TECHNICAL APPENDIX

RAW TRAFFIC COUNTS

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman — Seven Mile Rd
JOB NO. 26-118 — &
DATE OF COUNT: 4/30/2026 — Nine Mile Rd
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

Traffic Counts & Surveys Inc.

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	8	0	0	8	1	0	8	0	0	2	1	0	12	3	0	10	4	0	8	10	0	9	2	0	5	2	0	4	1	0	6	0	0	8	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	24	0	0	25	0	0	31	0	0	43	1	0	29	2	0	36	2	0	31	1	0	41	1	0	25	0	0	32	0	0	33	1	0	25	1
	App. Total	0	32	0	0	33	1	0	39	0	0	45	2	0	41	6	0	46	6	0	39	11	0	50	3	0	30	2	0	36	1	0	39	1	0	33	1
	Pct HV	0%			3%			0%			4%			13%			12%			22%			6%			6%			3%			3%			3%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	1	0	0	2	0	0	1	0	0	4	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0
	App. Total	0	3	0	0	1	0	0	1	0	0	0	0	0	0	1	0	2	0	0	2	1	0	0	0	0	1	0	0	3	0	0	2	0	0	5	0
	Pct HV	0%			0%			0%						100%			0%			33%						0%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	30	2	0	22	1	0	13	0	0	33	1	0	29	0	0	16	1	0	21	2	0	15	1	0	17	0	0	26	0	0	20	0	0	17	0
	Through	0	44	1	0	32	1	0	17	0	0	36	1	0	39	4	0	54	2	0	43	0	0	36	3	0	47	3	0	45	2	0	50	4	0	52	2
	Right	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	74	3	0	54	2	0	31	0	0	69	2	0	68	4	0	70	4	0	64	2	0	51	4	0	64	3	0	71	2	0	70	4	0	69	2
	Pct HV	4%			4%			0%			3%			6%			5%			3%			7%			4%			3%			5%			3%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	98	3	0	113	0	0	111	1	0	110	0	0	123	1	0	107	0	0	110	2	0	105	1	0	110	2	0	95	1	0	92	0	0	68	1
	Right	0	22	0	0	32	0	0	17	1	0	13	0	0	21	0	0	15	1	0	14	0	0	11	1	0	12	0	0	13	1	0	24	2	0	11	4
	App. Total	0	120	3	0	145	0	0	128	2	0	124	0	0	144	1	0	123	1	0	124	2	0	116	2	0	122	2	0	108	2	0	116	2	0	79	5
	Pct HV	2%			0%			2%			0%			1%			1%			2%			2%			2%			2%			2%			6%		
Total Class Volume		0	229	6	0	233	3	0	199	2	0	238	4	0	253	12	0	241	11	0	229	16	0	217	9	0	217	7	0	218	5	0	227	7	0	186	8
Total Interval Volume		235			236			201			242			265			252			245			226			224			223			234			194		
Intersection Pct HV		3%			1%			1%			2%			5%			4%			7%			4%			3%			2%			3%			4%		

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	914	1.6%
6:45 AM	944	2.2%
7:00 AM	960	3.0%
7:15 AM	**1,004**	**4.3%**
7:30 AM	988	4.9%
7:45 AM	947	4.5%
8:00 AM	918	4.0%
8:15 AM	907	3.1%
8:30 AM	875	3.1%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Volkman Seven Mile Rd & Nine Mile Rd
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter Analyst
Miovision BNG

AM PEAK HOURS

APPROACH	MOVEMENT	7:15 AM BK	7:15 AM PC	7:15 AM HV	7:30 AM BK	7:30 AM PC	7:30 AM HV	7:45 AM BK	7:45 AM PC	7:45 AM HV	8:00 AM BK	8:00 AM PC	8:00 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	1	0	12	3	0	10	4	0	8	10
	Through	0	0	0	0	0	1	0	0	0	0	0	0
	Right	0	43	1	0	29	2	0	36	2	0	31	1
	App. Total	0	45	2	0	41	6	0	46	6	0	39	11
	Pct HV		4%			13%			12%			22%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	2	0	0	2	1
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	1	0	0	0	0	0	0
	App. Total	0	0	0	0	0	1	0	2	0	0	2	1
	Pct HV					100%			0%			33%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	33	1	0	29	0	0	16	1	0	21	2
	Through	0	36	1	0	39	4	0	54	2	0	43	0
	Right	0	0	0	0	0	0	0	0	1	0	0	0
	App. Total	0	69	2	0	68	4	0	70	4	0	64	2
	Pct HV		3%			6%			5%			3%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	0	0	0	1	0	0	0	0
	Through	0	110	0	0	123	1	0	107	0	0	110	2
	Right	0	13	0	0	21	0	0	15	1	0	14	0
	App. Total	0	124	0	0	144	1	0	123	1	0	124	2
	Pct HV		0%			1%			1%			2%	
Total Class Volume		0	238	4	0	253	12	0	241	11	0	229	16
Total Interval Volume			242			265			252			245	
Intersection Pct Trucks			2%			5%			4%			7%	

Approach

Receiving

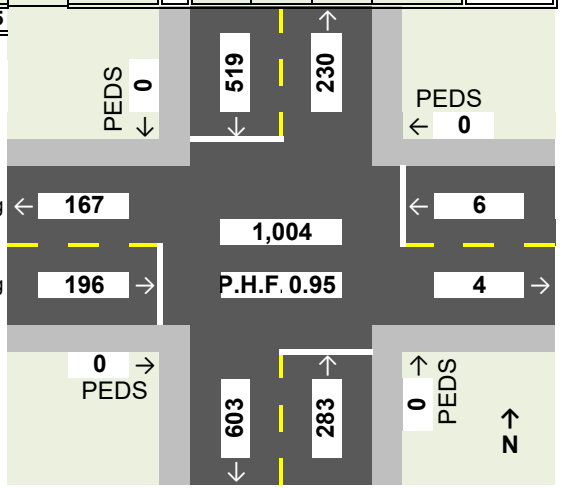
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	18	50		36%	25.51%
EBT	1	1		100%	0.51%
EBR	6	145		4%	73.98%
Total	25	196	0.94	13%	100.00%
WBU	0	0			0.00%
WBL	1	5		20%	83.33%
WBT	0	0			0.00%
WBR	1	1		100%	16.67%
Total	2	6	0.50	33%	100.00%
NBU	0	0			0.00%
NBL	4	103		4%	36.40%
NBT	7	179		4%	63.25%
NBR	1	1		100%	0.35%
Total	12	283	0.96	4%	100.00%
SBU	0	0			0.00%
SBL	0	2		0%	0.39%
SBT	3	453		1%	87.28%
SBR	1	64		2%	12.33%
Total	4	519	0.89	1%	100.00%
Total	**43**	**1,004**	**0.95**		
		1,004			
		4%			

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	103	4%	61.68%	
WBT	0		0.00%	
SBR	64	2%	38.32%	
Total	167	3%	100.00%	
WBU	0		0.00%	Westbound
SBL	2	0%	50.00%	
EBT	1	100%	25.00%	
NBR	1	100%	25.00%	
Total	4	50%	100.00%	
NBU	0		0.00%	Northbound
WBL	5	20%	0.83%	
SBT	453	1%	75.12%	
EBR	145	4%	24.05%	
Total	603	2%	100.00%	
SBU	0		0.00%	Southbound
EBL	50	36%	21.74%	
NBT	179	4%	77.83%	
WBR	1	100%	0.43%	
Total	230	11%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:15	7:30	7:45	8:00	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
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INTERSECTION

PROJECT: WCE Volkman
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter: Miovision
Analyst: BNG

Seven Mile Rd
&
Nine Mile Rd

PM PEAK HOURS
15 Minute Period Beginning @

Traffic Counts & Surveys Inc.

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	18	0	0	42	1	0	41	1	0	48	2	0	28	0	0	41	1	0	33	0	0	37	1	0	17	0	0	21	0	0	19	2	0	13	0
	Through	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	35	0	0	41	0	0	39	0	0	55	0	0	44	0	0	50	0	0	52	1	0	52	0	0	34	1	0	34	0	0	27	0	0	12	0
	App. Total	0	53	0	0	83	1	0	81	1	0	103	2	0	72	0	0	91	1	0	85	1	0	89	1	0	51	1	0	55	0	0	46	2	0	25	0
	Pct HV		0%			1%			1%			2%			0%			1%			1%			1%			2%			0%			4%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0
	App. Total	0	0	0	0	0	0	0	3	0	0	1	0	0	1	0	0	3	0	0	2	0	0	1	0	0	2	0	0	1	0	0	0	0	0	0	0
	Pct HV								0%			0%			0%			0%			0%			0%			0%			0%							
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	36	0	0	40	0	0	44	0	0	32	0	0	45	0	0	36	3	0	27	0	0	30	0	0	33	0	0	35	1	0	34	0	0	23	0
	Through	0	98	0	0	110	0	0	111	0	0	112	1	0	121	2	0	124	0	0	106	2	0	131	2	0	113	1	0	109	1	0	104	1	0	93	0
	Right	0	2	0	0	2	0	0	0	0	0	1	0	0	1	0	0	1	0	0	2	0	0	1	0	0	0	0	0	1	0	0	1	0	0	2	0
	App. Total	0	136	0	0	152	0	0	155	0	0	145	1	0	167	2	0	161	3	0	135	2	0	162	2	0	146	1	0	145	2	0	139	1	0	118	0
	Pct HV		0%			0%			0%			1%			1%			2%			1%			1%			1%			1%			1%			0%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Through	0	77	2	0	88	1	0	65	1	0	57	1	0	59	0	0	62	0	0	60	0	0	79	1	0	61	4	0	61	2	0	58	1	0	53	2
	Right	0	9	0	0	13	1	0	15	1	0	12	0	0	14	0	0	10	0	0	13	0	0	15	0	0	14	0	0	10	0	0	16	0	0	5	0
	App. Total	0	86	2	0	101	2	0	80	2	0	69	1	0	73	1	0	72	0	0	73	0	0	94	1	0	75	4	0	72	2	0	74	1	0	58	2
	Pct HV		2%			2%			2%			1%			1%			0%			0%			1%			5%			3%			1%			3%	
Total Class Volume		0	275	2	0	336	3	0	319	3	0	318	4	0	313	3	0	327	4	0	295	3	0	346	4	0	274	6	0	273	4	0	259	4	0	201	2
Total Interval Volume			277			339			322			322			316			331			298			350			280			277			263			203	
Intersection Pct HV			1%			1%			1%			1%			1%			1%			1%			1%			2%			1%			2%			1%	

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	1,260	1.0%
3:45 PM	1,299	1.0%
4:00 PM	1,291	1.1%
4:15 PM	1,267	1.1%
4:30 PM	**1,295**	**1.1%**
4:45 PM	1,259	1.4%
5:00 PM	1,205	1.4%
5:15 PM	1,170	1.5%
5:30 PM	1,023	1.6%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
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INTERSECTION

PROJECT: WCE Volkman Seven Mile Rd & Nine Mile Rd
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter Analyst
Miovision BNG

PM PEAK HOURS

APPROACH	MOVEMENT	4:30 PM			4:45 PM			5:00 PM			5:15 PM		
		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	28	0	0	41	1	0	33	0	0	37	1
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	44	0	0	50	0	0	52	1	0	52	0
	App. Total	0	72	0	0	91	1	0	85	1	0	89	1
	Pct HV		0%			1%			1%			1%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	2	0	0	1	0	0	1	0
	Through	0	1	0	0	1	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	1	0	0	0	0
	App. Total	0	1	0	0	3	0	0	2	0	0	1	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	45	0	0	36	3	0	27	0	0	30	0
	Through	0	121	2	0	124	0	0	106	2	0	131	2
	Right	0	1	0	0	1	0	0	2	0	0	1	0
	App. Total	0	167	2	0	161	3	0	135	2	0	162	2
	Pct HV		1%			2%			1%			1%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	1	0	0	0	0	0	0	0	0	0
	Through	0	59	0	0	62	0	0	60	0	0	79	1
	Right	0	14	0	0	10	0	0	13	0	0	15	0
	App. Total	0	73	1	0	72	0	0	73	0	0	94	1
	Pct HV		1%			0%			0%			1%	
Total Class Volume		0	313	3	0	327	4	0	295	3	0	346	4
Total Interval Volume			316			331			298			350	
Intersection Pct Trucks			1%			1%			1%			1%	

Approach

Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	2	141		1%	41.47%
EBT	0	0			0.00%
EBR	1	199		1%	58.53%
Total	3	340	0.92	1%	100.00%
WBU	0	0			0.00%
WBL	0	4		0%	57.14%
WBT	0	2		0%	28.57%
WBR	0	1		0%	14.29%
Total	0	7	0.58	0%	100.00%
NBU	0	0			0.00%
NBL	3	141		2%	22.24%
NBT	6	488		1%	76.97%
NBR	0	5		0%	0.79%
Total	9	634	0.94	1%	100.00%
SBU	0	0			0.00%
SBL	1	1		100%	0.32%
SBT	1	261		0%	83.12%
SBR	0	52		0%	16.56%
Total	2	314	0.83	1%	100.00%
Total	**14**	**1,295**	**0.93**		

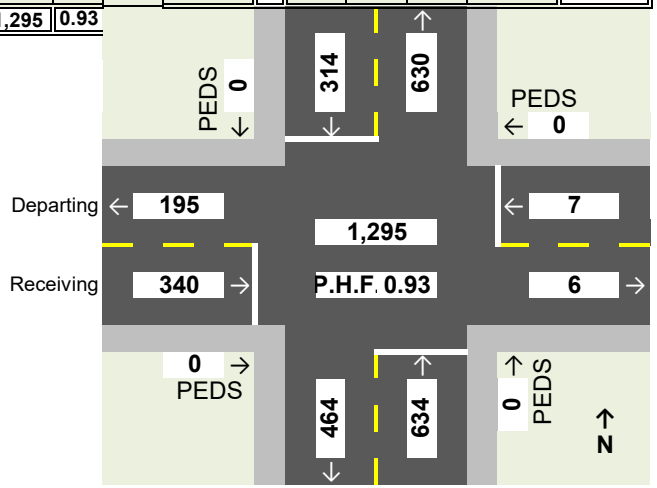
Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	141	2%	72.31%	
WBT	2	0%	1.03%	
SBR	52	0%	26.67%	
Total	195	2%	100.00%	
WBU	0		0.00%	Westbound
SBL	1	100%	16.67%	
EBT	0		0.00%	
NBR	5	0%	83.33%	
Total	6	17%	100.00%	
NBU	0		0.00%	Northbound
WBL	4	0%	0.86%	
SBT	261	0%	56.25%	
EBR	199	1%	42.89%	
Total	464	0%	100.00%	
SBU	0		0.00%	Southbound
EBL	141	1%	22.38%	
NBT	488	1%	77.46%	
WBR	1	0%	0.16%	
Total	630	1%	100.00%	
Total	**1,295**	**1%**		

Pedestrian Volumes

APPROACH	MOVEMENT	4:30	4:45	5:00	5:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Traffic Counts & Surveys Inc.



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Volkman — Seven Mile Road
JOB NO. 26-118 — &
DATE OF COUNT: 4/30/2026 — Inland Road

Counter: Miovision
Analyst: BNG

AM PEAK HOURS

15 Minute Period Beginning @

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	18	0	0	25	0	0	31	0	0	27	4	0	25	1	0	34	1	0	31	1	0	22	1	0	23	0	0	23	1	0	17	1	0	20	1
	Right	0	15	0	0	15	0	0	11	0	0	13	0	0	15	0	0	8	0	0	7	0	0	6	0	0	5	4	0	5	0	0	8	1	0	6	1
	App. Total	0	33	0	0	40	0	0	42	0	0	40	4	0	40	1	0	42	1	0	38	1	0	28	1	0	28	4	0	28	1	0	25	2	0	26	2
	Pct HV		0%			0%			0%			9%			2%			2%			3%			3%			13%			3%			7%			7%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	30	0	0	39	0	0	22	0	0	20	0	0	37	0	0	17	0	0	25	0	0	18	0	0	12	0	0	15	1	0	22	1	0	16	3
	Through	0	21	4	0	14	0	0	6	1	0	19	1	0	16	1	0	8	1	0	9	4	0	8	0	0	10	0	0	20	1	0	13	1	0	8	1
	App. Total	0	51	4	0	53	0	0	28	1	0	39	1	0	53	1	0	25	1	0	34	4	0	26	0	0	22	0	0	35	2	0	35	2	0	24	4
	Pct HV		7%			0%			3%			3%			2%			4%			11%			0%			0%			5%			5%			14%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	3	0	0	1	0	0	1	1	0	3	0	0	1	3	0	3	1	0	3	0	0	3	0	0	4	1	0	3	1	0	3	0	0	4	3
	Right	0	6	0	0	11	0	0	8	1	0	7	0	0	6	5	0	12	0	0	6	8	0	9	1	0	7	3	0	6	0	0	12	0	0	8	1
	App. Total	0	9	0	0	12	0	0	9	2	0	10	0	0	7	8	0	15	1	0	9	8	0	12	1	0	11	4	0	9	1	0	15	0	0	12	4
	Pct HV		0%			0%			18%			0%			53%			6%			47%			8%			27%			10%			0%			25%	
Total Class Volume		0	93	4	0	105	0	0	79	3	0	89	5	0	100	10	0	82	3	0	81	13	0	66	2	0	61	8	0	72	4	0	75	4	0	62	10
Total Interval Volume			97			105			82			94			110			85			94			68			69			76			79			72	
Intersection Pct HV			4%			0%			4%			5%			9%			4%			14%			3%			12%			5%			5%			14%	

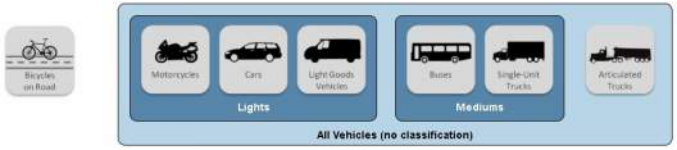
Pedestrian Volumes

15 Minute Period Beginning @

APPROACH	Movement	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)



Intersection Total One Hour Volumes	Pct HV
6:30 AM	378	0.3%
6:45 AM	**391**	**1.5%**
7:00 AM	371	1.6%
7:15 AM	383	3.4%
7:30 AM	357	3.9%
7:45 AM	316	3.8%
8:00 AM	307	3.9%
8:15 AM	292	1.4%
8:30 AM	296	1.4%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Volkman Seven Mile Road & Inland Road
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	AM PEAK HOURS 6:45 AM BK	6:45 AM PC	6:45 AM HV	7:00 AM BK	7:00 AM PC	7:00 AM HV	7:15 AM BK	7:15 AM PC	7:15 AM HV	7:30 AM BK	7:30 AM PC	7:30 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	25	0	0	31	0	0	27	4	0	25	1
	Right	0	15	0	0	11	0	0	13	0	0	15	0
	App. Total	0	40	0	0	42	0	0	40	4	0	40	1
	Pct HV		0%			0%			9%			2%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	39	0	0	22	0	0	20	0	0	37	0
	Through	0	14	0	0	6	1	0	19	1	0	16	1
	App. Total	0	53	0	0	28	1	0	39	1	0	53	1
	Pct HV		0%			3%			3%			2%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	1	1	0	3	0	0	1	3
	Right	0	11	0	0	8	1	0	7	0	0	6	5
	App. Total	0	12	0	0	9	2	0	10	0	0	7	8
	Pct HV		0%			18%			0%			53%	
Total Class Volume		0	105	0	0	79	3	0	89	5	0	100	10
Total Interval Volume			105			82			94			110	
Intersection Pct Trucks			0%			4%			5%			9%	

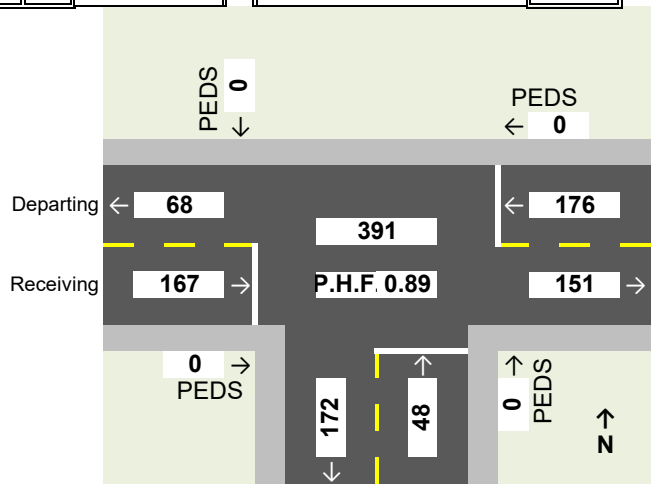
Approach

Receiving Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBT	5	113		4%	67.66%
EBR	0	54		0%	32.34%
Total	5	167	0.95	3%	100.00%
WBU	0	0			0.00%
WBL	0	118		0%	67.05%
WBT	3	58		5%	32.95%
Total	3	176	0.81	2%	100.00%
NBU	0	0			0.00%
NBL	4	10		40%	20.83%
NBR	6	38		16%	79.17%
Total	10	48	0.80	21%	100.00%
Total	**3**	**391**	**0.89**		

Departing Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
WBT	58	5%	85.29%	
NBL	10	40%	14.71%	
Total	68	10%	100.00%	
WBU	0		0.00%	Westbound
NBR	38	16%	25.17%	
EBT	113	4%	74.83%	
Total	151	7%	100.00%	
NBU	0		0.00%	Northbound
WBL	118	0%	68.60%	
EBR	54	0%	31.40%	
Total	172	0%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	6:45	7:00	7:15	7:30	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	**0**
Westbound	Crosswalk	0	0	0	0	**0**
Northbound	Crosswalk	0	0	0	0	**0**
Southbound	Crosswalk	0	0	0	0	**0**
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman — Seven Mile Road
JOB NO. 26-118 — &
DATE OF COUNT: 4/30/2026 — Inland Road
Counter: Miovision — Analyst: BNG — PM PEAK HOURS — 15 Minute Period Beginning @

Traffic Counts & Surveys Inc.

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	23	0	0	38	0	0	35	0	0	35	0	0	39	1	0	32	1	0	29	1	0	32	0	0	16	0	0	19	0	0	9	0	0	9	0
	Right	0	5	0	0	8	0	0	8	0	0	6	0	0	17	1	0	9	0	0	9	0	0	5	0	0	4	0	0	7	0	0	5	0	0	3	0
	App. Total	0	28	0	0	46	0	0	43	0	0	41	0	0	56	2	0	41	1	0	38	1	0	37	0	0	20	0	0	26	0	0	14	0	0	12	0
	Pct HV	0%			0%			0%			0%			3%			2%			3%			0%			0%			0%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	16	0	0	11	0	0	16	0	0	8	0	0	15	0	0	18	0	0	15	0	0	17	0	0	17	0	0	9	1	0	19	0	0	5	0
	Through	0	24	0	0	33	1	0	41	1	0	41	0	0	33	0	0	23	3	0	22	0	0	27	0	0	24	0	0	30	0	0	25	0	0	20	0
	App. Total	0	40	0	0	44	1	0	57	1	0	49	0	0	48	0	0	41	3	0	37	0	0	44	0	0	41	0	0	39	1	0	44	0	0	25	0
	Pct HV	0%			2%			2%			0%			0%			7%			0%			0%			0%			3%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	12	0	0	8	0	0	10	0	0	14	0	0	25	0	0	12	0	0	15	0	0	9	0	0	16	0	0	9	0	0	10	1	0	9	0
	Right	0	40	0	0	43	0	0	48	0	0	47	0	0	43	1	0	60	0	0	38	0	0	49	0	0	31	0	0	29	2	0	14	0	0	19	0
	App. Total	0	52	0	0	51	0	0	58	0	0	61	0	0	68	1	0	72	0	0	53	0	0	58	0	0	47	0	0	38	2	0	24	1	0	28	0
	Pct HV	0%			0%			0%			0%			1%			0%			0%			0%			0%			5%			4%			0%		
Total Class Volume		0	120	0	0	141	1	0	158	1	0	151	0	0	172	3	0	154	4	0	128	1	0	139	0	0	108	0	0	103	3	0	82	1	0	65	0
Total Interval Volume		120			142			159			151			175			158			129			139			108			106			83			65		
Intersection Pct HV		0%			1%			1%			0%			2%			3%			1%			0%			0%			3%			1%			0%		

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	572	0.3%
3:45 PM	627	0.8%
4:00 PM	**643**	**1.2%**
4:15 PM	613	1.3%
4:30 PM	601	1.3%
4:45 PM	534	0.9%
5:00 PM	482	0.8%
5:15 PM	436	0.9%
5:30 PM	362	1.1%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman — Seven Mile Road & Inland Road
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter Analyst
Miovision BNG

APPROACH	MOVEMENT	PM PEAK HOURS 4:00 PM BK	PC	HV	4:15 PM BK	PC	HV	4:30 PM BK	PC	HV	4:45 PM BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	35	0	0	35	0	0	39	1	0	32	1
	Right	0	8	0	0	6	0	0	17	1	0	9	0
	App. Total	0	43	0	0	41	0	0	56	2	0	41	1
	Pct HV	0%			0%			3%			2%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	16	0	0	8	0	0	15	0	0	18	0
	Through	0	41	1	0	41	0	0	33	0	0	23	3
	App. Total	0	57	1	0	49	0	0	48	0	0	41	3
	Pct HV	2%			0%			0%			7%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	10	0	0	14	0	0	25	0	0	12	0
	Right	0	48	0	0	47	0	0	43	1	0	60	0
	App. Total	0	58	0	0	61	0	0	68	1	0	72	0
	Pct HV	0%			0%			1%			0%		
Total Class Volume		0	158	1	0	151	0	0	172	3	0	154	4
Total Interval Volume		159			151			175			158		
Intersection Pct Trucks		1%			0%			2%			3%		

Approach

Receiving

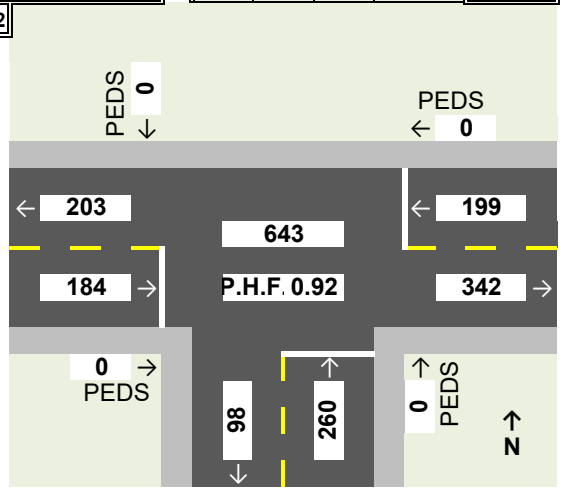
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBT	2	143		1%	77.72%
EBR	1	41		2%	22.28%
Total	3	184	0.79	2%	100.00%
WBU	0	0			0.00%
WBL	0	57		0%	28.64%
WBT	4	142		3%	71.36%
Total	4	199	0.86	2%	100.00%
NBU	0	0			0.00%
NBL	0	61		0%	23.46%
NBR	1	199		1%	76.54%
Total	1	260	0.90	0%	100.00%
Total	**5**	**643**	**0.92**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
WBT	142	3%	69.95%	
NBL	61	0%	30.05%	
Total	203	2%	100.00%	
WBU	0		0.00%	Westbound
NBR	199	1%	58.19%	
EBT	143	1%	41.81%	
Total	342	1%	100.00%	
NBU	0		0.00%	Northbound
WBL	57	0%	58.16%	
EBR	41	2%	41.84%	
Total	98	1%	100.00%	

Pedestrian Volumes APPROACH	MOVEMENT	4:00	4:15	4:30	4:45	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	**0**
Westbound	Crosswalk	0	0	0	0	**0**
Northbound	Crosswalk	0	0	0	0	**0**
Southbound	Crosswalk	0	0	0	0	**0**
	Total	0	0	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman — Johannsen Ave
JOB NO. 26-118 — &
DATE OF COUNT: 4/30/2026 — Nine Mile Road
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

Traffic Counts & Surveys Inc.

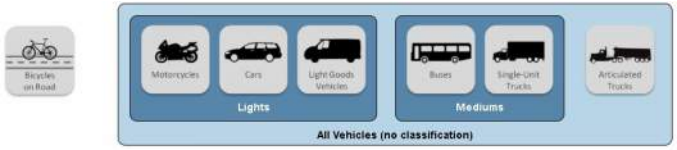
APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	3	0	0	0	0	0	0	0	0	1	0	0	1	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	2	0	0	2	0	0	3	0	0	1	0	0	5	0	0	3	0	0	2	0	0	3	0	0	3	0	0	3	0	0	4	0	0	3	0
	App. Total	0	5	0	0	2	0	0	3	0	0	2	0	0	6	1	0	5	0	0	3	0	0	3	0	0	3	0	0	3	0	0	4	0	0	3	0
	Pct HV		0%			0%			0%			0%			14%			0%			0%			0%			0%			0%			0%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Pct HV																										0%										
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	0	0	0	2	0
	Through	0	48	1	0	40	1	0	22	0	0	36	2	0	48	7	0	65	5	0	52	7	0	43	4	0	52	5	0	45	3	0	55	4	0	55	2
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	48	1	0	40	1	0	24	0	0	38	2	0	50	7	0	65	5	0	55	7	0	43	4	0	52	5	0	49	3	0	55	4	0	57	2
	Pct HV		2%			2%			0%			5%			12%			7%			11%			9%			9%			6%			7%			3%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	118	3	0	138	1	0	119	2	0	130	0	0	133	2	0	118	0	0	115	2	0	108	2	0	129	2	0	89	3	0	110	3	0	80	6
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	118	3	0	138	1	0	119	2	0	130	0	0	133	2	0	118	0	0	115	2	0	110	2	0	129	2	0	89	3	0	110	3	0	80	6
	Pct HV		2%			1%			2%			0%			1%			0%			2%			2%			2%			3%			3%			7%	
Total Class Volume		0	171	4	0	180	2	0	146	2	0	170	2	0	189	10	0	188	5	0	173	9	0	156	6	0	185	7	0	141	6	0	169	7	0	140	8
Total Interval Volume			175			182			148			172			199			193			182			162			192			147			176			148	
Intersection Pct HV			2%			1%			1%			1%			5%			3%			5%			4%			4%			4%			4%			5%	

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	1	0	0	0	0	0	0	0	0	0	0
Total		0	1	0	0	0	0	0	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)



Intersection Total One Hour Volumes		Pct HV
6:30 AM	677	1.5%
6:45 AM	701	2.3%
7:00 AM	712	2.7%
7:15 AM	**746**	**3.5%**
7:30 AM	736	4.1%
7:45 AM	729	3.7%
8:00 AM	683	4.1%
8:15 AM	677	3.8%
8:30 AM	663	4.2%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman Johannsen Ave & Nine Mile Road
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter Analyst
Miovision BNG

AM PEAK HOURS

APPROACH	MOVEMENT	7:15 AM BK	7:15 AM PC	7:15 AM HV	7:30 AM BK	7:30 AM PC	7:30 AM HV	7:45 AM BK	7:45 AM PC	7:45 AM HV	8:00 AM BK	8:00 AM PC	8:00 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	1	1	0	2	0	0	1	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	1	0	0	5	0	0	3	0	0	2	0
	App. Total	0	2	0	0	6	1	0	5	0	0	3	0
	Pct HV		0%			14%			0%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0
	Pct HV												
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	2	0	0	0	0	0	2	0
	Through	0	36	2	0	48	7	0	65	5	0	52	7
	Right	0	0	0	0	0	0	0	0	0	0	1	0
	App. Total	0	38	2	0	50	7	0	65	5	0	55	7
	Pct HV		5%			12%			7%			11%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	130	0	0	133	2	0	118	0	0	115	2
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	130	0	0	133	2	0	118	0	0	115	2
	Pct HV		0%			1%			0%			2%	
Total Class Volume		0	170	2	0	189	10	0	188	5	0	173	9
Total Interval Volume			172			199			193			182	
Intersection Pct Trucks			1%			5%			3%			5%	

Approach

Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	1	6		17%	35.29%
EBT	0	0			0.00%
EBR	0	11		0%	64.71%
Total	1	17	0.61	6%	100.00%
WBU	0	0			
WBL	0	0			
WBT	0	0			
WBR	0	0			
Total	0	0			
NBU	0	0			0.00%
NBL	0	6		0%	2.62%
NBT	21	222		9%	96.94%
NBR	0	1		0%	0.44%
Total	21	229	0.82	9%	100.00%
SBU	0	0			0.00%
SBL	0	0			0.00%
SBT	4	500		1%	100.00%
SBR	0	0			0.00%
Total	4	500	0.93	1%	100.00%
Total	**26**	**746**	**0.94**		

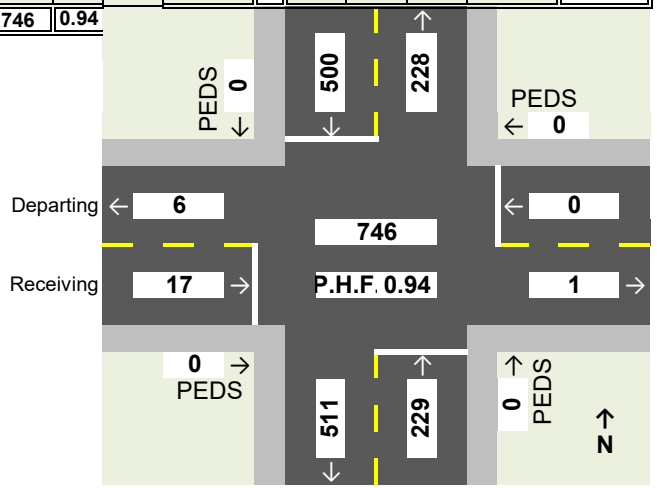
Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	6	0%	100.00%	
WBT	0		0.00%	
SBR	0		0.00%	
Total	6	0%	100.00%	
WBU	0		0.00%	Westbound
SBL	0		0.00%	
EBT	0		0.00%	
NBR	1	0%	100.00%	
Total	1	0%	100.00%	
NBU	0		0.00%	Northbound
WBL	0		0.00%	
SBT	500	1%	97.85%	
EBR	11	0%	2.15%	
Total	511	1%	100.00%	
SBU	0		0.00%	Southbound
EBL	6	17%	2.63%	
NBT	222	9%	97.37%	
WBR	0		0.00%	
Total	228	10%	100.00%	
Total Interval Volume	**746**			
Intersection Pct Trucks	**3%**			

Pedestrian Volumes

APPROACH	MOVEMENT	7:15	7:30	7:45	8:00	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	

Traffic Counts & Surveys Inc.



