	0	5
Mvmt Flow	46	14	31	70	27	53
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	59	0	185	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	-	-	4.5	-	6.4	6.25
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	3.2	-	3	3.1
Pot Cap-1 Maneuver	-	-	1072	-	932	1084
Stage 1	-	-	-	-	1133	-
Stage 2	-	-	-	-	1039	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1072	-	904	1084
Mov Cap-2 Maneuver	-	-	-	-	904	-
Stage 1	-	-	-	-	1099	-
Stage 2	-	-	-	-	1039	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		2.59		8.85	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1015	-	-	552	-	
HCM Lane V/C Ratio	0.079	-	-	0.029	-	
HCM Ctrl Dly (s/v)	8.8	-	-	8.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

9: Mt. Pleasant Rd. (SR 4010) & Eastern (Car Only) Dw

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	38	50	25	8	9
Future Volume (vph)	30	38	50	25	8	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		2%	-2%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25			25	25	25
Link Speed (mph)		40	40		25	
Link Distance (ft)		1109	2119		324	
Travel Time (s)		18.9	36.1		8.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	25%	15%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	75	84	0	19	0
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	38	50	25	8	9
Future Vol, veh/h	30	38	50	25	8	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	2	-2	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	25	15	2	2	2
Mvmt Flow	33	42	56	28	9	10
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	83	0	-	0	178	69
Stage 1	-	-	-	-	69	-
Stage 2	-	-	-	-	109	-
Critical Hdwy	4.3	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1124	-	-	-	940	1061
Stage 1	-	-	-	-	1112	-
Stage 2	-	-	-	-	1065	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1124	-	-	-	911	1061
Mov Cap-2 Maneuver	-	-	-	-	911	-
Stage 1	-	-	-	-	1079	-
Stage 2	-	-	-	-	1065	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	3.66	0		8.73		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	794	-	-	-	985	
HCM Lane V/C Ratio	0.03	-	-	-	0.019	
HCM Ctrl Dly (s/v)	8.3	0	-	-	8.7	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	54	0	4	55	0	0	51	14	0	28	17
Future Volume (vph)	55	54	0	4	55	0	0	51	14	0	28	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1309			1109			278			356	
Travel Time (s)		22.3			18.9			7.6			9.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	25%	0%	2%	15%	0%	0%	47%	2%	0%	68%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	121	0	0	65	0	0	73	0	0	50	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

Intersection

Int Delay, s/veh 6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	55	54	0	4	55	0	0	51	14	0	28	17
Future Vol, veh/h	55	54	0	4	55	0	0	51	14	0	28	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	25	0	2	15	0	0	47	2	0	68	2
Mvmt Flow	61	60	0	4	61	0	0	57	16	0	31	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	61	0	0	60	0	0	268	252	60	281	252	61
Stage 1	-	-	-	-	-	-	182	182	-	70	70	-
Stage 2	-	-	-	-	-	-	86	70	-	211	182	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.1	6.97	6.22	7.1	7.18	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.97	-	6.1	6.18	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.97	-	6.1	6.18	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.423	3.1	3	4.612	3.1
Pot Cap-1 Maneuver	1144	-	-	1145	-	-	790	581	1074	774	552	1073
Stage 1	-	-	-	-	-	-	950	672	-	1097	724	-
Stage 2	-	-	-	-	-	-	1076	756	-	916	640	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1144	-	-	1145	-	-	689	547	1074	647	520	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	689	547	-	647	520	-
Stage 1	-	-	-	-	-	-	897	634	-	1093	721	-
Stage 2	-	-	-	-	-	-	1007	753	-	776	605	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	4.2	0.55	11.68	11.05
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	611	908	-	-	122	-	-	645
HCM Lane V/C Ratio	0.118	0.053	-	-	0.004	-	-	0.077
HCM Ctrl Dly (s/v)	11.7	8.3	0	-	8.2	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0	-	-	0.3

1: Cloverleaf Rd. (SR 4025) & Mt. Pleasant Rd. (SR 4010)

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	89	29	334	71	23	229
Future Volume (vph)	89	29	334	71	23	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		1%			-1%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	40		40			35
Link Distance (ft)	1263		1057			799
Travel Time (s)	21.5		18.0			15.6
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	20%	13%	5%	2%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	126	0	431	0	0	268
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	89	29	334	71	23	229
Future Vol, veh/h	89	29	334	71	23	229
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	1	-	-	-1
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	20	13	5	2	0	3
Mvmt Flow	95	31	355	76	24	244

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	686	393	0	0	431	0
Stage 1	393	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Critical Hdwy	6.4	6.23	-	-	4.3	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.2	3.2	-	-	3	-
Pot Cap-1 Maneuver	444	675	-	-	854	-
Stage 1	739	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	429	675	-	-	854	-
Mov Cap-2 Maneuver	429	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	824	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	15.38	0	0.85
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	472	164
HCM Lane V/C Ratio	-	-	0.266	0.029
HCM Ctrl Dly (s/v)	-	-	15.4	9.3
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1.1	0.1

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	758	107	38	23	407	374	62	2	243	55
Future Volume (vph)	0	0	758	107	38	23	407	374	62	2	243	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	14	12	14	12	11	11	11	11	12
Grade (%)		0%			-5%			2%			-2%	
Storage Length (ft)	0		0	0		0	700		0	100		100
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Satd. Flow (prot)	0	0	1512	0	1508	0	1597	1499	0	1670	1620	0
Flt Permitted					0.969		0.316			0.505		
Satd. Flow (perm)	0	0	1512	0	1508	0	531	1499	0	887	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			360		8			16			11	
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		424			1042			715			1057	
Travel Time (s)		11.6			23.7			12.2			18.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	3%	15%	30%	0%	6%	7%	46%	0%	6%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	773	0	171	0	415	445	0	2	304	0
Turn Type			pm+ov	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases			5		8		5	2			6	
Permitted Phases			4	8			2			6		
Detector Phase			5	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)			5.0	5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)			11.0	11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)			33.0	33.0	33.0		33.0	67.0		34.0	34.0	
Total Split (%)			33.0%	33.0%	33.0%		33.0%	67.0%		34.0%	34.0%	
Maximum Green (s)			27.0	27.0	27.0		27.0	61.0		28.0	28.0	
Yellow Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)			2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)			-1.0		-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)			5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode			None	None	None		None	Min		Min	Min	
Walk Time (s)												

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.0
Total Split (s)	33.0
Total Split (%)	33%
Maximum Green (s)	27.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)			44.3		14.5		49.0	49.0		19.2	19.2	
Actuated g/C Ratio			0.60		0.20		0.66	0.66		0.26	0.26	
v/c Ratio			0.74		0.57		0.59	0.45		0.01	0.71	
Control Delay (s/veh)			10.8		35.7		10.4	7.8		22.5	35.4	
Queue Delay			0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)			10.8		35.7		10.4	7.8		22.5	35.4	
LOS			B		D		B	A		C	D	
Approach Delay (s/veh)		10.8			35.7			9.1			35.3	
Approach LOS		B			D			A			D	
Queue Length 50th (ft)			107		88		75	81		1	134	
Queue Length 95th (ft)			332		184		178	185		6	249	
Internal Link Dist (ft)		344			962			635			977	
Turn Bay Length (ft)							700			100		
Base Capacity (vph)			1125		603		774	1251		364	672	
Starvation Cap Reductn			0		0		0	0		0	0	
Spillback Cap Reductn			0		0		0	0		0	0	
Storage Cap Reductn			0		0		0	0		0	0	
Reduced v/c Ratio			0.69		0.28		0.54	0.36		0.01	0.45	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 74

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay (s/veh): 15.7

Intersection LOS: B

Intersection Capacity Utilization 88.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

#2  Ø2	#2  Ø4
67 s	33 s
#2  Ø5	#2  Ø8
33 s	33 s
#2  Ø6	
34 s	

Lane Group	Ø4
Flash Don't Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

HCM 7th Edition methodology does not support Non-NEMA phasing.

2035 Projected (Build) Conditions
 3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: P.M. Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	180	663	0	0	1111
Future Volume (vph)	0	180	663	0	0	1111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	10	11	11	11	11
Grade (%)	-2%		2%			-2%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	25		40			40
Link Distance (ft)	831		554			715
Travel Time (s)	22.7		9.4			12.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	13%	6%	0%	0%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	189	698	0	0	1169
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2035 Projected (Build) Conditions
 3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: P.M. Peak Hour

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	180	663	0	0	1111
Future Vol, veh/h	0	180	663	0	0	1111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	2	-	-	-2
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	13	6	0	0	4
Mvmt Flow	0	189	698	0	0	1169
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	698	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	2.6	-	-	-	-
Pot Cap-1 Maneuver	0	669	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	669	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Ctrl Dly, s/v	12.5	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 669		-			
HCM Lane V/C Ratio	- 0.283		-			
HCM Ctrl Dly (s/v)	- 12.5		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 1.2		-			

2035 Projected (Build) Conditions
4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: P.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	0	651	0	0	0	0	580	573	154	965	0
Future Volume (vph)	93	0	651	0	0	0	0	580	573	154	965	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	14	12	12	12	11	11	11	11	12	12
Grade (%)		-1%			0%			-1%			-2%	
Storage Length (ft)	0		350	0		0	0		75	200		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25		100	25		25	25		25	100		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		906			759			2459			554	
Travel Time (s)		24.7			20.7			41.9			9.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	17%	0%	1%	0%	0%	0%	0%	6%	3%	10%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	664	0	0	0	0	592	585	157	985	0
Turn Type	Prot	NA	Perm					NA	Perm	Perm	NA	
Protected Phases	7	4						2			6	
Permitted Phases			4						2	6		
Detector Phase	7	4	4					2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	10.0	10.0	
Minimum Split (s)	11.0	11.0	11.0					16.0	16.0	16.0	16.0	
Total Split (s)	23.0	23.0	23.0					37.0	37.0	37.0	37.0	
Total Split (%)	38.3%	38.3%	38.3%					61.7%	61.7%	61.7%	61.7%	
Maximum Green (s)	17.0	17.0	17.0					31.0	31.0	31.0	31.0	
Yellow Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0					-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)		5.0	5.0					5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Recall Mode	None	None	None					Min	Min	Min	Min	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio		0.21	1.20					0.67	0.58	0.58	1.04	
Control Delay (s/veh)		17.2	128.5					15.0	4.2	20.2	56.9	

2035 Projected (Build) Conditions
 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: P.M. Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay (s/veh)		17.2	128.5					15.0	4.2	20.2	56.9	
Queue Length 50th (ft)		25	~280					148	13	37	~371	
Queue Length 95th (ft)		57	#466					256	58	#125	#610	
Internal Link Dist (ft)		826			679			2379			474	
Turn Bay Length (ft)			350						75	200		
Base Capacity (vph)		455	553					880	1006	273	950	
Starvation Cap Reductn		0	0					0	0	0	0	
Spillback Cap Reductn		0	0					0	0	0	0	
Storage Cap Reductn		0	0					0	0	0	0	
Reduced v/c Ratio		0.21	1.20					0.67	0.58	0.58	1.04	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

