

Appendices

Appendix A: ADT, Speed, and Class Data

Appendix B: Turn Movement Count Data

Appendix C: HCM and Queuing Reports for the Existing Condition

Appendix D: HCM and Queuing Reports for the Build Condition

Appendix E: Conceptual Design Plans for the Recommended Concept

Appendix A: ADT, Speed, and Class Data

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1																	
2	Start Date: 11/13/2018																
3	Start Time: 12:00:00 AM																
4	Location 1: TAMAR DR N OF HAYSHED LN																
5	Location 2:																
6	westbound																
7	Date	Time	Motorcycles	Cars &	2 Axle	Buses	2 Axle 6	3 Axle	4 Axle	<5 Axle	5 Axle	>6 Axle	<6 Axle	6 Axle	>6 Axle	>7 Axle	Total
8	11/13/2018	12:00 AM	0	39	1	0	0	3	0	0	0	0	0	0	0	0	43
9	11/13/2018	01:00 AM	0	30	2	0	0	0	0	0	0	0	0	0	0	0	32
10	11/13/2018	02:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
11	11/13/2018	03:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
12	11/13/2018	04:00 AM	0	13	1	0	0	1	0	0	0	0	0	0	0	0	15
13	11/13/2018	05:00 AM	0	51	5	0	1	3	0	0	0	0	0	0	0	0	60
14	11/13/2018	06:00 AM	0	143	9	2	6	12	0	0	1	0	0	0	0	0	173
15	11/13/2018	07:00 AM	0	242	33	6	15	31	0	5	3	0	0	0	0	0	335
16	11/13/2018	08:00 AM	1	235	34	7	10	29	0	3	3	0	0	0	0	0	322
17	11/13/2018	09:00 AM	0	255	24	1	13	21	0	1	2	0	0	0	1	0	318
18	11/13/2018	10:00 AM	3	212	18	2	6	6	0	1	1	0	0	0	0	0	249
19	11/13/2018	11:00 AM	0	201	26	1	8	5	0	2	0	1	0	0	0	0	244
20	11/13/2018	12:00 PM	0	285	28	3	8	2	0	1	0	0	0	0	0	0	327
21	11/13/2018	01:00 PM	0	272	40	6	10	11	1	6	0	0	0	0	0	0	346
22	11/13/2018	02:00 PM	1	343	32	1	9	7	0	5	0	0	0	0	0	0	398
23	11/13/2018	03:00 PM	1	413	40	5	12	20	0	7	2	0	0	0	0	0	500
24	11/13/2018	04:00 PM	1	535	44	2	16	10	0	8	0	1	0	0	0	0	617
25	11/13/2018	05:00 PM	2	598	44	2	10	25	0	10	2	0	0	0	0	0	693
26	11/13/2018	06:00 PM	0	468	30	2	10	8	1	4	0	0	0	0	0	0	523
27	11/13/2018	07:00 PM	0	296	13	0	9	17	0	1	0	0	0	0	0	0	336
28	11/13/2018	08:00 PM	1	249	19	0	1	14	1	2	0	0	0	0	0	0	287
29	11/13/2018	09:00 PM	0	191	8	0	2	8	0	2	1	0	0	0	0	0	212
30	11/13/2018	10:00 PM	0	160	12	0	1	3	0	2	0	0	0	0	0	0	178
31	11/13/2018	11:00 PM	0	105	6	0	0	6	0	0	0	0	0	0	0	0	117
32	11/14/2018	12:00 AM	0	42	3	0	1	2	0	0	0	0	0	0	0	0	48
33	11/14/2018	01:00 AM	0	25	0	0	0	0	0	0	0	0	0	0	0	0	25
34	11/14/2018	02:00 AM	0	16	1	0	0	1	0	0	0	0	0	0	0	0	18
35	11/14/2018	03:00 AM	0	7	3	0	0	0	0	0	0	0	0	0	0	0	10
36	11/14/2018	04:00 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
37	11/14/2018	05:00 AM	0	41	6	0	2	0	0	0	0	0	0	0	0	0	49
38	11/14/2018	06:00 AM	1	149	16	3	5	1	0	1	0	0	0	0	0	0	176
39	11/14/2018	07:00 AM	0	215	24	7	10	5	0	9	0	0	0	0	0	0	270
40	11/14/2018	08:00 AM	3	275	30	8	13	12	0	1	1	0	0	0	0	0	343
41	11/14/2018	09:00 AM	0	204	31	0	12	4	0	3	1	1	0	0	0	0	256
42	11/14/2018	10:00 AM	0	196	26	1	7	2	0	1	0	0	0	0	0	0	233
43	11/14/2018	11:00 AM	0	214	28	1	10	6	0	1	1	0	0	0	0	0	261
44	11/14/2018	12:00 PM	1	292	31	2	9	5	0	2	0	0	0	0	0	0	342
45	11/14/2018	01:00 PM	0	278	31	4	18	5	0	2	0	0	0	0	0	0	338
46	11/14/2018	02:00 PM	1	308	15	1	7	5	0	2	0	0	0	0	0	0	339
47	11/14/2018	03:00 PM	3	439	28	7	16	17	0	8	0	0	0	0	0	0	518
48	11/14/2018	04:00 PM	2	535	47	7	11	17	1	6	1	1	0	0	0	0	628
49	11/14/2018	05:00 PM	4	806	47	1	9	28	0	13	3	0	0	0	1	0	912
50	11/14/2018	06:00 PM	0	674	49	1	9	19	0	7	0	0	0	0	0	0	759
51	11/14/2018	07:00 PM	0	341	18	0	5	13	0	1	0	0	0	0	0	0	378
52	11/14/2018	08:00 PM	1	252	19	0	2	11	0	0	1	0	0	0	0	0	286
53	11/14/2018	09:00 PM	0	225	6	0	5	7	0	1	0	0	0	0	0	0	244
54	11/14/2018	10:00 PM	0	154	5	0	2	4	0	0	0	0	0	0	0	0	165
55	11/14/2018	11:00 PM	0	85	7	0	0	4	0	0	0	0	0	0	0	0	96

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1																	
2	Start Date: 11/13/2018																
3	Start Time: 12:00:00 AM																
4	Location 1: TAMAR DR N OF HAYSHED LN																
5	Location 2:																
6	eastbound																
7	Date	Time	Motorcycl	Cars &	2 Axle	Buses	2 Axle 6	3 Axle	4 Axle	<5 Axle	5 Axle	>6 Axle	<6 Axle	6 Axle	>6 Axle	>7 Axle	Total
8	11/13/2018	12:00 AM	0	17	3	0	0	0	0	0	0	0	0	0	0	0	20
9	11/13/2018	01:00 AM	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
10	11/13/2018	02:00 AM	0	7	0	0	1	0	0	0	0	0	0	0	0	0	8
11	11/13/2018	03:00 AM	0	8	5	0	0	0	0	0	0	0	0	0	0	0	13
12	11/13/2018	04:00 AM	0	28	4	0	0	0	0	0	0	0	0	0	0	0	32
13	11/13/2018	05:00 AM	1	76	12	1	3	1	0	0	0	0	0	0	0	0	94
14	11/13/2018	06:00 AM	0	204	21	2	5	1	0	0	0	0	0	0	0	0	233
15	11/13/2018	07:00 AM	1	318	27	9	14	2	3	4	0	0	0	0	0	0	378
16	11/13/2018	08:00 AM	0	287	31	3	6	0	1	3	0	0	0	0	0	0	331
17	11/13/2018	09:00 AM	0	259	18	4	12	2	0	0	0	0	0	0	0	0	295
18	11/13/2018	10:00 AM	0	216	16	1	5	2	0	1	0	0	0	0	0	0	241
19	11/13/2018	11:00 AM	0	239	35	0	7	0	0	2	0	0	0	0	0	0	283
20	11/13/2018	12:00 PM	0	249	25	3	5	0	0	0	0	0	0	0	0	0	282
21	11/13/2018	01:00 PM	0	239	34	2	8	1	0	0	0	0	0	0	0	0	284
22	11/13/2018	02:00 PM	0	291	25	7	15	1	2	2	0	0	0	0	0	0	343
23	11/13/2018	03:00 PM	0	373	28	10	11	2	0	9	0	0	0	0	0	0	433
24	11/13/2018	04:00 PM	0	388	42	2	12	1	0	6	0	0	0	0	0	0	451
25	11/13/2018	05:00 PM	0	454	20	1	8	0	1	3	1	0	0	0	0	0	488
26	11/13/2018	06:00 PM	0	330	22	0	5	0	0	5	0	0	0	0	0	0	362
27	11/13/2018	07:00 PM	0	211	10	0	6	0	0	1	0	0	0	0	0	0	228
28	11/13/2018	08:00 PM	0	188	11	0	4	1	0	0	1	0	0	0	0	0	205
29	11/13/2018	09:00 PM	2	134	13	0	2	0	0	0	0	0	0	0	0	0	151
30	11/13/2018	10:00 PM	0	96	4	0	2	0	0	0	0	0	0	0	0	0	102
31	11/13/2018	11:00 PM	0	58	3	0	0	0	0	0	0	0	0	0	0	0	61
32	11/14/2018	12:00 AM	0	28	2	0	0	0	0	0	0	0	0	0	0	0	30
33	11/14/2018	01:00 AM	0	21	0	0	0	0	0	0	0	0	0	0	0	0	21
34	11/14/2018	02:00 AM	0	17	1	0	0	0	0	0	0	0	0	0	0	0	18
35	11/14/2018	03:00 AM	0	15	0	0	1	0	0	0	0	0	0	0	0	0	16
36	11/14/2018	04:00 AM	0	34	7	0	0	0	0	0	0	0	0	0	0	0	41
37	11/14/2018	05:00 AM	0	77	15	3	3	0	0	1	0	0	0	0	0	0	99
38	11/14/2018	06:00 AM	0	225	14	3	6	1	0	0	0	0	0	0	0	0	249
39	11/14/2018	07:00 AM	0	327	25	9	10	1	0	3	0	0	0	0	0	0	375
40	11/14/2018	08:00 AM	1	277	30	5	11	3	0	7	0	0	0	0	0	0	334
41	11/14/2018	09:00 AM	1	250	21	3	10	4	0	2	0	0	0	0	0	0	291
42	11/14/2018	10:00 AM	0	184	18	1	7	2	1	1	0	0	0	0	0	0	214
43	11/14/2018	11:00 AM	0	260	25	0	9	2	0	0	0	0	0	0	0	0	296
44	11/14/2018	12:00 PM	2	256	27	1	7	1	0	1	0	0	0	0	0	0	295
45	11/14/2018	01:00 PM	0	248	12	1	7	1	0	3	0	0	0	0	0	0	272
46	11/14/2018	02:00 PM	0	295	25	6	7	1	0	2	0	0	0	0	0	0	336
47	11/14/2018	03:00 PM	0	358	20	16	13	5	0	3	0	0	0	0	0	0	415
48	11/14/2018	04:00 PM	0	401	26	5	7	0	0	2	0	0	0	0	0	0	441
49	11/14/2018	05:00 PM	0	436	21	0	11	0	1	1	0	0	0	0	0	0	470
50	11/14/2018	06:00 PM	0	355	23	1	4	0	1	4	0	0	0	0	0	0	388
51	11/14/2018	07:00 PM	0	256	18	0	4	0	0	0	0	0	0	0	0	0	278
52	11/14/2018	08:00 PM	1	184	13	0	4	0	0	1	0	0	0	0	0	0	203
53	11/14/2018	09:00 PM	0	147	4	0	5	1	0	0	0	0	0	0	0	0	157
54	11/14/2018	10:00 PM	0	105	4	0	4	0	0	1	0	0	0	0	0	0	114
55	11/14/2018	11:00 PM	0	67	2	0	1	0	0	0	1	0	0	0	0	0	71

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
2	Start Date: 11/13/2018																
3	Start Time: 12:00:00 AM																
4	Location 1: TAMAR DR N OF HAYSHED LANE																
5	Location 2:																
6	Eastbound Speed (mph)																
7	Date	Time	1-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-999	Time
8	11/13/2018	12:00 AM	0	2	2	1	8	5	2	0	0	0	0	0	0	0	12:00 AM
9	11/13/2018	01:00 AM	0	2	2	5	5	3	0	0	0	0	0	0	0	0	1:00 AM
10	11/13/2018	02:00 AM	0	0	1	0	1	6	0	0	0	0	0	0	0	0	2:00 AM
11	11/13/2018	03:00 AM	0	0	3	2	3	4	1	0	0	0	0	0	0	0	3:00 AM
12	11/13/2018	04:00 AM	0	2	7	2	11	8	2	0	0	0	0	0	0	0	4:00 AM
13	11/13/2018	05:00 AM	2	5	6	8	35	25	10	3	0	0	0	0	0	0	5:00 AM
14	11/13/2018	06:00 AM	5	12	24	25	84	53	25	5	0	0	0	0	0	0	6:00 AM
15	11/13/2018	07:00 AM	17	24	59	38	114	95	30	2	0	0	0	0	0	0	7:00 AM
16	11/13/2018	08:00 AM	24	4	33	38	114	86	26	7	0	0	0	0	0	0	8:00 AM
17	11/13/2018	09:00 AM	27	19	21	32	89	85	20	4	0	0	0	0	0	0	9:00 AM
18	11/13/2018	10:00 AM	10	4	18	22	75	82	30	2	0	0	0	0	0	0	10:00 AM
19	11/13/2018	11:00 AM	21	6	13	22	99	90	33	1	0	0	0	0	0	0	11:00 AM
20	11/13/2018	12:00 PM	12	11	21	25	103	89	19	4	0	0	0	0	0	0	12:00 PM
21	11/13/2018	01:00 PM	10	12	19	23	91	108	18	2	2	0	0	0	0	0	1:00 PM
22	11/13/2018	02:00 PM	15	13	26	47	96	105	36	7	1	0	0	0	0	0	2:00 PM
23	11/13/2018	03:00 PM	21	21	31	54	155	129	22	0	1	0	0	0	0	0	3:00 PM
24	11/13/2018	04:00 PM	11	11	29	49	167	152	32	1	0	0	0	0	0	0	4:00 PM
25	11/13/2018	05:00 PM	10	19	45	76	217	98	24	0	0	0	0	0	0	0	5:00 PM
26	11/13/2018	06:00 PM	8	10	32	43	151	94	21	3	0	0	0	0	0	0	6:00 PM
27	11/13/2018	07:00 PM	1	11	28	29	82	63	14	0	0	0	0	0	0	0	7:00 PM
28	11/13/2018	08:00 PM	5	3	14	26	72	69	14	1	1	0	0	0	0	0	8:00 PM
29	11/13/2018	09:00 PM	0	10	15	25	51	37	11	1	1	0	0	0	0	0	9:00 PM
30	11/13/2018	10:00 PM	2	4	10	13	45	19	9	0	0	0	0	0	0	0	10:00 PM
31	11/13/2018	11:00 PM	0	3	3	7	22	21	5	0	0	0	0	0	0	0	11:00 PM
32	11/14/2018	12:00 AM	0	2	2	6	11	7	2	0	0	0	0	0	0	0	12:00 AM
33	11/14/2018	01:00 AM	0	1	0	9	5	4	1	1	0	0	0	0	0	0	1:00 AM
34	11/14/2018	02:00 AM	1	1	0	3	5	6	2	0	0	0	0	0	0	0	2:00 AM
35	11/14/2018	03:00 AM	0	1	3	3	1	3	5	0	0	0	0	0	0	0	3:00 AM
36	11/14/2018	04:00 AM	0	3	5	7	10	13	3	0	0	0	0	0	0	0	4:00 AM
37	11/14/2018	05:00 AM	0	4	16	10	31	28	7	3	0	0	0	0	0	0	5:00 AM
38	11/14/2018	06:00 AM	3	13	25	40	81	60	21	5	1	0	0	0	0	0	6:00 AM
39	11/14/2018	07:00 AM	20	22	43	42	107	114	21	7	1	0	0	0	0	0	7:00 AM
40	11/14/2018	08:00 AM	8	15	39	35	85	110	37	4	1	0	0	0	0	0	8:00 AM
41	11/14/2018	09:00 AM	18	14	20	24	95	87	31	2	0	0	0	0	0	0	9:00 AM
42	11/14/2018	10:00 AM	11	7	17	27	89	49	11	4	0	0	0	0	0	0	10:00 AM
43	11/14/2018	11:00 AM	24	7	28	33	94	88	21	1	2	0	0	0	0	0	11:00 AM
44	11/14/2018	12:00 PM	38	13	14	20	89	105	16	2	1	0	0	0	0	0	12:00 PM
45	11/14/2018	01:00 PM	14	9	18	26	89	99	16	2	1	0	0	0	0	0	1:00 PM
46	11/14/2018	02:00 PM	29	9	28	34	108	106	21	1	2	0	0	0	0	0	2:00 PM
47	11/14/2018	03:00 PM	23	17	39	73	129	100	32	2	2	0	0	0	0	0	3:00 PM
48	11/14/2018	04:00 PM	24	12	40	60	151	126	28	3	0	0	0	0	0	0	4:00 PM
49	11/14/2018	05:00 PM	15	10	48	87	202	90	17	3	0	0	0	0	0	0	5:00 PM
50	11/14/2018	06:00 PM	10	6	34	77	147	103	12	0	0	0	0	0	0	0	6:00 PM
51	11/14/2018	07:00 PM	7	5	21	44	110	77	13	1	0	1	0	0	0	0	7:00 PM
52	11/14/2018	08:00 PM	2	10	16	27	80	52	15	1	0	0	0	0	0	0	8:00 PM
53	11/14/2018	09:00 PM	4	9	15	29	61	36	3	0	0	0	0	0	0	0	9:00 PM
54	11/14/2018	10:00 PM	0	4	15	19	42	31	3	0	0	0	0	0	0	0	10:00 PM
55	11/14/2018	11:00 PM	1	2	4	14	22	23	5	0	0	0	0	0	0	0	11:00 PM

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																
2	Start Date: 11/13/2018															
3	Start Time: 12:00:00 AM															
4	Location 1: TAMAR DR N OF HAYSHED LANE															
5	Location 2:															
6	Westbound Speed (mph)															
7	Date	Time	1-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-999
8	11/13/2018	12:00 AM	5	3	2	14	12	5	2	0	0	0	0	0	0	0
9	11/13/2018	01:00 AM	6	2	1	5	10	6	3	0	0	0	0	0	0	0
10	11/13/2018	02:00 AM	1	2	1	1	3	1	0	0	0	0	0	0	0	0
11	11/13/2018	03:00 AM	0	0	0	3	5	0	1	0	0	0	0	0	0	0
12	11/13/2018	04:00 AM	2	1	1	1	6	3	1	0	0	0	0	0	0	0
13	11/13/2018	05:00 AM	5	6	4	16	21	5	2	1	0	0	0	0	0	0
14	11/13/2018	06:00 AM	18	8	6	37	74	24	7	0	0	0	0	0	0	0
15	11/13/2018	07:00 AM	49	26	15	81	106	49	8	3	0	0	0	0	0	0
16	11/13/2018	08:00 AM	41	23	12	77	100	61	7	3	1	0	0	0	0	0
17	11/13/2018	09:00 AM	35	29	30	67	85	55	15	3	0	1	0	0	0	0
18	11/13/2018	10:00 AM	6	19	6	44	94	57	19	4	0	0	0	0	0	0
19	11/13/2018	11:00 AM	5	19	10	39	82	64	21	3	1	0	0	0	0	0
20	11/13/2018	12:00 PM	10	18	15	49	117	86	26	4	0	1	1	0	0	0
21	11/13/2018	01:00 PM	14	23	14	63	145	68	16	2	1	1	0	0	0	0
22	11/13/2018	02:00 PM	17	32	20	59	146	107	14	4	0	0	0	0	0	0
23	11/13/2018	03:00 PM	36	44	30	104	155	106	21	2	3	0	0	0	0	0
24	11/13/2018	04:00 PM	18	63	27	97	250	142	18	3	1	0	0	0	0	0
25	11/13/2018	05:00 PM	41	85	41	161	219	107	39	1	1	0	0	0	0	0
26	11/13/2018	06:00 PM	24	52	24	112	216	76	17	3	1	0	0	0	0	0
27	11/13/2018	07:00 PM	11	57	25	67	112	53	8	2	2	0	0	0	0	0
28	11/13/2018	08:00 PM	21	36	13	49	90	66	11	0	2	0	0	0	0	0
29	11/13/2018	09:00 PM	7	24	15	37	70	47	10	0	1	1	0	0	0	0
30	11/13/2018	10:00 PM	11	15	15	34	55	36	9	3	0	0	0	0	0	0
31	11/13/2018	11:00 PM	5	16	7	15	45	19	9	1	0	0	0	0	0	0
32	11/14/2018	12:00 AM	2	3	0	11	15	11	5	1	0	0	0	0	0	0
33	11/14/2018	01:00 AM	1	5	4	7	2	4	2	0	0	0	0	0	0	0
34	11/14/2018	02:00 AM	1	6	0	1	3	4	3	0	0	0	0	0	0	0
35	11/14/2018	03:00 AM	0	0	0	0	3	5	1	1	0	0	0	0	0	0
36	11/14/2018	04:00 AM	0	1	1	1	3	4	0	0	0	0	0	0	0	0
37	11/14/2018	05:00 AM	2	5	1	5	11	16	8	1	0	0	0	0	0	0
38	11/14/2018	06:00 AM	7	9	7	23	59	49	18	3	1	0	0	0	0	0
39	11/14/2018	07:00 AM	11	20	13	53	87	58	22	6	1	0	0	0	0	0
40	11/14/2018	08:00 AM	22	33	25	43	91	94	26	7	3	0	0	0	0	0
41	11/14/2018	09:00 AM	5	19	11	33	94	70	19	4	1	0	0	0	0	0
42	11/14/2018	10:00 AM	3	20	8	37	87	60	18	0	0	0	0	0	0	0
43	11/14/2018	11:00 AM	11	16	20	31	93	75	11	4	1	0	0	0	0	0
44	11/14/2018	12:00 PM	5	26	16	39	131	98	21	5	1	0	0	0	0	0
45	11/14/2018	01:00 PM	11	19	14	54	122	92	22	4	0	0	0	0	0	0
46	11/14/2018	02:00 PM	10	26	24	52	122	89	14	3	0	0	0	0	0	0
47	11/14/2018	03:00 PM	31	62	36	105	176	83	22	3	1	0	0	0	0	0
48	11/14/2018	04:00 PM	29	60	52	149	219	88	24	6	2	0	0	0	0	0
49	11/14/2018	05:00 PM	73	103	79	268	282	88	19	2	1	0	0	0	0	0
50	11/14/2018	06:00 PM	43	72	76	225	238	72	22	9	2	0	0	0	0	0
51	11/14/2018	07:00 PM	13	43	26	98	118	58	17	5	1	0	0	0	0	0
52	11/14/2018	08:00 PM	19	38	16	70	91	41	9	1	1	0	0	0	0	0
53	11/14/2018	09:00 PM	20	22	9	67	71	46	8	1	0	0	0	0	0	0
54	11/14/2018	10:00 PM	8	17	8	31	64	28	7	2	0	0	0	0	0	0
55	11/14/2018	11:00 PM	2	11	2	27	33	15	5	1	0	0	0	0	0	0

Appendix B: Turn Movement Count Data

Sabra & Associates

7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Flamepool Way
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

	FLAMEPOOL WAY From North					TAMAR DR From East					FLAMEPOOL WAY From South					TAMAR DR From West						
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total	
07:00 AM	2	0	2	0	4	0	120	1	0	121	1	0	4	0	5	1	59	1	0	61	191	
07:15 AM	0	0	8	0	8	1	143	0	0	144	0	0	0	0	0	1	68	0	0	69	221	
07:30 AM	3	0	7	0	10	1	128	2	0	131	1	0	1	0	2	0	52	0	0	52	195	
07:45 AM	0	0	4	0	4	1	139	1	0	141	0	0	2	1	3	0	70	1	0	71	219	
Total	5	0	21	0	26	3	530	4	0	537	2	0	7	1	10	2	249	2	0	253	826	
08:00 AM	0	0	11	0	11	0	132	0	0	132	0	0	0	0	0	2	55	0	0	57	200	
08:15 AM	2	0	0	0	2	1	139	1	0	141	0	0	1	0	1	0	72	0	0	72	216	
08:30 AM	0	0	6	0	6	0	194	1	0	195	0	0	1	0	1	1	89	5	0	95	297	
08:45 AM	1	0	8	0	9	1	227	0	0	228	3	1	1	0	5	4	74	1	0	79	321	
Total	3	0	25	0	28	2	692	2	0	696	3	1	3	0	7	7	290	6	0	303	1034	
*** BREAK ***																						
04:00 PM	0	1	1	0	2	0	124	0	0	124	2	0	1	1	4	3	143	2	0	148	278	
04:15 PM	0	2	2	0	4	1	131	4	0	136	2	1	0	0	3	7	158	1	0	166	309	
04:30 PM	3	0	5	0	8	2	145	4	0	151	4	1	0	0	5	6	125	2	0	133	297	
04:45 PM	0	0	4	0	4	0	117	1	0	118	3	0	2	0	5	4	163	3	0	170	297	
Total	3	3	12	0	18	3	517	9	0	529	11	2	3	1	17	20	589	8	0	617	1181	
05:00 PM	3	0	1	0	4	0	151	3	0	154	0	0	2	0	2	7	149	1	0	157	317	
05:15 PM	2	0	2	0	4	1	131	5	0	137	0	0	1	1	2	8	186	2	0	196	339	
05:30 PM	1	0	2	0	3	0	176	2	0	178	0	0	0	0	0	2	184	3	0	189	370	
05:45 PM	1	0	5	0	6	3	145	2	0	150	0	0	1	0	1	3	172	16	0	191	348	
Total	7	0	10	0	17	4	603	12	0	619	0	0	4	1	5	20	691	22	0	733	1374	
06:00 PM	1	0	3	0	4	2	136	3	0	141	1	0	0	2	3	2	149	7	0	158	306	
06:15 PM	3	0	0	0	3	1	144	2	0	147	1	0	0	2	3	5	127	3	0	135	288	
06:30 PM	1	0	7	0	8	0	112	5	0	117	1	0	1	0	2	6	110	5	0	121	248	
06:45 PM	1	0	3	0	4	4	91	1	0	96	16	0	6	0	22	3	103	8	0	114	236	
Total	6	0	13	0	19	7	483	11	0	501	19	0	7	4	30	16	489	23	0	528	1078	
Grand Total	24	3	81	0	108	19	2825	38	0	2882	35	3	24	7	69	65	2308	61	0	2434	5493	
Apprch %	22.2	2.8	75	0		0.7	98	1.3	0		50.7	4.3	34.8	10.1		2.7	94.8	2.5	0			
Total %	0.4	0.1	1.5	0	2	0.3	51.4	0.7	0	52.5	0.6	0.1	0.4	0.1	1.3	1.2	42	1.1	0	44.3		

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Columbia, MD, 21046

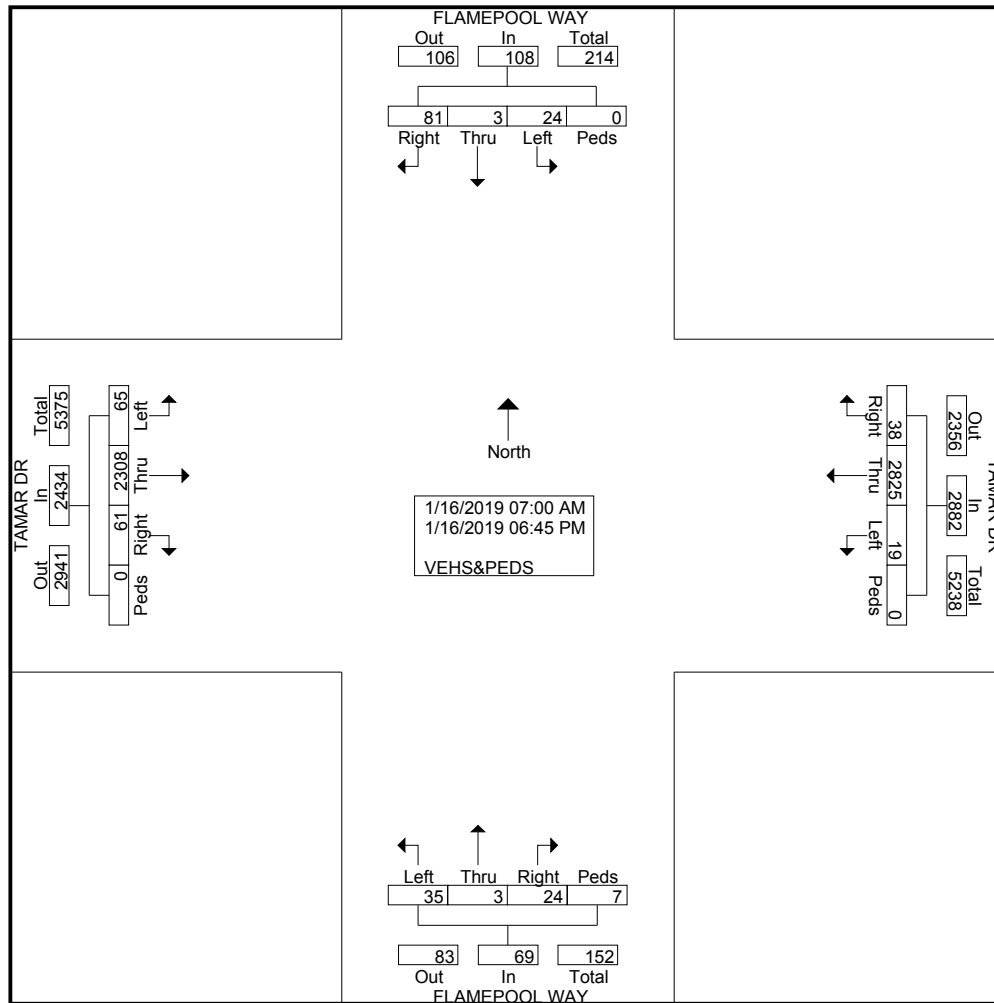
443-741-3500

File Name : Tamar Dr at Flamepool Way

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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Columbia, MD, 21046

443-741-3500

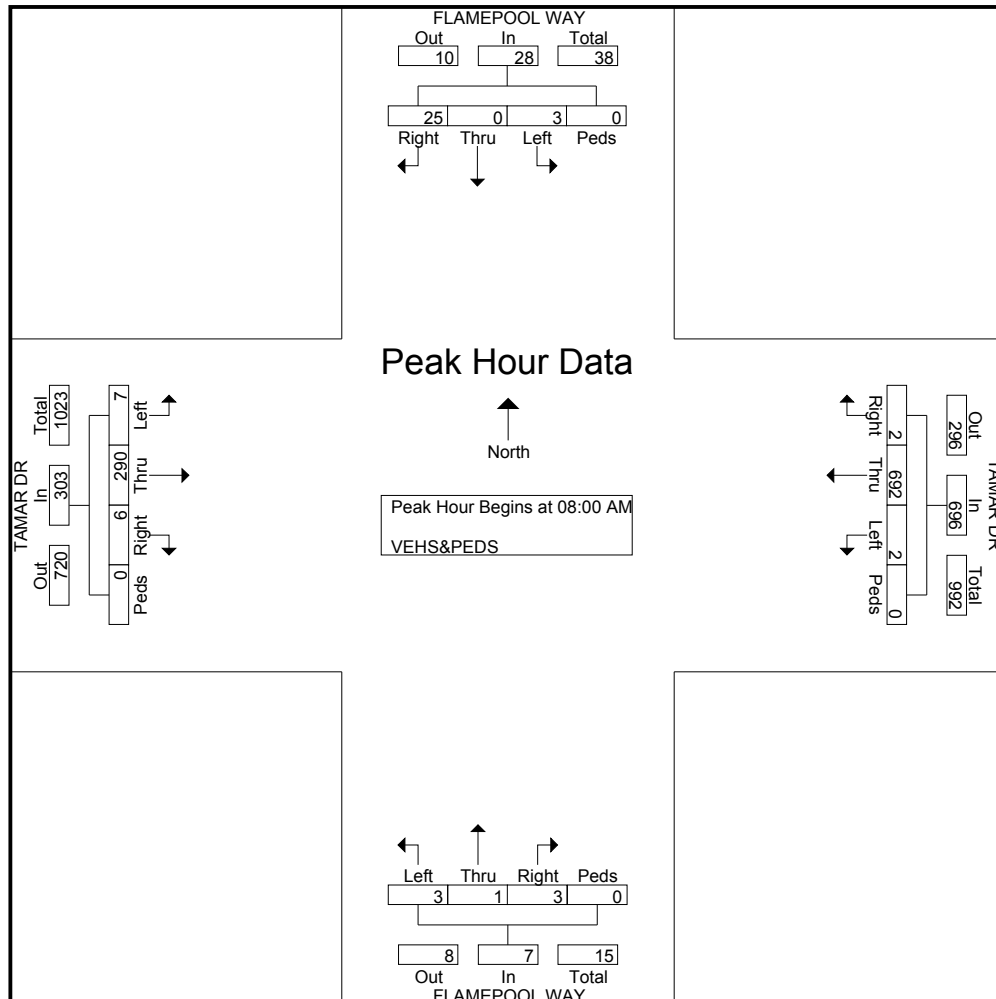
File Name : Tamar Dr at Flamepool Way

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	FLAMEPOOL WAY From North					TAMAR DR From East					FLAMEPOOL WAY From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	11	0	11	0	132	0	0	132	0	0	0	0	0	2	55	0	0	57	200
08:15 AM	2	0	0	0	2	1	139	1	0	141	0	0	1	0	1	0	72	0	0	72	216
08:30 AM	0	0	6	0	6	0	194	1	0	195	0	0	1	0	1	1	89	5	0	95	297
08:45 AM	1	0	8	0	9	1	227	0	0	228	3	1	1	0	5	4	74	1	0	79	321
Total Volume	3	0	25	0	28	2	692	2	0	696	3	1	3	0	7	7	290	6	0	303	1034
% App. Total	10.7	0	89.3	0		0.3	99.4	0.3	0		42.9	14.3	42.9	0		2.3	95.7	2	0		
PHF	.375	.000	.568	.000	.636	.500	.762	.500	.000	.763	.250	.250	.750	.000	.350	.438	.815	.300	.000	.797	.805



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Columbia, MD, 21046

443-741-3500

File Name : Tamar Dr at Flamepool Way

Site Code : 00000000

Start Date : 1/16/2019

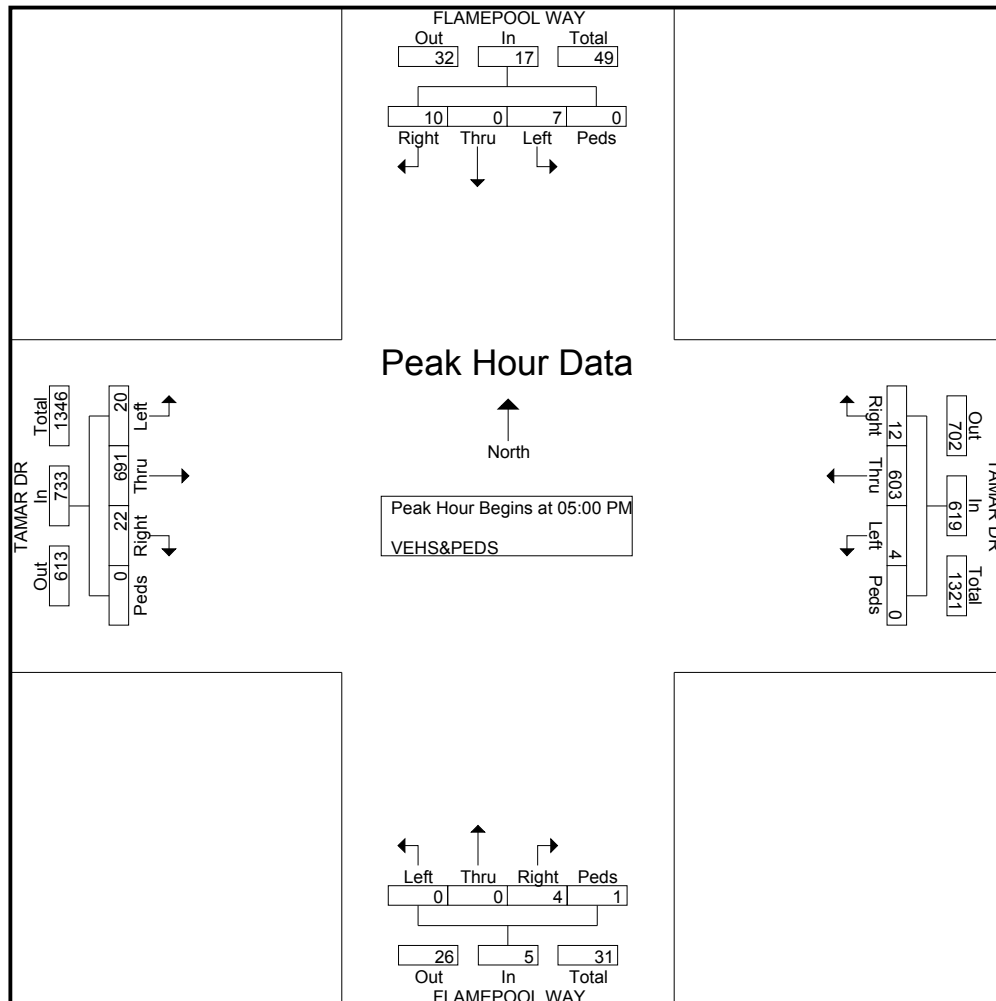
Page No : 4

	FLAMEPOOL WAY From North					TAMAR DR From East					FLAMEPOOL WAY From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	3	0	1	0	4	0	151	3	0	154	0	0	2	0	2	7	149	1	0	157	317
05:15 PM	2	0	2	0	4	1	131	5	0	137	0	0	1	1	2	8	186	2	0	196	339
05:30 PM	1	0	2	0	3	0	176	2	0	178	0	0	0	0	0	2	184	3	0	189	370
05:45 PM	1	0	5	0	6	3	145	2	0	150	0	0	1	0	1	3	172	16	0	191	348
Total Volume	7	0	10	0	17	4	603	12	0	619	0	0	4	1	5	20	691	22	0	733	1374
% App. Total	41.2	0	58.8	0		0.6	97.4	1.9	0		0	0	80	20		2.7	94.3	3	0		
PHF	.583	.000	.500	.000	.708	.333	.857	.600	.000	.869	.000	.000	.500	.250	.625	.625	.929	.344	.000	.935	.928



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Flamepool Way
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	FLAMEPOOL WAY From North					TAMAR DR From East					FLAMEPOOL WAY From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	4
Apprch %	0	0	100	0		0	100	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	25	0	25	0	25	0	0	25	0	0	0	0	0	0	50	0	0	50	

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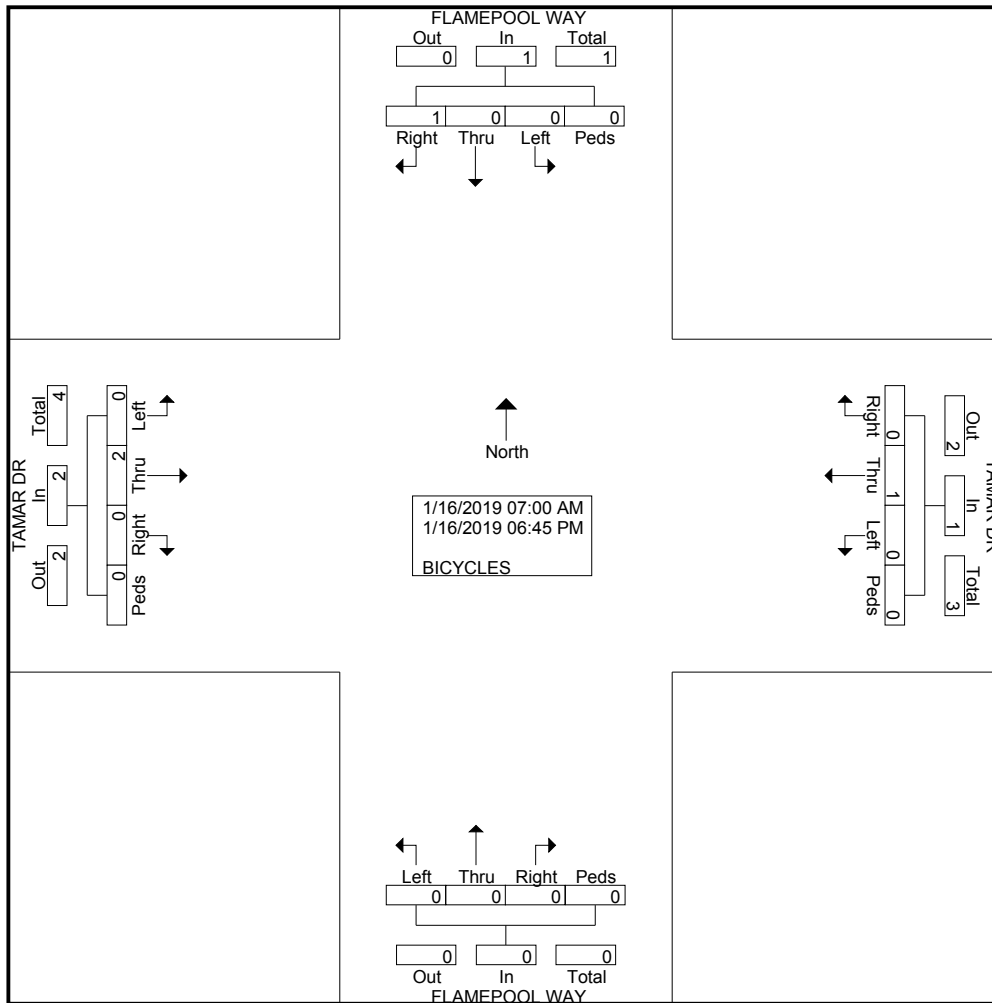
443-741-3500

File Name : Tamar Dr at Flamepool Way

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Flamepool Way
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- U TURNS

	FLAMEPOOL WAY From North					TAMAR DR From East					FLAMEPOOL WAY From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
*** BREAK ***																					
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***																					
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		100	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	

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Columbia, MD, 21046

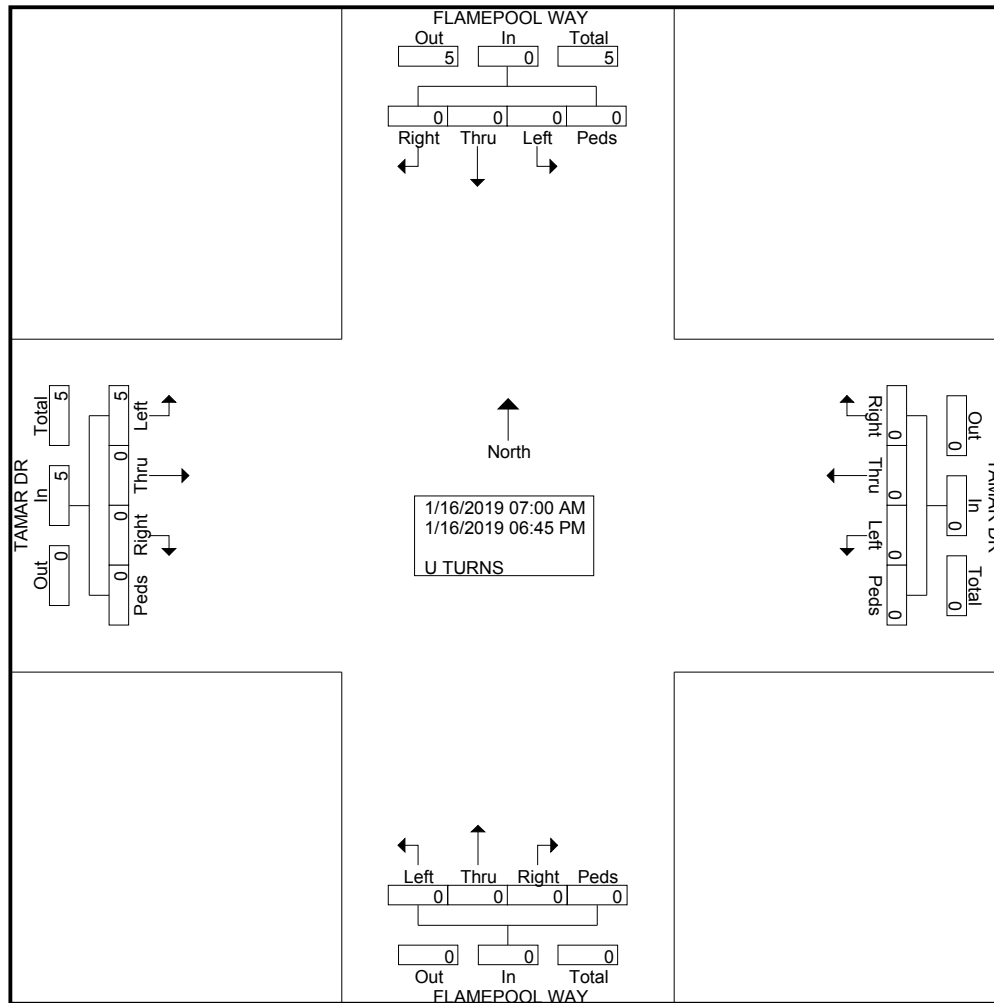
443-741-3500

File Name : Tamar Dr at Flamepool Way

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar dr at Lambskin Ln
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

