

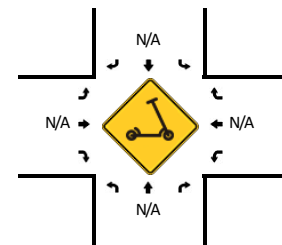
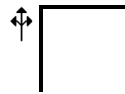
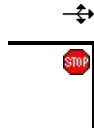
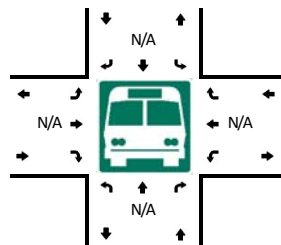
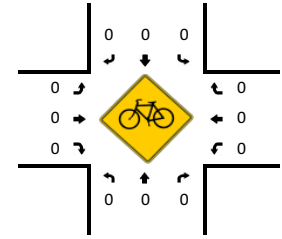
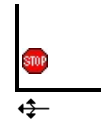
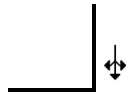
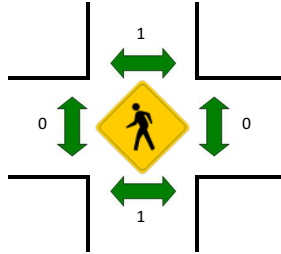
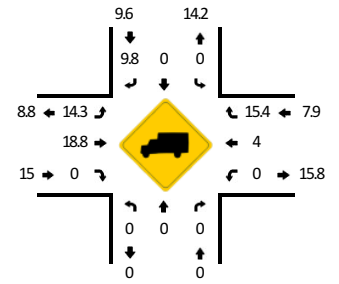
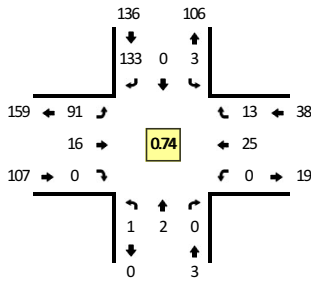
APPENDIX A: PROPOSED SITE PLAN

APPENDIX B: TRAFFIC COUNTS

LOCATION: N 10th Ave -- E Jefferson St
CITY/STATE: Stayton, OR

QC JOB #: 16125609
DATE: Wed, Mar 22 2023

Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:45 AM -- 8:00 AM



5-Min Count Period Beginning At	N 10th Ave (Northbound)				N 10th Ave (Southbound)				E Jefferson St (Eastbound)				E Jefferson St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	10	0	6	1	0	0	0	3	1	0	21	
7:05 AM	1	0	0	0	0	0	6	0	3	1	0	0	0	0	0	4	15	
7:10 AM	0	0	0	0	0	0	10	0	7	0	0	0	0	0	1	0	18	
7:15 AM	0	0	0	0	1	0	5	0	2	1	0	0	0	0	0	0	9	
7:20 AM	0	0	0	0	0	0	8	0	2	0	0	0	0	2	1	0	13	
7:25 AM	0	1	0	0	0	0	8	0	6	0	0	0	0	1	2	0	18	
7:30 AM	0	0	0	0	0	0	9	0	5	0	0	0	0	3	3	0	20	
7:35 AM	0	0	0	0	0	0	12	0	1	0	0	0	0	2	1	0	16	
7:40 AM	0	0	0	0	0	0	15	0	3	1	0	0	0	2	2	0	23	
7:45 AM	0	0	0	0	0	0	19	0	9	1	0	0	0	4	1	0	34	
7:50 AM	0	2	0	0	0	0	18	0	8	2	0	0	0	4	3	0	37	
7:55 AM	0	0	0	0	0	0	12	0	7	2	0	0	0	4	0	0	25	249
8:00 AM	1	0	0	0	1	0	16	0	11	2	0	0	0	0	2	0	33	261
8:05 AM	0	0	0	0	0	0	7	0	5	2	0	0	0	0	0	0	14	260
8:10 AM	0	0	0	0	0	0	7	0	8	0	0	0	0	2	0	0	17	259
8:15 AM	0	0	0	0	0	0	9	0	10	1	0	0	0	2	0	0	22	272
8:20 AM	0	0	0	0	1	0	9	0	7	0	0	0	0	2	3	0	22	281
8:25 AM	0	0	0	0	1	0	4	0	8	1	0	0	0	0	0	0	14	277
8:30 AM	0	0	0	0	0	0	5	0	7	4	0	0	0	2	2	0	20	277
8:35 AM	0	0	0	0	0	0	12	0	8	0	0	0	0	3	0	0	23	284
8:40 AM	0	0	0	0	0	0	14	0	7	1	0	0	0	0	0	0	22	283
8:45 AM	0	0	0	0	0	0	7	0	11	2	0	0	0	1	1	0	22	271
8:50 AM	0	0	0	0	0	0	9	0	8	2	0	0	0	0	0	0	19	253
8:55 AM	0	0	0	0	0	0	8	0	6	0	0	0	0	0	0	0	14	242
9:00 AM	0	0	0	0	1	0	5	0	4	1	0	0	0	2	0	0	13	222
9:05 AM	0	0	0	0	2	0	12	0	10	0	0	0	0	1	1	0	26	234
9:10 AM	0	0	0	0	1	0	9	0	5	1	0	0	0	3	0	0	19	236
9:15 AM	0	0	0	0	0	0	13	0	6	1	0	0	0	0	1	0	21	235
9:20 AM	0	0	0	0	0	0	8	0	9	2	0	0	0	2	0	0	21	234
9:25 AM	0	0	0	0	1	0	7	0	5	0	0	0	0	0	0	0	13	233
9:30 AM	0	0	0	0	0	0	13	0	5	1	0	0	0	1	0	0	20	233
9:35 AM	0	0	0	0	0	0	9	0	11	0	0	0	0	2	2	0	24	234
9:40 AM	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	15	227
9:45 AM	0	0	0	0	0	0	11	0	11	1	0	0	0	0	0	0	23	228
9:50 AM	0	0	0	0	1	0	10	0	6	1	0	0	0	0	1	0	19	228
9:55 AM	0	0	0	0	0	0	6	0	4	2	0	0	0	2	0	0	14	228

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	8	0	0	0	0	196	0	96	20	0	0	0	48	16	0	384
Heavy Trucks	0	0	0	0	0	0	8	0	0	4	0	0	0	4	0	0	16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

Comments: Only WB has a stop sign.