#4 ↑ Ø2	#4 → Ø4
37 s	23 s
#4 ↘ Ø6	#4 ↘ Ø7
37 s	23 s

2035 Projected (Build) Conditions
4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: P.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	0	651	0	0	0	0	580	573	154	965	0
Future Volume (veh/h)	93	0	651	0	0	0	0	580	573	154	965	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1659	1911	1896				0	1752	1795	1732	1846	0
Adj Flow Rate, veh/h	95	0	0				0	592	0	157	985	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	17	0	1				0	6	3	10	2	0
Cap, veh/h	192	0					0	1135		535	1196	0
Arrive On Green	0.11	0.00	0.00				0.00	0.65	0.00	0.65	0.65	0.00
Sat Flow, veh/h	1820	0	1607				0	1752	1521	764	1846	0
Grp Volume(v), veh/h	95	0	0				0	592	0	157	985	0
Grp Sat Flow(s),veh/h/ln	1820	0	1607				0	1752	1521	764	1846	0
Q Serve(g_s), s	2.0	0.0	0.0				0.0	7.3	0.0	5.6	16.3	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0				0.0	7.3	0.0	12.9	16.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	192	0					0	1135		535	1196	0
V/C Ratio(X)	0.49	0.00					0.00	0.52		0.29	0.82	0.00
Avail Cap(c_a), veh/h	807	0					0	1381		642	1455	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.1	0.0	0.0				0.0	3.8	0.0	7.2	5.4	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0				0.0	0.4	0.0	0.3	3.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0				0.0	1.2	0.0	1.0	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.1	0.0	0.0				0.0	4.2	0.0	7.5	8.7	0.0
LnGrp LOS	B							A		A	A	
Approach Vol, veh/h		95						592			1142	
Approach Delay, s/veh		19.1						4.2			8.5	
Approach LOS		B						A			A	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		31.3		9.3		31.3						
Change Period (Y+Rc), s		6.0		6.0		6.0						
Max Green Setting (Gmax), s		31.0		17.0		31.0						
Max Q Clear Time (g_c+l1), s		9.8		4.0		18.8						
Green Ext Time (p_c), s		3.7		0.3		6.5						
Intersection Summary												
HCM 7th Control Delay, s/veh			7.7									
HCM 7th LOS			A									
Notes												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: P.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	52	82	29	64	26	93	830	18	62	1087	441
Future Volume (vph)	272	52	82	29	64	26	93	830	18	62	1087	441
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	13	10	13	13	10	11	11	10	11	11
Grade (%)		-5%			3%			-3%			-4%	
Storage Length (ft)	225		0	75		0	100		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	75		25	75		25	75		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		2071			2145			626			2459	
Travel Time (s)		40.3			41.8			10.7			41.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	286	141	0	31	94	0	98	893	0	65	1608	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		18.5	18.5		18.5	18.5	
Total Split (s)	19.0	19.0		19.0	19.0		36.0	36.0		36.0	36.0	
Total Split (%)	34.5%	34.5%		34.5%	34.5%		65.5%	65.5%		65.5%	65.5%	
Maximum Green (s)	13.0	13.0		13.0	13.0		29.5	29.5		29.5	29.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		6.0	6.0		6.0	6.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.95	0.29		0.11	0.20		0.80	0.50		0.25	0.89	
Control Delay (s/veh)	65.7	11.1		17.0	13.7		60.2	8.8		9.4	17.7	

2035 Projected (Build) Conditions
 6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: P.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	65.7	11.1		17.0	13.7		60.2	8.8		9.4	17.7	
Queue Length 50th (ft)	92	18		8	17		23	86		10	197	
Queue Length 95th (ft)	#221	55		25	47		#103	127		30	#378	
Internal Link Dist (ft)		1991			2065			546			2379	
Turn Bay Length (ft)	225			75			100			75		
Base Capacity (vph)	302	493		281	466		123	1771		263	1814	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.95	0.29		0.11	0.20		0.80	0.50		0.25	0.89	

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

#6 	Ø2 (R)		#6 	Ø4
36 s			19 s	
#6 	Ø6 (R)		#6 	Ø8
36 s			19 s	

2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: P.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	52	82	29	64	26	93	830	18	62	1087	441
Future Volume (veh/h)	272	52	82	29	64	26	93	830	18	62	1087	441
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.04	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1972	2066	2066	1750	1820	1820	1912	1841	1912	1906	1892	1935
Adj Flow Rate, veh/h	286	55	73	31	67	12	98	874	18	65	1144	448
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	0	0	0	0	0	5	0	3	4	1
Cap, veh/h	449	205	272	377	382	68	189	1943	40	389	1411	538
Arrive On Green	0.25	0.25	0.24	0.25	0.25	0.24	0.55	0.55	0.54	0.55	0.55	0.54
Sat Flow, veh/h	1392	805	1068	1181	1502	269	327	3504	72	636	2545	970
Grp Volume(v), veh/h	286	0	128	31	0	79	98	436	456	65	799	793
Grp Sat Flow(s),veh/h/ln	1392	0	1873	1181	0	1771	327	1749	1828	636	1798	1718
Q Serve(g_s), s	11.0	0.0	3.0	1.2	0.0	1.9	9.8	8.1	8.2	3.7	19.6	21.2
Cycle Q Clear(g_c), s	12.4	0.0	3.0	3.7	0.0	1.9	30.5	8.1	8.2	11.9	19.6	21.2
Prop In Lane	1.00		0.57	1.00		0.15	1.00		0.04	1.00		0.56
Lane Grp Cap(c), veh/h	449	0	477	377	0	451	189	970	1014	389	997	952
V/C Ratio(X)	0.64	0.00	0.27	0.08	0.00	0.18	0.52	0.45	0.45	0.17	0.80	0.83
Avail Cap(c_a), veh/h	449	0	477	377	0	451	189	970	1014	389	997	952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	20.6	0.0	16.6	17.7	0.0	16.1	24.6	7.3	7.3	10.8	9.8	10.4
Incr Delay (d2), s/veh	3.0	0.0	0.3	0.1	0.0	0.2	9.7	1.5	1.4	0.1	0.7	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.3	0.0	2.1	0.5	0.0	1.3	3.0	4.4	4.5	0.7	6.3	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.6	0.0	16.9	17.8	0.0	16.2	34.3	8.8	8.7	10.9	10.5	11.2
LnGrp LOS	C		B	B		B	C	A	A	B	B	B
Approach Vol, veh/h	414			110			990			1657		
Approach Delay, s/veh	21.5			16.7			11.3			10.9		
Approach LOS	C			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	36.0			19.0			36.0			19.0		
Change Period (Y+Rc), s	6.5			6.0			6.5			6.0		
Max Green Setting (Gmax), s	29.5			13.0			29.5			13.0		
Max Q Clear Time (g_c+I1), s	10.6			14.9			23.2			6.2		
Green Ext Time (p_c), s	14.6			0.0			6.3			0.2		
Intersection Summary												
HCM 7th Control Delay, s/veh	12.6											
HCM 7th LOS	B											

7: Schwanger Rd. & Campus Dr. & Merts Dr.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	383	4	115	401	43	1	8	53	18	8	17
Future Volume (vph)	24	383	4	115	401	43	1	8	53	18	8	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	14	14	14	16	16	16
Grade (%)		0%			-1%			1%			-3%	
Storage Length (ft)	175		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		885			2071			354			527	
Travel Time (s)		17.2			40.3			6.9			10.3	
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	430	0	128	494	0	0	69	0	0	48	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	383	4	115	401	43	1	8	53	18	8	17
Future Vol, veh/h	24	383	4	115	401	43	1	8	53	18	8	17
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175		-	150		-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-3	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	2	0	1	1	2	0	13	3	6	13	6
Mvmt Flow	27	426	4	128	446	48	1	9	59	20	9	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	494	0	0	430	0	0	1187	1231	429	1210	1209	470
Stage 1	-	-	-	-	-	-	481	481	-	726	726	-
Stage 2	-	-	-	-	-	-	706	750	-	484	483	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.3	6.83	6.33	6.56	6.03	5.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.83	-	5.56	5.03	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.83	-	5.56	5.03	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.117	3.1	3.1	4.117	3.2
Pot Cap-1 Maneuver	811	-	-	854	-	-	170	158	653	206	213	632
Stage 1	-	-	-	-	-	-	628	522	-	509	467	-
Stage 2	-	-	-	-	-	-	462	387	-	672	579	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	810	-	-	854	-	-	130	130	653	145	175	631
Mov Cap-2 Maneuver	-	-	-	-	-	-	130	130	-	145	175	-
Stage 1	-	-	-	-	-	-	607	504	-	432	396	-
Stage 2	-	-	-	-	-	-	372	328	-	581	560	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.56	2.05	15.49	26.02
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	412	810	-	-	854	-	-	219
HCM Lane V/C Ratio	0.167	0.033	-	-	0.15	-	-	0.219
HCM Ctrl Dly (s/v)	15.5	9.6	-	-	10	-	-	26
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.5	-	-	0.8

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	80	27	45	33	10	35
Future Volume (vph)	80	27	45	33	10	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	-2%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)		25	25		25	25
Link Speed (mph)	40			40	35	
Link Distance (ft)	2125			1252	852	
Travel Time (s)	36.2			21.3	16.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	0%	15%	3%	25%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	122	0	0	89	51	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	27	45	33	10	35
Future Vol, veh/h	80	27	45	33	10	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	9	0	15	3	25	4
Mvmt Flow	91	31	51	38	11	40
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	122	0	246	106
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	-	-	4.5	-	6.65	6.24
Critical Hdwy Stg 1	-	-	-	-	5.65	-
Critical Hdwy Stg 2	-	-	-	-	5.65	-
Follow-up Hdwy	-	-	3.1	-	3.2	3.1
Pot Cap-1 Maneuver	-	-	1051	-	795	1011
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	961	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1051	-	756	1011
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	961	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		4.96		9.05	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	940	-	-	1029	-	
HCM Lane V/C Ratio	0.054	-	-	0.049	-	
HCM Ctrl Dly (s/v)	9	-	-	8.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-	

9: Mt. Pleasant Rd. (SR 4010) & Eastern (Car Only) Dw

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	79	36	8	29	36
Future Volume (vph)	10	79	36	8	29	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		2%	-2%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25			25	25	25
Link Speed (mph)		40	40		25	
Link Distance (ft)		1141	2125		293	
Travel Time (s)		19.4	36.2		8.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	8%	15%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	99	49	0	72	0
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	79	36	8	29	36
Future Vol, veh/h	10	79	36	8	29	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	2	-2	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	8	15	2	2	2
Mvmt Flow	11	88	40	9	32	40
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	49	0	-	0	154	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	110	-
Critical Hdwy	4.3	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1155	-	-	-	971	1096
Stage 1	-	-	-	-	1143	-
Stage 2	-	-	-	-	1064	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1155	-	-	-	961	1096
Mov Cap-2 Maneuver	-	-	-	-	961	-
Stage 1	-	-	-	-	1132	-
Stage 2	-	-	-	-	1064	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	0.92	0		8.75		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	202	-	-	-	1032	
HCM Lane V/C Ratio	0.01	-	-	-	0.07	
HCM Ctrl Dly (s/v)	8.1	0	-	-	8.8	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	84	0	16	56	0	0	35	5	0	57	66
Future Volume (vph)	18	84	0	16	56	0	0	35	5	0	57	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1263			1141			424			360	
Travel Time (s)		21.5			19.4			11.6			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	8%	0%	2%	15%	0%	0%	74%	2%	0%	42%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	113	0	0	80	0	0	45	0	0	136	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

Intersection

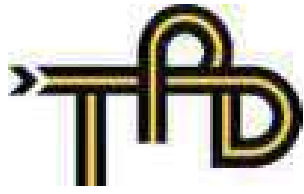
Int Delay, s/veh 6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	84	0	16	56	0	0	35	5	0	57	66
Future Vol, veh/h	18	84	0	16	56	0	0	35	5	0	57	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	8	0	2	15	0	0	74	2	0	42	2
Mvmt Flow	20	93	0	18	62	0	0	39	6	0	63	73