	LAMBSKIN LN From North					TAMAR DR From East					LAMBSKIN LN From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	0	0	0	2	1	0	0	0	1	7	0	8	0	15	0	0	8	0	8	26
07:15 AM	2	0	0	0	2	8	0	0	0	8	8	0	6	0	14	0	0	5	0	5	29
07:30 AM	0	0	6	0	6	4	0	3	0	7	13	0	6	0	19	0	0	8	0	8	40
07:45 AM	0	0	0	0	0	6	0	0	0	6	17	0	5	0	22	1	0	7	0	8	36
Total	4	0	6	0	10	19	0	3	0	22	45	0	25	0	70	1	0	28	0	29	131
08:00 AM	0	0	0	0	0	6	0	4	0	10	7	0	5	0	12	0	0	0	0	0	22
08:15 AM	0	0	0	0	0	5	0	0	0	5	7	0	2	0	9	0	0	2	0	2	16
08:30 AM	0	0	2	0	2	3	0	0	0	3	5	0	6	0	11	0	0	3	0	3	19
08:45 AM	0	0	0	0	0	3	0	0	0	3	10	0	3	0	13	0	0	4	0	4	20
Total	0	0	2	0	2	17	0	4	0	21	29	0	16	0	45	0	0	9	0	9	77
*** BREAK ***																					
04:00 PM	0	0	1	0	1	3	0	0	0	3	8	0	5	0	13	0	0	11	0	11	28
04:15 PM	0	0	1	0	1	8	0	0	0	8	0	0	8	0	8	0	0	5	0	5	22
04:30 PM	1	0	0	0	1	8	0	1	0	9	6	0	4	0	10	0	0	6	0	6	26
04:45 PM	0	0	0	0	0	6	0	2	0	8	3	0	13	0	16	3	0	7	0	10	34
Total	1	0	2	0	3	25	0	3	0	28	17	0	30	0	47	3	0	29	0	32	110
05:00 PM	0	0	0	0	0	8	0	1	0	9	2	0	5	0	7	1	0	11	0	12	28
05:15 PM	0	0	0	0	0	11	0	0	0	11	10	0	8	0	18	0	0	9	0	9	38
05:30 PM	1	0	1	0	2	7	0	0	0	7	10	0	6	0	16	3	0	6	0	9	34
05:45 PM	1	0	1	0	2	0	0	1	0	1	8	0	4	0	12	0	0	16	0	16	31
Total	2	0	2	0	4	26	0	2	0	28	30	0	23	0	53	4	0	42	0	46	131
06:00 PM	0	0	1	0	1	4	0	1	0	5	8	0	5	1	14	1	0	14	0	15	35
06:15 PM	1	0	0	0	1	5	0	0	0	5	6	0	1	0	7	2	0	5	0	7	20
06:30 PM	0	0	1	0	1	6	0	0	0	6	8	0	3	0	11	0	0	5	0	5	23
06:45 PM	1	0	1	0	2	1	0	1	0	2	2	0	1	0	3	0	0	5	0	5	12
Total	2	0	3	0	5	16	0	2	0	18	24	0	10	1	35	3	0	29	0	32	90
Grand Total	9	0	15	0	24	103	0	14	0	117	145	0	104	1	250	11	0	137	0	148	539
Apprch %	37.5	0	62.5	0		88	0	12	0		58	0	41.6	0.4		7.4	0	92.6	0		
Total %	1.7	0	2.8	0	4.5	19.1	0	2.6	0	21.7	26.9	0	19.3	0.2	46.4	2	0	25.4	0	27.5	

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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

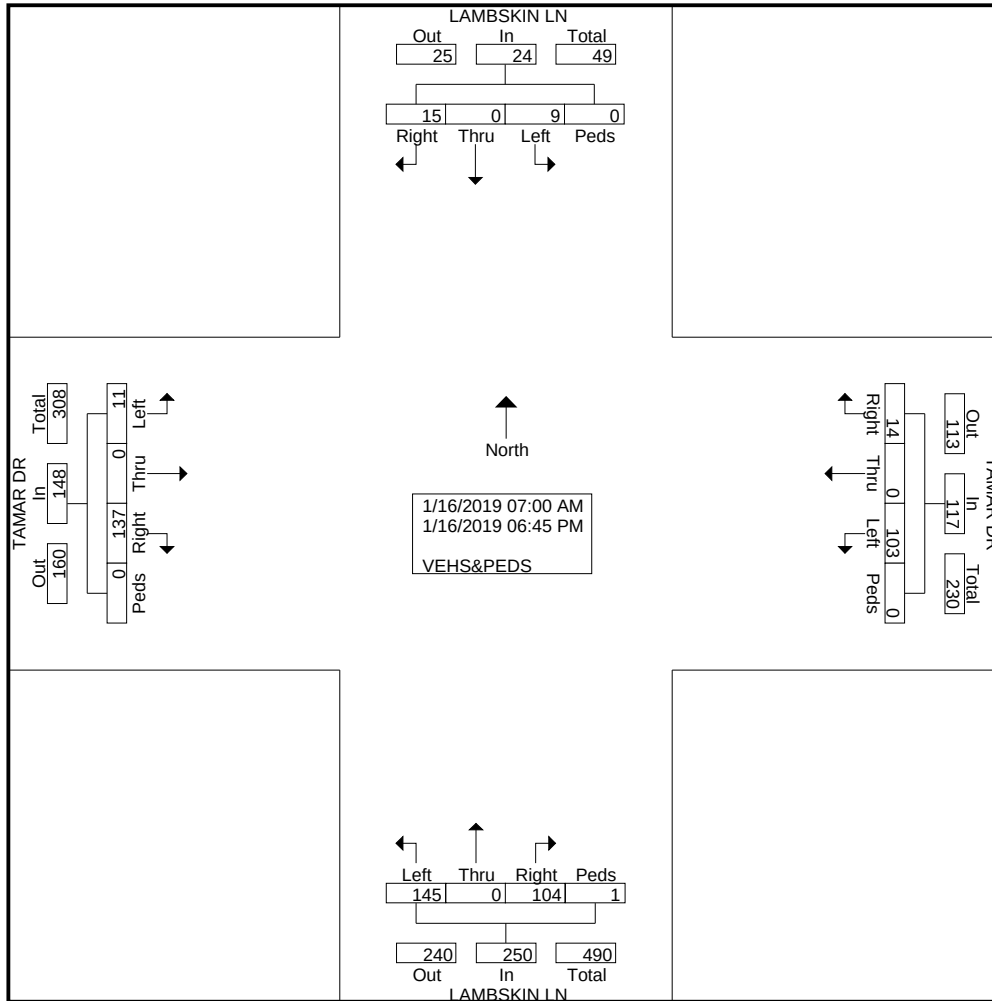
443-741-3500

File Name : Tamar dr at Lambskin Ln

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

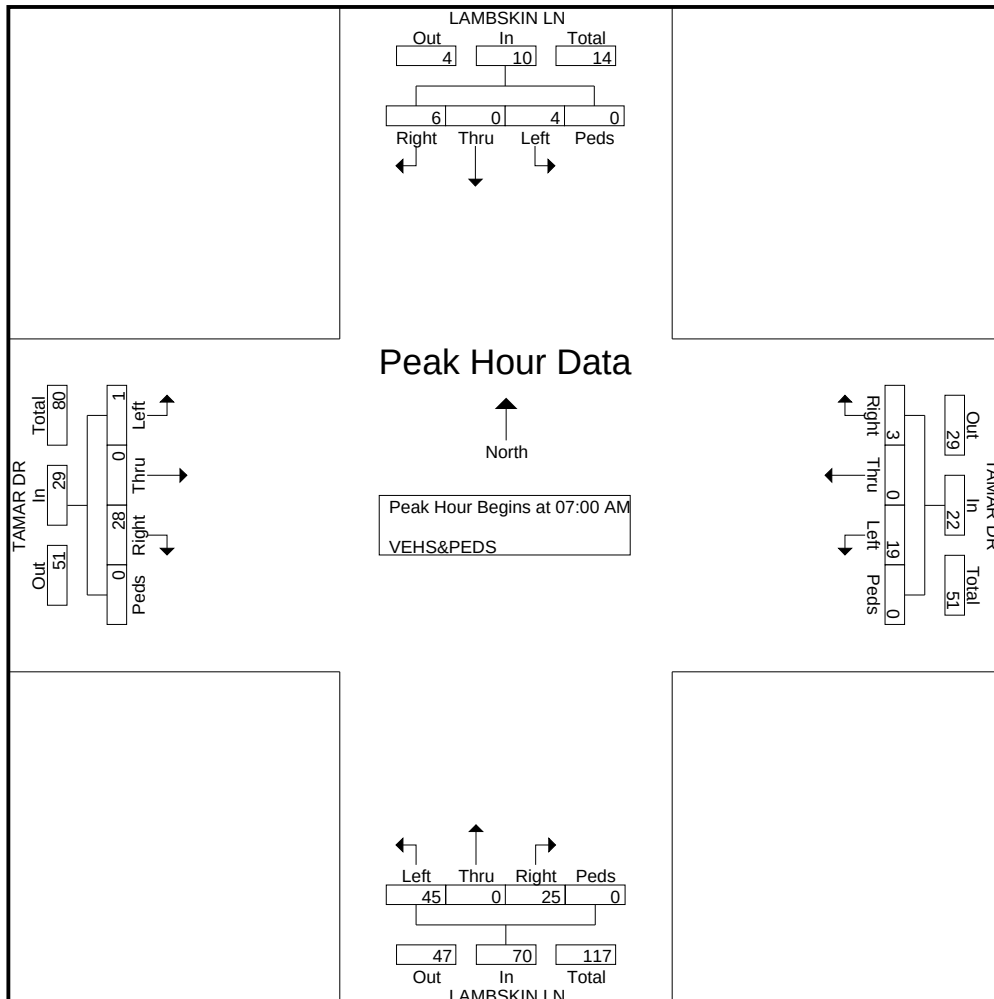
File Name : Tamar dr at Lambskin Ln

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	LAMBSKIN LN From North					TAMAR DR From East					LAMBSKIN LN From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	2	0	0	0	2	1	0	0	0	1	7	0	8	0	15	0	0	8	0	8	26
07:15 AM	2	0	0	0	2	8	0	0	0	8	8	0	6	0	14	0	0	5	0	5	29
07:30 AM	0	0	6	0	6	4	0	3	0	7	13	0	6	0	19	0	0	8	0	8	40
07:45 AM	0	0	0	0	0	6	0	0	0	6	17	0	5	0	22	1	0	7	0	8	36
Total Volume	4	0	6	0	10	19	0	3	0	22	45	0	25	0	70	1	0	28	0	29	131
% App. Total	40	0	60	0		86.4	0	13.6	0		64.3	0	35.7	0		3.4	0	96.6	0		
PHF	.500	.000	.250	.000	.417	.594	.000	.250	.000	.688	.662	.000	.781	.000	.795	.250	.000	.875	.000	.906	.819



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443-741-3500

File Name : Tamar dr at Lambskin Ln

Site Code : 00000000

Start Date : 1/16/2019

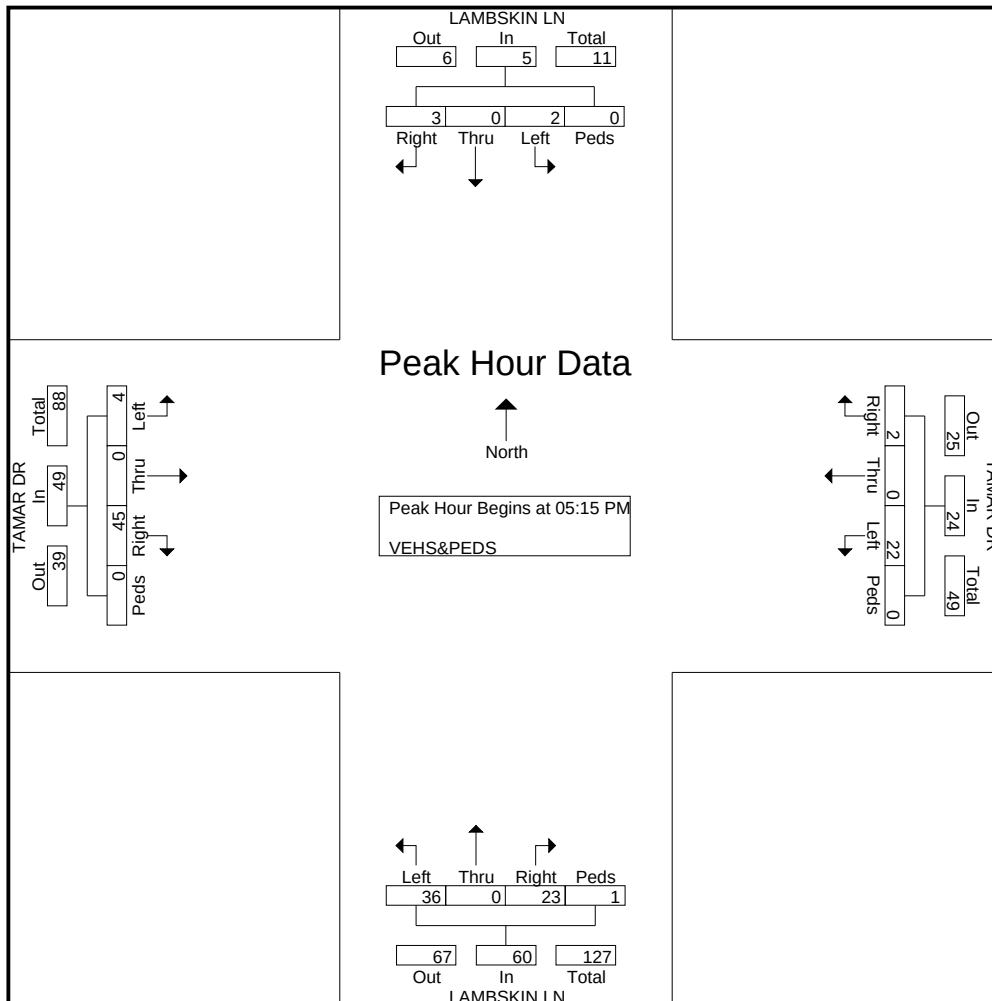
Page No : 4

	LAMBSKIN LN From North					TAMAR DR From East					LAMBSKIN LN From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	0	0	0	0	0	11	0	0	0	11	10	0	8	0	18	0	0	9	0	9	38
05:30 PM	1	0	1	0	2	7	0	0	0	7	10	0	6	0	16	3	0	6	0	9	34
05:45 PM	1	0	1	0	2	0	0	1	0	1	8	0	4	0	12	0	0	16	0	16	31
06:00 PM	0	0	1	0	1	4	0	1	0	5	8	0	5	1	14	1	0	14	0	15	35
Total Volume	2	0	3	0	5	22	0	2	0	24	36	0	23	1	60	4	0	45	0	49	138
% App. Total	40	0	60	0		91.7	0	8.3	0		60	0	38.3	1.7		8.2	0	91.8	0		
PHF	.500	.000	.750	.000	.625	.500	.000	.500	.000	.545	.900	.000	.719	.250	.833	.333	.000	.703	.000	.766	.908



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046
443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar dr at Lambskin Ln
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- U TURNS

	LAMBSKIN LN From North					TAMAR DR From East					LAMBSKIN LN From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***																					
04:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	2
Apprch %	0	0	0	0		100	0	0	0		0	0	0	0		100	0	0	0		
Total %	0	0	0	0	0	50	0	0	0	50	0	0	0	0	0	50	0	0	0	50	

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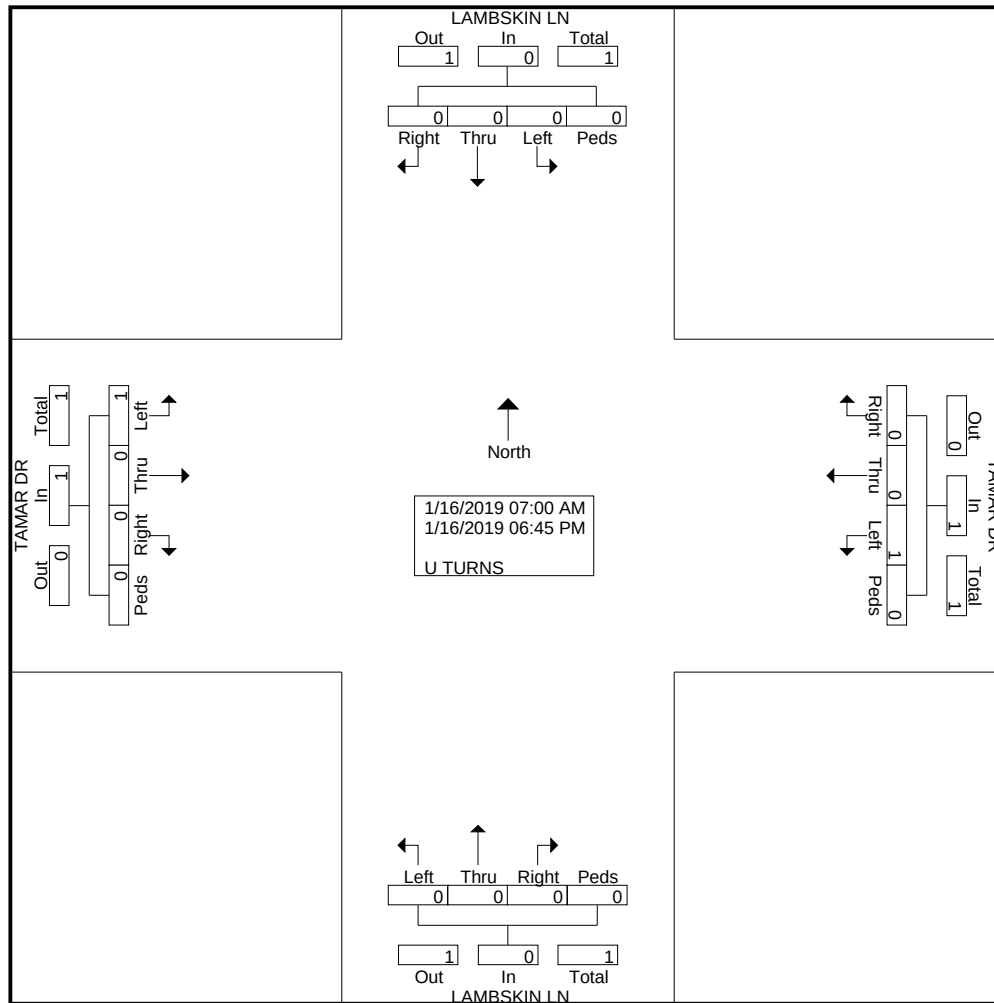
443-741-3500

File Name : Tamar dr at Lambskin Ln

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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Columbia, MD, 21046
443-741-3500

Weather: Clear
Counted By: Habib
Town:
County: Howard

File Name : Tamar Dr at Blue Pool
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	BLUE POOL From North					TAMAR DR From East					BLUE POOL From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
05:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
Apprch %	0	0	0	100		0	0	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	0	33.3	33.3	0	0	0	0	0	0	0	0	0	0	0	66.7	0	0	66.7	

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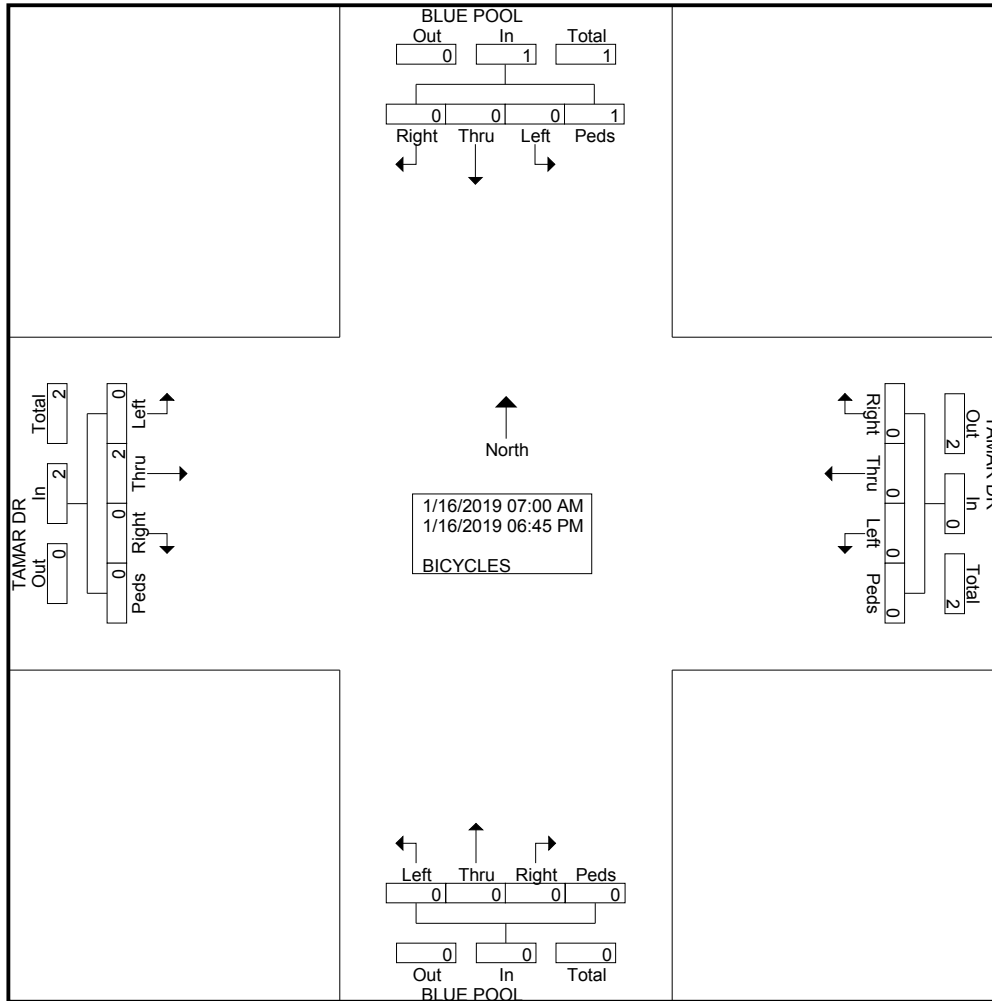
443-741-3500

File Name : Tamar Dr at Blue Pool

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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443-741-3500

Weather: Clear
Counted By: Habib
Town:
County: Howard

File Name : Tamar Dr at Blue Pool
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

Start Time	BLUE POOL From North					TAMAR DR From East					BLUE POOL From South					TAMAR DR From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	2	0	4	0	6	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	8
07:15 AM	1	0	3	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5
07:30 AM	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5
07:45 AM	2	0	2	1	5	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	7
Total	7	0	11	1	19	0	0	3	0	3	0	0	0	0	0	3	0	0	0	3	25
08:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
08:30 AM	1	0	3	0	4	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	6
08:45 AM	2	0	5	0	7	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	8
Total	3	0	13	0	16	0	0	3	0	3	0	0	0	0	0	1	0	0	0	1	20
*** BREAK ***																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
04:15 PM	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	3	0	0	0	3	6
04:30 PM	1	0	1	0	2	0	0	2	0	2	0	0	0	0	0	3	0	0	0	3	7
04:45 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	3
Total	1	0	3	0	4	0	0	5	0	5	0	0	0	0	0	8	0	0	0	8	17
05:00 PM	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	3	0	0	0	3	5
05:15 PM	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	3
05:30 PM	1	0	4	0	5	0	0	1	0	1	0	0	0	0	0	3	0	0	0	3	9
05:45 PM	2	0	2	0	4	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	7
Total	5	0	6	0	11	0	0	5	0	5	0	0	0	0	0	8	0	0	0	8	24
06:00 PM	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	2	0	0	0	2	5
06:15 PM	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0	3	0	0	0	3	7
06:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	2
06:45 PM	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	6
Total	2	0	6	0	8	0	0	4	0	4	0	0	0	0	0	8	0	0	0	8	20
Grand Total	18	0	39	1	58	0	0	20	0	20	0	0	0	0	0	28	0	0	0	28	106
Apprch %	31	0	67.2	1.7		0	0	100	0		0	0	0	0		100	0	0	0		
Total %	17	0	36.8	0.9	54.7	0	0	18.9	0	18.9	0	0	0	0	0	26.4	0	0	0	26.4	

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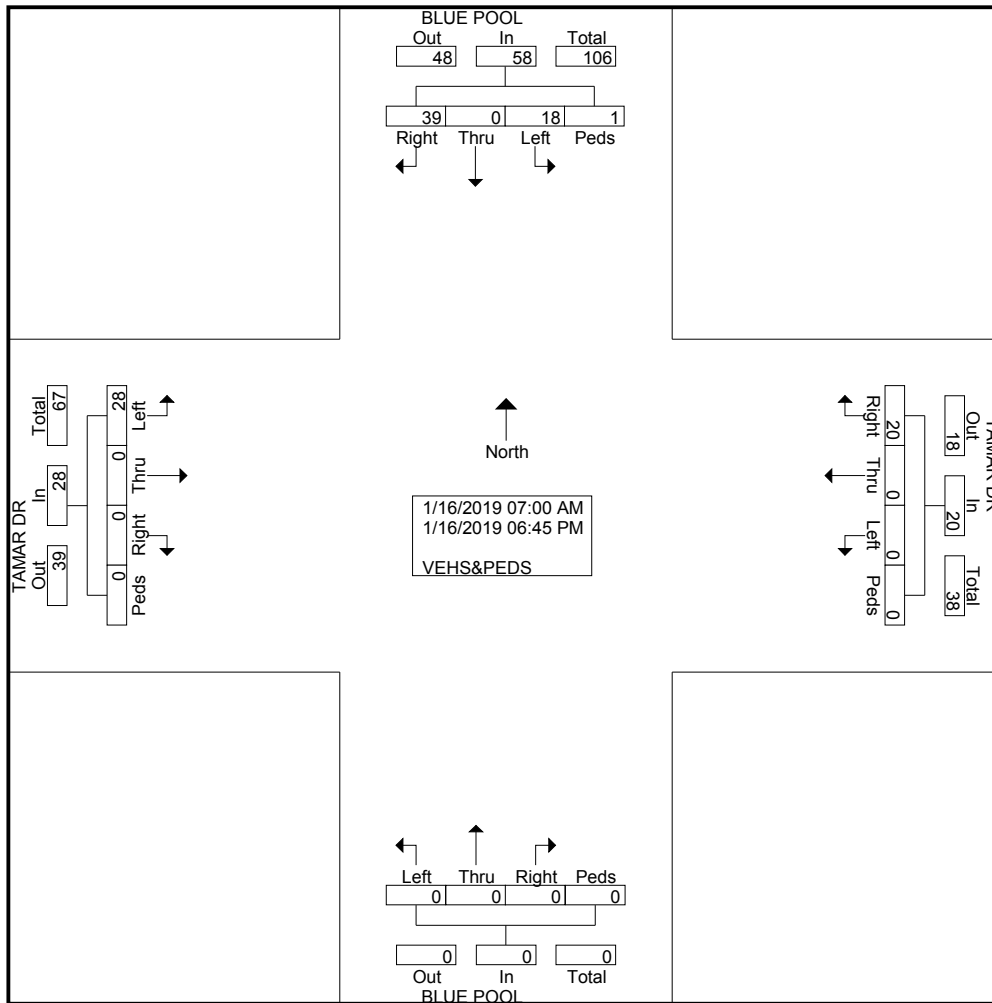
443-741-3500

File Name : Tamar Dr at Blue Pool

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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Columbia, MD, 21046

443-741-3500

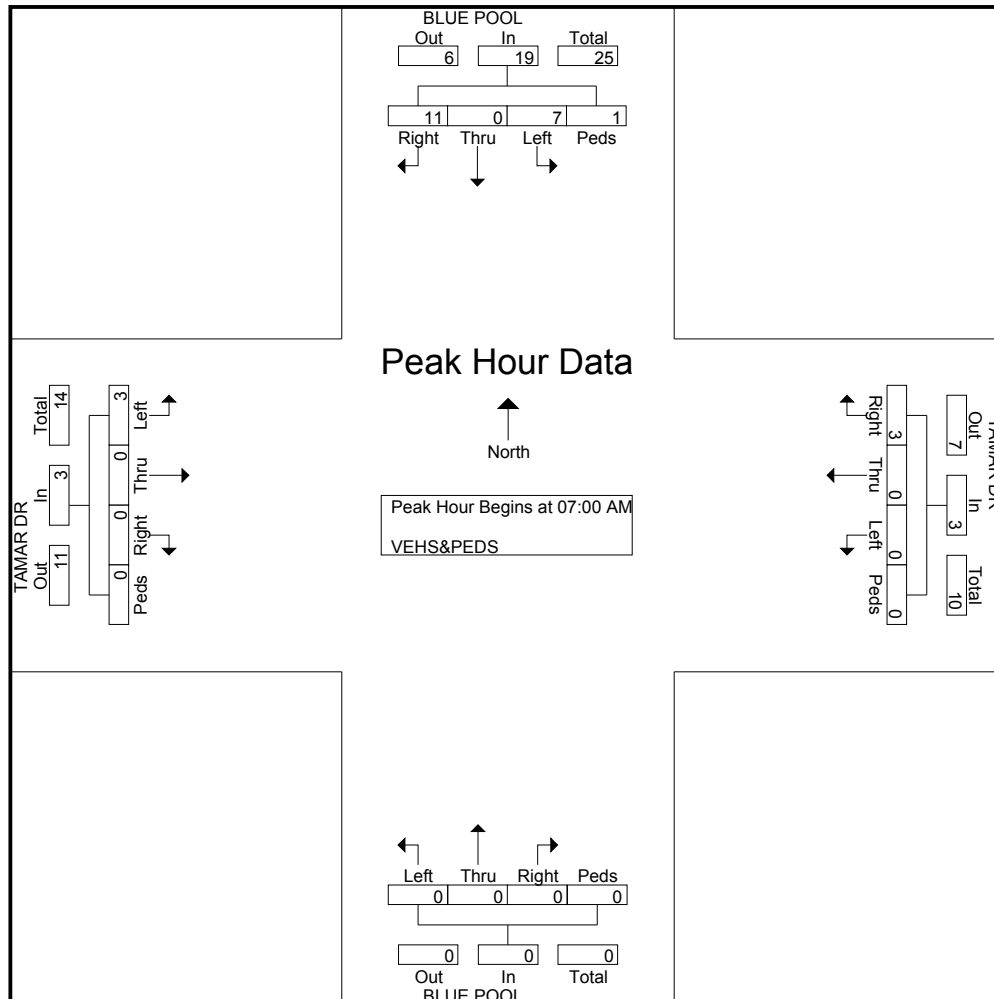
File Name : Tamar Dr at Blue Pool

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	BLUE POOL From North					TAMAR DR From East					BLUE POOL From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	2	0	4	0	6	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	8
07:15 AM	1	0	3	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5
07:30 AM	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5
07:45 AM	2	0	2	1	5	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	7
Total Volume	7	0	11	1	19	0	0	3	0	3	0	0	0	0	0	3	0	0	0	3	25
% App. Total	36.8	0	57.9	5.3		0	0	100	0		0	0	0	0		100	0	0	0		
PHF	.875	.000	.688	.250	.792	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.750	.000	.000	.000	.750	.781



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443-741-3500

File Name : Tamar Dr at Blue Pool

Site Code : 00000000

Start Date : 1/16/2019

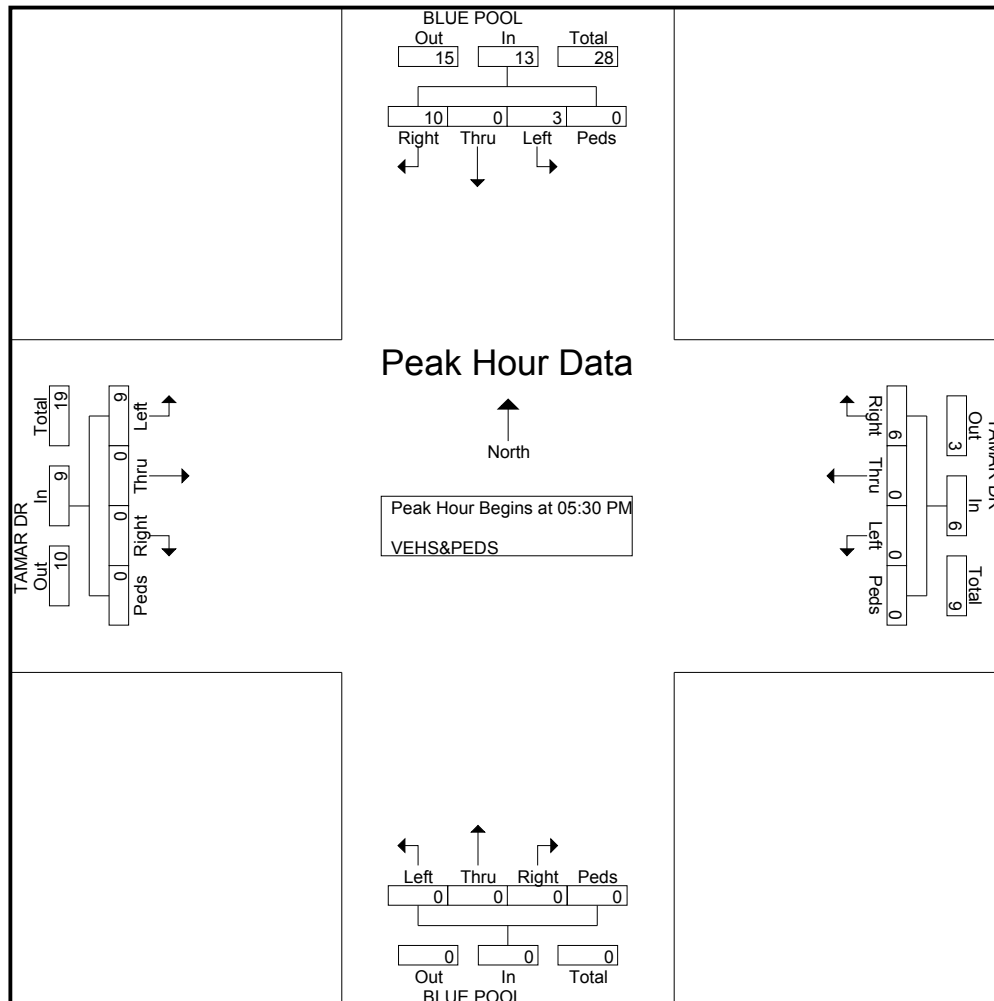
Page No : 4

	BLUE POOL From North					TAMAR DR From East					BLUE POOL From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:30 PM

05:30 PM	1	0	4	0	5	0	0	1	0	1	0	0	0	0	0	3	0	0	0	3	9
05:45 PM	2	0	2	0	4	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	7
06:00 PM	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	2	0	0	0	2	5
06:15 PM	0	0	3	0	3	0	0	1	0	1	0	0	0	0	0	3	0	0	0	3	7
Total Volume	3	0	10	0	13	0	0	6	0	6	0	0	0	0	0	9	0	0	0	9	28
% App. Total	23.1	0	76.9	0		0	0	100	0		0	0	0	0		100	0	0	0		
PHF	.375	.000	.625	.000	.650	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.750	.000	.000	.000	.750	.778



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Phelps Luck Dr
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

Start Time	PHELPS LUCK DR From North					TAMAR DR From East					From South					TAMAR DR From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	7	0	25	0	32	0	0	9	0	9	0	0	0	0	0	21	0	0	0	21	62
07:15 AM	13	0	45	0	58	0	0	3	0	3	0	0	0	0	0	17	0	0	0	17	78
07:30 AM	8	0	35	3	46	0	0	3	0	3	0	0	0	0	0	16	0	0	0	16	65
07:45 AM	7	0	45	1	53	0	0	8	0	8	0	0	0	0	0	21	0	0	0	21	82
Total	35	0	150	4	189	0	0	23	0	23	0	0	0	0	0	75	0	0	0	75	287
08:00 AM	6	0	45	0	51	0	0	5	0	5	0	0	0	0	0	21	0	0	0	21	77
08:15 AM	11	0	50	0	61	0	0	3	0	3	0	0	0	0	0	21	0	0	0	21	85
08:30 AM	7	0	65	0	72	0	0	8	0	8	0	0	0	0	0	39	0	0	0	39	119
08:45 AM	3	0	95	0	98	0	0	10	0	10	0	0	0	0	0	25	0	0	0	25	133
Total	27	0	255	0	282	0	0	26	0	26	0	0	0	0	0	106	0	0	0	106	414
*** BREAK ***																					
04:00 PM	9	0	35	0	44	0	0	22	0	22	0	0	0	0	0	43	0	0	0	43	109
04:15 PM	8	0	37	0	45	0	0	18	0	18	0	0	0	0	0	67	0	0	0	67	130
04:30 PM	15	0	49	0	64	0	0	18	0	18	0	0	0	0	0	49	0	0	0	49	131
04:45 PM	8	0	35	0	43	0	0	22	0	22	0	0	0	0	0	74	0	0	0	74	139
Total	40	0	156	0	196	0	0	80	0	80	0	0	0	0	0	233	0	0	0	233	509
05:00 PM	16	0	52	0	68	0	0	24	0	24	0	0	0	0	0	60	0	0	0	60	152
05:15 PM	10	0	49	0	59	0	0	24	0	24	0	0	0	0	0	71	0	0	0	71	154
05:30 PM	17	0	60	0	77	0	0	26	0	26	0	0	0	0	0	65	0	0	0	65	168
05:45 PM	14	0	36	0	50	0	0	16	0	16	0	0	0	0	0	59	0	0	0	59	125
Total	57	0	197	0	254	0	0	90	0	90	0	0	0	0	0	255	0	0	0	255	599
06:00 PM	14	0	41	0	55	0	0	14	0	14	0	0	0	0	0	38	0	0	0	38	107
06:15 PM	14	0	48	0	62	0	0	15	0	15	0	0	0	0	0	39	0	0	0	39	116
06:30 PM	11	0	38	0	49	0	0	11	0	11	0	0	0	0	0	42	0	0	0	42	102
06:45 PM	6	0	31	0	37	0	0	13	0	13	0	0	0	0	0	39	0	0	0	39	89
Total	45	0	158	0	203	0	0	53	0	53	0	0	0	0	0	158	0	0	0	158	414
Grand Total	204	0	916	4	1124	0	0	272	0	272	0	0	0	0	0	827	0	0	0	827	2223
Apprch %	18.1	0	81.5	0.4		0	0	100	0		0	0	0	0		100	0	0	0		
Total %	9.2	0	41.2	0.2	50.6	0	0	12.2	0	12.2	0	0	0	0	0	37.2	0	0	0	37.2	

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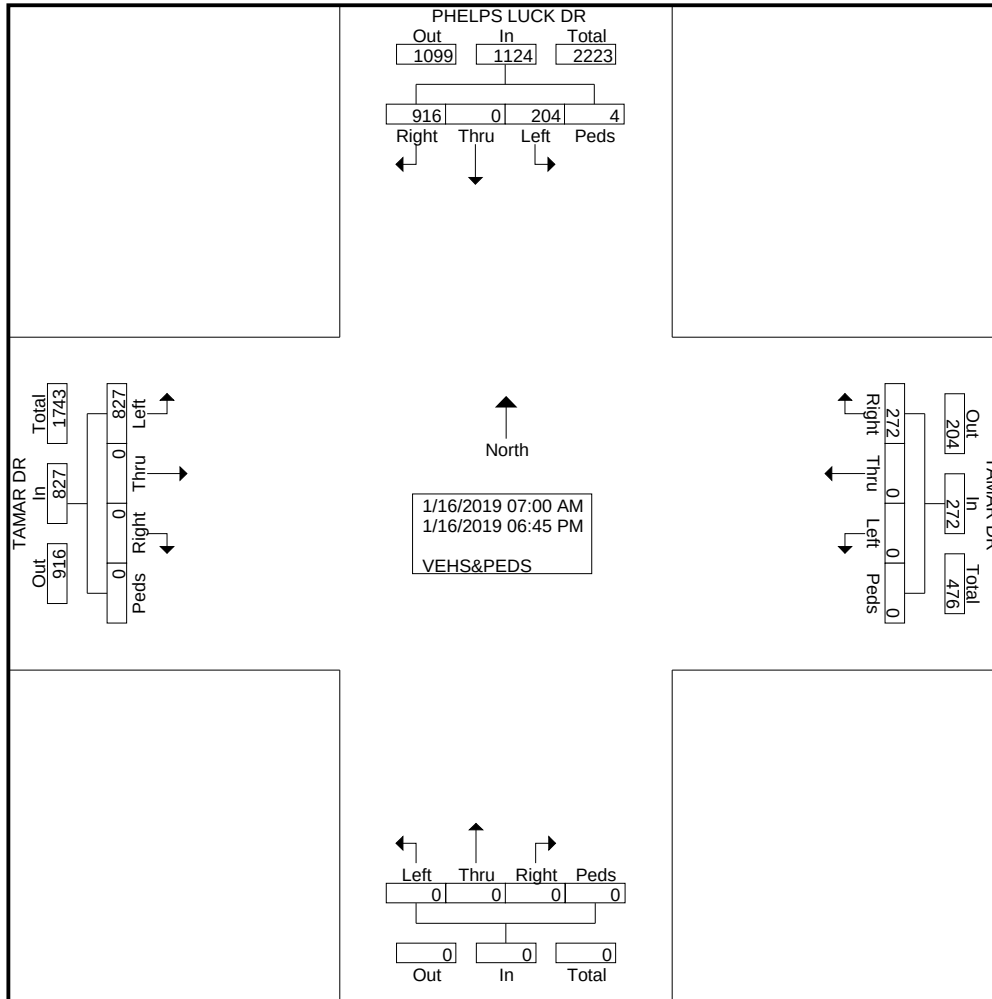
443-741-3500

File Name : Tamar Dr at Phelps Luck Dr

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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443-741-3500

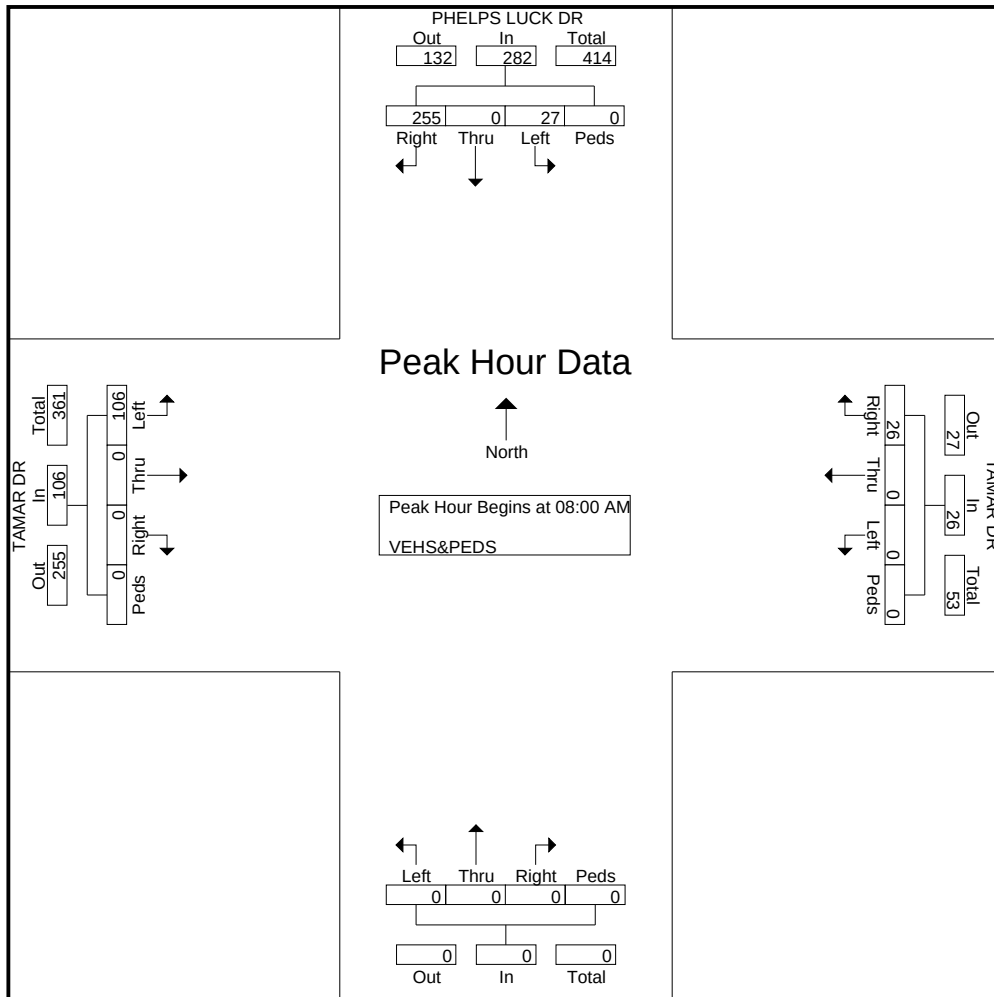
File Name : Tamar Dr at Phelps Luck Dr

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	PHELPS LUCK DR From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	6	0	45	0	51	0	0	5	0	5	0	0	0	0	0	21	0	0	0	21	77
08:15 AM	11	0	50	0	61	0	0	3	0	3	0	0	0	0	0	21	0	0	0	21	85
08:30 AM	7	0	65	0	72	0	0	8	0	8	0	0	0	0	0	39	0	0	0	39	119
08:45 AM	3	0	95	0	98	0	0	10	0	10	0	0	0	0	0	25	0	0	0	25	133
Total Volume	27	0	255	0	282	0	0	26	0	26	0	0	0	0	0	106	0	0	0	106	414
% App. Total	9.6	0	90.4	0		0	0	100	0		0	0	0	0		100	0	0	0		
PHF	.614	.000	.671	.000	.719	.000	.000	.650	.000	.650	.000	.000	.000	.000	.000	.679	.000	.000	.000	.679	.778



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Columbia, MD, 21046

443-741-3500

File Name : Tamar Dr at Phelps Luck Dr

Site Code : 00000000

Start Date : 1/16/2019

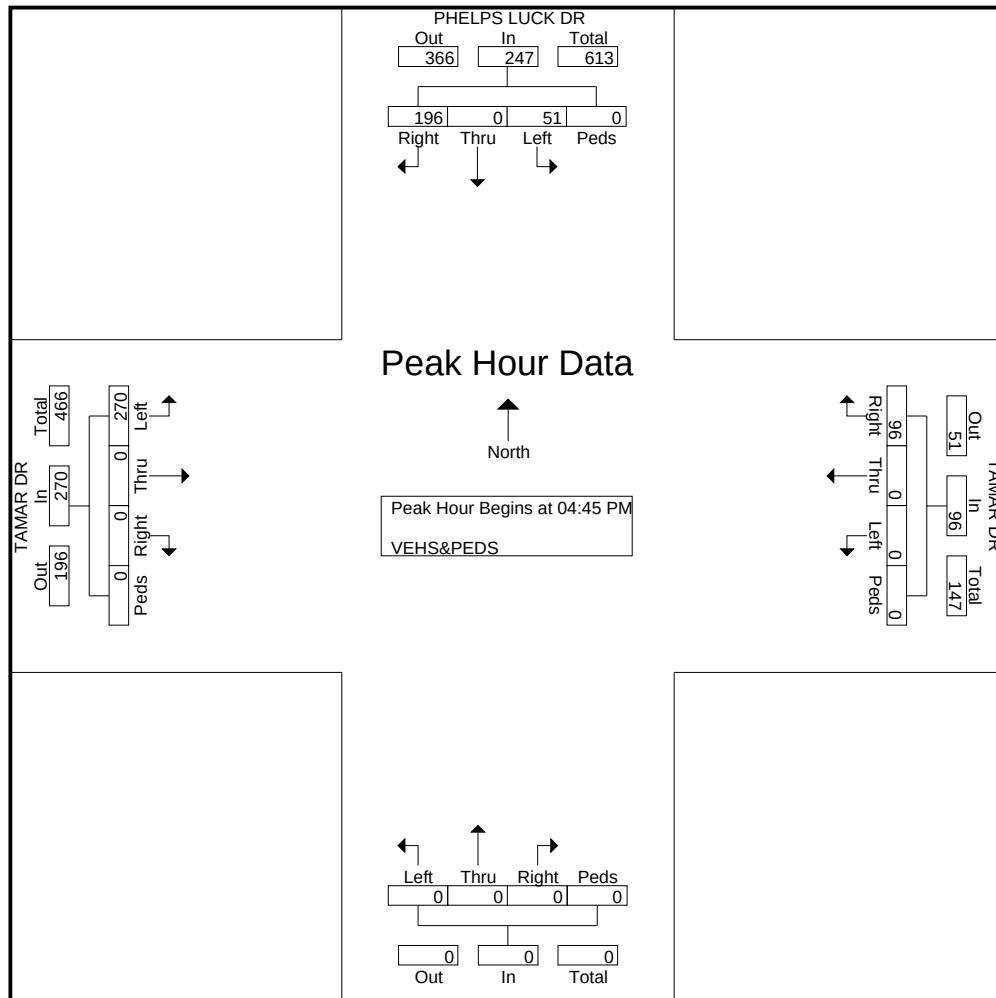
Page No : 4

	PHELPS LUCK DR From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	8	0	35	0	43	0	0	22	0	22	0	0	0	0	0	74	0	0	0	74	139
05:00 PM	16	0	52	0	68	0	0	24	0	24	0	0	0	0	0	60	0	0	0	60	152
05:15 PM	10	0	49	0	59	0	0	24	0	24	0	0	0	0	0	71	0	0	0	71	154
05:30 PM	17	0	60	0	77	0	0	26	0	26	0	0	0	0	0	65	0	0	0	65	168
Total Volume	51	0	196	0	247	0	0	96	0	96	0	0	0	0	0	270	0	0	0	270	613
% App. Total	20.6	0	79.4	0		0	0	100	0		0	0	0	0		100	0	0	0		
PHF	.750	.000	.817	.000	.802	.000	.000	.923	.000	.923	.000	.000	.000	.000	.000	.912	.000	.000	.000	.912	.912