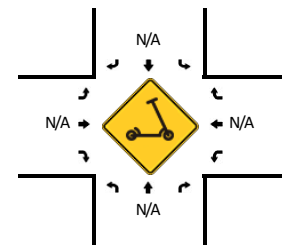
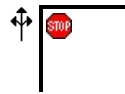
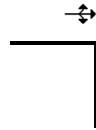
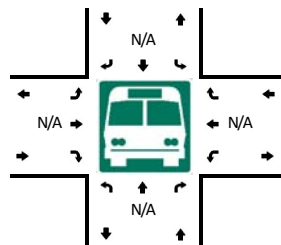
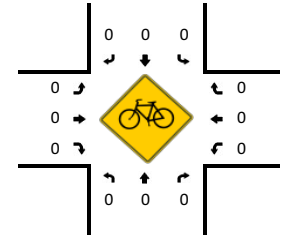
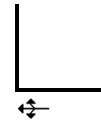
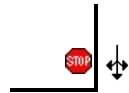
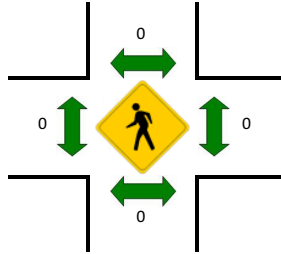
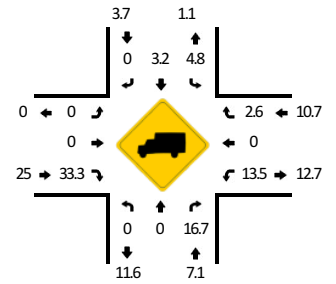
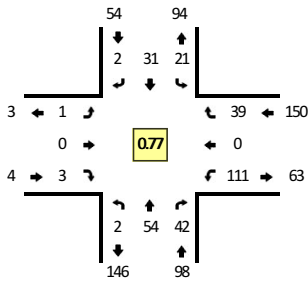
Report generated on 3/30/2023 1:24 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: N 10th Ave -- E Santiam St
CITY/STATE: Stayton, OR

QC JOB #: 16125611
DATE: Wed, Mar 22 2023

Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:45 AM -- 8:00 AM



5-Min Count Period Beginning At	N 10th Ave (Northbound)				N 10th Ave (Southbound)				E Santiam St (Eastbound)				E Santiam St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	3	4	0	0	2	0	0	1	1	0	0	7	0	5	0	23	
7:05 AM	0	6	1	0	1	3	0	0	0	0	0	0	3	0	5	0	19	
7:10 AM	0	7	3	0	0	4	0	0	0	0	0	0	7	0	3	0	24	
7:15 AM	0	1	1	0	1	2	0	0	1	0	0	0	4	0	5	0	15	
7:20 AM	0	3	0	0	2	2	0	0	0	0	0	0	6	0	3	0	16	
7:25 AM	1	6	2	0	1	2	1	0	0	0	0	0	6	0	1	0	20	
7:30 AM	0	5	3	0	0	2	0	0	1	0	0	0	8	0	4	0	23	
7:35 AM	0	1	0	0	1	2	0	0	0	0	0	0	11	0	5	0	20	
7:40 AM	0	5	0	1	3	3	1	0	0	0	1	0	10	0	3	0	27	
7:45 AM	0	4	5	0	2	4	0	0	0	0	1	0	17	0	6	0	39	
7:50 AM	0	7	5	0	3	4	0	0	0	0	0	0	11	0	2	0	32	
7:55 AM	0	3	5	0	2	1	0	0	0	0	0	0	12	0	5	0	28	286
8:00 AM	0	7	6	0	4	7	0	0	0	0	0	0	10	0	4	0	38	301
8:05 AM	0	3	2	0	1	0	0	0	0	0	0	0	6	0	3	0	15	297
8:10 AM	0	4	4	0	0	2	0	0	0	0	0	0	5	0	0	0	15	288
8:15 AM	0	4	6	0	3	2	0	0	0	0	1	0	6	0	1	0	23	296
8:20 AM	0	5	4	0	1	2	0	0	0	0	0	0	9	0	5	0	26	306
8:25 AM	1	3	4	0	2	2	0	0	0	0	1	0	3	0	3	0	19	305
8:30 AM	0	6	4	0	2	1	0	0	0	0	0	0	3	0	2	0	18	300
8:35 AM	0	2	7	0	0	4	0	0	1	0	0	0	8	0	1	0	23	303
8:40 AM	0	2	5	0	0	2	0	0	1	0	0	0	12	0	2	0	24	300
8:45 AM	0	3	9	0	0	4	0	0	0	0	0	0	4	0	3	0	23	284
8:50 AM	0	4	4	0	4	1	0	0	0	0	0	0	8	0	1	0	22	274
8:55 AM	0	3	3	0	0	3	0	0	0	0	0	0	5	0	1	0	15	261
9:00 AM	0	2	2	0	1	1	0	0	0	0	0	0	4	1	4	0	15	238
9:05 AM	0	5	7	0	0	5	1	0	0	0	0	0	7	0	3	0	28	251
9:10 AM	1	1	4	0	1	6	0	0	0	0	1	0	4	0	0	0	18	254
9:15 AM	0	3	4	0	1	3	0	0	0	0	0	0	9	0	2	0	22	253
9:20 AM	0	2	6	0	1	2	0	0	0	0	0	0	5	0	1	0	17	244
9:25 AM	0	2	4	0	1	3	0	0	0	0	0	0	5	0	3	0	18	243
9:30 AM	0	2	3	0	0	2	0	0	0	0	1	0	12	0	0	0	20	245
9:35 AM	0	3	9	0	1	1	0	0	1	0	0	0	7	0	4	0	26	248
9:40 AM	0	1	1	0	0	4	0	0	1	0	0	0	9	0	3	0	19	243
9:45 AM	0	3	8	0	1	3	0	0	0	0	0	0	8	0	1	0	24	244
9:50 AM	0	1	6	0	1	2	0	0	1	0	0	0	8	0	4	0	23	245
9:55 AM	0	2	0	0	0	3	0	0	0	0	0	0	2	0	0	0	7	237

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	56	60	0	28	36	0	0	0	0	4	0	160	0	52	0	396
Heavy Trucks	0	0	0		0	0	0		0	0	4		8	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