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	62	0	0	93	0	0	263	231	93	251	231	62
Stage 1	-	-	-	-	-	-	133	133	-	98	98	-
Stage 2	-	-	-	-	-	-	129	98	-	153	133	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.1	7.24	6.22	7.1	6.92	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	6.24	-	6.1	5.92	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	6.24	-	6.1	5.92	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.666	3.1	3	4.378	3.1
Pot Cap-1 Maneuver	1143	-	-	1116	-	-	796	561	1029	811	605	1071
Stage 1	-	-	-	-	-	-	1012	667	-	1059	743	-
Stage 2	-	-	-	-	-	-	1017	693	-	987	715	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1143	-	-	1116	-	-	640	542	1029	725	584	1071
Mov Cap-2 Maneuver	-	-	-	-	-	-	640	542	-	725	584	-
Stage 1	-	-	-	-	-	-	993	654	-	1041	730	-
Stage 2	-	-	-	-	-	-	851	682	-	906	702	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.45	1.84	11.78	10.66
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	576	318	-	-	400	-	-	772
HCM Lane V/C Ratio	0.077	0.017	-	-	0.016	-	-	0.177
HCM Ctrl Dly (s/v)	11.8	8.2	0	-	8.3	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.6



ITE 130 Industrial Park - Alternative Analysis



1: Cloverleaf Rd. (SR 4025) & Mt. Pleasant Rd. (SR 4010)

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	63	9	191	97	37	263
Future Volume (vph)	63	9	191	97	37	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		1%			-1%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	40		40			35
Link Distance (ft)	1309		1084			881
Travel Time (s)	22.3		18.5			17.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	17%	0%	19%	27%	24%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	78	0	313	0	0	326
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	9	191	97	37	263
Future Vol, veh/h	63	9	191	97	37	263
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	1	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	17	0	19	27	24	8
Mvmt Flow	68	10	208	105	40	286

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	627	260	0	0	313	0
Stage 1	260	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6.37	6.1	-	-	4.5	-
Critical Hdwy Stg 1	5.37	-	-	-	-	-
Critical Hdwy Stg 2	5.37	-	-	-	-	-
Follow-up Hdwy	3.2	3.1	-	-	3.2	-
Pot Cap-1 Maneuver	484	834	-	-	871	-
Stage 1	855	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	458	834	-	-	871	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	763	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.85	0	1.15
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	485	222
HCM Lane V/C Ratio	-	-	0.161	0.046
HCM Ctrl Dly (s/v)	-	-	13.8	9.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	438	32	15	0	666	288	131	7	236	77
Future Volume (vph)	0	0	438	32	15	0	666	288	131	7	236	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	14	14	14	12	11	11	11	11	12
Grade (%)		0%			-5%			2%			-2%	
Storage Length (ft)	0		0	0		0	700		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Satd. Flow (prot)	0	0	1455	0	1308	0	1628	1385	0	1670	1521	0
Flt Permitted					0.967		0.276			0.498		
Satd. Flow (perm)	0	0	1455	0	1308	0	473	1385	0	875	1521	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			340					86			21	
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		523			1042			715			1084	
Travel Time (s)		14.3			23.7			12.2			18.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	7%	42%	53%	0%	4%	21%	13%	0%	11%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	481	0	51	0	732	460	0	8	344	0
Turn Type			pm+ov	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases			5		8		5	2			6	
Permitted Phases			4	8			2			6		
Detector Phase			5	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)			5.0	5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)			11.0	11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)			38.0	14.0	14.0		38.0	66.0		28.0	28.0	
Total Split (%)			47.5%	17.5%	17.5%		47.5%	82.5%		35.0%	35.0%	
Maximum Green (s)			32.0	8.0	8.0		32.0	60.0		22.0	22.0	
Yellow Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)			2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)			-1.0		-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)			5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode			None	None	None		None	Min		Min	Min	
Walk Time (s)												

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.0
Total Split (s)	14.0
Total Split (%)	18%
Maximum Green (s)	8.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)			38.8			8.4			55.9	58.7	19.0	19.0
Actuated g/C Ratio			0.57			0.12			0.82	0.86	0.28	0.28
v/c Ratio			0.49			0.32			0.80	0.38	0.03	0.79
Control Delay (s/veh)			4.6			37.9			18.1	3.2	21.1	37.7
Queue Delay			0.0			0.0			0.0	0.0	0.0	0.0
Total Delay (s/veh)			4.6			37.9			18.1	3.2	21.1	37.7
LOS			A			D			B	A	C	D
Approach Delay (s/veh)			4.6			37.9			12.4			37.3
Approach LOS			A			D			B			D
Queue Length 50th (ft)			31			34			219	54	3	160
Queue Length 95th (ft)			85			83			#463	97	13	#300
Internal Link Dist (ft)			443			962			635			1004
Turn Bay Length (ft)									700			100
Base Capacity (vph)			1028			182			978	1200	312	556
Starvation Cap Reductn			0			0			0	0	0	0
Spillback Cap Reductn			0			0			0	0	0	0
Storage Cap Reductn			0			0			0	0	0	0
Reduced v/c Ratio			0.47			0.28			0.75	0.38	0.03	0.62

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 68.4

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay (s/veh): 15.4

Intersection LOS: B

Intersection Capacity Utilization 73.7%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

#2  Ø2	#2  Ø4
66 s	14 s
#2  Ø5	#2  Ø6
38 s	28 s
#2  Ø8	
	14 s

Lane Group	Ø4
Flash Don't Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

HCM 7th Edition methodology does not support Non-NEMA phasing.

2035 Projected (Build) Conditions
 3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: A.M. Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	176	911	0	0	707
Future Volume (vph)	0	176	911	0	0	707
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	10	11	11	11	11
Grade (%)	-2%		2%			-2%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	25		40			40
Link Distance (ft)	831		554			715
Travel Time (s)	22.7		9.4			12.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	15%	6%	0%	0%	9%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	191	990	0	0	768
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2035 Projected (Build) Conditions
3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: A.M. Peak Hour

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	176	911	0	0	707
Future Vol, veh/h	0	176	911	0	0	707
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	2	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	15	6	0	0	9
Mvmt Flow	0	191	990	0	0	768
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	990	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	2.6	-	-	-	-
Pot Cap-1 Maneuver	0	490	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	490	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	16.98	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	-		490			
HCM Lane V/C Ratio	-		0.39			
HCM Ctrl Dly (s/v)	-		17			
HCM Lane LOS	-		C			
HCM 95th %tile Q(veh)	-		1.8			

2035 Projected (Build) Conditions
4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	0	371	0	0	0	0	862	717	156	565	0
Future Volume (vph)	76	0	371	0	0	0	0	862	717	156	565	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	14	12	12	12	11	11	11	11	12	12
Grade (%)		-1%			0%			-1%			-2%	
Storage Length (ft)	0		350	0		0	0		75	200		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25		100	25		25	25		25	100		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		906			759			2459			554	
Travel Time (s)		24.7			20.7			41.9			9.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	22%	0%	7%	0%	0%	0%	0%	5%	3%	16%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	417	0	0	0	0	969	806	175	635	0
Turn Type	Prot	NA	Perm					NA	Perm	Perm	NA	
Protected Phases	7	4						2			6	
Permitted Phases			4						2	6		
Detector Phase	7	4	4					2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	10.0	10.0	
Minimum Split (s)	11.0	11.0	11.0					16.0	16.0	16.0	16.0	
Total Split (s)	14.0	14.0	14.0					46.0	46.0	46.0	46.0	
Total Split (%)	23.3%	23.3%	23.3%					76.7%	76.7%	76.7%	76.7%	
Maximum Green (s)	8.0	8.0	8.0					40.0	40.0	40.0	40.0	
Yellow Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0					-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)		5.0	5.0					5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Recall Mode	None	None	None					Min	Min	Min	Min	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio		0.39	0.82					0.86	0.68	0.97	0.55	
Control Delay (s/veh)		28.8	22.4					17.9	4.6	75.9	6.8	

2035 Projected (Build) Conditions
 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay (s/veh)		28.8	22.4					17.9	4.6	75.9	6.8	
Queue Length 50th (ft)		28	32					218	19	45	89	
Queue Length 95th (ft)		64	#167					#524	53	#88	132	
Internal Link Dist (ft)		826			679			2379			474	
Turn Bay Length (ft)			350						75	200		
Base Capacity (vph)		220	513					1175	1203	189	1210	
Starvation Cap Reductn		0	0					0	0	0	0	
Spillback Cap Reductn		0	0					0	0	0	0	
Storage Cap Reductn		0	0					0	0	0	0	
Reduced v/c Ratio		0.39	0.81					0.82	0.67	0.93	0.52	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 58.3

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

#4  Ø2		#4  Ø4
46 s		14 s
#4  Ø6		#4  Ø7
46 s		14 s

2035 Projected (Build) Conditions
4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: A.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	0	371	0	0	0	0	862	717	156	565	0
Future Volume (veh/h)	76	0	371	0	0	0	0	862	717	156	565	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No							No		No		
Adj Sat Flow, veh/h/ln	1585	1911	1807				0	1766	1795	1647	1789	0
Adj Flow Rate, veh/h	85	0	0				0	969	0	175	635	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	22	0	7				0	5	3	16	6	0
Cap, veh/h	155	0					0	1291		339	1308	0
Arrive On Green	0.08	0.00	0.00				0.00	0.73	0.00	0.73	0.73	0.00
Sat Flow, veh/h	1820	0	1532				0	1766	1521	511	1789	0
Grp Volume(v), veh/h	85	0	0				0	969	0	175	635	0
Grp Sat Flow(s),veh/h/ln	1820	0	1532				0	1766	1521	511	1789	0
Q Serve(g_s), s	2.4	0.0	0.0				0.0	17.8	0.0	16.9	8.0	0.0
Cycle Q Clear(g_c), s	2.4	0.0	0.0				0.0	17.8	0.0	34.6	8.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	155	0					0	1291		339	1308	0
V/C Ratio(X)	0.55	0.00					0.00	0.75		0.52	0.49	0.00
Avail Cap(c_a), veh/h	302	0					0	1333		351	1351	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.8	0.0	0.0				0.0	4.4	0.0	14.7	3.0	0.0
Incr Delay (d2), s/veh	3.0	0.0	0.0				0.0	2.3	0.0	1.2	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	0.0				0.0	4.3	0.0	2.9	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.9	0.0	0.0				0.0	6.7	0.0	15.9	3.3	0.0
LnGrp LOS	C							A		B		A
Approach Vol, veh/h	85							969		810		
Approach Delay, s/veh	26.9							6.7		6.0		
Approach LOS	C							A		A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	44.7			9.6			44.7					
Change Period (Y+Rc), s	6.0			6.0			6.0					
Max Green Setting (Gmax), s	40.0			8.0			40.0					
Max Q Clear Time (g_c+I1), s	20.3			4.4			37.1					
Green Ext Time (p_c), s	7.3			0.1			1.6					
Intersection Summary												
HCM 7th Control Delay, s/veh	7.3											
HCM 7th LOS	A											
Notes												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	440	51	98	12	22	72	43	1067	25	17	724	196
Future Volume (vph)	440	51	98	12	22	72	43	1067	25	17	724	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	13	10	13	13	10	11	11	10	11	11
Grade (%)		-5%			3%			-3%			-4%	
Storage Length (ft)	225		0	75		0	100		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	75		25	75		25	75		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		2071			2145			626			2459	
Travel Time (s)		40.3			41.8			10.7			41.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	468	158	0	13	100	0	46	1162	0	18	979	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		18.5	18.5		18.5	18.5	
Total Split (s)	39.0	39.0		39.0	39.0		21.0	21.0		21.0	21.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%		35.0%	35.0%	
Maximum Green (s)	33.0	33.0		33.0	33.0		14.5	14.5		14.5	14.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		6.0	6.0		6.0	6.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.81	0.19		0.02	0.13		0.41	1.11		0.16	0.94	
Control Delay (s/veh)	24.7	6.9		6.1	7.1		34.6	89.9		21.7	41.5	

2035 Projected (Build) Conditions
 6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.7	6.9		6.1	7.1		34.6	89.9		21.7	41.5	
Queue Length 50th (ft)	122	24		2	16		13	~304		5	~220	
Queue Length 95th (ft)	#219	44		8	32		#59	#456		22	#368	
Internal Link Dist (ft)		1991			2065			546			2379	
Turn Bay Length (ft)	225			75			100			75		
Base Capacity (vph)	668	938		615	897		113	1045		113	1040	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.70	0.17		0.02	0.11		0.41	1.11		0.16	0.94	

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 Yellow

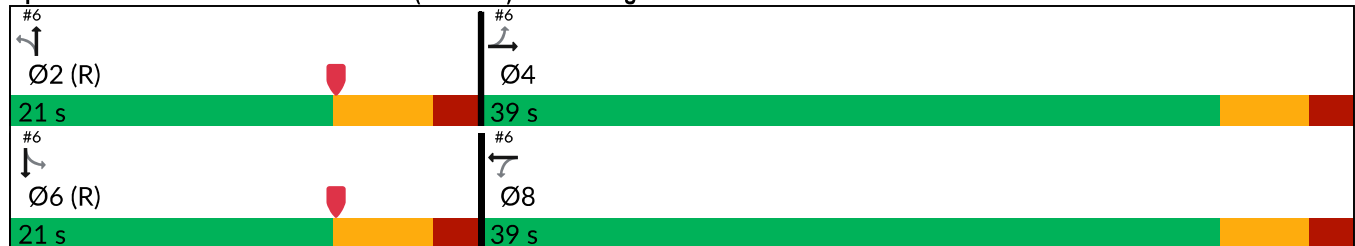
Natural Cycle: 70

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.