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046
443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Phelps Luck Dr
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	PHELPS LUCK DR From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
05:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
*** BREAK ***																					
Grand Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	4
Apprch %	0	0	100	0		0	0	0	0		0	0	0	0		66.7	33.3	0	0		
Total %	0	0	25	0	25	0	0	0	0	0	0	0	0	0	0	50	25	0	0	75	

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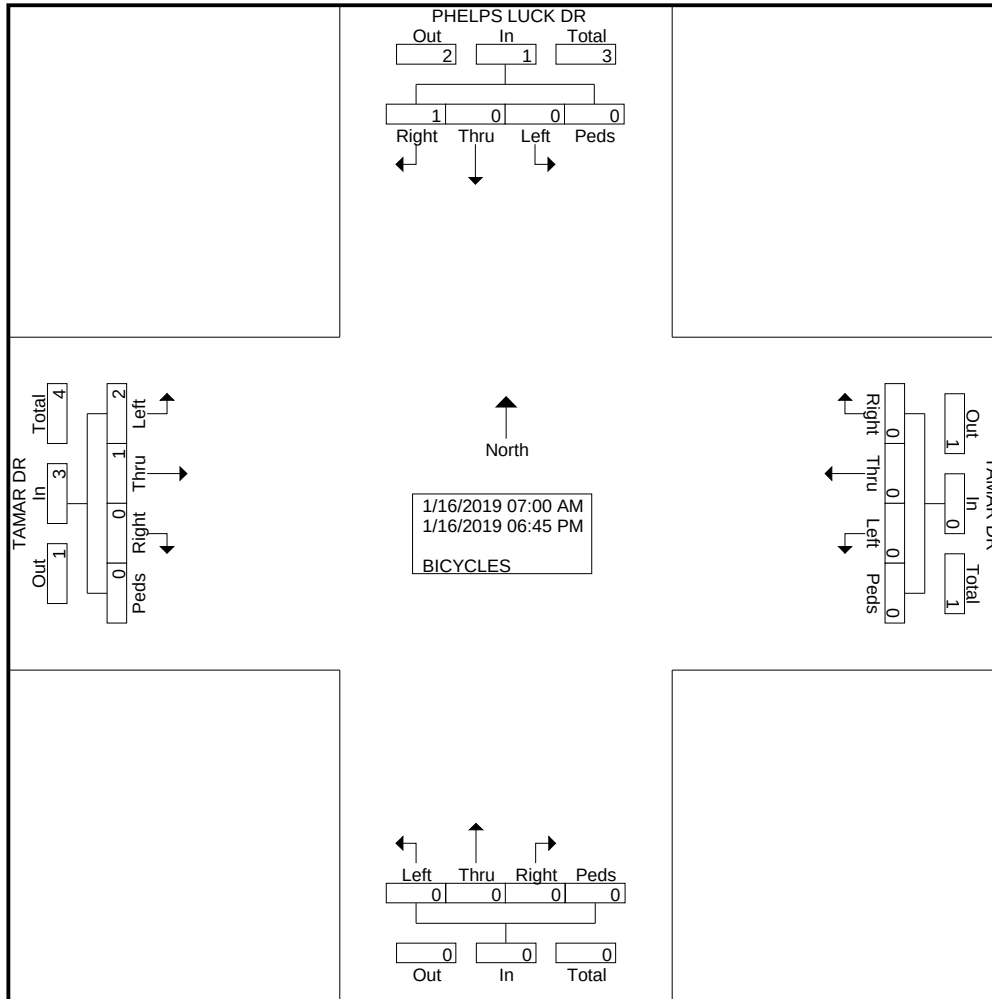
443-741-3500

File Name : Tamar Dr at Phelps Luck Dr

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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7055 Samuel Morris Dr, Suite 100
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443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar Dr at Sweet Wind Pl
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS(TURNS ONLY)

	SWEET WIND PL From North					TAMAR DR From East					BUSINESS ENT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	3	0	3	0	6	0	0	0	0	0	2	0	4	1	7	1	0	1	0	2	15
07:15 AM	2	0	3	0	5	1	0	1	0	2	0	0	1	0	1	1	0	1	0	2	10
07:30 AM	2	0	5	1	8	0	0	2	0	2	5	0	2	1	8	2	0	1	0	3	21
07:45 AM	2	0	5	0	7	1	0	0	0	1	1	0	0	1	2	2	0	1	0	3	13
Total	9	0	16	1	26	2	0	3	0	5	8	0	7	3	18	6	0	4	0	10	59
08:00 AM	2	0	6	0	8	4	0	3	1	8	1	0	0	0	1	0	0	0	0	0	17
08:15 AM	1	0	8	1	10	1	0	2	0	3	2	0	4	2	8	4	0	3	0	7	28
08:30 AM	7	0	8	1	16	0	0	3	0	3	4	0	0	6	10	3	0	2	0	5	34
08:45 AM	1	0	6	2	9	0	0	1	0	1	2	0	3	2	7	3	0	3	0	6	23
Total	11	0	28	4	43	5	0	9	1	15	9	0	7	10	26	10	0	8	0	18	102
*** BREAK ***																					
04:00 PM	5	0	5	0	10	4	0	4	0	8	4	0	4	0	8	7	0	6	0	13	39
04:15 PM	0	0	2	0	2	3	0	3	0	6	1	0	2	1	4	2	0	0	0	2	14
04:30 PM	3	0	6	0	9	3	0	2	0	5	5	0	2	1	8	2	0	2	0	4	26
04:45 PM	0	0	1	1	2	0	0	3	0	3	1	0	2	0	3	3	0	3	0	6	14
Total	8	0	14	1	23	10	0	12	0	22	11	0	10	2	23	14	0	11	0	25	93
05:00 PM	1	0	5	0	6	2	0	2	0	4	2	0	4	0	6	6	0	4	0	10	26
05:15 PM	6	0	6	1	13	0	0	6	0	6	3	0	7	1	11	7	0	3	0	10	40
05:30 PM	5	0	4	0	9	4	0	5	0	9	0	0	2	1	3	8	0	1	0	9	30
05:45 PM	2	0	3	0	5	4	0	4	0	8	1	0	1	0	2	1	0	3	0	4	19
Total	14	0	18	1	33	10	0	17	0	27	6	0	14	2	22	22	0	11	0	33	115
06:00 PM	2	0	2	0	4	1	0	4	0	5	0	0	0	0	0	2	0	2	0	4	13
06:15 PM	4	0	2	0	6	4	0	1	0	5	1	0	1	0	2	3	0	2	0	5	18
06:30 PM	1	0	3	0	4	0	0	3	0	3	1	0	1	0	2	1	0	1	0	2	11
06:45 PM	2	0	3	0	5	2	0	2	0	4	3	0	1	0	4	6	1	4	0	11	24
Total	9	0	10	0	19	7	0	10	0	17	5	0	3	0	8	12	1	9	0	22	66
Grand Total	51	0	86	7	144	34	0	51	1	86	39	0	41	17	97	64	1	43	0	108	435
Apprch %	35.4	0	59.7	4.9		39.5	0	59.3	1.2		40.2	0	42.3	17.5		59.3	0.9	39.8	0		
Total %	11.7	0	19.8	1.6	33.1	7.8	0	11.7	0.2	19.8	9	0	9.4	3.9	22.3	14.7	0.2	9.9	0	24.8	

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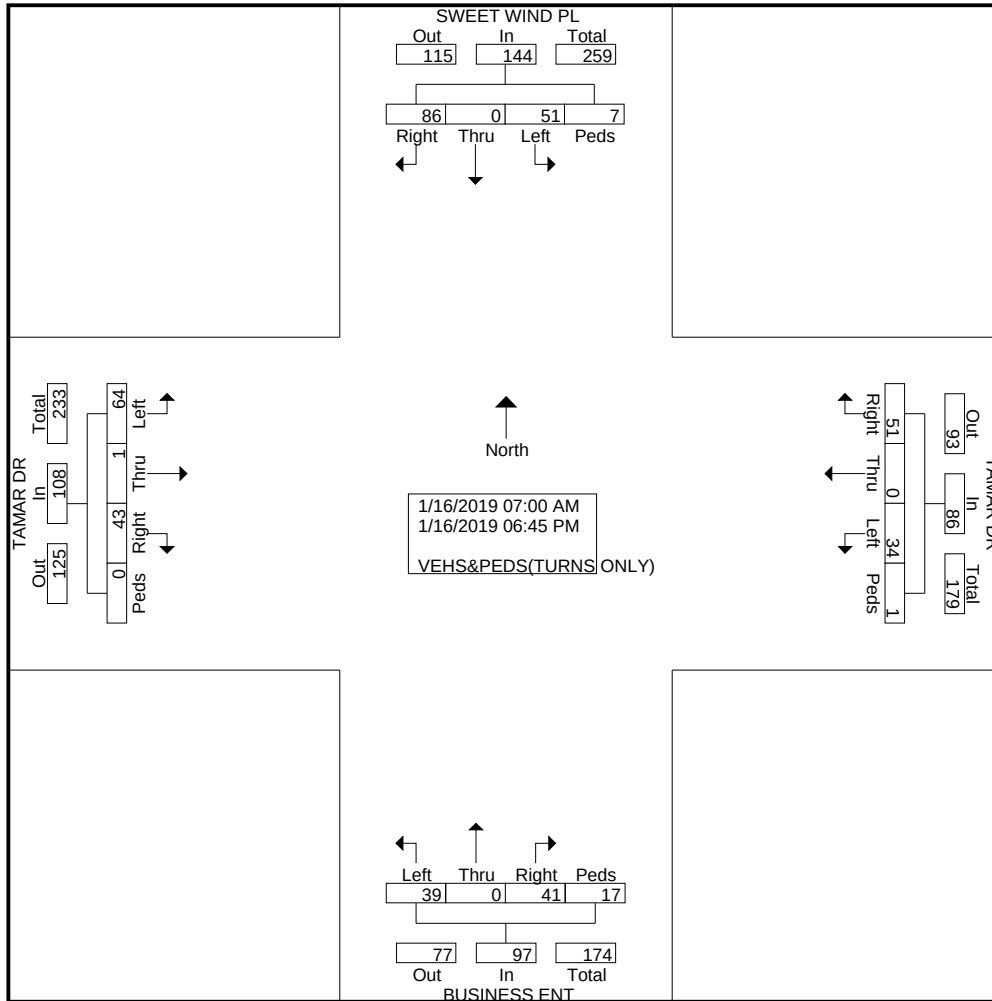
443-741-3500

File Name : Tamar Dr at Sweet Wind Pl

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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Columbia, MD, 21046

443-741-3500

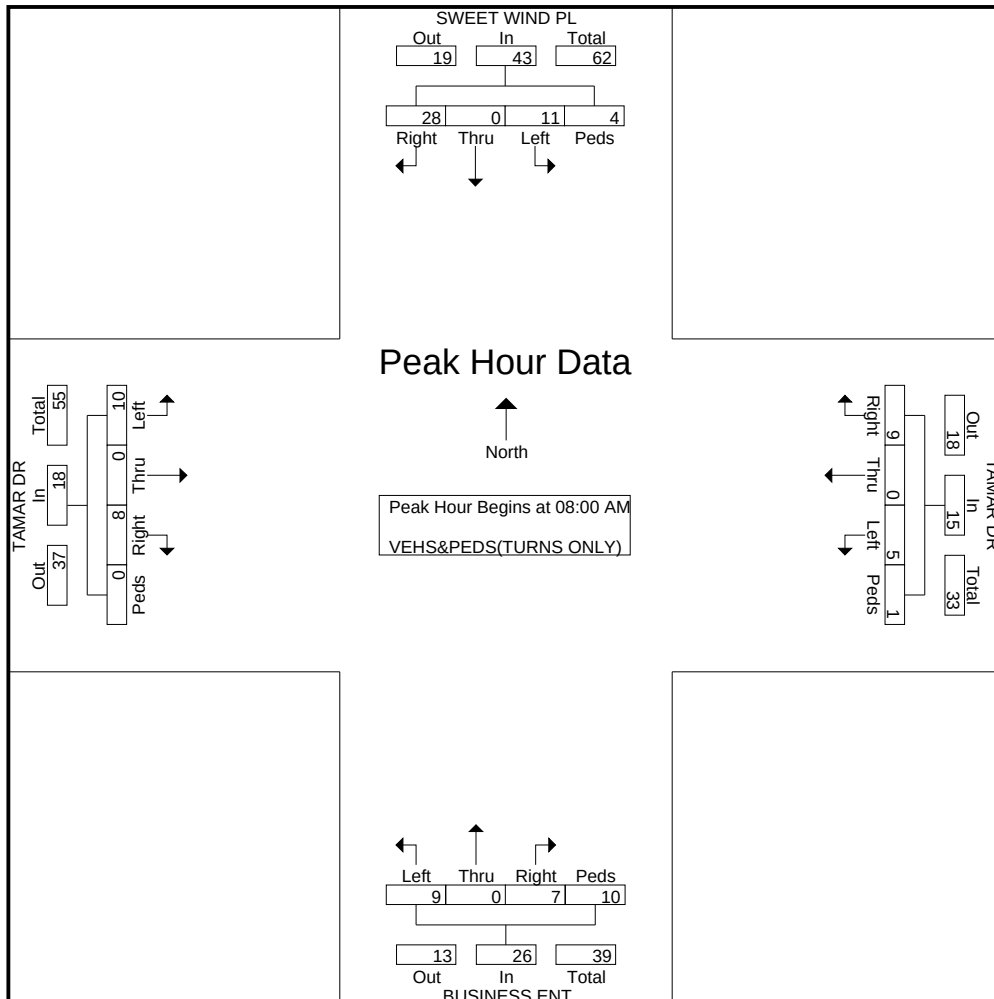
File Name : Tamar Dr at Sweet Wind Pl

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	SWEET WIND PL From North					TAMAR DR From East					BUSINESS ENT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	0	6	0	8	4	0	3	1	8	1	0	0	0	1	0	0	0	0	0	17
08:15 AM	1	0	8	1	10	1	0	2	0	3	2	0	4	2	8	4	0	3	0	7	28
08:30 AM	7	0	8	1	16	0	0	3	0	3	4	0	0	6	10	3	0	2	0	5	34
08:45 AM	1	0	6	2	9	0	0	1	0	1	2	0	3	2	7	3	0	3	0	6	23
Total Volume	11	0	28	4	43	5	0	9	1	15	9	0	7	10	26	10	0	8	0	18	102
% App. Total	25.6	0	65.1	9.3		33.3	0	60	6.7		34.6	0	26.9	38.5		55.6	0	44.4	0		
PHF	.393	.000	.875	.500	.672	.313	.000	.750	.250	.469	.563	.000	.438	.417	.650	.625	.000	.667	.000	.643	.750



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443-741-3500

File Name : Tamar Dr at Sweet Wind Pl

Site Code : 00000000

Start Date : 1/16/2019

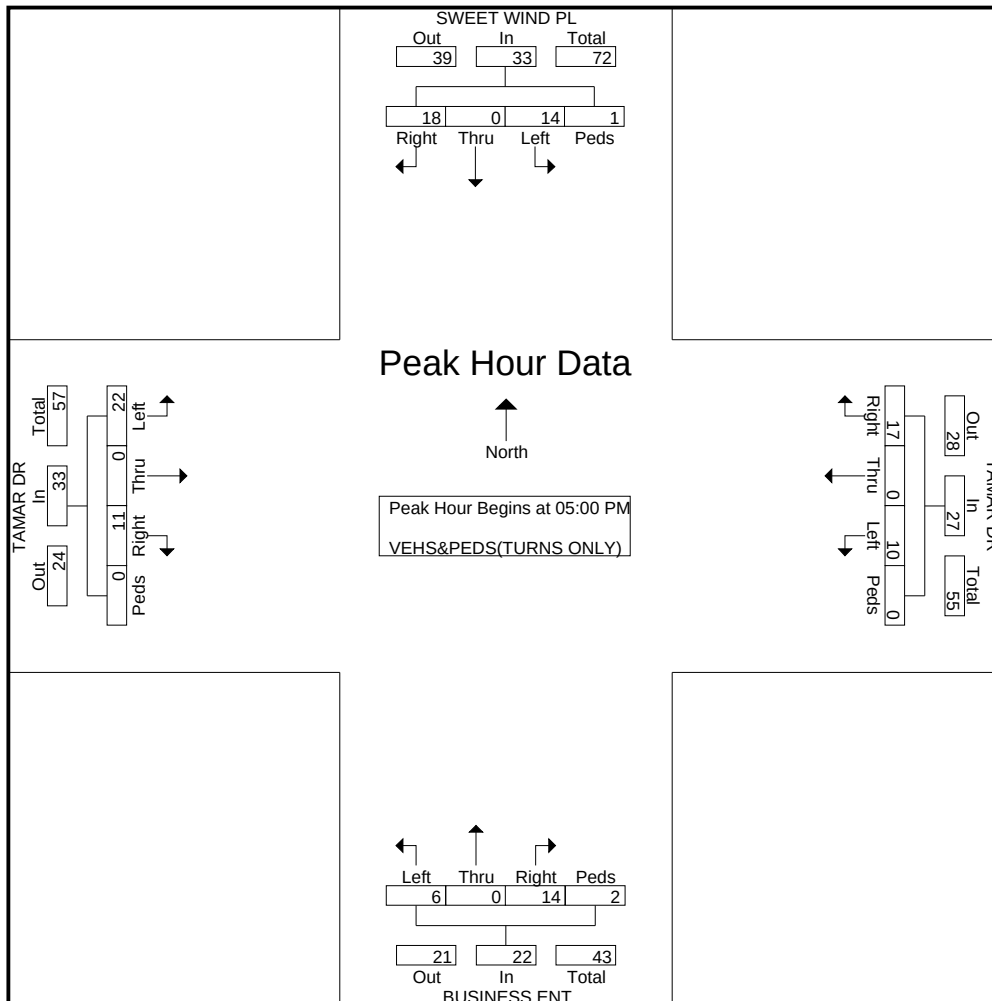
Page No : 4

	SWEET WIND PL From North					TAMAR DR From East					BUSINESS ENT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	1	0	5	0	6	2	0	2	0	4	2	0	4	0	6	6	0	4	0	10	26
05:15 PM	6	0	6	1	13	0	0	6	0	6	3	0	7	1	11	7	0	3	0	10	40
05:30 PM	5	0	4	0	9	4	0	5	0	9	0	0	2	1	3	8	0	1	0	9	30
05:45 PM	2	0	3	0	5	4	0	4	0	8	1	0	1	0	2	1	0	3	0	4	19
Total Volume	14	0	18	1	33	10	0	17	0	27	6	0	14	2	22	22	0	11	0	33	115
% App. Total	42.4	0	54.5	3		37	0	63	0		27.3	0	63.6	9.1		66.7	0	33.3	0		
PHF	.583	.000	.750	.250	.635	.625	.000	.708	.000	.750	.500	.000	.500	.500	.500	.688	.000	.688	.000	.825	.719



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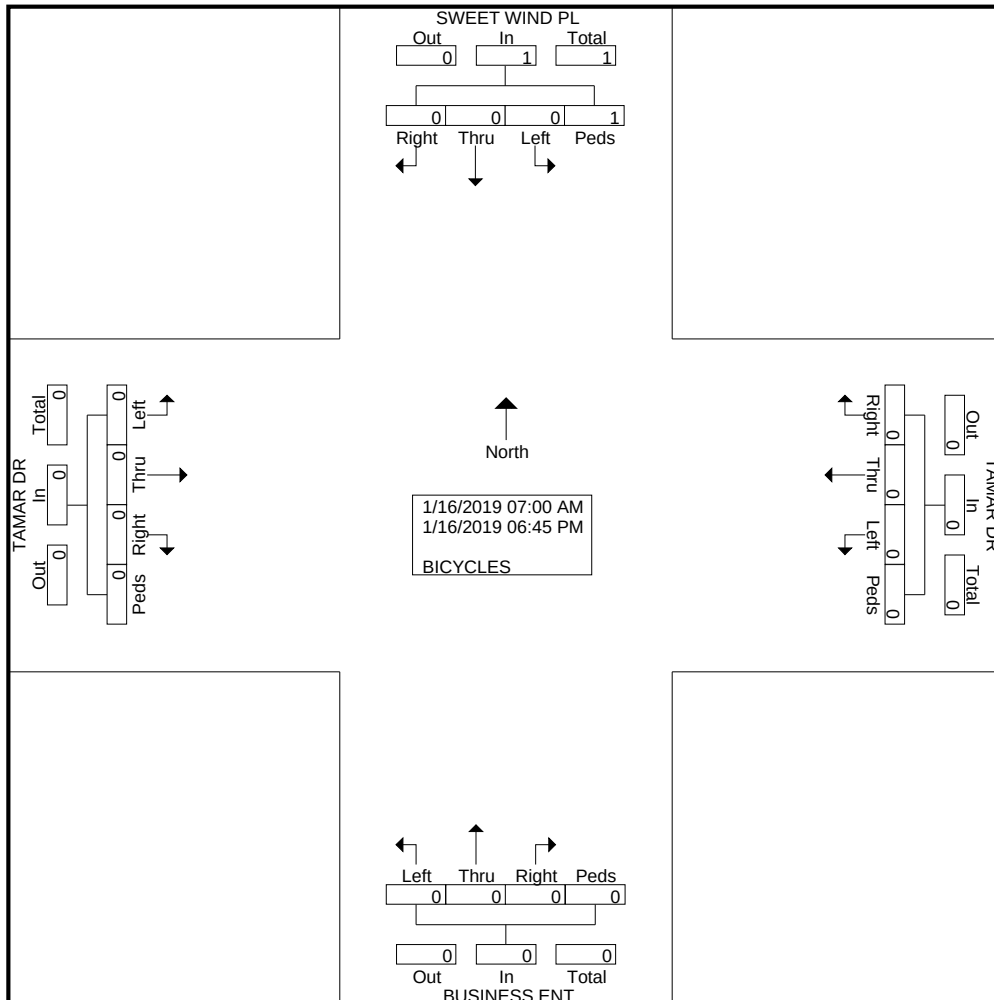
443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar Dr at Sweet Wind Pl
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	SWEET WIND PL From North					TAMAR DR From East					BUSINESS ENT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
05:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	100		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



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Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar Dr at High Tor Hill
Site Code : 00000000
Start Date : 1/18/2019
Page No : 1

Groups Printed- VEHS&PEDS

	HIGH TOR HILL From North					TAMAR DR From East					HIGH TOR HILL From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	21	0	10	1	32	0	63	12	0	75	0	0	0	0	0	2	53	0	0	55	162
07:15 AM	16	0	16	0	32	0	90	10	0	100	0	0	0	0	0	4	67	0	0	71	203
07:30 AM	14	0	11	1	26	0	51	9	0	60	0	0	0	0	0	5	56	0	0	61	147
07:45 AM	18	0	14	0	32	0	76	19	0	95	0	0	0	0	0	1	51	0	0	52	179
Total	69	0	51	2	122	0	280	50	0	330	0	0	0	0	0	12	227	0	0	239	691
08:00 AM	14	0	18	1	33	0	69	12	0	81	0	0	0	0	0	6	42	0	0	48	162
08:15 AM	14	0	10	0	24	0	73	20	0	93	0	0	0	0	0	3	55	0	1	59	176
08:30 AM	17	0	20	1	38	0	105	34	0	139	0	0	0	0	0	5	65	0	0	70	247
08:45 AM	45	0	11	2	58	0	99	25	0	124	0	0	0	0	0	6	51	0	0	57	239
Total	90	0	59	4	153	0	346	91	0	437	0	0	0	0	0	20	213	0	1	234	824
*** BREAK ***																					
04:00 PM	16	0	6	0	22	0	106	26	0	132	0	0	0	0	0	10	92	0	0	102	256
04:15 PM	22	0	10	0	32	0	109	21	0	130	0	0	0	0	0	16	80	0	0	96	258
04:30 PM	21	0	9	0	30	0	117	34	0	151	0	0	0	0	0	10	78	0	0	88	269
04:45 PM	18	0	4	1	23	0	101	27	0	128	0	0	0	0	0	9	91	0	0	100	251
Total	77	0	29	1	107	0	433	108	0	541	0	0	0	0	0	45	341	0	0	386	1034
05:00 PM	28	0	4	0	32	0	123	27	0	150	0	0	0	0	0	14	80	0	0	94	276
05:15 PM	16	0	3	0	19	0	114	30	0	144	0	0	0	0	0	14	112	0	0	126	289
05:30 PM	27	0	11	0	38	0	140	37	0	177	0	0	0	0	0	13	119	0	0	132	347
05:45 PM	14	0	12	0	26	0	105	31	0	136	0	0	0	0	0	15	102	0	0	117	279
Total	85	0	30	0	115	0	482	125	0	607	0	0	0	0	0	56	413	0	0	469	1191
06:00 PM	23	0	14	0	37	0	106	32	0	138	0	0	0	0	0	8	100	0	0	108	283
06:15 PM	11	0	9	0	20	0	88	14	0	102	0	0	0	0	0	8	91	0	0	99	221
06:30 PM	11	0	5	0	16	0	90	25	0	115	0	0	0	0	0	4	80	0	0	84	215
06:45 PM	12	0	8	1	21	0	57	18	0	75	0	0	0	0	0	6	62	0	0	68	164
Total	57	0	36	1	94	0	341	89	0	430	0	0	0	0	0	26	333	0	0	359	883
Grand Total	378	0	205	8	591	0	1882	463	0	2345	0	0	0	0	0	159	1527	0	1	1687	4623
Apprch %	64	0	34.7	1.4		0	80.3	19.7	0		0	0	0	0		9.4	90.5	0	0.1		
Total %	8.2	0	4.4	0.2	12.8	0	40.7	10	0	50.7	0	0	0	0	0	3.4	33	0	0	36.5	

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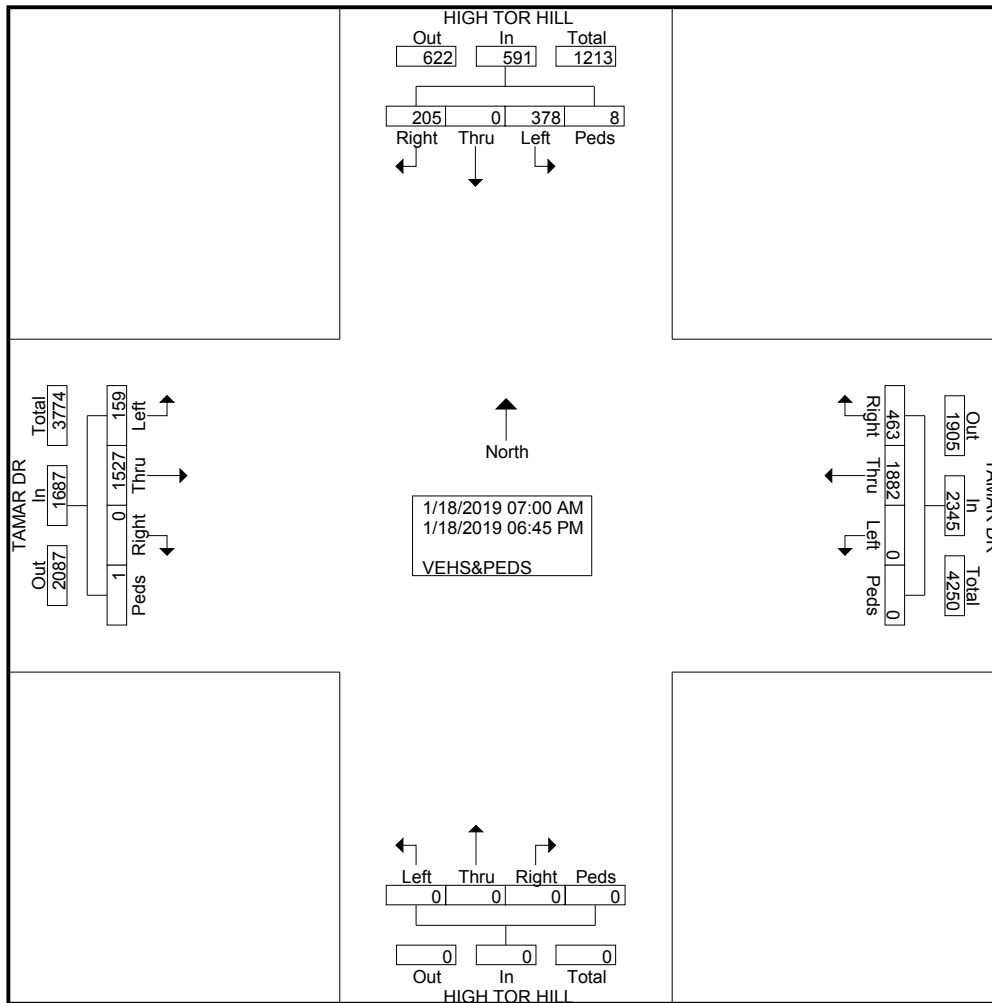
443-741-3500

File Name : Tamar Dr at High Tor Hill

Site Code : 00000000

Start Date : 1/18/2019

Page No : 2



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Columbia, MD, 21046

443-741-3500

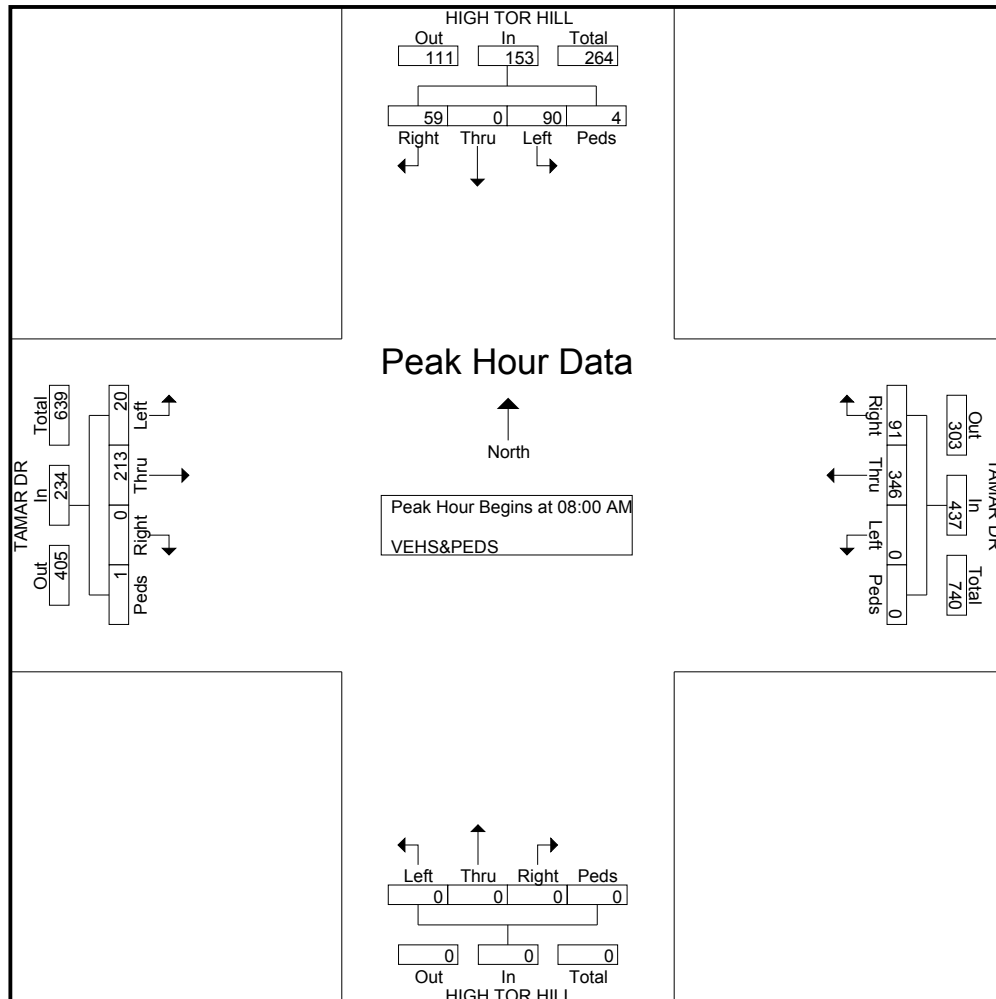
File Name : Tamar Dr at High Tor Hill

Site Code : 00000000

Start Date : 1/18/2019

Page No : 3

	HIGH TOR HILL From North					TAMAR DR From East					HIGH TOR HILL From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	14	0	18	1	33	0	69	12	0	81	0	0	0	0	0	6	42	0	0	48	162
08:15 AM	14	0	10	0	24	0	73	20	0	93	0	0	0	0	0	3	55	0	1	59	176
08:30 AM	17	0	20	1	38	0	105	34	0	139	0	0	0	0	0	5	65	0	0	70	247
08:45 AM	45	0	11	2	58	0	99	25	0	124	0	0	0	0	0	6	51	0	0	57	239
Total Volume	90	0	59	4	153	0	346	91	0	437	0	0	0	0	0	20	213	0	1	234	824
% App. Total	58.8	0	38.6	2.6		0	79.2	20.8	0		0	0	0	0		8.5	91	0	0.4		
PHF	.500	.000	.738	.500	.659	.000	.824	.669	.000	.786	.000	.000	.000	.000	.000	.833	.819	.000	.250	.836	.834



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443-741-3500

File Name : Tamar Dr at High Tor Hill

Site Code : 00000000

Start Date : 1/18/2019

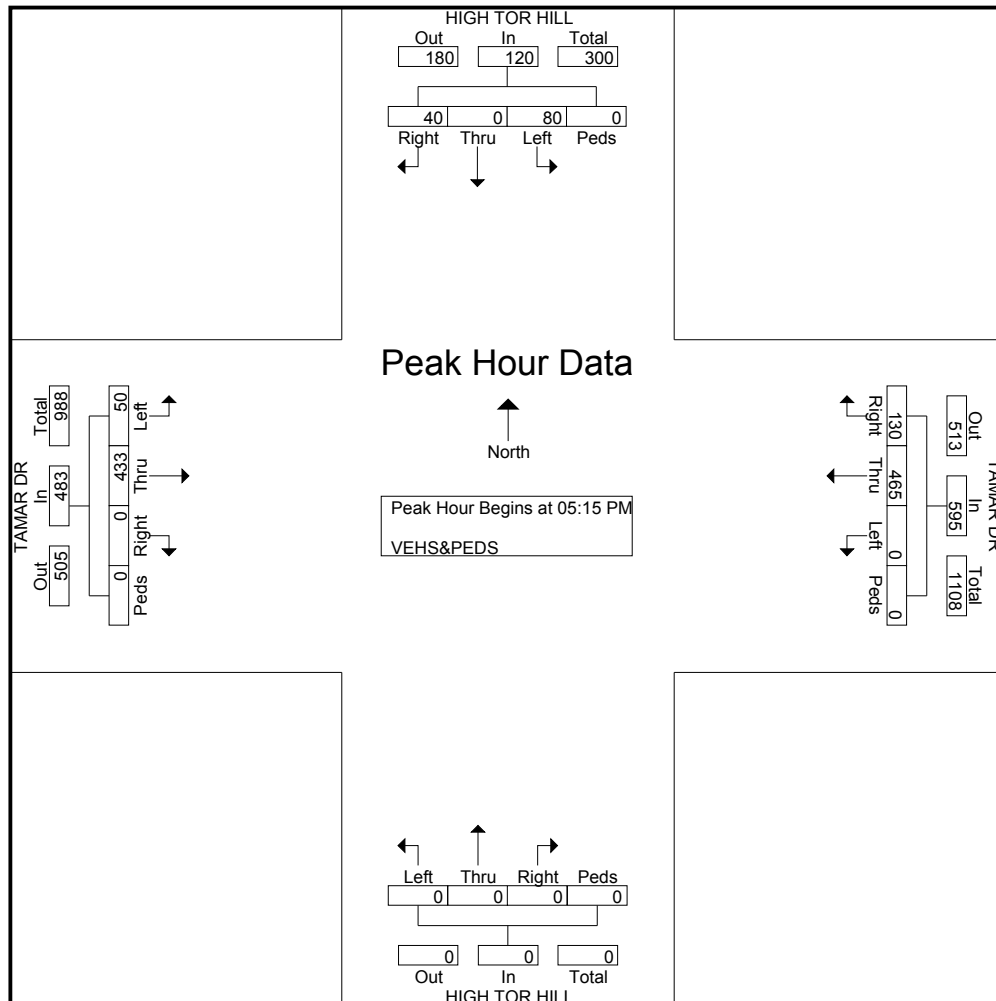
Page No : 4

	HIGH TOR HILL From North					TAMAR DR From East					HIGH TOR HILL From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	16	0	3	0	19	0	114	30	0	144	0	0	0	0	0	14	112	0	0	126	289
05:30 PM	27	0	11	0	38	0	140	37	0	177	0	0	0	0	0	13	119	0	0	132	347
05:45 PM	14	0	12	0	26	0	105	31	0	136	0	0	0	0	0	15	102	0	0	117	279
06:00 PM	23	0	14	0	37	0	106	32	0	138	0	0	0	0	0	8	100	0	0	108	283
Total Volume	80	0	40	0	120	0	465	130	0	595	0	0	0	0	0	50	433	0	0	483	1198
% App. Total	66.7	0	33.3	0		0	78.2	21.8	0		0	0	0	0		10.4	89.6	0	0		
PHF	.741	.000	.714	.000	.789	.000	.830	.878	.000	.840	.000	.000	.000	.000	.000	.833	.910	.000	.000	.915	.863



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar Dr at High Tor Hill
Site Code : 00000000
Start Date : 1/18/2019
Page No : 1

Groups Printed- BICYCLES

	HIGH TOR HILL From North					TAMAR DR From East					HIGH TOR HILL From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
*** BREAK ***																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
05:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	3
Apprch %	0	0	0	100		0	0	0	0		0	0	0	100		0	0	0	0		
Total %	0	0	0	33.3	33.3	0	0	0	0	0	0	0	0	66.7	66.7	0	0	0	0	0	

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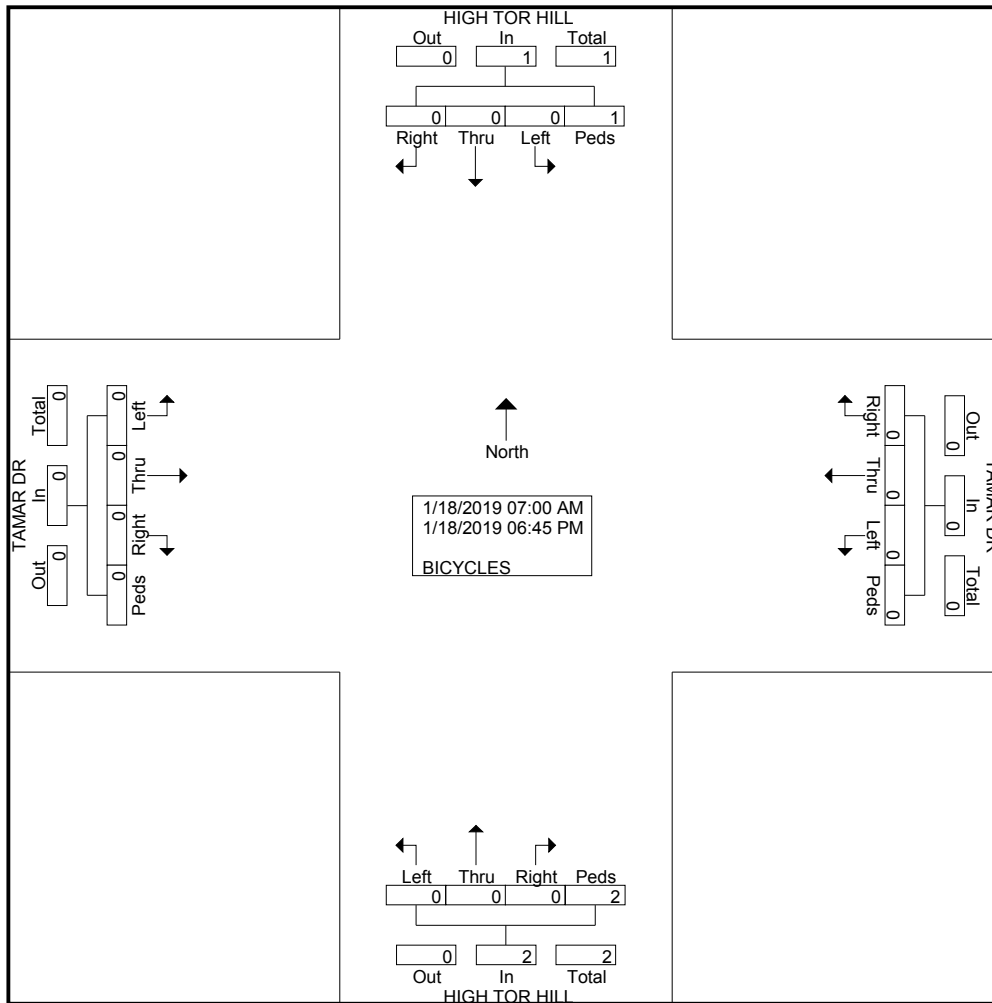
443-741-3500

File Name : Tamar Dr at High Tor Hill

Site Code : 00000000

Start Date : 1/18/2019

Page No : 2



Sabra & Associates

7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Gary
Town:
County: Howard

File Name : Tamar Dr at Spiral Cut (turns only)
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS(TURNS ONLY)

Start Time	SPIRAL CUT From North					TAMAR DR From East					SPIRAL CUT From South					TAMAR DR From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	0	0	0	0	0	1	0	0	0	1	6	0	7	4	17	0	0	3	0	3	21
07:15 AM	0	0	0	0	0	4	0	0	0	4	7	0	8	0	15	0	0	3	0	3	22
07:30 AM	0	0	0	0	0	1	0	0	0	1	1	0	6	1	8	0	0	0	0	0	9
07:45 AM	0	0	0	0	0	5	0	0	0	5	9	0	4	1	14	0	0	1	0	1	20
Total	0	0	0	0	0	11	0	0	0	11	23	0	25	6	54	0	0	7	0	7	72
08:00 AM	0	0	0	0	0	2	0	0	0	2	5	0	3	0	8	0	0	3	0	3	13
08:15 AM	0	0	0	0	0	1	0	0	0	1	7	0	6	5	18	0	0	2	0	2	21
08:30 AM	0	0	0	0	0	1	0	0	0	1	7	0	10	2	19	0	0	2	0	2	22
08:45 AM	0	0	0	0	0	3	0	0	0	3	6	0	6	2	14	0	0	3	0	3	20
Total	0	0	0	0	0	7	0	0	0	7	25	0	25	9	59	0	0	10	0	10	76
*** BREAK ***																					
04:00 PM	0	0	0	0	0	4	0	0	0	4	3	0	6	2	11	0	0	5	0	5	20
04:15 PM	0	0	0	0	0	8	0	0	0	8	1	0	6	3	10	0	0	5	0	5	23
04:30 PM	0	0	0	0	0	2	0	0	0	2	2	0	5	0	7	0	0	2	0	2	11
04:45 PM	0	0	0	0	0	12	0	0	0	12	1	0	3	0	4	0	0	4	0	4	20
Total	0	0	0	0	0	26	0	0	0	26	7	0	20	5	32	0	0	16	0	16	74
05:00 PM	0	0	0	0	0	9	0	0	0	9	3	0	6	1	10	0	0	5	0	5	24
05:15 PM	0	0	0	0	0	10	0	0	0	10	5	0	5	3	13	0	0	5	0	5	28
05:30 PM	0	0	0	0	0	6	0	0	0	6	3	0	3	1	7	0	0	11	0	11	24
05:45 PM	0	0	0	0	0	7	0	0	1	8	2	0	7	0	9	0	0	5	0	5	22
Total	0	0	0	0	0	32	0	0	1	33	13	0	21	5	39	0	0	26	0	26	98
06:00 PM	0	0	0	0	0	10	0	0	0	10	3	0	2	0	5	0	0	5	0	5	20
06:15 PM	0	0	0	0	0	6	0	0	0	6	6	0	7	1	14	0	0	6	0	6	26
06:30 PM	0	0	0	0	0	4	0	0	0	4	2	0	1	2	5	0	0	0	0	0	9
06:45 PM	0	0	0	0	0	3	0	0	0	3	2	0	6	0	8	0	0	2	0	2	13
Total	0	0	0	0	0	23	0	0	0	23	13	0	16	3	32	0	0	13	0	13	68
Grand Total	0	0	0	0	0	99	0	0	1	100	81	0	107	28	216	0	0	72	0	72	388
Apprch %	0	0	0	0		99	0	0	1		37.5	0	49.5	13		0	0	100	0		
Total %	0	0	0	0	0	25.5	0	0	0.3	25.8	20.9	0	27.6	7.2	55.7	0	0	18.6	0	18.6	