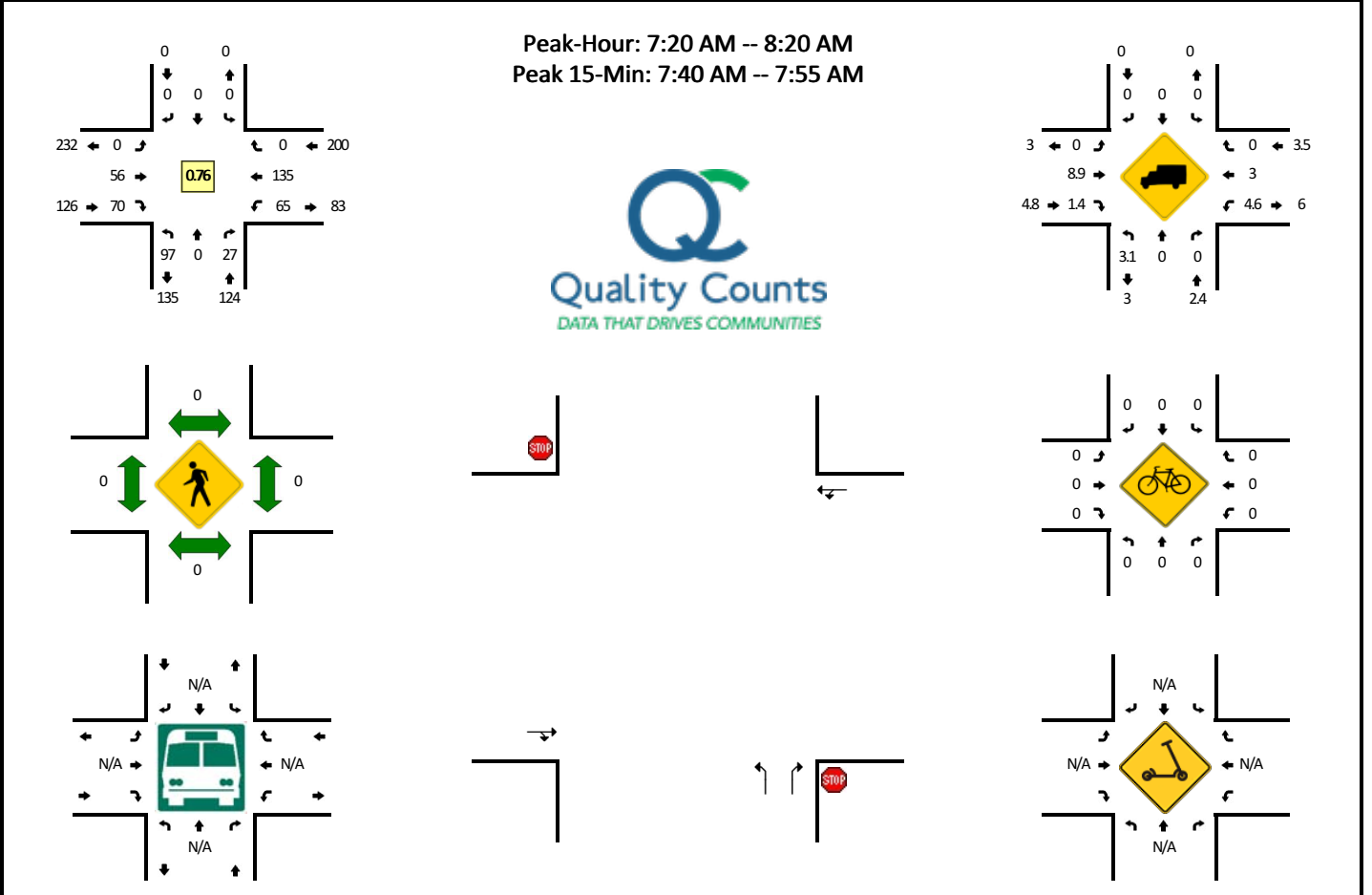
Comments: EB also has a stop sign and NBR are permitted without stopping.

Report generated on 3/30/2023 1:24 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: N 10th Ave -- Fern Ridge SE
CITY/STATE: Stayton, OR

QC JOB #: 16125613
DATE: Wed, Mar 22 2023



5-Min Count Period Beginning At	N 10th Ave (Northbound)				N 10th Ave (Southbound)				Fern Ridge SE (Eastbound)				Fern Ridge SE (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	0	2	0	0	0	0	0	0	7	1	0	5	7	0	0	32	
7:05 AM	10	0	0	0	0	0	0	0	0	0	5	0	2	6	0	0	23	
7:10 AM	9	0	1	0	0	0	0	0	0	2	2	0	2	5	0	0	21	
7:15 AM	8	0	1	0	0	0	0	0	0	1	2	0	3	2	0	0	17	
7:20 AM	8	0	4	0	0	0	0	0	0	3	5	0	1	17	0	0	38	
7:25 AM	9	0	1	0	0	0	0	0	0	2	6	0	0	8	0	0	26	
7:30 AM	8	0	4	0	0	0	0	0	0	3	4	0	3	8	0	0	30	
7:35 AM	14	0	3	0	0	0	0	0	0	6	4	0	7	14	0	0	48	
7:40 AM	13	0	2	0	0	0	0	0	0	0	12	0	3	11	0	0	41	
7:45 AM	9	0	0	0	0	0	0	0	0	8	4	0	15	10	0	0	46	
7:50 AM	11	0	7	0	0	0	0	0	0	5	10	0	12	17	0	0	62	
7:55 AM	5	0	2	0	0	0	0	0	0	6	6	0	5	6	0	0	30	414
8:00 AM	10	0	1	0	0	0	0	0	0	8	9	0	7	14	0	0	49	431
8:05 AM	6	0	0	0	0	0	0	0	0	7	3	0	3	12	0	0	31	439
8:10 AM	0	0	3	0	0	0	0	0	0	2	3	0	3	9	0	0	20	438
8:15 AM	4	0	0	0	0	0	0	0	0	6	4	0	6	9	0	0	29	450
8:20 AM	5	0	1	0	0	0	0	0	0	3	7	0	3	6	0	0	25	437
8:25 AM	10	0	2	0	0	0	0	0	0	5	3	0	5	11	0	0	36	447
8:30 AM	5	0	0	0	0	0	0	0	0	3	12	0	0	9	0	0	29	446
8:35 AM	7	0	2	0	0	0	0	0	0	4	6	0	1	5	0	0	25	423
8:40 AM	7	0	1	0	0	0	0	0	0	2	6	0	1	10	0	0	27	409
8:45 AM	3	0	0	0	0	0	0	0	0	6	11	0	3	10	0	0	33	396
8:50 AM	2	0	1	0	0	0	0	0	0	7	4	0	1	7	0	0	22	356
8:55 AM	1	0	1	0	0	0	0	0	0	2	3	0	2	8	0	0	17	343
9:00 AM	5	0	0	0	0	0	0	0	0	1	7	0	0	7	0	0	20	314
9:05 AM	8	0	0	0	0	0	0	0	0	5	4	0	4	4	0	0	25	308
9:10 AM	2	0	0	0	0	0	0	0	0	1	6	0	3	7	0	0	19	307
9:15 AM	5	0	0	0	0	0	0	0	0	2	3	0	1	3	0	0	14	292
9:20 AM	6	0	1	0	0	0	0	0	0	4	7	0	4	7	0	0	29	296
9:25 AM	7	0	0	0	0	0	0	0	0	3	2	0	4	7	0	0	23	283
9:30 AM	4	0	0	0	0	0	0	0	0	3	6	0	2	2	0	0	17	271
9:35 AM	8	0	3	0	0	0	0	0	0	6	5	0	4	7	0	0	33	279
9:40 AM	4	0	1	0	0	0	0	0	0	8	7	0	3	3	0	0	26	278
9:45 AM	5	0	0	0	0	0	0	0	0	3	7	0	2	11	0	0	28	273
9:50 AM	12	0	1	0	0	0	0	0	0	1	3	0	2	9	0	0	28	279
9:55 AM	5	0	2	0	0	0	0	0	0	4	4	0	2	14	0	0	31	293