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman — Johannsen Ave
JOB NO. 26-118 — &
DATE OF COUNT: 4/30/2026 — Nine Mile Road
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

Traffic Counts & Surveys Inc.

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	3	0	0	2	1	0	2	0	0	3	0	0	1	0	0	1	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	2	0	0	2	1	0	2	1	0	1	0	0	2	0	0	1	0	0	4	0	0	0	0	0	2	0	0	0	0	0	3	0	0	2	1
	App. Total	0	5	0	0	4	2	0	4	1	0	4	0	0	3	0	0	2	0	0	7	0	0	1	0	0	2	0	0	0	0	0	3	0	0	2	1
	Pct HV	0%			33%			20%			0%			0%			0%			0%			0%			0%						0%			33%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
	Pct HV																																			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	4	0	0	7	0	0	6	0	0	3	0	0	1	0	0	3	0	0	3	0	0	0	0	0	4	0	0	1	0	0	3	0
	Through	0	112	0	0	144	1	0	138	1	0	155	1	0	144	1	0	156	1	0	143	1	0	155	3	0	133	1	0	123	1	0	121	3	0	104	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	114	0	0	148	1	0	145	1	0	161	1	0	147	1	0	157	1	0	146	1	0	158	3	0	133	1	0	127	1	0	122	3	0	107	0
	Pct HV	0%			1%			1%			1%			1%			1%			1%			2%			1%			1%			2%			0%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	88	5	0	93	2	0	77	2	0	61	1	0	71	0	0	62	1	0	71	0	0	88	2	0	76	4	0	68	2	0	69	2	0	48	2
	Right	0	2	0	0	0	2	0	2	2	0	0	0	0	0	0	0	1	0	0	2	0	0	3	0	0	2	0	0	3	0	0	0	0	0	0	0
	App. Total	0	90	5	0	93	4	0	79	4	0	61	1	0	71	0	0	63	1	0	73	0	0	92	2	0	78	4	0	71	2	0	69	2	0	48	2
	Pct HV	5%			4%			5%			2%			0%			2%			0%			2%			5%			3%			3%			4%		
Total Class Volume		0	209	5	0	245	7	0	228	6	0	226	2	0	221	1	0	222	2	0	226	1	0	251	5	0	213	5	0	198	3	0	194	5	0	159	3
Total Interval Volume		214			252			234			228			222			224			227			256			218			201			199			162		
Intersection Pct HV		2%			3%			3%			1%			0%			1%			0%			2%			2%			1%			3%			2%		

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	1	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	1	0	0	0	0	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	928	2.2%
3:45 PM	936	1.7%
4:00 PM	908	1.2%
4:15 PM	901	0.7%
4:30 PM	**929**	**1.0%**
4:45 PM	925	1.4%
5:00 PM	902	1.6%
5:15 PM	874	2.1%
5:30 PM	780	2.1%

App.= Approach
Pct= Percent

INTERSECTION

Phone: (509) 951-1851
email: beng@trfcnts.com

PROJECT: WCE Volkman Johannsen Ave & Nine Mile Road
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter Analyst
Miovision BNG

PM PEAK HOURS

APPROACH	MOVEMENT	4:30 PM BK	4:30 PM PC	4:30 PM HV	4:45 PM BK	4:45 PM PC	4:45 PM HV	5:00 PM BK	5:00 PM PC	5:00 PM HV	5:15 PM BK	5:15 PM PC	5:15 PM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	1	0	0	3	0	0	1	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	2	0	0	1	0	0	4	0	0	0	0
	App. Total	0	3	0	0	2	0	0	7	0	0	1	0
	Pct HV		0%			0%			0%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	0	0	0	0	0	0	0	0	0	0	0
	Pct HV												
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	3	0	0	1	0	0	3	0	0	3	0
	Through	0	144	1	0	156	1	0	143	1	0	155	3
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	App. Total	0	147	1	0	157	1	0	146	1	0	158	3
	Pct HV		1%			1%			1%			2%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	1	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	71	0	0	62	1	0	71	0	0	88	2
	Right	0	0	0	0	1	0	0	2	0	0	3	0
	App. Total	0	71	0	0	63	1	0	73	0	0	92	2
	Pct HV		0%			2%			0%			2%	
Total Class Volume		0	221	1	0	222	2	0	226	1	0	251	5
Total Interval Volume			222			224			227			256	
Intersection Pct Trucks			0%			1%			0%			2%	

Approach

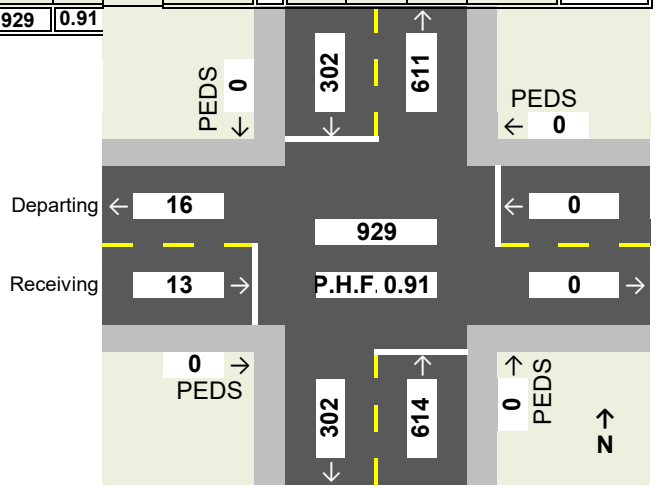
Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	6		0%	46.15%
EBT	0	0			0.00%
EBR	0	7		0%	53.85%
Total	0	13	0.46	0%	100.00%
WBU	0	0			
WBL	0	0			
WBT	0	0			
WBR	0	0			
Total	0	0			
NBU	0	0			0.00%
NBL	0	10		0%	1.63%
NBT	6	604		1%	98.37%
NBR	0	0			0.00%
Total	6	614	0.95	1%	100.00%
SBU	0	1		0%	0.33%
SBL	0	0			0.00%
SBT	3	295		1%	97.68%
SBR	0	6		0%	1.99%
Total	3	302	0.80	1%	100.00%
Total	**9**	**929**	**0.91**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	10	0%	62.50%	
WBT	0		0.00%	
SBR	6	0%	37.50%	
Total	16	0%	100.00%	
WBU	0			Westbound
SBL	0			
EBT	0			
NBR	0			
Total	0			
NBU	0		0.00%	Northbound
WBL	0		0.00%	
SBT	295	1%	97.68%	
EBR	7	0%	2.32%	
Total	302	1%	100.00%	
SBU	1	0%	0.16%	Southbound
EBL	6	0%	0.98%	
NBT	604	1%	98.85%	
WBR	0		0.00%	
Total	611	1%	100.00%	

Pedestrian Volumes APPROACH	MOVEMENT	4:30	4:45	5:00	5:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman — Rifle Club Rd
JOB NO. 26-118 — &
DATE OF COUNT: 4/30/2026 — Nine Mile Road
Counter: Miovision — Analyst: BNG
AM PEAK HOURS
15 Minute Period Beginning @

Traffic Counts & Surveys Inc.

APPROACH	Movement	6:30 AM			6:45 AM			7:00 AM			7:15 AM			7:30 AM			7:45 AM			8:00 AM			8:15 AM			8:30 AM			8:45 AM			9:00 AM			9:15 AM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	2	0	1	0	0	2	0	0	2	0	0	2	0	0	2	1	0	0	1	0	0	0	0	1	0	0	1	0	0	2	0	0	0	0
	Through	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Right	0	1	0	0	3	0	0	13	1	0	13	0	0	10	0	0	12	0	0	13	0	0	14	0	0	17	1	0	16	0	0	8	0	0	9	0
	App. Total	0	3	2	0	4	0	0	16	1	0	15	0	0	12	0	0	14	1	0	13	1	0	14	0	0	19	1	0	17	0	0	10	0	0	9	0
	Pct HV	40%			0%			6%			0%			0%			7%			7%			0%			5%			0%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	5	0	0	7	0	0	6	0	0	11	0	0	8	0	0	10	0	0	7	0	0	8	0	0	5	0	0	7	0	0	5	0	0	1	0
	Through	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	App. Total	0	6	0	0	7	0	0	6	0	0	11	1	0	8	1	0	11	1	0	7	0	0	8	0	0	5	0	0	7	0	0	6	0	0	1	1
	Pct HV	0%			0%			0%			8%			11%			8%			0%			0%			0%			0%			0%			50%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	3	0	0	2	0	0	5	1	0	7	0	0	4	0	0	3	0	0	7	0	0	3	0	0	11	0	0	12	0	0	11	1
	Through	0	78	2	0	49	1	0	39	1	0	68	2	0	65	3	0	76	3	0	59	1	0	60	4	0	76	3	0	80	4	0	81	4	0	76	2
	Right	0	2	0	0	2	0	0	0	2	0	1	0	0	3	0	0	3	1	0	4	0	0	5	1	0	3	0	0	1	0	0	3	1	0	2	0
	App. Total	0	81	2	0	54	1	0	41	3	0	74	3	0	75	3	0	83	4	0	66	1	0	72	5	0	82	3	0	92	4	0	96	5	0	89	3
	Pct HV	2%			2%			7%			4%			4%			5%			1%			6%			4%			4%			5%			3%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0
	Through	0	144	3	0	143	2	0	157	1	0	175	2	0	176	2	0	178	1	0	159	3	0	160	2	0	162	2	0	134	2	0	151	1	0	109	1
	Right	0	0	0	0	2	0	0	0	0	0	2	1	0	3	1	0	0	0	0	2	0	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0
	App. Total	0	144	3	0	145	2	0	157	1	0	177	3	0	179	3	0	178	1	0	161	3	0	160	2	0	163	2	0	136	2	0	153	2	0	110	1
	Pct HV	2%			1%			1%			2%			2%			1%			2%			1%			1%			1%			1%			1%		
Total Class Volume		0	234	7	0	210	3	0	220	5	0	277	7	0	274	7	0	286	7	0	247	5	0	254	7	0	269	6	0	252	6	0	265	7	0	209	5
Total Interval Volume		241			213			225			284			281			293			252			261			275			258			272			214		
Intersection Pct HV		3%			1%			2%			2%			2%			2%			2%			3%			2%			2%			3%			2%		

Pedestrian Volumes — 15 Minute Period Beginning @

APPROACH	Movement	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45	9:00	9:15
Eastbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	1	0	0	0	0	0	0	0
Total		0	0	0	0	1	0	0	0	0	0	0	0

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
6:30 AM	963	2.3%
6:45 AM	1,003	2.2%
7:00 AM	1,083	2.4%
7:15 AM	**1,110**	**2.3%**
7:30 AM	1,087	2.4%
7:45 AM	1,081	2.3%
8:00 AM	1,046	2.3%
8:15 AM	1,066	2.4%
8:30 AM	1,019	2.4%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman Rifle Club Rd & Nine Mile Road
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter Analyst
Miovision BNG

AM PEAK HOURS

APPROACH	MOVEMENT	7:15 AM BK	7:15 AM PC	7:15 AM HV	7:30 AM BK	7:30 AM PC	7:30 AM HV	7:45 AM BK	7:45 AM PC	7:45 AM HV	8:00 AM BK	8:00 AM PC	8:00 AM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	2	0	0	2	1	0	0	1
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	13	0	0	10	0	0	12	0	0	13	0
	App. Total	0	15	0	0	12	0	0	14	1	0	13	1
	Pct HV		0%			0%			7%			7%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	11	0	0	8	0	0	10	0	0	7	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	1	0	0	1	0	1	1	0	0	0
	App. Total	0	11	1	0	8	1	0	11	1	0	7	0
	Pct HV		8%			11%			8%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	5	1	0	7	0	0	4	0	0	3	0
	Through	0	68	2	0	65	3	0	76	3	0	59	1
	Right	0	1	0	0	3	0	0	3	1	0	4	0
	App. Total	0	74	3	0	75	3	0	83	4	0	66	1
	Pct HV		4%			4%			5%			1%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Through	0	175	2	0	176	2	0	178	1	0	159	3
	Right	0	2	1	0	3	1	0	0	0	0	2	0
	App. Total	0	177	3	0	179	3	0	178	1	0	161	3
	Pct HV		2%			2%			1%			2%	
Total Class Volume		0	277	7	0	274	7	0	286	7	0	247	5
Total Interval Volume			284			281			293			252	
Intersection Pct Trucks			2%			2%			2%			2%	

Approach

Receiving

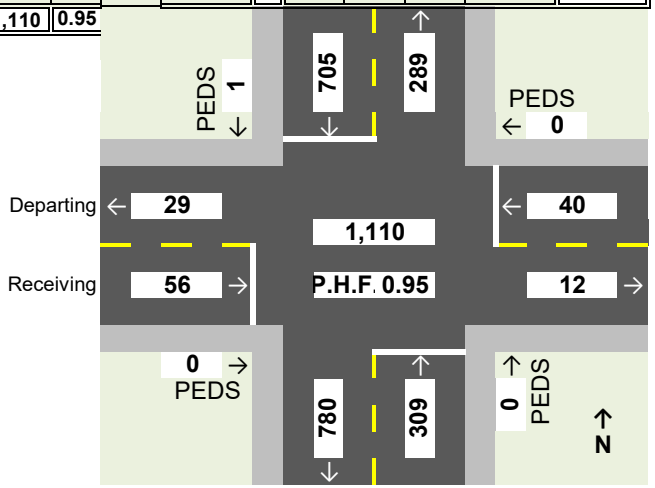
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	2	8		25%	14.29%
EBT	0	0			0.00%
EBR	0	48		0%	85.71%
Total	2	56	0.93	4%	100.00%
WBU	0	0			0.00%
WBL	0	36		0%	90.00%
WBT	0	0			0.00%
WBR	3	4		75%	10.00%
Total	3	40	0.83	8%	100.00%
NBU	0	0			0.00%
NBL	1	20		5%	6.47%
NBT	9	277		3%	89.64%
NBR	1	12		8%	3.88%
Total	11	309	0.89	4%	100.00%
SBU	0	0			0.00%
SBL	0	0			0.00%
SBT	8	696		1%	98.72%
SBR	2	9		22%	1.28%
Total	10	705	0.97	1%	100.00%
Total	**26**	**1,110**	**0.95**		

Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	20	5%	68.97%	
WBT	0		0.00%	
SBR	9	22%	31.03%	
Total	29	10%	100.00%	
WBU	0		0.00%	Westbound
SBL	0		0.00%	
EBT	0		0.00%	
NBR	12	8%	100.00%	
Total	12	8%	100.00%	
NBU	0		0.00%	Northbound
WBL	36	0%	4.62%	
SBT	696	1%	89.23%	
EBR	48	0%	6.15%	
Total	780	1%	100.00%	
SBU	0		0.00%	Southbound
EBL	8	25%	2.77%	
NBT	277	3%	95.85%	
WBR	4	75%	1.38%	
Total	289	5%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	7:15	7:30	7:45	8:00	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	1	0	0	1
	Total	0	1	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman — Rifle Club Rd
JOB NO. 26-118 — &
DATE OF COUNT: 4/30/2026 — Nine Mile Road
Counter: Miovision — Analyst: BNG
PM PEAK HOURS
15 Minute Period Beginning @

Traffic Counts & Surveys Inc.

APPROACH	Movement	3:30 PM			3:45 PM			4:00 PM			4:15 PM			4:30 PM			4:45 PM			5:00 PM			5:15 PM			5:30 PM			5:45 PM			6:00 PM			6:15 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	4	1	0	2	1	0	1	0	0	0	0	0	6	0	0	4	0	0	1	0	0	0	0	0	1	1	0	1	0	0	1	0
	Through	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Right	0	9	0	0	2	0	0	8	0	0	15	0	0	13	1	0	10	0	0	8	1	0	14	0	0	15	0	0	11	0	0	10	0	0	12	0
	App. Total	0	10	0	0	6	1	0	10	1	0	17	0	0	13	1	0	16	0	0	12	1	0	15	0	0	16	0	0	12	1	0	11	0	0	13	0
	Pct HV	0%			14%			9%			0%			7%			0%			8%			0%			0%			8%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	5	0	0	9	0	0	9	0	0	8	0	0	4	0	0	7	0	0	9	0	0	8	0	0	6	0	0	4	0	0	4	0	0	5	0
	Through	0	0	1	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
	Right	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	1	0	0	0	0	0	1	0	0	0	0
	App. Total	0	5	1	0	9	0	0	10	0	0	9	0	0	7	0	0	7	0	0	10	0	0	11	0	0	7	0	0	4	0	0	6	0	0	5	0
	Pct HV	17%			0%			0%			0%			0%			0%			0%			0%			0%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	15	1	0	12	0	0	23	0	0	11	0	0	13	0	0	10	0	0	16	0	0	14	0	0	8	0	0	16	0	0	6	0	0	17	0
	Through	0	136	0	0	167	0	0	168	0	0	162	1	0	176	4	0	175	1	0	137	0	0	198	1	0	156	2	0	164	1	0	155	1	0	130	0
	Right	0	11	0	0	6	1	0	9	1	0	6	0	0	9	0	0	9	0	0	13	0	0	7	0	0	11	0	0	4	0	0	9	0	0	9	0
	App. Total	0	162	1	0	185	1	0	200	1	0	179	1	0	198	4	0	194	1	0	166	0	0	219	1	0	175	2	0	184	1	0	170	1	0	156	0
	Pct HV	1%			1%			0%			1%			2%			1%			0%			0%			1%			1%			1%			0%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	Through	0	115	7	0	139	5	0	122	5	0	112	0	0	116	2	0	120	1	0	124	1	0	144	1	0	107	4	0	104	2	0	91	3	0	73	2
	Right	0	2	0	0	5	0	0	1	0	0	4	0	0	1	0	0	5	0	0	1	0	0	4	0	0	0	1	0	2	0	0	2	0	0	2	0
	App. Total	0	119	7	0	144	5	0	123	5	0	116	0	0	117	2	0	128	1	0	126	1	0	148	1	0	107	5	0	106	2	0	94	3	0	75	2
	Pct HV	6%			3%			4%			0%			2%			1%			1%			1%			4%			2%			3%			3%		
Total Class Volume		0	296	9	0	344	7	0	343	7	0	321	1	0	335	7	0	345	2	0	314	2	0	393	2	0	305	7	0	306	4	0	281	4	0	249	2
Total Interval Volume		305			351			350			322			342			347			316			395			312			310			285			251		
Intersection Pct HV		3%			2%			2%			0%			2%			1%			1%			1%			2%			1%			1%			1%		

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15
Eastbound	Crosswalk	0	0	0	1	0	0	0	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0	0	0	0	2	0	0	1
Northbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	2	0	0	0
Total		0	0	0	1	0	0	0	0	4	0	0	1

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
3:30 PM	1,328	1.8%
3:45 PM	1,365	1.6%
4:00 PM	1,361	1.2%
4:15 PM	1,327	0.9%
4:30 PM	**1,400**	**0.9%**
4:45 PM	1,370	0.9%
5:00 PM	1,333	1.1%
5:15 PM	1,302	1.3%
5:30 PM	1,158	1.5%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman — Rifle Club Rd & Nine Mile Road
JOB NO. 26-118
DATE OF COUNT: 4/30/2026

Counter: Analyst
Miovision: BNG

PM PEAK HOURS

APPROACH	MOVEMENT	4:30 PM BK	4:30 PM PC	4:30 PM HV	4:45 PM BK	4:45 PM PC	4:45 PM HV	5:00 PM BK	5:00 PM PC	5:00 PM HV	5:15 PM BK	5:15 PM PC	5:15 PM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	6	0	0	4	0	0	1	0
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	13	1	0	10	0	0	8	1	0	14	0
	App. Total	0	13	1	0	16	0	0	12	1	0	15	0
	Pct HV		7%			0%			8%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	4	0	0	7	0	0	9	0	0	8	0
	Through	0	3	0	0	0	0	0	0	0	0	1	0
	Right	0	0	0	0	0	0	0	1	0	0	2	0
	App. Total	0	7	0	0	7	0	0	10	0	0	11	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	13	0	0	10	0	0	16	0	0	14	0
	Through	0	176	4	0	175	1	0	137	0	0	198	1
	Right	0	9	0	0	9	0	0	13	0	0	7	0
	App. Total	0	198	4	0	194	1	0	166	0	0	219	1
	Pct HV		2%			1%			0%			0%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	3	0	0	1	0	0	0	0
	Through	0	116	2	0	120	1	0	124	1	0	144	1
	Right	0	1	0	0	5	0	0	1	0	0	4	0
	App. Total	0	117	2	0	128	1	0	126	1	0	148	1
	Pct HV		2%			1%			1%			1%	
Total Class Volume		0	335	7	0	345	2	0	314	2	0	393	2
Total Interval Volume			342			347			316			395	
Intersection Pct Trucks			2%			1%			1%			1%	

Approach — Receiving

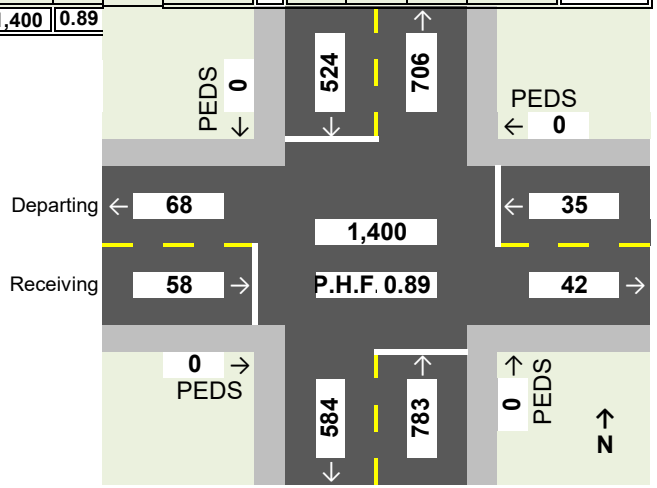
Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	11		0%	18.97%
EBT	0	0			0.00%
EBR	2	47		4%	81.03%
Total	2	58	0.91	3%	100.00%
WBU	0	0			0.00%
WBL	0	28		0%	80.00%
WBT	0	4		0%	11.43%
WBR	0	3		0%	8.57%
Total	0	35	0.80	0%	100.00%
NBU	0	0			0.00%
NBL	0	53		0%	6.77%
NBT	6	692		1%	88.38%
NBR	0	38		0%	4.85%
Total	6	783	0.89	1%	100.00%
SBU	0	0			0.00%
SBL	0	4		0%	0.76%
SBT	5	509		1%	97.14%
SBR	0	11		0%	2.10%
Total	5	524	0.88	1%	100.00%
Total	**13**	**1,400**	**0.89**		

Approach — Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	53	0%	77.94%	
WBT	4	0%	5.88%	
SBR	11	0%	16.18%	
Total	68	0%	100.00%	
WBU	0		0.00%	Westbound
SBL	4	0%	9.52%	
EBT	0		0.00%	
NBR	38	0%	90.48%	
Total	42	0%	100.00%	
NBU	0		0.00%	Northbound
WBL	28	0%	4.79%	
SBT	509	1%	87.16%	
EBR	47	4%	8.05%	
Total	584	1%	100.00%	
SBU	0		0.00%	Southbound
EBL	11	0%	1.56%	
NBT	692	1%	98.02%	
WBR	3	0%	0.42%	
Total	706	1%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	4:30	4:45	5:00	5:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	0	0	0	0
Westbound	Crosswalk	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0
	Total	0	0	0	0	



Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter: Miovision
Analyst: BNG

Rifle Club Rd
&
Nine Mile Road

MID PEAK HOURS
15 Minute Period Beginning @

Traffic Counts & Surveys Inc.

APPROACH	Movement	11:00 AM			11:15 AM			11:30 AM			11:45 AM			12:00 PM			12:15 PM			12:30 PM			12:45 PM			1:00 PM			1:15 PM			1:30 PM			1:45 PM		
Type		BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV	BK	PC	HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	0	0	0	1	0	0	2	0	0	1	0	0	0	0	0	5	0	0	1	0	0	1	0	0	2	0	0	1	0	0	1	0
	Through	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
	Right	0	8	0	0	9	1	0	9	1	0	12	1	0	9	1	0	8	0	0	11	0	0	15	0	0	6	0	0	9	0	0	7	0	0	10	0
	App. Total	0	8	0	0	9	1	0	11	1	0	14	1	0	10	1	0	8	0	0	16	0	0	16	0	0	8	0	0	11	0	0	8	0	0	12	0
	Pct HV	0%			10%			8%			7%			9%			0%			0%			0%			0%			0%			0%			0%		
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	5	0	0	8	1	0	9	1	0	5	1	0	2	0	0	2	0	0	6	0	0	3	0	0	2	0	0	3	0	0	4	0	0	5	0
	Through	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	App. Total	0	6	0	0	8	1	0	9	1	0	5	1	0	4	0	0	3	0	0	6	0	0	4	0	0	2	0	0	4	0	0	4	0	0	5	0
	Pct HV	0%			11%			10%			17%			0%			0%			0%			0%			0%			0%			0%			0%		
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	11	0	0	8	0	0	4	0	0	11	0	0	8	0	0	11	0	0	6	0	0	6	0	0	11	0	0	8	1	0	7	0	0	10	0
	Through	0	87	2	0	89	3	0	86	3	0	90	4	0	75	0	0	119	3	0	115	2	0	100	1	0	113	3	0	113	4	0	118	0	0	89	2
	Right	0	7	0	0	7	0	0	3	0	0	2	0	0	7	0	0	6	0	0	5	0	0	8	0	0	4	0	0	6	0	0	3	0	0	12	0
	App. Total	0	105	2	0	104	3	0	93	3	0	103	4	0	90	0	0	136	3	0	126	2	0	114	1	0	128	3	0	127	5	0	128	0	0	111	2
	Pct HV	2%			3%			3%			4%			0%			2%			2%			1%			2%			4%			0%			2%		
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0
	Through	0	100	2	0	104	2	0	95	3	0	99	9	0	88	2	0	99	6	0	108	0	0	118	3	0	109	2	0	114	0	0	107	2	0	109	1
	Right	0	0	1	0	1	0	0	2	0	0	2	0	0	2	0	0	1	0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	0	1	0
	App. Total	0	101	3	0	105	2	0	98	3	0	101	9	0	90	2	0	100	6	0	109	0	0	120	3	0	111	2	0	116	0	0	107	2	0	110	1
	Pct HV	3%			2%			3%			8%			2%			6%			0%			2%			2%			0%			2%			1%		
Total Class Volume		0	220	5	0	226	7	0	211	8	0	223	15	0	194	3	0	247	9	0	257	2	0	254	4	0	249	5	0	258	5	0	247	2	0	238	3
Total Interval Volume		225			233			219			238			197			256			259			258			254			263			249			241		
Intersection Pct HV		2%			3%			4%			6%			2%			4%			1%			2%			2%			2%			1%			1%		

Pedestrian Volumes

APPROACH	Movement	15 Minute Period Beginning @ 11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	1:00	1:15	1:30	1:45
Eastbound	Crosswalk	0	0	1	0	0	0	0	1	0	0	0	1
Westbound	Crosswalk	1	0	2	0	0	0	0	0	0	0	0	0
Northbound	Crosswalk	0	0	0	0	0	0	0	2	0	0	0	0
Southbound	Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0
Total		1	0	3	0	0	0	0	3	0	0	0	1

Miovision Vehicle Classification

Bike (BK) | Passenger Car (PC) | Heavy Vehicle (HV)

Intersection Total One Hour Volumes		Pct HV
11:00 AM	915	3.8%
11:15 AM	887	3.7%
11:30 AM	910	3.8%
11:45 AM	950	3.1%
12:00 PM	970	1.9%
12:15 PM	1,027	1.9%
12:30 PM	**1,034**	**1.5%**
12:45 PM	1,024	1.6%
1:00 PM	1,007	1.5%

App.= Approach
Pct= Percent

Phone: (509) 951-1851
email: beng@trfcnts.com

INTERSECTION

PROJECT: WCE Volkman — Rifle Club Rd & Nine Mile Road
JOB NO. 26-118
DATE OF COUNT: 4/30/2026
Counter: Analyst
Miovision: BNG

MID PEAK HOURS

APPROACH	MOVEMENT	12:30 PM BK	12:30 PM PC	12:30 PM HV	12:45 PM BK	12:45 PM PC	12:45 PM HV	1:00 PM BK	1:00 PM PC	1:00 PM HV	1:15 PM BK	1:15 PM PC	1:15 PM HV
Eastbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	5	0	0	1	0	0	1	0	0	2	0
	Through	0	0	0	0	0	0	0	1	0	0	0	0
	Right	0	11	0	0	15	0	0	6	0	0	9	0
	App. Total	0	16	0	0	16	0	0	8	0	0	11	0
	Pct HV		0%			0%			0%			0%	
Westbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	6	0	0	3	0	0	2	0	0	3	0
	Through	0	0	0	0	1	0	0	0	0	0	0	0
	Right	0	0	0	0	0	0	0	0	0	0	1	0
	App. Total	0	6	0	0	4	0	0	2	0	0	4	0
	Pct HV		0%			0%			0%			0%	
Northbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	6	0	0	6	0	0	11	0	0	8	1
	Through	0	115	2	0	100	1	0	113	3	0	113	4
	Right	0	5	0	0	8	0	0	4	0	0	6	0
	App. Total	0	126	2	0	114	1	0	128	3	0	127	5
	Pct HV		2%			1%			2%			4%	
Southbound	U-Turn	0	0	0	0	0	0	0	0	0	0	0	0
	Left	0	0	0	0	2	0	0	1	0	0	0	0
	Through	0	108	0	0	118	3	0	109	2	0	114	0
	Right	0	1	0	0	0	0	0	1	0	0	2	0
	App. Total	0	109	0	0	120	3	0	111	2	0	116	0
	Pct HV		0%			2%			2%			0%	
Total Class Volume		0	257	2	0	254	4	0	249	5	0	258	5
Total Interval Volume			259			258			254			263	
Intersection Pct Trucks			1%			2%			2%			2%	