2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: A.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	440	51	98	12	22	72	43	1067	25	17	724	196
Future Volume (veh/h)	440	51	98	12	22	72	43	1067	25	17	724	196
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.04	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1972	2066	1962	1750	1820	1776	1912	1812	1300	1949	1793	1906
Adj Flow Rate, veh/h	468	54	73	13	23	62	46	1135	27	18	770	191
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	0	7	0	0	3	0	7	43	0	11	3
Cap, veh/h	668	335	453	576	183	493	220	1390	33	176	1094	271
Arrive On Green	0.42	0.42	0.40	0.42	0.42	0.40	0.40	0.40	0.39	0.40	0.40	0.39
Sat Flow, veh/h	1384	796	1076	1182	435	1173	597	3437	82	504	2704	671
Grp Volume(v), veh/h	468	0	127	13	0	85	46	568	594	18	485	476
Grp Sat Flow(s),veh/h/ln	1384	0	1872	1182	0	1609	597	1722	1798	504	1703	1672
Q Serve(g_s), s	18.5	0.0	2.6	0.4	0.0	2.0	4.2	17.6	17.6	2.0	14.2	14.3
Cycle Q Clear(g_c), s	20.0	0.0	2.6	2.5	0.0	2.0	18.4	17.6	17.6	19.6	14.2	14.3
Prop In Lane	1.00		0.57	1.00		0.73	1.00		0.05	1.00		0.40
Lane Grp Cap(c), veh/h	668	0	787	576	0	676	220	696	727	176	689	676
V/C Ratio(X)	0.70	0.00	0.16	0.02	0.00	0.13	0.21	0.82	0.82	0.10	0.70	0.70
Avail Cap(c_a), veh/h	870	0	1061	749	0	912	220	696	727	176	689	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71
Uniform Delay (d), s/veh	16.5	0.0	11.0	11.4	0.0	10.9	22.5	15.9	15.9	24.6	14.9	15.1
Incr Delay (d2), s/veh	1.7	0.0	0.1	0.0	0.0	0.1	2.2	10.2	9.8	0.8	4.3	4.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.0	0.0	1.7	0.2	0.0	1.1	1.2	12.1	12.4	0.5	8.5	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.3	0.0	11.1	11.4	0.0	11.0	24.7	26.1	25.8	25.4	19.2	19.4
LnGrp LOS	B		B	B		B	C	C	C	C	B	B
Approach Vol, veh/h	595			98			1208			979		
Approach Delay, s/veh	16.7			11.0			25.9			19.4		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	29.8			30.2			29.8			30.2		
Change Period (Y+Rc), s	6.5			6.0			6.5			6.0		
Max Green Setting (Gmax), s	14.5			33.0			14.5			33.0		
Max Q Clear Time (g_c+I1), s	20.1			22.5			16.7			5.0		
Green Ext Time (p_c), s	0.0			1.7			0.0			0.5		
Intersection Summary												
HCM 7th Control Delay, s/veh	21.3											
HCM 7th LOS	C											

7: Schwanger Rd. & Campus Dr. & Merts Dr.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	390	1	30	229	4	0	4	65	40	4	24
Future Volume (vph)	13	390	1	30	229	4	0	4	65	40	4	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	14	14	14	16	16	16
Grade (%)		0%			-1%			1%			-3%	
Storage Length (ft)	175		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		885			2071			354			527	
Travel Time (s)		17.2			40.3			6.9			10.3	
Confl. Peds. (#/hr)	1					1						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	444	0	34	265	0	0	79	0	0	77	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	390	1	30	229	4	0	4	65	40	4	24
Future Vol, veh/h	13	390	1	30	229	4	0	4	65	40	4	24
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175		-	150		-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-3	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	17	2	0	5	1	0	0	0	3	5	0	4
Mvmt Flow	15	443	1	34	260	5	0	5	74	45	5	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	266	0	0	444	0	0	804	807	444	807	806	264
Stage 1	-	-	-	-	-	-	473	473	-	332	332	-
Stage 2	-	-	-	-	-	-	331	334	-	475	474	-
Critical Hdwy	4.5	-	-	4.4	-	-	7.3	6.7	6.33	6.6	5.9	5.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.7	-	5.55	4.9	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.7	-	5.55	4.9	-
Follow-up Hdwy	3.2	-	-	3	-	-	3	4	3.1	3	4	3.1
Pot Cap-1 Maneuver	906	-	-	834	-	-	323	303	640	376	364	840
Stage 1	-	-	-	-	-	-	634	547	-	824	685	-
Stage 2	-	-	-	-	-	-	770	635	-	699	607	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	905	-	-	834	-	-	291	286	640	308	343	839
Mov Cap-2 Maneuver	-	-	-	-	-	-	291	286	-	308	343	-
Stage 1	-	-	-	-	-	-	624	538	-	789	656	-
Stage 2	-	-	-	-	-	-	709	608	-	603	597	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.29			1.08			11.93			16.14		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	597	905	-	-	834	-	-	400
HCM Lane V/C Ratio	0.131	0.016	-	-	0.041	-	-	0.193
HCM Ctrl Dly (s/v)	11.9	9	-	-	9.5	-	-	16.1
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.7

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	34	10	23	54	26	39
Future Volume (vph)	34	10	23	54	26	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	-2%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)		25	25		25	25
Link Speed (mph)	40			40	35	
Link Distance (ft)	2119			1252	852	
Travel Time (s)	36.1			21.3	16.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	16%	0%	19%	7%	0%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	0	104	88	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	4.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	34	10	23	54	26	39
Future Vol, veh/h	34	10	23	54	26	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	16	0	19	7	0	5
Mvmt Flow	46	14	31	73	35	53
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	59	0	188	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	-	-	4.5	-	6.4	6.25
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	3.2	-	3	3.1
Pot Cap-1 Maneuver	-	-	1072	-	928	1084
Stage 1	-	-	-	-	1133	-
Stage 2	-	-	-	-	1036	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1072	-	900	1084
Mov Cap-2 Maneuver	-	-	-	-	900	-
Stage 1	-	-	-	-	1099	-
Stage 2	-	-	-	-	1036	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		2.53		8.94	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1002	-	-	538	-	
HCM Lane V/C Ratio	0.088	-	-	0.029	-	
HCM Ctrl Dly (s/v)	8.9	-	-	8.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

9: Mt. Pleasant Rd. (SR 4010) & Eastern (Car Only) Dw

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	41	38	50	33	8	10
Future Volume (vph)	41	38	50	33	8	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		2%	-2%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25			25	25	25
Link Speed (mph)		40	40		25	
Link Distance (ft)		1109	2119		324	
Travel Time (s)		18.9	36.1		8.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	25%	15%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	88	93	0	20	0
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	41	38	50	33	8	10
Future Vol, veh/h	41	38	50	33	8	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	2	-2	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	25	15	2	2	2
Mvmt Flow	46	42	56	37	9	11
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	92	0	-	0	207	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	133	-
Critical Hdwy	4.3	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1117	-	-	-	903	1055
Stage 1	-	-	-	-	1107	-
Stage 2	-	-	-	-	1037	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1117	-	-	-	865	1055
Mov Cap-2 Maneuver	-	-	-	-	865	-
Stage 1	-	-	-	-	1061	-
Stage 2	-	-	-	-	1037	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	4.34	0		8.82		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	934	-	-	-	961	
HCM Lane V/C Ratio	0.041	-	-	-	0.021	
HCM Ctrl Dly (s/v)	8.4	0	-	-	8.8	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	60	0	5	55	0	0	53	19	0	25	17
Future Volume (vph)	74	60	0	5	55	0	0	53	19	0	25	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1309			1109			278			356	
Travel Time (s)		22.3			18.9			7.6			9.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	25%	0%	2%	15%	0%	0%	30%	2%	0%	64%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	149	0	0	67	0	0	80	0	0	47	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

Intersection

Int Delay, s/veh 6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	74	60	0	5	55	0	0	53	19	0	25	17
Future Vol, veh/h	74	60	0	5	55	0	0	53	19	0	25	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	25	0	2	15	0	0	30	2	0	64	2
Mvmt Flow	82	67	0	6	61	0	0	59	21	0	28	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	61	0	0	67	0	0	317	303	67	333	303	61
Stage 1	-	-	-	-	-	-	231	231	-	72	72	-
Stage 2	-	-	-	-	-	-	86	72	-	261	231	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.1	6.8	6.22	7.1	7.14	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.8	-	6.1	6.14	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.8	-	6.1	6.14	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.27	3.1	3	4.576	3.1
Pot Cap-1 Maneuver	1144	-	-	1139	-	-	730	566	1065	713	519	1073
Stage 1	-	-	-	-	-	-	892	664	-	1094	728	-
Stage 2	-	-	-	-	-	-	1075	783	-	858	612	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1144	-	-	1139	-	-	625	521	1065	576	478	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	625	521	-	576	478	-
Stage 1	-	-	-	-	-	-	825	615	-	1089	724	-
Stage 2	-	-	-	-	-	-	1010	779	-	704	566	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	4.63	0.68	11.89	11.32
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	602	994	-	-	150	-	-	617
HCM Lane V/C Ratio	0.133	0.072	-	-	0.005	-	-	0.076
HCM Ctrl Dly (s/v)	11.9	8.4	0	-	8.2	0	-	11.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0	-	-	0.2

1: Cloverleaf Rd. (SR 4025) & Mt. Pleasant Rd. (SR 4010)