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	132	0	36	0	0	0	0	0	0	52	104	0	120	152	0	0	596
Heavy Trucks	4	0	0		0	0	0		0	4	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

Comments:

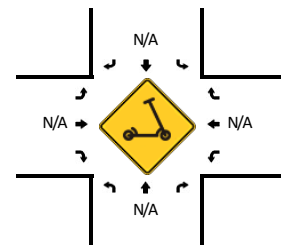
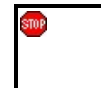
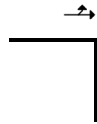
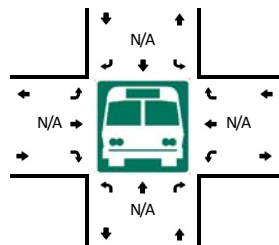
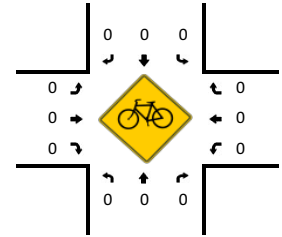
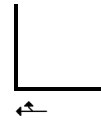
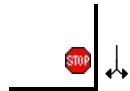
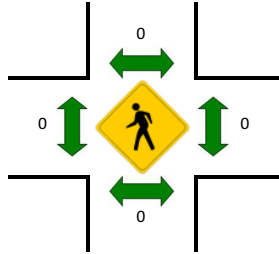
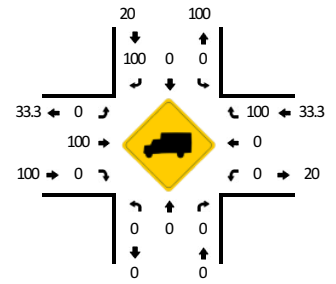
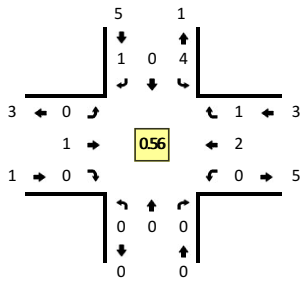
Report generated on 3/30/2023 1:24 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: Orchard Ct -- E Santiam St
 CITY/STATE: Stayton, OR

QC JOB #: 16125615
 DATE: Wed, Mar 22 2023

Peak-Hour: 7:00 AM -- 8:00 AM
 Peak 15-Min: 7:20 AM -- 7:35 AM



5-Min Count Period Beginning At	Orchard Ct (Northbound)				Orchard Ct (Southbound)				E Santiam St (Eastbound)				E Santiam St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:40 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
8:25 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	3	8
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8:40 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	5
9:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
9:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
9:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
9:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	4
9:35 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	5
9:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
9:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	4	0	0	0	0	0	0	0	0	8	4	0	16
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	4		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

Comments:

Report generated on 3/30/2023 1:24 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

APPENDIX C: SYNCHRO REPORTS – 2023 EXISTING

HCM 6th TWSC
 1: N 10th Ave & Fern Rdg SE/Fern Ridge SE

04/04/2023

Intersection						
Int Delay, s/veh	4.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	59	69	72	127	95	25
Future Vol, veh/h	59	69	72	127	95	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	130	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	5	5	4	4	2	2
Mvmt Flow	79	92	96	169	127	33

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	171	0	486 125
Stage 1	-	-	-	-	125 -
Stage 2	-	-	-	-	361 -
Critical Hdwy	-	-	4.14	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.236	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1394	-	540 926
Stage 1	-	-	-	-	901 -
Stage 2	-	-	-	-	705 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1394	-	499 926
Mov Cap-2 Maneuver	-	-	-	-	499 -
Stage 1	-	-	-	-	901 -
Stage 2	-	-	-	-	651 -

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	499	926	-	-	1394	-
HCM Lane V/C Ratio	0.254	0.036	-	-	0.069	-
HCM Control Delay (s)	14.7	9	-	-	7.8	0
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	1	0.1	-	-	0.2	-

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	2	1	2	2	2
Future Vol, veh/h	1	2	1	2	2	2
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	50	50	50	50	50	50
Heavy Vehicles, %	100	100	2	2	50	50
Mvmt Flow	2	4	2	4	4	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	6	0	-	0	12
Stage 1	-	-	-	-	4
Stage 2	-	-	-	-	8
Critical Hdwy	5.1	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	5.9
Critical Hdwy Stg 2	-	-	-	-	5.9
Follow-up Hdwy	3.1	-	-	-	3.95
Pot Cap-1 Maneuver	1154	-	-	-	897
Stage 1	-	-	-	-	907
Stage 2	-	-	-	-	903
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1154	-	-	-	895
Mov Cap-2 Maneuver	-	-	-	-	895
Stage 1	-	-	-	-	905
Stage 2	-	-	-	-	903

















Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1154	-	-	-	924
HCM Lane V/C Ratio	0.002	-	-	-	0.009
HCM Control Delay (s)	8.1	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM Unsignalized Intersection Capacity Analysis

