Approach — Receiving

Mvmt	TOTAL HV	TOTAL Veh	PHF	Percentage of: HV	Percentage of: Approach
EBU	0	0			0.00%
EBL	0	9		0%	17.65%
EBT	0	1		0%	1.96%
EBR	0	41		0%	80.39%
Total	0	51	0.80	0%	100.00%
WBU	0	0			0.00%
WBL	0	14		0%	87.50%
WBT	0	1		0%	6.25%
WBR	0	1		0%	6.25%
Total	0	16	0.67	0%	100.00%
NBU	0	0			0.00%
NBL	1	32		3%	6.32%
NBT	10	451		2%	89.13%
NBR	0	23		0%	4.55%
Total	11	506	0.96	2%	100.00%
SBU	0	0			0.00%
SBL	0	3		0%	0.65%
SBT	5	454		1%	98.48%
SBR	0	4		0%	0.87%
Total	5	461	0.94	1%	100.00%
Total	**16**	**1,034**	**0.98**		
	1,034				
	2%				

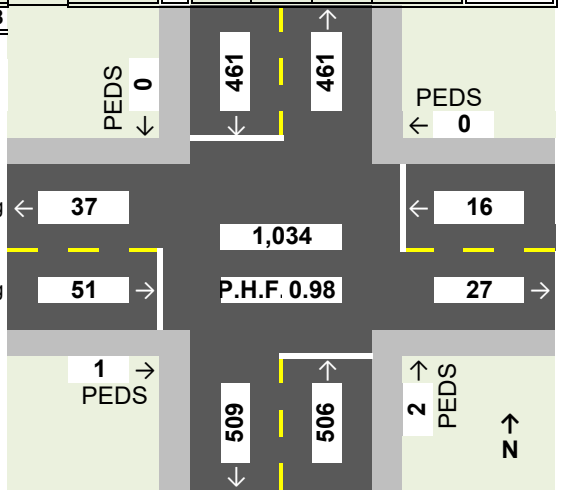
Departing

Mvmt	Total	Percentage of: HV	Percentage of: Approach	App.
EBU	0		0.00%	Eastbound
NBL	32	3%	86.49%	
WBT	1	0%	2.70%	
SBR	4	0%	10.81%	
Total	37	3%	100.00%	
WBU	0		0.00%	Westbound
SBL	3	0%	11.11%	
EBT	1	0%	3.70%	
NBR	23	0%	85.19%	
Total	27	0%	100.00%	
NBU	0		0.00%	Northbound
WBL	14	0%	2.75%	
SBT	454	1%	89.19%	
EBR	41	0%	8.06%	
Total	509	1%	100.00%	
SBU	0		0.00%	Southbound
EBL	9	0%	1.95%	
NBT	451	2%	97.83%	
WBR	1	0%	0.22%	
Total	461	2%	100.00%	

Pedestrian Volumes

APPROACH	MOVEMENT	12:30	12:45	1:00	1:15	Confli. Ped TOTAL
Eastbound	Crosswalk	0	1	0	0	**1**
Westbound	Crosswalk	0	0	0	0	**0**
Northbound	Crosswalk	0	2	0	0	**2**
Southbound	Crosswalk	0	0	0	0	**0**
	Total	0	3	0	0	

Movement = Mvmt
Pedestrian = Ped
P.H.F.= Peak Hour Factor
App.= Approach
Pct= Percent



Proj. Traffic Counts and Surveys Inc. Count Date

WCE Volkman Rifle Club Rd & Nine Mile Road 4/30/2026

	Eastbound				Westbound				Northbound				Southbound				Total
Time	**U**	**Lt**	**TH**	**Rt**	**U**	**Lt**	**TH**	**Rt**	**U**	**Lt**	**TH**	**Rt**	**U**	**Lt**	**TH**	**Rt**	
12:00 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	2	0	11
12:15 AM	0	0	0	0	0	0	0	0	0	1	11	1	0	0	6	0	19
12:30 AM	0	0	0	0	0	2	0	0	0	0	3	0	0	0	4	0	9
12:45 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	4	0	12
1:00 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	7
1:15 AM	0	0	0	0	0	0	0	0	0	1	12	1	0	0	3	0	17
1:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
1:45 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	5
2:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	6
2:15 AM	0	0	0	0	0	0	0	0	0	1	3	0	0	0	4	0	8
2:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	7
2:45 AM	0	0	0	0	0	0	0	0	0	1	4	0	0	0	3	0	8
3:00 AM	0	0	0	0	0	1	0	1	0	0	2	0	0	0	4	0	8
3:15 AM	0	0	0	0	0	0	0	0	0	2	2	0	0	0	3	0	7
3:30 AM	0	0	0	2	0	0	1	0	0	1	7	1	0	0	8	0	20
3:45 AM	0	1	0	1	0	2	0	0	0	1	4	1	0	0	7	0	17
4:00 AM	0	0	0	0	0	1	0	0	0	0	7	1	0	0	15	0	24
4:15 AM	0	0	0	0	0	0	1	0	0	1	6	0	0	0	20	0	28
4:30 AM	0	0	0	0	0	2	1	0	0	1	6	0	0	0	26	1	37
4:45 AM	1	0	0	3	0	1	0	0	0	0	8	0	0	0	26	1	40
5:00 AM	0	2	0	1	0	0	0	0	0	1	6	0	0	0	49	0	59
5:15 AM	0	1	0	3	0	0	0	1	0	0	25	1	0	0	60	0	91
5:30 AM	0	0	0	8	0	3	1	0	0	4	11	2	0	0	61	3	93
5:45 AM	0	0	0	6	0	6	0	0	0	2	24	4	0	2	83	2	129
6:00 AM	0	1	0	0	0	5	0	0	0	3	33	2	0	1	90	3	138
6:15 AM	0	0	0	3	0	7	0	0	0	3	49	1	0	0	132	0	195
6:30 AM	0	4	0	1	0	5	1	0	0	1	80	2	0	0	147	0	241
6:45 AM	0	1	0	3	0	7	0	0	0	3	50	2	0	0	145	2	213
7:00 AM	0	2	1	14	0	6	0	0	0	2	40	2	0	0	158	0	225
7:15 AM	**0**	**2**	**0**	**13**	**0**	**11**	**0**	**1**	**0**	**6**	**70**	**1**	**0**	**0**	**177**	**3**	**284**
7:30 AM	**0**	**2**	**0**	**10**	**0**	**8**	**0**	**1**	**0**	**7**	**68**	**3**	**0**	**0**	**178**	**4**	**281**
7:45 AM	**0**	**3**	**0**	**12**	**0**	**10**	**0**	**2**	**0**	**4**	**79**	**4**	**0**	**0**	**179**	**0**	**293**
8:00 AM	**0**	**1**	**0**	**13**	**0**	**7**	**0**	**0**	**0**	**3**	**60**	**4**	**0**	**0**	**162**	**2**	**252**
8:15 AM	0	0	0	14	0	8	0	0	0	7	64	6	0	0	162	0	261
8:30 AM	0	1	1	18	0	5	0	0	0	3	79	3	0	0	164	1	275
8:45 AM	0	1	0	16	0	7	0	0	0	11	84	1	0	1	136	1	258
9:00 AM	0	2	0	8	0	5	0	1	0	12	85	4	0	1	152	2	272
9:15 AM	0	0	0	9	0	1	0	1	0	12	78	2	0	1	110	0	214
9:30 AM	0	2	0	10	0	10	0	0	0	11	79	5	0	1	127	1	246
9:45 AM	0	0	0	6	0	5	1	1	0	12	91	6	0	1	123	6	252
10:00 AM	0	0	0	5	0	3	0	0	0	6	71	8	0	0	129	1	223
10:15 AM	0	1	0	8	0	4	0	4	0	10	70	5	0	0	144	1	247
10:30 AM	0	0	0	7	0	10	2	1	0	17	81	3	0	1	131	3	256
10:45 AM	0	0	0	10	0	9	0	0	0	3	71	5	0	0	131	1	230
11:00 AM	0	0	0	8	0	5	1	0	0	11	89	7	0	1	102	1	225
11:15 AM	0	0	0	10	0	9	0	0	0	8	92	7	0	0	106	1	233
11:30 AM	0	1	1	9	0	9	0	0	0	4	87	4	0	1	96	2	214
11:45 AM	0	2	0	13	0	6	0	0	0	11	94	2	0	0	108	2	238
AM Total	**1**	**30**	**3**	**244**	**0**	**180**	**9**	**14**	**0**	**188**	**1917**	**101**	**0**	**11**	**3688**	**44**	**6430**
	278				203				2206				3743				

	Eastbound				Westbound				Northbound				Southbound				Total
Time	**U**	**Lt**	**TH**	**Rt**	**U**	**Lt**	**TH**	**Rt**	**U**	**Lt**	**TH**	**Rt**	**U**	**Lt**	**TH**	**Rt**	
12:00 PM	0	1	0	10	0	2	2	0	0	8	75	7	0	0	90	2	197
12:15 PM	0	0	0	8	0	2	1	0	0	11	122	6	0	0	105	1	256
12:30 PM	**0**	**5**	**0**	**11**	**0**	**6**	**0**	**0**	**0**	**6**	**117**	**5**	**0**	**0**	**108**	**1**	**259**
12:45 PM	**0**	**1**	**0**	**15**	**0**	**3**	**1**	**0**	**0**	**6**	**101**	**8**	**0**	**2**	**121**	**0**	**258**
1:00 PM	**0**	**1**	**1**	**6**	**0**	**2**	**0**	**0**	**0**	**11**	**116**	**4**	**0**	**1**	**111**	**1**	**254**
1:15 PM	**0**	**2**	**0**	**9**	**0**	**3**	**0**	**1**	**0**	**9**	**117**	**6**	**0**	**0**	**114**	**2**	**263**
1:30 PM	0	1	0	7	0	4	0	0	0	7	118	3	0	0	109	0	249
1:45 PM	0	1	1	10	0	5	0	0	0	10	91	12	0	0	110	1	241
2:00 PM	0	2	0	11	0	5	1	0	0	5	108	4	0	0	84	0	220
2:15 PM	0	1	0	8	0	4	0	2	0	6	130	6	0	0	114	3	274
2:30 PM	0	4	0	12	0	12	0	1	0	11	126	4	0	0	100	0	270
2:45 PM	0	5	0	16	0	8	0	1	0	9	144	7	0	3	128	2	323
3:00 PM	0	2	0	13	0	8	1	0	0	12	162	10	0	1	100	4	313
3:15 PM	0	0	0	10	0	8	0	0	0	15	156	12	0	0	122	1	324
3:30 PM	0	1	0	9	0	5	1	0	0	16	136	11	0	2	122	2	305
3:45 PM	0	5	0	2	0	9	0	0	0	12	167	7	0	0	144	5	351
4:00 PM	0	2	0	8	0	9	0	1	0	23	169	9	0	0	124	1	346
4:15 PM	0	1	1	15	0	8	1	0	0	11	163	6	0	0	112	4	322
4:30 PM	**0**	**0**	**0**	**14**	**0**	**4**	**3**	**0**	**0**	**13**	**180**	**9**	**0**	**0**	**118**	**1**	**342**
4:45 PM	**0**	**6**	**0**	**10**	**0**	**7**	**0**	**0**	**0**	**10**	**176**	**9**	**0**	**3**	**121**	**5**	**347**
5:00 PM	**0**	**4**	**0**	**9**	**0**	**9**	**0**	**1**	**0**	**16**	**137**	**13**	**0**	**1**	**125**	**1**	**316**
5:15 PM	**0**	**1**	**0**	**14**	**0**	**8**	**1**	**2**	**0**	**14**	**199**	**7**	**0**	**0**	**145**	**4**	**395**
5:30 PM	0	0	1	15	0	6	0	1	0	8	158	11	0	0	111	1	312
5:45 PM	0	2	0	11	0	4	0	0	0	16	165	4	0	0	106	2	310
6:00 PM	0	1	0	10	0	4	1	1	0	6	156	9	0	1	94	2	285
6:15 PM	0	1	0	12	0	5	0	0	0	17	130	9	0	0	75	2	251
6:30 PM	0	2	0	12	0	6	1	1	0	10	123	14	0	0	63	1	233
6:45 PM	0	0	2	11	0	4	0	2	0	11	121	4	0	1	78	1	235
7:00 PM	0	3	0	8	0	2	0	1	0	11	113	6	0	1	62	3	210
7:15 PM	0	4	0	10	0	2	1	0	0	14	99	6	0	1	50	2	189
7:30 PM	0	2	0	5	0	2	0	0	0	10	92	5	0	1	39	1	157
7:45 PM	0	0	1	6	0	3	0	1	0	11	98	7	0	0	38	0	165
8:00 PM	0	0	0	4	0	2	0	1	0	12	96	9	0	0	49	1	174
8:15 PM	0	1	0	4	0	2	0	0	0	10	75	6	0	1	42	1	142
8:30 PM	0	0	0	3	0	1	0	0	0	4	76	4	0	0	35	0	123
8:45 PM	0	1	0	4	0	3	0	0	0	7	70	7	0	0	30	1	123
9:00 PM	0	0	0	3	0	1	0	0	0	5	58	2	0	0	18	0	87
9:15 PM	0	1	0	2	0	0	0	0	0	7	63	3	0	0	33	3	112
9:30 PM	0	0	0	2	0	1	0	0	0	4	48	5	0	0	24	0	84
9:45 PM	0	0	0	1	0	2	0	0	0	3	34	2	0	0	14	1	57
10:00 PM	0	1	0	0	0	3	0	0	0	5	26	6	0	1	15	0	57
10:15 PM	0	0	0	2	0	6	0	0	0	2	36	2	0	0	17	1	66
10:30 PM	0	0	0	0	0	1	0	0	0	5	30	4	0	0	16	0	56
10:45 PM	0	0	0	0	0	1	0	0	0	0	20	1	0	0	8	1	31
11:00 PM	0	1	0	0	0	0	0	0	0	3	8	2	0	0	11	0	25
11:15 PM	0	0	0	3	0	1	0	0	0	0	17	4	0	0	11	0	36
11:30 PM	0	0	0	0	0	0	0	0	0	1	13	0	0	0	6	0	20
11:45 PM	0	0	0	0	0	1	0	0	0	1	7	1	0	0	5	0	15
PM Total	**0**	**66**	**7**	**355**	**0**	**194**	**15**	**17**	**0**	**424**	**4942**	**298**	**0**	**20**	**3577**	**65**	**9980**
	428				226				5664				3662				
INTX Total	706				429				7870				7405				
	16410																

CRASH DATA

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety

COUNTY	CITY	PRIMARY TRAFFICWAY	MILEPOST	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
Spokane	Spokane	291	3.84	3.84	No	EG46106	11/05/2025	09:14	No Apparent Injury	0	0	2	0	0	Intersection Related but Not at Intersection	Raining	Wet	Daylight
Spokane	Spokane	291	3.85	3.85	No	EE34873	12/27/2023	11:55	No Apparent Injury	0	0	2	0	0	At Intersection and Related	Clear or Partly Cloudy	Wet	Daylight
Spokane	Spokane	291	3.85	3.85	No	EB11547	03/05/2021	12:04	No Apparent Injury	0	0	1	0	0	At Intersection and Related	Clear	Dry	Daylight
Spokane	Spokane	291	3.85	3.85	No	EB49326	07/17/2021	12:34	No Apparent Injury	0	0	2	0	0	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
Spokane	Spokane	291	3.85	3.85	No	EF65953	02/14/2025	19:22	No Apparent Injury	0	0	2	0	0	At Intersection and Not Related	Overcast	Ice	Dark-No Street Lights
Spokane	Spokane	291	3.85	3.85	No	EG31921	09/25/2025	21:03	No Apparent Injury	0	0	2	0	0	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On
Spokane		291	5.22	5.22	No	EE74483	05/03/2024	18:50	No Apparent Injury	0	0	2	0	0	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
Spokane		291	5.22	5.22	No	EF46213	12/11/2024	21:40	No Apparent Injury	0	0	1	0	0	At Intersection and Not Related	Fog or Smog or Smoke	Wet	Dark-Street Lights On
Spokane		291	5.22	5.22	No	ED51197	04/11/2023	13:15	No Apparent Injury	0	0	2	0	0	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
Spokane		291	5.23	5.23	No	EE30178	12/11/2023	20:47	Suspected Minor Injury	1	0	1	0	0	Intersection Related but Not at Intersection	Clear	Wet	Dark-Street Lights On
Spokane		291	5.24	5.24	No	ED27487	01/19/2023	19:52	Suspected Minor Injury	1	0	1	0	0	Not at Intersection and Not Related	Fog or Smog or Smoke	Dry	Dark-Street Lights On

COUNTY ROAD INTERSECTION

Seven Mile Rd (Co Rd # 04444, mp 1.910 – 1.950) @ Inland Rd (Co Rd # 02035, mp 0.470 – 0.490) – No Reporting Crashes

STATE ROUTE INTERSECTIONS

SR 291 (aka Nine Mile Rd, mp 3.83 – 3.87) @ Rifle Club Rd / W Rifle Club Ct – City Street

SR 291 (aka Nine Mile Rd, mp 5.20 – 5.24) @ Seven Mile Rd (Co Rd # 04444, mp 4.110 – 0.130) / Lowell Ave (Co Rd # 02592, mp 0.000 – 0.020)

SR 291 (aka Nine Mile Rd, mp 5.70 – 5.74) @ Johannsen Ave (Co Rd # 02146, mp 0.390 – 0.410) – No Reported Crashes

Intersections	2021		2022		2023		2024		2025		Avg MEV per yr
	PDO	INJ	PDO	INJ	PDO	INJ	PDO	INJ	PDO	INJ	
Seven Mile Road & Inland Road	0	0	0	0	0	0	0	0	0	0	
MEV @ 10% of Intx ADT	0.00		0.00		0.00		0.00		0.00		0.00
Johannsen Ave. & Nine Mile Road	0	0	0	0	0	0	0	0	0	0	
MEV @ 10% of Intx ADT	0.00		0.00		0.00		0.00		0.00		0.00
Seven Mile Rd & Nine Mile Rd	0	0	0	0	1	2	2	0	0	0	
MEV @ 10% of Intx ADT	0.00		0.00		0.63		0.42		0.00		0.21
Rifle Club Rd & Nine Mile Rd	2	0	0	0	1	0	0	0	3	0	
MEV @ 10% of Intx ADT	0.39		0.00		0.20		0.00		0.59		0.23

Intersection	Peak Hour Volume*	% of Peak Hour	24 hr (ADT) Volume
Seven Mile Road & Inland Road	643	10	6,430
Johannsen Avenue & Nine Mile Road	928	10	9,280
Seven Mile Road & Nine Mile Road	1295	10	12,950
Rifle Club Road & Nine Mile Road	1400	10	14,000

BACKGROUND PROJECTS

Whipple Consulting Engineers, Inc.

Updated
June 13, 2023
W.O. No. 2021-3100

Parcel No.
26212.9017
26212.9019

Spokane County
1026 W. Broadway Ave.
Spokane, WA 99260

Attn: Barry Green, P.E.,

Re: **Seven Mile Addition**
Seven Mile Road & Nine Mile Road
Expanded Trip Generation & Distribution Letter

Dear Barry,

This Expanded Trip Generation and Distribution Letter (TGDL) is for the proposed Seven Mile Addition development near the intersection of Seven Mile Road and Nine Mile Road. Please see Figure 1, Vicinity Map. This letter will establish the anticipated trip generation and distribution for the development as shown on Figure 2, Preliminary Site Plan. This report will follow the standards for traffic letters as required by Spokane County and Transportation Impact Analyses for Site Development published by the Institute of Transportation Engineers (ITE).

PROJECT DESCRIPTION

The project proposes to develop 11.40 acres +/- into 77 residential lots. With the county code change there is the potential that lots may be developed with a duplex. It is anticipated that the plat may include up to 13 duplex lots. With the development of the duplexes there would be 91 residential units (65 single family residential units and 26 duplex units) onsite.

The project site is currently undeveloped and covered in field grass, weeds, and trees. The project proposes to build two east-west streets and three north-south streets. The project is proposed to be accessed via Seven Mile Road as well as a connecting street to the north into Rivermere Estates Subdivision as an extension of Harwood Street. The proposed streets form a box grid for the subdivision. Please see Figure 2 Preliminary site plan.

VICINITY / SITE PLAN

The site is currently listed on the comprehensive plan and zoned as Low Density Residential (LDR). The subject property is located on a portion of NW ¼, Section 21, T26N., R42E., W.M. The parcel numbers for the project are 26212.9017 and 26212.9019. The surrounding areas are zoned as low density residential. A vicinity map is included as Figure 1, along with a preliminary plat as Figure 2.

Trip Generation Characteristics for the Proposed Project

As noted earlier, trip generation rates for the AM & PM peak hours are determined by the use of the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE). The purpose of the *Trip Generation Manual* is to compile and quantify empirical data into trip generation rates for specific land uses within the US, UK, and Canada.

Proposed Land Uses

For the proposed 65 single family residential units, Land Use Code LUC#210, Single-Family Detached Housing was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in Trip Generation Handbook, the fitted curve equation was used to calculate new project trips. The fitted curve equation and the anticipated number of AM & PM peak hour trips for the proposed land use are shown on Table 1.

Table 1-Trip Generation Rates for LUC # 210 – Single-Family Detached Housing

Dwelling Units	AM Peak Hour Trips			PM Peak Hour Trips		
	Vol. @ Fitted Curve Equation / Unit	Directional Distribution		Vol. @ Fitted Curve Equation / Unit	Directional Distribution	
		26% In	74% Out		63% In	37% Out
65	51	13	38	67	42	25

Average Daily Trip Ends (ADT)			
Units	Fitted Curve Equation	ADT	
65	-	679	

Fitted Curve Equation
AM – Ln(T) = 0.91 Ln(x) + 0.12
PM - Ln(T) = 0.94 Ln(x) + 0.27
ADT – Ln(T) = 0.92 Ln(x) + 2.68
T = Trips/units, x = Dwelling Units

For the proposed 26 duplex residential units, Land Use Code LUC#215, Single-Family Attached Housing was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in Trip Generation Handbook, the fitted curve equation was used to calculate new project trips. The fitted curve equation and the anticipated number of AM & PM peak hour trips for the proposed land use are shown on Table 2.

Table 2-Trip Generation Rates for LUC # 215 – Single-Family Attached Housing

Dwelling Units	AM Peak Hour Trips			PM Peak Hour Trips		
	Vol. @ Fitted Curve Equation / Unit	Directional Distribution		Vol. @ Fitted Curve Equation / Unit	Directional Distribution	
		31% In	69% Out		57% In	43% Out
26	8	2	6	12	7	5

Average Daily Trip Ends (ADT)			
Units	Fitted Curve Equation	ADT	
26	-	148	

Fitted Curve Equation
AM – T = 0.52(x) – 5.70
PM – T = 0.60(x) – 3.93
ADT – T = 7.62(x) – 50.48
T = Trips/units, x = Dwelling Units

A trip generation summary of the proposed residential development is shown in Table

Table 3 – Trip Generation Summary (Figures 3&4)

Land Use Code (LUC)	AM Peak Hour			PM Peak Hour		
	Vol. per LUC	Directional Distribution		Vol. per LUC	Directional Distribution	
		In	Out		In	Out
LUC 210 Single-Family Detached Housing	51	13	38	67	42	25
LUC 215 Single Family Attached Housing	8	2	6	12	7	5
Total	59	15	44	79	49	30

Average Daily Trip Ends (ADT)		
Land Use Code (LUC)	**Rate**	**ADT**
LUC 210 Single-Family Detached Housing		679
LUC 215 Single Family Attached Housing		148
Total		827

As shown on Table 3, the proposed development is anticipated to generate a total of 59 trips in the AM peak hour with 15 trips entering the site and 44 trips exiting the site. In the PM peak hour, the proposed development is anticipated to generate a total of 79 trips, with 49 trips entering the site and 30 trips exiting the site. The proposed development is anticipated to generate a total of 827 average daily trip ends to/from the site.

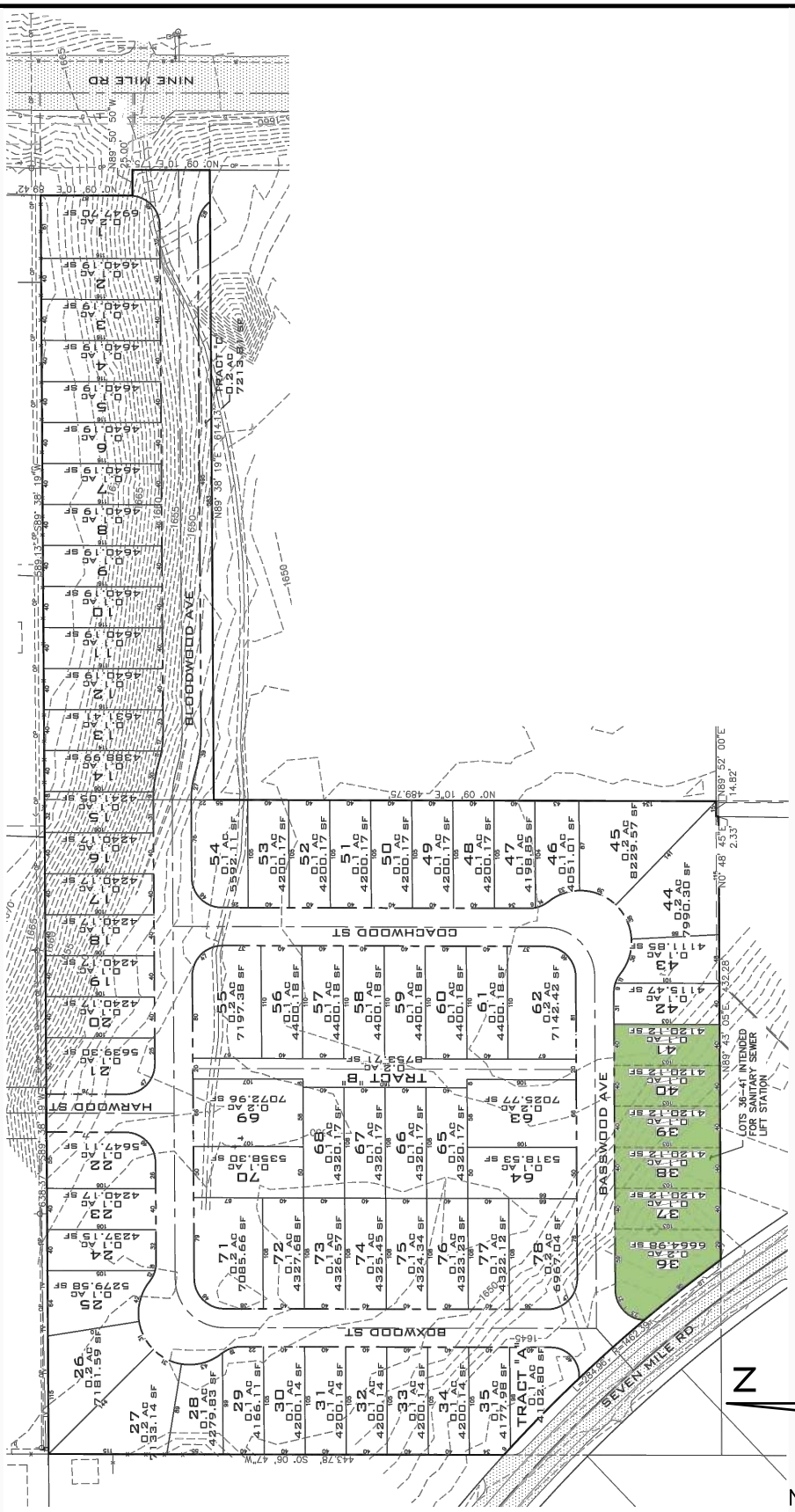
TRIP DISTRIBUTION

As shown on the site plan, the site will be accessed via Seven Mile Road and Harwood Street. (please see Figure 2 Site Plan) It is anticipated that the residents of the site will generally use the following roadways:

Harwood Street is generally a north/south, two-way, 2-lane local access road that extends south from Dogwood Avenue through Burchwood Avenue before terminating. Harwood Street generally serves residential land uses. The speed limit on Harwood Street within the study area is 25 MPH.

Seven Mile Road is generally an east/west, two-way, 2-lane rural major collector/rural minor arterial/urban minor arterial that extends east from Coulee Hite Road through Inland Road, Riverside Park, and Seigle Court before terminating at Nine Mile Road. Seven Mile Road generally serves residential and rural land uses. The speed limit on Seven Mile Road within the study area is 35 MPH.

Nine Mile Road (State Route 291) is generally a north/south, two-way, 2-lane urban principal arterial/urban minor arterial/rural major collector within Spokane County that extends southeast from the western boundary of Spokane County through Seven Mile Road and Rifle Club Road before transitioning into Francis Avenue. Nine Mile Road generally serves residential and rural land uses. The speed limit on Nine Mile Road within the study area is 50 MPH.