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	96	31	334	78	25	229
Future Volume (vph)	96	31	334	78	25	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		1%			-1%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	40		40			35
Link Distance (ft)	1263		1057			799
Travel Time (s)	21.5		18.0			15.6
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	20%	13%	5%	2%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	0	438	0	0	271
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	96	31	334	78	25	229
Future Vol, veh/h	96	31	334	78	25	229
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	1	-	-	-1
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	20	13	5	2	0	3
Mvmt Flow	102	33	355	83	27	244
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	694	397	0	0	438	0
Stage 1	397	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Critical Hdwy	6.4	6.23	-	-	4.3	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.2	3.2	-	-	3	-
Pot Cap-1 Maneuver	439	672	-	-	849	-
Stage 1	736	-	-	-	-	-
Stage 2	820	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	423	672	-	-	849	-
Mov Cap-2 Maneuver	423	-	-	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	820	-	-	-	-	-
Approach	WB	NB	SB			
HCM Ctrl Dly, s/v	15.87	0	0.92			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	465	177	-	
HCM Lane V/C Ratio	-	-	0.29	0.031	-	
HCM Ctrl Dly (s/v)	-	-	15.9	9.4	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	758	106	35	23	407	381	56	2	248	57
Future Volume (vph)	0	0	758	106	35	23	407	381	56	2	248	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	14	12	14	12	11	11	11	11	12
Grade (%)		0%			-5%			2%			-2%	
Storage Length (ft)	0		0	0		0	700		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Satd. Flow (prot)	0	0	1512	0	1580	0	1597	1532	0	1670	1620	0
Flt Permitted					0.969		0.317			0.505		
Satd. Flow (perm)	0	0	1512	0	1580	0	533	1532	0	887	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			380		8			14			12	
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		424			1042			715			1057	
Travel Time (s)		11.6			23.7			12.2			18.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	3%	11%	18%	0%	6%	7%	33%	0%	6%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	773	0	167	0	415	446	0	2	311	0
Turn Type			pm+ov	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases			5		8		5	2			6	
Permitted Phases			4	8			2			6		
Detector Phase			5	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)			5.0	5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)			11.0	11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)			32.0	32.0	32.0		32.0	68.0		36.0	36.0	
Total Split (%)			32.0%	32.0%	32.0%		32.0%	68.0%		36.0%	36.0%	
Maximum Green (s)			26.0	26.0	26.0		26.0	62.0		30.0	30.0	
Yellow Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)			2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)			-1.0		-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)			5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode			None	None	None		None	Min		Min	Min	
Walk Time (s)												

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.0
Total Split (s)	32.0
Total Split (%)	32%
Maximum Green (s)	26.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)			43.2		13.9		48.8	48.8		19.6	19.6	
Actuated g/C Ratio			0.59		0.19		0.67	0.67		0.27	0.27	
v/c Ratio			0.74		0.55		0.59	0.43		0.01	0.71	
Control Delay (s/veh)			10.9		35.0		10.2	7.4		21.5	33.8	
Queue Delay			0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)			10.9		35.0		10.2	7.4		21.5	33.8	
LOS			B		C		B	A		C	C	
Approach Delay (s/veh)		10.9			35.0			8.7			33.7	
Approach LOS		B			C			A			C	
Queue Length 50th (ft)			99		77		71	78		1	133	
Queue Length 95th (ft)			339		166		171	176		6	246	
Internal Link Dist (ft)		344			962			635			977	
Turn Bay Length (ft)							700			100		
Base Capacity (vph)			1113		615		766	1306		393	725	
Starvation Cap Reductn			0		0		0	0		0	0	
Spillback Cap Reductn			0		0		0	0		0	0	
Storage Cap Reductn			0		0		0	0		0	0	
Reduced v/c Ratio			0.69		0.27		0.54	0.34		0.01	0.43	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 73.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay (s/veh): 15.3

Intersection LOS: B

Intersection Capacity Utilization 89.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

#2  Ø2	#2  Ø4
68 s	32 s
#2  Ø5	#2  Ø8
32 s	36 s

Lane Group	Ø4
Flash Don't Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

HCM 7th Edition methodology does not support Non-NEMA phasing.

2035 Projected (Build) Conditions
 3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: P.M. Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	178	666	0	0	1115
Future Volume (vph)	0	178	666	0	0	1115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	10	11	11	11	11
Grade (%)	-2%		2%			-2%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	25		40			40
Link Distance (ft)	831		554			715
Travel Time (s)	22.7		9.4			12.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	10%	6%	0%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	187	701	0	0	1174
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2035 Projected (Build) Conditions
 3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: P.M. Peak Hour

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	178	666	0	0	1115
Future Vol, veh/h	0	178	666	0	0	1115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	2	-	-	-2
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	10	6	0	0	3
Mvmt Flow	0	187	701	0	0	1174
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	701	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	2.6	-	-	-	-
Pot Cap-1 Maneuver	0	666	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	666	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	12.5	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	-		666			
HCM Lane V/C Ratio	-		0.281			
HCM Ctrl Dly (s/v)	-		12.5			
HCM Lane LOS	-		B			
HCM 95th %tile Q(veh)	-		1.2			

2035 Projected (Build) Conditions
4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: P.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	0	651	0	0	0	0	584	573	154	969	0
Future Volume (vph)	92	0	651	0	0	0	0	584	573	154	969	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	14	12	12	12	11	11	11	11	12	12
Grade (%)		-1%			0%			-1%			-2%	
Storage Length (ft)	0		350	0		0	0		75	200		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25		100	25		25	25		25	100		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		906			759			313			554	
Travel Time (s)		24.7			20.7			5.3			9.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	0%	1%	0%	0%	0%	0%	6%	3%	7%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	94	664	0	0	0	0	596	585	157	989	0
Turn Type	Prot	NA	Perm					NA	Perm	Perm	NA	
Protected Phases	7	4						2			6	
Permitted Phases			4						2	6		
Detector Phase	7	4	4					2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	10.0	10.0	
Minimum Split (s)	11.0	11.0	11.0					16.0	16.0	16.0	16.0	
Total Split (s)	23.0	23.0	23.0					37.0	37.0	37.0	37.0	
Total Split (%)	38.3%	38.3%	38.3%					61.7%	61.7%	61.7%	61.7%	
Maximum Green (s)	17.0	17.0	17.0					31.0	31.0	31.0	31.0	
Yellow Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0					-1.0	0.0	-1.0	-1.0	
Total Lost Time (s)		5.0	5.0					5.0	6.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Recall Mode	None	None	None					Min	Min	Min	Min	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio		0.20	1.20					0.68	0.60	0.56	1.04	
Control Delay (s/veh)		17.1	129.4					15.1	4.8	19.4	58.2	

2035 Projected (Build) Conditions
 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: P.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay (s/veh)		17.1	129.4					15.1	4.8	19.4	58.2	
Queue Length 50th (ft)		25	~280					149	17	36	~406	
Queue Length 95th (ft)		56	#466					259	70	#107	#614	
Internal Link Dist (ft)		826			679			233			474	
Turn Bay Length (ft)			350						75	200		
Base Capacity (vph)		471	552					880	980	278	950	
Starvation Cap Reductn		0	0					0	0	0	0	
Spillback Cap Reductn		0	0					0	0	0	0	
Storage Cap Reductn		0	0					0	0	0	0	
Reduced v/c Ratio		0.20	1.20					0.68	0.60	0.56	1.04	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

#4  Ø2	#4  Ø4
37 s	23 s
#4  Ø6	#4  Ø7
37 s	23 s

2035 Projected (Build) Conditions
 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: P.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	0	651	0	0	0	0	584	573	154	969	0
Future Volume (veh/h)	92	0	651	0	0	0	0	584	573	154	969	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No							No		No		
Adj Sat Flow, veh/h/ln	1719	1911	1896				0	1752	1795	1775	1846	0
Adj Flow Rate, veh/h	94	0	0				0	596	0	157	989	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	13	0	1				0	6	3	7	2	0
Cap, veh/h	191	0					0	1137		542	1198	0
Arrive On Green	0.11	0.00	0.00				0.00	0.65	0.00	0.65	0.65	0.00
Sat Flow, veh/h	1820	0	1607				0	1752	1521	780	1846	0
Grp Volume(v), veh/h	94	0	0				0	596	0	157	989	0
Grp Sat Flow(s),veh/h/ln	1820	0	1607				0	1752	1521	780	1846	0
Q Serve(g_s), s	2.0	0.0	0.0				0.0	7.4	0.0	5.5	16.5	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0				0.0	7.4	0.0	12.8	16.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	191	0					0	1137		542	1198	0
V/C Ratio(X)	0.49	0.00					0.00	0.52		0.29	0.83	0.00
Avail Cap(c_a), veh/h	805	0					0	1379		650	1453	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.2	0.0	0.0				0.0	3.8	0.0	7.2	5.4	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0				0.0	0.4	0.0	0.3	3.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0				0.0	1.2	0.0	1.0	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.1	0.0	0.0				0.0	4.2	0.0	7.5	8.8	0.0
LnGrp LOS	B							A		A		
Approach Vol, veh/h	94							596		1146		
Approach Delay, s/veh	19.1							4.2		8.6		
Approach LOS	B							A		A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	31.4			9.3			31.4					
Change Period (Y+Rc), s	6.0			6.0			6.0					
Max Green Setting (Gmax), s	31.0			17.0			31.0					
Max Q Clear Time (g_c+l1), s	9.9			4.0			19.0					
Green Ext Time (p_c), s	3.7			0.3			6.4					
Intersection Summary												
HCM 7th Control Delay, s/veh	7.7											
HCM 7th LOS	A											
Notes												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: P.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	53	82	31	65	26	93	833	19	62	1091	441
Future Volume (vph)	273	53	82	31	65	26	93	833	19	62	1091	441
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	13	10	13	13	10	11	11	10	11	11
Grade (%)		-5%			3%			-3%			-4%	
Storage Length (ft)	225		0	75		0	100		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	75		25	75		25	75		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		2071			2145			626			2157	
Travel Time (s)		40.3			41.8			10.7			36.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	0%	0%	0%	0%	5%	0%	3%	4%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	287	142	0	33	95	0	98	897	0	65	1612	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		18.5	18.5		18.5	18.5	
Total Split (s)	19.0	19.0		19.0	19.0		36.0	36.0		36.0	36.0	
Total Split (%)	34.5%	34.5%		34.5%	34.5%		65.5%	65.5%		65.5%	65.5%	
Maximum Green (s)	13.0	13.0		13.0	13.0		29.5	29.5		29.5	29.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		6.0	6.0		6.0	6.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.95	0.29		0.12	0.20		0.80	0.51		0.25	0.89	
Control Delay (s/veh)	67.2	11.3		17.1	13.7		60.2	8.8		9.4	17.8	

2035 Projected (Build) Conditions
 6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: P.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	67.2	11.3		17.1	13.7		60.2	8.8		9.4	17.8	
Queue Length 50th (ft)	93	19		8	17		23	87		10	198	
Queue Length 95th (ft)	#222	56		26	48		#103	128		30	#379	
Internal Link Dist (ft)		1991			2065			546			2077	
Turn Bay Length (ft)	225			75			100			75		
Base Capacity (vph)	301	492		280	466		123	1772		261	1814	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.95	0.29		0.12	0.20		0.80	0.51		0.25	0.89	

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

#6 	Ø2 (R)					#6 	Ø4
36 s						19 s	
#6 	Ø6 (R)					#6 	Ø8
36 s						19 s	

2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: P.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	53	82	31	65	26	93	833	19	62	1091	441
Future Volume (veh/h)	273	53	82	31	65	26	93	833	19	62	1091	441
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.04	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1972	2066	2066	1750	1820	1820	1912	1841	1912	1906	1892	1935
Adj Flow Rate, veh/h	287	56	73	33	68	12	98	877	19	65	1148	448
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	0	0	0	0	0	5	0	3	4	1
Cap, veh/h	448	207	270	376	383	68	189	1941	42	388	1413	537
Arrive On Green	0.25	0.25	0.24	0.25	0.25	0.24	0.55	0.55	0.54	0.55	0.55	0.54
Sat Flow, veh/h	1390	814	1061	1180	1506	266	326	3500	76	633	2548	968
Grp Volume(v), veh/h	287	0	129	33	0	80	98	438	458	65	801	795
Grp Sat Flow(s),veh/h/ln	1390	0	1875	1180	0	1772	326	1749	1827	633	1798	1718
Q Serve(g_s), s	11.0	0.0	3.1	1.3	0.0	1.9	9.7	8.2	8.2	3.7	19.7	21.3
Cycle Q Clear(g_c), s	12.5	0.0	3.1	3.8	0.0	1.9	30.5	8.2	8.2	11.9	19.7	21.3
Prop In Lane	1.00		0.57	1.00		0.15	1.00		0.04	1.00		0.56
Lane Grp Cap(c), veh/h	448	0	477	376	0	451	189	970	1013	388	997	953
V/C Ratio(X)	0.64	0.00	0.27	0.09	0.00	0.18	0.52	0.45	0.45	0.17	0.80	0.83
Avail Cap(c_a), veh/h	448	0	477	376	0	451	189	970	1013	388	997	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	16.6	17.7	0.0	16.1	24.6	7.3	7.3	10.8	9.8	10.4
Incr Delay (d2), s/veh	3.1	0.0	0.3	0.1	0.0	0.2	9.9	1.5	1.5	0.9	6.8	8.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.3	0.0	2.2	0.6	0.0	1.3	3.0	4.4	4.5	0.9	11.2	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.7	0.0	17.0	17.8	0.0	16.3	34.5	8.8	8.8	11.8	16.7	19.0
LnGrp LOS	C		B	B		B	C	A	A	B	B	B
Approach Vol, veh/h	416				113		994				1661	
Approach Delay, s/veh	21.6				16.7		11.3				17.6	
Approach LOS	C				B		B				B	
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	36.0		19.0		36.0		19.0					
Change Period (Y+Rc), s	6.5		6.0		6.5		6.0					
Max Green Setting (Gmax), s	29.5		13.0		29.5		13.0					
Max Q Clear Time (g_c+l1), s	10.7		15.0		23.3		6.3					
Green Ext Time (p_c), s	14.6		0.0		6.2		0.2					
Intersection Summary												
HCM 7th Control Delay, s/veh			16.1									
HCM 7th LOS			B									