3: N 10th Ave & E Santiam St

04/04/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Yield			Stop	
Traffic Volume (vph)	1	1	4	108	1	41	1	51	44	22	31	1
Future Volume (vph)	1	1	4	108	1	41	1	51	44	22	31	1
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	1	1	5	140	1	53	1	66	57	29	40	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	7	194	124	70								
Volume Left (vph)	1	140	1	29								
Volume Right (vph)	5	53	57	1								
Hadj (s)	0.28	0.13	-0.12	0.14								
Departure Headway (s)	4.9	4.5	4.3	4.7								
Degree Utilization, x	0.01	0.24	0.15	0.09								
Capacity (veh/h)	698	762	786	725								
Control Delay (s)	7.9	8.9	8.1	8.1								
Approach Delay (s)	7.9	8.9	8.1	8.1								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.5									
Level of Service			A									
Intersection Capacity Utilization			31.4%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 4: N 10th Ave & E Jefferson St

04/04/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Yield	
Traffic Volume (vph)	82	12	1	1	25	15	1	2	1	3	1	137
Future Volume (vph)	82	12	1	1	25	15	1	2	1	3	1	137
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	114	17	1	1	35	21	1	3	1	4	1	190
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	132	57	5	195								
Volume Left (vph)	114	1	1	4								
Volume Right (vph)	1	21	1	190								
Hadj (s)	0.41	-0.05	-0.08	-0.39								
Departure Headway (s)	4.8	4.4	4.5	4.0								
Degree Utilization, x	0.18	0.07	0.01	0.22								
Capacity (veh/h)	710	759	750	868								
Control Delay (s)	8.8	7.8	7.5	8.1								
Approach Delay (s)	8.8	7.8	7.5	8.1								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			27.4%	ICU Level of Service	A							
Analysis Period (min)			15									

APPENDIX D: METHODS AND ASSUMPTIONS MEMORANDUM



MEMORANDUM

DATE: March 23, 2023
TO: Dan Fleishman/City of Stayton
FROM: Tegan Enloe, PE/Enloe Consulting, LLC
SUBJECT: Family Building Blocks Traffic Analysis: Methods & Assumptions

Background

Family Building Blocks is proposing to build a daycare facility located at 955 E Santiam St. The total structure is estimated at 6,000 SQFT with access to the building located on Orchard Ct. Although classified as a daycare, this particular use will operate differently than a traditional daycare. Students are expected to arrive primarily via bus service provided by the daycare. Occasionally, some students may walk to the site with their parents.

Enloe Consulting, LLC, is contracted with the applicant to prepare the traffic analysis for their proposed development as part of their land use application. The analysis will include information that addresses the traffic impact analysis (TIA) land use requirements. This memorandum outlines key analysis assumptions that will be used for review and comment prior to application submittal.

Trip Generation

Trip generation estimates are prepared for the proposed development. The proposed daycare is unique in its use because the majority of student trips are planned to arrive via school provided bus services. Some students may elect to walk to campus with their parents, but there are no expectations that any students would be arriving via parent driven vehicle.

Family Build Blocks proposes to use the maximum capacity of the building upon opening. They are planning for eight students per classroom (with five classrooms total) for a total of forty students. Thirty-six of the students are expected to arrive via school provided bus, which amounts to three buses providing drop off/pick up. It is estimated that up to four students may arrive by walking.

Each classroom will have two teachers for a total of ten on-site teachers, and an additional two teaching assistants. There will be an additional nine other staff on site. Teachers and staff are anticipated to arrive via personal vehicles.



Classes start at 9:30 AM, with staff and students arriving beforehand. Students and teaching staff will be released at noon each day. The remaining staff will leave around 4:00 PM. **Table 1** provides a summary of estimated trips for each timeframe.

Table 1: Site Generated Trip Estimates

Time Period	Peak Hour Trips		
	In	Out	Total
AM Peak Hour	24	3	27
Noon Release	3	15	18
PM Peak Hour		9	9

Trips estimated from the proposed use will be evaluated under existing, future no build, and opening year conditions to establish their impacts to the surrounding transportation network.

Trip Distribution

The following distribution is proposed for routing trips from the proposed development onto the surrounding network and is based on trends observed from traffic volumes provided in the City’s Transportation System Plan.

- 32% north on First Ave
- 20% south on First Ave
- 18% west on Shaff Rd
- 10% west on Washington St
- 10% east on Fern Ridge
- 10% east on Santiam St

Figure 1 shows how the estimated trips would be routed onto the study networking using the trip distribution assumptions.