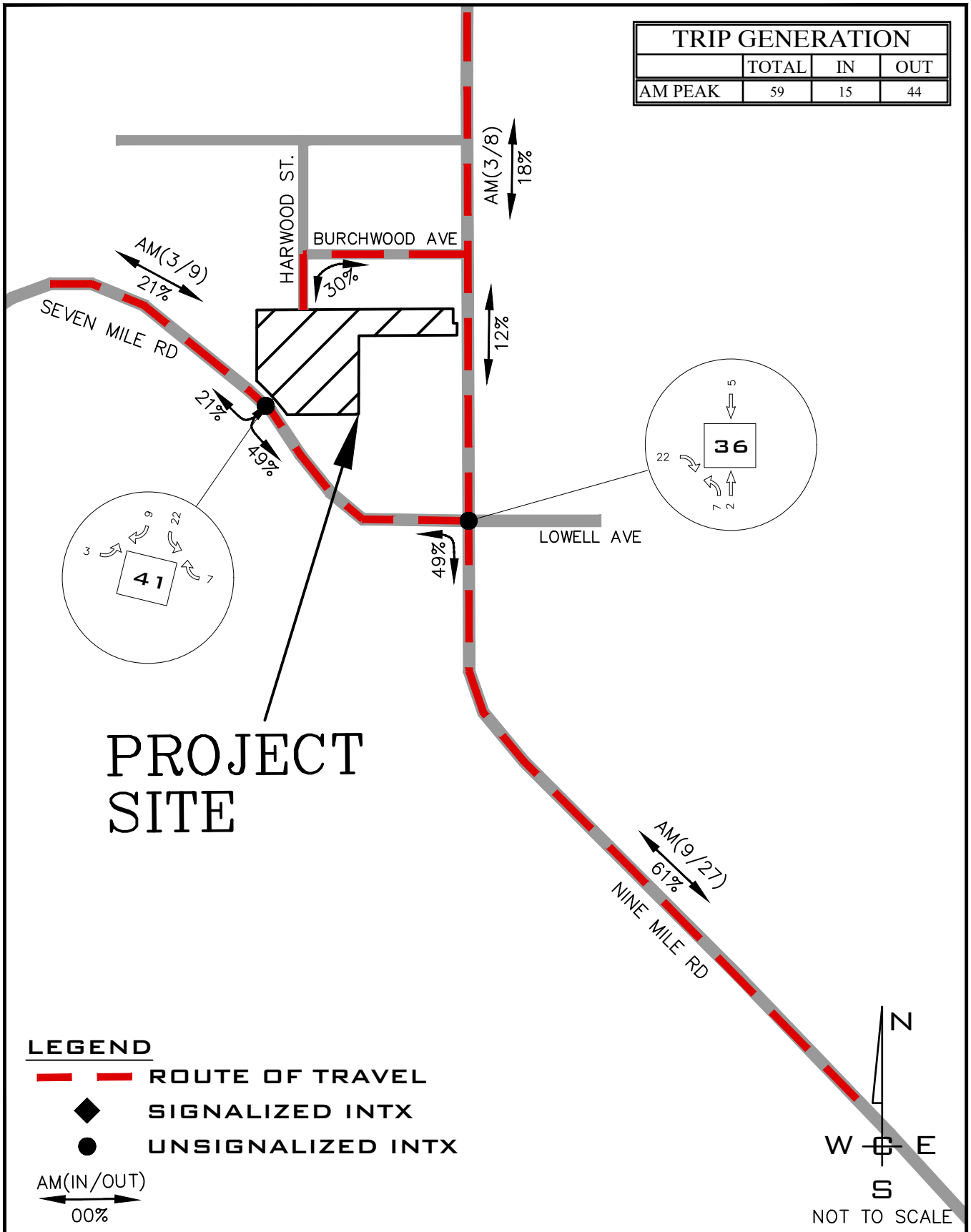
PROJ #: 21-3100
DATE: 06/06/23
DRAWN: MTR
APPROVED: TRW

TRIP GENERATION & DISTRIBUTION
SEVEN MILE ADDITION
SEVEN MILE ROAD & NINE MILE ROAD
SPOKANE COUNTY, WASHINGTON

FIGURE 2

PRELIMINARY SITE PLAN

WCE
WHIPPLE CONSULTING ENGINEERS
CIVIL AND TRANSPORTATION ENGINEERING
21 S. PINES ROAD
SPOKANE VALLEY, WASHINGTON 99206
PH: 509-893-2617 FAX: 509-926-0227



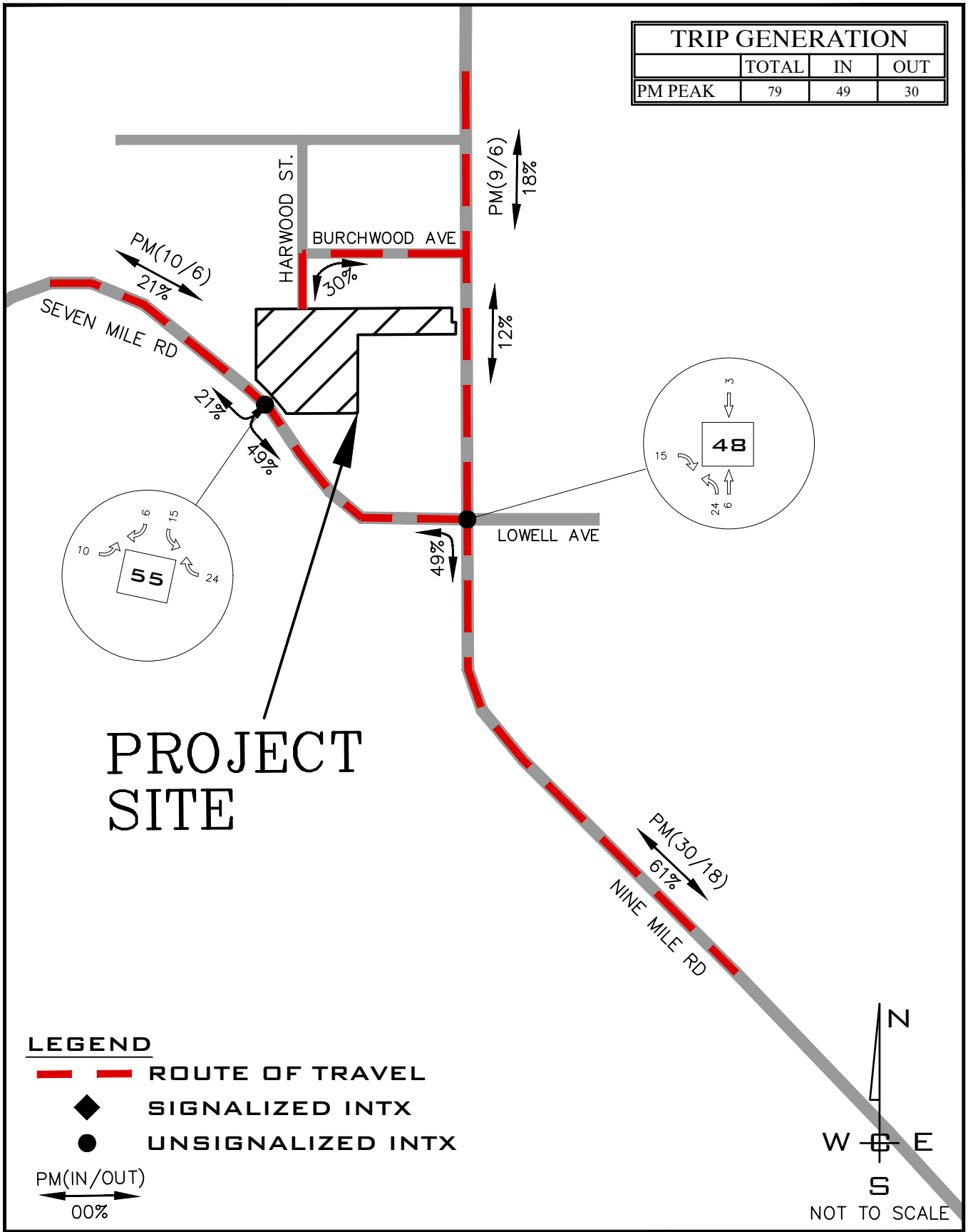
PROJ #: 21-3100
DATE: 06/06/23
DRAWN: MTR
APPROVED: TRW

TRIP GENERATION & DISTRIBUTION
SEVEN MILE ADDITION
SEVEN MILE ROAD & NINE MILE ROAD
SPOKANE COUNTY, WASHINGTON

FIGURE 3

AM PROJECT TRIP DISTRIBUTION

WCE
WHIPPLE CONSULTING ENGINEERS
CIVIL AND TRANSPORTATION ENGINEERING
21 S. PINES ROAD
SPOKANE VALLEY, WASHINGTON 99206
PH: 509-893-2617 FAX: 509-926-0227



PROJ #: 21-3100
DATE: 06/06/23
DRAWN: MTR
APPROVED: TRW

TRIP GENERATION & DISTRIBUTION

SEVEN MILE ADDITION

SEVEN MILE ROAD & NINE MILE ROAD
SPOKANE COUNTY, WASHINGTON

FIGURE 4

PM PROJECT TRIP DISTRIBUTION

WCE
WHIPPLE CONSULTING ENGINEERS
CIVIL AND TRANSPORTATION ENGINEERING
21 S. PINES ROAD
SPOKANE VALLEY, WASHINGTON 99206
PH: 509-893-2617 FAX: 509-926-0227

Revised

TRAFFIC IMPACT STUDY

Sundance Meadows

Spokane County, WA

Prepared for:
Sundance Meadows, LLC c/o Mike Kinney
Spokane, WA

September, 2019

W.O. No. 1908

Prepared by:

Sunburst Engineering, P.S.
16402 E Valleyway Avenue
Spokane Valley, WA 99037
(509) 924-2155

This report has been prepared by the undersigned professional engineer whose seal and signature appears hereon.

General Project Description

Sundance Meadows is a 475-lot single family residential subdivision which redevelops the Sun Dance Golf Course, located in Spokane County on the west side of Nine Mile Road (SR 291) north of Seven Mile Road as shown on the Vicinity Map (Figure 1). Development of the site will occur steadily in a phased manner until complete and completion depends on market forces. Full development was assumed to be complete in five years, as traffic impact analyses are approved for five years, but actual completion of the project could take longer.

Access to the plat will be via two new public roads to SR 291, Tepee Avenue and Red Cloud Avenue. Residential subdivisions were developed along the northern and southern borders of this golf course many years ago, and no provisions for vehicular access between them and the golf course were made at that time. A pedestrian / bike / golf cart access is located into the southern subdivision. Land west of the site falls steeply down to the Spokane River, and is owned by Washington State Department of Parks and Rec. As such, no access is available in this direction either. Due to Spokane County health and safety requirements, two access points are required for any new subdivision which serves more than 30 - 50 residences. Of necessity, these two access points will be to Nine Mile Road (SR 291).

The layout of the project, including the location of Tepee Avenue and Red Cloud Avenue is shown on the Site Plan, Figure 2. Stub roads are provided into the State owned park land west of the site.

Subsequent to approval of the preliminary plat, the public roads serving this site will go through an Intersection Control Evaluation, the normal process whereby Spokane County roads tie into WSDOT facilities. These intersections fall under WSDOT Design Manual Chapter 1300.05 (3), Developer Initiated Intersections. They are 674' apart if measured along the curve, and 671' in a straight line, in excess of the 660' required by WSDOT under Managed Access Class 2 Highways, such as SR 291. Due to the location of Johannsen Avenue south of the site and Kendick Avenue north of the site, the location of these two access points can only be moved slightly and still meet Class 2 standards.

This land is zoned for low density housing and Sundance Meadows, as proposed, is consistent with that zoning. The golf course which has operated at this location for many years closed at the end of the 2018 season, and no changes to the site have occurred since then. As such, the various fairways are clearly visible and some buildings are still in place. Sundance Meadows will continue a larger housing trend in this area which has been on-going for several decades.

Project Trip Generation

Trip generation rates and volumes for Sundance Meadows were based on information published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual* (10th Edition). The ITE Manual is a nationally recognized resource for determining trip generation for residential and other types of developments. Average daily trip (ADT) values were adjusted to reflect locally collected information since ADT in the Spokane area is higher than the national average.

Peak hour project trip generation was estimated based on the number of lots using the ITE trip generation rates for "Single-Family Detached Housing" (Land Use Category 210). Average daily traffic (ADT) volumes for the single family houses were determined using the 2005 SRTC publication, "Spokane and Kootenai County Regional Traffic Survey." Table 4 summarizes the expected weekday trip generation for the AM peak hour, PM peak hour and on a daily basis. These are expected to be the highest traffic volumes of the week.

Table 4 - Trip Generation Characteristics of Sundance Meadows

Units	AM Peak Hour			PM Peak Hour			ADT
	Vol @ 0.74 Trips per Unit	Directional Distribution		Vol @ 0.99 Trips per Unit	Directional Distribution		Vol @ 11.55 Trips per Unit
		25% In	75% Out		63% In	37% Out	
475	352	88	264	470	296	174	5,486

Project Trip Distribution

The trip distribution of traffic from the site was determined based on field counts at Ridgecrest / SR 291 on a typical weekday, and the distribution both entering and exiting was 18% to/from the north and 82% to/from the south. Traffic destinations and types are expected to be the same for Sundance Meadows. At Seven Mile Road, approximately 21% of the traffic turns off SR 291, leaving 61% with destinations within the city of Spokane. Overall distribution of traffic from this site is shown on Figure 6, which shows 61% of the traffic traveling into the city of Spokane. The traffic volumes from Sundance Meadows were assigned to the network based on this distribution and are shown on Figure 7.

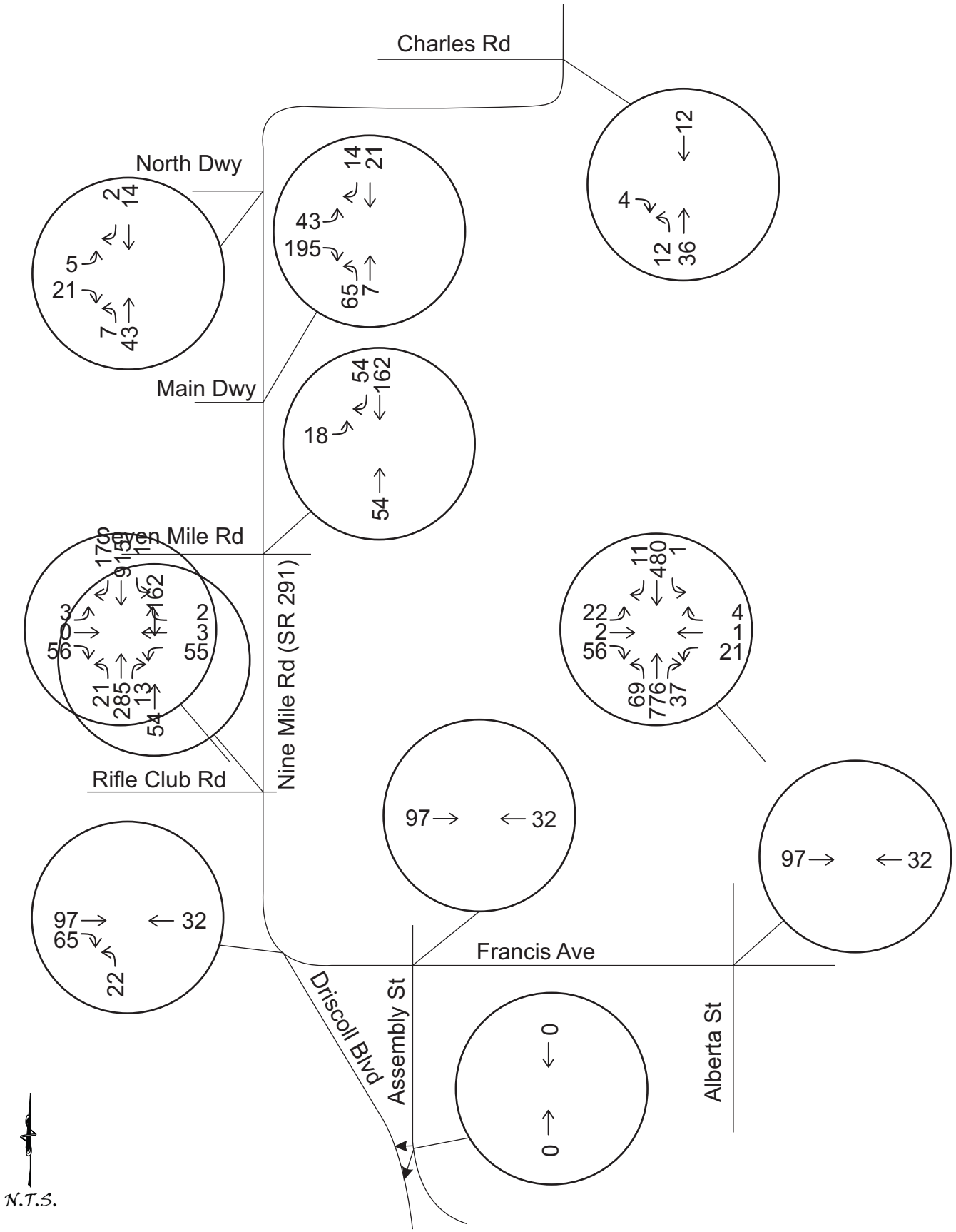
Graphic Provided by Storhaug Engineering

Sunburst
ENGINEERING
16402 E Valleyway Ave
Spokane Valley, WA 99037
(509) 924-2155 www.sunburstengr.com

Sundance Meadows

Traffic Impact Analysis

Figure 2
Site Plan



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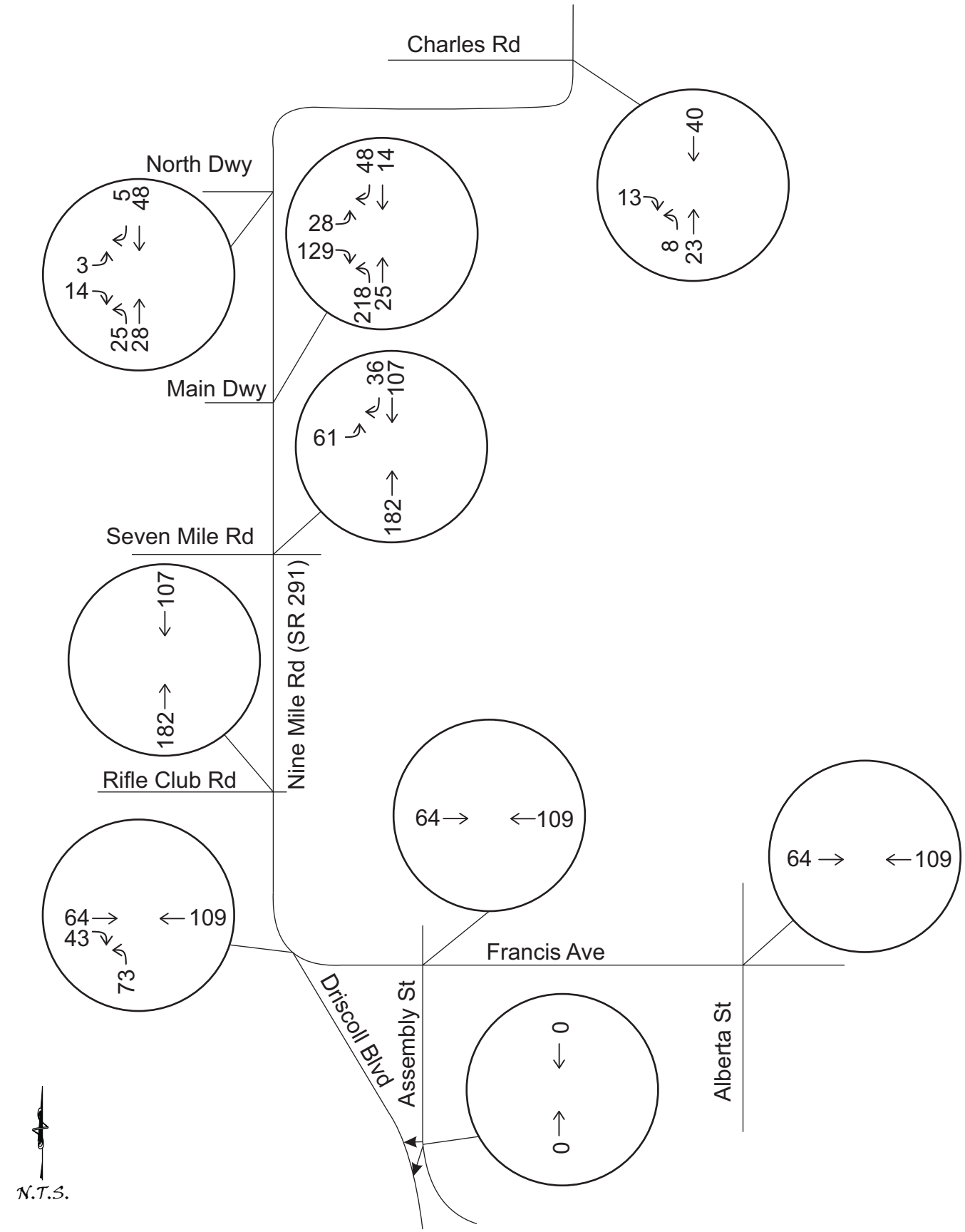
Sundance Meadows

Traffic Impact Analysis

Figure 7a

A.M. Peak Hour Site Generated Traffic Volumes



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Traffic Impact Analysis

Figure 7b

P.M. Peak Hour Site Generated Traffic Volumes

YEAR 2026

LEVEL OF SERVICE CALCULATIONS

AM & PM EXISTING CONDITIONS

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	113	54	118	58	10	38
Future Vol, veh/h	113	54	118	58	10	38
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, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	4	0	0	5	40	16
Mvmt Flow	127	61	133	65	11	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	188	0	488	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	330	-
Critical Hdwy	-	-	4.1	-	6.8	6.36
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.86	3.444
Pot Cap-1 Maneuver	-	-	1399	-	477	853
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	650	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1399	-	430	853
Mov Cap-2 Maneuver	-	-	-	-	430	-
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	650	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.26	10.51
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	708	-	-	1207	-
HCM Lane V/C Ratio	0.076	-	-	0.095	-
HCM Ctrl Dly (s/v)	10.5	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	11	0	0	0	6	222	1	0	500	0
Future Vol, veh/h	6	0	11	0	0	0	6	222	1	0	500	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	17	0	0	0	0	0	0	9	0	0	1	0
Mvmt Flow	6	0	12	0	0	0	6	236	1	0	532	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	781	782	532	781	781	237	532	0	0	237	0	0
Stage 1	532	532	-	249	249	-	-	-	-	-	-	-
Stage 2	249	250	-	532	532	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	295	328	551	314	328	807	1046	-	-	1342	-	-
Stage 1	505	529	-	759	704	-	-	-	-	-	-	-
Stage 2	723	704	-	535	529	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	293	326	551	306	326	807	1046	-	-	1342	-	-
Mov Cap-2 Maneuver	293	326	-	306	326	-	-	-	-	-	-	-
Stage 1	505	529	-	754	700	-	-	-	-	-	-	-
Stage 2	718	699	-	524	529	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.94	0	0.22	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1046	-	-	421	-	1342	-	-
HCM Lane V/C Ratio	0.006	-	-	0.043	-	-	-	-
HCM Ctrl Dly (s/v)	8.5	-	-	13.9	0	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	1	145	5	0	1	103	179	1	2	453	64
Future Vol, veh/h	50	1	145	5	0	1	103	179	1	2	453	64
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	183	-	-	100	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	36	100	4	20	0	100	4	4	100	0	1	2
Mvmt Flow	53	1	153	5	0	1	108	188	1	2	477	67

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	792	887	477	887	887	95	477	0	0	189	0	0
Stage 1	481	481	-	406	406	-	-	-	-	-	-	-
Stage 2	311	406	-	482	481	-	-	-	-	-	-	-
Critical Hdwy	7.84	8	6.26	7.6	6.5	8.4	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.64	7	-	6.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.04	7	-	6.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.842	4.95	3.338	3.69	4	4.25	2.238	-	-	2.2	-	-
Pot Cap-1 Maneuver	247	175	582	228	285	718	1071	-	-	1397	-	-
Stage 1	493	390	-	554	601	-	-	-	-	-	-	-
Stage 2	599	431	-	525	557	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	222	157	582	150	256	718	1071	-	-	1397	-	-
Mov Cap-2 Maneuver	222	157	-	150	256	-	-	-	-	-	-	-
Stage 1	493	390	-	498	541	-	-	-	-	-	-	-
Stage 2	538	387	-	386	556	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	22.55	26.59	3.18	0.03
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1071	-	-	408	173	1397	-	-
HCM Lane V/C Ratio	0.101	-	-	0.506	0.037	0.002	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	22.5	26.6	7.6	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.8	0.1	0	-	-

USER REPORT FOR SITE

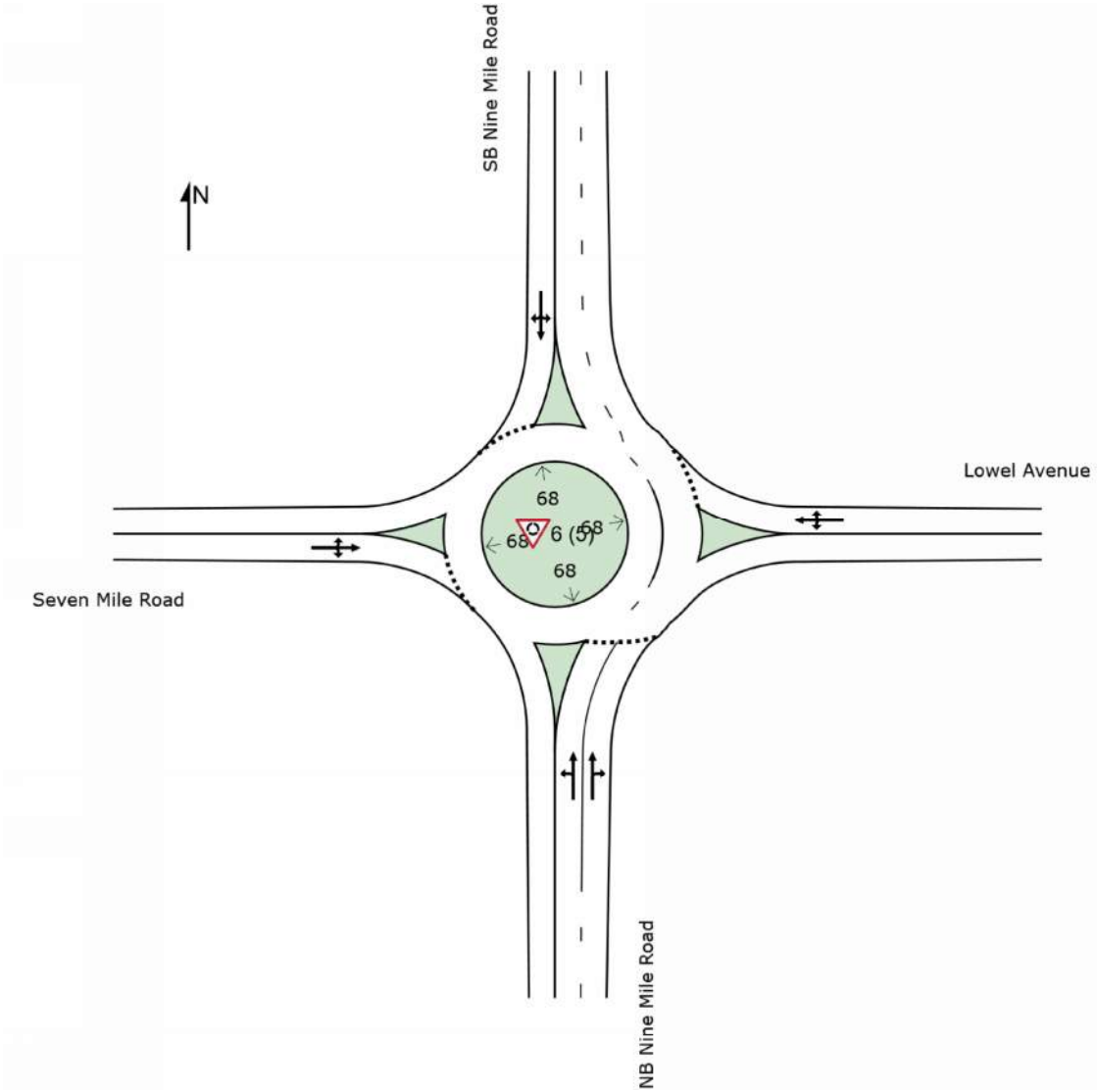
Default Site User Report

Site: [6 (5)] Seven Mile & Nine Mile Road (2026 AM Existing)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

2026 AM Existing
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



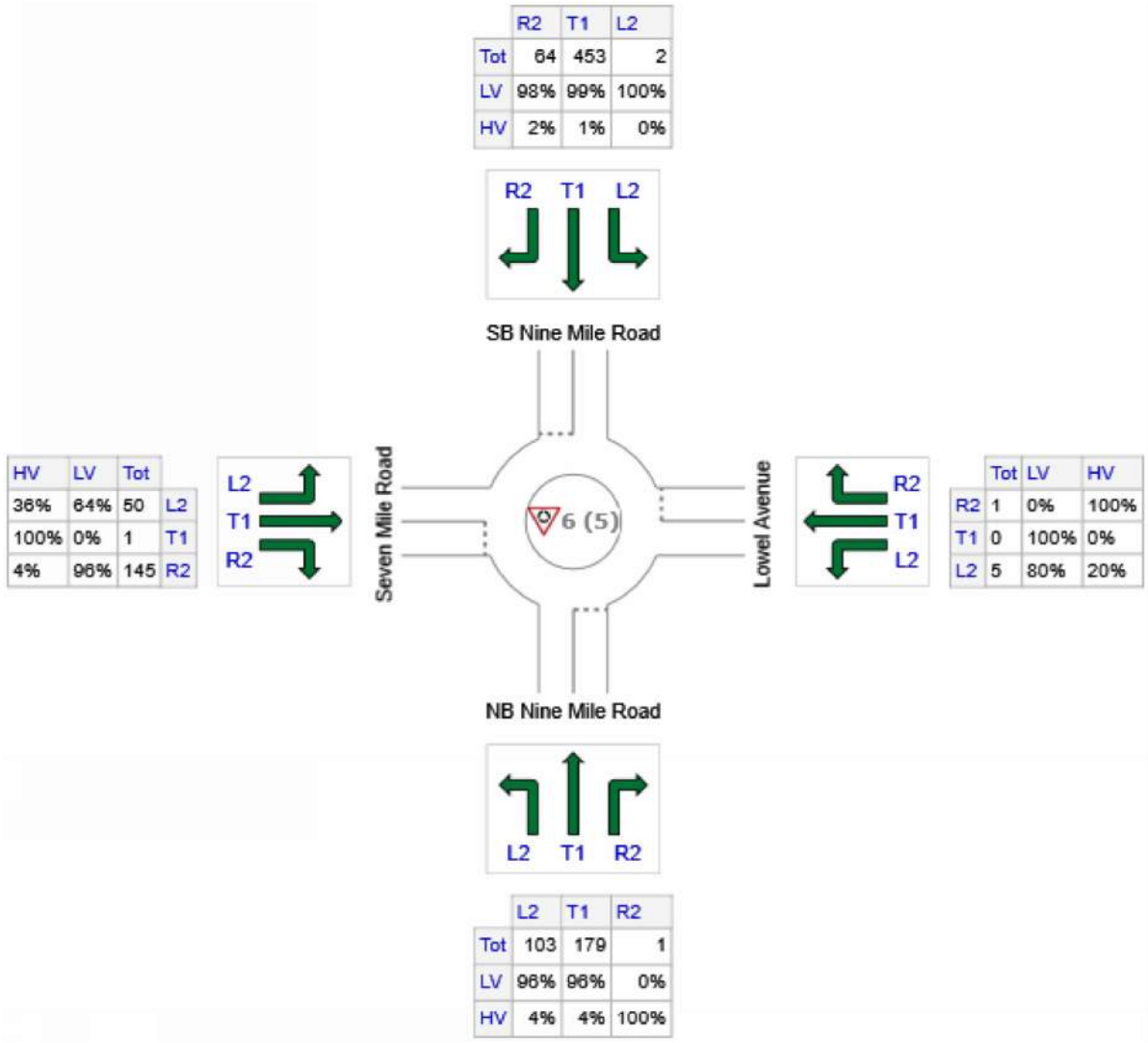
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
West: Seven Mile Road															
5	L2	All MCs	53	36.0	53	36.0	0.272	14.7	LOS B	1.6	43.7	0.67	0.68	0.67	32.0
2	T1	All MCs	1	100.0	1	100.0	0.272	13.7	LOS B	1.6	43.7	0.67	0.68	0.67	32.0
12	R2	All MCs	153	4.0	153	4.0	0.272	7.1	LOS A	1.6	43.7	0.67	0.68	0.67	33.6
Approach			206	12.7	206	12.7	0.272	9.1	LOS A	1.6	43.7	0.67	0.68	0.67	33.2
South: NB Nine Mile Road															
3	L2	All MCs	108	4.0	108	4.0	0.112	9.5	LOS A	0.7	16.9	0.25	0.58	0.25	32.9
8	T1	All MCs	188	4.0	188	4.0	0.112	5.1	LOS A	0.7	17.1	0.25	0.46	0.25	34.7
18	R2	All MCs	1	100.0	1	100.0	0.112	6.4	LOS A	0.7	17.1	0.24	0.44	0.24	31.8
Approach			298	4.3	298	4.3	0.112	6.7	LOS A	0.7	17.1	0.25	0.51	0.25	34.0
East: Lowel Avenue															
1	L2	All MCs	5	20.0	5	20.0	0.010	11.5	LOS B	0.0	1.1	0.44	0.65	0.44	31.6
6	T1	All MCs	0	0.0	0	0.0	0.010	6.1	LOS A	0.0	1.1	0.44	0.65	0.44	32.7
16	R2	All MCs	1	100.0	1	100.0	0.010	10.5	LOS B	0.0	1.1	0.44	0.65	0.44	29.6
Approach			6	32.8	6	32.8	0.010	11.2	LOS B	0.0	1.1	0.44	0.65	0.44	31.3
North: SB Nine Mile Road															
7	L2	All MCs	2	0.0	2	0.0	0.440	10.2	LOS B	3.2	81.2	0.40	0.45	0.40	34.5
4	T1	All MCs	477	1.0	477	1.0	0.440	5.0	LOS A	3.2	81.2	0.40	0.45	0.40	35.2
14	R2	All MCs	67	2.0	67	2.0	0.440	5.1	LOS A	3.2	81.2	0.40	0.45	0.40	34.8
Approach			546	1.1	546	1.1	0.440	5.0	LOS A	3.2	81.2	0.40	0.45	0.40	35.1
All Vehicles			1057	4.5	1057	4.5	0.440	6.3	LOS A	3.2	81.2	0.41	0.51	0.41	34.4