7: Schwanger Rd. & Campus Dr. & Merts Dr.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	383	4	115	402	43	1	8	53	18	8	17
Future Volume (vph)	24	383	4	115	402	43	1	8	53	18	8	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	14	14	14	16	16	16
Grade (%)		0%			-1%			1%			-3%	
Storage Length (ft)	175		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		885			2071			354			527	
Travel Time (s)		17.2			40.3			6.9			10.3	
Confl. Peds. (#/hr)	1					1			1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	1%	1%	2%	0%	13%	3%	6%	13%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	430	0	128	495	0	0	69	0	0	48	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	383	4	115	402	43	1	8	53	18	8	17
Future Vol, veh/h	24	383	4	115	402	43	1	8	53	18	8	17
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175		-	150		-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-3	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	2	0	1	1	2	0	13	3	6	13	6
Mvmt Flow	27	426	4	128	447	48	1	9	59	20	9	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	495	0	0	430	0	0	1188	1232	429	1211	1210	472
Stage 1	-	-	-	-	-	-	481	481	-	727	727	-
Stage 2	-	-	-	-	-	-	707	751	-	484	483	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.3	6.83	6.33	6.56	6.03	5.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.83	-	5.56	5.03	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.83	-	5.56	5.03	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.117	3.1	3.1	4.117	3.2
Pot Cap-1 Maneuver	810	-	-	854	-	-	170	157	653	206	213	631
Stage 1	-	-	-	-	-	-	628	522	-	508	466	-
Stage 2	-	-	-	-	-	-	461	386	-	672	579	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	810	-	-	854	-	-	130	129	653	145	175	630
Mov Cap-2 Maneuver	-	-	-	-	-	-	130	129	-	145	175	-
Stage 1	-	-	-	-	-	-	607	504	-	432	396	-
Stage 2	-	-	-	-	-	-	372	328	-	581	560	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.56	2.04	15.5	26.06
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	411	810	-	-	854	-	-	218
HCM Lane V/C Ratio	0.167	0.033	-	-	0.15	-	-	0.219
HCM Ctrl Dly (s/v)	15.5	9.6	-	-	10	-	-	26.1
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.5	-	-	0.8

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	81	30	45	34	12	35
Future Volume (vph)	81	30	45	34	12	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	-2%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)		25	25		25	25
Link Speed (mph)	40			40	35	
Link Distance (ft)	2125			1252	852	
Travel Time (s)	36.2			21.3	16.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	0%	15%	3%	25%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	126	0	0	90	54	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	81	30	45	34	12	35
Future Vol, veh/h	81	30	45	34	12	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	9	0	15	3	25	4
Mvmt Flow	92	34	51	39	14	40
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	126	0	250	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	141	-
Critical Hdwy	-	-	4.5	-	6.65	6.24
Critical Hdwy Stg 1	-	-	-	-	5.65	-
Critical Hdwy Stg 2	-	-	-	-	5.65	-
Follow-up Hdwy	-	-	3.1	-	3.2	3.1
Pot Cap-1 Maneuver	-	-	1047	-	791	1007
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	959	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1047	-	751	1007
Mov Cap-2 Maneuver	-	-	-	-	751	-
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	959	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		4.91		9.12	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	926	-	-	1024	-	
HCM Lane V/C Ratio	0.058	-	-	0.049	-	
HCM Ctrl Dly (s/v)	9.1	-	-	8.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-	

9: Mt. Pleasant Rd. (SR 4010) & Eastern (Car Only) Dw

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	79	36	11	33	40
Future Volume (vph)	14	79	36	11	33	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		2%	-2%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25			25	25	25
Link Speed (mph)		40	40		25	
Link Distance (ft)		1141	2125		293	
Travel Time (s)		19.4	36.2		8.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	8%	15%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	104	52	0	81	0
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	79	36	11	33	40
Future Vol, veh/h	14	79	36	11	33	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	2	-2	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	8	15	2	2	2
Mvmt Flow	16	88	40	12	37	44
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	52	0	-	0	165	46
Stage 1	-	-	-	-	46	-
Stage 2	-	-	-	-	119	-
Critical Hdwy	4.3	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	3	-	-	-	3	3.1
Pot Cap-1 Maneuver	1152	-	-	-	957	1094
Stage 1	-	-	-	-	1141	-
Stage 2	-	-	-	-	1054	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1152	-	-	-	943	1094
Mov Cap-2 Maneuver	-	-	-	-	943	-
Stage 1	-	-	-	-	1125	-
Stage 2	-	-	-	-	1054	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	1.23	0		8.83		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	271	-	-	-	1020	
HCM Lane V/C Ratio	0.014	-	-	-	0.079	
HCM Ctrl Dly (s/v)	8.2	0	-	-	8.8	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	87	0	18	58	0	0	28	6	0	51	73
Future Volume (vph)	24	87	0	18	58	0	0	28	6	0	51	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1263			1141			424			360	
Travel Time (s)		21.5			19.4			11.6			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	8%	0%	2%	15%	0%	0%	57%	2%	0%	27%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	84	0	0	38	0	0	138	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

Intersection

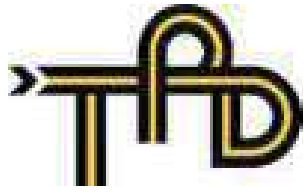
Int Delay, s/veh 5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	87	0	18	58	0	0	28	6	0	51	73
Future Vol, veh/h	24	87	0	18	58	0	0	28	6	0	51	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	8	0	2	15	0	0	57	2	0	27	2
Mvmt Flow	27	97	0	20	64	0	0	31	7	0	57	81

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	64	0	0	97	0	0	283	254	97	270	254	64
Stage 1	-	-	-	-	-	-	150	150	-	104	104	-
Stage 2	-	-	-	-	-	-	133	104	-	166	150	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.1	7.07	6.22	7.1	6.77	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	6.07	-	6.1	5.77	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	6.07	-	6.1	5.77	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.513	3.1	3	4.243	3.1
Pot Cap-1 Maneuver	1141	-	-	1113	-	-	771	565	1024	787	609	1068
Stage 1	-	-	-	-	-	-	990	680	-	1050	763	-
Stage 2	-	-	-	-	-	-	1012	714	-	970	728	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1141	-	-	1113	-	-	618	541	1024	707	582	1068
Mov Cap-2 Maneuver	-	-	-	-	-	-	618	541	-	707	582	-
Stage 1	-	-	-	-	-	-	966	663	-	1030	749	-
Stage 2	-	-	-	-	-	-	848	700	-	896	710	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.78	1.96	11.52	10.47
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	590	389	-	-	426	-	-	795
HCM Lane V/C Ratio	0.064	0.023	-	-	0.018	-	-	0.173
HCM Ctrl Dly (s/v)	11.5	8.2	0	-	8.3	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.1	-	-	0.6



TIS + 20% - Alternative Analysis



1: Cloverleaf Rd. (SR 4025) & Mt. Pleasant Rd. (SR 4010)

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	63	9	191	79	33	263
Future Volume (vph)	63	9	191	79	33	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		1%			-1%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	40		40			35
Link Distance (ft)	1309		1084			881
Travel Time (s)	22.3		18.5			17.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	17%	0%	19%	27%	24%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	78	0	294	0	0	322
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	9	191	79	33	263
Future Vol, veh/h	63	9	191	79	33	263
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	1	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	17	0	19	27	24	8
Mvmt Flow	68	10	208	86	36	286
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	608	251	0	0	293	0
Stage 1	251	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Critical Hdwy	6.37	6.1	-	-	4.5	-
Critical Hdwy Stg 1	5.37	-	-	-	-	-
Critical Hdwy Stg 2	5.37	-	-	-	-	-
Follow-up Hdwy	3.2	3.1	-	-	3.2	-
Pot Cap-1 Maneuver	497	844	-	-	886	-
Stage 1	864	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	473	844	-	-	886	-
Mov Cap-2 Maneuver	473	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Approach	WB	NB	SB			
HCM Ctrl Dly, s/v	13.53	0	1.03			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	500	201	-	
HCM Lane V/C Ratio	-	-	0.156	0.041	-	
HCM Ctrl Dly (s/v)	-	-	13.5	9.2	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	438	36	18	0	666	270	131	7	236	77
Future Volume (vph)	0	0	438	36	18	0	666	270	131	7	236	77
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	14	14	14	12	11	11	11	11	12
Grade (%)		0%			-5%			2%			-2%	
Storage Length (ft)	0		0	0		0	700		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Satd. Flow (prot)	0	0	1455	0	1245	0	1628	1347	0	1670	1521	0
Flt Permitted					0.968		0.276			0.507		
Satd. Flow (perm)	0	0	1455	0	1245	0	473	1347	0	891	1521	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			340					92			21	
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		523			1042			715			1084	
Travel Time (s)		14.3			23.7			12.2			18.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	7%	49%	61%	0%	4%	21%	23%	0%	11%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	481	0	60	0	732	441	0	8	344	0
Turn Type			pm+ov	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases			5		8		5	2			6	
Permitted Phases			4	8			2			6		
Detector Phase			5	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)			5.0	5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)			11.0	11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)			38.0	14.0	14.0		38.0	66.0		28.0	28.0	
Total Split (%)			47.5%	17.5%	17.5%		47.5%	82.5%		35.0%	35.0%	
Maximum Green (s)			32.0	8.0	8.0		32.0	60.0		22.0	22.0	
Yellow Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)			2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)			-1.0		-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)			5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode			None	None	None		None	Min		Min	Min	
Walk Time (s)												

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.0
Total Split (s)	14.0
Total Split (%)	18%
Maximum Green (s)	8.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)			38.8			8.5			55.9	58.7	19.0	19.0
Actuated g/C Ratio			0.57			0.12			0.82	0.86	0.28	0.28
v/c Ratio			0.49			0.39			0.80	0.38	0.03	0.79
Control Delay (s/veh)			4.6			40.3			18.1	3.1	21.1	37.7
Queue Delay			0.0			0.0			0.0	0.0	0.0	0.0
Total Delay (s/veh)			4.6			40.3			18.1	3.1	21.1	37.7
LOS			A			D			B	A	C	D
Approach Delay (s/veh)			4.6			40.3			12.5			37.3
Approach LOS			A			D			B			D
Queue Length 50th (ft)			31			42			219	50	3	160
Queue Length 95th (ft)			85			98			#463	91	13	#300
Internal Link Dist (ft)			443			962			635			1004
Turn Bay Length (ft)									700			100
Base Capacity (vph)			1028			174			978	1168	318	556
Starvation Cap Reductn			0			0			0	0	0	0
Spillback Cap Reductn			0			0			0	0	0	0
Storage Cap Reductn			0			0			0	0	0	0
Reduced v/c Ratio			0.47			0.34			0.75	0.38	0.03	0.62

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 68.4

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay (s/veh): 15.7

Intersection LOS: B

Intersection Capacity Utilization 73.7%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

#2  Ø2	#2  Ø4
66 s	14 s
#2  Ø5	#2  Ø6
38 s	28 s
#2  Ø8	
	14 s

Lane Group	Ø4
Flash Don't Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

HCM 7th Edition methodology does not support Non-NEMA phasing.