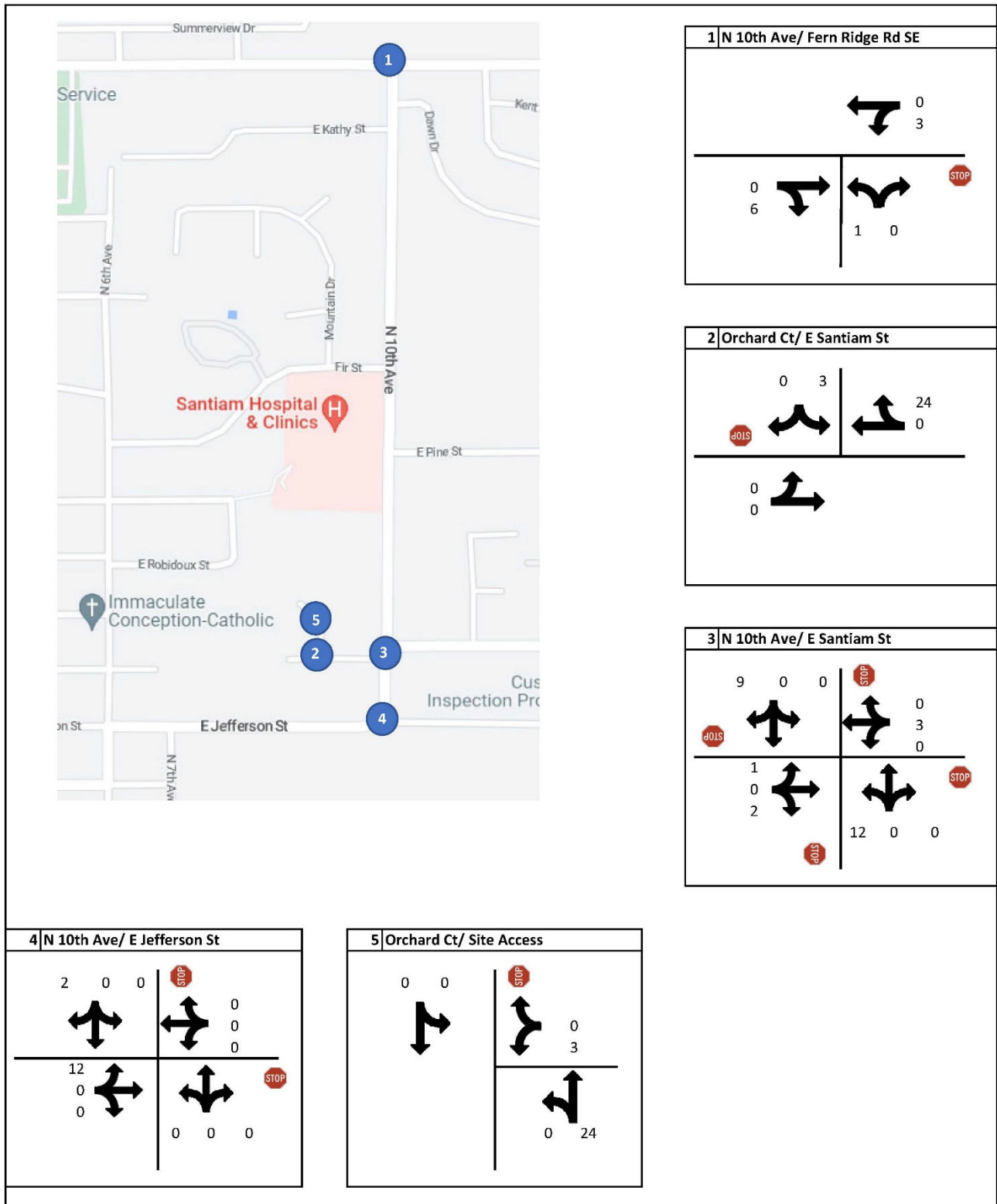


Figure 1: Site Generated Trips, AM Peak Hour



Study Intersections

Based on the trip generation and trip distribution, our team suggests the following intersections be included in the traffic analysis:

- N 10th Ave/ Fern Ridge Rd SE
- N 10th Ave/ E Santiam St
- N 10th Ave/ E Jefferson St
- Orchard Ct/ E Santiam St
- Orchard Ct/ Site Access

Analysis Scenarios

City of Stayton Code Section 17.26.050.6 notes that if the peak hour trips of a study scenario are negligible, then that scenario does not need to be further evaluated. Our team typically recommends a scenario for study when it receives twenty-five or more trips to a single intersection. Using this metric as a threshold, the AM Peak Hour would qualify for study, but the noon release and PM Peak Hour would not. A total impact of eighteen new trips at the noon release and nine trips at the PM Peak Hour would be expected to have minimal impacts to the surrounding roadway network. Therefore, it is recommended that only the AM Peak Hour be analyzed.

The following analysis scenarios are proposed for review to satisfy the TIA requirements for the City:

- 2023 Existing Conditions, AM Peak Hour
- 2024 Background Traffic, AM Peak Hour
- 2024 Total Traffic (Background + Site), AM Peak Hour

Growth Rate

A 2.2% annual linear growth rate is recommended to project volumes to their future values. This rate is calculated based on a comparison of 2018 and 2040 volumes from the City's TSP. No seasonal adjustment is recommended.

Planned Improvements

It is important that future analysis scenarios of the study area include planned roadway improvement projects. The TSP identifies Project M5 as adding a roundabout at 10th/Santiam. The City has indicated these are not currently funded projects, so it is not recommended for inclusion in the 2024 analysis scenarios.

In Process Developments

No in process developments that overlap the study area have been identified by the City for inclusion in this study.

APPENDIX E: CRASH DATA REPORTS

CITY OF STAYTON, MARION COUNTY

URBAN NON-SYSTEM CRASH LISTING
10TH AVE at FERN RIDGE RD, City of Stayton, Marion County, 01/01/2017 to 12/31/2021

1 - 1 of 1 Crash records shown.

SER#	S	D	M	DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE	ACT	EVENT	CAUSE																			
INVEST	P	R	J	S	W	DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE	ACT	EVENT	CAUSE																	
RD DPT	E	A	U	I	C	O	DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR	QTY	MOVE	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE	
UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE	
01030	N	N	N	N		04/04/2021	17	FERN RIDGE RD	INTER	3-LEG	N	N	N	CLR	ANGL-OTH	01	NONE	0	TURN-L											02
NONE				SU	0	10TH AVE	CN					STOP SIGN	N	DRY	TURN		PRVTE	S	-W								000		00	
N				12P			02			0			N	DAY	INJ		PSNGR	CAR	01	DRVR	NONE	69	M	OR-Y		028	000		02	
N				44 48 35.31	-122 47						2.67																			
																02	NONE	0	TURN-L											
																	PRVTE	E	-S									000		00
																	PSNGR	CAR	01	DRVR	INJB	73	M	OR-Y		000	000		00	

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CITY OF STAYTON, MARION COUNTY

10TH AVE at FERN RIDGE RD, City of Stayton, Marion County, 01/01/2017 to 12/31/2021