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Input Volumes

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
W: Seven Mile Road	196	171	25
S: NB Nine Mile Road	283	271	12
E: Lowel Avenue	6	4	2
N: SB Nine Mile Road	519	513	6
Total	1004	959	45

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	48	36	0	4	20	277	12	0	696	9
Future Vol, veh/h	8	0	48	36	0	4	20	277	12	0	696	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	180	-	-	180	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	25	0	0	0	0	75	5	3	8	0	1	22
Mvmt Flow	8	0	51	38	0	4	21	292	13	0	733	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	925	1084	371	706	1082	152	742	0	0	304	0	0
Stage 1	737	737	-	340	340	-	-	-	-	-	-	-
Stage 2	188	346	-	366	742	-	-	-	-	-	-	-
Critical Hdwy	8	6.5	6.9	7.5	6.5	8.4	4.2	-	-	4.1	-	-
Critical Hdwy Stg 1	7	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.75	4	3.3	3.5	4	4.05	2.25	-	-	2.2	-	-
Pot Cap-1 Maneuver	191	219	632	326	219	678	841	-	-	1268	-	-
Stage 1	328	427	-	654	643	-	-	-	-	-	-	-
Stage 2	734	639	-	631	425	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	185	213	632	293	214	678	841	-	-	1268	-	-
Mov Cap-2 Maneuver	185	213	-	293	214	-	-	-	-	-	-	-
Stage 1	328	427	-	637	627	-	-	-	-	-	-	-
Stage 2	711	623	-	581	425	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.75	18.41	0.61	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	841	-	-	470	310	1268	-	-
HCM Lane V/C Ratio	0.025	-	-	0.125	0.136	-	-	-
HCM Ctrl Dly (s/v)	9.4	-	-	13.8	18.4	0	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.5	0	-	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	143	41	57	142	61	199
Future Vol, veh/h	143	41	57	142	61	199
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, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	2	0	3	0	1
Mvmt Flow	155	45	62	154	66	216

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	200	0	456	178
Stage 1	-	-	-	-	178	-
Stage 2	-	-	-	-	278	-
Critical Hdwy	-	-	4.1	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.309
Pot Cap-1 Maneuver	-	-	1384	-	566	868
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	773	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1384	-	538	868
Mov Cap-2 Maneuver	-	-	-	-	538	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	773	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.21	12.53
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	759	-	-	516	-
HCM Lane V/C Ratio	0.372	-	-	0.045	-
HCM Ctrl Dly (s/v)	12.5	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	7	0	0	0	10	604	0	0	295	6
Future Vol, veh/h	6	0	7	0	0	0	10	604	0	0	295	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	7	0	8	0	0	0	11	664	0	0	324	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1013	1013	327	1010	1016	664	331	0	0	664	0	0
Stage 1	327	327	-	686	686	-	-	-	-	-	-	-
Stage 2	686	686	-	324	331	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	219	241	718	220	240	464	1240	-	-	935	-	-
Stage 1	690	651	-	441	451	-	-	-	-	-	-	-
Stage 2	441	451	-	692	649	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	217	239	718	216	238	464	1240	-	-	935	-	-
Mov Cap-2 Maneuver	217	239	-	216	238	-	-	-	-	-	-	-
Stage 1	690	651	-	437	447	-	-	-	-	-	-	-
Stage 2	437	447	-	685	649	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	15.79	0	0.13	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1240	-	-	348	-	935	-	-
HCM Lane V/C Ratio	0.009	-	-	0.041	-	-	-	-
HCM Ctrl Dly (s/v)	7.9	-	-	15.8	0	0	-	-
HCM Lane LOS	A	-	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-

Intersection	
Int Delay, s/veh	17.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	141	0	199	4	2	1	141	488	5	1	261	52
Future Vol, veh/h	141	0	199	4	2	1	141	488	5	1	261	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	183	-	-	100	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	1	0	1	0	0	0	2	1	0	100	0	0
Mvmt Flow	152	0	214	4	2	1	152	525	5	1	281	56

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	849	1116	281	1113	1113	265	281	0	0	530	0	0
Stage 1	283	283	-	831	831	-	-	-	-	-	-	-
Stage 2	567	833	-	283	283	-	-	-	-	-	-	-
Critical Hdwy	7.315	6.5	6.215	7.3	6.5	6.9	4.13	-	-	5.6	-	-
Critical Hdwy Stg 1	6.115	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.515	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5095	4	3.3095	3.5	4	3.3	2.219	-	-	3.15	-	-
Pot Cap-1 Maneuver	268	209	760	176	210	739	1280	-	-	626	-	-
Stage 1	726	681	-	335	387	-	-	-	-	-	-	-
Stage 2	479	386	-	729	681	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	234	184	760	111	185	739	1280	-	-	626	-	-
Mov Cap-2 Maneuver	234	184	-	111	185	-	-	-	-	-	-	-
Stage 1	725	680	-	295	342	-	-	-	-	-	-	-
Stage 2	419	341	-	523	680	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	62.46	31.08	1.82	0.03
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	393	146	626	-	-
HCM Lane V/C Ratio	0.118	-	-	0.931	0.052	0.002	-	-
HCM Ctrl Dly (s/v)	8.2	-	-	62.5	31.1	10.8	-	-
HCM Lane LOS	A	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	10.1	0.2	0	-	-

USER REPORT FOR SITE

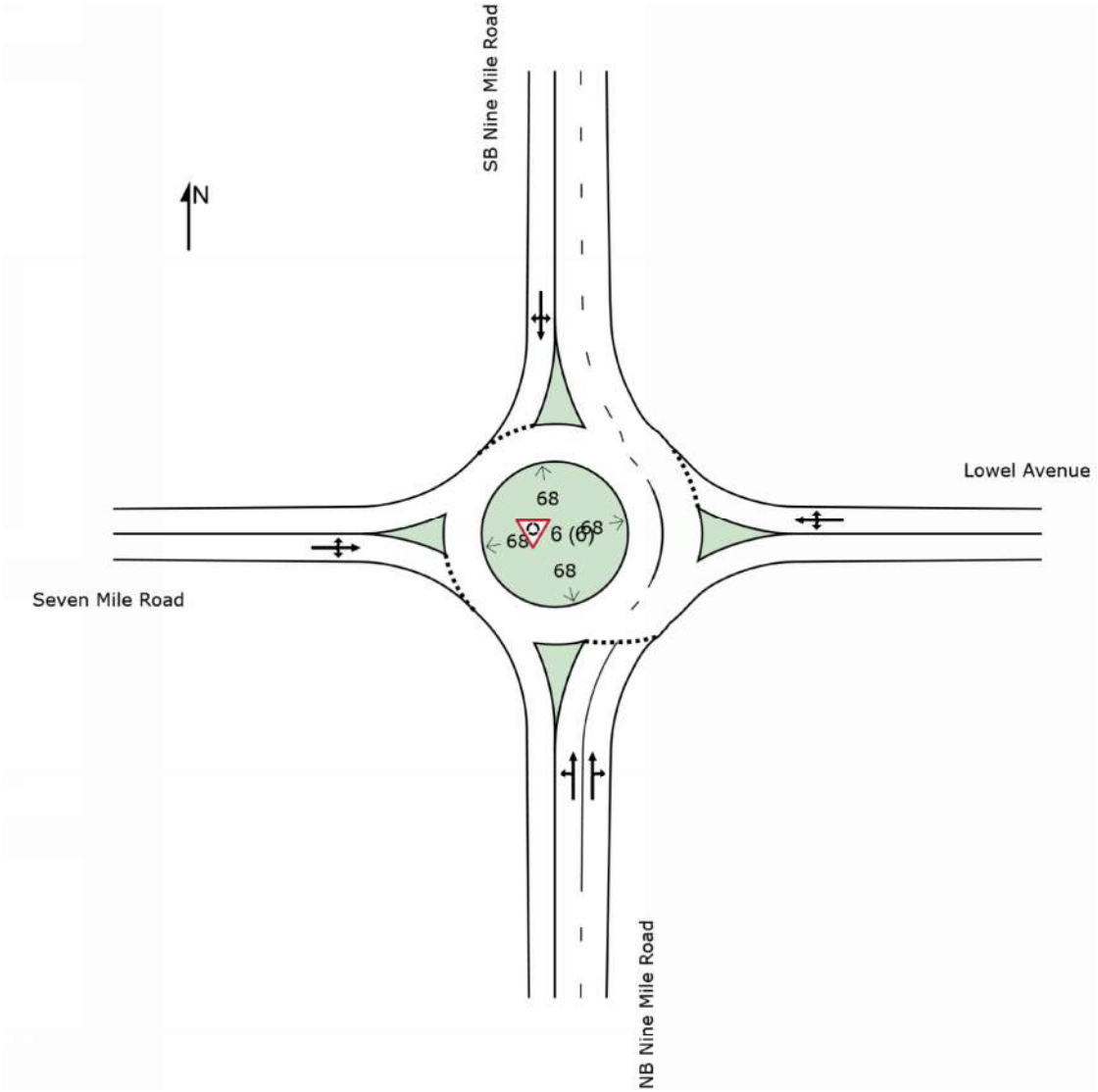
Default Site User Report

Site: [6 (6)] Seven Mile & Nine Mile Road (2026 PM Existing)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

2026 PM Existing
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



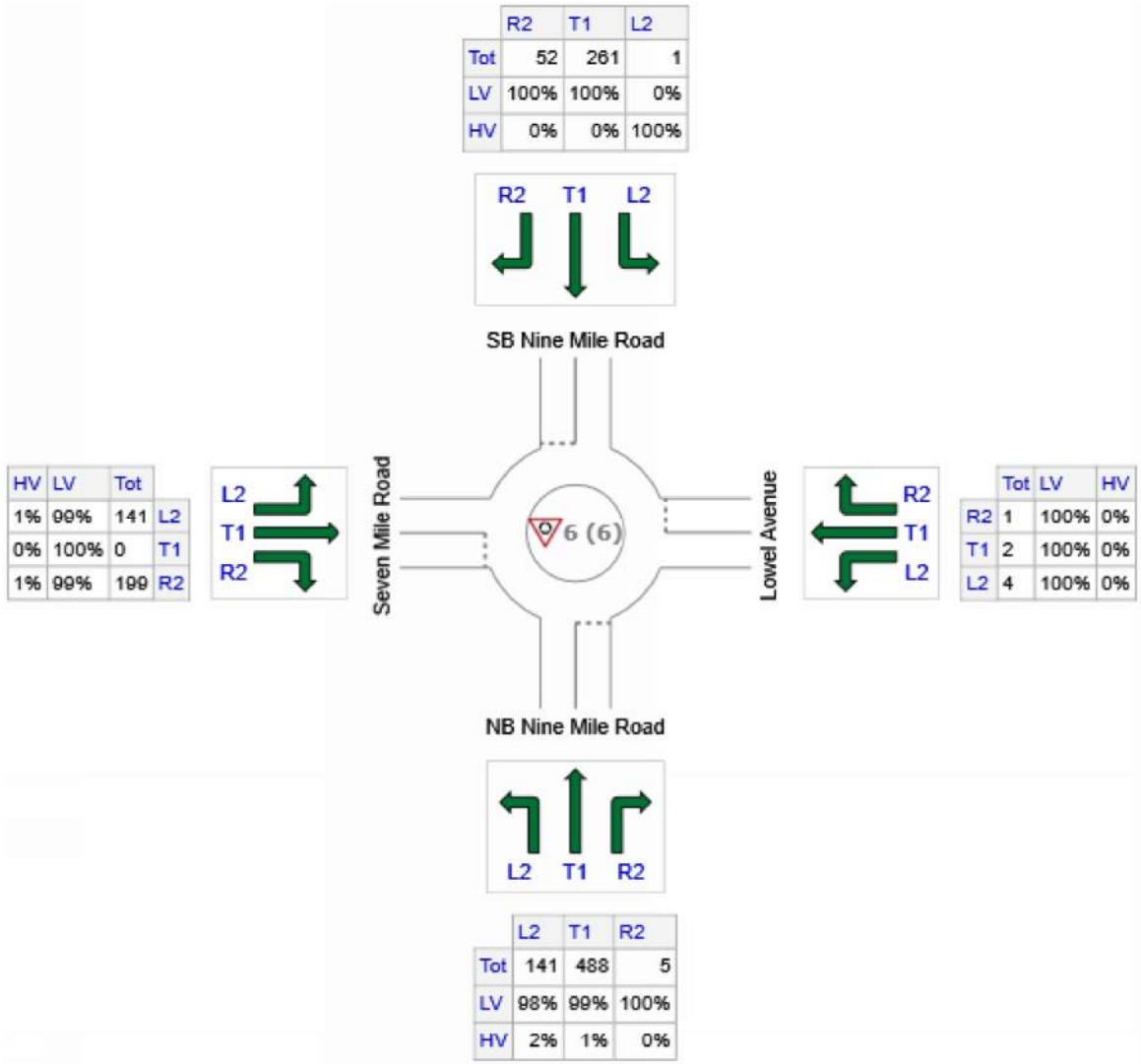
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
West: Seven Mile Road															
5	L2	All MCs	152	1.0	152	1.0	0.344	11.0	LOS B	2.2	56.3	0.55	0.61	0.55	33.4
2	T1	All MCs	0	0.0	0	0.0	0.344	5.9	LOS A	2.2	56.3	0.55	0.61	0.55	34.2
12	R2	All MCs	214	1.0	214	1.0	0.344	5.8	LOS A	2.2	56.3	0.55	0.61	0.55	33.9
Approach			366	1.0	366	1.0	0.344	8.0	LOS A	2.2	56.3	0.55	0.61	0.55	33.7
South: NB Nine Mile Road															
3	L2	All MCs	152	2.0	152	2.0	0.267	10.0	LOS B	1.7	43.5	0.40	0.56	0.40	33.2
8	T1	All MCs	525	1.0	525	1.0	0.267	5.6	LOS A	1.8	44.1	0.39	0.50	0.39	34.3
18	R2	All MCs	5	0.0	5	0.0	0.267	5.1	LOS A	1.8	44.1	0.39	0.47	0.39	34.4
Approach			682	1.2	682	1.2	0.267	6.5	LOS A	1.8	44.1	0.39	0.51	0.39	34.1
East: Lowel Avenue															
1	L2	All MCs	4	0.0	4	0.0	0.011	11.9	LOS B	0.0	1.0	0.55	0.69	0.55	32.6
6	T1	All MCs	2	0.0	2	0.0	0.011	7.4	LOS A	0.0	1.0	0.55	0.69	0.55	33.1
16	R2	All MCs	1	0.0	1	0.0	0.011	7.4	LOS A	0.0	1.0	0.55	0.69	0.55	32.7
Approach			8	0.0	8	0.0	0.011	10.0	LOS A	0.0	1.0	0.55	0.69	0.55	32.8
North: SB Nine Mile Road															
7	L2	All MCs	1	100.0	1	100.0	0.281	13.1	LOS B	1.8	44.1	0.40	0.47	0.40	31.2
4	T1	All MCs	281	0.0	281	0.0	0.281	5.0	LOS A	1.8	44.1	0.40	0.47	0.40	35.2
14	R2	All MCs	56	0.0	56	0.0	0.281	5.1	LOS A	1.8	44.1	0.40	0.47	0.40	34.8
Approach			338	0.3	338	0.3	0.281	5.0	LOS A	1.8	44.1	0.40	0.47	0.40	35.2
All Vehicles			1393	0.9	1393	0.9	0.344	6.6	LOS A	2.2	56.3	0.44	0.53	0.44	34.2

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Input Volumes

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
W: Seven Mile Road	340	337	3
S: NB Nine Mile Road	634	626	8
E: Lowel Avenue	7	7	0
N: SB Nine Mile Road	314	313	1
Total	1295	1283	12

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	0	47	28	4	3	53	692	38	4	509	11
Future Vol, veh/h	11	0	47	28	4	3	53	692	38	4	509	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	180	-	-	180	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	4	0	0	0	0	1	0	0	1	0
Mvmt Flow	12	0	53	31	4	3	60	778	43	4	572	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1097	1526	292	1213	1511	410	584	0	0	820	0	0
Stage 1	587	587	-	918	918	-	-	-	-	-	-	-
Stage 2	510	939	-	295	593	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.98	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.34	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	170	119	698	140	121	596	1000	-	-	818	-	-
Stage 1	468	500	-	296	353	-	-	-	-	-	-	-
Stage 2	519	345	-	695	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	152	111	698	121	113	596	1000	-	-	818	-	-
Mov Cap-2 Maneuver	152	111	-	121	113	-	-	-	-	-	-	-
Stage 1	465	497	-	279	332	-	-	-	-	-	-	-
Stage 2	479	325	-	639	494	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	15.26	44.77	0.6	0.07
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1000	-	-	416	129	818	-	-
HCM Lane V/C Ratio	0.06	-	-	0.157	0.305	0.005	-	-
HCM Ctrl Dly (s/v)	8.8	-	-	15.3	44.8	9.4	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	1.2	0	-	-

YEAR 2031

LEVEL OF SERVICE CALCULATIONS

AM & PM WITH BACKGROUND, WITHOUT PROJECT

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	129	58	169	83	11	55
Future Vol, veh/h	129	58	169	83	11	55
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, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	4	0	0	5	40	16
Mvmt Flow	145	65	190	93	12	62

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	210	0	651	178
Stage 1	-	-	-	-	178	-
Stage 2	-	-	-	-	473	-
Critical Hdwy	-	-	4.1	-	6.8	6.36
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.86	3.444
Pot Cap-1 Maneuver	-	-	1373	-	379	831
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	555	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1373	-	324	831
Mov Cap-2 Maneuver	-	-	-	-	324	-
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	555	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.39	11.16
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	659	-	-	1207	-
HCM Lane V/C Ratio	0.113	-	-	0.138	-
HCM Ctrl Dly (s/v)	11.2	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.5	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	21	7	297	556	2
Future Vol, veh/h	5	21	7	297	556	2
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	-	150	-	-	10
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	10	1	0
Mvmt Flow	5	23	8	323	604	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	942	604	607	0	-	0
Stage 1	604	-	-	-	-	-
Stage 2	338	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	294	502	981	-	-	-
Stage 1	549	-	-	-	-	-
Stage 2	727	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	292	502	981	-	-	-
Mov Cap-2 Maneuver	292	-	-	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	727	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.73	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	981	-	441	-	-
HCM Lane V/C Ratio	0.008	-	0.064	-	-
HCM Ctrl Dly (s/v)	8.7	-	13.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	195	65	261	563	14
Future Vol, veh/h	43	195	65	261	563	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	10
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	10	1	0
Mvmt Flow	47	212	71	284	612	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1037	612	627	0	-	0
Stage 1	612	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	258	497	964	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	239	497	964	-	-	-
Mov Cap-2 Maneuver	239	-	-	-	-	-
Stage 1	505	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	18.63	1.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	964	-	239	497	-	-
HCM Lane V/C Ratio	0.073	-	0.195	0.427	-	-
HCM Ctrl Dly (s/v)	9	-	23.6	17.5	-	-
HCM Lane LOS	A	-	C	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	2.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	12	0	0	0	6	319	1	0	758	0
Future Vol, veh/h	6	0	12	0	0	0	6	319	1	0	758	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	17	0	0	0	0	0	0	9	0	0	1	0
Mvmt Flow	6	0	13	0	0	0	6	339	1	0	806	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1159	1160	806	1159	1159	340	806	0	0	340	0	0
Stage 1	806	806	-	353	353	-	-	-	-	-	-	-
Stage 2	352	353	-	806	806	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	161	197	385	174	197	707	827	-	-	1230	-	-
Stage 1	354	397	-	668	635	-	-	-	-	-	-	-
Stage 2	635	634	-	378	397	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	160	196	385	167	196	707	827	-	-	1230	-	-
Mov Cap-2 Maneuver	160	196	-	167	196	-	-	-	-	-	-	-
Stage 1	354	397	-	663	630	-	-	-	-	-	-	-
Stage 2	630	629	-	366	397	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	19.8	0	0.17	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	827	-	-	262	-	1230	-	-
HCM Lane V/C Ratio	0.008	-	-	0.073	-	-	-	-
HCM Ctrl Dly (s/v)	9.4	-	-	19.8	0	0	-	-
HCM Lane LOS	A	-	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	-	0	-	-

Intersection	
Int Delay, s/veh	19.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	1	178	5	0	1	118	249	1	2	655	123
Future Vol, veh/h	72	1	178	5	0	1	118	249	1	2	655	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	183	-	-	100	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	36	100	4	20	0	100	4	4	100	0	1	2
Mvmt Flow	76	1	187	5	0	1	124	262	1	2	689	129

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1073	1205	689	1205	1205	132	689	0	0	263	0	0
Stage 1	694	694	-	511	511	-	-	-	-	-	-	-
Stage 2	379	512	-	694	694	-	-	-	-	-	-	-
Critical Hdwy	7.84	8	6.26	7.6	6.5	8.4	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.64	7	-	6.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.04	7	-	6.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.842	4.95	3.338	3.69	4	4.25	2.238	-	-	2.2	-	-
Pot Cap-1 Maneuver	152	102	440	133	185	673	892	-	-	1313	-	-
Stage 1	369	293	-	477	540	-	-	-	-	-	-	-
Stage 2	543	375	-	397	447	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	130	88	440	65	159	673	892	-	-	1313	-	-
Mov Cap-2 Maneuver	130	88	-	65	159	-	-	-	-	-	-	-
Stage 1	368	292	-	411	465	-	-	-	-	-	-	-
Stage 2	466	322	-	227	447	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	102.96	56.1	3.11	0.02
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	892	-	-	259	77	1313	-	-
HCM Lane V/C Ratio	0.139	-	-	1.019	0.082	0.002	-	-
HCM Ctrl Dly (s/v)	9.7	-	-	103	56.1	7.7	-	-
HCM Lane LOS	A	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	10.3	0.3	0	-	-

USER REPORT FOR SITE

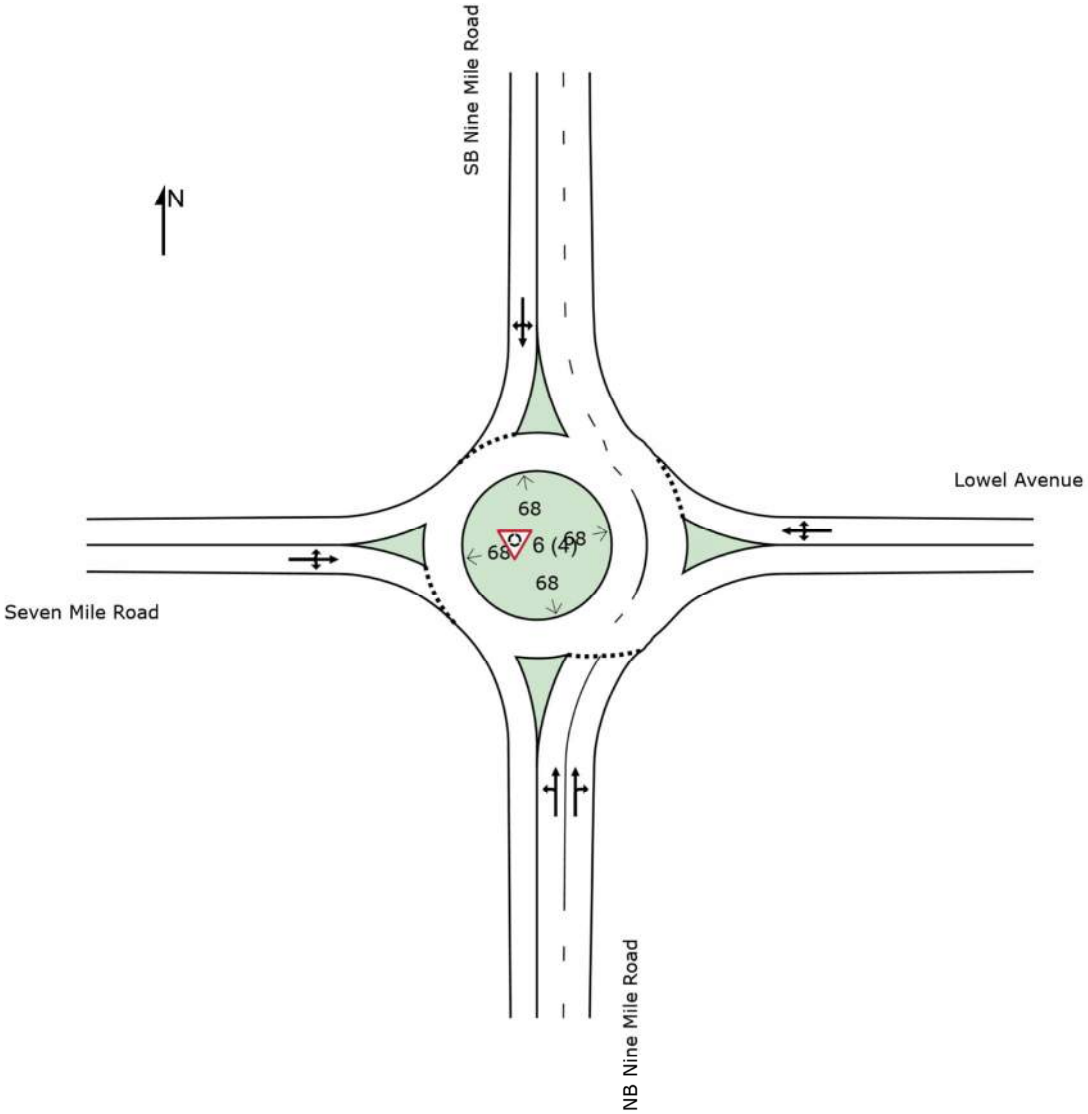
Default Site User Report

Site: [6 (4)] Seven Mile & Nine Mile Road (2031 AM W-O Proj)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

2031 AM W- O Proj
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



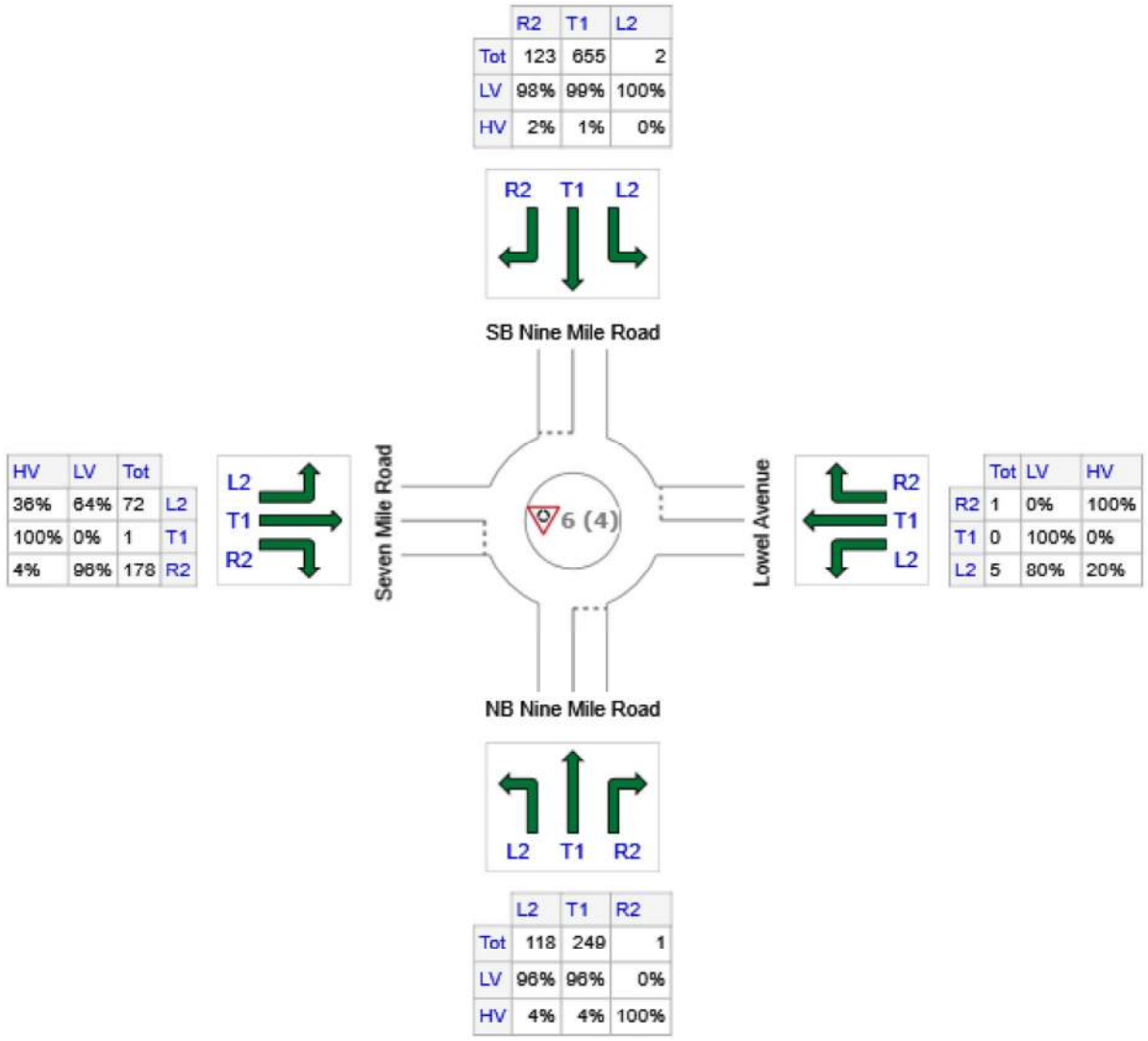
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
West: Seven Mile Road															
5	L2	All MCs	76	36.0	76	36.0	0.466	20.1	LOS C	3.4	94.5	0.87	0.83	1.00	30.1
2	T1	All MCs	1	100.0	1	100.0	0.466	22.4	LOS C	3.4	94.5	0.87	0.83	1.00	30.1
12	R2	All MCs	187	4.0	187	4.0	0.466	10.9	LOS B	3.4	94.5	0.87	0.83	1.00	31.5
Approach			264	13.6	264	13.6	0.466	13.6	LOS B	3.4	94.5	0.87	0.83	1.00	31.1
South: NB Nine Mile Road															
3	L2	All MCs	124	4.0	124	4.0	0.152	9.7	LOS A	0.9	24.4	0.33	0.57	0.33	32.9
8	T1	All MCs	262	4.0	262	4.0	0.152	5.3	LOS A	1.0	24.9	0.32	0.48	0.32	34.4
18	R2	All MCs	1	100.0	1	100.0	0.152	6.9	LOS A	1.0	24.9	0.32	0.45	0.32	31.6
Approach			387	4.3	387	4.3	0.152	6.7	LOS A	1.0	24.9	0.32	0.51	0.32	33.9
East: Lowel Avenue															
1	L2	All MCs	5	20.0	5	20.0	0.011	12.1	LOS B	0.0	1.2	0.49	0.69	0.49	31.2
6	T1	All MCs	0	0.0	0	0.0	0.011	6.5	LOS A	0.0	1.2	0.49	0.69	0.49	32.3
16	R2	All MCs	1	100.0	1	100.0	0.011	12.5	LOS B	0.0	1.2	0.49	0.69	0.49	29.3
Approach			6	32.8	6	32.8	0.011	12.1	LOS B	0.0	1.2	0.49	0.69	0.49	30.9
North: SB Nine Mile Road															
7	L2	All MCs	2	0.0	2	0.0	0.672	10.8	LOS B	7.0	176.4	0.60	0.50	0.60	33.9
4	T1	All MCs	689	1.0	689	1.0	0.672	5.6	LOS A	7.0	176.4	0.60	0.50	0.60	34.6
14	R2	All MCs	129	2.0	129	2.0	0.672	5.7	LOS A	7.0	176.4	0.60	0.50	0.60	34.2
Approach			821	1.2	821	1.2	0.672	5.6	LOS A	7.0	176.4	0.60	0.50	0.60	34.6
All Vehicles			1479	4.3	1479	4.3	0.672	7.4	LOS A	7.0	176.4	0.58	0.56	0.60	33.7