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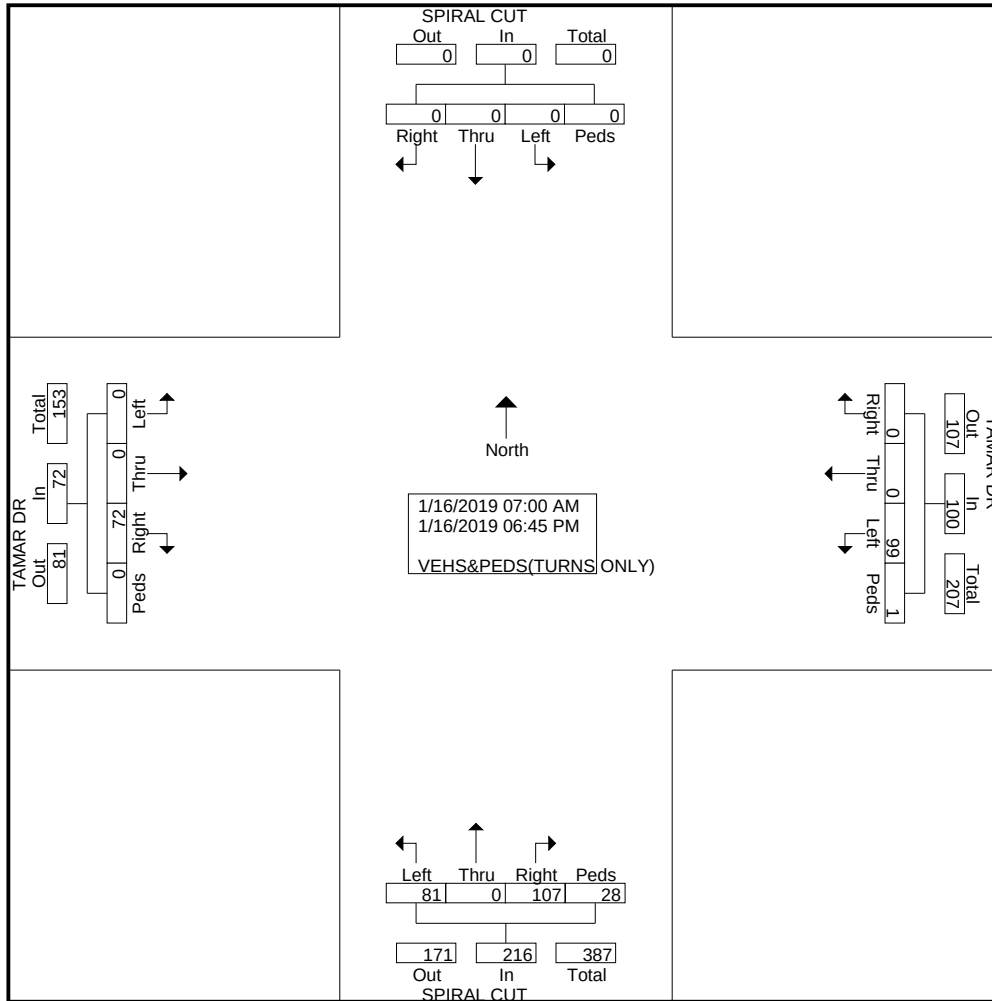
443-741-3500

File Name : Tamar Dr at Spiral Cut (turns only)

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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443-741-3500

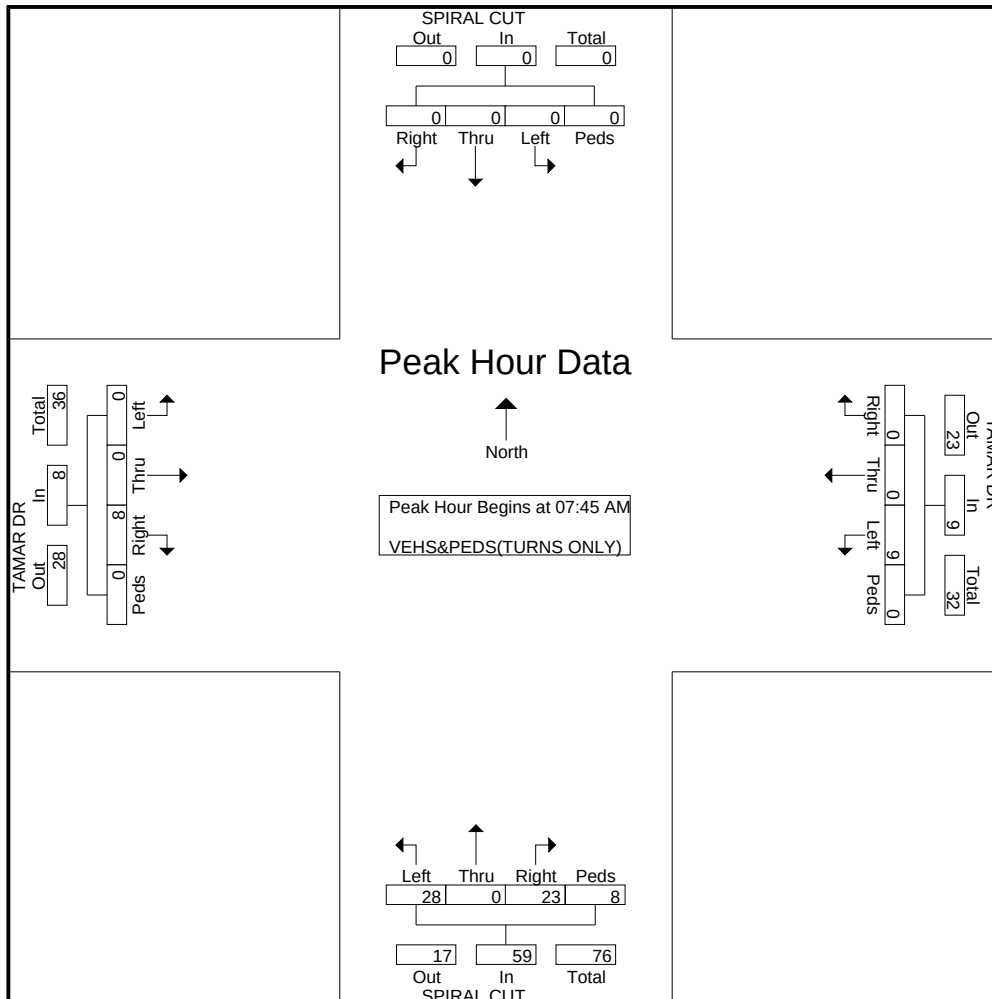
File Name : Tamar Dr at Spiral Cut (turns only)

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	SPIRAL CUT From North					TAMAR DR From East					SPIRAL CUT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	5	0	0	0	5	9	0	4	1	14	0	0	1	0	1	20
08:00 AM	0	0	0	0	0	2	0	0	0	2	5	0	3	0	8	0	0	3	0	3	13
08:15 AM	0	0	0	0	0	1	0	0	0	1	7	0	6	5	18	0	0	2	0	2	21
08:30 AM	0	0	0	0	0	1	0	0	0	1	7	0	10	2	19	0	0	2	0	2	22
Total Volume	0	0	0	0	0	9	0	0	0	9	28	0	23	8	59	0	0	8	0	8	76
% App. Total	0	0	0	0	0	100	0	0	0	0	47.5	0	39	13.6		0	0	100	0		
PHF	.000	.000	.000	.000	.000	.450	.000	.000	.000	.450	.778	.000	.575	.400	.776	.000	.000	.667	.000	.667	.864



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443-741-3500

File Name : Tamar Dr at Spiral Cut (turns only)

Site Code : 00000000

Start Date : 1/16/2019

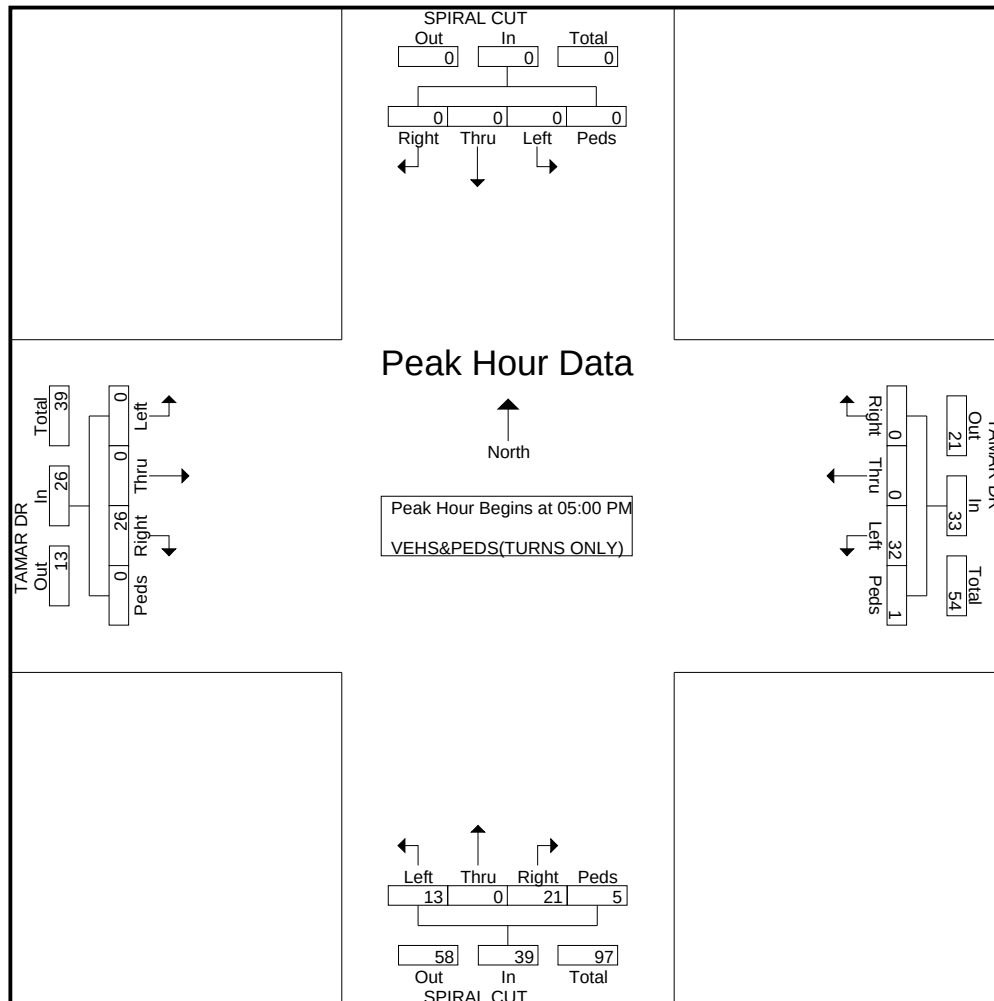
Page No : 4

	SPIRAL CUT From North					TAMAR DR From East					SPIRAL CUT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	0	0	0	0	0	9	0	0	0	9	3	0	6	1	10	0	0	5	0	5	24
05:15 PM	0	0	0	0	0	10	0	0	0	10	5	0	5	3	13	0	0	5	0	5	28
05:30 PM	0	0	0	0	0	6	0	0	0	6	3	0	3	1	7	0	0	11	0	11	24
05:45 PM	0	0	0	0	0	7	0	0	1	8	2	0	7	0	9	0	0	5	0	5	22
Total Volume	0	0	0	0	0	32	0	0	1	33	13	0	21	5	39	0	0	26	0	26	98
% App. Total	0	0	0	0		97	0	0	3		33.3	0	53.8	12.8		0	0	100	0		
PHF	.000	.000	.000	.000	.000	.800	.000	.000	.250	.825	.650	.000	.750	.417	.750	.000	.000	.591	.000	.591	.875



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7055 Samuel Morris Dr, Suite 100
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443-741-3500

Weather: Clear
Counted By: Gary
Town:
County: Howard

File Name : Tamar Dr at Spiral Cut (turns only)
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLE

	SPIRAL CUT From North					TAMAR DR From East					SPIRAL CUT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	33.3	0	0	33.3	0	0	0	0	0	0	66.7	0	0	66.7	

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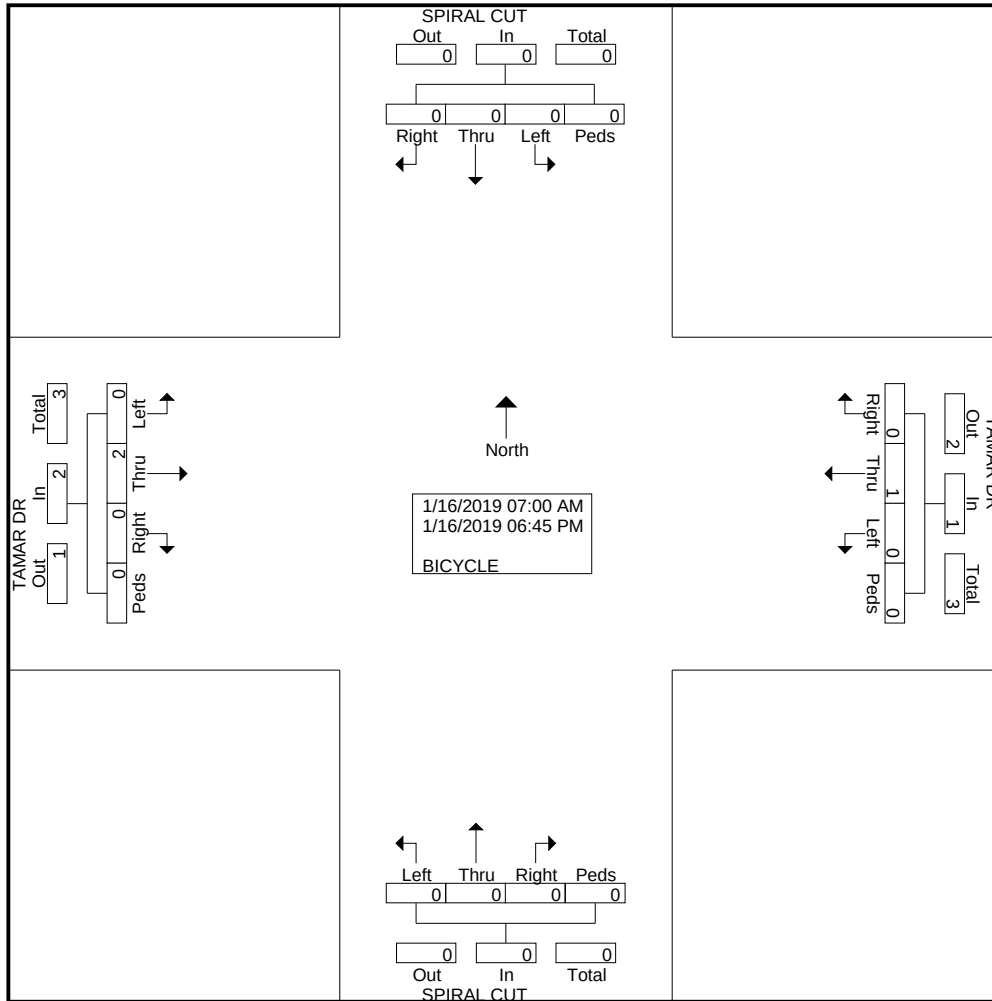
443-741-3500

File Name : Tamar Dr at Spiral Cut (turns only)

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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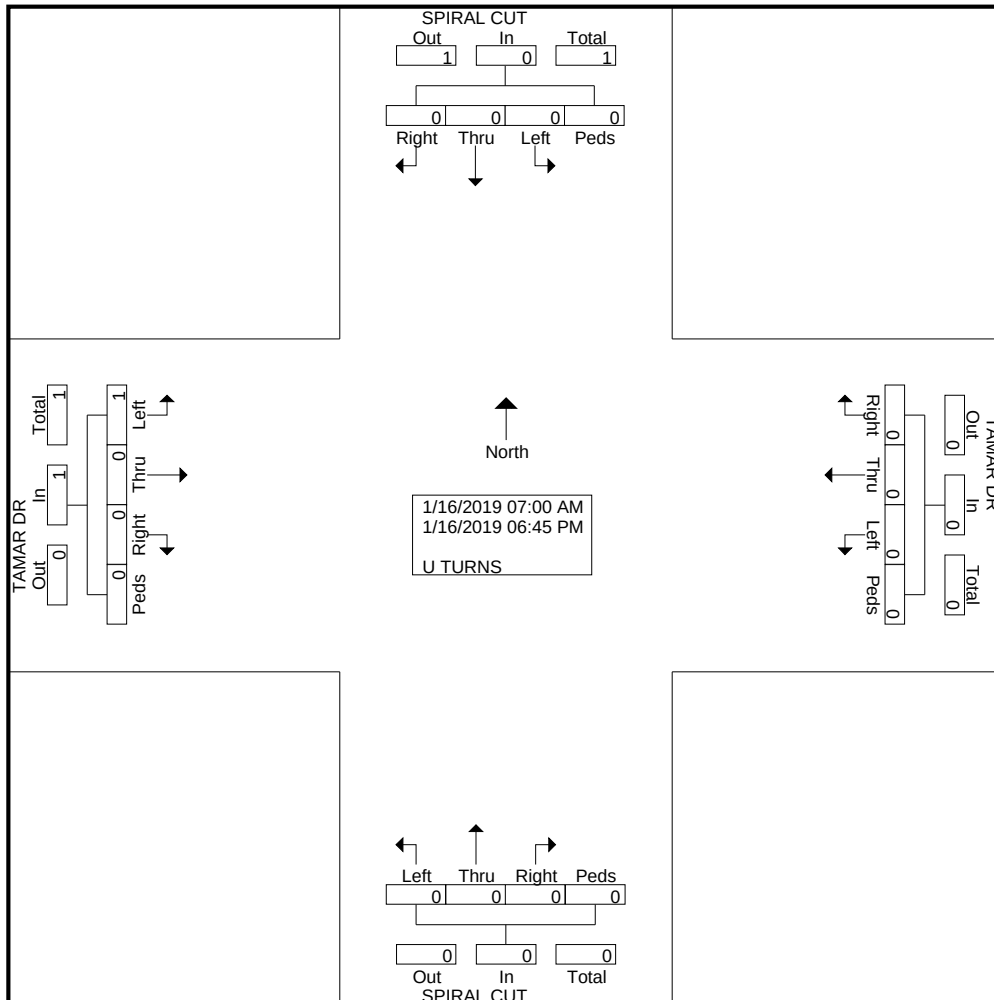
443-741-3500

Weather: Clear
Counted By: Gary
Town:
County: Howard

File Name : Tamar Dr at Spiral Cut (turns only)
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- U TURNS

	SPIRAL CUT From North					TAMAR DR From East					SPIRAL CUT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		100	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	



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443-741-3500

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Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Driveway Entrance to 8810-8860 Tamar Dr
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

Start Time	DRIVEWAY 8810 8860 From North					TAMAR DR From East					From South					TAMAR DR From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	10	0	4	2	16	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	22
07:15 AM	5	0	0	2	7	0	0	4	2	6	0	0	0	0	0	3	0	0	0	3	16
07:30 AM	4	0	8	1	13	0	0	3	0	3	0	0	0	0	0	2	0	0	0	2	18
07:45 AM	4	0	3	0	7	0	0	2	0	2	0	0	0	0	0	1	0	0	9	10	19
Total	23	0	15	5	43	0	0	15	2	17	0	0	0	0	0	6	0	0	9	15	75
08:00 AM	5	0	4	0	9	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	12
08:15 AM	6	0	3	1	10	0	0	2	0	2	0	0	0	0	0	4	0	0	0	4	16
08:30 AM	6	0	7	5	18	0	0	4	1	5	0	0	0	0	0	2	0	0	0	2	25
08:45 AM	2	0	9	1	12	0	0	1	0	1	0	0	0	0	0	6	0	0	0	6	19
Total	19	0	23	7	49	0	0	7	1	8	0	0	0	0	0	15	0	0	0	15	72
*** BREAK ***																					
04:00 PM	4	0	8	3	15	0	0	10	0	10	0	0	0	0	0	7	0	0	0	7	32
04:15 PM	9	0	3	1	13	0	0	8	0	8	0	0	0	0	0	9	0	0	0	9	30
04:30 PM	2	0	5	0	7	0	0	10	0	10	0	0	0	0	0	1	0	0	0	1	18
04:45 PM	8	0	7	1	16	0	0	6	0	6	0	0	0	0	0	2	0	0	0	2	24
Total	23	0	23	5	51	0	0	34	0	34	0	0	0	0	0	19	0	0	0	19	104
05:00 PM	7	0	3	2	12	0	0	8	0	8	0	0	0	0	0	7	0	0	0	7	27
05:15 PM	7	0	6	3	16	0	0	7	0	7	0	0	0	0	0	5	0	0	4	9	32
05:30 PM	1	0	2	0	3	0	0	8	0	8	0	0	0	0	0	1	0	0	1	2	13
05:45 PM	2	0	3	0	5	0	0	11	0	11	0	0	0	0	0	8	0	0	0	8	24
Total	17	0	14	5	36	0	0	34	0	34	0	0	0	0	0	21	0	0	5	26	96
06:00 PM	5	0	4	1	10	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	13
06:15 PM	5	0	0	0	5	0	0	6	0	6	0	0	0	0	0	1	0	0	0	1	12
06:30 PM	6	0	2	0	8	0	0	3	0	3	0	0	0	0	0	5	0	0	0	5	16
06:45 PM	3	0	5	0	8	0	0	4	0	4	0	0	0	0	0	3	0	0	0	3	15
Total	19	0	11	1	31	0	0	15	0	15	0	0	0	0	0	10	0	0	0	10	56
Grand Total	101	0	86	23	210	0	0	105	3	108	0	0	0	0	0	71	0	0	14	85	403
Apprch %	48.1	0	41	11		0	0	97.2	2.8		0	0	0	0		83.5	0	0	16.5		
Total %	25.1	0	21.3	5.7	52.1	0	0	26.1	0.7	26.8	0	0	0	0	0	17.6	0	0	3.5	21.1	

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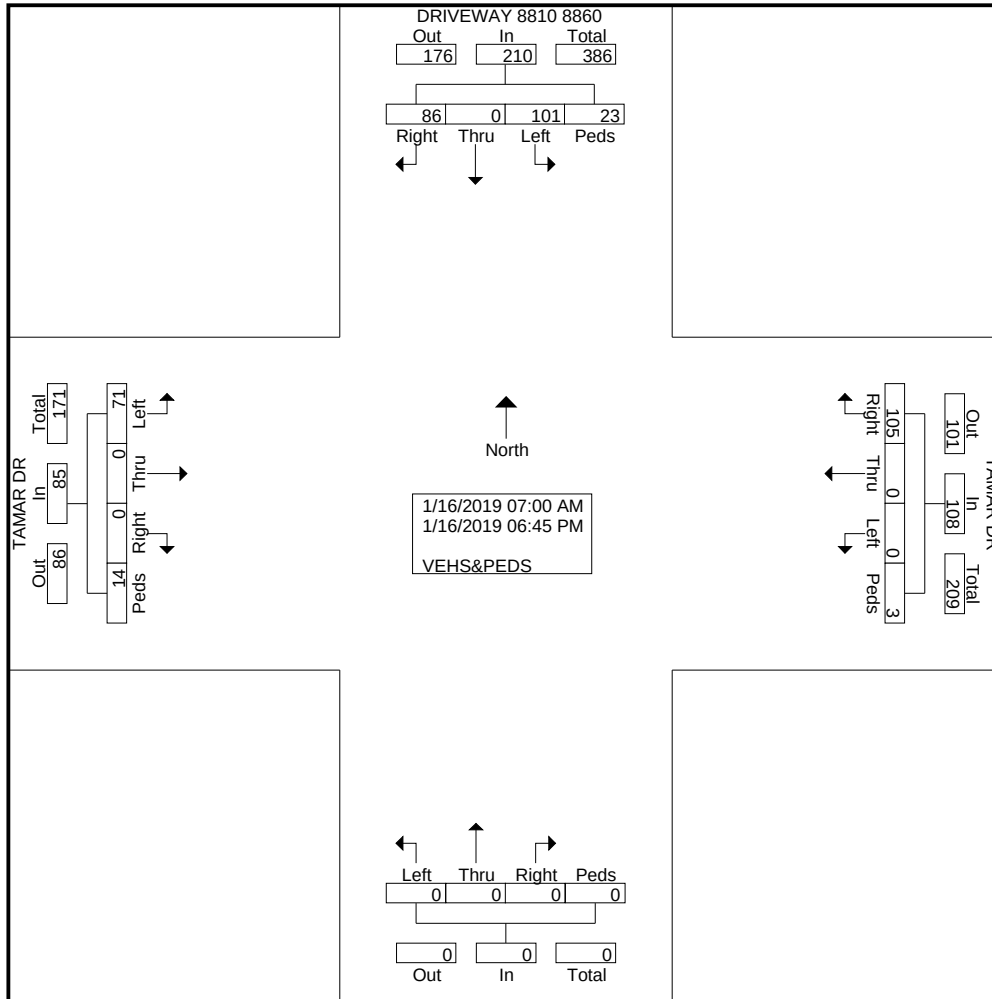
443-741-3500

File Name : Tamar Dr at Driveway Entrance to 8810-8860 Tamar Dr

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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7055 Samuel Morris Dr, Suite 100
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443-741-3500

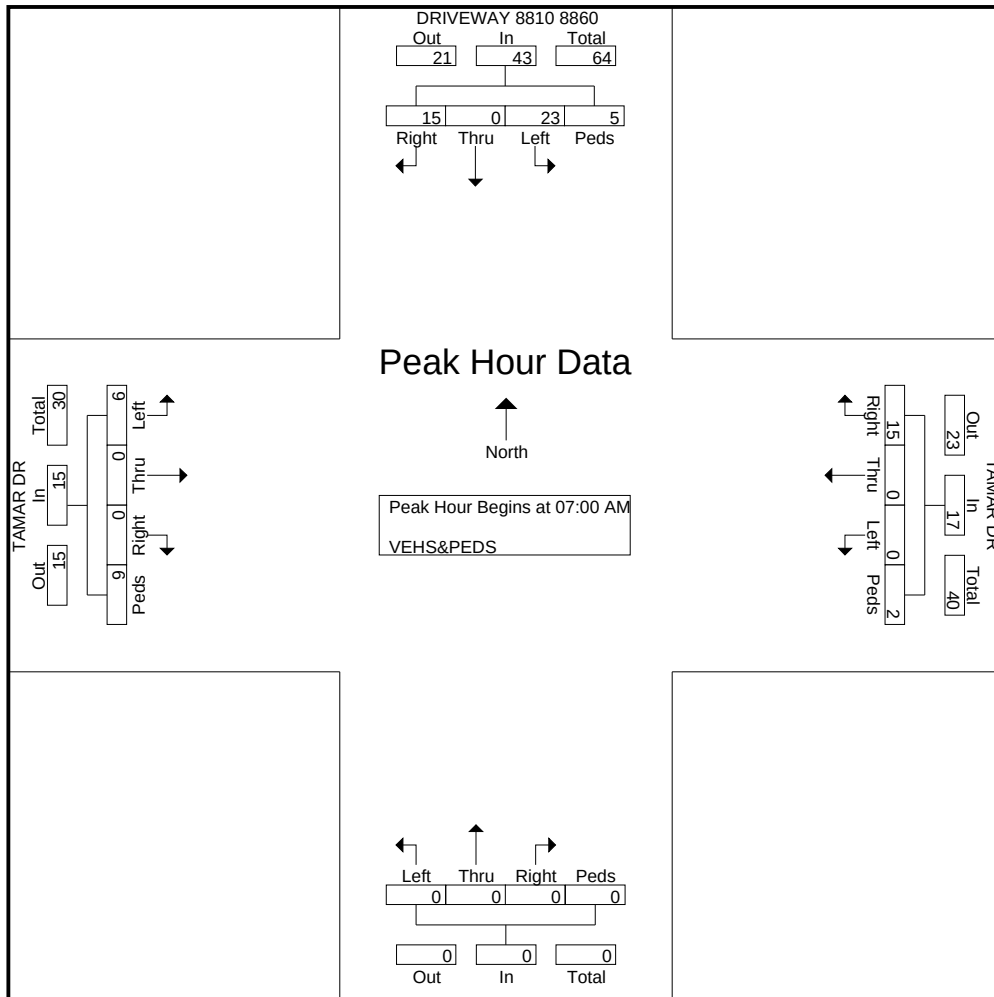
File Name : Tamar Dr at Driveway Entrance to 8810-8860 Tamar Dr

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	DRIVEWAY 8810 8860 From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	10	0	4	2	16	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	22
07:15 AM	5	0	0	2	7	0	0	4	2	6	0	0	0	0	0	3	0	0	0	3	16
07:30 AM	4	0	8	1	13	0	0	3	0	3	0	0	0	0	0	2	0	0	0	2	18
07:45 AM	4	0	3	0	7	0	0	2	0	2	0	0	0	0	0	1	0	0	9	10	19
Total Volume	23	0	15	5	43	0	0	15	2	17	0	0	0	0	0	6	0	0	9	15	75
% App. Total	53.5	0	34.9	11.6		0	0	88.2	11.8		0	0	0	0		40	0	0	60		
PHF	.575	.000	.469	.625	.672	.000	.000	.625	.250	.708	.000	.000	.000	.000	.000	.500	.000	.000	.250	.375	.852



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443-741-3500

File Name : Tamar Dr at Driveway Entrance to 8810-8860 Tamar Dr

Site Code : 00000000

Start Date : 1/16/2019

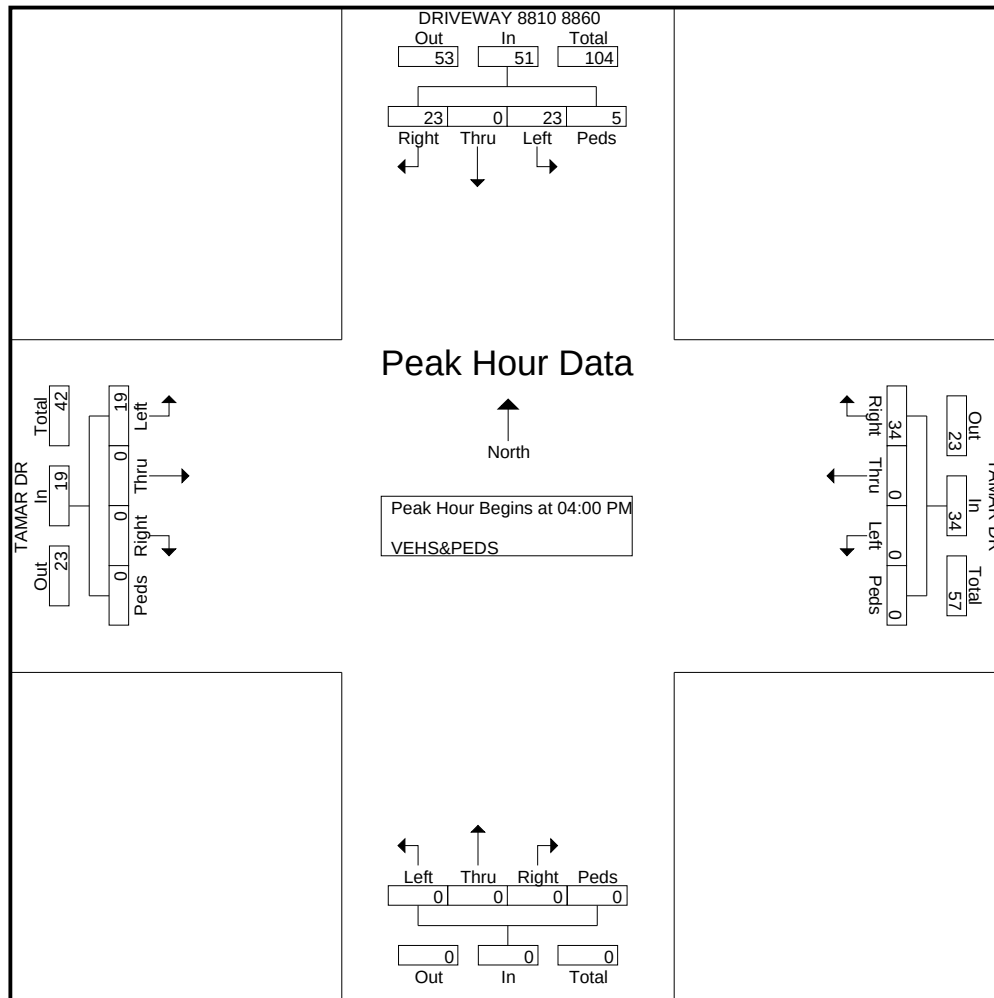
Page No : 4

	DRIVEWAY 8810 8860 From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	4	0	8	3	15	0	0	10	0	10	0	0	0	0	0	7	0	0	0	7	32
04:15 PM	9	0	3	1	13	0	0	8	0	8	0	0	0	0	0	9	0	0	0	9	30
04:30 PM	2	0	5	0	7	0	0	10	0	10	0	0	0	0	0	1	0	0	0	1	18
04:45 PM	8	0	7	1	16	0	0	6	0	6	0	0	0	0	0	2	0	0	0	2	24
Total Volume	23	0	23	5	51	0	0	34	0	34	0	0	0	0	0	19	0	0	0	19	104
% App. Total	45.1	0	45.1	9.8		0	0	100	0		0	0	0	0		100	0	0	0		
PHF	.639	.000	.719	.417	.797	.000	.000	.850	.000	.850	.000	.000	.000	.000	.000	.528	.000	.000	.000	.528	.813



Sabra & Associates

7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Driveway Entrance to 8810-8860 Tamar Dr
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	DRIVEWAY 8810 8860 From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	0	50	0	0	50	

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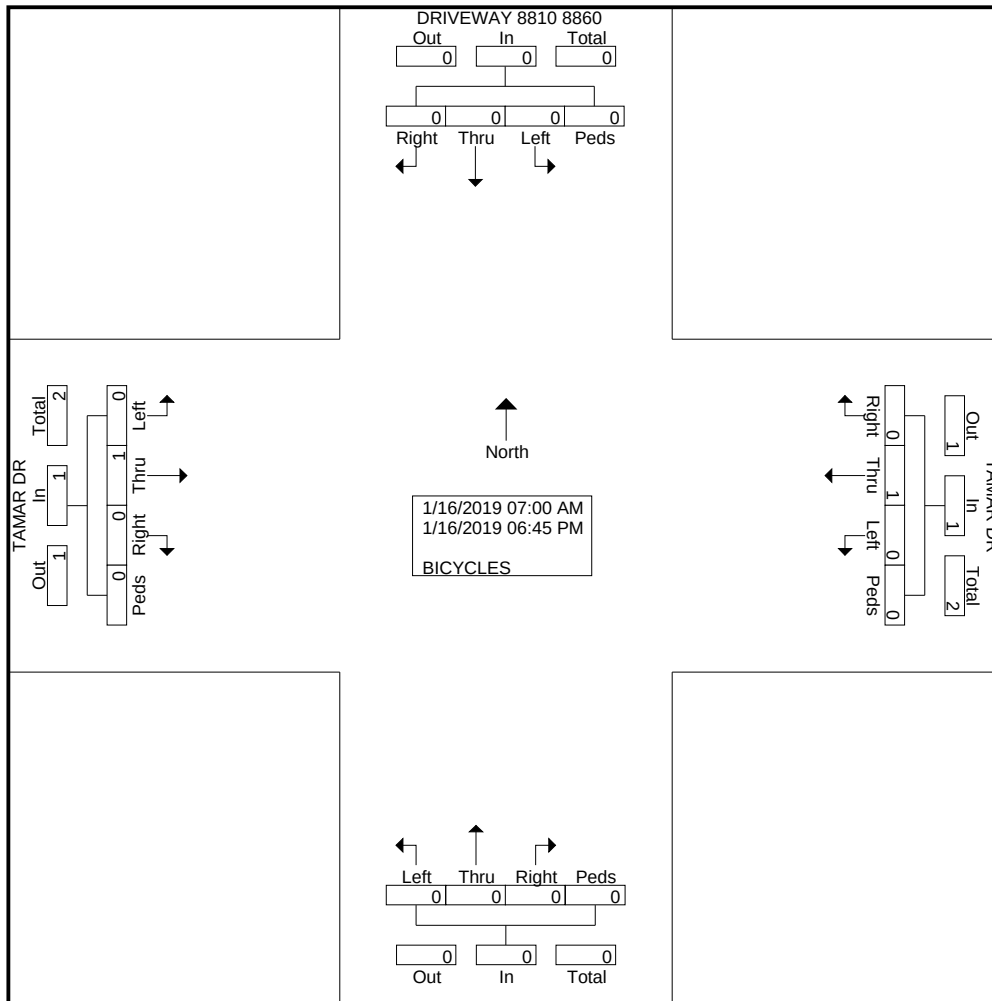
443-741-3500

File Name : Tamar Dr at Driveway Entrance to 8810-8860 Tamar Dr

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Habib
Town:
County: Howard

File Name : Tamar Dr at Hayshed Ln
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

	HAYSHED LN From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	24	0	18	6	48	0	58	11	0	69	0	0	0	0	0	5	86	0	0	91	208
07:15 AM	25	0	17	6	48	0	81	7	0	88	0	0	0	0	0	10	85	0	0	95	231
07:30 AM	13	0	18	3	34	0	40	3	0	43	0	0	0	0	0	3	75	0	0	78	155
07:45 AM	10	0	14	1	25	0	68	9	0	77	0	0	0	0	0	5	76	0	0	81	183
Total	72	0	67	16	155	0	247	30	0	277	0	0	0	0	0	23	322	0	0	345	777
08:00 AM	9	0	13	2	24	0	63	4	0	67	0	0	0	0	0	4	61	0	0	65	156
08:15 AM	9	0	22	1	32	0	65	8	0	73	0	0	0	0	0	8	63	0	0	71	176
08:30 AM	11	0	25	4	40	0	96	8	0	104	0	0	0	0	0	9	88	0	0	97	241
08:45 AM	16	0	20	3	39	0	102	5	0	107	0	0	0	0	0	6	81	0	0	87	233
Total	45	0	80	10	135	0	326	25	0	351	0	0	0	0	0	27	293	0	0	320	806
*** BREAK ***																					
04:00 PM	15	0	7	8	30	0	126	14	0	140	0	0	0	0	0	13	88	0	0	101	271
04:15 PM	14	0	14	3	31	0	137	16	0	153	0	0	0	0	0	17	94	0	5	116	300
04:30 PM	8	0	12	0	20	0	136	18	0	154	0	0	0	0	0	18	90	0	0	108	282
04:45 PM	4	0	14	3	21	0	129	20	0	149	0	0	0	0	0	8	106	0	0	114	284
Total	41	0	47	14	102	0	528	68	0	596	0	0	0	0	0	56	378	0	5	439	1137
05:00 PM	7	0	21	3	31	0	155	21	0	176	0	0	0	0	0	13	101	0	0	114	321
05:15 PM	6	0	13	1	20	0	130	15	0	145	0	0	0	0	0	17	108	0	2	127	292
05:30 PM	15	0	8	1	24	0	174	15	0	189	0	0	0	0	0	21	109	0	0	130	343
05:45 PM	9	0	10	1	20	0	146	16	0	162	0	0	0	0	0	24	101	0	1	126	308
Total	37	0	52	6	95	0	605	67	0	672	0	0	0	0	0	75	419	0	3	497	1264
06:00 PM	9	0	14	1	24	0	126	20	0	146	0	0	0	0	0	20	98	0	0	118	288
06:15 PM	8	0	12	2	22	0	122	18	0	140	0	0	0	0	0	12	95	0	1	108	270
06:30 PM	7	0	10	3	20	0	115	15	0	130	0	0	0	0	0	16	80	0	0	96	246
06:45 PM	5	0	11	0	16	0	62	14	0	76	0	0	0	0	0	6	71	0	0	77	169
Total	29	0	47	6	82	0	425	67	0	492	0	0	0	0	0	54	344	0	1	399	973
Grand Total	224	0	293	52	569	0	2131	257	0	2388	0	0	0	0	0	235	1756	0	9	2000	4957
Apprch %	39.4	0	51.5	9.1		0	89.2	10.8	0		0	0	0	0		11.8	87.8	0	0.4		
Total %	4.5	0	5.9	1	11.5	0	43	5.2	0	48.2	0	0	0	0	0	4.7	35.4	0	0.2	40.3	

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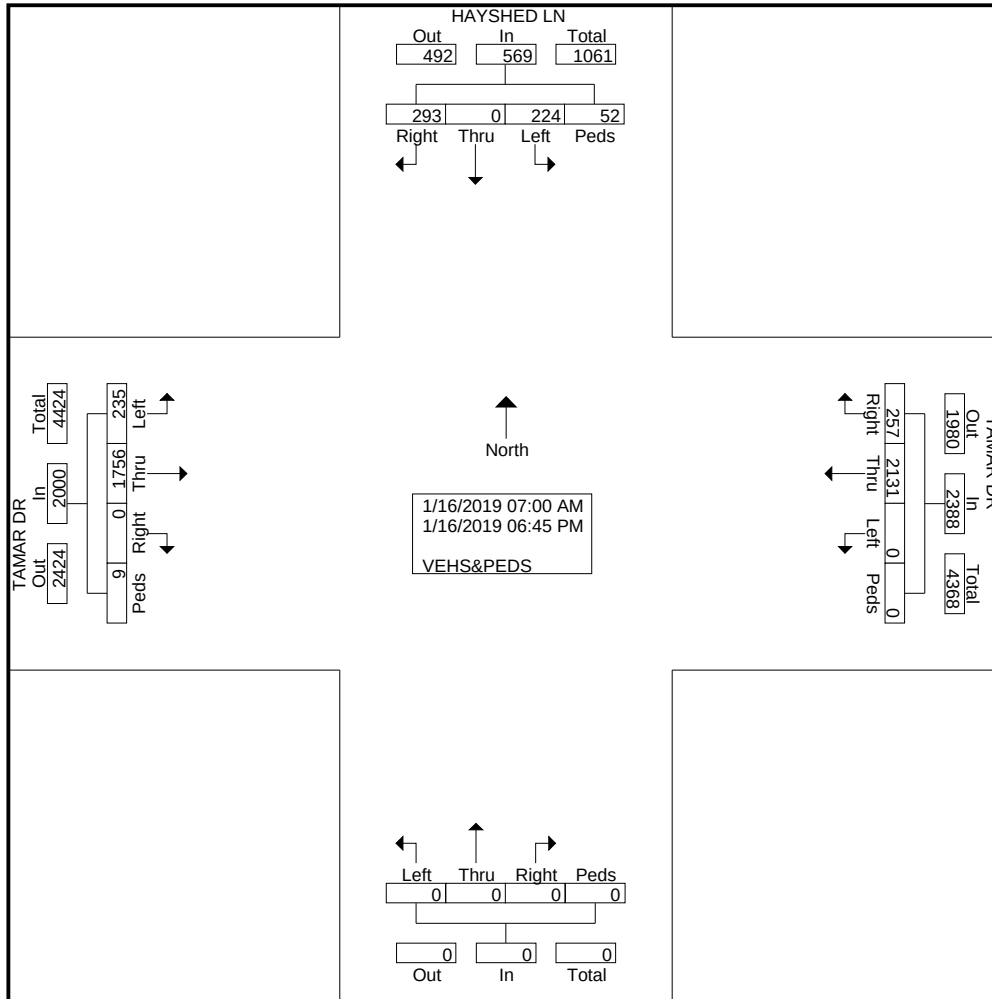
443-741-3500

File Name : Tamar Dr at Hayshed Ln

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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443-741-3500

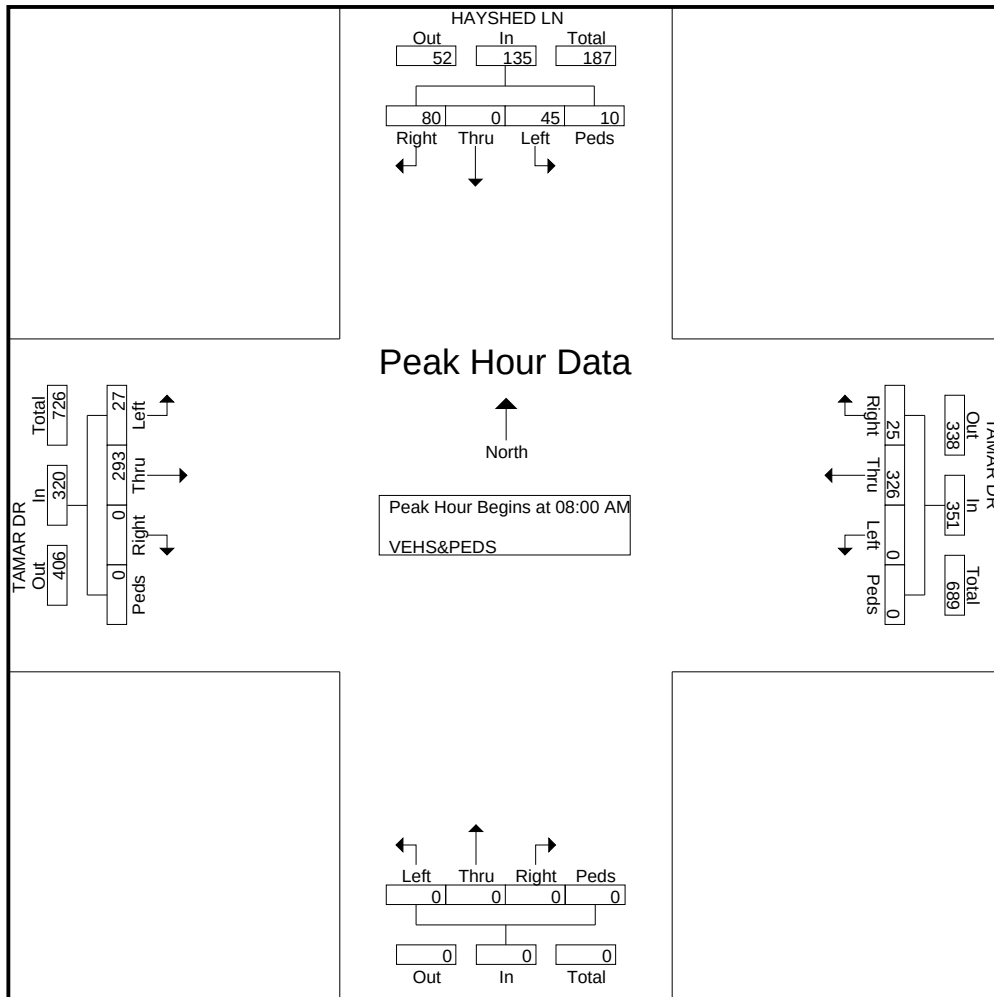
File Name : Tamar Dr at Hayshed Ln

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	HAYSHED LN From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	9	0	13	2	24	0	63	4	0	67	0	0	0	0	0	4	61	0	0	65	156
08:15 AM	9	0	22	1	32	0	65	8	0	73	0	0	0	0	0	8	63	0	0	71	176
08:30 AM	11	0	25	4	40	0	96	8	0	104	0	0	0	0	0	9	88	0	0	97	241
08:45 AM	16	0	20	3	39	0	102	5	0	107	0	0	0	0	0	6	81	0	0	87	233
Total Volume	45	0	80	10	135	0	326	25	0	351	0	0	0	0	0	27	293	0	0	320	806
% App. Total	33.3	0	59.3	7.4		0	92.9	7.1	0		0	0	0	0		8.4	91.6	0	0		
PHF	.703	.000	.800	.625	.844	.000	.799	.781	.000	.820	.000	.000	.000	.000	.000	.750	.832	.000	.000	.825	.836