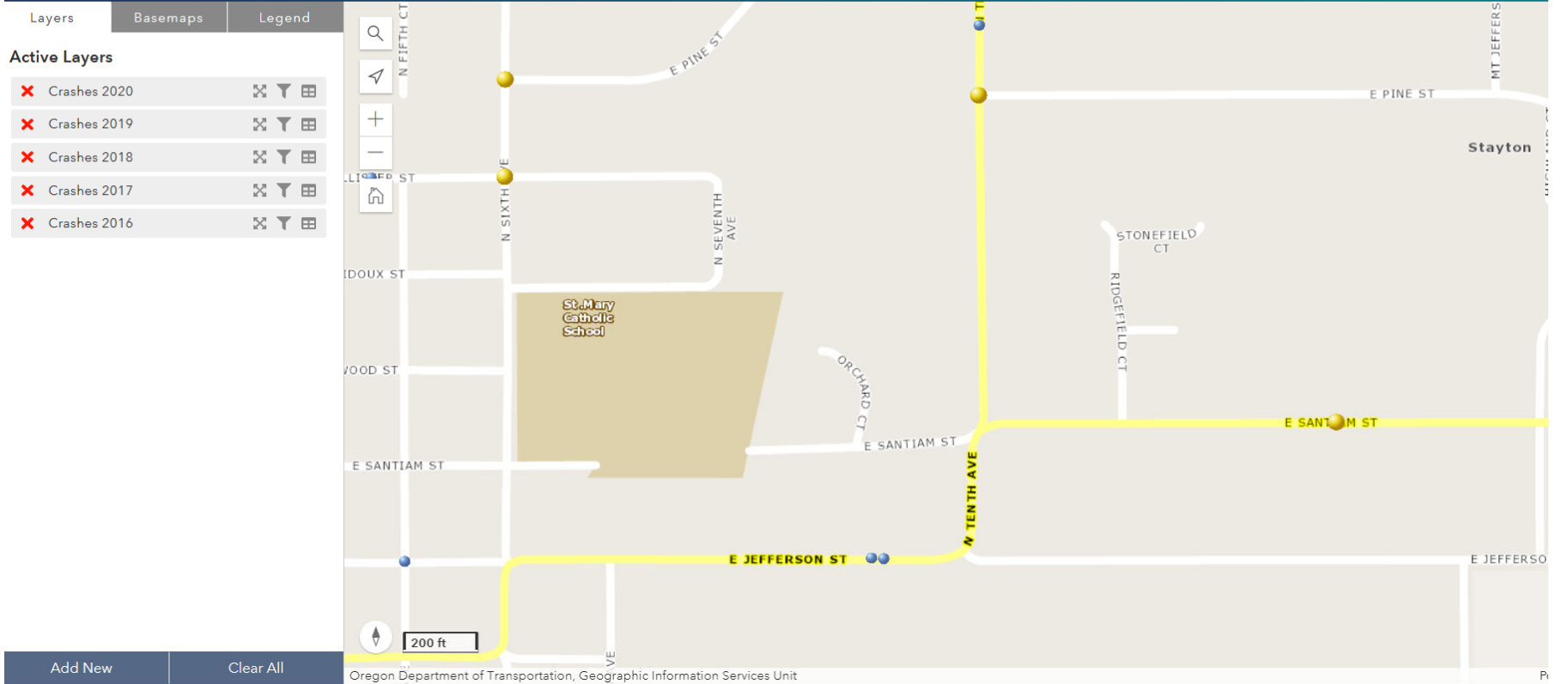


Figure 1: ODOT TransGIS Data, retrieved 4/6/2023

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING
SANTIAM ST at 10TH AVE, City of Stayton, Marion County, 01/01/2017 to 12/31/2021

CITY OF STAYTON, MARION COUNTY

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE	AS	RES	LOC	ERROR	ACT	EVENT	CAUSE												
INVEST	E	A	U	I	C	O	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR	QTY	MOVE												
RD DPT	E	L	G	N	H	R	TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED						
UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CITY OF STAYTON, MARION COUNTY

CITY OF STAYTON, MARION COUNTY

10TH AVE at JEFFERSON ST, City of Stayton, Marion County, 01/01/2017 to 12/31/2021

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	SPCL USE	MOVE	A	S															
INVEST	E	A	U	I	C	O	DIST	FIRST STREET		(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR	QTY													
RD DPT	E	L	G	N	H	R	TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED						
UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CITY OF STAYTON, MARION COUNTY

APPENDIX F: SYNCHRO REPORTS – 2024 BACKGROUND

HCM 6th TWSC
1: N 10th Ave & Fern Rdg SE/Fern Ridge SE

04/04/2023

Intersection						
Int Delay, s/veh	5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	71	74	130	97	26
Future Vol, veh/h	60	71	74	130	97	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	130	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	5	5	4	4	2	2
Mvmt Flow	80	95	99	173	129	35

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	175	0	499 128
Stage 1	-	-	-	-	128 -
Stage 2	-	-	-	-	371 -
Critical Hdwy	-	-	4.14	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.236	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1389	-	531 922
Stage 1	-	-	-	-	898 -
Stage 2	-	-	-	-	698 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1389	-	489 922
Mov Cap-2 Maneuver	-	-	-	-	489 -
Stage 1	-	-	-	-	898 -
Stage 2	-	-	-	-	643 -

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	489	922	-	-	1389	-
HCM Lane V/C Ratio	0.264	0.038	-	-	0.071	-
HCM Control Delay (s)	15	9.1	-	-	7.8	0
HCM Lane LOS	C	A	-	-	A	A
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0.2	-

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	1	2	1	2	2	2
Future Vol, veh/h	1	2	1	2	2	2
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	50	50	50	50	50	50
Heavy Vehicles, %	100	100	2	2	50	50
Mvmt Flow	2	4	2	4	4	4

















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	6	0	-	0	12
Stage 1	-	-	-	-	4
Stage 2	-	-	-	-	8
Critical Hdwy	5.1	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	5.9
Critical Hdwy Stg 2	-	-	-	-	5.9
Follow-up Hdwy	3.1	-	-	-	3.95
Pot Cap-1 Maneuver	1154	-	-	-	897
Stage 1	-	-	-	-	907
Stage 2	-	-	-	-	903
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1154	-	-	-	895
Mov Cap-2 Maneuver	-	-	-	-	895
Stage 1	-	-	-	-	905
Stage 2	-	-	-	-	903

Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1154	-	-	-	924
HCM Lane V/C Ratio	0.002	-	-	-	0.009
HCM Control Delay (s)	8.1	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM Unsignalized Intersection Capacity Analysis
 3: N 10th Ave & E Santiam St

04/04/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Yield			Stop	
Traffic Volume (vph)	1	1	4	110	1	42	1	52	45	22	32	1
Future Volume (vph)	1	1	4	110	1	42	1	52	45	22	32	1
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	1	1	5	143	1	55	1	68	58	29	42	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	7	199	127	72								
Volume Left (vph)	1	143	1	29								
Volume Right (vph)	5	55	58	1								
Hadj (s)	0.28	0.13	-0.12	0.14								
Departure Headway (s)	4.9	4.5	4.4	4.7								
Degree Utilization, x	0.01	0.25	0.15	0.09								
Capacity (veh/h)	694	760	782	722								
Control Delay (s)	7.9	9.0	8.2	8.2								
Approach Delay (s)	7.9	9.0	8.2	8.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.6									
Level of Service			A									
Intersection Capacity Utilization			31.7%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