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Input Volumes

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
W: Seven Mile Road	251	217	34
S: NB Nine Mile Road	368	352	16
E: Lowel Avenue	6	4	2
N: SB Nine Mile Road	780	771	9
Total	1405	1344	61

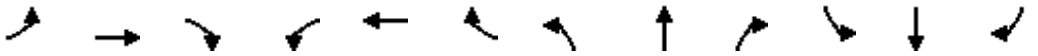
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	52	39	0	4	22	361	13	0	939	10
Future Vol, veh/h	9	0	52	39	0	4	22	361	13	0	939	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	180	-	-	180	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	25	0	0	0	0	75	5	3	8	0	1	22
Mvmt Flow	9	0	55	41	0	4	23	380	14	0	988	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1230	1434	499	927	1432	197	999	0	0	394	0	0
Stage 1	994	994	-	433	433	-	-	-	-	-	-	-
Stage 2	236	440	-	494	999	-	-	-	-	-	-	-
Critical Hdwy	8	6.5	6.9	7.5	6.5	8.4	4.2	-	-	4.1	-	-
Critical Hdwy Stg 1	7	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.75	4	3.3	3.5	4	4.05	2.25	-	-	2.2	-	-
Pot Cap-1 Maneuver	111	135	522	226	135	626	671	-	-	1176	-	-
Stage 1	223	326	-	577	585	-	-	-	-	-	-	-
Stage 2	684	581	-	531	324	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	131	522	195	131	626	671	-	-	1176	-	-
Mov Cap-2 Maneuver	106	131	-	195	131	-	-	-	-	-	-	-
Stage 1	223	326	-	557	565	-	-	-	-	-	-	-
Stage 2	656	561	-	475	324	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	18.49	26.95	0.59	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	671	-	-	331	209	1176	-	-
HCM Lane V/C Ratio	0.035	-	-	0.194	0.217	-	-	-
HCM Ctrl Dly (s/v)	10.6	-	-	18.5	27	0	-	-
HCM Lane LOS	B	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.8	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	52	39	0	4	22	361	13	0	939	10
Future Volume (veh/h)	9	0	52	39	0	4	22	361	13	0	939	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1530	1900	1900	1900	1900	789	1826	1856	1781	1900	1885	1574
Adj Flow Rate, veh/h	9	0	55	41	0	4	23	380	14	0	988	11
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, %	25	0	0	0	0	75	5	3	8	0	1	22
Cap, veh/h	131	5	127	322	1	13	50	2277	84	5	1823	20
Arrive On Green	0.09	0.00	0.09	0.09	0.00	0.09	0.03	0.66	0.66	0.00	0.50	0.50
Sat Flow, veh/h	174	52	1379	1407	15	139	1739	3468	127	1810	3628	40
Grp Volume(v), veh/h	64	0	0	45	0	0	23	193	201	0	488	511
Grp Sat Flow(s),veh/h/ln	1605	0	0	1560	0	0	1739	1763	1833	1810	1791	1878
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	0.5	1.5	1.5	0.0	6.7	6.7
Cycle Q Clear(g_c), s	1.3	0.0	0.0	0.8	0.0	0.0	0.5	1.5	1.5	0.0	6.7	6.7
Prop In Lane	0.14		0.86	0.91		0.09	1.00		0.07	1.00		0.02
Lane Grp Cap(c), veh/h	263	0	0	336	0	0	50	1157	1203	5	900	943
V/C Ratio(X)	0.24	0.00	0.00	0.13	0.00	0.00	0.46	0.17	0.17	0.00	0.54	0.54
Avail Cap(c_a), veh/h	912	0	0	905	0	0	243	1157	1203	252	900	943
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.4	0.0	0.0	15.1	0.0	0.0	17.1	2.4	2.4	0.0	6.1	6.1
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.2	0.0	0.0	6.6	0.3	0.3	0.0	2.3	2.2
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(50%),veh/ln	0.5	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.1	0.0	1.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.8	0.0	0.0	15.3	0.0	0.0	23.7	2.7	2.7	0.0	8.4	8.3
LnGrp LOS	B			B			C	A	A		A	A
Approach Vol, veh/h		64			45			417			999	
Approach Delay, s/veh		15.8			15.3			3.8			8.4	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	28.0		7.8	5.5	22.5		7.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.0		18.0	5.0	18.0		18.0				
Max Q Clear Time (g_c+I1), s	0.0	3.5		3.3	2.5	8.7		2.8				
Green Ext Time (p_c), s	0.0	1.6		0.2	0.0	3.7		0.1				

Intersection Summary												
HCM 7th Control Delay, s/veh			7.7									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	7.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	177	44	89	167	66	262
Future Vol, veh/h	177	44	89	167	66	262
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, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	2	0	3	0	1
Mvmt Flow	192	48	97	182	72	285

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	240	0	591	216
Stage 1	-	-	-	-	216	-
Stage 2	-	-	-	-	375	-
Critical Hdwy	-	-	4.1	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.309
Pot Cap-1 Maneuver	-	-	1338	-	473	826
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	699	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1338	-	435	826
Mov Cap-2 Maneuver	-	-	-	-	435	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	699	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.75	15.38
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	699	-	-	626	-
HCM Lane V/C Ratio	0.51	-	-	0.072	-
HCM Ctrl Dly (s/v)	15.4	-	-	7.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.9	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	14	25	692	382	5
Future Vol, veh/h	3	14	25	692	382	5
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	-	150	-	-	10
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	3	15	27	752	415	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1222	415	421	0	-	0
Stage 1	415	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	200	642	1149	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	196	642	1149	-	-	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.2	0.29	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1149	-	457	-	-
HCM Lane V/C Ratio	0.024	-	0.04	-	-
HCM Ctrl Dly (s/v)	8.2	-	13.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	129	218	689	348	48
Future Vol, veh/h	28	129	218	689	348	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	10
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	1	0
Mvmt Flow	30	140	237	749	378	52

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1601	378	430	0	-	0
Stage 1	378	-	-	-	-	-
Stage 2	1223	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	118	673	1140	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	93	673	1140	-	-	-
Mov Cap-2 Maneuver	93	-	-	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	281	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	20.58	2.16	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1140	-	93	673	-	-
HCM Lane V/C Ratio	0.208	-	0.326	0.208	-	-
HCM Ctrl Dly (s/v)	9	-	61.2	11.8	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.8	-	1.3	0.8	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	8	0	0	0	11	900	0	0	470	6
Future Vol, veh/h	6	0	8	0	0	0	11	900	0	0	470	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	7	0	9	0	0	0	12	989	0	0	516	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1533	1533	520	1530	1536	989	523	0	0	989	0	0
Stage 1	520	520	-	1013	1013	-	-	-	-	-	-	-
Stage 2	1013	1013	-	516	523	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	96	118	560	97	117	302	1054	-	-	707	-	-
Stage 1	543	535	-	290	319	-	-	-	-	-	-	-
Stage 2	290	319	-	545	534	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	95	116	560	94	116	302	1054	-	-	707	-	-
Mov Cap-2 Maneuver	95	116	-	94	116	-	-	-	-	-	-	-
Stage 1	543	535	-	287	315	-	-	-	-	-	-	-
Stage 2	287	315	-	537	534	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	26.73	0	0.1	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1054	-	-	181	-	707	-	-
HCM Lane V/C Ratio	0.011	-	-	0.085	-	-	-	-
HCM Ctrl Dly (s/v)	8.5	-	-	26.7	0	0	-	-
HCM Lane LOS	A	-	-	D	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	-	0	-	-

Intersection	
Int Delay, s/veh	143.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	213	0	229	4	2	1	176	714	5	1	391	92
Future Vol, veh/h	213	0	229	4	2	1	176	714	5	1	391	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	183	-	-	100	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	1	0	1	0	0	0	2	1	0	100	0	0
Mvmt Flow	229	0	246	4	2	1	189	768	5	1	420	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1186	1574	420	1572	1572	387	420	0	0	773	0	0
Stage 1	423	423	-	1149	1149	-	-	-	-	-	-	-
Stage 2	763	1152	-	423	423	-	-	-	-	-	-	-
Critical Hdwy	7.315	6.5	6.215	7.3	6.5	6.9	4.13	-	-	5.6	-	-
Critical Hdwy Stg 1	6.115	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.515	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5095	4	3.3095	3.5	4	3.3	2.219	-	-	3.15	-	-
Pot Cap-1 Maneuver	~ 155	111	635	83	112	618	1137	-	-	472	-	-
Stage 1	611	591	-	215	275	-	-	-	-	-	-	-
Stage 2	365	275	-	613	591	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 127	92	635	42	93	618	1137	-	-	472	-	-
Mov Cap-2 Maneuver	~ 127	92	-	42	93	-	-	-	-	-	-	-
Stage 1	609	590	-	179	230	-	-	-	-	-	-	-
Stage 2	301	229	-	374	590	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 589.63	74.3	1.73	0.03
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1137	-	-	216	59	472	-	-
HCM Lane V/C Ratio	0.166	-	-	2.198	0.127	0.002	-	-
HCM Ctrl Dly (s/v)	8.8	-	-	$ 589.6	74.3	12.6	-	-
HCM Lane LOS	A	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	37.2	0.4	0	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

USER REPORT FOR SITE

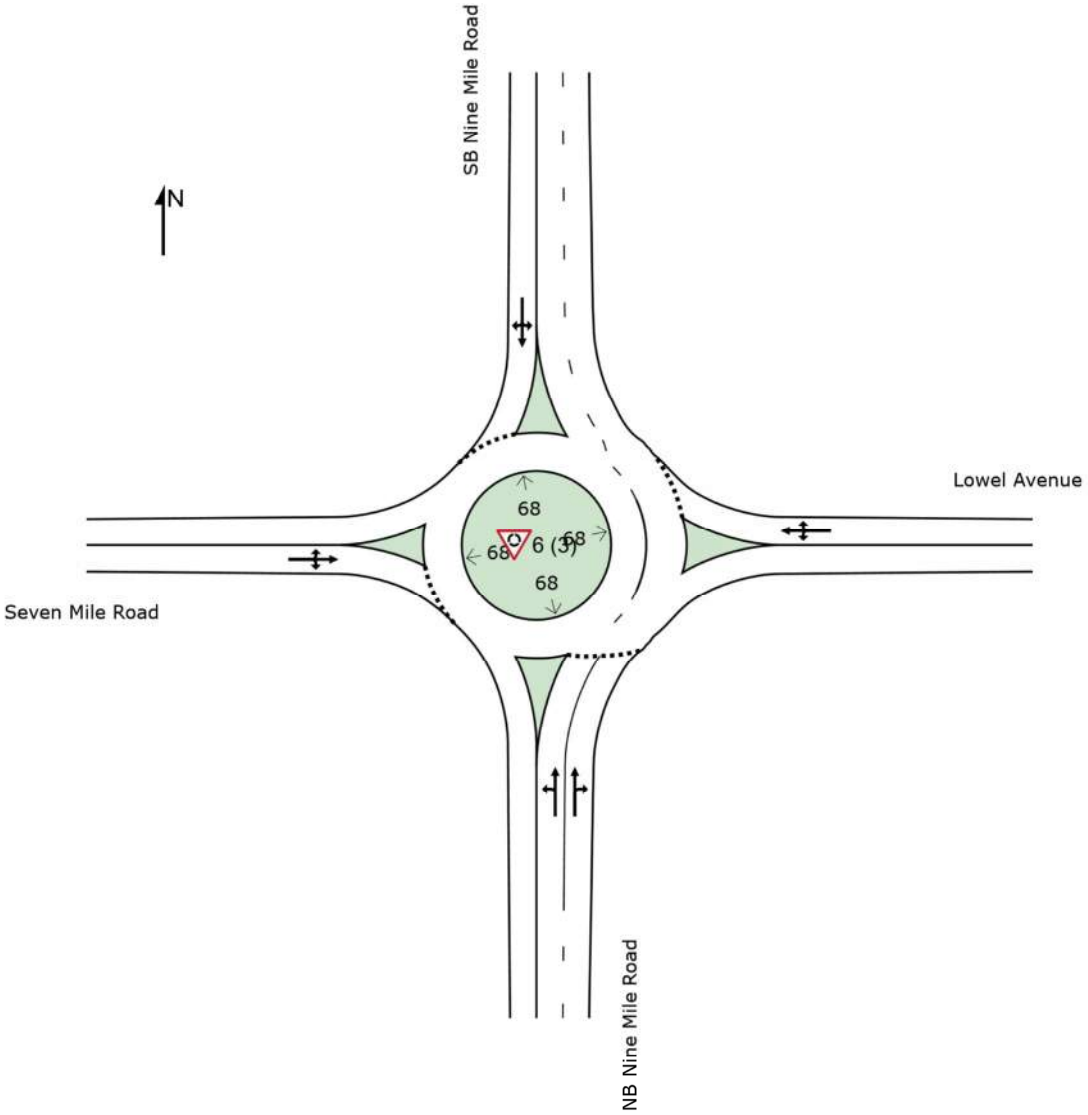
Default Site User Report

Site: [6 (3)] Seven Mile & Nine Mile Road (2031 PM W-O Proj)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

2031 PM W-O Proj
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



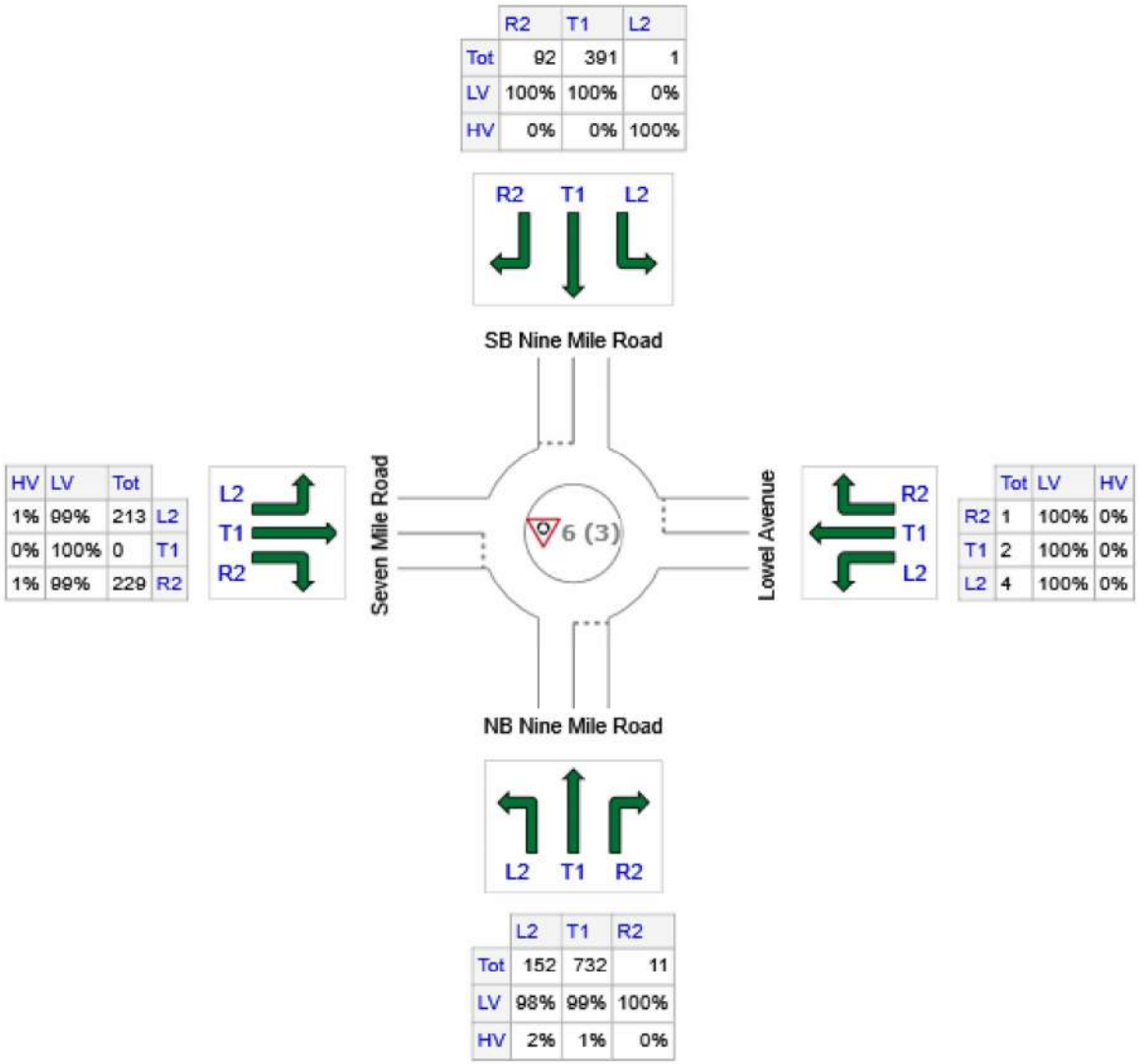
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
West: Seven Mile Road															
5	L2	All MCs	229	1.0	229	1.0	0.507	12.7	LOS B	4.0	100.5	0.74	0.70	0.78	32.6
2	T1	All MCs	0	0.0	0	0.0	0.507	7.5	LOS A	4.0	100.5	0.74	0.70	0.78	33.3
12	R2	All MCs	246	1.0	246	1.0	0.507	7.5	LOS A	4.0	100.5	0.74	0.70	0.78	33.1
Approach			475	1.0	475	1.0	0.507	10.0	LOS B	4.0	100.5	0.74	0.70	0.78	32.8
South: NB Nine Mile Road															
3	L2	All MCs	163	2.0	163	2.0	0.409	10.7	LOS B	3.1	77.2	0.57	0.58	0.57	33.0
8	T1	All MCs	787	1.0	787	1.0	0.409	6.2	LOS A	3.1	79.3	0.56	0.55	0.56	33.9
18	R2	All MCs	12	0.0	12	0.0	0.409	5.7	LOS A	3.1	79.3	0.55	0.53	0.55	33.9
Approach			962	1.2	962	1.2	0.409	6.9	LOS A	3.1	79.3	0.56	0.55	0.56	33.8
East: Lowel Avenue															
1	L2	All MCs	4	0.0	4	0.0	0.013	13.0	LOS B	0.1	1.4	0.65	0.75	0.65	32.1
6	T1	All MCs	2	0.0	2	0.0	0.013	8.6	LOS A	0.1	1.4	0.65	0.75	0.65	32.6
16	R2	All MCs	1	0.0	1	0.0	0.013	8.6	LOS A	0.1	1.4	0.65	0.75	0.65	32.3
Approach			8	0.0	8	0.0	0.013	11.1	LOS B	0.1	1.4	0.65	0.75	0.65	32.3
North: SB Nine Mile Road															
7	L2	All MCs	1	100.0	1	100.0	0.440	13.9	LOS B	3.4	84.2	0.50	0.49	0.50	30.9
4	T1	All MCs	420	0.0	420	0.0	0.440	5.3	LOS A	3.4	84.2	0.50	0.49	0.50	34.9
14	R2	All MCs	99	0.0	99	0.0	0.440	5.4	LOS A	3.4	84.2	0.50	0.49	0.50	34.6
Approach			520	0.2	520	0.2	0.440	5.3	LOS A	3.4	84.2	0.50	0.49	0.50	34.9
All Vehicles			1966	0.9	1966	0.9	0.507	7.3	LOS A	4.0	100.5	0.59	0.57	0.60	33.8

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Input Volumes

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
W: Seven Mile Road	442	438	4
S: NB Nine Mile Road	895	885	10
E: Lowel Avenue	7	7	0
N: SB Nine Mile Road	484	483	1
Total	1828	1812	16

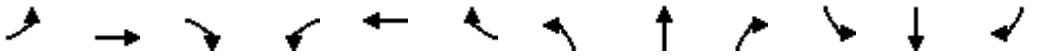
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	0	51	30	4	3	57	957	41	4	673	12
Future Vol, veh/h	12	0	51	30	4	3	57	957	41	4	673	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	180	-	-	180	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	4	0	0	0	0	1	0	0	1	0
Mvmt Flow	13	0	57	34	4	3	64	1075	46	4	756	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1440	2021	385	1613	2005	561	770	0	0	1121	0	0
Stage 1	772	772	-	1226	1226	-	-	-	-	-	-	-
Stage 2	668	1249	-	387	779	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.98	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.34	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	95	59	608	71	60	476	854	-	-	630	-	-
Stage 1	363	412	-	192	253	-	-	-	-	-	-	-
Stage 2	419	247	-	614	409	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	80	54	608	59	55	476	854	-	-	630	-	-
Mov Cap-2 Maneuver	80	54	-	59	55	-	-	-	-	-	-	-
Stage 1	360	409	-	178	234	-	-	-	-	-	-	-
Stage 2	377	228	-	552	406	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	23.01	137.35	0.52	0.06
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	854	-	-	270	63	630	-	-
HCM Lane V/C Ratio	0.075	-	-	0.262	0.662	0.007	-	-
HCM Ctrl Dly (s/v)	9.6	-	-	23	137.3	10.8	-	-
HCM Lane LOS	A	-	-	C	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1	2.8	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	0	51	30	4	3	57	957	41	4	673	12
Future Volume (veh/h)	12	0	51	30	4	3	57	957	41	4	673	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1841	1900	1900	1900	1900	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	13	0	57	34	4	3	64	1075	46	4	756	13
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
Percent Heavy Veh, %	0	0	4	0	0	0	0	1	0	0	1	0
Cap, veh/h	136	6	119	290	22	11	118	1895	81	10	1737	30
Arrive On Green	0.09	0.00	0.09	0.09	0.09	0.09	0.06	0.54	0.54	0.01	0.48	0.48
Sat Flow, veh/h	236	61	1302	1245	242	117	1810	3499	150	1810	3603	62
Grp Volume(v), veh/h	70	0	0	41	0	0	64	550	571	4	376	393
Grp Sat Flow(s),veh/h/ln	1599	0	0	1604	0	0	1810	1791	1858	1810	1791	1874
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	1.3	7.6	7.6	0.1	5.1	5.1
Cycle Q Clear(g_c), s	1.5	0.0	0.0	0.8	0.0	0.0	1.3	7.6	7.6	0.1	5.1	5.1
Prop In Lane	0.19		0.81	0.83		0.07	1.00		0.08	1.00		0.03
Lane Grp Cap(c), veh/h	261	0	0	323	0	0	118	970	1006	10	863	903
V/C Ratio(X)	0.27	0.00	0.00	0.13	0.00	0.00	0.54	0.57	0.57	0.41	0.44	0.44
Avail Cap(c_a), veh/h	875	0	0	878	0	0	242	970	1006	242	863	903
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	0.0	15.8	0.0	0.0	16.9	5.7	5.7	18.5	6.3	6.3
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.2	0.0	0.0	3.9	2.4	2.3	24.7	1.6	1.5
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(50%),veh/ln	0.5	0.0	0.0	0.3	0.0	0.0	0.5	1.2	1.3	0.1	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.6	0.0	0.0	15.9	0.0	0.0	20.8	8.1	8.0	43.2	7.9	7.9
LnGrp LOS	B			B			C	A	A	D	A	A
Approach Vol, veh/h		70			41			1185			773	
Approach Delay, s/veh		16.6			15.9			8.7			8.1	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	24.7		7.9	6.9	22.5		7.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.0		18.0	5.0	18.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	9.6		3.5	3.3	7.1		2.8				
Green Ext Time (p_c), s	0.0	4.0		0.2	0.0	3.0		0.1				

Intersection Summary												
HCM 7th Control Delay, s/veh			8.9									
HCM 7th LOS			A									

YEAR 2031

LEVEL OF SERVICE CALCULATIONS

AM & PM WITH BACKGROUND, WITH PROJECT

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	58	203	100	11	67
Future Vol, veh/h	137	58	203	100	11	67
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, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	4	0	0	5	40	16
Mvmt Flow	154	65	228	112	12	75

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	219	0	755	187
Stage 1	-	-	-	-	187	-
Stage 2	-	-	-	-	569	-
Critical Hdwy	-	-	4.1	-	6.8	6.36
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.86	3.444
Pot Cap-1 Maneuver	-	-	1362	-	327	821
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	498	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1362	-	268	821
Mov Cap-2 Maneuver	-	-	-	-	268	-
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	498	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.48	11.56
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	636	-	-	1206	-
HCM Lane V/C Ratio	0.138	-	-	0.167	-
HCM Ctrl Dly (s/v)	11.6	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.6	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	21	0	0	2	7	310	2	0	563	2
Future Vol, veh/h	5	0	21	0	0	2	7	310	2	0	563	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	150	-	-	-	-	10
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	10	0	0	1	0
Mvmt Flow	5	0	23	0	0	2	8	337	2	0	612	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	964	966	612	-	-	338	614	0	0	-	-	0
Stage 1	612	612	-	-	-	-	-	-	-	-	-	-
Stage 2	352	354	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	-	-	6.2	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	-	-	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	237	256	497	0	0	709	975	-	-	0	-	-
Stage 1	484	487	-	0	0	-	-	-	-	0	-	-
Stage 2	669	634	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	234	254	497	-	-	709	975	-	-	-	-	-
Mov Cap-2 Maneuver	234	254	-	-	-	-	-	-	-	-	-	-
Stage 1	484	487	-	-	-	-	-	-	-	-	-	-
Stage 2	662	629	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	14.46	10.09	0.19	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	975	-	-	409	709	-	-
HCM Lane V/C Ratio	0.008	-	-	0.069	0.003	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	14.5	10.1	-	-
HCM Lane LOS	A	-	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	-	-

Intersection	
Int Delay, s/veh	252.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	0	195	326	0	5	65	273	10	15	555	14
Future Vol, veh/h	43	0	195	326	0	5	65	273	10	15	555	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	100	150	-	150	150	-	10
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	10	0	0	1	0
Mvmt Flow	47	0	212	354	0	5	71	297	11	16	603	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1074	1085	603	1074	1089	297	618	0	0	308	0	0
Stage 1	636	636	-	438	438	-	-	-	-	-	-	-
Stage 2	438	449	-	636	651	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	199	218	503	~ 199	217	747	972	-	-	1264	-	-
Stage 1	470	475	-	601	582	-	-	-	-	-	-	-
Stage 2	601	576	-	470	468	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	181	200	503	~ 105	199	747	972	-	-	1264	-	-
Mov Cap-2 Maneuver	181	200	-	~ 105	199	-	-	-	-	-	-	-
Stage 1	463	469	-	558	540	-	-	-	-	-	-	-
Stage 2	554	534	-	~ 268	462	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	19.88	$ 1130.04	1.68	0.2
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	972	-	-	181	503	105	747	1264	-	-
HCM Lane V/C Ratio	0.073	-	-	0.258	0.422	3.359	0.007	0.013	-	-
HCM Ctrl Dly (s/v)	9	-	-	31.7	17.$	1147.2	9.9	7.9	-	-
HCM Lane LOS	A	-	-	D	C	F	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1	2.1	34.9	0	0	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

USER REPORT FOR SITE

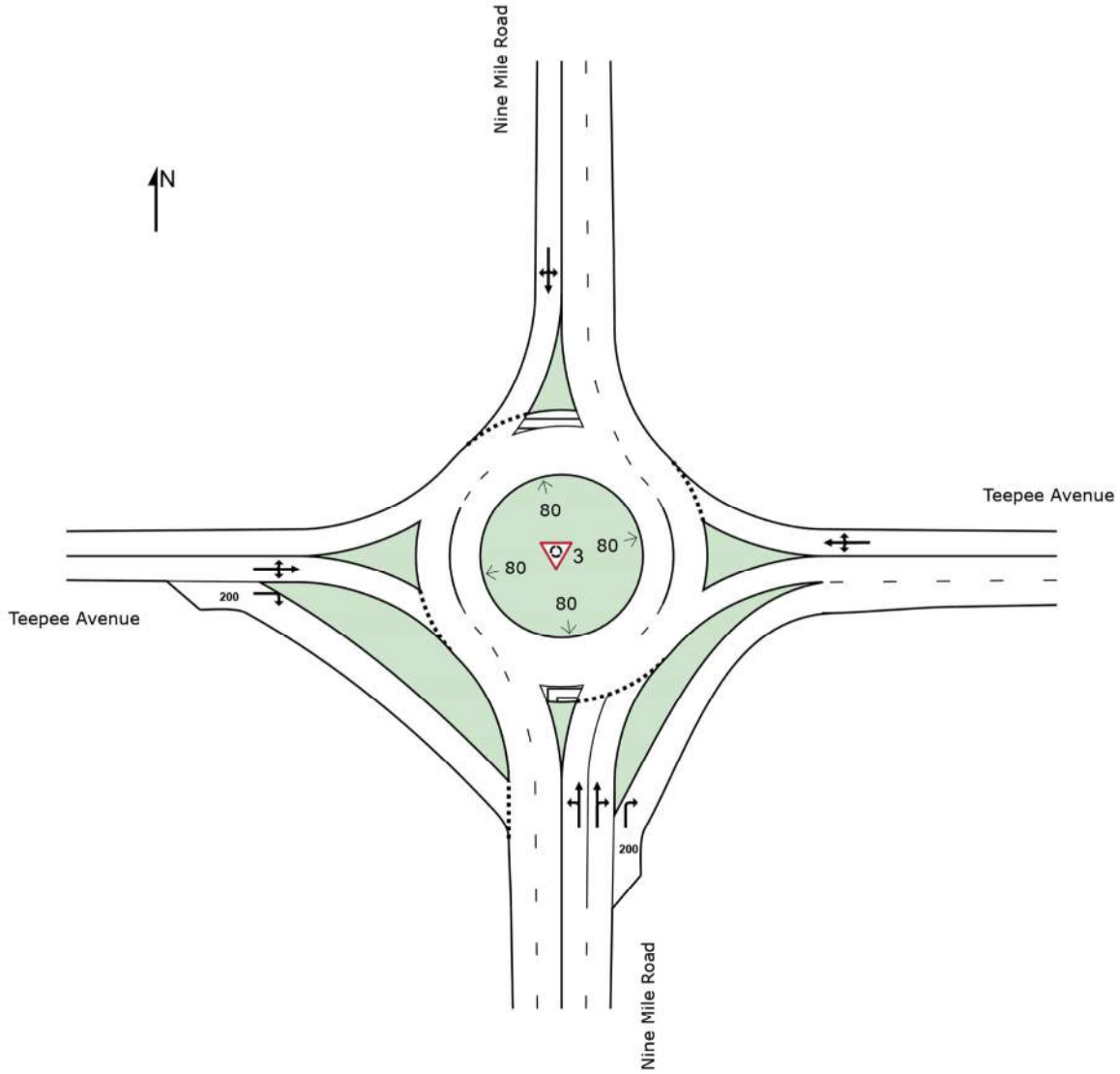
Default Site User Report

Site: [3] Teepee Ave & SR 291 (2031 AM W-Proj)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