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File Name : Tamar Dr at Hayshed Ln

Site Code : 00000000

Start Date : 1/16/2019

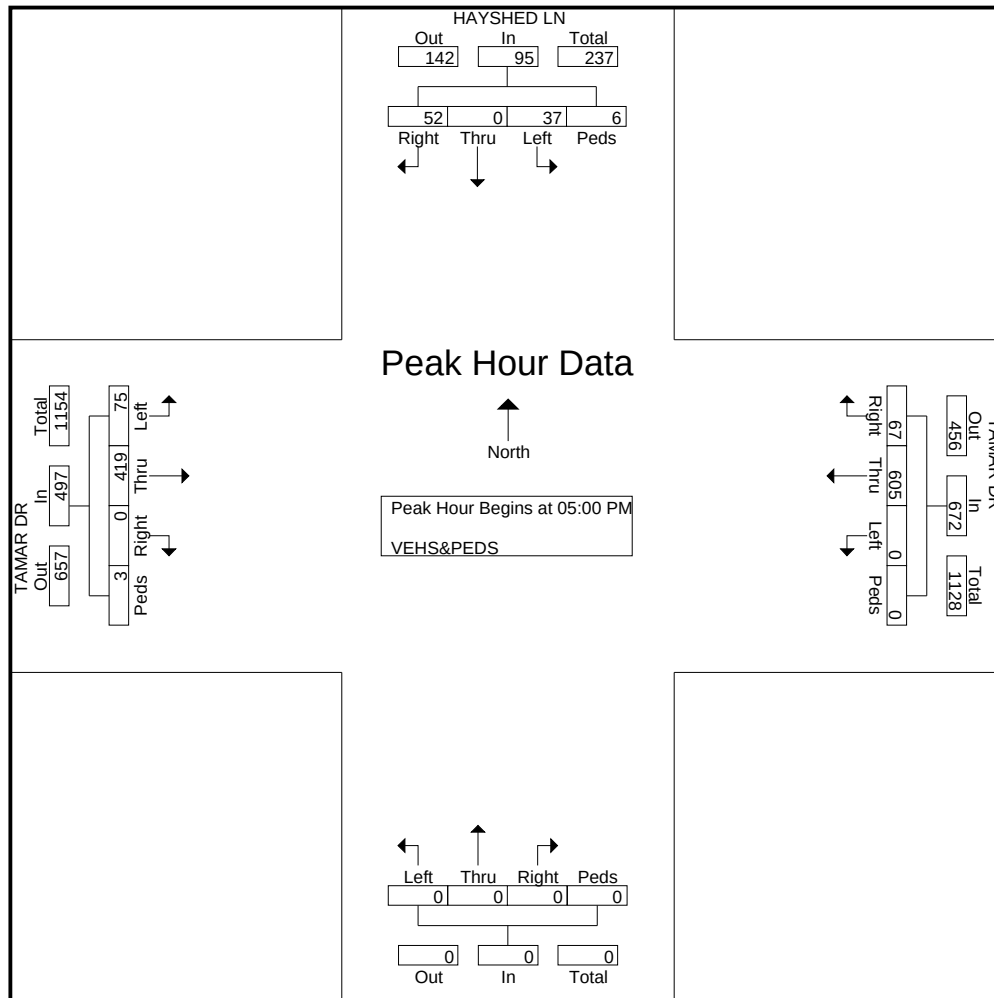
Page No : 4

	HAYSHED LN From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	7	0	21	3	31	0	155	21	0	176	0	0	0	0	0	13	101	0	0	114	321
05:15 PM	6	0	13	1	20	0	130	15	0	145	0	0	0	0	0	17	108	0	2	127	292
05:30 PM	15	0	8	1	24	0	174	15	0	189	0	0	0	0	0	21	109	0	0	130	343
05:45 PM	9	0	10	1	20	0	146	16	0	162	0	0	0	0	0	24	101	0	1	126	308
Total Volume	37	0	52	6	95	0	605	67	0	672	0	0	0	0	0	75	419	0	3	497	1264
% App. Total	38.9	0	54.7	6.3		0	90	10	0		0	0	0	0		15.1	84.3	0	0.6		
PHF	.617	.000	.619	.500	.766	.000	.869	.798	.000	.889	.000	.000	.000	.000	.000	.781	.961	.000	.375	.956	.921



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Columbia, MD, 21046
443-741-3500

Weather: Clear
Counted By: Habib
Town:
County: Howard

File Name : Tamar Dr at Hayshed Ln
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	HAYSHED LN From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	3
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		50	50	0	0		
Total %	0	0	0	0	0	0	33.3	0	0	33.3	0	0	0	0	0	33.3	33.3	0	0	66.7	

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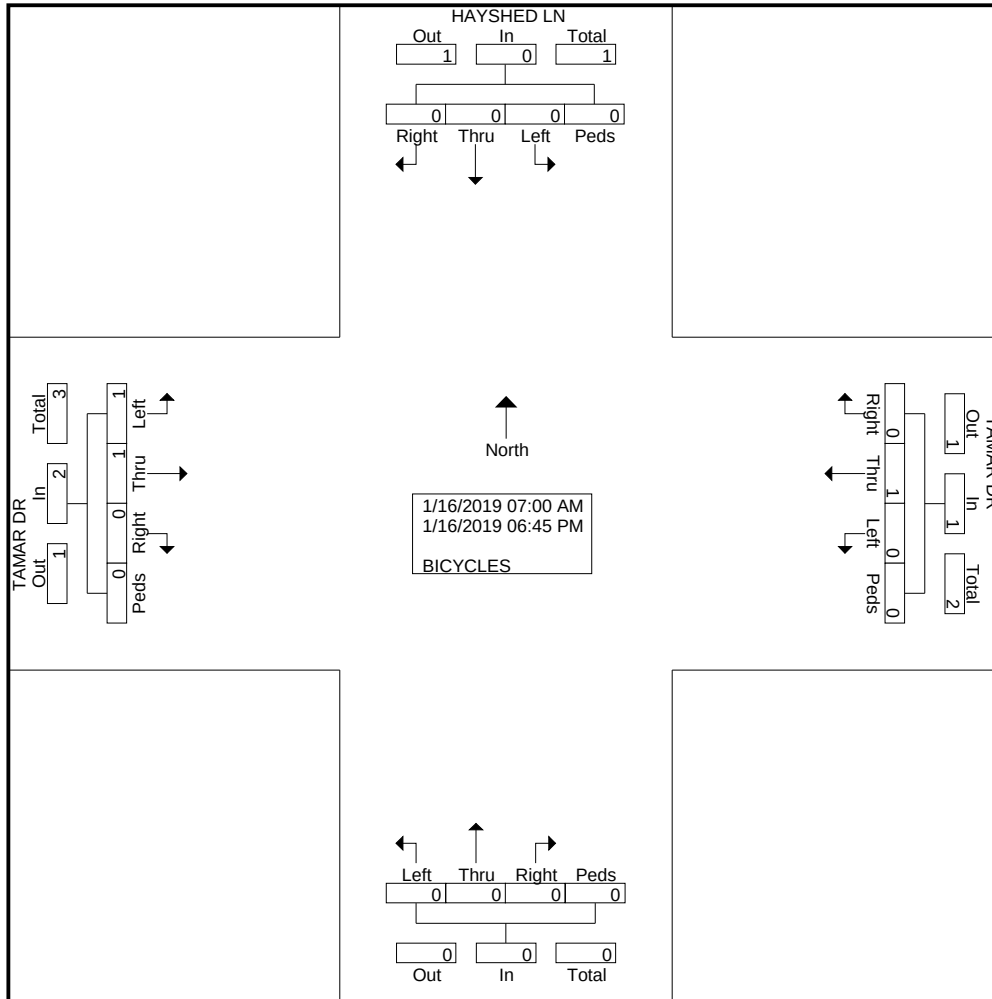
443-741-3500

File Name : Tamar Dr at Hayshed Ln

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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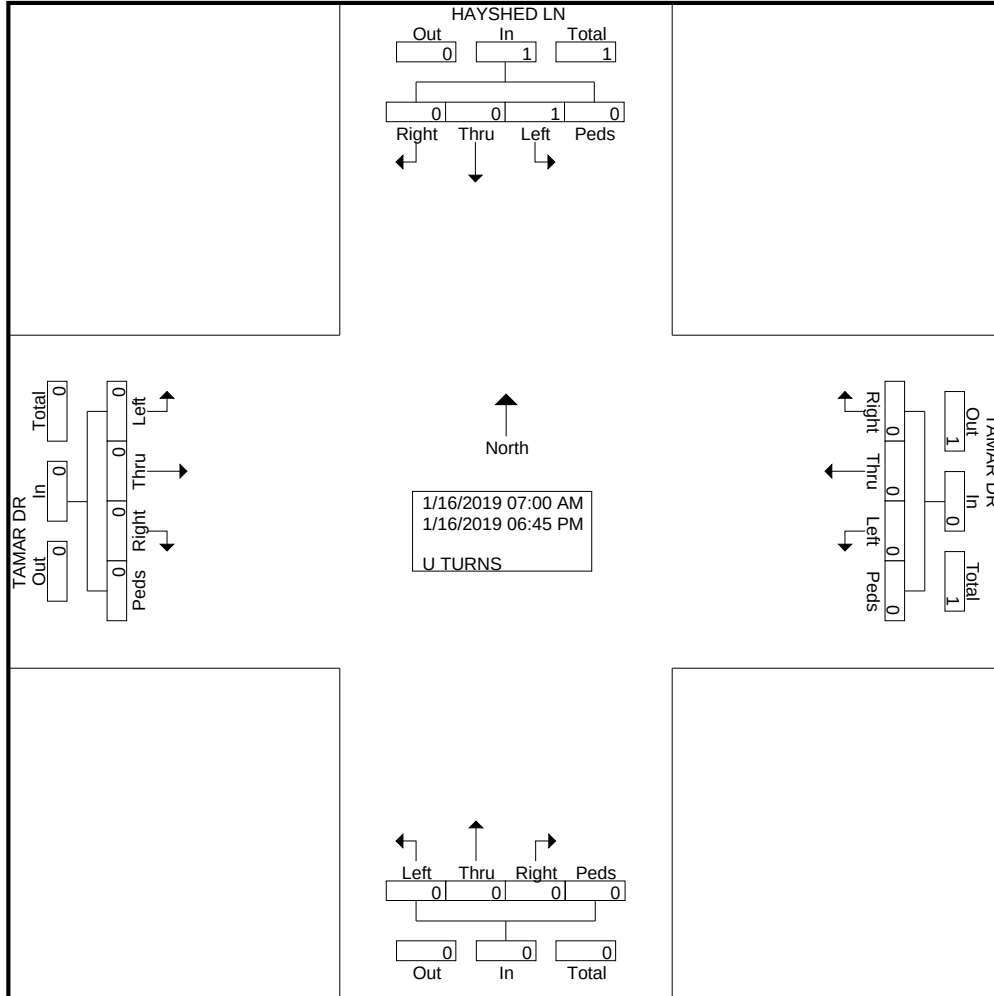
443-741-3500

Weather: Clear
Counted By: Habib
Town:
County: Howard

File Name : Tamar Dr at Hayshed Ln
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- U TURNS

	HAYSHED LN From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	100	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	100	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



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443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Cloudleap Court
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

Start Time	From North					TAMAR DR From East					CLOUDLEAP COURT From South					TAMAR DR From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	0	0	0	0	0	2	0	0	1	3	7	0	6	7	20	0	0	4	1	5	28
07:15 AM	0	0	0	0	0	3	0	0	1	4	5	0	7	8	20	0	0	5	0	5	29
07:30 AM	0	0	0	0	0	3	0	0	4	7	7	0	6	7	20	0	0	1	0	1	28
07:45 AM	0	0	0	0	0	3	0	0	1	4	9	0	7	4	20	0	0	3	0	3	27
Total	0	0	0	0	0	11	0	0	7	18	28	0	26	26	80	0	0	13	1	14	112
08:00 AM	0	0	0	0	0	2	0	0	2	4	9	0	7	0	16	0	0	3	0	3	23
08:15 AM	0	0	0	0	0	5	0	0	0	5	8	0	8	3	19	0	0	6	0	6	30
08:30 AM	0	0	0	0	0	3	0	0	4	7	17	0	9	4	30	0	0	11	0	11	48
08:45 AM	0	0	0	0	0	2	0	0	4	6	9	0	9	0	18	0	0	5	0	5	29
Total	0	0	0	0	0	12	0	0	10	22	43	0	33	7	83	0	0	25	0	25	130
*** BREAK ***																					
04:00 PM	0	0	0	0	0	11	0	0	3	14	21	0	12	3	36	0	0	13	0	13	63
04:15 PM	0	0	0	0	0	13	0	0	1	14	20	0	5	0	25	0	0	14	0	14	53
04:30 PM	0	0	0	0	0	11	0	0	0	11	21	0	11	2	34	0	0	4	0	4	49
04:45 PM	0	0	0	0	0	13	0	0	2	15	15	0	7	1	23	0	0	13	0	13	51
Total	0	0	0	0	0	48	0	0	6	54	77	0	35	6	118	0	0	44	0	44	216
05:00 PM	0	0	0	0	0	13	0	0	5	18	17	0	8	4	29	0	0	11	0	11	58
05:15 PM	0	0	0	0	0	12	0	0	2	14	10	0	9	0	19	0	0	9	0	9	42
05:30 PM	0	0	0	0	0	14	0	0	1	15	19	0	11	4	34	0	0	10	0	10	59
05:45 PM	0	0	0	0	0	13	0	0	1	14	11	0	9	4	24	0	0	10	0	10	48
Total	0	0	0	0	0	52	0	0	9	61	57	0	37	12	106	0	0	40	0	40	207
06:00 PM	0	0	0	0	0	11	0	0	2	13	9	0	9	0	18	0	0	9	0	9	40
06:15 PM	0	0	0	0	0	7	0	0	1	8	16	0	5	0	21	0	0	6	0	6	35
06:30 PM	0	0	0	0	0	8	0	0	0	8	15	0	10	0	25	0	0	8	0	8	41
06:45 PM	0	0	0	0	0	10	0	0	0	10	12	0	3	0	15	0	0	3	0	3	28
Total	0	0	0	0	0	36	0	0	3	39	52	0	27	0	79	0	0	26	0	26	144
Grand Total	0	0	0	0	0	159	0	0	35	194	257	0	158	51	466	0	0	148	1	149	809
Apprch %	0	0	0	0		82	0	0	18		55.2	0	33.9	10.9		0	0	99.3	0.7		
Total %	0	0	0	0	0	19.7	0	0	4.3	24	31.8	0	19.5	6.3	57.6	0	0	18.3	0.1	18.4	

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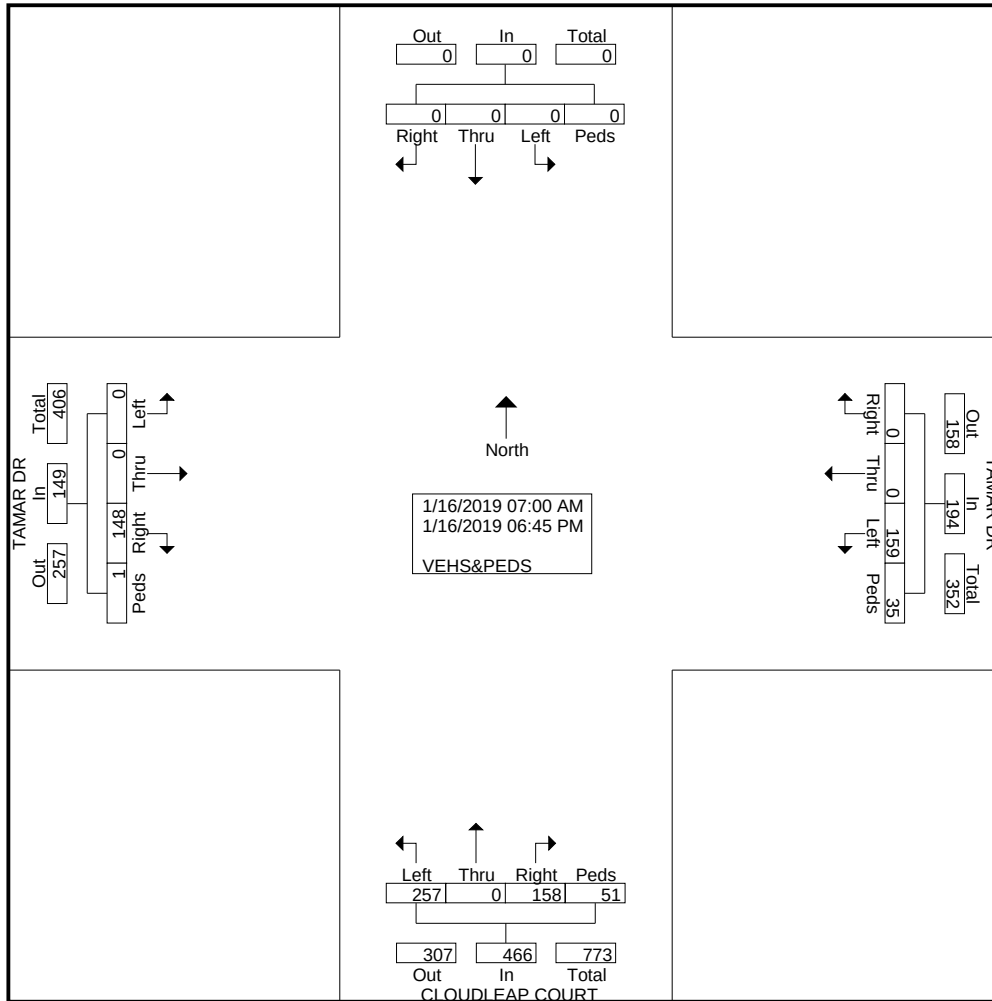
443-741-3500

File Name : Tamar Dr at Cloudleap Court

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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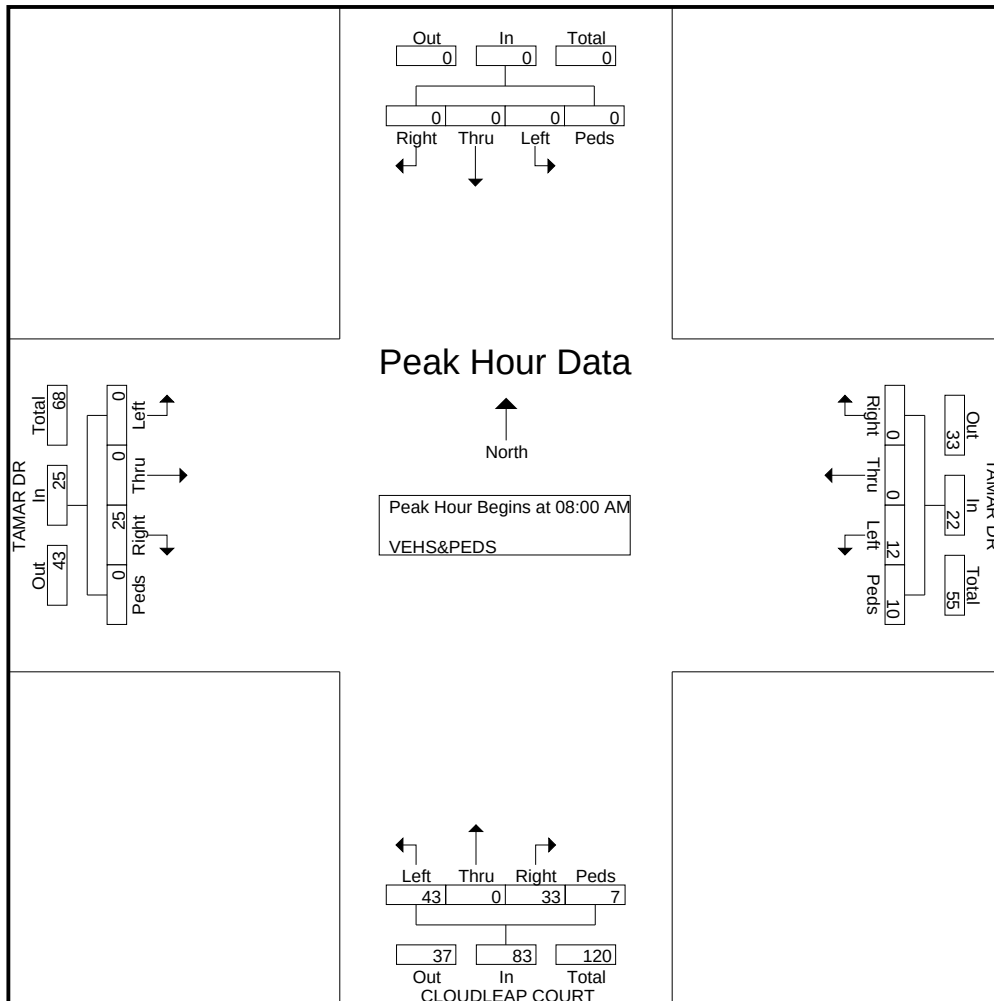
File Name : Tamar Dr at Cloudleap Court

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	From North					TAMAR DR From East					CLOUDLEAP COURT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	2	0	0	2	4	9	0	7	0	16	0	0	3	0	3	23
08:15 AM	0	0	0	0	0	5	0	0	0	5	8	0	8	3	19	0	0	6	0	6	30
08:30 AM	0	0	0	0	0	3	0	0	4	7	17	0	9	4	30	0	0	11	0	11	48
08:45 AM	0	0	0	0	0	2	0	0	4	6	9	0	9	0	18	0	0	5	0	5	29
Total Volume	0	0	0	0	0	12	0	0	10	22	43	0	33	7	83	0	0	25	0	25	130
% App. Total	0	0	0	0	0	54.5	0	0	45.5		51.8	0	39.8	8.4		0	0	100	0		
PHF	.000	.000	.000	.000	.000	.600	.000	.000	.625	.786	.632	.000	.917	.438	.692	.000	.000	.568	.000	.568	.677



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443-741-3500

File Name : Tamar Dr at Cloudleap Court

Site Code : 00000000

Start Date : 1/16/2019

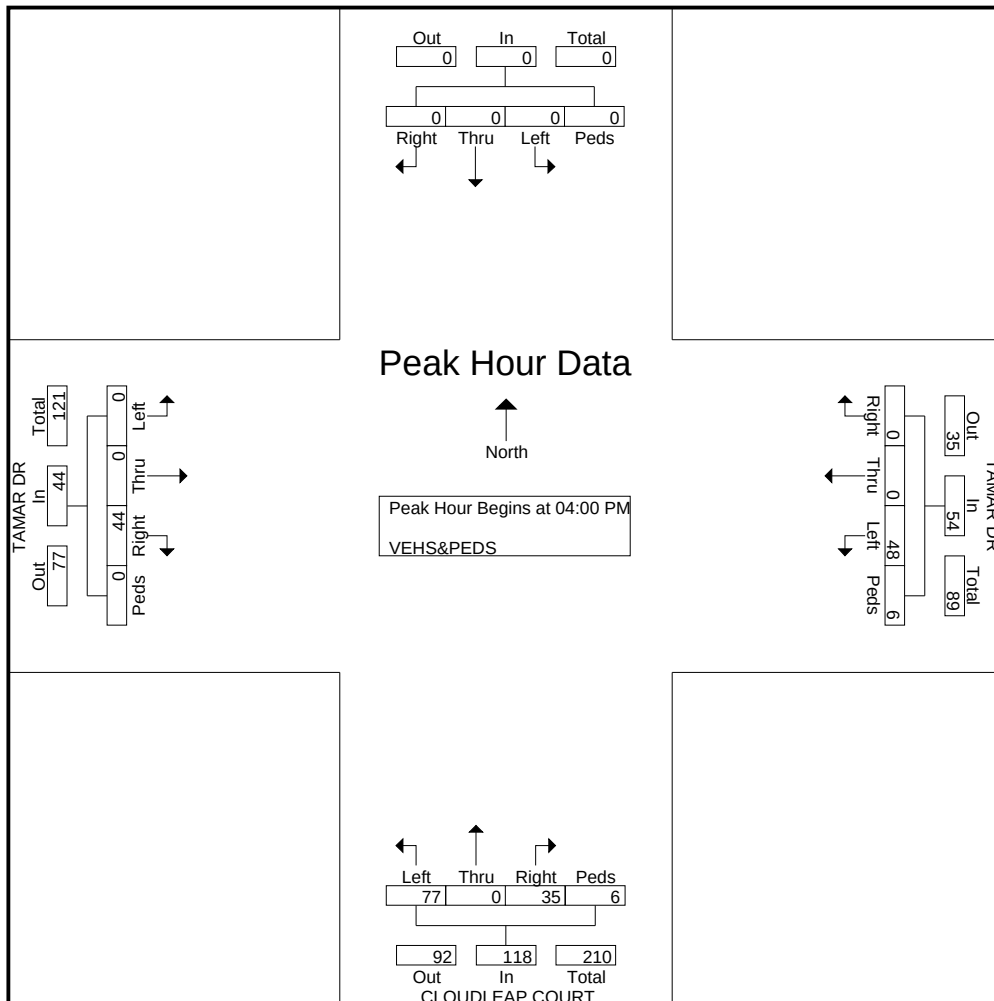
Page No : 4

	From North					TAMAR DR From East					CLOUDLEAP COURT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	0	0	0	0	0	11	0	0	3	14	21	0	12	3	36	0	0	13	0	13	63
04:15 PM	0	0	0	0	0	13	0	0	1	14	20	0	5	0	25	0	0	14	0	14	53
04:30 PM	0	0	0	0	0	11	0	0	0	11	21	0	11	2	34	0	0	4	0	4	49
04:45 PM	0	0	0	0	0	13	0	0	2	15	15	0	7	1	23	0	0	13	0	13	51
Total Volume	0	0	0	0	0	48	0	0	6	54	77	0	35	6	118	0	0	44	0	44	216
% App. Total	0	0	0	0		88.9	0	0	11.1		65.3	0	29.7	5.1		0	0	100	0		
PHF	.000	.000	.000	.000	.000	.923	.000	.000	.500	.900	.917	.000	.729	.500	.819	.000	.000	.786	.000	.786	.857



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Cloudleap Court
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	From North					TAMAR DR From East					CLOUDLEAP COURT From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	0	1	0	0	1	3
Apprch %	0	0	0	0		0	50	0	50		0	0	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	33.3	0	33.3	66.7	0	0	0	0	0	0	33.3	0	0	33.3	

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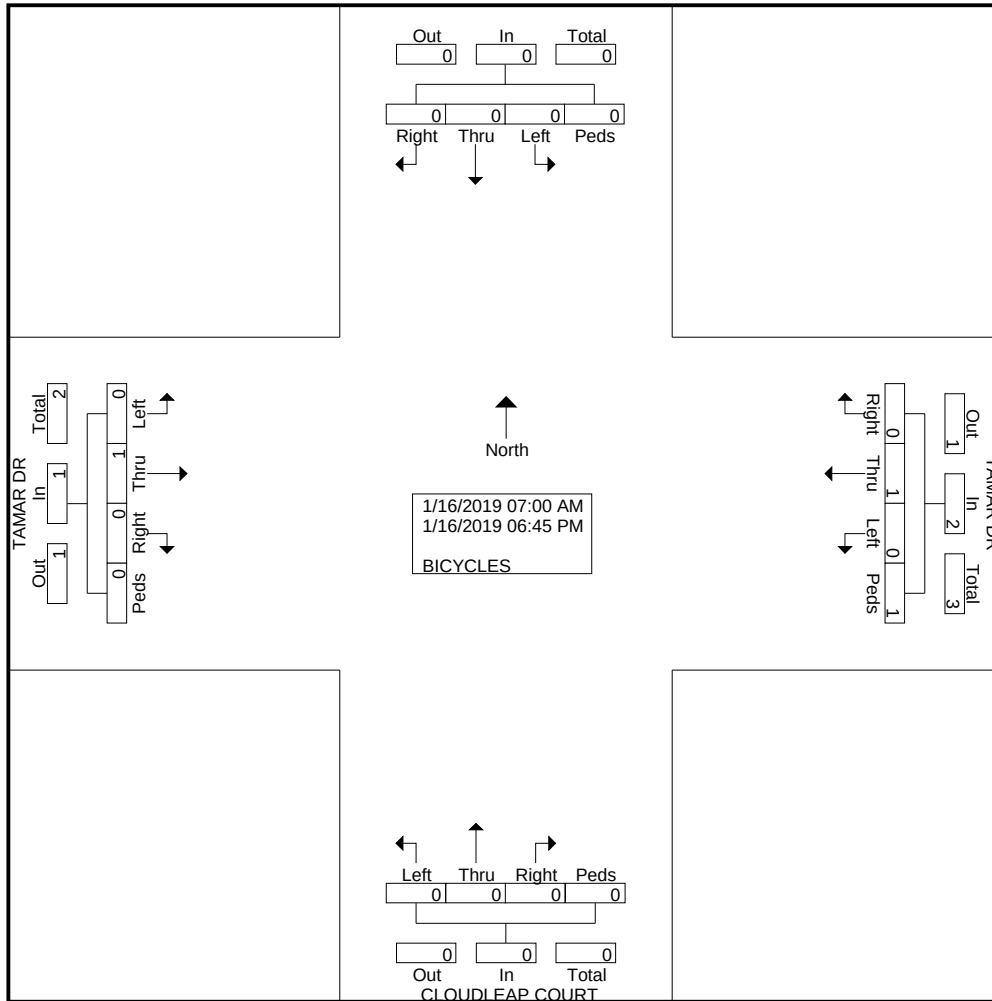
443-741-3500

File Name : Tamar Dr at Cloudleap Court

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Gary
Town:
County: Howard

File Name : Tamar Dr at Foreland Garth
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

	FORELAND GARTH From North					TAMAR DR From East					FORELAND GARTH From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	14	0	0	0	14	0	0	8	13	21	0	0	5	1	6	41
07:15 AM	0	0	0	0	0	13	0	0	0	13	4	0	19	7	30	0	0	6	0	6	49
07:30 AM	0	0	0	0	0	8	0	0	0	8	2	0	11	1	14	0	0	7	0	7	29
07:45 AM	0	0	0	0	0	10	0	0	0	10	5	0	13	1	19	0	0	8	0	8	37
Total	0	0	0	0	0	45	0	0	0	45	11	0	51	22	84	0	0	26	1	27	156
08:00 AM	0	0	0	0	0	14	0	0	0	14	1	0	6	0	7	0	0	11	0	11	32
08:15 AM	0	0	0	0	0	19	0	0	0	19	7	0	22	0	29	0	0	12	0	12	60
08:30 AM	0	0	0	0	0	10	0	0	0	10	13	0	13	0	26	0	0	13	0	13	49
08:45 AM	0	0	0	0	0	13	0	0	0	13	6	0	10	0	16	0	0	8	0	8	37
Total	0	0	0	0	0	56	0	0	0	56	27	0	51	0	78	0	0	44	0	44	178
*** BREAK ***																					
04:00 PM	0	0	0	0	0	16	0	0	0	16	7	0	14	1	22	0	0	9	0	9	47
04:15 PM	0	0	0	0	0	20	0	0	0	20	9	0	7	2	18	0	0	9	0	9	47
04:30 PM	0	0	0	0	0	18	0	0	0	18	9	0	9	0	18	0	0	10	2	12	48
04:45 PM	0	0	0	0	0	21	0	0	0	21	4	0	13	0	17	0	0	14	1	15	53
Total	0	0	0	0	0	75	0	0	0	75	29	0	43	3	75	0	0	42	3	45	195
05:00 PM	0	0	0	0	0	17	0	0	0	17	7	0	16	0	23	0	0	7	0	7	47
05:15 PM	0	0	0	0	0	13	0	0	1	14	8	0	17	2	27	0	0	11	6	17	58
05:30 PM	0	0	0	0	0	23	0	0	0	23	14	0	17	0	31	0	0	16	0	16	70
05:45 PM	0	0	0	0	0	21	0	0	0	21	8	0	11	0	19	0	0	11	0	11	51
Total	0	0	0	0	0	74	0	0	1	75	37	0	61	2	100	0	0	45	6	51	226
06:00 PM	0	0	0	0	0	21	0	0	0	21	16	0	21	0	37	0	0	10	0	10	68
06:15 PM	0	0	0	0	0	18	0	0	0	18	10	0	13	1	24	0	0	16	4	20	62
06:30 PM	0	0	0	0	0	27	0	0	0	27	8	0	11	0	19	0	0	11	2	13	59
06:45 PM	0	0	0	0	0	32	0	0	0	32	5	0	11	0	16	0	0	16	1	17	65
Total	0	0	0	0	0	98	0	0	0	98	39	0	56	1	96	0	0	53	7	60	254
Grand Total	0	0	0	0	0	348	0	0	1	349	143	0	262	28	433	0	0	210	17	227	1009
Apprch %	0	0	0	0		99.7	0	0	0.3		33	0	60.5	6.5		0	0	92.5	7.5		
Total %	0	0	0	0	0	34.5	0	0	0.1	34.6	14.2	0	26	2.8	42.9	0	0	20.8	1.7	22.5	

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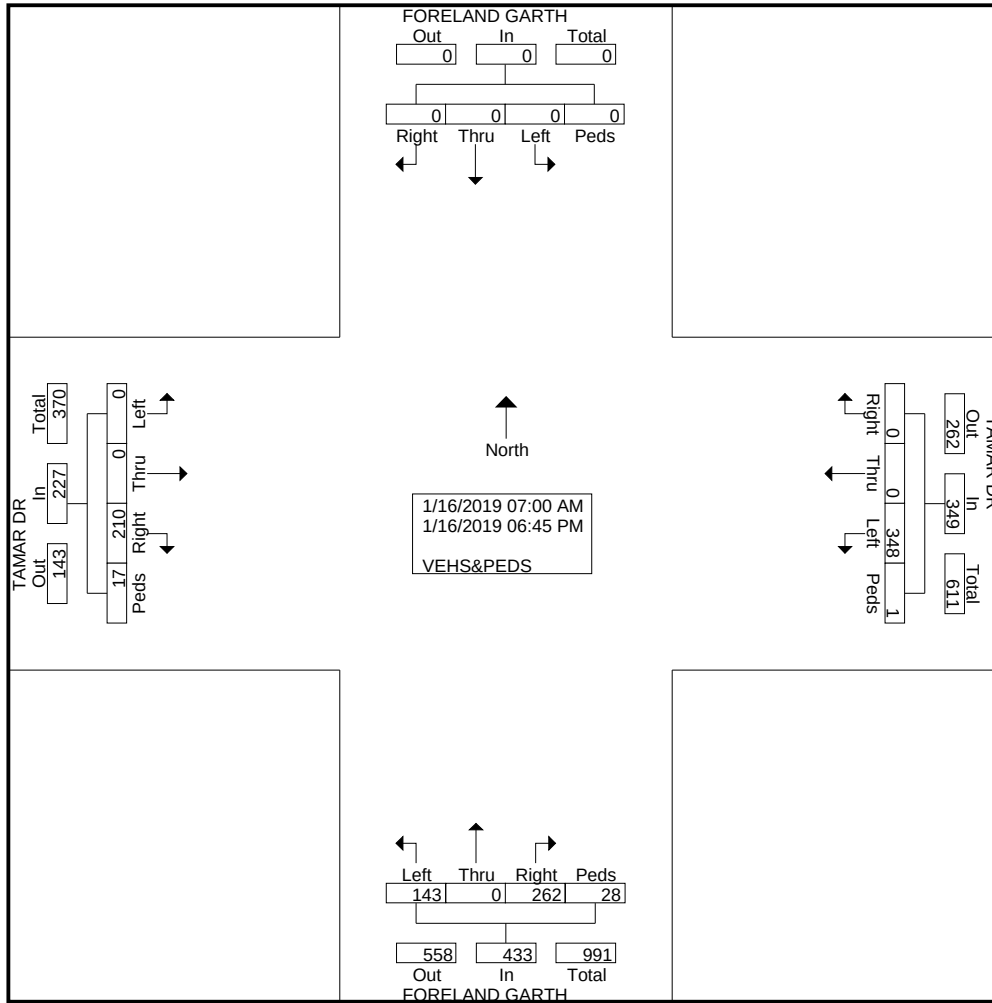
443-741-3500

File Name : Tamar Dr at Foreland Garth

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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443-741-3500

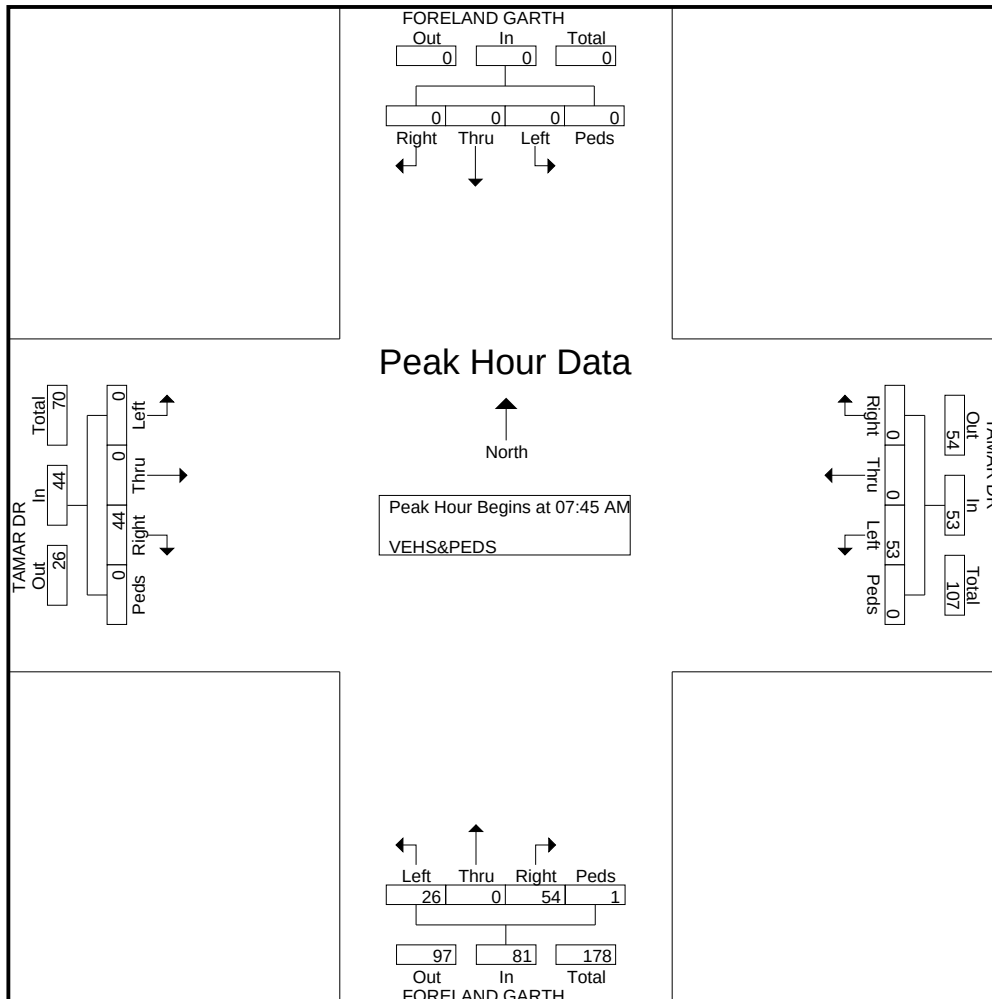
File Name : Tamar Dr at Foreland Garth

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	FORELAND GARTH From North					TAMAR DR From East					FORELAND GARTH From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	10	0	0	0	10	5	0	13	1	19	0	0	8	0	8	37
08:00 AM	0	0	0	0	0	14	0	0	0	14	1	0	6	0	7	0	0	11	0	11	32
08:15 AM	0	0	0	0	0	19	0	0	0	19	7	0	22	0	29	0	0	12	0	12	60
08:30 AM	0	0	0	0	0	10	0	0	0	10	13	0	13	0	26	0	0	13	0	13	49
Total Volume	0	0	0	0	0	53	0	0	0	53	26	0	54	1	81	0	0	44	0	44	178
% App. Total	0	0	0	0	0	100	0	0	0	0	32.1	0	66.7	1.2		0	0	100	0		
PHF	.000	.000	.000	.000	.000	.697	.000	.000	.000	.697	.500	.000	.614	.250	.698	.000	.000	.846	.000	.846	.742



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File Name : Tamar Dr at Foreland Garth

Site Code : 00000000

Start Date : 1/16/2019

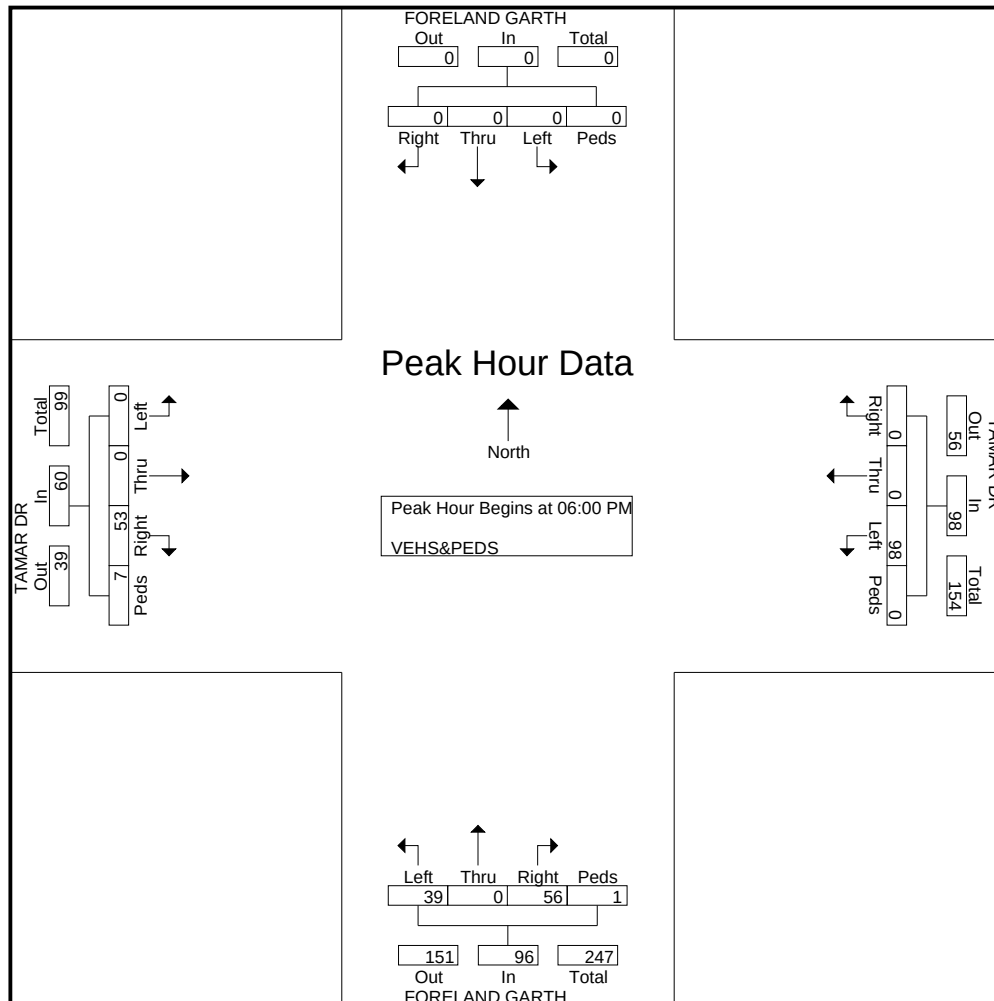
Page No : 4

	FORELAND GARTH From North					TAMAR DR From East					FORELAND GARTH From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 06:00 PM

06:00 PM	0	0	0	0	0	21	0	0	0	21	16	0	21	0	37	0	0	10	0	10	68
06:15 PM	0	0	0	0	0	18	0	0	0	18	10	0	13	1	24	0	0	16	4	20	62
06:30 PM	0	0	0	0	0	27	0	0	0	27	8	0	11	0	19	0	0	11	2	13	59
06:45 PM	0	0	0	0	0	32	0	0	0	32	5	0	11	0	16	0	0	16	1	17	65
Total Volume	0	0	0	0	0	98	0	0	0	98	39	0	56	1	96	0	0	53	7	60	254
% App. Total	0	0	0	0		100	0	0	0		40.6	0	58.3	1		0	0	88.3	11.7		
PHF	.000	.000	.000	.000	.000	.766	.000	.000	.000	.766	.609	.000	.667	.250	.649	.000	.000	.828	.438	.750	.934



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Columbia, MD, 21046
443-741-3500

Weather: Clear
Counted By: Gary
Town:
County: Howard

File Name : Tamar Dr at Foreland Garth
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	FORELAND GARTH From North					TAMAR DR From East					FORELAND GARTH From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	0	50	0	0	50	