4: N 10th Ave & E Jefferson St

04/04/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Yield			Stop			Stop			Yield	
Traffic Volume (vph)	84	12	1	1	26	15	1	2	1	3	1	140
Future Volume (vph)	84	12	1	1	26	15	1	2	1	3	1	140
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	117	17	1	1	36	21	1	3	1	4	1	194
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	135	58	5	199								
Volume Left (vph)	117	1	1	4								
Volume Right (vph)	1	21	1	194								
Hadj (s)	0.41	-0.04	-0.08	-0.39								
Departure Headway (s)	4.8	4.5	4.5	4.0								
Degree Utilization, x	0.18	0.07	0.01	0.22								
Capacity (veh/h)	708	756	747	865								
Control Delay (s)	8.9	7.8	7.5	8.1								
Approach Delay (s)	8.9	7.8	7.5	8.1								
Approach LOS	A	A	A	A								

Intersection Summary

Delay	8.3	
Level of Service	A	
Intersection Capacity Utilization	27.7%	ICU Level of Service A
Analysis Period (min)	15	

**APPENDIX G:
SYNCHRO REPORTS – 2024 TOTAL**

HCM 6th TWSC
 1: N 10th Ave & Fern Rdg SE/Fern Ridge SE

04/06/2023

Intersection						
Int Delay, s/veh	5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	77	77	130	98	26
Future Vol, veh/h	60	77	77	130	98	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	130	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	5	5	4	4	2	2
Mvmt Flow	80	103	103	173	131	35

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	183	0	511	132
Stage 1	-	-	-	-	132	-
Stage 2	-	-	-	-	379	-
Critical Hdwy	-	-	4.14	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.236	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1380	-	523	917
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	692	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1380	-	480	917
Mov Cap-2 Maneuver	-	-	-	-	480	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	635	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	480	917	-	-	1380	-
HCM Lane V/C Ratio	0.272	0.038	-	-	0.074	-
HCM Control Delay (s)	15.3	9.1	-	-	7.8	0
HCM Lane LOS	C	A	-	-	A	A
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0.2	-

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	2	1	26	2	5
Future Vol, veh/h	1	2	1	26	2	5
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	50	50	50	50	50	50
Heavy Vehicles, %	100	100	2	2	50	50
Mvmt Flow	2	4	2	52	4	10

















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	54	0	-	0	36 28
Stage 1	-	-	-	-	28 -
Stage 2	-	-	-	-	8 -
Critical Hdwy	5.1	-	-	-	6.9 6.7
Critical Hdwy Stg 1	-	-	-	-	5.9 -
Critical Hdwy Stg 2	-	-	-	-	5.9 -
Follow-up Hdwy	3.1	-	-	-	3.95 3.75
Pot Cap-1 Maneuver	1101	-	-	-	868 925
Stage 1	-	-	-	-	884 -
Stage 2	-	-	-	-	903 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1101	-	-	-	866 925
Mov Cap-2 Maneuver	-	-	-	-	866 -
Stage 1	-	-	-	-	882 -
Stage 2	-	-	-	-	903 -

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1101	-	-	-	907
HCM Lane V/C Ratio	0.002	-	-	-	0.015
HCM Control Delay (s)	8.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM Unsignalized Intersection Capacity Analysis
 3: N 10th Ave & E Santiam St

04/06/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Yield			Stop	
Traffic Volume (vph)	2	1	6	110	3	42	13	52	45	22	32	10
Future Volume (vph)	2	1	6	110	3	42	13	52	45	22	32	10
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	3	1	8	143	4	55	17	68	58	29	42	13
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	12	202	143	84								
Volume Left (vph)	3	143	17	29								
Volume Right (vph)	8	55	58	13								
Hadj (s)	0.33	0.13	-0.07	0.04								
Departure Headway (s)	5.0	4.6	4.5	4.6								
Degree Utilization, x	0.02	0.26	0.18	0.11								
Capacity (veh/h)	663	745	766	727								
Control Delay (s)	8.1	9.2	8.4	8.2								
Approach Delay (s)	8.1	9.2	8.4	8.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.7									
Level of Service			A									
Intersection Capacity Utilization			29.9%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 4: N 10th Ave & E Jefferson St

04/06/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Yield			Stop			Stop			Yield	
Traffic Volume (vph)	96	12	1	1	26	15	1	2	1	3	1	142
Future Volume (vph)	96	12	1	1	26	15	1	2	1	3	1	142
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	133	17	1	1	36	21	1	3	1	4	1	197

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	151	58	5	202
Volume Left (vph)	133	1	1	4
Volume Right (vph)	1	21	1	197
Hadj (s)	0.41	-0.04	-0.08	-0.39
Departure Headway (s)	4.8	4.5	4.6	4.0
Degree Utilization, x	0.20	0.07	0.01	0.23
Capacity (veh/h)	707	750	736	844
Control Delay (s)	9.0	7.8	7.6	8.2
Approach Delay (s)	9.0	7.8	7.6	8.2
Approach LOS	A	A	A	A

Intersection Summary			
Delay		8.5	
Level of Service		A	
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM 6th Roundabout
 3: N 10th Ave & E Santiam St

04/06/2023

Intersection				
Intersection Delay, s/veh	4.3			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	12	202	143	84
Demand Flow Rate, veh/h	16	220	156	88
Vehicles Circulating, veh/h	230	97	35	179
Vehicles Exiting, veh/h	37	94	211	138
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.6	4.7	3.9	3.9
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	16	220	156	88
Cap Entry Lane, veh/h	1091	1250	1331	1150
Entry HV Adj Factor	0.732	0.917	0.916	0.958
Flow Entry, veh/h	12	202	143	84
Cap Entry, veh/h	799	1146	1220	1101
V/C Ratio	0.015	0.176	0.117	0.077
Control Delay, s/veh	4.6	4.7	3.9	3.9
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	0

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	1	2	24	1	4
Future Vol, veh/h	3	1	2	24	1	4
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, %	2	2	2	2	2	2
Mvmt Flow	3	1	2	26	1	4

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	21	15	0	0	28
Stage 1	15	-	-	-	-
Stage 2	6	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	996	1065	-	-	1585
Stage 1	1008	-	-	-	-
Stage 2	1017	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	995	1065	-	-	1585
Mov Cap-2 Maneuver	995	-	-	-	-
Stage 1	1008	-	-	-	-
Stage 2	1016	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	1.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1012	1585
HCM Lane V/C Ratio	-	-	0.004	0.001
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0