2031 AM W- Proj
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



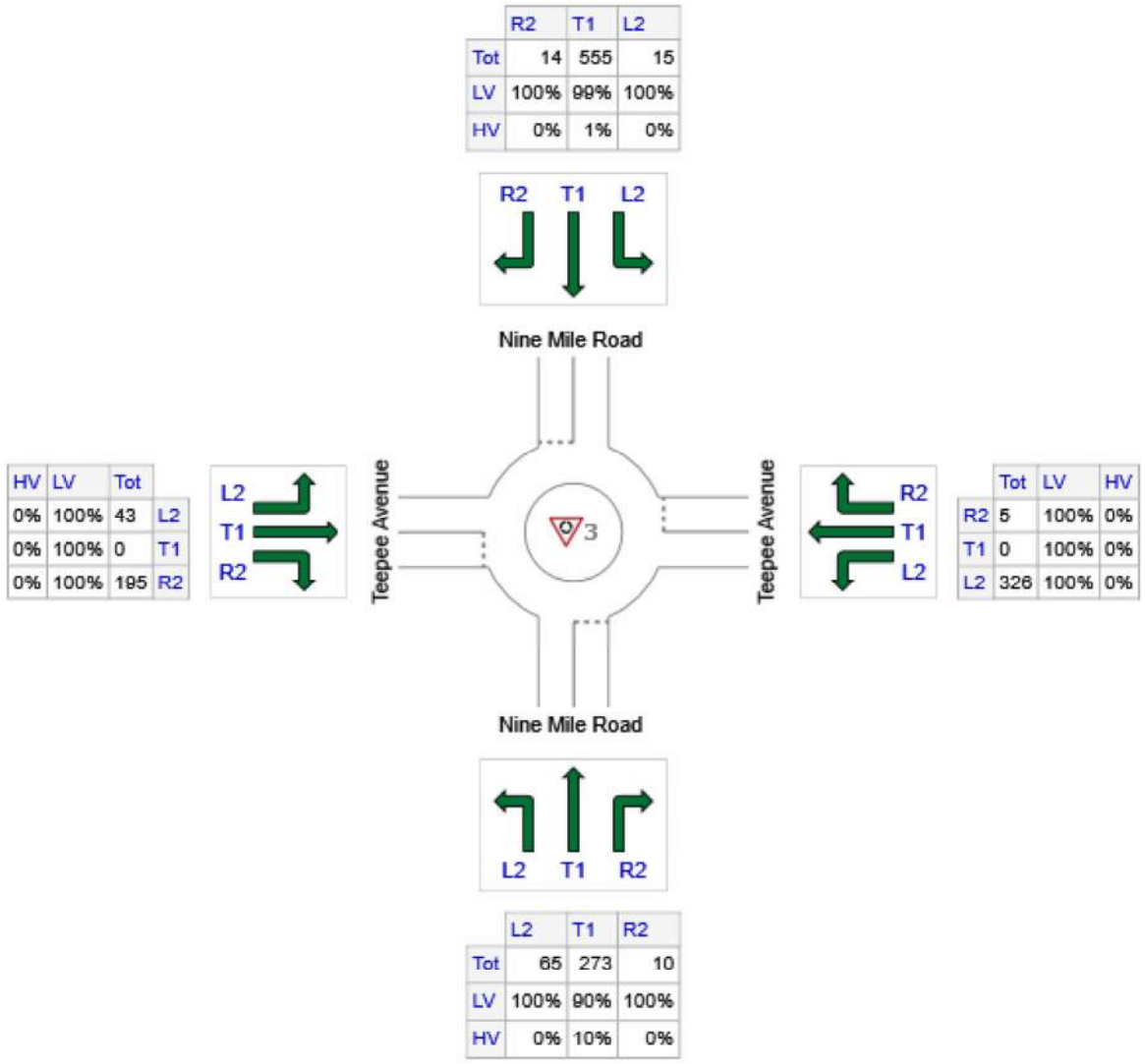
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
West: Teepee Avenue															
5	L2	All MCs	47	0.0	47	0.0	0.222	15.0	LOS B	1.4	36.2	0.86	0.80	0.86	21.7
2	T1	All MCs	0	0.0	0	0.0	0.222	10.0	LOS B	1.4	36.2	0.86	0.80	0.86	18.0
12	R2	All MCs	212	0.0	212	0.0	0.222	7.2	LOS A	1.4	36.2	0.76	0.78	0.76	21.3
Approach			259	0.0	259	0.0	0.222	8.6	LOS A	1.4	36.2	0.78	0.78	0.78	21.4
South: Nine Mile Road															
3	L2	All MCs	71	0.0	71	0.0	0.146	9.7	LOS A	0.9	22.9	0.24	0.51	0.24	16.8
8	T1	All MCs	297	10.0	297	10.0	0.146	4.6	LOS A	0.9	23.6	0.24	0.44	0.24	27.8
18	R2	All MCs	11	0.0	11	0.0	0.006	3.9	LOS A	0.0	0.0	0.00	0.49	0.00	27.8
Approach			378	7.8	378	7.8	0.146	5.6	LOS A	0.9	23.6	0.23	0.45	0.23	25.7
East: Teepee Avenue															
1	L2	All MCs	354	0.0	354	0.0	0.421	12.1	LOS B	2.1	51.9	0.56	0.74	0.58	20.7
6	T1	All MCs	0	0.0	0	0.0	0.421	6.8	LOS A	2.1	51.9	0.56	0.74	0.58	15.9
16	R2	All MCs	5	0.0	5	0.0	0.421	6.7	LOS A	2.1	51.9	0.56	0.74	0.58	24.2
Approach			360	0.0	360	0.0	0.421	12.0	LOS B	2.1	51.9	0.56	0.74	0.58	20.8
North: Nine Mile Road															
7	L2	All MCs	16	0.0	16	0.0	0.777	19.3	LOS B	10.6	268.1	0.95	0.92	1.33	21.1
4	T1	All MCs	603	1.0	603	1.0	0.777	14.3	LOS B	10.6	268.1	0.95	0.92	1.33	21.9
14	R2	All MCs	15	0.0	15	0.0	0.777	14.0	LOS B	10.6	268.1	0.95	0.92	1.33	20.2
Approach			635	1.0	635	1.0	0.777	14.4	LOS B	10.6	268.1	0.95	0.92	1.33	21.8
All Vehicles			1632	2.2	1632	2.2	0.777	10.9	LOS B	10.6	268.1	0.67	0.75	0.82	22.4

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Input Volumes

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
W: Teepee Avenue	238	238	0
S: Nine Mile Road	348	321	27
E: Teepee Avenue	331	331	0
N: Nine Mile Road	584	578	6
Total	1501	1468	33

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	344	35	0	1078
Future Vol, veh/h	0	4	344	35	0	1078
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, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	10	0	0	1
Mvmt Flow	0	4	374	38	0	1172

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	393	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	660	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	660	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.49	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	660	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Ctrl Dly (s/v)	-	-	10.5	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	12	0	0	7	6	365	85	0	1078	0
Future Vol, veh/h	6	0	12	0	0	7	6	365	85	0	1078	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	10	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	17	0	0	0	0	0	0	9	0	0	1	0
Mvmt Flow	6	0	13	0	0	7	6	388	90	0	1147	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1548	1638	1147	1548	1548	388	1147	0	0	479	0	0
Stage 1	1147	1147	-	401	401	-	-	-	-	-	-	-
Stage 2	401	491	-	1147	1147	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	86	102	245	94	115	664	617	-	-	1094	-	-
Stage 1	226	276	-	630	604	-	-	-	-	-	-	-
Stage 2	597	551	-	244	276	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	84	100	245	88	114	664	617	-	-	1094	-	-
Mov Cap-2 Maneuver	84	100	-	88	114	-	-	-	-	-	-	-
Stage 1	226	276	-	623	598	-	-	-	-	-	-	-
Stage 2	584	546	-	232	276	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	32.62	10.48	0.14	0
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	617	-	-	149	664	1094	-	-
HCM Lane V/C Ratio	0.01	-	-	0.128	0.011	-	-	-
HCM Ctrl Dly (s/v)	10.9	-	-	32.6	10.5	0	-	-
HCM Lane LOS	B	-	-	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	-	-

Intersection	
Int Delay, s/veh	82.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	1	178	5	0	1	118	359	1	2	924	174
Future Vol, veh/h	92	1	178	5	0	1	118	359	1	2	924	174
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	183	-	-	100	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	36	100	4	20	0	100	4	4	100	0	1	2
Mvmt Flow	97	1	187	5	0	1	124	378	1	2	973	183

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1414	1604	973	1604	1604	189	973	0	0	379	0	0
Stage 1	977	977	-	627	627	-	-	-	-	-	-	-
Stage 2	437	627	-	977	977	-	-	-	-	-	-	-
Critical Hdwy	7.84	8	6.26	7.6	6.5	8.4	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.64	7	-	6.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.04	7	-	6.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.842	4.95	3.338	3.69	4	4.25	2.238	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 83	51	302	67	107	608	697	-	-	1191	-	-
Stage 1	249	198	-	405	480	-	-	-	-	-	-	-
Stage 2	499	321	-	272	332	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 68	42	302	20	87	608	697	-	-	1191	-	-
Mov Cap-2 Maneuver	~ 68	42	-	20	87	-	-	-	-	-	-	-
Stage 1	249	197	-	333	394	-	-	-	-	-	-	-
Stage 2	409	263	-	102	331	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 555.67	197.97	2.79	0.01
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	697	-	-	138	24	1191	-	-
HCM Lane V/C Ratio	0.178	-	-	2.063	0.259	0.002	-	-
HCM Ctrl Dly (s/v)	11.3	-	-	$ 555.7	198	8	-	-
HCM Lane LOS	B	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	23	0.8	0	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

USER REPORT FOR SITE

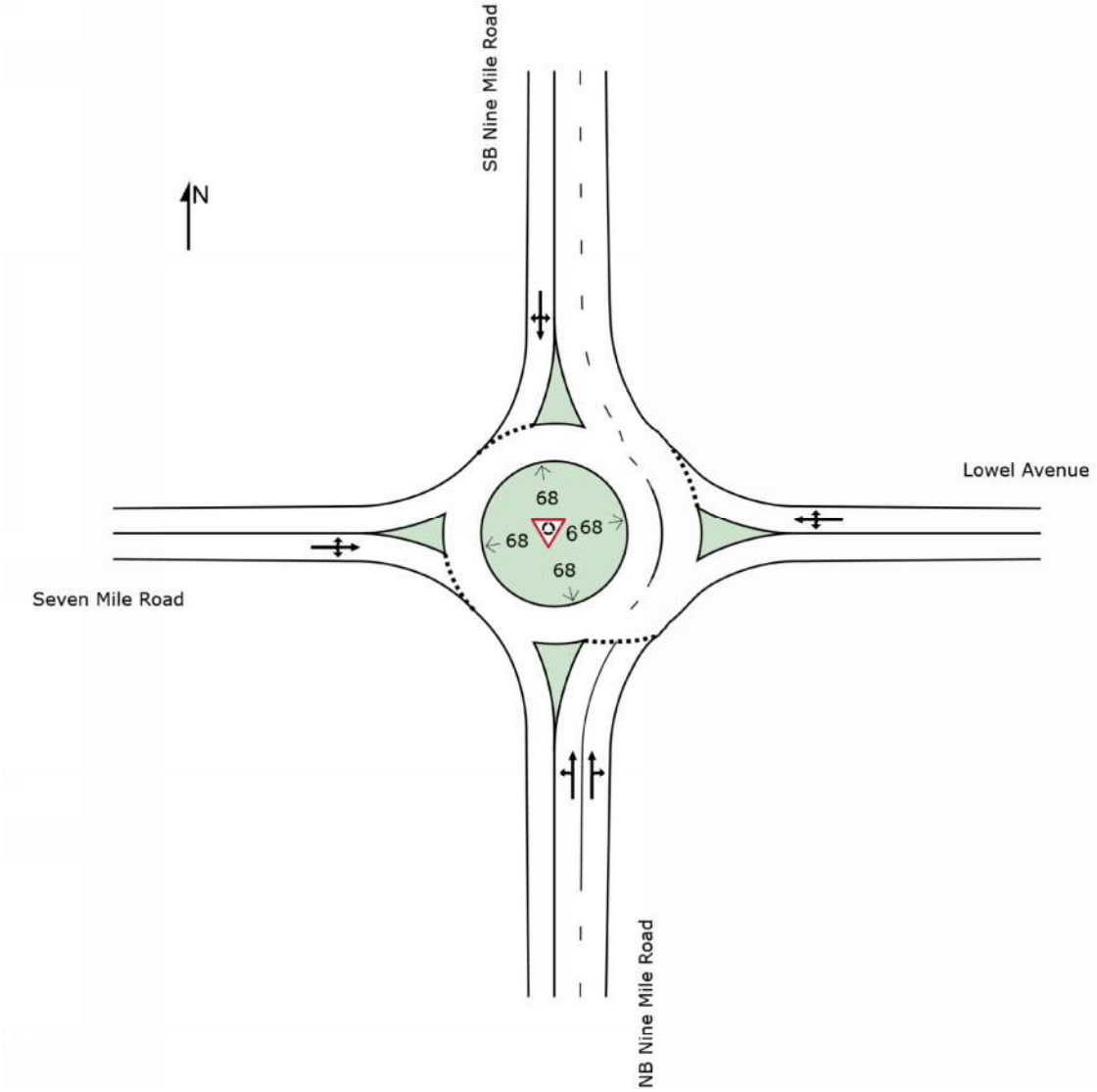
Default Site User Report

Site: [6] Seven Mile & Nine Mile Road (2031 AM W-Proj)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

2031 AM W-Proj
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



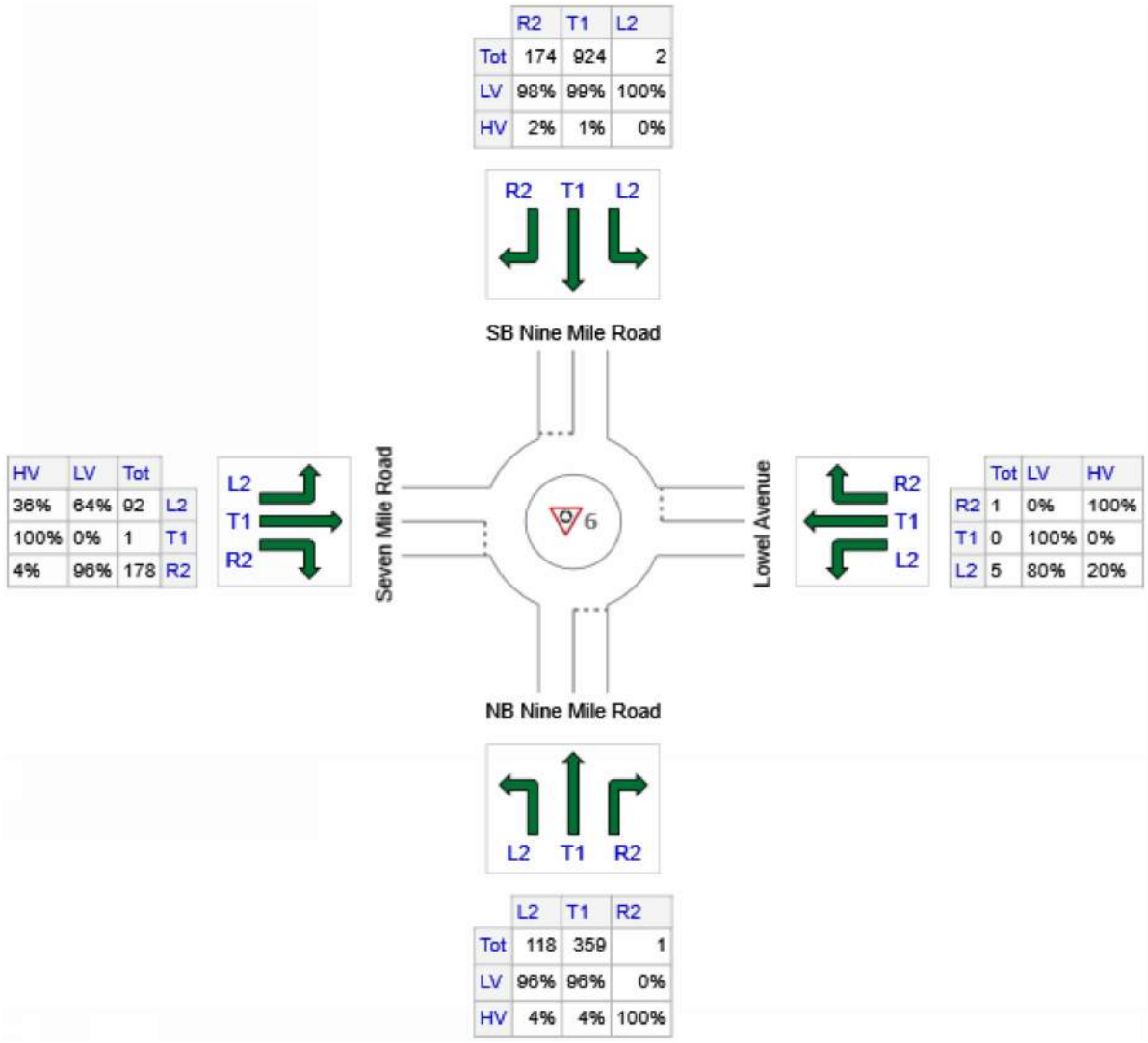
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
West: Seven Mile Road															
5	L2	All MCs	97	36.0	97	36.0	0.943	64.4	LOS E	13.4	375.7	1.00	1.45	2.24	19.0
2	T1	All MCs	1	100.0	1	100.0	0.943	71.3	LOS E	13.4	375.7	1.00	1.45	2.24	19.0
12	R2	All MCs	187	4.0	187	4.0	0.943	52.9	LOS D	13.4	375.7	1.00	1.45	2.24	19.6
Approach			285	15.2	285	15.2	0.943	56.8	LOS E	13.4	375.7	1.00	1.45	2.24	19.4
South: NB Nine Mile Road															
3	L2	All MCs	124	4.0	124	4.0	0.204	9.9	LOS A	1.4	35.0	0.39	0.56	0.39	33.1
8	T1	All MCs	378	4.0	378	4.0	0.204	5.5	LOS A	1.4	35.9	0.39	0.49	0.39	34.3
18	R2	All MCs	1	100.0	1	100.0	0.204	7.4	LOS A	1.4	35.9	0.38	0.46	0.38	31.5
Approach			503	4.2	503	4.2	0.204	6.6	LOS A	1.4	35.9	0.39	0.51	0.39	34.0
East: Lowel Avenue															
1	L2	All MCs	5	20.0	5	20.0	0.013	13.0	LOS B	0.0	1.4	0.55	0.72	0.55	30.8
6	T1	All MCs	0	0.0	0	0.0	0.013	6.9	LOS A	0.0	1.4	0.55	0.72	0.55	31.8
16	R2	All MCs	1	100.0	1	100.0	0.013	15.1	LOS B	0.0	1.4	0.55	0.72	0.55	28.9
Approach			6	32.8	6	32.8	0.013	13.3	LOS B	0.0	1.4	0.55	0.72	0.55	30.4
North: SB Nine Mile Road															
7	L2	All MCs	2	0.0	2	0.0	0.950	17.8	LOS E	29.0	730.8	1.00	0.87	1.18	30.6
4	T1	All MCs	973	1.0	973	1.0	0.950	12.6	LOS E	29.0	730.8	1.00	0.87	1.18	31.2
14	R2	All MCs	183	2.0	183	2.0	0.950	12.8	LOS E	29.0	730.8	1.00	0.87	1.18	30.8
Approach			1158	1.2	1158	1.2	0.950	12.6	LOS B	29.0	730.8	1.00	0.87	1.18	31.1
All Vehicles			1953	4.1	1953	4.1	0.950	17.5	LOS B	29.0	730.8	0.84	0.86	1.13	29.2

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Input Volumes

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
W: Seven Mile Road	271	230	41
S: NB Nine Mile Road	478	458	20
E: Lowel Avenue	6	4	2
N: SB Nine Mile Road	1100	1087	13
Total	1855	1779	76

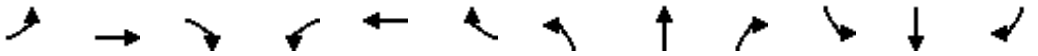
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	52	39	0	4	22	471	13	0	1208	10
Future Vol, veh/h	9	0	52	39	0	4	22	471	13	0	1208	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	180	-	-	180	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	25	0	0	0	0	75	5	3	8	0	1	22
Mvmt Flow	9	0	55	41	0	4	23	496	14	0	1272	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1571	1833	641	1185	1831	255	1282	0	0	509	0	0
Stage 1	1277	1277	-	549	549	-	-	-	-	-	-	-
Stage 2	294	556	-	636	1282	-	-	-	-	-	-	-
Critical Hdwy	8	6.5	6.9	7.5	6.5	8.4	4.2	-	-	4.1	-	-
Critical Hdwy Stg 1	7	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.75	4	3.3	3.5	4	4.05	2.25	-	-	2.2	-	-
Pot Cap-1 Maneuver	59	77	422	147	77	564	521	-	-	1066	-	-
Stage 1	145	239	-	493	520	-	-	-	-	-	-	-
Stage 2	629	516	-	438	238	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	56	74	422	122	74	564	521	-	-	1066	-	-
Mov Cap-2 Maneuver	56	74	-	122	74	-	-	-	-	-	-	-
Stage 1	145	239	-	471	497	-	-	-	-	-	-	-
Stage 2	597	493	-	381	238	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	28.62	46.03	0.53	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	521	-	-	216	132	1066	-	-
HCM Lane V/C Ratio	0.044	-	-	0.298	0.344	-	-	-
HCM Ctrl Dly (s/v)	12.2	-	-	28.6	46	0	-	-
HCM Lane LOS	B	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.2	1.4	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	0	52	39	0	4	22	471	13	0	1208	10
Future Volume (veh/h)	9	0	52	39	0	4	22	471	13	0	1208	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1530	1900	1900	1900	1900	789	1826	1856	1781	1900	1885	1574
Adj Flow Rate, veh/h	9	0	55	41	0	4	23	496	14	0	1272	11
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, %	25	0	0	0	0	75	5	3	8	0	1	22
Cap, veh/h	131	5	127	322	1	13	50	2299	65	5	1828	16
Arrive On Green	0.09	0.00	0.09	0.09	0.00	0.09	0.03	0.66	0.66	0.00	0.50	0.50
Sat Flow, veh/h	174	52	1379	1407	15	139	1739	3502	99	1810	3639	31
Grp Volume(v), veh/h	64	0	0	45	0	0	23	249	261	0	626	657
Grp Sat Flow(s),veh/h/ln	1605	0	0	1560	0	0	1739	1763	1838	1810	1791	1880
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	0.5	2.0	2.0	0.0	9.6	9.6
Cycle Q Clear(g_c), s	1.3	0.0	0.0	0.8	0.0	0.0	0.5	2.0	2.0	0.0	9.6	9.6
Prop In Lane	0.14		0.86	0.91		0.09	1.00		0.05	1.00		0.02
Lane Grp Cap(c), veh/h	263	0	0	336	0	0	50	1157	1206	5	900	944
V/C Ratio(X)	0.24	0.00	0.00	0.13	0.00	0.00	0.46	0.22	0.22	0.00	0.70	0.70
Avail Cap(c_a), veh/h	912	0	0	905	0	0	243	1157	1206	252	900	944
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.4	0.0	0.0	15.1	0.0	0.0	17.1	2.5	2.5	0.0	6.8	6.8
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.2	0.0	0.0	6.6	0.4	0.4	0.0	4.4	4.2
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(50%),veh/ln	0.5	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.1	0.0	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.8	0.0	0.0	15.3	0.0	0.0	23.7	2.9	2.9	0.0	11.3	11.1
LnGrp LOS	B			B			C	A	A		B	B
Approach Vol, veh/h		64			45			533			1283	
Approach Delay, s/veh		15.8			15.3			3.8			11.2	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	28.0		7.8	5.5	22.5		7.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.0		18.0	5.0	18.0		18.0				
Max Q Clear Time (g_c+I1), s	0.0	4.0		3.3	2.5	11.6		2.8				
Green Ext Time (p_c), s	0.0	2.1		0.2	0.0	3.7		0.1				

Intersection Summary												
HCM 7th Control Delay, s/veh			9.4									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	8.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	194	44	113	178	66	295
Future Vol, veh/h	194	44	113	178	66	295
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, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	2	0	3	0	1
Mvmt Flow	211	48	123	193	72	321

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	259	0	674	235
Stage 1	-	-	-	-	235	-
Stage 2	-	-	-	-	439	-
Critical Hdwy	-	-	4.1	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.309
Pot Cap-1 Maneuver	-	-	1318	-	423	807
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	654	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1318	-	379	807
Mov Cap-2 Maneuver	-	-	-	-	379	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	654	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.11	17.74
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	669	-	-	699	-
HCM Lane V/C Ratio	0.587	-	-	0.093	-
HCM Ctrl Dly (s/v)	17.7	-	-	8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	3.8	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	14	0	0	0	25	702	4	0	397	5
Future Vol, veh/h	3	0	14	0	0	0	25	702	4	0	397	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	150	-	-	-	-	10
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	2	2	2	0	1	2	2	1	0
Mvmt Flow	3	0	15	0	0	0	27	763	4	0	432	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1249	1253	432	-	-	765	437	0	0	-	-	0
Stage 1	432	432	-	-	-	-	-	-	-	-	-	-
Stage 2	817	822	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.52	6.2	-	-	6.22	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.018	3.3	-	-	3.318	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	151	172	628	0	0	403	1134	-	-	0	-	-
Stage 1	606	583	-	0	0	-	-	-	-	0	-	-
Stage 2	373	388	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	148	168	628	-	-	403	1134	-	-	-	-	-
Mov Cap-2 Maneuver	148	168	-	-	-	-	-	-	-	-	-	-
Stage 1	606	583	-	-	-	-	-	-	-	-	-	-
Stage 2	364	379	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	14.46	0	0.28	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1134	-	-	399	-	-	-
HCM Lane V/C Ratio	0.024	-	-	0.046	-	-	-
HCM Ctrl Dly (s/v)	8.3	-	-	14.5	0	-	-
HCM Lane LOS	A	-	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	-	-

Intersection	
Int Delay, s/veh	242.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	0	129	219	0	10	218	695	32	16	347	48
Future Vol, veh/h	28	0	129	219	0	10	218	695	32	16	347	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	100	150	-	150	150	-	10
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	2	2	2	0	1	2	2	1	0
Mvmt Flow	30	0	140	238	0	11	237	755	35	17	377	52

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1641	1676	377	1641	1693	755	429	0	0	790	0	0
Stage 1	412	412	-	1229	1229	-	-	-	-	-	-	-
Stage 2	1229	1264	-	412	464	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.52	6.2	7.12	6.52	6.22	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.018	3.3	3.518	4.018	3.318	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	81	95	674	~ 80	93	408	1141	-	-	830	-	-
Stage 1	621	594	-	~ 217	250	-	-	-	-	-	-	-
Stage 2	220	241	-	617	563	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	61	74	674	~ 49	72	408	1141	-	-	830	-	-
Mov Cap-2 Maneuver	61	74	-	~ 49	72	-	-	-	-	-	-	-
Stage 1	608	582	-	~ 172	198	-	-	-	-	-	-	-
Stage 2	169	191	-	478	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	29.66	$ 1814.48	2.07	0.37
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1141	-	-	61	674	49	408	830	-	-
HCM Lane V/C Ratio	0.208	-	-	0.498	0.208	4.846	0.027	0.021	-	-
HCM Ctrl Dly (s/v)	9	-	-	112.2	11.3	$ 1896.7	14.1	9.4	-	-
HCM Lane LOS	A	-	-	F	B	F	B	A	-	-
HCM 95th %tile Q(veh)	0.8	-	-	2	0.8	26.9	0.1	0.1	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

USER REPORT FOR SITE

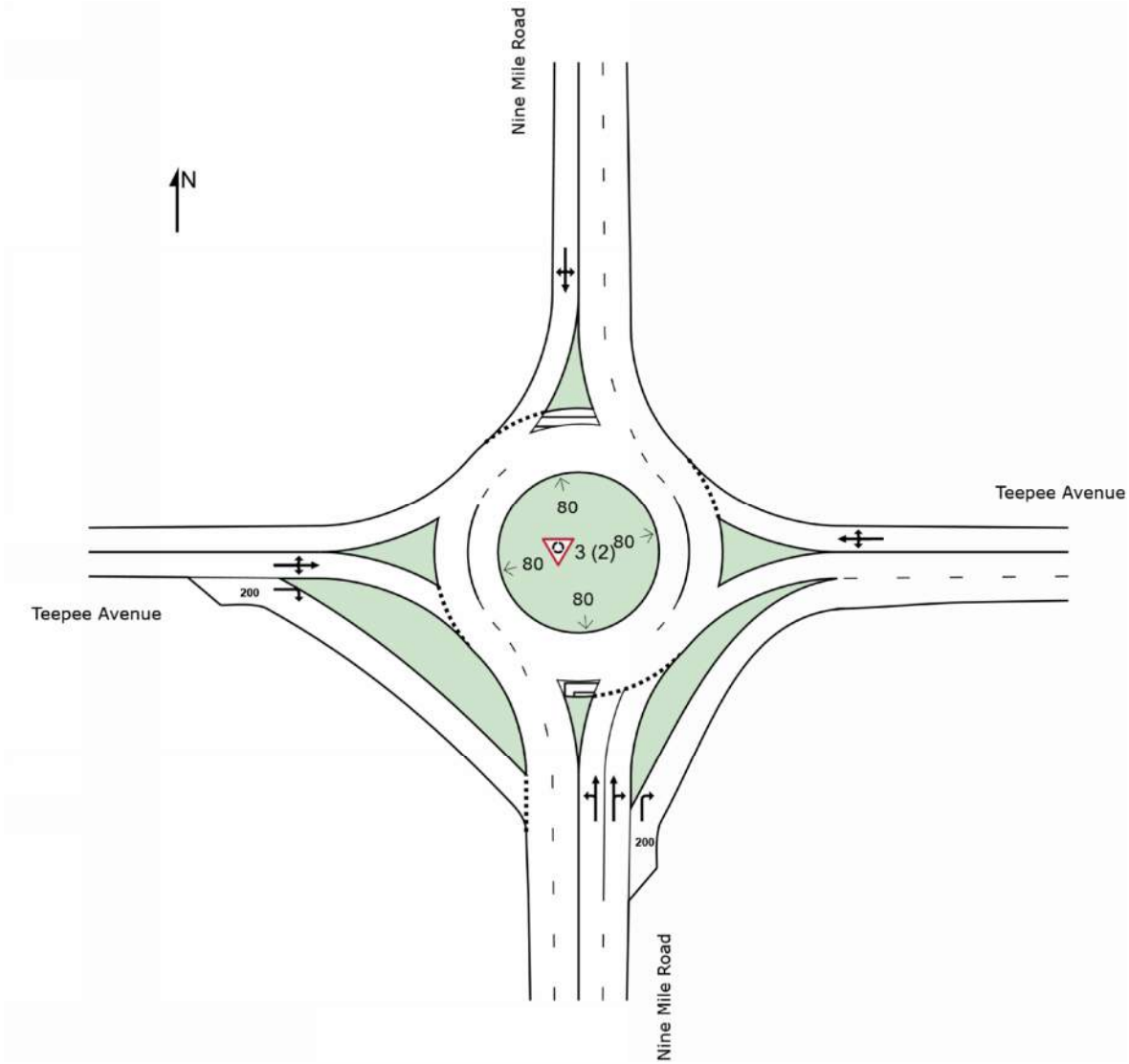
Default Site User Report

Site: [3 (2)] Teepee Ave & SR 291 (2031 PM W-Proj)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