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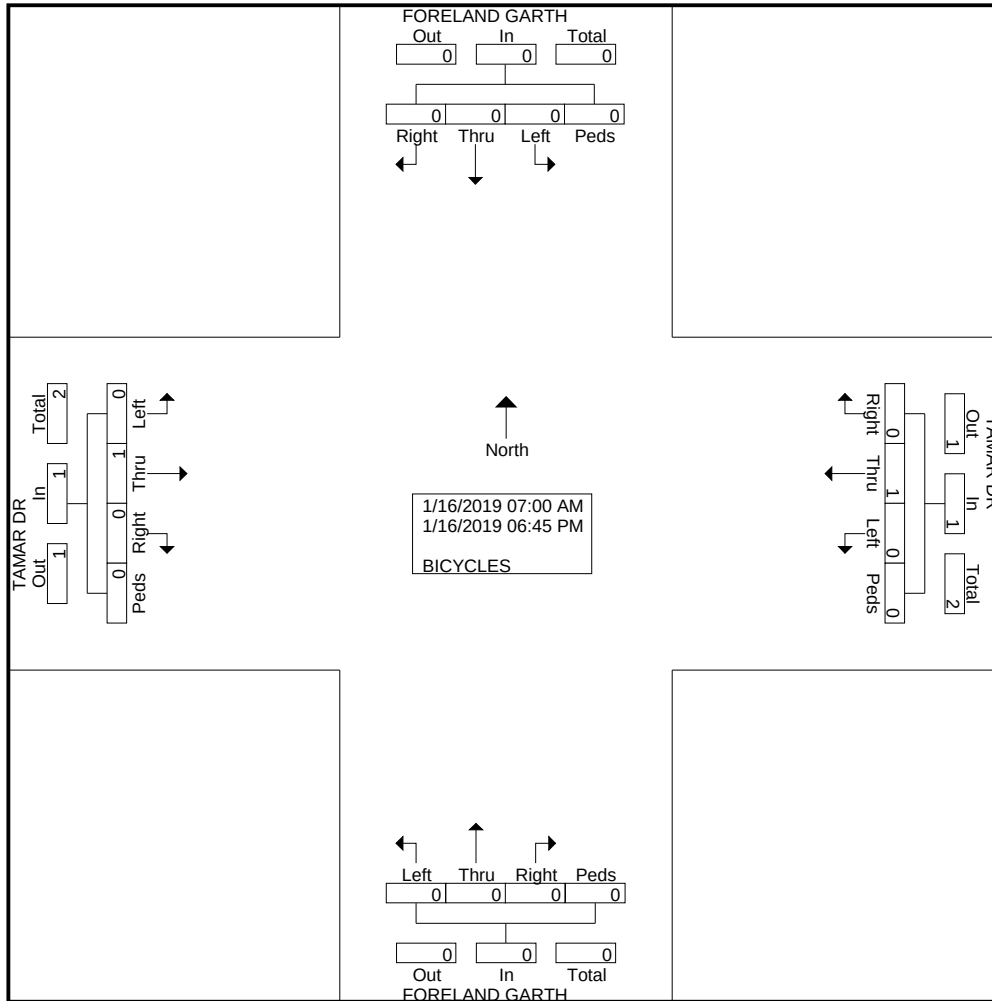
443-741-3500

File Name : Tamar Dr at Foreland Garth

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Gary
Town:
County: Howard

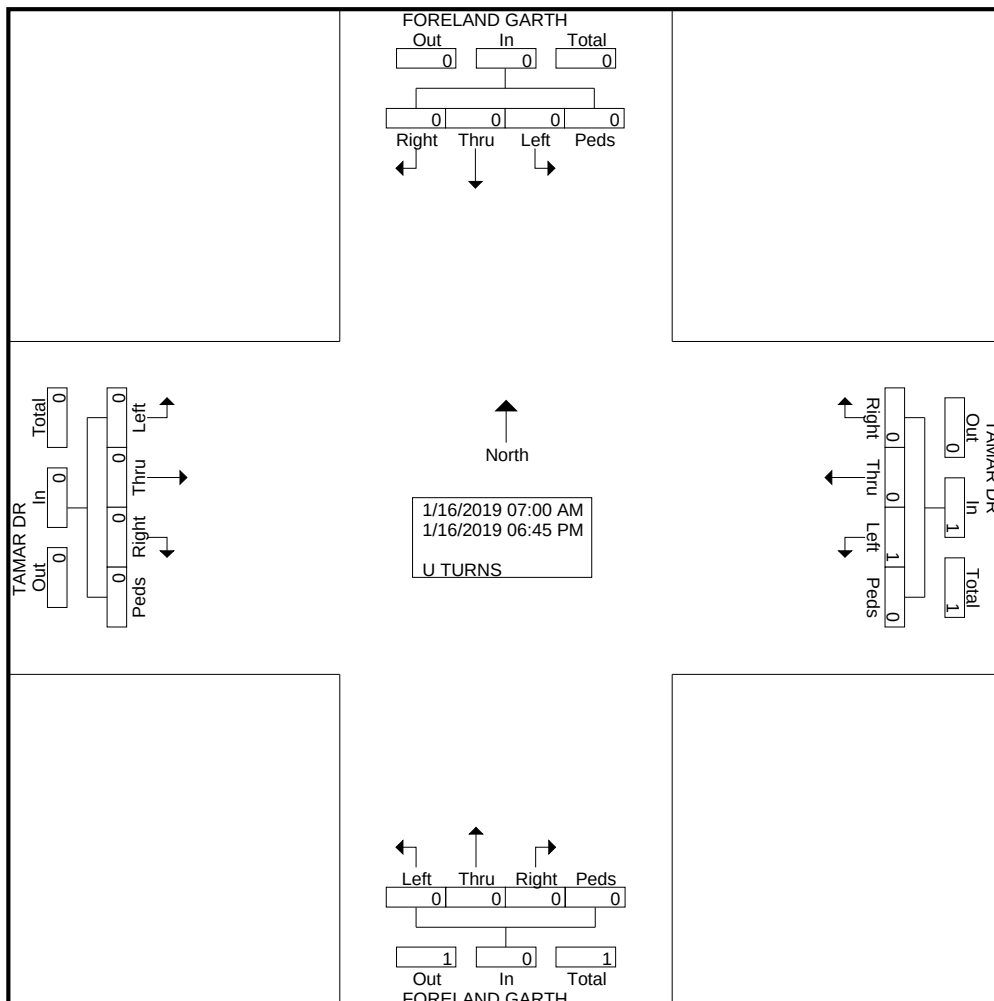
File Name : Tamar Dr at Foreland Garth
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- U TURNS

	FORELAND GARTH From North					TAMAR DR From East					FORELAND GARTH From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1

*** BREAK ***

Grand Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0		100	0	0	0		0	0	0	0		0	0	0	0			
Total %	0	0	0	0	0	100	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	



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443-741-3500

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Columbia, MD, 21046

443-741-3500

Weather: Cloudy
Counted By: Gary
Town:
County: Howard

File Name : Tamar Dr at Airybrink Ln
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

	AIRYBRINK LN From North					TAMAR DR From East					AIRYBRINK LN From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	5	0	5	8	18	0	0	2	1	3	0	0	0	0	0	1	0	0	0	1	22
07:15 AM	3	0	1	9	13	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	14
07:30 AM	4	0	1	3	8	0	0	1	0	1	0	0	0	0	0	4	0	0	0	4	13
07:45 AM	4	0	0	0	4	0	0	2	0	2	0	0	0	0	0	2	0	0	0	2	8
Total	16	0	7	20	43	0	0	6	1	7	0	0	0	0	0	7	0	0	0	7	57
08:00 AM	1	0	0	0	1	0	0	3	0	3	0	0	0	0	0	1	0	0	0	1	5
08:15 AM	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4
08:30 AM	3	0	6	2	11	0	0	2	0	2	0	0	0	0	0	4	0	0	0	4	17
08:45 AM	7	0	8	1	16	0	0	3	1	4	0	0	0	0	0	6	0	0	1	7	27
Total	13	0	15	3	31	0	0	8	1	9	0	0	0	0	0	12	0	0	1	13	53
*** BREAK ***																					
04:00 PM	4	0	0	5	9	0	0	4	0	4	0	0	0	0	0	3	0	0	0	3	16
04:15 PM	3	0	4	0	7	0	0	5	0	5	0	0	0	0	0	2	0	0	0	2	14
04:30 PM	4	0	5	0	9	0	0	5	0	5	0	0	0	0	0	2	0	0	0	2	16
04:45 PM	3	0	7	0	10	0	0	8	0	8	0	0	0	0	0	2	0	0	0	2	20
Total	14	0	16	5	35	0	0	22	0	22	0	0	0	0	0	9	0	0	0	9	66
05:00 PM	2	0	5	1	8	0	0	3	3	6	0	0	0	0	0	1	0	0	3	4	18
05:15 PM	2	0	2	2	6	0	0	1	0	1	0	0	0	0	0	7	0	0	2	9	16
05:30 PM	1	0	5	0	6	0	0	4	0	4	0	0	0	0	0	3	0	0	0	3	13
05:45 PM	0	0	5	1	6	0	0	4	0	4	0	0	0	0	0	2	0	0	0	2	12
Total	5	0	17	4	26	0	0	12	3	15	0	0	0	0	0	13	0	0	5	18	59
06:00 PM	3	0	3	0	6	0	0	2	0	2	0	0	0	0	0	2	0	0	4	6	14
06:15 PM	4	0	5	0	9	0	0	4	0	4	0	0	0	0	0	4	0	0	0	4	17
06:30 PM	1	0	3	4	8	0	0	6	1	7	0	0	0	0	0	3	0	0	0	3	18
06:45 PM	1	0	3	0	4	0	0	4	0	4	0	0	0	0	0	1	0	0	0	1	9
Total	9	0	14	4	27	0	0	16	1	17	0	0	0	0	0	10	0	0	4	14	58
Grand Total	57	0	69	36	162	0	0	64	6	70	0	0	0	0	0	51	0	0	10	61	293
Apprch %	35.2	0	42.6	22.2		0	0	91.4	8.6		0	0	0	0		83.6	0	0	16.4		
Total %	19.5	0	23.5	12.3	55.3	0	0	21.8	2	23.9	0	0	0	0	0	17.4	0	0	3.4	20.8	

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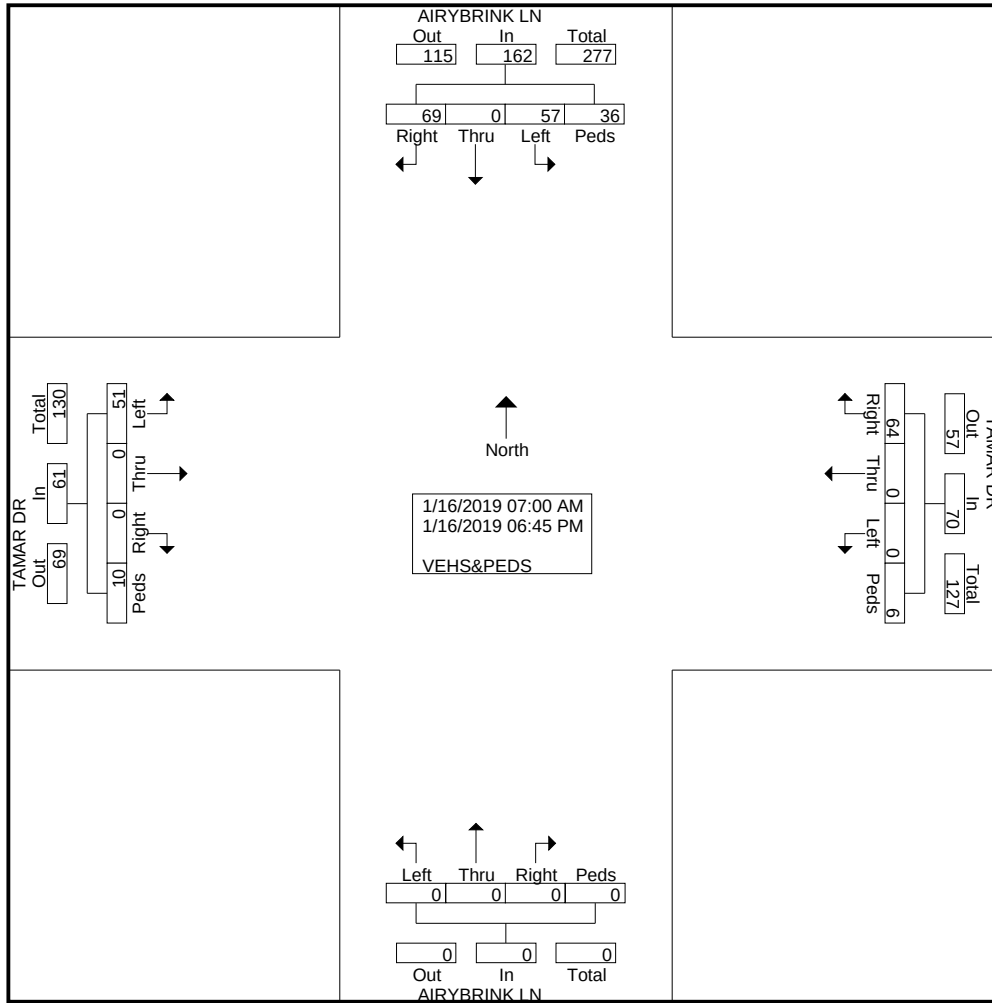
443-741-3500

File Name : Tamar Dr at Airybrink Ln

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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443-741-3500

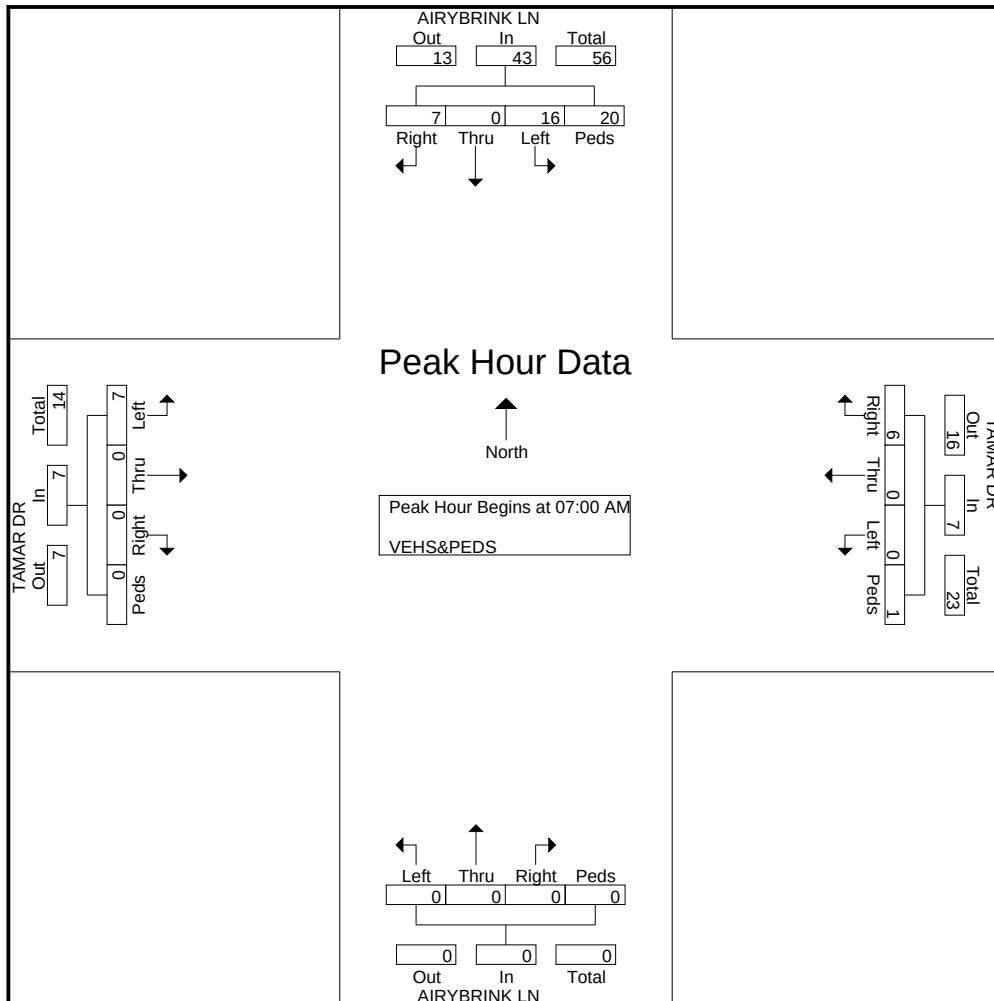
File Name : Tamar Dr at Airybrink Ln

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	AIRYBRINK LN From North					TAMAR DR From East					AIRYBRINK LN From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	5	0	5	8	18	0	0	2	1	3	0	0	0	0	0	1	0	0	0	1	22
07:15 AM	3	0	1	9	13	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	14
07:30 AM	4	0	1	3	8	0	0	1	0	1	0	0	0	0	0	4	0	0	0	4	13
07:45 AM	4	0	0	0	4	0	0	2	0	2	0	0	0	0	0	2	0	0	0	2	8
Total Volume	16	0	7	20	43	0	0	6	1	7	0	0	0	0	0	7	0	0	0	7	57
% App. Total	37.2	0	16.3	46.5		0	0	85.7	14.3		0	0	0	0		100	0	0	0		
PHF	.800	.000	.350	.556	.597	.000	.000	.750	.250	.583	.000	.000	.000	.000	.000	.438	.000	.000	.000	.438	.648



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443-741-3500

File Name : Tamar Dr at Airybrink Ln

Site Code : 00000000

Start Date : 1/16/2019

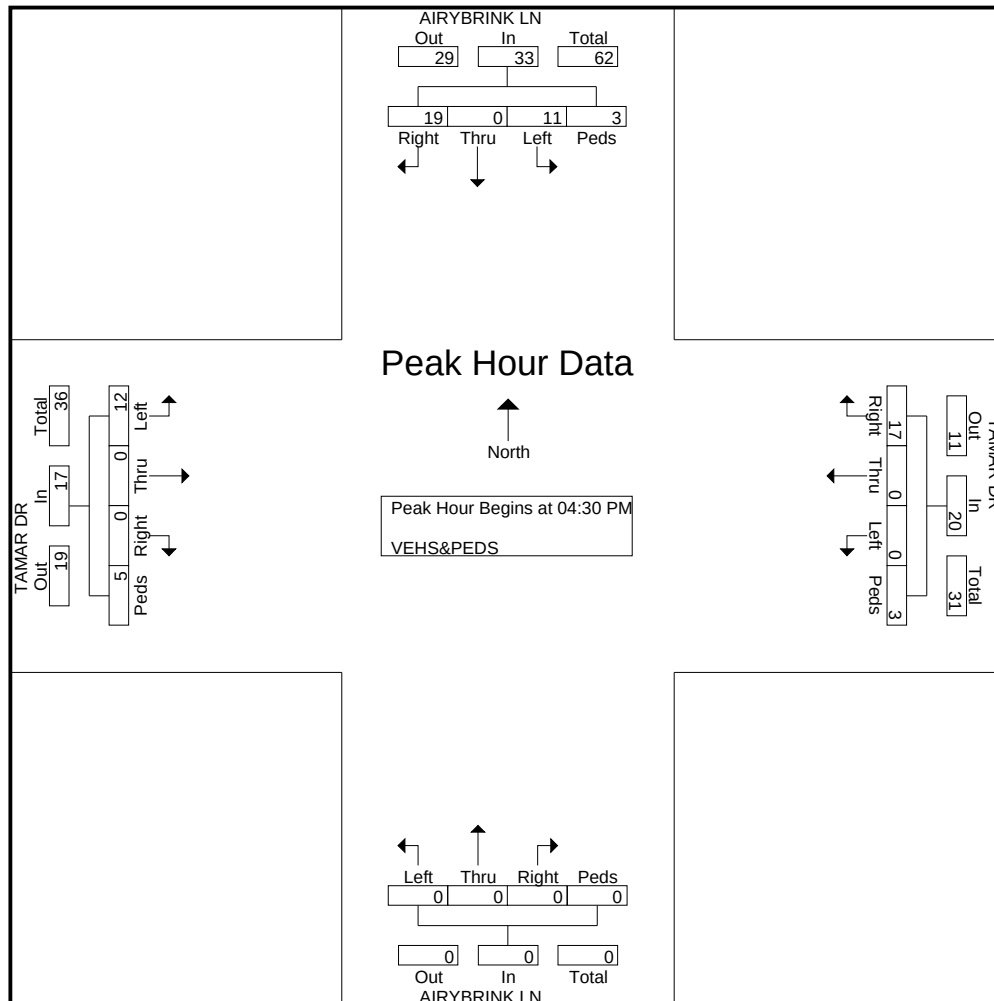
Page No : 4

	AIRYBRINK LN From North					TAMAR DR From East					AIRYBRINK LN From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

04:30 PM	4	0	5	0	9	0	0	5	0	5	0	0	0	0	0	2	0	0	0	2	16
04:45 PM	3	0	7	0	10	0	0	8	0	8	0	0	0	0	0	2	0	0	0	2	20
05:00 PM	2	0	5	1	8	0	0	3	3	6	0	0	0	0	0	1	0	0	3	4	18
05:15 PM	2	0	2	2	6	0	0	1	0	1	0	0	0	0	0	7	0	0	2	9	16
Total Volume	11	0	19	3	33	0	0	17	3	20	0	0	0	0	0	12	0	0	5	17	70
% App. Total	33.3	0	57.6	9.1		0	0	85	15		0	0	0	0		70.6	0	0	29.4		
PHF	.688	.000	.679	.375	.825	.000	.000	.531	.250	.625	.000	.000	.000	.000	.000	.429	.000	.000	.417	.472	.875



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046
443-741-3500

Weather: Cloudy
Counted By: Gary
Town:
County: Howard

File Name : Tamar Dr at Airybrink Ln
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	AIRYBRINK LN From North					TAMAR DR From East					AIRYBRINK LN From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***																					
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
06:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3
Apprch %	0	0	0	100		0	100	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	0	33.3	33.3	0	33.3	0	0	33.3	0	0	0	0	0	0	33.3	0	0	33.3	

Sabra & Associates

7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

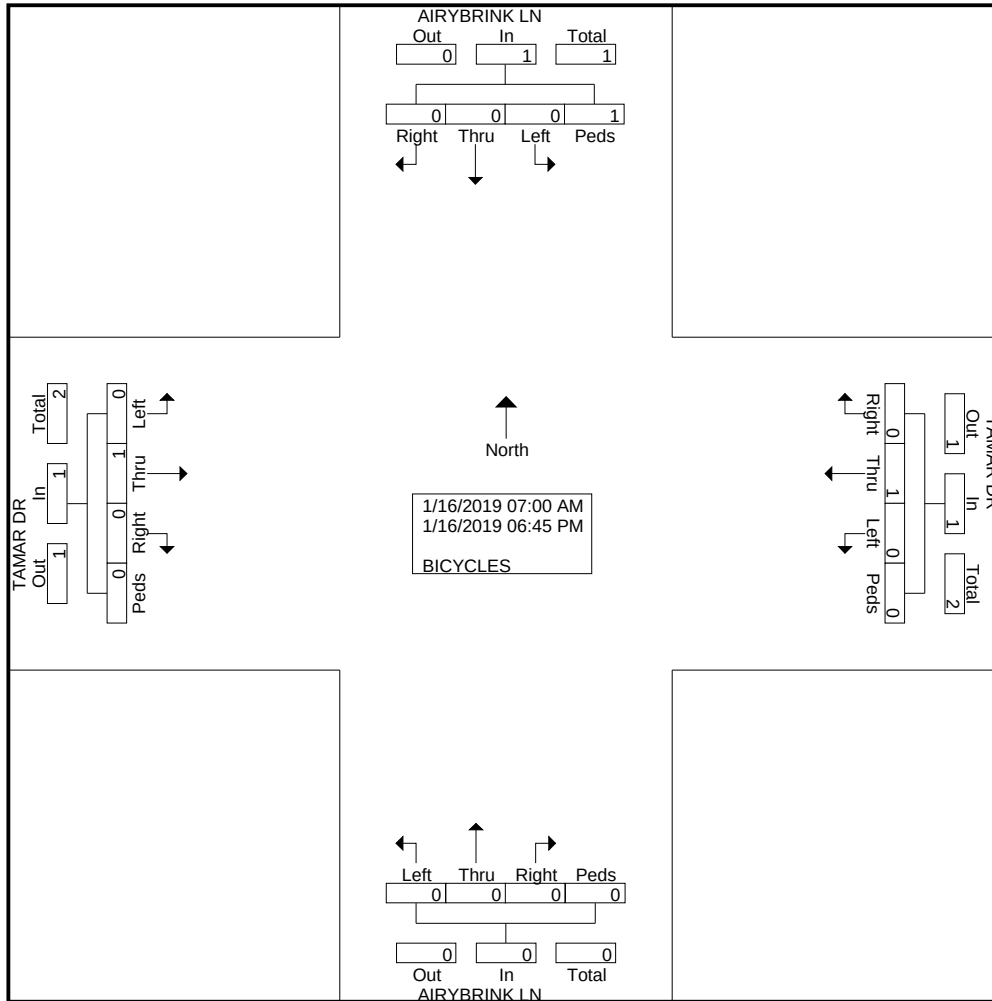
443-741-3500

File Name : Tamar Dr at Airybrink Ln

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar Dr at Old Dobbin La
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

Start Time	From North					TAMAR DR From East					OLD DOBBIN LA From South					TAMAR DR From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	0	0	0	0	0	119	52	0	12	183	26	0	74	10	110	0	53	70	0	123	416
07:15 AM	0	0	0	0	0	98	52	0	39	189	39	0	114	13	166	0	84	56	0	140	495
07:30 AM	0	0	0	0	0	37	35	0	2	74	12	0	20	2	34	0	65	28	0	93	201
07:45 AM	0	0	0	0	0	42	64	0	1	107	11	0	7	1	19	0	76	30	0	106	232
Total	0	0	0	0	0	296	203	0	54	553	88	0	215	26	329	0	278	184	0	462	1344
08:00 AM	0	0	0	0	0	54	49	0	1	104	16	0	8	1	25	0	51	25	0	76	205
08:15 AM	0	0	0	0	0	51	71	0	1	123	14	0	8	0	22	0	53	31	0	84	229
08:30 AM	0	0	0	0	0	63	70	0	2	135	12	0	13	1	26	0	61	36	0	97	258
08:45 AM	0	0	0	0	0	47	84	0	1	132	17	0	19	1	37	0	68	40	0	108	277
Total	0	0	0	0	0	215	274	0	5	494	59	0	48	3	110	0	233	132	0	365	969
*** BREAK ***																					
04:00 PM	0	0	0	0	0	42	82	0	6	130	72	0	58	1	131	0	71	41	0	112	373
04:15 PM	0	0	0	0	0	38	96	0	2	136	56	0	62	1	119	0	50	43	0	93	348
04:30 PM	0	0	0	0	0	31	85	0	1	117	68	0	59	0	127	0	70	40	0	110	354
04:45 PM	0	0	0	0	0	46	100	0	3	149	70	0	58	0	128	0	71	33	0	104	381
Total	0	0	0	0	0	157	363	0	12	532	266	0	237	2	505	0	262	157	0	419	1456
05:00 PM	0	0	0	0	0	41	94	0	6	141	85	0	88	0	173	0	83	39	0	122	436
05:15 PM	0	0	0	0	0	61	87	0	1	149	65	0	78	4	147	0	83	38	0	121	417
05:30 PM	0	0	0	0	0	38	126	0	2	166	76	0	75	0	151	0	84	41	0	125	442
05:45 PM	0	0	0	0	0	35	95	0	1	131	65	0	69	1	135	0	73	32	0	105	371
Total	0	0	0	0	0	175	402	0	10	587	291	0	310	5	606	0	323	150	0	473	1666
Grand Total	0	0	0	0	0	843	1242	0	81	2166	704	0	810	36	1550	0	1096	623	0	1719	5435
Apprch %	0	0	0	0	0	38.9	57.3	0	3.7		45.4	0	52.3	2.3		0	63.8	36.2	0		
Total %	0	0	0	0	0	15.5	22.9	0	1.5	39.9	13	0	14.9	0.7	28.5	0	20.2	11.5	0	31.6	

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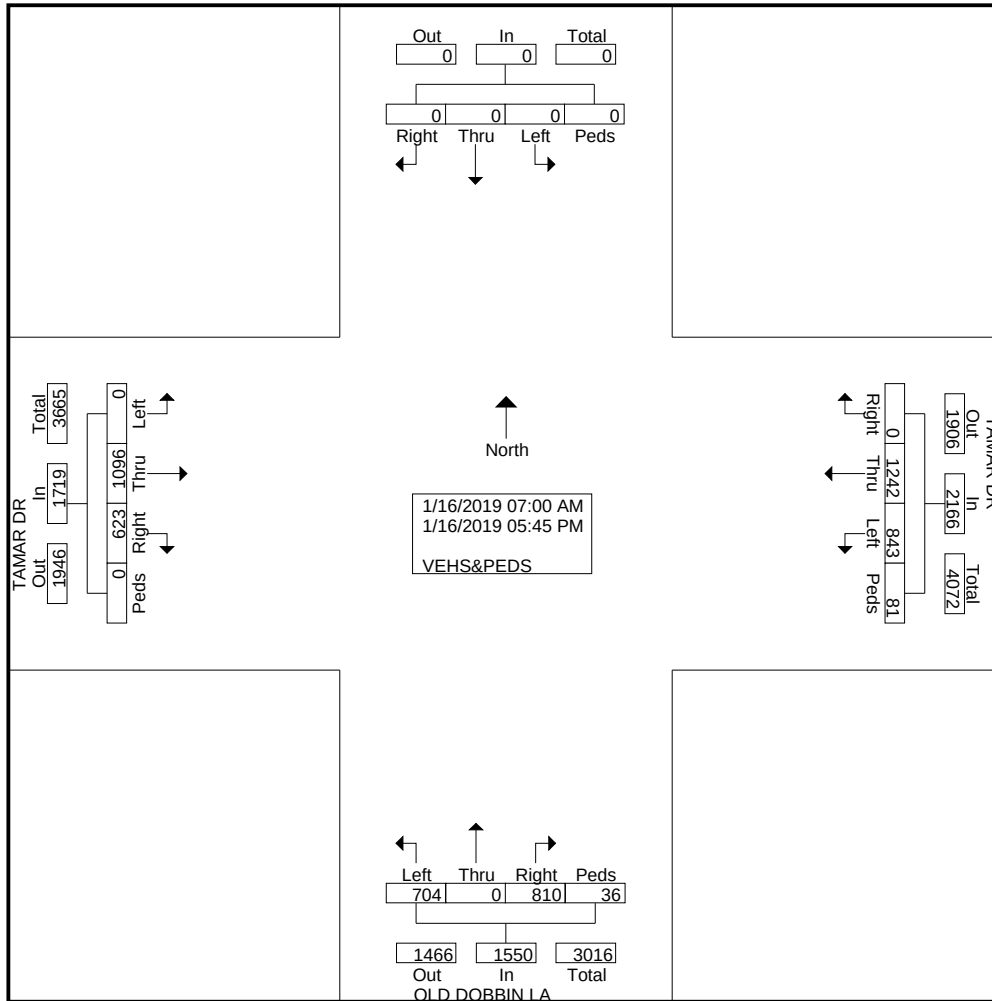
443-741-3500

File Name : Tamar Dr at Old Dobbin La

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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443-741-3500

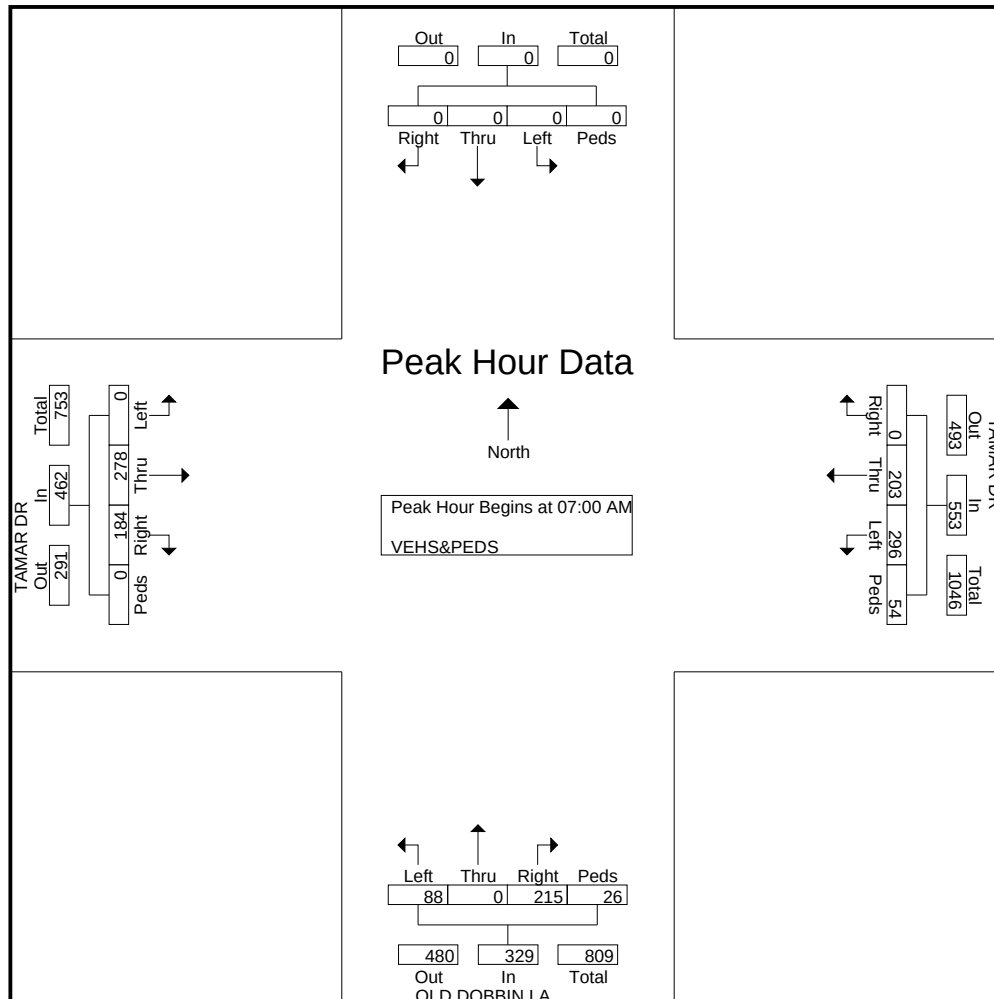
File Name : Tamar Dr at Old Dobbin La

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	From North					TAMAR DR From East					OLD DOBBIN LA From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0	0	119	52	0	12	183	26	0	74	10	110	0	53	70	0	123	416
07:15 AM	0	0	0	0	0	98	52	0	39	189	39	0	114	13	166	0	84	56	0	140	495
07:30 AM	0	0	0	0	0	37	35	0	2	74	12	0	20	2	34	0	65	28	0	93	201
07:45 AM	0	0	0	0	0	42	64	0	1	107	11	0	7	1	19	0	76	30	0	106	232
Total Volume	0	0	0	0	0	296	203	0	54	553	88	0	215	26	329	0	278	184	0	462	1344
% App. Total	0	0	0	0	0	53.5	36.7	0	9.8		26.7	0	65.3	7.9		0	60.2	39.8	0		
PHF	.000	.000	.000	.000	.000	.622	.793	.000	.346	.731	.564	.000	.471	.500	.495	.000	.827	.657	.000	.825	.679



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443-741-3500

File Name : Tamar Dr at Old Dobbin La

Site Code : 00000000

Start Date : 1/16/2019

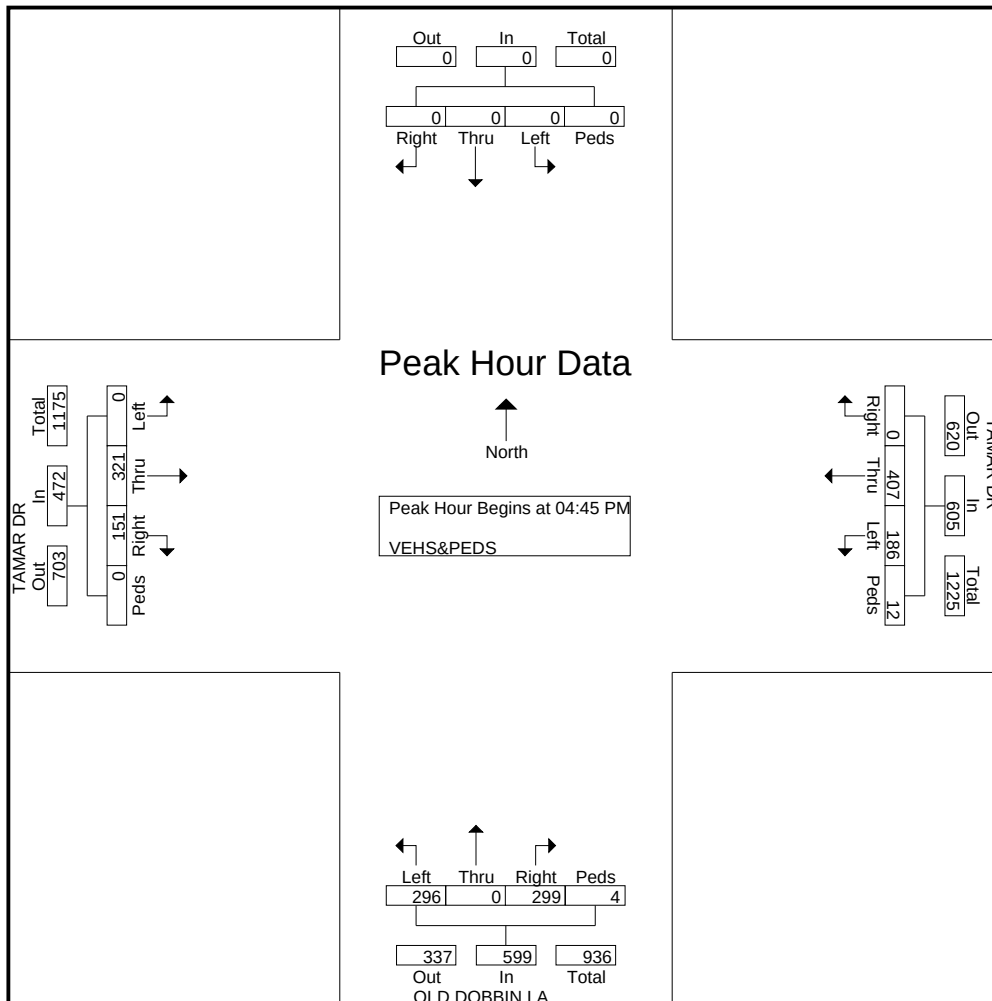
Page No : 4

	From North					TAMAR DR From East					OLD DOBBIN LA From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	0	0	0	0	0	46	100	0	3	149	70	0	58	0	128	0	71	33	0	104	381
05:00 PM	0	0	0	0	0	41	94	0	6	141	85	0	88	0	173	0	83	39	0	122	436
05:15 PM	0	0	0	0	0	61	87	0	1	149	65	0	78	4	147	0	83	38	0	121	417
05:30 PM	0	0	0	0	0	38	126	0	2	166	76	0	75	0	151	0	84	41	0	125	442
Total Volume	0	0	0	0	0	186	407	0	12	605	296	0	299	4	599	0	321	151	0	472	1676
% App. Total	0	0	0	0		30.7	67.3	0	2		49.4	0	49.9	0.7		0	68	32	0		
PHF	.000	.000	.000	.000	.000	.762	.808	.000	.500	.911	.871	.000	.849	.250	.866	.000	.955	.921	.000	.944	.948



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Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar Dr at Old Dobbin La
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	From North					TAMAR DR From East					OLD DOBBIN LA From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
*** BREAK ***																					
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
Apprch %	0	0	0	0		0	0	0	0		0	0	0	100		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	50	50	

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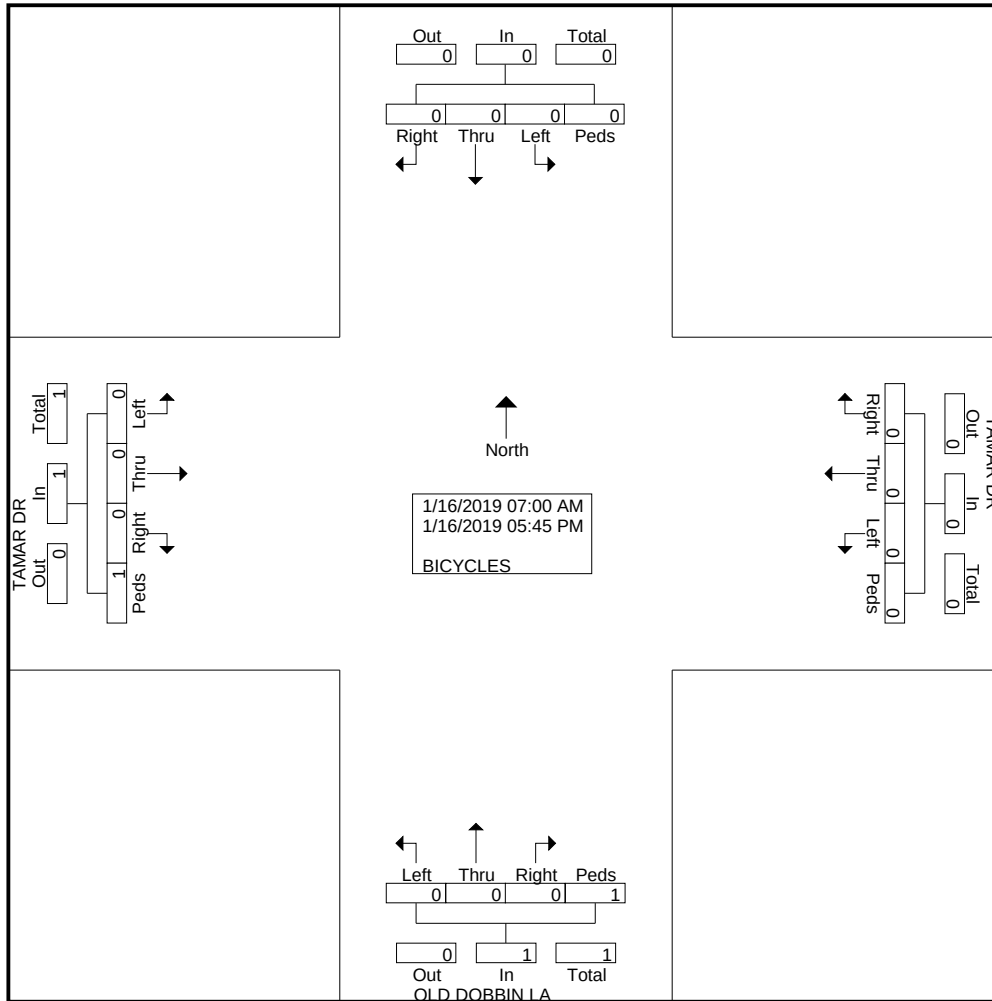
443-741-3500

File Name : Tamar Dr at Old Dobbin La

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Coudy
Counted By: Mike
Town:
County: Howard

File Name : Tamar Dr at Autumn Ridge Dr
Site Code : 00000000
Start Date : 1/23/2019
Page No : 1

Groups Printed- VEHS&PEDS

	AUTUMN RIDGE DR From North					TAMAR DR From East					AUTUMN RIDGE DR From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	0	5	10	17	0	188	0	1	189	0	0	0	0	0	3	152	0	2	157	363
07:15 AM	6	0	6	4	16	0	117	1	1	119	0	0	0	0	0	3	169	0	1	173	308
07:30 AM	3	0	2	0	5	0	103	1	0	104	0	0	0	0	0	1	74	0	0	75	184
07:45 AM	2	0	0	1	3	0	107	1	0	108	0	0	0	0	0	3	80	0	0	83	194
Total	13	0	13	15	41	0	515	3	2	520	0	0	0	0	0	10	475	0	3	488	1049
08:00 AM	5	0	3	1	9	0	104	1	0	105	0	0	0	0	0	1	60	0	1	62	176
08:15 AM	2	0	4	0	6	0	114	0	0	114	0	0	0	0	0	2	58	0	0	60	180
08:30 AM	4	0	4	0	8	0	101	2	0	103	0	0	0	0	0	3	79	0	0	82	193
08:45 AM	3	0	8	0	11	0	135	1	0	136	0	0	0	0	0	3	66	0	0	69	216
Total	14	0	19	1	34	0	454	4	0	458	0	0	0	0	0	9	263	0	1	273	765
*** BREAK ***																					
04:00 PM	0	0	0	0	0	0	118	3	0	121	0	0	0	0	0	4	110	0	0	114	235
04:15 PM	3	0	4	0	7	0	128	2	0	130	0	0	0	0	0	7	127	0	0	134	271
04:30 PM	1	0	3	1	5	0	151	2	0	153	0	0	0	0	0	6	133	0	0	139	297
04:45 PM	4	0	4	3	11	0	126	0	0	126	0	0	0	0	0	5	140	0	0	145	282
Total	8	0	11	4	23	0	523	7	0	530	0	0	0	0	0	22	510	0	0	532	1085
05:00 PM	1	0	5	1	7	0	134	4	0	138	0	0	0	0	0	8	145	0	1	154	299
05:15 PM	3	0	2	1	6	0	120	1	0	121	0	0	0	0	0	9	133	0	0	142	269
05:30 PM	0	0	5	4	9	0	123	1	0	124	0	0	0	0	0	8	120	0	1	129	262
05:45 PM	0	0	3	0	3	0	118	0	0	118	0	0	0	0	0	7	131	0	0	138	259
Total	4	0	15	6	25	0	495	6	0	501	0	0	0	0	0	32	529	0	2	563	1089
06:00 PM	0	0	5	0	5	0	131	4	0	135	0	0	0	0	0	5	104	0	0	109	249
06:15 PM	1	0	3	1	5	0	120	1	0	121	0	0	0	0	0	5	101	0	0	106	232
06:30 PM	3	0	0	0	3	0	117	2	0	119	0	0	0	0	0	6	119	0	0	125	247
06:45 PM	4	0	3	0	7	0	92	2	0	94	0	0	0	0	0	3	105	0	0	108	209
Total	8	0	11	1	20	0	460	9	0	469	0	0	0	0	0	19	429	0	0	448	937
Grand Total	47	0	69	27	143	0	2447	29	2	2478	0	0	0	0	0	92	2206	0	6	2304	4925
Apprch %	32.9	0	48.3	18.9		0	98.7	1.2	0.1		0	0	0	0		4	95.7	0	0.3		
Total %	1	0	1.4	0.5	2.9	0	49.7	0.6	0	50.3	0	0	0	0	0	1.9	44.8	0	0.1	46.8	