2035 Projected (Build) Conditions
3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: A.M. Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	170	899	0	0	712
Future Volume (vph)	0	170	899	0	0	712
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	10	11	11	11	11
Grade (%)	-2%		2%			-2%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	25		40			40
Link Distance (ft)	831		554			715
Travel Time (s)	22.7		9.4			12.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	19%	6%	0%	0%	9%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	185	977	0	0	774
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2035 Projected (Build) Conditions
 3: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps

Timing Plan: A.M. Peak Hour

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	170	899	0	0	712
Future Vol, veh/h	0	170	899	0	0	712
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	2	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	19	6	0	0	9
Mvmt Flow	0	185	977	0	0	774
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	977	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	5	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	2.6	-	-	-	-
Pot Cap-1 Maneuver	0	497	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	-	497	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	16.47	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	-		497			
HCM Lane V/C Ratio	-		0.372			
HCM Ctrl Dly (s/v)	-		16.5			
HCM Lane LOS	-		C			
HCM 95th %tile Q(veh)	-		1.7			

2035 Projected (Build) Conditions
4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	0	371	0	0	0	0	852	717	160	565	0
Future Volume (vph)	74	0	371	0	0	0	0	852	717	160	565	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	14	12	12	12	11	11	11	11	12	12
Grade (%)		-1%			0%			-1%			-2%	
Storage Length (ft)	0		350	0		0	0		75	200		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25		100	25		25	25		25	100		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		906			759			313			554	
Travel Time (s)		24.7			20.7			5.3			9.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	27%	0%	7%	0%	0%	0%	0%	5%	3%	18%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	417	0	0	0	0	957	806	180	635	0
Turn Type	Prot	NA	Perm					NA	Perm	Perm	NA	
Protected Phases	7	4						2			6	
Permitted Phases			4						2	6		
Detector Phase	7	4	4					2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	10.0	10.0	
Minimum Split (s)	11.0	11.0	11.0					16.0	16.0	16.0	16.0	
Total Split (s)	14.0	14.0	14.0					46.0	46.0	46.0	46.0	
Total Split (%)	23.3%	23.3%	23.3%					76.7%	76.7%	76.7%	76.7%	
Maximum Green (s)	8.0	8.0	8.0					40.0	40.0	40.0	40.0	
Yellow Time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0					2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		-1.0	-1.0					-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)		5.0	5.0					5.0	5.0	5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0					3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Recall Mode	None	None	None					Min	Min	Min	Min	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio		0.40	0.82					0.85	0.68	0.96	0.55	
Control Delay (s/veh)		29.4	22.6					16.9	4.5	74.2	6.8	

2035 Projected (Build) Conditions
 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0	0.0					0.0	0.0	0.0	0.0	
Total Delay (s/veh)		29.4	22.6					16.9	4.5	74.2	6.8	
Queue Length 50th (ft)		28	32					212	18	47	89	
Queue Length 95th (ft)		63	#167					#513	52	#90	133	
Internal Link Dist (ft)		826			679			233			474	
Turn Bay Length (ft)			350						75	200		
Base Capacity (vph)		210	512					1167	1202	193	1202	
Starvation Cap Reductn		0	0					0	0	0	0	
Spillback Cap Reductn		0	0					0	0	0	0	
Storage Cap Reductn		0	0					0	0	0	0	
Reduced v/c Ratio		0.40	0.81					0.82	0.67	0.93	0.53	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 58.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

#4  Ø2		#4  Ø4
46 s		14 s
#4  Ø6		#4  Ø7
46 s		14 s

2035 Projected (Build) Conditions
4: Cloverleaf Rd. (SR 4025) & Route 283 East Ramps

Timing Plan: A.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	0	371	0	0	0	0	852	717	160	565	0
Future Volume (veh/h)	74	0	371	0	0	0	0	852	717	160	565	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.04	1.04	1.04				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1511	1911	1807				0	1766	1795	1619	1789	0
Adj Flow Rate, veh/h	83	0	0				0	957	0	180	635	0
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	27	0	7				0	5	3	18	6	0
Cap, veh/h	153	0					0	1292		343	1309	0
Arrive On Green	0.08	0.00	0.00				0.00	0.73	0.00	0.73	0.73	0.00
Sat Flow, veh/h	1820	0	1532				0	1766	1521	508	1789	0
Grp Volume(v), veh/h	83	0	0				0	957	0	180	635	0
Grp Sat Flow(s),veh/h/ln	1820	0	1532				0	1766	1521	508	1789	0
Q Serve(g_s), s	2.4	0.0	0.0				0.0	17.2	0.0	17.5	8.0	0.0
Cycle Q Clear(g_c), s	2.4	0.0	0.0				0.0	17.2	0.0	34.7	8.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	153	0					0	1292		343	1309	0
V/C Ratio(X)	0.54	0.00					0.00	0.74		0.52	0.49	0.00
Avail Cap(c_a), veh/h	302	0					0	1333		355	1351	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.9	0.0	0.0				0.0	4.3	0.0	14.4	3.0	0.0
Incr Delay (d2), s/veh	3.0	0.0	0.0				0.0	2.2	0.0	1.3	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	0.0				0.0	4.0	0.0	3.0	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.8	0.0	0.0				0.0	6.4	0.0	15.7	3.3	0.0
LnGrp LOS	C						A			B		
Approach Vol, veh/h	83						957			815		
Approach Delay, s/veh	26.8						6.4			6.1		
Approach LOS	C						A			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	44.7			9.6			44.7					
Change Period (Y+Rc), s	6.0			6.0			6.0					
Max Green Setting (Gmax), s	40.0			8.0			40.0					
Max Q Clear Time (g_c+l1), s	19.7			4.4			37.2					
Green Ext Time (p_c), s	7.3			0.1			1.5					
Intersection Summary												
HCM 7th Control Delay, s/veh				7.2								
HCM 7th LOS				A								
Notes												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	438	49	98	12	22	72	43	1059	22	17	724	196
Future Volume (vph)	438	49	98	12	22	72	43	1059	22	17	724	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	13	10	13	13	10	11	11	10	11	11
Grade (%)		-5%			3%			-3%			-4%	
Storage Length (ft)	225		0	75		0	100		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	75		25	75		25	75		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		2071			2145			626			2157	
Travel Time (s)		40.3			41.8			10.7			36.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	7%	0%	0%	3%	0%	7%	43%	0%	11%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	466	156	0	13	100	0	46	1150	0	18	979	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		18.5	18.5		18.5	18.5	
Total Split (s)	39.0	39.0		39.0	39.0		21.0	21.0		21.0	21.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%		35.0%	35.0%	
Maximum Green (s)	33.0	33.0		33.0	33.0		14.5	14.5		14.5	14.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		6.0	6.0		6.0	6.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		14.0	14.0		14.0	14.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)												
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.81	0.19		0.02	0.13		0.40	1.10		0.16	0.94	
Control Delay (s/veh)	24.6	6.9		6.1	7.1		34.5	84.0		21.7	40.9	

2035 Projected (Build) Conditions
 6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: A.M. Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.6	6.9		6.1	7.1		34.5	84.0		21.7	40.9	
Queue Length 50th (ft)	122	23		2	16		13	~298		5	~219	
Queue Length 95th (ft)	215	44		8	32		#59	#451		22	#368	
Internal Link Dist (ft)		1991			2065			546			2077	
Turn Bay Length (ft)	225			75			100			75		
Base Capacity (vph)	668	937		617	897		114	1049		114	1044	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.70	0.17		0.02	0.11		0.40	1.10		0.16	0.94	

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 Yellow

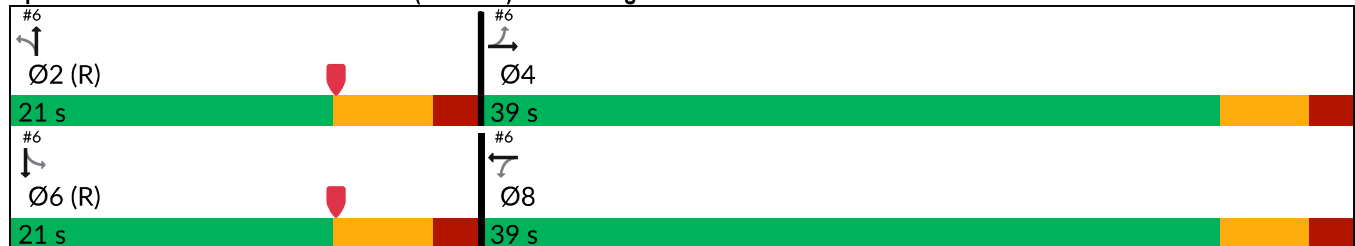
Natural Cycle: 70

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.



2035 Projected (Build) Conditions
6: Cloverleaf Rd. (SR 4025) & Schwanger Rd.

Timing Plan: A.M. Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	438	49	98	12	22	72	43	1059	22	17	724	196
Future Volume (veh/h)	438	49	98	12	22	72	43	1059	22	17	724	196
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.04	1.04	1.00	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1972	2066	1962	1750	1820	1776	1912	1812	1300	1949	1793	1906
Adj Flow Rate, veh/h	466	52	73	13	23	62	46	1127	23	18	770	191
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	0	7	0	0	3	0	7	43	0	11	3
Cap, veh/h	666	326	458	576	182	492	221	1400	29	180	1097	272
Arrive On Green	0.42	0.42	0.40	0.42	0.42	0.40	0.41	0.41	0.39	0.41	0.41	0.39
Sat Flow, veh/h	1384	778	1092	1184	435	1173	597	3451	70	509	2704	671
Grp Volume(v), veh/h	466	0	125	13	0	85	46	562	588	18	485	476
Grp Sat Flow(s),veh/h/ln	1384	0	1869	1184	0	1609	597	1722	1800	509	1703	1672
Q Serve(g_s), s	18.4	0.0	2.5	0.4	0.0	2.0	4.2	17.3	17.3	1.9	14.2	14.3
Cycle Q Clear(g_c), s	19.9	0.0	2.5	2.4	0.0	2.0	18.4	17.3	17.3	19.2	14.2	14.3
Prop In Lane	1.00		0.58	1.00		0.73	1.00		0.04	1.00		0.40
Lane Grp Cap(c), veh/h	666	0	784	576	0	674	221	699	730	180	691	678
V/C Ratio(X)	0.70	0.00	0.16	0.02	0.00	0.13	0.21	0.80	0.80	0.10	0.70	0.70
Avail Cap(c_a), veh/h	870	0	1059	751	0	912	221	699	730	180	691	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	11.0	11.5	0.0	10.9	22.4	15.7	15.7	24.2	14.8	15.0
Incr Delay (d2), s/veh	1.7	0.0	0.1	0.0	0.0	0.1	2.1	9.6	9.2	1.1	5.9	6.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.0	0.0	1.7	0.2	0.0	1.1	1.2	11.8	12.1	0.5	9.5	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.3	0.0	11.1	11.5	0.0	11.0	24.6	25.3	25.0	25.3	20.7	21.0
LnGrp LOS	B		B	B		B	C	C	C	C	C	C
Approach Vol, veh/h	591			98			1196			979		
Approach Delay, s/veh	16.8			11.1			25.1			20.9		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	29.8			30.2			29.8			30.2		
Change Period (Y+Rc), s	6.5			6.0			6.5			6.0		
Max Green Setting (Gmax), s	14.5			33.0			14.5			33.0		
Max Q Clear Time (g_c+I1), s	19.8			22.4			16.7			4.9		
Green Ext Time (p_c), s	0.0			1.7			0.0			0.5		
Intersection Summary												
HCM 7th Control Delay, s/veh	21.5											
HCM 7th LOS	C											