2031 PM W- Proj
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



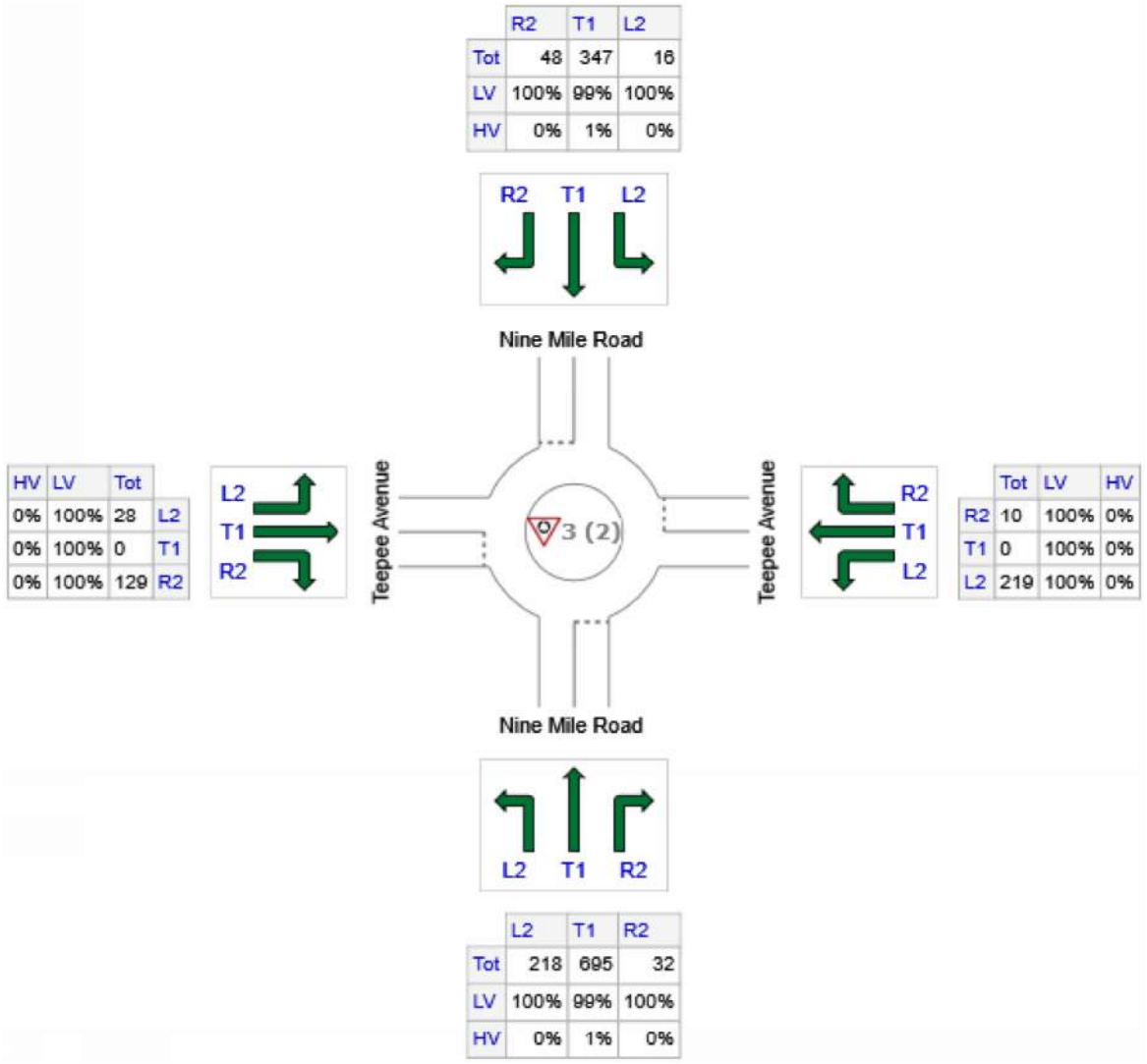
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
West: Teepee Avenue															
5	L2	All MCs	30	0.0	30	0.0	0.105	11.1	LOS B	0.6	14.0	0.63	0.69	0.63	24.9
2	T1	All MCs	0	0.0	0	0.0	0.105	6.2	LOS A	0.6	14.0	0.63	0.69	0.63	21.3
12	R2	All MCs	140	0.0	140	0.0	0.105	5.2	LOS A	0.6	14.0	0.58	0.67	0.58	23.6
Approach			171	0.0	171	0.0	0.105	6.2	LOS A	0.6	14.0	0.59	0.67	0.59	23.9
South: Nine Mile Road															
3	L2	All MCs	237	0.0	237	0.0	0.360	9.8	LOS A	2.6	65.2	0.24	0.52	0.24	16.7
8	T1	All MCs	755	1.0	755	1.0	0.360	4.6	LOS A	2.6	65.7	0.23	0.44	0.23	28.7
18	R2	All MCs	35	0.0	35	0.0	0.021	3.9	LOS A	0.0	0.0	0.00	0.49	0.00	27.8
Approach			1027	0.7	1027	0.7	0.360	5.8	LOS A	2.6	65.7	0.23	0.46	0.23	25.8
East: Teepee Avenue															
1	L2	All MCs	238	0.0	238	0.0	0.384	14.3	LOS B	1.7	43.5	0.67	0.89	0.76	19.4
6	T1	All MCs	0	0.0	0	0.0	0.384	9.0	LOS A	1.7	43.5	0.67	0.89	0.76	14.9
16	R2	All MCs	11	0.0	11	0.0	0.384	8.8	LOS A	1.7	43.5	0.67	0.89	0.76	22.8
Approach			249	0.0	249	0.0	0.384	14.0	LOS B	1.7	43.5	0.67	0.89	0.76	19.5
North: Nine Mile Road															
7	L2	All MCs	17	0.0	17	0.0	0.562	15.2	LOS B	4.8	120.5	0.79	0.75	0.92	24.0
4	T1	All MCs	377	1.0	377	1.0	0.562	10.1	LOS B	4.8	120.5	0.79	0.75	0.92	25.0
14	R2	All MCs	52	0.0	52	0.0	0.562	9.8	LOS A	4.8	120.5	0.79	0.75	0.92	23.2
Approach			447	0.8	447	0.8	0.562	10.2	LOS B	4.8	120.5	0.79	0.75	0.92	24.8
All Vehicles			1894	0.6	1894	0.6	0.562	7.9	LOS A	4.8	120.5	0.45	0.60	0.49	24.5

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Input Volumes

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
W: Teepee Avenue	157	157	0
S: Nine Mile Road	945	938	7
E: Teepee Avenue	229	229	0
N: Nine Mile Road	411	408	3
Total	1742	1732	10

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	929	65	0	695
Future Vol, veh/h	0	9	929	65	0	695
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, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	10	1010	71	0	755

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1045	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	280	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	280	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	18.31	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	280	-
HCM Lane V/C Ratio	-	-	0.035	-
HCM Ctrl Dly (s/v)	-	-	18.3	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	8	0	0	2	11	985	226	0	688	6
Future Vol, veh/h	6	0	8	0	0	2	11	985	226	0	688	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	10	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	7	0	9	0	0	2	12	1082	248	0	756	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1866	2114	759	1863	1869	1082	763	0	0	1331	0	0
Stage 1	759	759	-	1107	1107	-	-	-	-	-	-	-
Stage 2	1107	1355	-	756	763	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	56	51	410	57	73	267	859	-	-	525	-	-
Stage 1	402	418	-	258	288	-	-	-	-	-	-	-
Stage 2	258	220	-	403	416	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	55	51	410	55	72	267	859	-	-	525	-	-
Mov Cap-2 Maneuver	55	51	-	55	72	-	-	-	-	-	-	-
Stage 1	402	418	-	254	284	-	-	-	-	-	-	-
Stage 2	252	217	-	395	416	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	43.46	18.61	0.08	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	859	-	-	109	267	525	-	-
HCM Lane V/C Ratio	0.014	-	-	0.141	0.008	-	-	-
HCM Ctrl Dly (s/v)	9.3	-	-	43.5	18.6	0	-	-
HCM Lane LOS	A	-	-	E	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0	0	-	-

Intersection	
Int Delay, s/veh	358.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	263	0	229	4	2	1	176	975	5	1	574	127
Future Vol, veh/h	263	0	229	4	2	1	176	975	5	1	574	127
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	183	-	-	100	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	1	0	1	0	0	0	2	1	0	100	0	0
Mvmt Flow	283	0	246	4	2	1	189	1048	5	1	617	137

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1523	2052	617	2049	2049	527	617	0	0	1054	0	0
Stage 1	619	619	-	1430	1430	-	-	-	-	-	-	-
Stage 2	904	1432	-	619	619	-	-	-	-	-	-	-
Critical Hdwy	7.315	6.5	6.215	7.3	6.5	6.9	4.13	-	-	5.6	-	-
Critical Hdwy Stg 1	6.115	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.515	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5095	4	3.3095	3.5	4	3.3	2.219	-	-	3.15	-	-
Pot Cap-1 Maneuver	~ 89	56	491	37	56	501	961	-	-	340	-	-
Stage 1	477	483	-	144	202	-	-	-	-	-	-	-
Stage 2	301	202	-	479	483	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 68	45	491	15	45	501	961	-	-	340	-	-
Mov Cap-2 Maneuver	~ 68	45	-	15	45	-	-	-	-	-	-	-
Stage 1	476	482	-	116	162	-	-	-	-	-	-	-
Stage 2	~ 238	162	-	238	482	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 1709.55	235.04	1.47	0.02
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	961	-	-	114	22	340	-	-
HCM Lane V/C Ratio	0.197	-	-	4.631	0.339	0.003	-	-
HCM Ctrl Dly (s/v)	9.7	-	-	$ 1709.5	235	15.6	-	-
HCM Lane LOS	A	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.7	-	-	55.4	1	0	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

USER REPORT FOR SITE

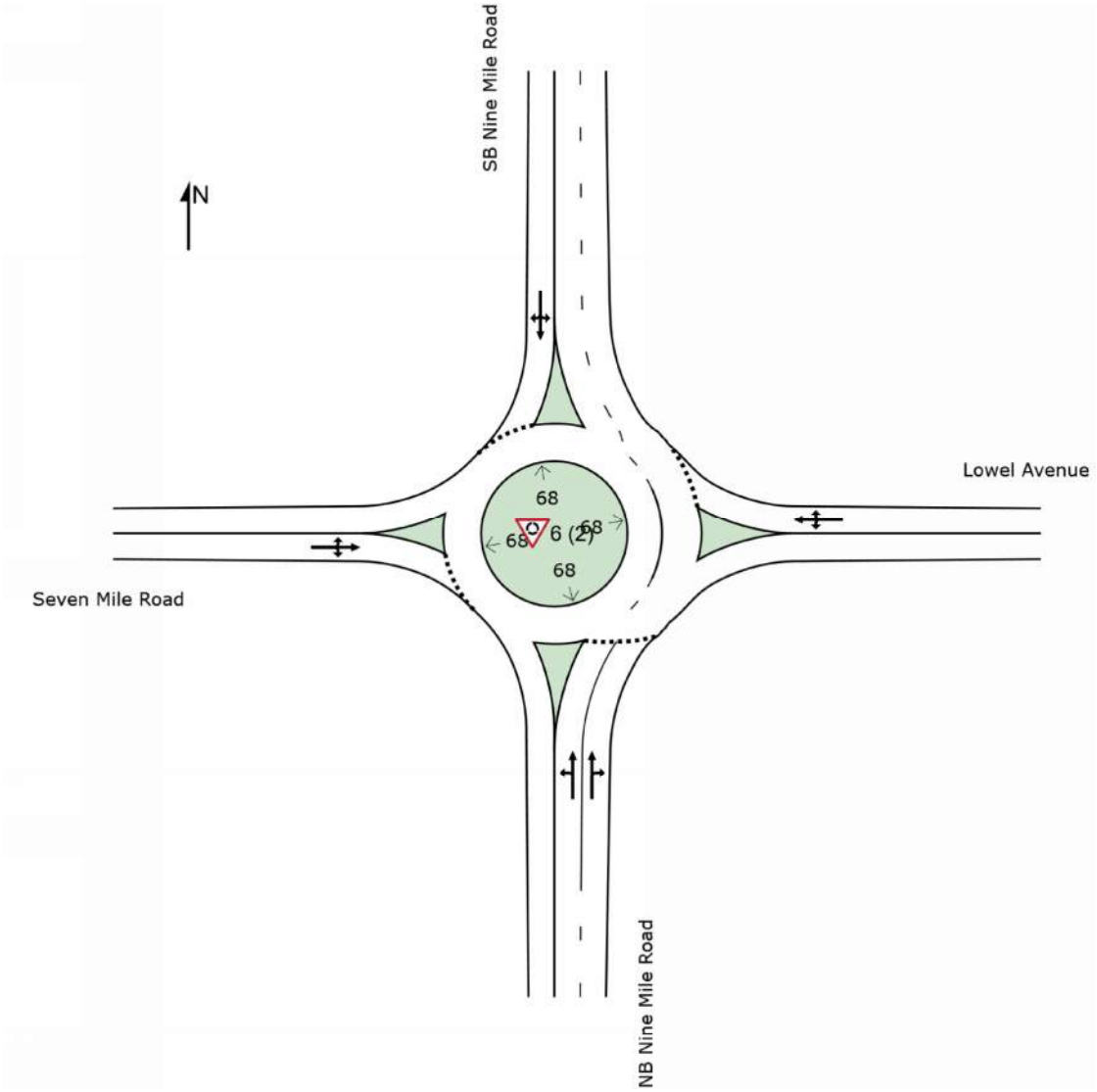
Default Site User Report

Site: [6 (2)] Seven Mile & Nine Mile Road (2031 PM W-Proj)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

2031 PM W-Proj
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Site Layout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



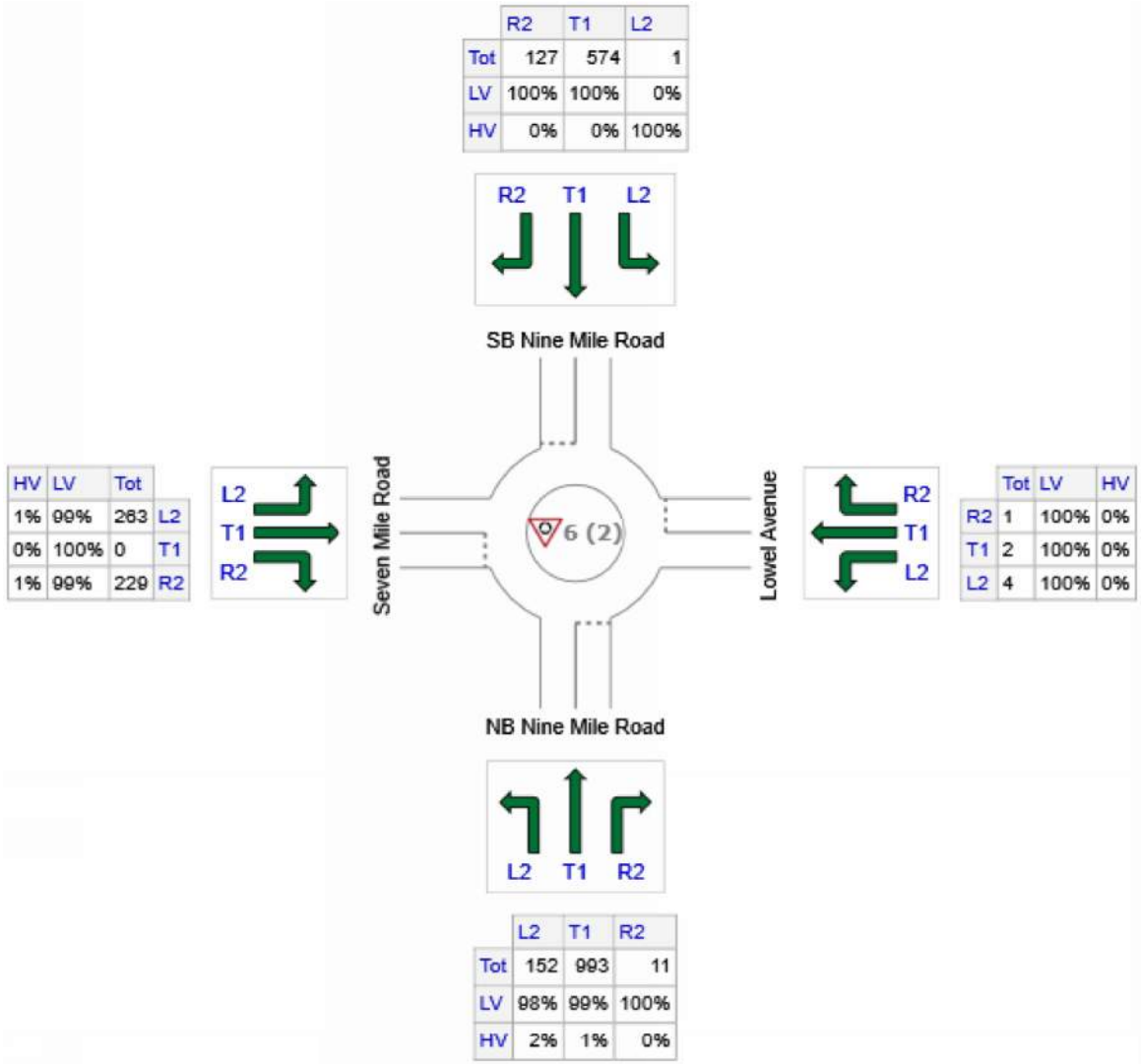
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
West: Seven Mile Road															
5	L2	All MCs	283	1.0	283	1.0	0.700	19.0	LOS B	8.2	207.4	0.97	0.93	1.32	29.8
2	T1	All MCs	0	0.0	0	0.0	0.700	13.8	LOS B	8.2	207.4	0.97	0.93	1.32	30.4
12	R2	All MCs	246	1.0	246	1.0	0.700	13.8	LOS B	8.2	207.4	0.97	0.93	1.32	30.2
Approach			529	1.0	529	1.0	0.700	16.6	LOS B	8.2	207.4	0.97	0.93	1.32	29.9
South: NB Nine Mile Road															
3	L2	All MCs	163	2.0	163	2.0	0.564	11.5	LOS B	5.0	127.4	0.74	0.63	0.74	32.7
8	T1	All MCs	1068	1.0	1068	1.0	0.564	6.9	LOS A	5.2	130.8	0.73	0.60	0.73	33.5
18	R2	All MCs	12	0.0	12	0.0	0.564	6.3	LOS A	5.2	130.8	0.72	0.59	0.72	33.4
Approach			1243	1.1	1243	1.1	0.564	7.5	LOS A	5.2	130.8	0.73	0.61	0.73	33.4
East: Lowel Avenue															
1	L2	All MCs	4	0.0	4	0.0	0.017	14.4	LOS B	0.1	1.9	0.74	0.80	0.74	31.5
6	T1	All MCs	2	0.0	2	0.0	0.017	9.9	LOS A	0.1	1.9	0.74	0.80	0.74	32.0
16	R2	All MCs	1	0.0	1	0.0	0.017	9.9	LOS A	0.1	1.9	0.74	0.80	0.74	31.7
Approach			8	0.0	8	0.0	0.017	12.5	LOS B	0.1	1.9	0.74	0.80	0.74	31.7
North: SB Nine Mile Road															
7	L2	All MCs	1	100.0	1	100.0	0.643	15.1	LOS B	6.6	164.9	0.67	0.53	0.67	30.6
4	T1	All MCs	617	0.0	617	0.0	0.643	5.7	LOS A	6.6	164.9	0.67	0.53	0.67	34.5
14	R2	All MCs	137	0.0	137	0.0	0.643	5.8	LOS A	6.6	164.9	0.67	0.53	0.67	34.1
Approach			755	0.1	755	0.1	0.643	5.8	LOS A	6.6	164.9	0.67	0.53	0.67	34.4
All Vehicles			2535	0.8	2535	0.8	0.700	8.9	LOS A	8.2	207.4	0.76	0.65	0.84	32.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Input Volumes

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
W: Seven Mile Road	492	487	5
S: NB Nine Mile Road	1156	1143	13
E: Lowel Avenue	7	7	0
N: SB Nine Mile Road	702	701	1
Total	2357	2338	19

Intersection	
Int Delay, s/veh	9.4

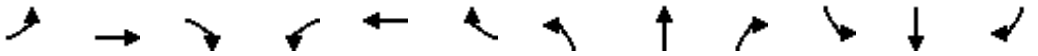
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	0	51	30	4	3	57	1218	41	4	856	12
Future Vol, veh/h	12	0	51	30	4	3	57	1218	41	4	856	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	180	-	-	180	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	4	0	0	0	0	1	0	0	1	0
Mvmt Flow	13	0	57	34	4	3	64	1369	46	4	962	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1792	2520	488	2010	2504	707	975	0	0	1415	0	0
Stage 1	978	978	-	1520	1520	-	-	-	-	-	-	-
Stage 2	815	1543	-	490	984	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.98	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.34	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	52	28	521	36	29	382	715	-	-	488	-	-
Stage 1	273	331	-	127	183	-	-	-	-	-	-	-
Stage 2	342	178	-	534	329	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	39	26	521	~ 29	26	382	715	-	-	488	-	-
Mov Cap-2 Maneuver	39	26	-	~ 29	26	-	-	-	-	-	-	-
Stage 1	270	328	-	115	167	-	-	-	-	-	-	-
Stage 2	300	162	-	471	326	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	46.09	$ 484.37	0.46	0.06
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	715	-	-	156	31	488	-	-
HCM Lane V/C Ratio	0.09	-	-	0.455	1.36	0.009	-	-
HCM Ctrl Dly (s/v)	10.5	-	-	46.1	$ 484.4	12.4	-	-
HCM Lane LOS	B	-	-	E	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.1	4.7	0	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	0	51	30	4	3	57	1218	41	4	856	12
Future Volume (veh/h)	12	0	51	30	4	3	57	1218	41	4	856	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1841	1900	1900	1900	1900	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	13	0	57	34	4	3	64	1369	46	4	962	13
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
Percent Heavy Veh, %	0	0	4	0	0	0	0	1	0	0	1	0
Cap, veh/h	136	6	119	290	22	11	118	1915	64	10	1744	24
Arrive On Green	0.09	0.00	0.09	0.09	0.09	0.09	0.06	0.54	0.54	0.01	0.48	0.48
Sat Flow, veh/h	236	61	1302	1245	242	117	1810	3536	119	1810	3618	49
Grp Volume(v), veh/h	70	0	0	41	0	0	64	693	722	4	476	499
Grp Sat Flow(s),veh/h/ln	1599	0	0	1604	0	0	1810	1791	1864	1810	1791	1876
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	1.3	10.8	10.8	0.1	7.0	7.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	0.8	0.0	0.0	1.3	10.8	10.8	0.1	7.0	7.0
Prop In Lane	0.19		0.81	0.83		0.07	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	261	0	0	323	0	0	118	970	1009	10	863	904
V/C Ratio(X)	0.27	0.00	0.00	0.13	0.00	0.00	0.54	0.71	0.72	0.41	0.55	0.55
Avail Cap(c_a), veh/h	875	0	0	878	0	0	242	970	1009	242	863	904
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	0.0	15.8	0.0	0.0	16.9	6.4	6.4	18.5	6.8	6.8
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.2	0.0	0.0	3.9	4.5	4.3	24.7	2.5	2.4
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(50%),veh/ln	0.5	0.0	0.0	0.3	0.0	0.0	0.5	2.1	2.1	0.1	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.6	0.0	0.0	15.9	0.0	0.0	20.8	10.9	10.8	43.2	9.4	9.2
LnGrp LOS	B			B			C	B	B	D	A	A
Approach Vol, veh/h		70			41			1479			979	
Approach Delay, s/veh		16.6			15.9			11.2			9.4	
Approach LOS		B			B			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	24.7		7.9	6.9	22.5		7.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.0		18.0	5.0	18.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	12.8		3.5	3.3	9.0		2.8				
Green Ext Time (p_c), s	0.0	3.4		0.2	0.0	3.5		0.1				

Intersection Summary												
HCM 7th Control Delay, s/veh			10.8									
HCM 7th LOS			B									

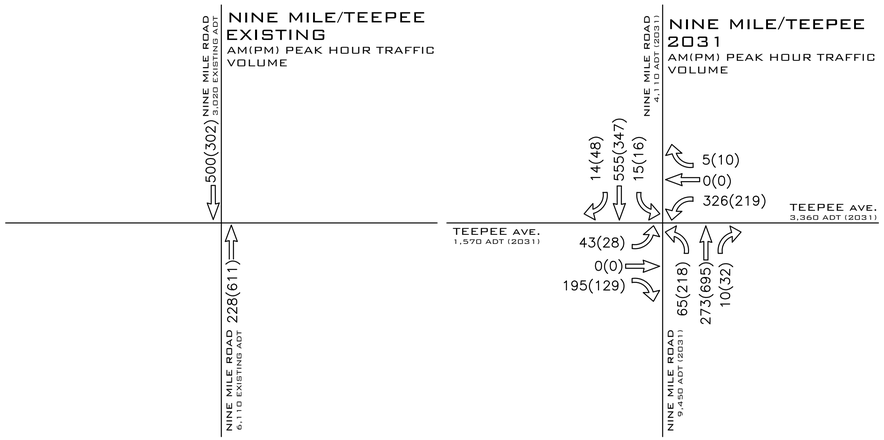
SE 1/4 SEC. 16, T. 26 N., R. 42 E., W.M.

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG

INTERSECTION PLAN FOR APPROVAL
NINE MILE RD./SR-291 & TEEPEE AVENUE
LOCATED IN A PORTION OF SW 1/4, SEC. 16 T. 26 N., R.42 E., W.M.
SPOKANE COUNTY, WA

SPOKANE COUNTY

APPROVED BY: COUNTY ENGINEER



CONCURRENCE_____DATE_____
EASTERN REGION TRAFFIC ENGINEER

APPROVED_____DATE_____
EASTERN REGION ASSISTANT REGION ADMINISTRATOR FOR DEVELOPMENT

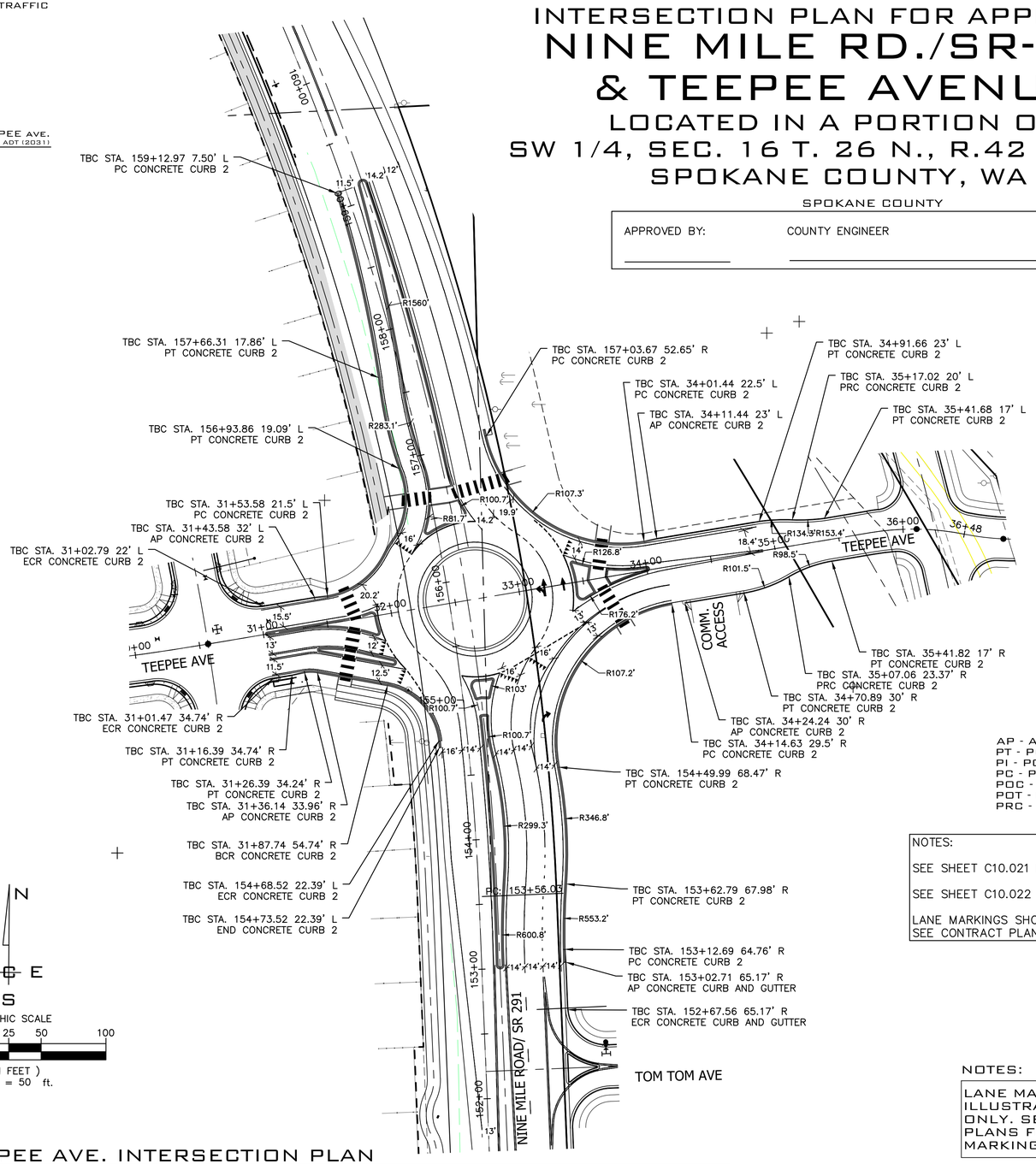
WSDOT APPROVAL IS ONLY FOR THE ROADWAY GEOMETRIC DESIGN WITHIN THE RIGHT OF WAY ALONG STATE ROUTE 27 WITHIN THE WSDOT BOUNDARY. RIGHT OF WAY LINES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

DESIGN ELEMENTS

ALIGNMENT	SR 291/NINE MILE ROAD	TEEPEE AVE.
ROADWAY CLASSIFICATION	URBAN MINOR ARTERIAL	COLLECTOR ARTERIAL
ACCESS CONTROL	MANAGED CLASS II	N/A
LAND USE	URBAN MINOR ARTERIAL	URBAN/RESIDENTIAL
ADT (EXISTING)	6,110	N/A
ADT (2031)	9,450	3,360
PERCENT TRUCKS (PM PEAK)	6%	0%
DESIGN VEHICLE	WB-67	S-BUS-40
DESIGN SPEED (MPH)	50	40
POSTED SPEED (EXISTING)	50	35

INTERSECTION REVISIONS

THIS PLAN CREATES A PUBLIC ROAD (TEEPEE AVE.) CONNECTION TO SR291/NINE MILE ROAD. THE INTERSECTION CONTROL IS CHANGED TO A ROUNDABOUT.



AP - ANGLE POINT
PT - POINT OF TANGENCY
PI - POINT OF INTERSECTION
PC - POINT OF CURVITURE
POC - POINT ON CURVE
POT - POINT ON TANGENT (OUTSIDE OF CURVE)
PRC - POINT OF REVERSE CURVE

NOTES:

SEE SHEET C10.021 FOR CHANNELIZATION PLAN

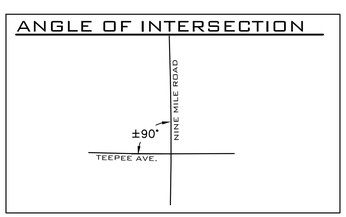
SEE SHEET C10.022 FOR SIGNING AND ILLUMINATION PLAN

LANE MARKINGS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE CONTRACT PLANS FOR PAVEMENT MARKINGS.

N
W E
S

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

ANGLE OF INTERSECTION



NAVD - 88

WSDOT BRASS DISK SET IN THE TOP OF A ROUND CONCRETE MONUMENT, STATE ROUTE 291 MILE POST 5.7. WSDOT #3817. ELEV: 1679.58

NOTES:

LANE MARKINGS FOR ILLUSTRATIVE PURPOSES ONLY. SEE CONTRACT PLANS FOR PAVEMENT MARKINGS.

JUSTIN PETER TURNER
STATE OF WASHINGTON
23338
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY
04/25/25

NINE MILE ROAD & TEEPEE AVE. INTERSECTION PLAN

SCALE: 1"=50'

NO.	DATE	BY	REVISIONS

SCALE:
HORIZONTAL: 1"=50'
VERTICAL: N/A

PROJ #: 22-3287
DATE: 05/06/25
DRAWN: BNG
REVIEWED: TRW

- CIVIL
- STRUCTURAL
- SURVEYING
- [X] TRAFFIC
- PLANNING
- LANDSCAPE
- OTHER

WCE
WHIPPLE CONSULTING ENGINEERS
21 S. PINES ROAD
SPOKANE VALLEY, WA 99206
PH: 509-893-2617 FAX: 509-926-0227

VOLKMAN INTERSECTION PLAN SET
SR 291 MP 5.82 & TEEPEE AVENUE
9702 N NINE MILE ROAD
SPOKANE, WA 99026

SHEET C10.020

JOB NUMBER 22-3287

P:\WCE_WORK\2022 WCE PROJECTS\2022-3287 Kinney- Volkman\DWG\TRAFFIC\3287-SR291.dwg, 6/2/2026 2:01:16 PM

P:\WCE_WORK\2022 WCE PROJECTS\2022-3287 KINNEY- VOLKMAN\DWG\TRAFFIC\3287-SR291.DWG PLOT DATE: 06/02/26