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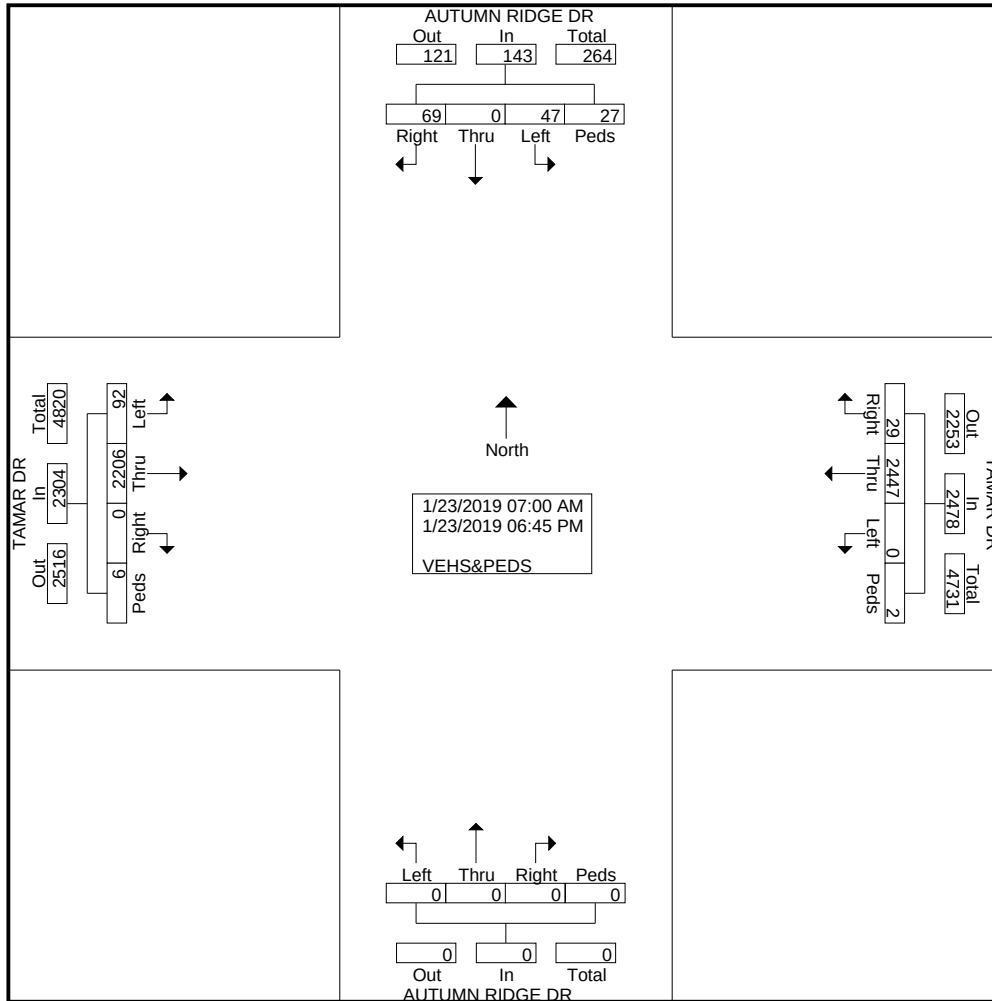
443-741-3500

File Name : Tamar Dr at Autumn Ridge Dr

Site Code : 00000000

Start Date : 1/23/2019

Page No : 2



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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

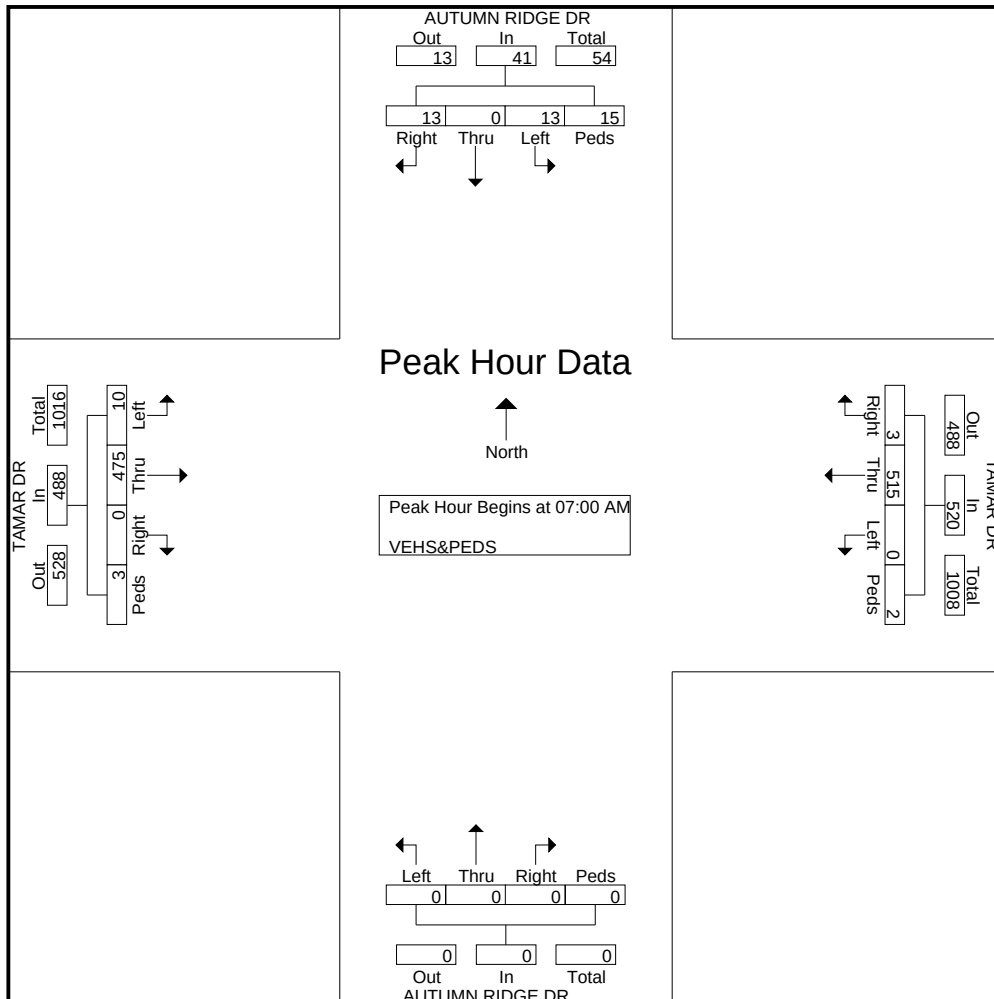
File Name : Tamar Dr at Autumn Ridge Dr

Site Code : 00000000

Start Date : 1/23/2019

Page No : 3

	AUTUMN RIDGE DR From North					TAMAR DR From East					AUTUMN RIDGE DR From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	2	0	5	10	17	0	188	0	1	189	0	0	0	0	0	3	152	0	2	157	363
07:15 AM	6	0	6	4	16	0	117	1	1	119	0	0	0	0	0	3	169	0	1	173	308
07:30 AM	3	0	2	0	5	0	103	1	0	104	0	0	0	0	0	1	74	0	0	75	184
07:45 AM	2	0	0	1	3	0	107	1	0	108	0	0	0	0	0	3	80	0	0	83	194
Total Volume	13	0	13	15	41	0	515	3	2	520	0	0	0	0	0	10	475	0	3	488	1049
% App. Total	31.7	0	31.7	36.6		0	99	0.6	0.4		0	0	0	0		2	97.3	0	0.6		
PHF	.542	.000	.542	.375	.603	.000	.685	.750	.500	.688	.000	.000	.000	.000	.000	.833	.703	.000	.375	.705	.722



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443-741-3500

File Name : Tamar Dr at Autumn Ridge Dr

Site Code : 00000000

Start Date : 1/23/2019

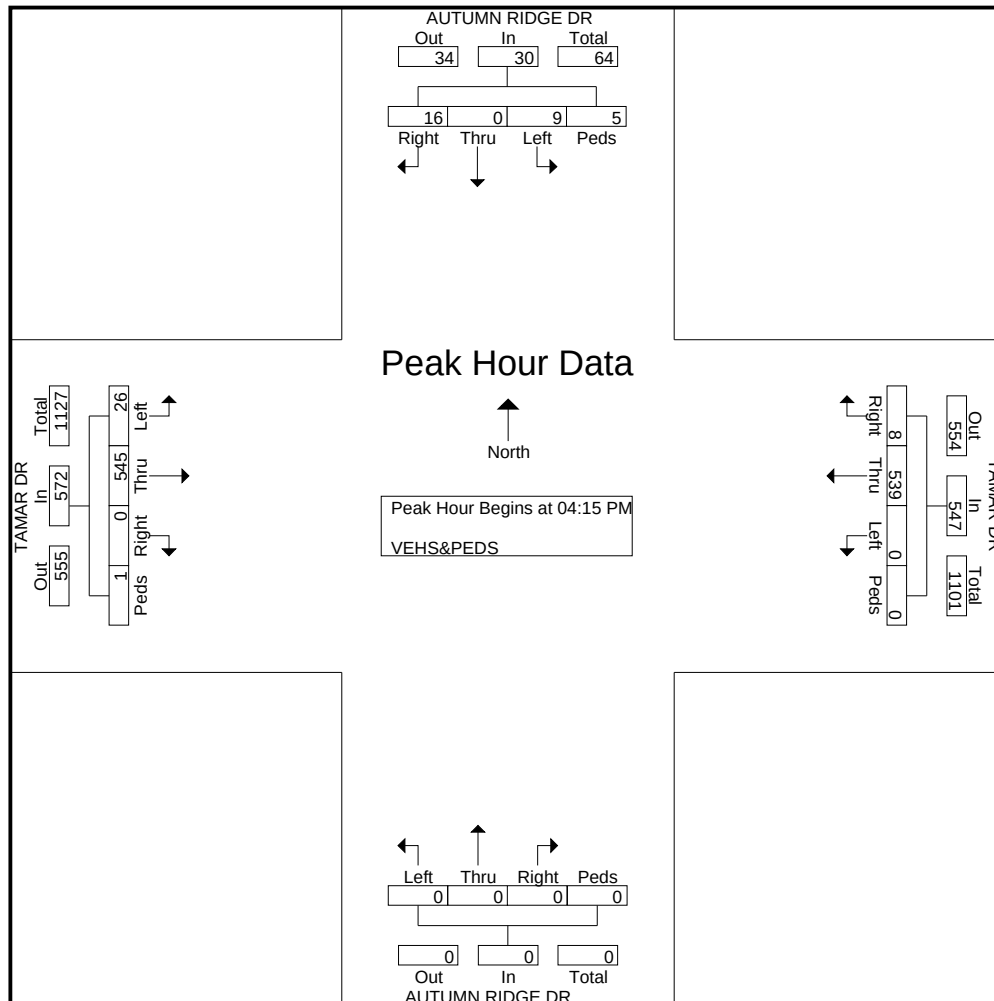
Page No : 4

	AUTUMN RIDGE DR From North					TAMAR DR From East					AUTUMN RIDGE DR From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

04:15 PM	3	0	4	0	7	0	128	2	0	130	0	0	0	0	0	7	127	0	0	134	271
04:30 PM	1	0	3	1	5	0	151	2	0	153	0	0	0	0	0	6	133	0	0	139	297
04:45 PM	4	0	4	3	11	0	126	0	0	126	0	0	0	0	0	5	140	0	0	145	282
05:00 PM	1	0	5	1	7	0	134	4	0	138	0	0	0	0	0	8	145	0	1	154	299
Total Volume	9	0	16	5	30	0	539	8	0	547	0	0	0	0	0	26	545	0	1	572	1149
% App. Total	30	0	53.3	16.7		0	98.5	1.5	0		0	0	0	0		4.5	95.3	0	0.2		
PHF	.563	.000	.800	.417	.682	.000	.892	.500	.000	.894	.000	.000	.000	.000	.000	.813	.940	.000	.250	.929	.961



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Columbia, MD, 21046

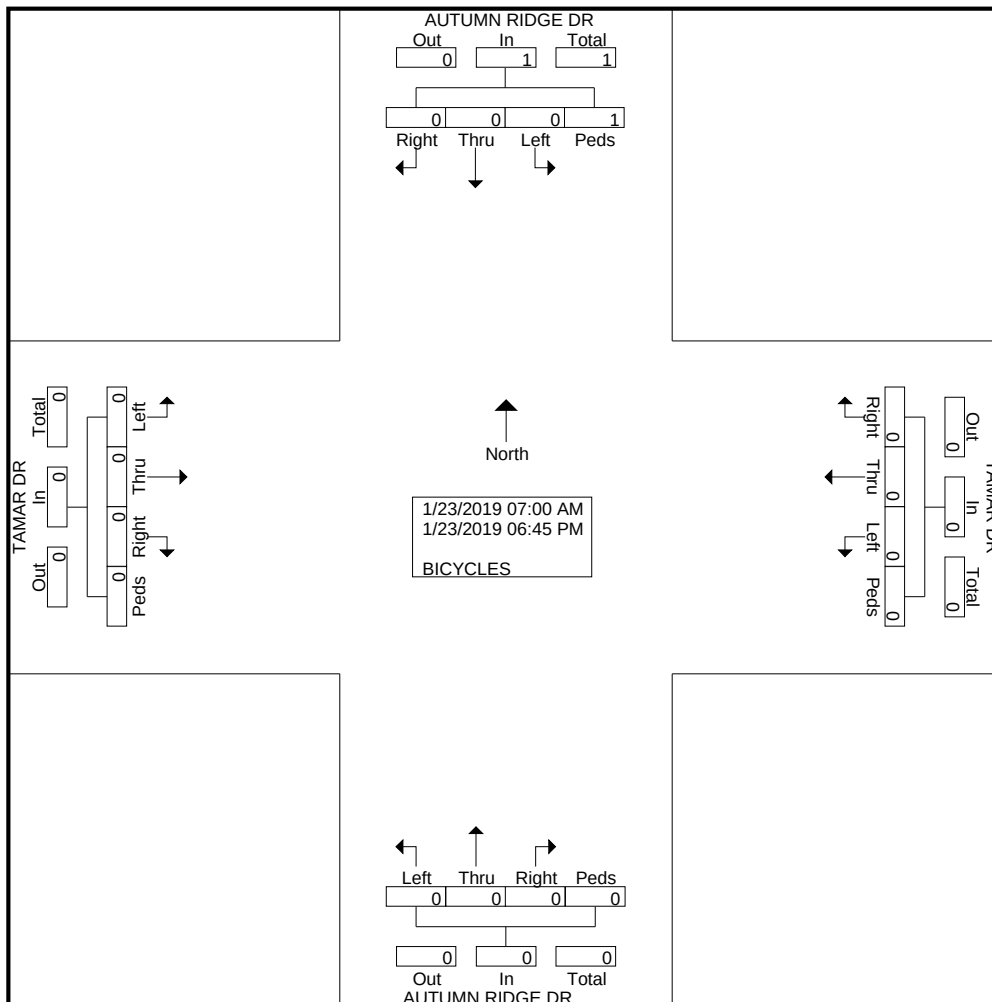
443-741-3500

Weather: Coudy
Counted By: Mike
Town:
County: Howard

File Name : Tamar Dr at Autumn Ridge Dr
Site Code : 00000000
Start Date : 1/23/2019
Page No : 1

Groups Printed- BICYCLES

	AUTUMN RIDGE DR From North					TAMAR DR From East					AUTUMN RIDGE DR From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
04:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	100		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



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Columbia, MD, 21046

443-741-3500

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7055 Samuel Morris Dr, Suite 100
Columbia, MD, 21046

443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Stonecutter Rd
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS (TURNS ONLY)

Start Time	STONECUTTER RD From North					TAMAR DR From East					From South					TAMAR DR From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	23	0	11	0	34	0	0	7	0	7	0	0	0	0	0	2	0	0	0	2	43
07:15 AM	21	0	3	1	25	0	0	7	0	7	0	0	0	0	0	6	0	0	0	6	38
07:30 AM	32	0	3	0	35	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	42
07:45 AM	39	0	5	0	44	0	0	7	0	7	0	0	0	0	0	1	0	0	0	1	52
Total	115	0	22	1	138	0	0	28	0	28	0	0	0	0	0	9	0	0	0	9	175
08:00 AM	23	0	3	0	26	0	0	7	0	7	0	0	0	0	0	3	0	0	0	3	36
08:15 AM	20	0	4	0	24	0	0	5	0	5	0	0	0	0	0	2	0	0	0	2	31
08:30 AM	26	0	6	0	32	0	0	6	0	6	0	0	0	0	0	2	0	0	0	2	40
08:45 AM	14	0	4	0	18	0	0	6	0	6	0	0	0	0	0	1	0	0	0	1	25
Total	83	0	17	0	100	0	0	24	0	24	0	0	0	0	0	8	0	0	0	8	132
*** BREAK ***																					
04:00 PM	7	0	4	0	11	0	0	15	0	15	0	0	0	0	0	3	0	0	0	3	29
04:15 PM	9	0	2	0	11	0	0	14	0	14	0	0	0	0	0	7	0	0	0	7	32
04:30 PM	10	0	2	0	12	0	0	24	0	24	0	0	0	0	0	1	0	0	0	1	37
04:45 PM	10	0	4	0	14	0	0	23	0	23	0	0	0	0	0	10	0	0	0	10	47
Total	36	0	12	0	48	0	0	76	0	76	0	0	0	0	0	21	0	0	0	21	145
05:00 PM	12	0	3	0	15	0	0	25	0	25	0	0	0	0	0	11	0	0	0	11	51
05:15 PM	10	0	4	0	14	0	0	30	0	30	0	0	0	0	0	7	0	0	0	7	51
05:30 PM	6	0	1	0	7	0	0	15	0	15	0	0	0	0	0	13	0	0	0	13	35
05:45 PM	5	0	4	0	9	0	0	31	0	31	0	0	0	0	0	9	0	0	0	9	49
Total	33	0	12	0	45	0	0	101	0	101	0	0	0	0	0	40	0	0	0	40	186
06:00 PM	16	0	8	2	26	0	0	17	0	17	0	0	0	0	0	10	0	0	0	10	53
06:15 PM	14	0	7	0	21	0	0	15	0	15	0	0	0	0	0	9	0	0	0	9	45
06:30 PM	8	0	6	0	14	0	0	21	0	21	0	0	0	0	0	4	0	0	0	4	39
06:45 PM	7	0	10	0	17	0	0	29	0	29	0	0	0	0	0	5	0	0	0	5	51
Total	45	0	31	2	78	0	0	82	0	82	0	0	0	0	0	28	0	0	0	28	188
Grand Total	312	0	94	3	409	0	0	311	0	311	0	0	0	0	0	106	0	0	0	106	826
Apprch %	76.3	0	23	0.7		0	0	100	0		0	0	0	0		100	0	0	0		
Total %	37.8	0	11.4	0.4	49.5	0	0	37.7	0	37.7	0	0	0	0	0	12.8	0	0	0	12.8	

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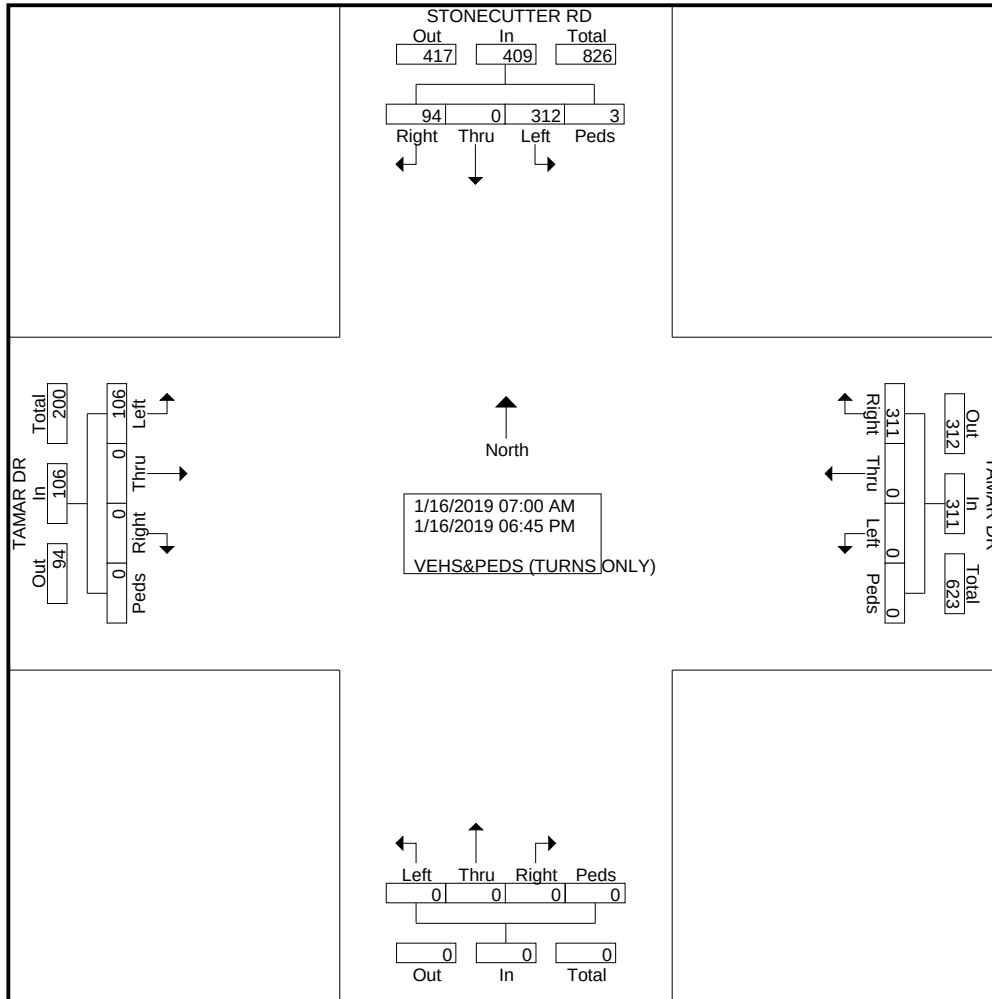
443-741-3500

File Name : Tamar Dr at Stonecutter Rd

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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443-741-3500

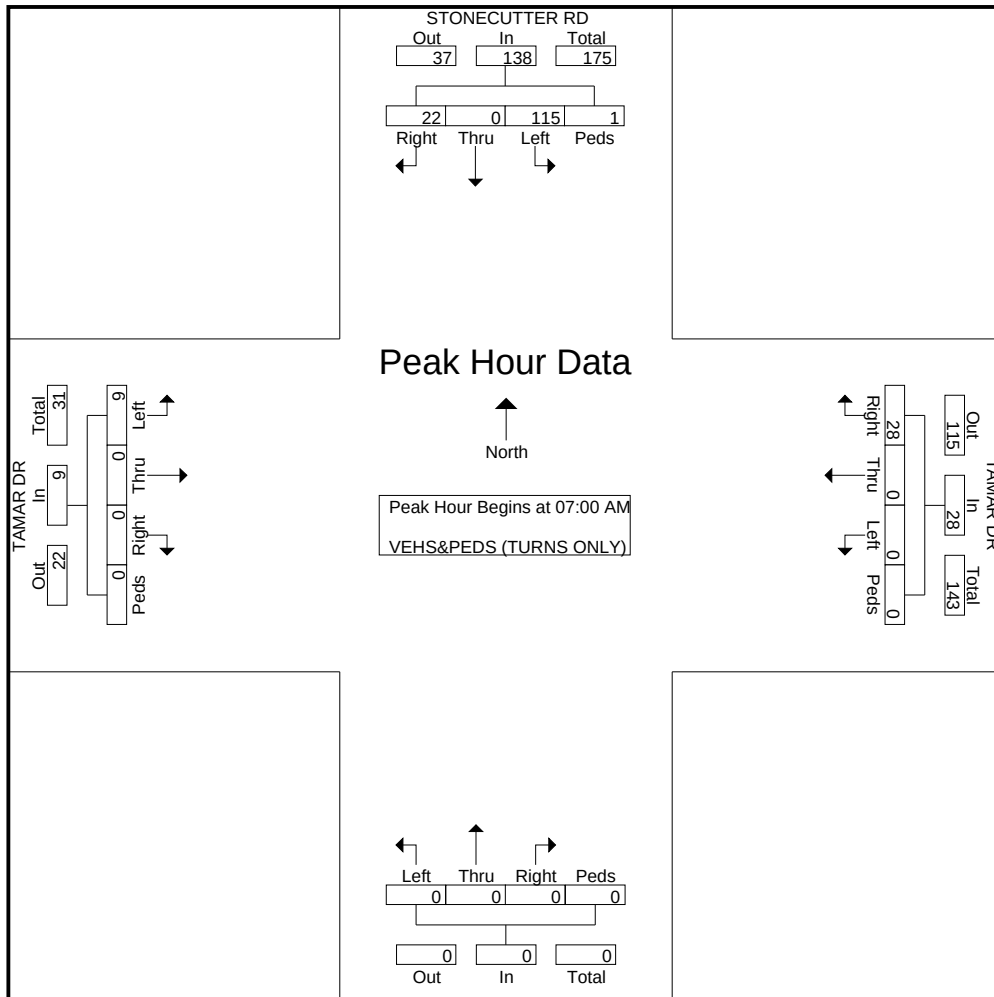
File Name : Tamar Dr at Stonecutter Rd

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	STONECUTTER RD From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	23	0	11	0	34	0	0	7	0	7	0	0	0	0	0	2	0	0	0	2	43
07:15 AM	21	0	3	1	25	0	0	7	0	7	0	0	0	0	0	6	0	0	0	6	38
07:30 AM	32	0	3	0	35	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	42
07:45 AM	39	0	5	0	44	0	0	7	0	7	0	0	0	0	0	1	0	0	0	1	52
Total Volume	115	0	22	1	138	0	0	28	0	28	0	0	0	0	0	9	0	0	0	9	175
% App. Total	83.3	0	15.9	0.7		0	0	100	0		0	0	0	0		100	0	0	0		
PHF	.737	.000	.500	.250	.784	.000	.000	1.00	.000	1.00	.000	.000	.000	.000	.000	.375	.000	.000	.000	.375	.841



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File Name : Tamar Dr at Stonecutter Rd

Site Code : 00000000

Start Date : 1/16/2019

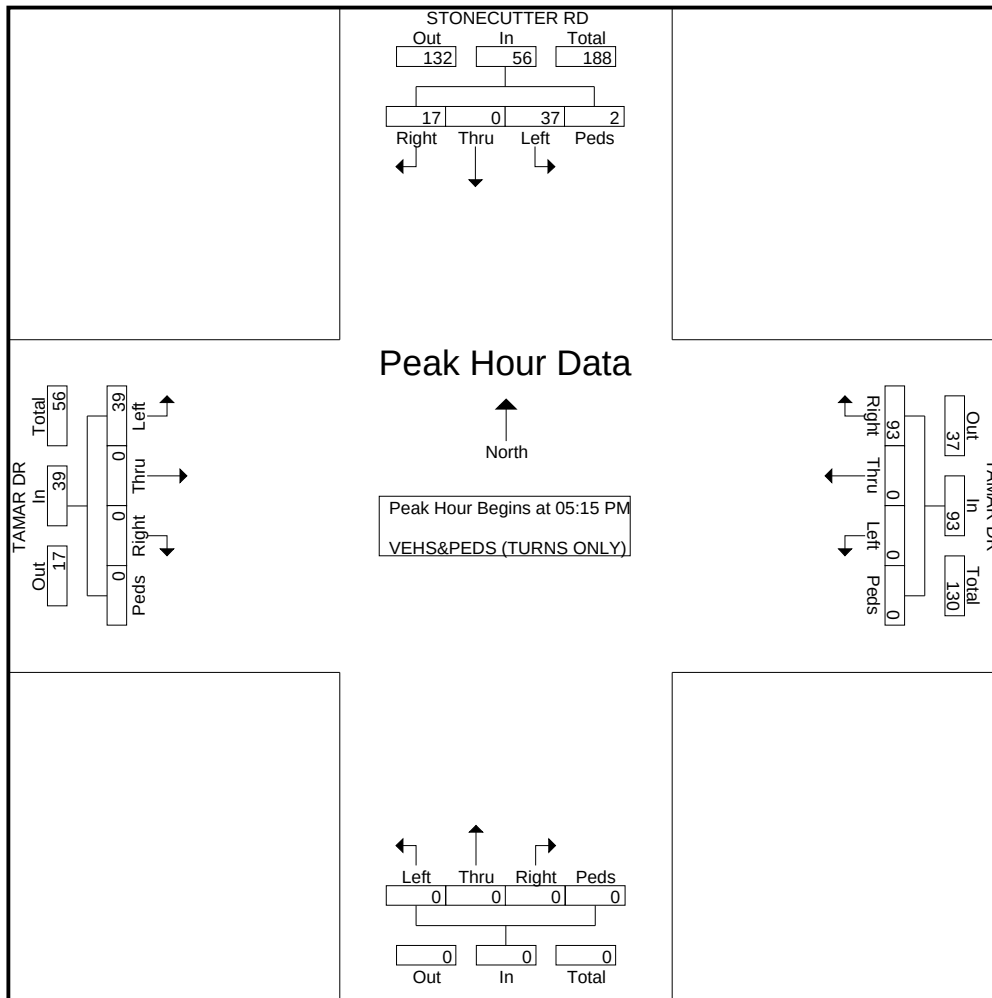
Page No : 4

	STONECUTTER RD From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	10	0	4	0	14	0	0	30	0	30	0	0	0	0	0	7	0	0	0	7	51
05:30 PM	6	0	1	0	7	0	0	15	0	15	0	0	0	0	0	13	0	0	0	13	35
05:45 PM	5	0	4	0	9	0	0	31	0	31	0	0	0	0	0	9	0	0	0	9	49
06:00 PM	16	0	8	2	26	0	0	17	0	17	0	0	0	0	0	10	0	0	0	10	53
Total Volume	37	0	17	2	56	0	0	93	0	93	0	0	0	0	0	39	0	0	0	39	188
% App. Total	66.1	0	30.4	3.6		0	0	100	0		0	0	0	0		100	0	0	0		
PHF	.578	.000	.531	.250	.538	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.750	.000	.000	.000	.750	.887



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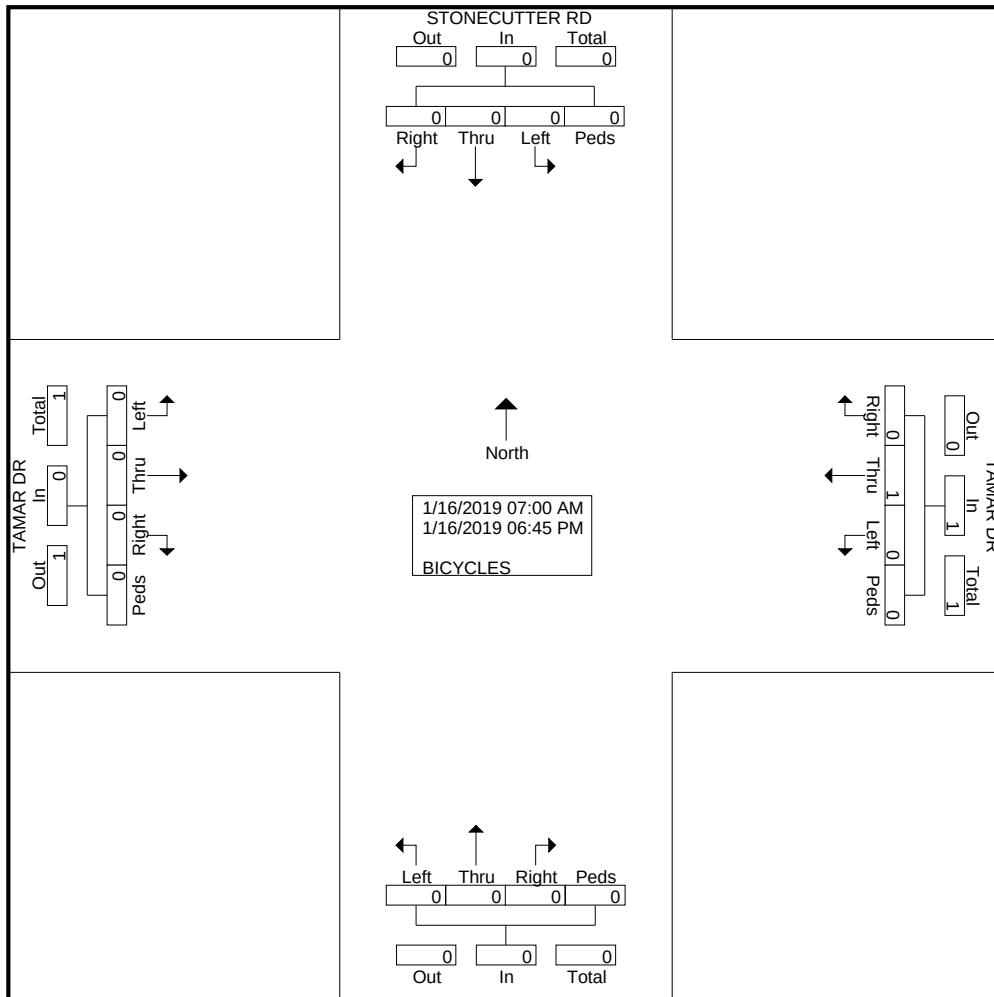
443-741-3500

Weather: Clear
Counted By: Don
Town:
County: Howard

File Name : Tamar Dr at Stonecutter Rd
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	STONECUTTER RD From North					TAMAR DR From East					From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
06:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	



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443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar Dr at Snowden River Pkwy
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- VEHS&PEDS

	SNOWDEN PKWY From North					TAMAR DR From East					SNOWDEN PKWY From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	93	22	29	0	144	2	215	152	0	369	25	36	12	0	73	11	73	9	5	98	684
07:15 AM	153	70	58	0	281	3	220	65	2	290	16	18	14	0	48	17	109	11	1	138	757
07:30 AM	78	12	34	0	124	3	287	62	0	352	19	14	21	0	54	6	84	9	0	99	629
07:45 AM	56	15	29	0	100	9	339	71	1	420	16	14	16	0	46	14	79	4	0	97	663
Total	380	119	150	0	649	17	1061	350	3	1431	76	82	63	0	221	48	345	33	6	432	2733
08:00 AM	42	15	24	0	81	6	322	90	0	418	15	18	11	0	44	5	134	7	0	146	689
08:15 AM	35	16	23	0	74	3	351	90	0	444	17	19	21	0	57	10	86	7	2	105	680
08:30 AM	66	12	19	0	97	9	291	145	14	459	18	17	21	0	56	17	112	13	0	142	754
08:45 AM	52	17	31	0	100	8	403	97	0	508	15	20	13	0	48	13	101	9	0	123	779
Total	195	60	97	0	352	26	1367	422	14	1829	65	74	66	0	205	45	433	36	2	516	2902
*** BREAK ***																					
04:00 PM	76	31	18	0	125	9	232	83	0	324	14	25	17	0	56	20	315	27	2	364	869
04:15 PM	77	19	11	0	107	8	162	96	0	266	24	40	7	0	71	18	273	24	1	316	760
04:30 PM	78	26	19	0	123	13	228	105	0	346	13	25	7	0	45	18	281	31	0	330	844
04:45 PM	79	30	17	0	126	5	219	91	0	315	14	25	8	1	48	40	316	33	1	390	879
Total	310	106	65	0	481	35	841	375	0	1251	65	115	39	1	220	96	1185	115	4	1400	3352
05:00 PM	105	36	21	0	162	7	213	103	1	324	15	31	7	0	53	22	317	44	0	383	922
05:15 PM	79	30	16	0	125	24	211	126	0	361	22	31	5	0	58	36	331	62	0	429	973
05:30 PM	74	44	32	0	150	7	192	110	0	309	18	30	10	0	58	29	277	48	0	354	871
05:45 PM	74	25	22	0	121	14	229	104	0	347	23	34	6	0	63	27	271	24	1	323	854
Total	332	135	91	0	558	52	845	443	1	1341	78	126	28	0	232	114	1196	178	1	1489	3620
06:00 PM	100	21	22	0	143	5	204	80	4	293	17	27	7	2	53	29	231	21	0	281	770
06:15 PM	82	18	18	0	118	11	237	93	0	341	17	16	6	0	39	35	264	20	1	320	818
06:30 PM	74	25	7	0	106	6	204	92	1	303	10	19	3	0	32	25	246	21	0	292	733
06:45 PM	68	22	10	0	100	8	188	99	7	302	6	12	11	0	29	31	222	14	2	269	700
Total	324	86	57	0	467	30	833	364	12	1239	50	74	27	2	153	120	963	76	3	1162	3021
Grand Total	1541	506	460	0	2507	160	4947	1954	30	7091	334	471	223	3	1031	423	4122	438	16	4999	15628
Apprch %	61.5	20.2	18.3	0		2.3	69.8	27.6	0.4		32.4	45.7	21.6	0.3		8.5	82.5	8.8	0.3		
Total %	9.9	3.2	2.9	0	16	1	31.7	12.5	0.2	45.4	2.1	3	1.4	0	6.6	2.7	26.4	2.8	0.1	32	

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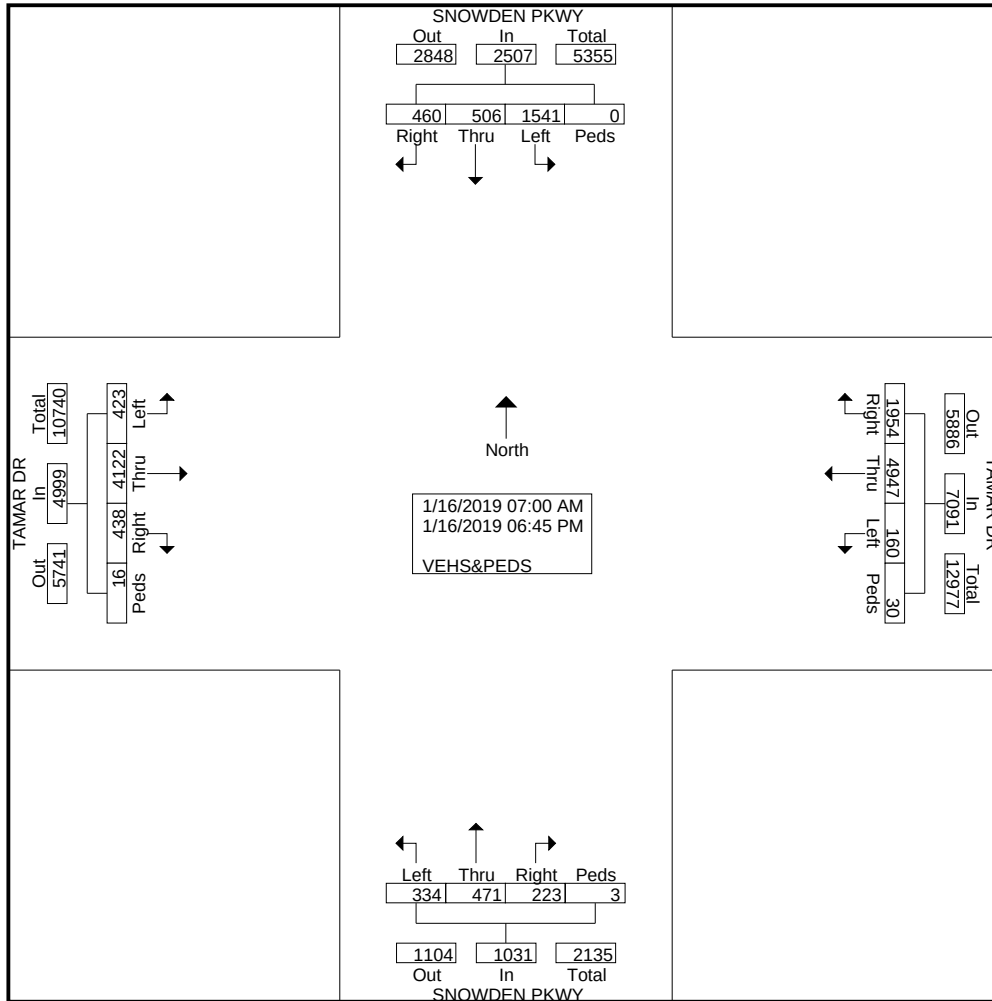
443-741-3500

File Name : Tamar Dr at Snowden River Pkwy

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



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443-741-3500

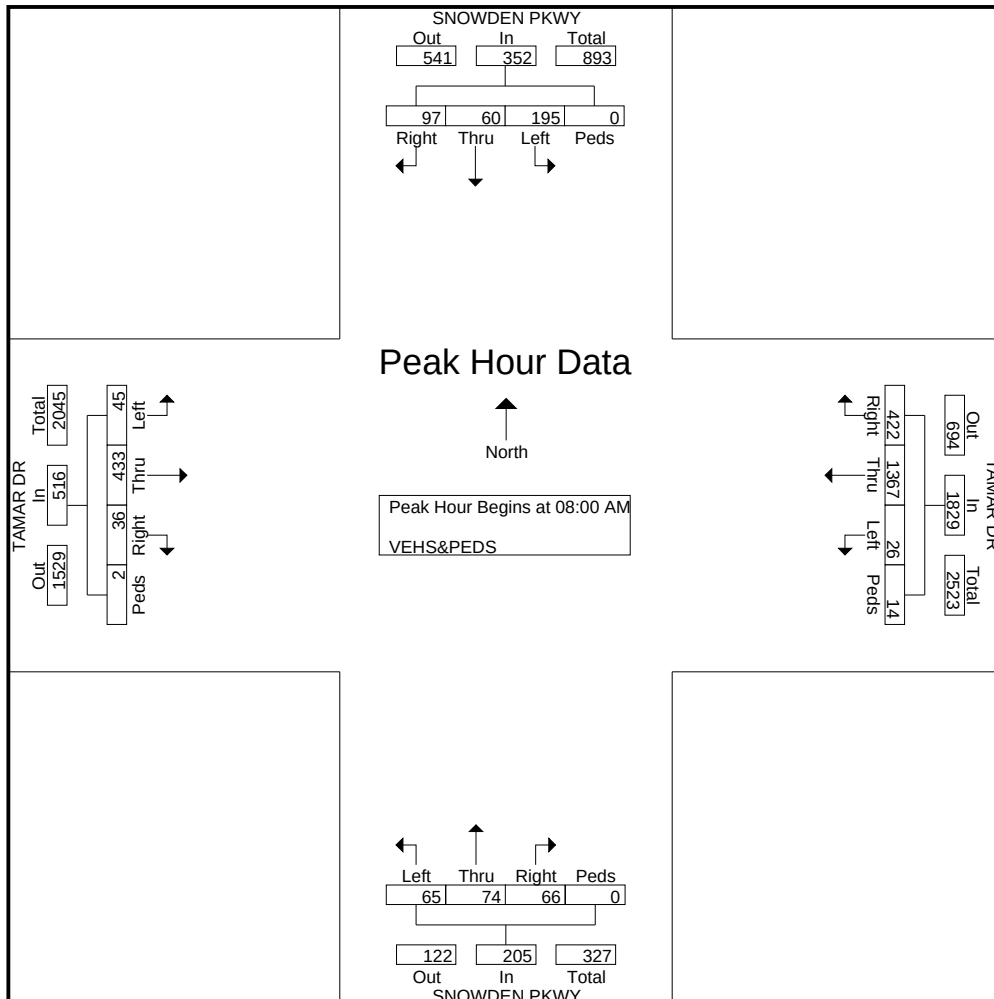
File Name : Tamar Dr at Snowden River Pkwy

Site Code : 00000000

Start Date : 1/16/2019

Page No : 3

	SNOWDEN PKWY From North					TAMAR DR From East					SNOWDEN PKWY From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	42	15	24	0	81	6	322	90	0	418	15	18	11	0	44	5	134	7	0	146	689
08:15 AM	35	16	23	0	74	3	351	90	0	444	17	19	21	0	57	10	86	7	2	105	680
08:30 AM	66	12	19	0	97	9	291	145	14	459	18	17	21	0	56	17	112	13	0	142	754
08:45 AM	52	17	31	0	100	8	403	97	0	508	15	20	13	0	48	13	101	9	0	123	779
Total Volume	195	60	97	0	352	26	1367	422	14	1829	65	74	66	0	205	45	433	36	2	516	2902
% App. Total	55.4	17	27.6	0		1.4	74.7	23.1	0.8		31.7	36.1	32.2	0		8.7	83.9	7	0.4		
PHF	.739	.882	.782	.000	.880	.722	.848	.728	.250	.900	.903	.925	.786	.000	.899	.662	.808	.692	.250	.884	.931



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File Name : Tamar Dr at Snowden River Pkwy

Site Code : 00000000

Start Date : 1/16/2019

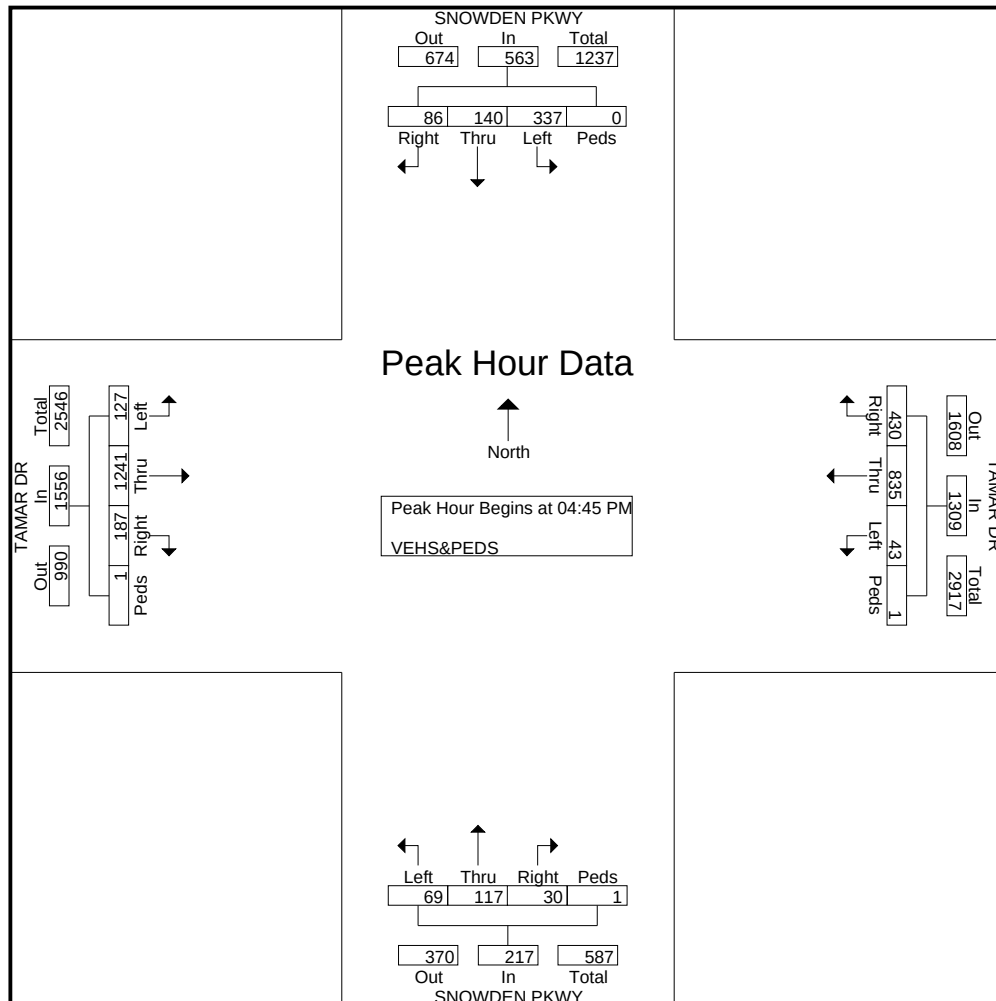
Page No : 4

	SNOWDEN PKWY From North					TAMAR DR From East					SNOWDEN PKWY From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	79	30	17	0	126	5	219	91	0	315	14	25	8	1	48	40	316	33	1	390	879
05:00 PM	105	36	21	0	162	7	213	103	1	324	15	31	7	0	53	22	317	44	0	383	922
05:15 PM	79	30	16	0	125	24	211	126	0	361	22	31	5	0	58	36	331	62	0	429	973
05:30 PM	74	44	32	0	150	7	192	110	0	309	18	30	10	0	58	29	277	48	0	354	871
Total Volume	337	140	86	0	563	43	835	430	1	1309	69	117	30	1	217	127	1241	187	1	1556	3645
% App. Total	59.9	24.9	15.3	0		3.3	63.8	32.8	0.1		31.8	53.9	13.8	0.5		8.2	79.8	12	0.1		
PHF	.802	.795	.672	.000	.869	.448	.953	.853	.250	.907	.784	.944	.750	.250	.935	.794	.937	.754	.250	.907	.937