7: Schwanger Rd. & Campus Dr. & Merts Dr.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	392	1	30	229	4	0	4	65	40	4	24
Future Volume (vph)	13	392	1	30	229	4	0	4	65	40	4	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	14	14	14	16	16	16
Grade (%)		0%			-1%			1%			-3%	
Storage Length (ft)	175		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		885			2071			354			527	
Travel Time (s)		17.2			40.3			6.9			10.3	
Confl. Peds. (#/hr)	1					1						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	17%	2%	0%	5%	1%	0%	0%	0%	3%	5%	0%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	446	0	34	265	0	0	79	0	0	77	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	392	1	30	229	4	0	4	65	40	4	24
Future Vol, veh/h	13	392	1	30	229	4	0	4	65	40	4	24
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	175		-	150		-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	1	-	-	-3	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	17	2	0	5	1	0	0	0	3	5	0	4
Mvmt Flow	15	445	1	34	260	5	0	5	74	45	5	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	266	0	0	447	0	0	806	810	446	809	808	264
Stage 1	-	-	-	-	-	-	476	476	-	332	332	-
Stage 2	-	-	-	-	-	-	331	334	-	477	476	-
Critical Hdwy	4.5	-	-	4.4	-	-	7.3	6.7	6.33	6.6	5.9	5.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.7	-	5.55	4.9	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.7	-	5.55	4.9	-
Follow-up Hdwy	3.2	-	-	3	-	-	3	4	3.1	3	4	3.1
Pot Cap-1 Maneuver	906	-	-	833	-	-	321	302	638	374	363	840
Stage 1	-	-	-	-	-	-	632	546	-	824	685	-
Stage 2	-	-	-	-	-	-	770	635	-	697	606	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	905	-	-	833	-	-	290	285	638	307	342	839
Mov Cap-2 Maneuver	-	-	-	-	-	-	290	285	-	307	342	-
Stage 1	-	-	-	-	-	-	622	537	-	789	656	-
Stage 2	-	-	-	-	-	-	709	608	-	601	596	-

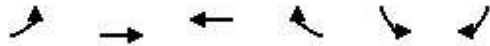
Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.29	1.08	11.96	16.18
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	596	905	-	-	833	-	-	399
HCM Lane V/C Ratio	0.132	0.016	-	-	0.041	-	-	0.194
HCM Ctrl Dly (s/v)	12	9	-	-	9.5	-	-	16.2
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.7

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	34	10	23	52	21	39
Future Volume (vph)	34	10	23	52	21	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Grade (%)	-2%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)		25	25		25	25
Link Speed (mph)	40			40	35	
Link Distance (ft)	2119			1252	852	
Travel Time (s)	36.1			21.3	16.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	16%	0%	19%	7%	0%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	0	101	81	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	4.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	34	10	23	52	21	39
Future Vol, veh/h	34	10	23	52	21	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	0	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	16	0	19	7	0	5
Mvmt Flow	46	14	31	70	28	53
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	59	0	185	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	-	-	4.5	-	6.4	6.25
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	3.2	-	3	3.1
Pot Cap-1 Maneuver	-	-	1072	-	932	1084
Stage 1	-	-	-	-	1133	-
Stage 2	-	-	-	-	1039	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1072	-	904	1084
Mov Cap-2 Maneuver	-	-	-	-	904	-
Stage 1	-	-	-	-	1099	-
Stage 2	-	-	-	-	1039	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		2.59		8.86	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1013	-	-	552	-	
HCM Lane V/C Ratio	0.08	-	-	0.029	-	
HCM Ctrl Dly (s/v)	8.9	-	-	8.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

9: Mt. Pleasant Rd. (SR 4010) & Eastern (Car Only) Dw



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	31	38	50	26	8	10
Future Volume (vph)	31	38	50	26	8	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		2%	-2%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25			25	25	25
Link Speed (mph)		40	40		25	
Link Distance (ft)		1109	2119		324	
Travel Time (s)		18.9	36.1		8.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	25%	15%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	76	85	0	20	0
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	38	50	26	8	10
Future Vol, veh/h	31	38	50	26	8	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	2	-2	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	25	15	2	2	2
Mvmt Flow	34	42	56	29	9	11

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	84	0	0 181 70
Stage 1	-	-	- 70 -
Stage 2	-	-	- 111 -
Critical Hdwy	4.3	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	3	-	- 3 3.1
Pot Cap-1 Maneuver	1123	-	- 936 1060
Stage 1	-	-	- 1112 -
Stage 2	-	-	- 1063 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1123	-	- 907 1060
Mov Cap-2 Maneuver	-	-	- 907 -
Stage 1	-	-	- 1077 -
Stage 2	-	-	- 1063 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	3.73	0	8.73
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	809	-	-	-	986
HCM Lane V/C Ratio	0.031	-	-	-	0.02
HCM Ctrl Dly (s/v)	8.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	55	0	5	55	0	0	58	14	0	32	17
Future Volume (vph)	57	55	0	5	55	0	0	58	14	0	32	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1309			1109			278			356	
Travel Time (s)		22.3			18.9			7.6			9.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	25%	0%	2%	15%	0%	0%	50%	2%	0%	72%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	67	0	0	80	0	0	55	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

10: Proposed Archers Lane/Western Dw. & Mt. Pleasant Rd. (SR 4010)

Intersection

Int Delay, s/veh 6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	57	55	0	5	55	0	0	58	14	0	32	17
Future Vol, veh/h	57	55	0	5	55	0	0	58	14	0	32	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	25	0	2	15	0	0	50	2	0	72	2
Mvmt Flow	63	61	0	6	61	0	0	64	16	0	36	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	61	0	0	61	0	0	278	260	61	292	260	61
Stage 1	-	-	-	-	-	-	188	188	-	72	72	-
Stage 2	-	-	-	-	-	-	90	72	-	220	188	-
Critical Hdwy	4.3	-	-	4.3	-	-	7.1	7	6.22	7.1	7.22	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	6	-	6.1	6.22	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	6	-	6.1	6.22	-
Follow-up Hdwy	3	-	-	3	-	-	3	4.45	3.1	3	4.648	3.1
Pot Cap-1 Maneuver	1144	-	-	1144	-	-	777	571	1073	760	541	1073
Stage 1	-	-	-	-	-	-	943	663	-	1094	716	-
Stage 2	-	-	-	-	-	-	1069	750	-	905	631	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1144	-	-	1144	-	-	669	535	1073	622	508	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	669	535	-	622	508	-
Stage 1	-	-	-	-	-	-	889	625	-	1089	712	-
Stage 2	-	-	-	-	-	-	993	746	-	754	594	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	4.24	0.68	12.02	11.35
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	593	916	-	-	150	-	-	621
HCM Lane V/C Ratio	0.135	0.055	-	-	0.005	-	-	0.088
HCM Ctrl Dly (s/v)	12	8.3	0	-	8.2	0	-	11.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0	-	-	0.3

1: Cloverleaf Rd. (SR 4025) & Mt. Pleasant Rd. (SR 4010)

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	80	27	334	69	23	229
Future Volume (vph)	80	27	334	69	23	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		1%			-1%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Link Speed (mph)	40		40			35
Link Distance (ft)	1263		1057			510
Travel Time (s)	21.5		18.0			9.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	20%	13%	5%	2%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	114	0	428	0	0	268
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	27	334	69	23	229
Future Vol, veh/h	80	27	334	69	23	229
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	1	-	-	-1
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	20	13	5	2	0	3
Mvmt Flow	85	29	355	73	24	244
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	685	392	0	0	429	0
Stage 1	392	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Critical Hdwy	6.4	6.23	-	-	4.3	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.2	3.2	-	-	3	-
Pot Cap-1 Maneuver	445	676	-	-	855	-
Stage 1	740	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	430	676	-	-	855	-
Mov Cap-2 Maneuver	430	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Approach	WB	NB	SB			
HCM Ctrl Dly, s/v	14.99	0	0.85			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	473	164	-	
HCM Lane V/C Ratio	-	-	0.24	0.029	-	
HCM Ctrl Dly (s/v)	-	-	15	9.3	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.9	0.1	-	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	758	110	39	23	407	375	65	2	246	56
Future Volume (vph)	0	0	758	110	39	23	407	375	65	2	246	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	14	12	14	12	11	11	11	11	12
Grade (%)		0%			-5%			2%			-2%	
Storage Length (ft)	0		0	0		0	700		0	100		100
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Satd. Flow (prot)	0	0	1512	0	1502	0	1597	1492	0	1670	1620	0
Flt Permitted					0.969		0.317			0.503		
Satd. Flow (perm)	0	0	1512	0	1502	0	533	1492	0	884	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			383		7			17			12	
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		424			1042			715			1057	
Travel Time (s)		11.6			23.7			12.2			18.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	3%	16%	29%	0%	6%	7%	47%	0%	6%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	773	0	175	0	415	449	0	2	308	0
Turn Type			pm+ov	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases			5		8		5	2			6	
Permitted Phases			4	8			2			6		
Detector Phase			5	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)			5.0	5.0	5.0		5.0	10.0		10.0	10.0	
Minimum Split (s)			11.0	11.0	11.0		11.0	16.0		16.0	16.0	
Total Split (s)			32.0	32.0	32.0		32.0	68.0		36.0	36.0	
Total Split (%)			32.0%	32.0%	32.0%		32.0%	68.0%		36.0%	36.0%	
Maximum Green (s)			26.0	26.0	26.0		26.0	62.0		30.0	30.0	
Yellow Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)			2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)			-1.0		-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)			5.0		5.0		5.0	5.0		5.0	5.0	
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?			Yes				Yes			Yes	Yes	
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)			3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode			None	None	None		None	Min		Min	Min	
Walk Time (s)												

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
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)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.0
Total Split (s)	32.0
Total Split (%)	32%
Maximum Green (s)	26.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	

2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Don't Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)			44.1		14.8		48.9	48.9		19.6	19.6	
Actuated g/C Ratio			0.59		0.20		0.66	0.66		0.26	0.26	
v/c Ratio			0.73		0.57		0.60	0.45		0.01	0.71	
Control Delay (s/veh)			10.6		36.0		10.7	8.1		22.0	34.5	
Queue Delay			0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)			10.6		36.0		10.7	8.1		22.0	34.5	
LOS			B		D		B	A		C	C	
Approach Delay (s/veh)		10.6			36.0			9.4			34.4	
Approach LOS		B			D			A			C	
Queue Length 50th (ft)			98		89		75	83		1	134	
Queue Length 95th (ft)			334		189		181	192		6	250	
Internal Link Dist (ft)		344			962			635			977	
Turn Bay Length (ft)							700			100		
Base Capacity (vph)			1119		578		758	1258		387	717	
Starvation Cap Reductn			0		0		0	0		0	0	
Spillback Cap Reductn			0		0		0	0		0	0	
Storage Cap Reductn			0		0		0	0		0	0	
Reduced v/c Ratio			0.69		0.30		0.55	0.36		0.01	0.43	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 74.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay (s/veh): 15.7

Intersection LOS: B

Intersection Capacity Utilization 89.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 2: Cloverleaf Rd. (SR 4025) & Route 283 West Ramps/Steel Way

#2  Ø2	#2  Ø4
68 s	32 s
#2  Ø5	#2  Ø6
32 s	36 s
#2  Ø8	#2  Ø8
32 s	32 s

Lane Group	Ø4
Flash Don't Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	