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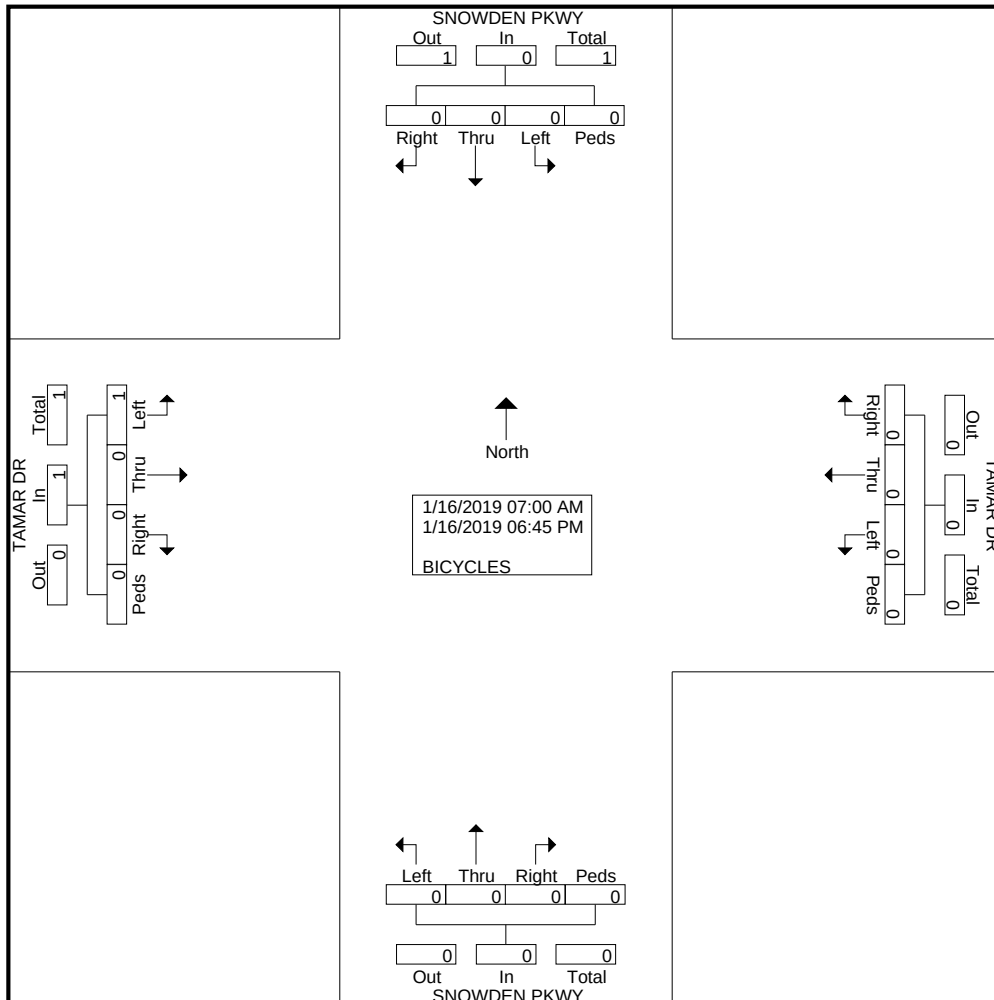
443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar Dr at Snowden River Pkwy
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- BICYCLES

	SNOWDEN PKWY From North					TAMAR DR From East					SNOWDEN PKWY From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		100	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	



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443-741-3500

Weather: Clear
Counted By: Dev
Town:
County: Howard

File Name : Tamar Dr at Snowden River Pkwy
Site Code : 00000000
Start Date : 1/16/2019
Page No : 1

Groups Printed- U TURNS

	SNOWDEN PKWY From North					TAMAR DR From East					SNOWDEN PKWY From South					TAMAR DR From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
*** BREAK ***																					
07:30 AM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	3
Total	1	0	0	0	1	3	0	0	0	3	0	0	0	0	0	1	0	0	0	1	5
*** BREAK ***																					
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
*** BREAK ***																					
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	2
Total	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	1	0	0	0	1	3
05:00 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5
06:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
06:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2
Grand Total	2	0	0	0	2	10	0	0	0	10	2	0	0	0	2	2	0	0	0	2	16
Apprch %	100	0	0	0		100	0	0	0		100	0	0	0		100	0	0	0		
Total %	12.5	0	0	0	12.5	62.5	0	0	0	62.5	12.5	0	0	0	12.5	12.5	0	0	0	12.5	

Sabra & Associates

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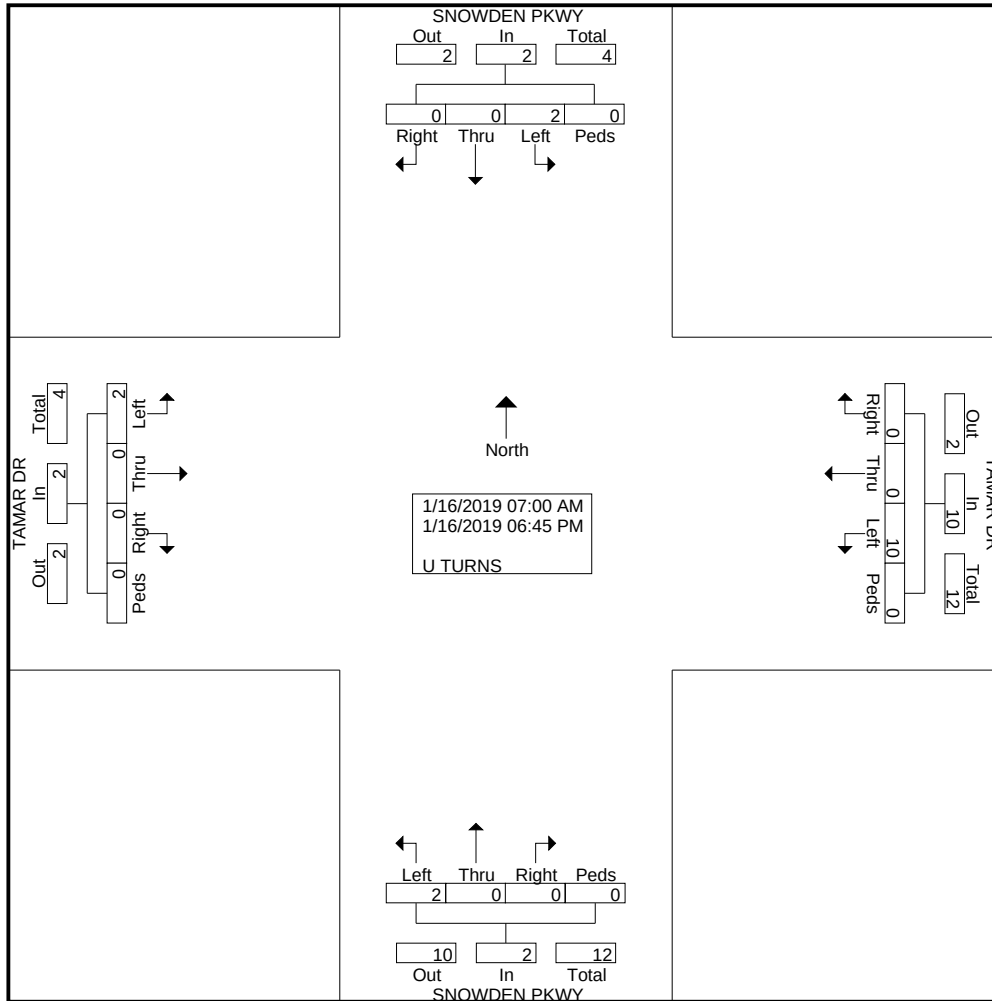
443-741-3500

File Name : Tamar Dr at Snowden River Pkwy

Site Code : 00000000

Start Date : 1/16/2019

Page No : 2



Appendix C: HCM and Queuing Reports for the Existing Condition

HCM Unsignalized Intersection Capacity Analysis

Tamar Drive - Road Diet Study

1: Flamepool Way & Tamar Drive

03/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	290	6	2	723	2	3	1	3	3	0	25
Future Volume (Veh/h)	7	290	6	2	723	2	3	1	3	3	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	8	341	7	2	851	2	4	1	4	4	0	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		644										
pX, platoon unblocked												
vC, conflicting volume	853			348			819	1218	174	1047	1220	426
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	853			348			819	1218	174	1047	1220	426
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			98	99	100	98	100	95
cM capacity (veh/h)	782			1208			252	177	839	179	177	576
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	178	178	428	428	5	4	33					
Volume Left	8	0	2	0	4	0	4					
Volume Right	0	7	0	2	0	4	29					
cSH	782	1700	1208	1700	232	839	454					
Volume to Capacity	0.01	0.10	0.00	0.25	0.02	0.00	0.07					
Queue Length 95th (ft)	1	0	0	0	2	0	6					
Control Delay (s)	0.5	0.0	0.1	0.0	20.8	9.3	13.5					
Lane LOS	A		A		C	A	B					
Approach Delay (s)	0.3		0.0		15.7		13.5					
Approach LOS					C		B					
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			32.5%		ICU Level of Service		A					
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2: Lambskin Lane/Flicker Place & Tamar Drive

Tamar Drive - Road Diet Study

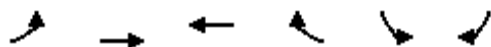
03/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	287	9	17	696	4	29	0	16	0	0	2
Future Volume (Veh/h)	0	287	9	17	696	4	29	0	16	0	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	326	10	19	791	5	33	0	18	0	0	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		1164										
pX, platoon unblocked												
vC, conflicting volume	796			336			766	1165	168	1012	1168	398
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	796			336			766	1165	168	1012	1168	398
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			89	100	98	100	100	100
cM capacity (veh/h)	822			1220			287	190	847	187	189	601
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	163	173	414	400	51	2						
Volume Left	0	0	19	0	33	0						
Volume Right	0	10	0	5	18	2						
cSH	822	1700	1220	1700	375	601						
Volume to Capacity	0.00	0.10	0.02	0.24	0.14	0.00						
Queue Length 95th (ft)	0	0	1	0	12	0						
Control Delay (s)	0.0	0.0	0.5	0.0	16.1	11.0						
Lane LOS			A		C	B						
Approach Delay (s)	0.0		0.3		16.1	11.0						
Approach LOS					C	B						
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			47.3%		ICU Level of Service		A					
Analysis Period (min)			15									

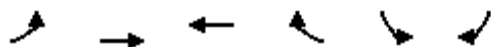
HCM Unsignalized Intersection Capacity Analysis

3: Tamar Drive & Blue Pool

Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	1	302	704	3	3	13
Future Volume (Veh/h)	1	302	704	3	3	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	355	828	4	4	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	832				1010	416
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	832				1010	416
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	97
cM capacity (veh/h)	796				236	585
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	119	237	552	280	19	
Volume Left	1	0	0	0	4	
Volume Right	0	0	0	4	15	
cSH	796	1700	1700	1700	446	
Volume to Capacity	0.00	0.14	0.32	0.16	0.04	
Queue Length 95th (ft)	0	0	0	0	3	
Control Delay (s)	0.1	0.0	0.0	0.0	13.4	
Lane LOS	A				B	
Approach Delay (s)	0.0		0.0		13.4	
Approach LOS					B	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			29.6%		ICU Level of Service	A
Analysis Period (min)			15			



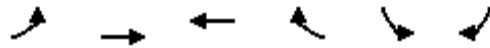
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↕	↕
Traffic Volume (veh/h)	106	199	452	26	27	255
Future Volume (Veh/h)	106	199	452	26	27	255
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	125	234	532	31	32	300
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	563				914	282
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	563				914	282
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				87	58
cM capacity (veh/h)	1005				238	716
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	203	156	355	208	32	300
Volume Left	125	0	0	0	32	0
Volume Right	0	0	0	31	0	300
cSH	1005	1700	1700	1700	238	716
Volume to Capacity	0.12	0.09	0.21	0.12	0.13	0.42
Queue Length 95th (ft)	11	0	0	0	11	52
Control Delay (s)	6.1	0.0	0.0	0.0	22.4	13.6
Lane LOS	A				C	B
Approach Delay (s)	3.4		0.0		14.5	
Approach LOS					B	
Intersection Summary						
Average Delay			4.8			
Intersection Capacity Utilization			35.8%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

5: Tamar Drive & Sweet Wind Place

Tamar Drive - Road Diet Study

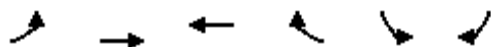
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔	↔↔		↔↔	
Traffic Volume (veh/h)	10	216	450	9	11	28
Future Volume (Veh/h)	10	216	450	9	11	28
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	254	529	11	13	33
Pedestrians			1		4	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	544				690	274
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	544				690	274
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	95
cM capacity (veh/h)	1017				373	721
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	97	169	353	187	46	
Volume Left	12	0	0	0	13	
Volume Right	0	0	0	11	33	
cSH	1017	1700	1700	1700	570	
Volume to Capacity	0.01	0.10	0.21	0.11	0.08	
Queue Length 95th (ft)	1	0	0	0	7	
Control Delay (s)	1.2	0.0	0.0	0.0	11.9	
Lane LOS	A				B	
Approach Delay (s)	0.4		0.0		11.9	
Approach LOS					B	
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			23.3%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 6: Tamar Drive & High Tor Hill

Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔	↔↔		↔	↔
Traffic Volume (veh/h)	20	207	400	91	90	59
Future Volume (Veh/h)	20	207	400	91	90	59
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	24	244	471	107	106	69
Pedestrians		1				
Lane Width (ft)		12.0				
Walking Speed (ft/s)		3.5				
Percent Blockage		0				
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	578				694	290
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	578				694	290
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				71	90
cM capacity (veh/h)	992				367	706
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	105	163	314	264	106	69
Volume Left	24	0	0	0	106	0
Volume Right	0	0	0	107	0	69
cSH	992	1700	1700	1700	367	706
Volume to Capacity	0.02	0.10	0.18	0.16	0.29	0.10
Queue Length 95th (ft)	2	0	0	0	29	8
Control Delay (s)	2.2	0.0	0.0	0.0	18.7	10.7
Lane LOS	A				C	B
Approach Delay (s)	0.8		0.0		15.5	
Approach LOS					C	
Intersection Summary						
Average Delay			2.9			
Intersection Capacity Utilization			33.1%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

7: Spiral Cut & Tamar Drive

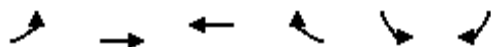
Tamar Drive - Road Diet Study
03/28/2019

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↙	
Traffic Volume (veh/h)	287	10	7	466	25	25
Future Volume (Veh/h)	287	10	7	466	25	25
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	338	12	8	548	29	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)				1088		
pX, platoon unblocked						
vC, conflicting volume			350		634	175
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			350		634	175
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		93	97
cM capacity (veh/h)			1206		409	838
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	225	125	191	365	58	
Volume Left	0	0	8	0	29	
Volume Right	0	12	0	0	29	
cSH	1700	1700	1206	1700	549	
Volume to Capacity	0.13	0.07	0.01	0.21	0.11	
Queue Length 95th (ft)	0	0	1	0	9	
Control Delay (s)	0.0	0.0	0.4	0.0	12.3	
Lane LOS			A		B	
Approach Delay (s)	0.0		0.1		12.3	
Approach LOS					B	
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			27.8%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Tamar Drive & 8810-8860 Driveway

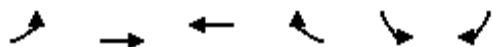
Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	15	297	450	7	19	23
Future Volume (Veh/h)	15	297	450	7	19	23
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	18	349	529	8	22	27
Pedestrians			1		7	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		1	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			845			
pX, platoon unblocked						
vC, conflicting volume	544				752	276
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	544				752	276
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				93	96
cM capacity (veh/h)	1014				338	717
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	134	233	353	184	49	
Volume Left	18	0	0	0	22	
Volume Right	0	0	0	8	27	
cSH	1014	1700	1700	1700	477	
Volume to Capacity	0.02	0.14	0.21	0.11	0.10	
Queue Length 95th (ft)	1	0	0	0	9	
Control Delay (s)	1.3	0.0	0.0	0.0	13.4	
Lane LOS	A				B	
Approach Delay (s)	0.5		0.0		13.4	
Approach LOS					B	
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			29.3%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 9: Tamar Drive & Hayshed Lane

Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑
Traffic Volume (veh/h)	27	289	377	25	45	80
Future Volume (Veh/h)	27	289	377	25	45	80
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	32	340	444	29	53	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			402			
pX, platoon unblocked						
vC, conflicting volume	473				692	236
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	473				692	236
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				86	88
cM capacity (veh/h)	1085				367	765
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	145	227	296	177	53	94
Volume Left	32	0	0	0	53	0
Volume Right	0	0	0	29	0	94
cSH	1085	1700	1700	1700	367	765
Volume to Capacity	0.03	0.13	0.17	0.10	0.14	0.12
Queue Length 95th (ft)	2	0	0	0	13	10
Control Delay (s)	2.1	0.0	0.0	0.0	16.5	10.4
Lane LOS	A				C	B
Approach Delay (s)	0.8		0.0		12.6	
Approach LOS					B	
Intersection Summary						
Average Delay			2.2			
Intersection Capacity Utilization			33.3%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

10: Cloudleap Court & Tamar Drive

Tamar Drive - Road Diet Study

03/28/2019

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↵
Traffic Volume (vph)	309	25	12	359	43	33
Future Volume (vph)	309	25	12	359	43	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3493		1768	3539	1770	1555
Flt Permitted	1.00		0.43	1.00	0.95	1.00
Satd. Flow (perm)	3493		800	3539	1770	1555
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	364	29	14	422	51	39
RTOR Reduction (vph)	5	0	0	0	0	34
Lane Group Flow (vph)	388	0	14	422	51	5
Confl. Peds. (#/hr)		7	7			10
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Actuated Green, G (s)	23.9		29.7	29.7	6.0	6.0
Effective Green, g (s)	23.9		29.7	29.7	6.0	6.0
Actuated g/C Ratio	0.52		0.65	0.65	0.13	0.13
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	1826		536	2299	232	204
v/s Ratio Prot	c0.11		0.00	c0.12	c0.03	
v/s Ratio Perm			0.02			0.00
v/c Ratio	0.21		0.03	0.18	0.22	0.03
Uniform Delay, d1	5.9		3.1	3.2	17.8	17.3
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1		0.0	0.1	0.5	0.0
Delay (s)	6.0		3.1	3.3	18.2	17.4
Level of Service	A		A	A	B	B
Approach Delay (s)	6.0			3.3	17.9	
Approach LOS	A			A	B	
Intersection Summary						
HCM 2000 Control Delay			5.8		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.23			
Actuated Cycle Length (s)			45.7		Sum of lost time (s)	15.0
Intersection Capacity Utilization			29.0%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

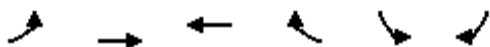
11: Foreland Garth & Tamar Drive

Tamar Drive - Road Diet Study
03/28/2019

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑	↘	↗
Traffic Volume (veh/h)	298	44	56	344	27	51
Future Volume (Veh/h)	298	44	56	344	27	51
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	351	52	66	405	32	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	616			382		
pX, platoon unblocked					0.95	
vC, conflicting volume			403		914	202
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			403		882	202
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		87	93
cM capacity (veh/h)			1152		255	806
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	234	169	66	405	32	60
Volume Left	0	0	66	0	32	0
Volume Right	0	52	0	0	0	60
cSH	1700	1700	1152	1700	255	806
Volume to Capacity	0.14	0.10	0.06	0.24	0.13	0.07
Queue Length 95th (ft)	0	0	5	0	11	6
Control Delay (s)	0.0	0.0	8.3	0.0	21.1	9.8
Lane LOS			A		C	A
Approach Delay (s)	0.0		1.2		13.8	
Approach LOS					B	
Intersection Summary						
Average Delay			1.9			
Intersection Capacity Utilization			28.1%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 12: Tamar Drive & Airbrink Lane

Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	337	385	8	13	15
Future Volume (Veh/h)	12	337	385	8	13	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	14	396	453	9	15	18
Pedestrians		1	1		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		714	284			
pX, platoon unblocked	0.91				0.91	0.91
vC, conflicting volume	465				688	462
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	368				612	364
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				96	97
cM capacity (veh/h)	1082				382	576
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	146	264	462	33		
Volume Left	14	0	0	15		
Volume Right	0	0	9	18		
cSH	1082	1700	1700	468		
Volume to Capacity	0.01	0.16	0.27	0.07		
Queue Length 95th (ft)	1	0	0	6		
Control Delay (s)	0.9	0.0	0.0	13.3		
Lane LOS	A			B		
Approach Delay (s)	0.3		0.0	13.3		
Approach LOS				B		
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			31.1%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

13: Old Dobbin Lane & Tamar Drive

Tamar Drive - Road Diet Study

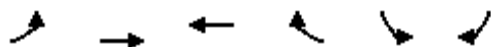
03/28/2019

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	218	132	215	334	59	48
Future Volume (vph)	218	132	215	334	59	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	0.95		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3309		1768	1863	1770	1558
Flt Permitted	1.00		0.40	1.00	0.95	1.00
Satd. Flow (perm)	3309		742	1863	1770	1558
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	251	152	247	384	68	55
RTOR Reduction (vph)	101	0	0	0	0	47
Lane Group Flow (vph)	302	0	247	384	68	8
Confl. Peds. (#/hr)		3	3			5
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Actuated Green, G (s)	17.1		33.4	33.4	7.2	7.2
Effective Green, g (s)	17.1		33.4	33.4	7.2	7.2
Actuated g/C Ratio	0.34		0.66	0.66	0.14	0.14
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.0		3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	1118		718	1229	251	221
v/s Ratio Prot	0.09		0.08	c0.21	c0.04	
v/s Ratio Perm			c0.15			0.01
v/c Ratio	0.27		0.34	0.31	0.27	0.04
Uniform Delay, d1	12.2		3.7	3.7	19.4	18.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0		0.3	0.3	0.6	0.1
Delay (s)	12.3		4.0	4.0	19.9	18.8
Level of Service	B		A	A	B	B
Approach Delay (s)	12.3			4.0	19.4	
Approach LOS	B			A	B	
Intersection Summary						
HCM 2000 Control Delay			8.5		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.36			
Actuated Cycle Length (s)			50.6		Sum of lost time (s)	15.0
Intersection Capacity Utilization			42.7%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

14: Tamar Drive & Autumn Ridge Drive

Tamar Drive - Road Diet Study
03/28/2019

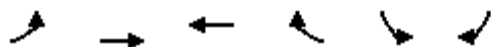


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	257	530	4	14	19
Future Volume (Veh/h)	9	257	530	4	14	19
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	292	602	5	16	22
Pedestrians		1			1	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		0			0	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		601	1183			
pX, platoon unblocked						
vC, conflicting volume	608				772	606
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	608				772	606
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	95
cM capacity (veh/h)	965				332	439
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	107	195	607	38		
Volume Left	10	0	0	16		
Volume Right	0	0	5	22		
cSH	965	1700	1700	387		
Volume to Capacity	0.01	0.11	0.36	0.10		
Queue Length 95th (ft)	1	0	0	8		
Control Delay (s)	0.9	0.0	0.0	15.3		
Lane LOS	A			C		
Approach Delay (s)	0.3		0.0	15.3		
Approach LOS				C		
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			38.5%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

15: Tamar Drive & Stonecutter Road

Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 				
Traffic Volume (veh/h)	8	263	517	24	83	17
Future Volume (Veh/h)	8	263	517	24	83	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	309	608	28	98	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1241	543			
pX, platoon unblocked	0.97				0.97	0.97
vC, conflicting volume	636				794	622
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	612				775	598
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				70	95
cM capacity (veh/h)	937				322	434
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2	
Volume Total	112	206	636	98	20	
Volume Left	9	0	0	98	0	
Volume Right	0	0	28	0	20	
cSH	937	1700	1700	322	434	
Volume to Capacity	0.01	0.12	0.37	0.30	0.05	
Queue Length 95th (ft)	1	0	0	31	4	
Control Delay (s)	0.8	0.0	0.0	21.0	13.7	
Lane LOS	A			C	B	
Approach Delay (s)	0.3		0.0	19.7		
Approach LOS				C		
Intersection Summary						
Average Delay			2.3			
Intersection Capacity Utilization			39.9%		ICU Level of Service	
Analysis Period (min)			15		A	

HCM Signalized Intersection Capacity Analysis

16: Snowden River Parkway & Tamar Drive

Tamar Drive - Road Diet Study

03/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	60	97	65	74	66	45	433	36	26	1367	422
Future Volume (vph)	195	60	97	65	74	66	45	433	36	26	1367	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.0	6.5		5.0	6.5	6.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.93		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3109		1770	3249		1770	3498		1770	3539	1583
Flt Permitted	0.95	0.98		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3109		1770	3249		1770	3498		1770	3539	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	210	65	104	70	80	71	48	466	39	28	1470	454
RTOR Reduction (vph)	0	90	0	0	65	0	0	3	0	0	0	170
Lane Group Flow (vph)	130	159	0	70	86	0	48	502	0	28	1470	284
Confl. Peds. (#/hr)	14		2	2		14						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	16.4	16.4		10.9	10.9		7.6	64.1		5.1	61.6	61.6
Effective Green, g (s)	16.4	16.4		10.9	10.9		7.6	64.1		5.1	61.6	61.6
Actuated g/C Ratio	0.14	0.14		0.09	0.09		0.06	0.53		0.04	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	6.5		5.0	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	220	424		160	295		112	1868		75	1816	812
v/s Ratio Prot	c0.08	0.05		c0.04	0.03		c0.03	0.14		0.02	c0.42	
v/s Ratio Perm												0.18
v/c Ratio	0.59	0.38		0.44	0.29		0.43	0.27		0.37	0.81	0.35
Uniform Delay, d1	48.6	47.1		51.6	51.0		54.1	15.2		55.9	24.3	17.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.6		1.9	0.6		2.6	0.4		3.1	4.0	1.2
Delay (s)	52.9	47.7		53.6	51.5		56.7	15.6		59.0	28.3	18.5
Level of Service	D	D		D	D		E	B		E	C	B
Approach Delay (s)		49.5			52.2			19.1			26.5	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			29.8				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			23.5		
Intersection Capacity Utilization			75.1%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

1: Flamepool Way & Tamar Drive

Tamar Drive - Road Diet Study

03/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	691	22	4	640	12	0	0	4	7	0	10
Future Volume (Veh/h)	20	691	22	4	640	12	0	0	4	7	0	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	22	743	24	4	688	13	0	0	4	8	0	11
Pedestrians								1				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								3.5				
Percent Blockage								0				
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		644										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	701			768			1163	1509	384	1122	1514	350
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	701			628			1047	1415	220	1004	1421	350
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	99	96	100	98
cM capacity (veh/h)	892			893			165	124	737	179	123	646
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total	394	396	348	357	0	4	19					
Volume Left	22	0	4	0	0	0	8					
Volume Right	0	24	0	13	0	4	11					
cSH	892	1700	893	1700	1700	737	308					
Volume to Capacity	0.02	0.23	0.00	0.21	0.00	0.01	0.06					
Queue Length 95th (ft)	2	0	0	0	0	0	5					
Control Delay (s)	0.8	0.0	0.2	0.0	0.0	9.9	17.4					
Lane LOS	A		A		A	A	C					
Approach Delay (s)	0.4		0.1		9.9		17.4					
Approach LOS					A		C					
Intersection Summary												
Average Delay			0.5									
Intersection Capacity Utilization			44.3%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2: Lambskin Lane/Flicker Place & Tamar Drive

Tamar Drive - Road Diet Study

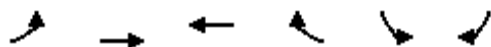
03/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	656	42	26	624	2	30	0	23	2	0	2
Future Volume (Veh/h)	4	656	42	26	624	2	30	0	23	2	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	5	763	49	30	726	2	35	0	27	2	0	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)	1164											
pX, platoon unblocked				0.98			0.98	0.98	0.98	0.98	0.98	
vC, conflicting volume	728			812			1222	1586	406	1206	1609	364
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	728			777			1194	1563	364	1177	1587	364
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			74	100	96	99	100	100
cM capacity (veh/h)	871			822			135	104	622	133	101	633
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	386	430	393	365	62	4						
Volume Left	5	0	30	0	35	2						
Volume Right	0	49	0	2	27	2						
cSH	871	1700	822	1700	205	220						
Volume to Capacity	0.01	0.25	0.04	0.21	0.30	0.02						
Queue Length 95th (ft)	0	0	3	0	30	1						
Control Delay (s)	0.2	0.0	1.1	0.0	30.0	21.6						
Lane LOS	A		A		D	C						
Approach Delay (s)	0.1		0.6		30.0	21.6						
Approach LOS					D	C						
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			47.1%	ICU Level of Service				A				
Analysis Period (min)			15									

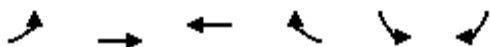
HCM Unsignalized Intersection Capacity Analysis

3: Tamar Drive & Blue Pool

Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	8	673	646	5	5	6
Future Volume (Veh/h)	8	673	646	5	5	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	792	760	6	6	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	766				1177	383
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	766				1177	383
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	99
cM capacity (veh/h)	843				182	615
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	273	528	507	259	13	
Volume Left	9	0	0	0	6	
Volume Right	0	0	0	6	7	
cSH	843	1700	1700	1700	293	
Volume to Capacity	0.01	0.31	0.30	0.15	0.04	
Queue Length 95th (ft)	1	0	0	0	3	
Control Delay (s)	0.4	0.0	0.0	0.0	17.8	
Lane LOS	A				C	
Approach Delay (s)	0.1		0.0		17.8	
Approach LOS					C	
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			34.2%		ICU Level of Service	A
Analysis Period (min)			15			

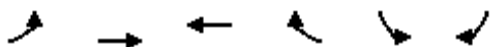


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑
Traffic Volume (veh/h)	255	423	454	90	57	197
Future Volume (Veh/h)	255	423	454	90	57	197
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	287	475	510	101	64	221
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	611				1372	306
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	611				1372	306
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	70				33	68
cM capacity (veh/h)	964				96	690
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	445	317	340	271	64	221
Volume Left	287	0	0	0	64	0
Volume Right	0	0	0	101	0	221
cSH	964	1700	1700	1700	96	690
Volume to Capacity	0.30	0.19	0.20	0.16	0.67	0.32
Queue Length 95th (ft)	31	0	0	0	82	34
Control Delay (s)	7.8	0.0	0.0	0.0	96.9	12.6
Lane LOS	A				F	B
Approach Delay (s)	4.6		0.0		31.6	
Approach LOS					D	
Intersection Summary						
Average Delay			7.5			
Intersection Capacity Utilization			47.9%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

5: Tamar Drive & Sweet Wind Place

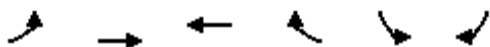
Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	22	458	526	17	14	18
Future Volume (Veh/h)	22	458	526	17	14	18
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	26	539	619	20	16	21
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	640				952	320
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	640				952	320
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				94	97
cM capacity (veh/h)	939				250	675
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	206	359	413	226	37	
Volume Left	26	0	0	0	16	
Volume Right	0	0	0	20	21	
cSH	939	1700	1700	1700	389	
Volume to Capacity	0.03	0.21	0.24	0.13	0.10	
Queue Length 95th (ft)	2	0	0	0	8	
Control Delay (s)	1.4	0.0	0.0	0.0	15.2	
Lane LOS	A				C	
Approach Delay (s)	0.5		0.0		15.2	
Approach LOS					C	
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			38.9%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 6: Tamar Drive & High Tor Hill

Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑
Traffic Volume (veh/h)	56	416	513	125	85	30
Future Volume (Veh/h)	56	416	513	125	85	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	65	484	597	145	99	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	742				1042	371
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	742				1042	371
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				52	94
cM capacity (veh/h)	861				208	626
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	226	323	398	344	99	35
Volume Left	65	0	0	0	99	0
Volume Right	0	0	0	145	0	35
cSH	861	1700	1700	1700	208	626
Volume to Capacity	0.08	0.19	0.23	0.20	0.48	0.06
Queue Length 95th (ft)	6	0	0	0	58	4
Control Delay (s)	3.3	0.0	0.0	0.0	37.0	11.1
Lane LOS	A				E	B
Approach Delay (s)	1.4		0.0		30.2	
Approach LOS					D	
Intersection Summary						
Average Delay			3.4			
Intersection Capacity Utilization			46.0%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

7: Spiral Cut & Tamar Drive

Tamar Drive - Road Diet Study

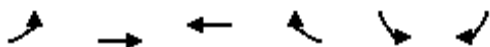
03/28/2019

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	475	26	32	625	13	21
Future Volume (Veh/h)	475	26	32	625	13	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	516	28	35	679	14	23
Pedestrians				1		
Lane Width (ft)				12.0		
Walking Speed (ft/s)				3.5		
Percent Blockage				0		
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)				1088		
pX, platoon unblocked						
vC, conflicting volume				544	940	273
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol				544	940	273
tC, single (s)				4.1	6.8	6.9
tC, 2 stage (s)						
tF (s)				2.2	3.5	3.3
p0 queue free %				97	94	97
cM capacity (veh/h)				1021	253	724
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	
Volume Total	344	200	261	453	37	
Volume Left	0	0	35	0	14	
Volume Right	0	28	0	0	23	
cSH	1700	1700	1021	1700	425	
Volume to Capacity	0.20	0.12	0.03	0.27	0.09	
Queue Length 95th (ft)	0	0	3	0	7	
Control Delay (s)	0.0	0.0	1.5	0.0	14.3	
Lane LOS				A	B	
Approach Delay (s)	0.0		0.5		14.3	
Approach LOS					B	
Intersection Summary						
Average Delay				0.7		
Intersection Capacity Utilization				45.8%	ICU Level of Service	A
Analysis Period (min)				15		

HCM Unsignalized Intersection Capacity Analysis

8: Tamar Drive & 8810-8860 Driveway

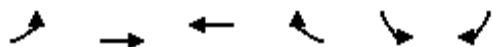
Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (veh/h)	21	475	643	34	17	14
Future Volume (Veh/h)	21	475	643	34	17	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	24	552	748	40	20	16
Pedestrians		5			5	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		0			0	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			845			
pX, platoon unblocked						
vC, conflicting volume	793				1097	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	793				1097	404
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				90	97
cM capacity (veh/h)	820				200	590
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	
Volume Total	208	368	499	289	36	
Volume Left	24	0	0	0	20	
Volume Right	0	0	0	40	16	
cSH	820	1700	1700	1700	284	
Volume to Capacity	0.03	0.22	0.29	0.17	0.13	
Queue Length 95th (ft)	2	0	0	0	11	
Control Delay (s)	1.4	0.0	0.0	0.0	19.5	
Lane LOS	A				C	
Approach Delay (s)	0.5		0.0		19.5	
Approach LOS					C	
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			40.1%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 9: Tamar Drive & Hayshed Lane

Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑
Traffic Volume (veh/h)	75	417	625	67	37	52
Future Volume (Veh/h)	75	417	625	67	37	52
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	453	679	73	40	57
Pedestrians		3				
Lane Width (ft)		12.0				
Walking Speed (ft/s)		3.5				
Percent Blockage		0				
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)			402			
pX, platoon unblocked	0.94				0.94	0.94
vC, conflicting volume	752				1106	379
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	596				974	197
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	91				81	92
cM capacity (veh/h)	913				212	756
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	233	302	453	299	40	57
Volume Left	82	0	0	0	40	0
Volume Right	0	0	0	73	0	57
cSH	913	1700	1700	1700	212	756
Volume to Capacity	0.09	0.18	0.27	0.18	0.19	0.08
Queue Length 95th (ft)	7	0	0	0	17	6
Control Delay (s)	3.9	0.0	0.0	0.0	25.9	10.1
Lane LOS	A				D	B
Approach Delay (s)	1.7		0.0		16.6	
Approach LOS					C	
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			47.4%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

10: Cloudleap Court & Tamar Drive

Tamar Drive - Road Diet Study

03/28/2019

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↗
Traffic Volume (vph)	414	40	52	635	57	37
Future Volume (vph)	414	40	52	635	57	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3482		1767	3539	1770	1555
Flt Permitted	1.00		0.38	1.00	0.95	1.00
Satd. Flow (perm)	3482		698	3539	1770	1555
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	481	47	60	738	66	43
RTOR Reduction (vph)	6	0	0	0	0	36
Lane Group Flow (vph)	522	0	60	738	66	7
Confl. Peds. (#/hr)		12	12			9
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Actuated Green, G (s)	23.2		31.8	31.8	7.7	7.7
Effective Green, g (s)	23.2		31.8	31.8	7.7	7.7
Actuated g/C Ratio	0.47		0.64	0.64	0.16	0.16
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	1631		526	2273	275	241
v/s Ratio Prot	0.15		0.01	c0.21	c0.04	
v/s Ratio Perm			0.06			0.00
v/c Ratio	0.32		0.11	0.32	0.24	0.03
Uniform Delay, d1	8.2		3.5	4.0	18.3	17.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		0.1	0.2	0.5	0.0
Delay (s)	8.5		3.6	4.2	18.8	17.8
Level of Service	A		A	A	B	B
Approach Delay (s)	8.5			4.1	18.4	
Approach LOS	A			A	B	
Intersection Summary						
HCM 2000 Control Delay			6.8		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.35			
Actuated Cycle Length (s)			49.5		Sum of lost time (s)	15.0
Intersection Capacity Utilization			36.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

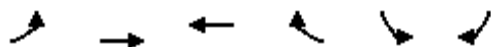
11: Foreland Garth & Tamar Drive

Tamar Drive - Road Diet Study
03/28/2019

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	406	45	74	650	37	61
Future Volume (Veh/h)	406	45	74	650	37	61
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	478	53	87	765	44	72
Pedestrians	6				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	1				0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	616			382		
pX, platoon unblocked			0.98		0.88	0.98
vC, conflicting volume			533		1452	268
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			481		1356	210
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		61	91
cM capacity (veh/h)			1054		112	778
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	319	212	87	765	44	72
Volume Left	0	0	87	0	44	0
Volume Right	0	53	0	0	0	72
cSH	1700	1700	1054	1700	112	778
Volume to Capacity	0.19	0.12	0.08	0.45	0.39	0.09
Queue Length 95th (ft)	0	0	7	0	41	8
Control Delay (s)	0.0	0.0	8.7	0.0	56.4	10.1
Lane LOS			A		F	B
Approach Delay (s)	0.0		0.9		27.7	
Approach LOS					D	
Intersection Summary						
Average Delay	2.6					
Intersection Capacity Utilization			44.2%		ICU Level of Service	A
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis 12: Tamar Drive & Airbrink Lane

Tamar Drive - Road Diet Study
03/28/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	454	707	12	5	17
Future Volume (Veh/h)	13	454	707	12	5	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	14	504	786	13	6	19
Pedestrians		5	3		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		714	284			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	803				1080	802
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	679				1005	678
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				97	94
cM capacity (veh/h)	769				197	333
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	182	336	799	25		
Volume Left	14	0	0	6		
Volume Right	0	0	13	19		
cSH	769	1700	1700	285		
Volume to Capacity	0.02	0.20	0.47	0.09		
Queue Length 95th (ft)	1	0	0	7		
Control Delay (s)	0.9	0.0	0.0	18.8		
Lane LOS	A			C		
Approach Delay (s)	0.3		0.0	18.8		
Approach LOS				C		
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			49.5%		ICU Level of Service	
Analysis Period (min)			15			
					A	

HCM Signalized Intersection Capacity Analysis

13: Old Dobbin Lane & Tamar Drive

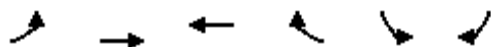
Tamar Drive - Road Diet Study

03/28/2019

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	309	150	175	428	291	310
Future Volume (vph)	309	150	175	428	291	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	0.95		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3336		1768	1863	1770	1551
Flt Permitted	1.00		0.32	1.00	0.95	1.00
Satd. Flow (perm)	3336		601	1863	1770	1551
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	329	160	186	455	310	330
RTOR Reduction (vph)	77	0	0	0	0	240
Lane Group Flow (vph)	412	0	186	455	310	90
Confl. Peds. (#/hr)		5	5			10
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Actuated Green, G (s)	16.2		31.2	31.2	15.4	15.4
Effective Green, g (s)	16.2		31.2	31.2	15.4	15.4
Actuated g/C Ratio	0.29		0.55	0.55	0.27	0.27
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.0		3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	954		537	1026	481	422
v/s Ratio Prot	0.12		0.06	c0.24	c0.18	
v/s Ratio Perm			0.13			0.06
v/c Ratio	0.43		0.35	0.44	0.64	0.21
Uniform Delay, d1	16.5		6.9	7.5	18.2	15.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1		0.4	0.6	3.0	0.3
Delay (s)	16.6		7.3	8.2	21.1	16.2
Level of Service	B		A	A	C	B
Approach Delay (s)	16.6			7.9	18.6	
Approach LOS	B			A	B	
Intersection Summary						
HCM 2000 Control Delay			14.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.57			
Actuated Cycle Length (s)			56.6		Sum of lost time (s)	15.0
Intersection Capacity Utilization			52.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis 14: Tamar Drive & Autumn Ridge Drive

Tamar Drive - Road Diet Study
03/28/2019

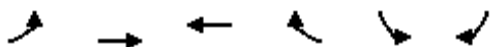


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	587	588	6	4	15
Future Volume (Veh/h)	32	587	588	6	4	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	35	645	646	7	4	16
Pedestrians		2			6	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		0			1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		601	1183			
pX, platoon unblocked	0.96				0.96	0.96
vC, conflicting volume	659				1048	658
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	622				1028	620
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				98	96
cM capacity (veh/h)	909				211	409
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	250	430	653	20		
Volume Left	35	0	0	4		
Volume Right	0	0	7	16		
cSH	909	1700	1700	344		
Volume to Capacity	0.04	0.25	0.38	0.06		
Queue Length 95th (ft)	3	0	0	5		
Control Delay (s)	1.6	0.0	0.0	16.1		
Lane LOS	A			C		
Approach Delay (s)	0.6		0.0	16.1		
Approach LOS				C		
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			50.7%		ICU Level of Service	
Analysis Period (min)			15			
			A			

HCM Unsignalized Intersection Capacity Analysis

15: Tamar Drive & Stonecutter Road

Tamar Drive - Road Diet Study
03/28/2019



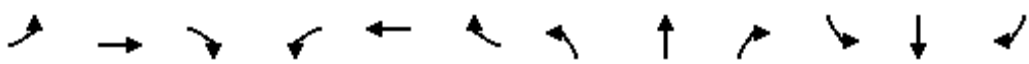
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 				
Traffic Volume (veh/h)	40	551	582	101	33	12
Future Volume (Veh/h)	40	551	582	101	33	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	44	605	640	111	36	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		1241	543			
pX, platoon unblocked	0.94				0.94	0.94
vC, conflicting volume	751				1086	696
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	704				1060	645
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				82	97
cM capacity (veh/h)	837				195	390
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2	
Volume Total	246	403	751	36	13	
Volume Left	44	0	0	36	0	
Volume Right	0	0	111	0	13	
cSH	837	1700	1700	195	390	
Volume to Capacity	0.05	0.24	0.44	0.18	0.03	
Queue Length 95th (ft)	4	0	0	16	3	
Control Delay (s)	2.2	0.0	0.0	27.5	14.5	
Lane LOS	A			D	B	
Approach Delay (s)	0.8		0.0	24.1		
Approach LOS				C		
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			55.6%		ICU Level of Service	
Analysis Period (min)			15			
B						

HCM Signalized Intersection Capacity Analysis

16: Snowden River Parkway & Tamar Drive

Tamar Drive - Road Diet Study

03/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	145	99	78	126	28	114	1196	178	52	845	443
Future Volume (vph)	340	145	99	78	126	28	114	1196	178	52	845	443
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.0	6.5		5.0	6.5	6.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	0.98		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3190		1770	3434		1770	3471		1770	3539	1583
Flt Permitted	0.95	0.98		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3190		1770	3434		1770	3471		1770	3539	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	366	156	106	84	135	30	123	1286	191	56	909	476
RTOR Reduction (vph)	0	20	0	0	12	0	0	6	0	0	0	233
Lane Group Flow (vph)	212	396	0	84	153	0	123	1471	0	56	909	243
Confl. Peds. (#/hr)	1		1	1		1						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	26.1	26.1		12.7	12.7		16.1	89.1		8.6	81.6	81.6
Effective Green, g (s)	26.1	26.1		12.7	12.7		16.1	89.1		8.6	81.6	81.6
Actuated g/C Ratio	0.16	0.16		0.08	0.08		0.10	0.56		0.05	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	6.5		5.0	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	262	520		140	272		178	1932		95	1804	807
v/s Ratio Prot	c0.13	0.12		c0.05	0.04		c0.07	c0.42		0.03	0.26	
v/s Ratio Perm												0.15
v/c Ratio	0.81	0.76		0.60	0.56		0.69	0.76		0.59	0.50	0.30
Uniform Delay, d1	64.5	64.0		71.2	71.0		69.5	27.3		74.0	25.9	22.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.6	6.5		6.8	2.7		11.0	2.9		9.0	1.0	1.0
Delay (s)	81.1	70.5		78.0	73.6		80.5	30.2		83.0	26.9	23.6
Level of Service	F	E		E	E		F	C		F	C	C
Approach Delay (s)		74.1			75.1			34.0			28.0	
Approach LOS		E			E			C			C	
Intersection Summary												
HCM 2000 Control Delay			40.8			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			160.0			Sum of lost time (s)			23.5			
Intersection Capacity Utilization			78.8%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 1: Flamepool Way & Tamar Drive

Movement	EB	WB	NB	NB	SB
Directions Served	LT	LT	LT	R	LTR
Maximum Queue (ft)	54	9	25	31	56
Average Queue (ft)	5	0	2	2	21
95th Queue (ft)	28	5	13	14	49
Link Distance (ft)	559	449	386		415
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				75	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Lambskin Lane/Flicker Place & Tamar Drive

Movement	WB	NB	SB
Directions Served	LT	LTR	LTR
Maximum Queue (ft)	51	66	25
Average Queue (ft)	6	27	2
95th Queue (ft)	28	57	14
Link Distance (ft)	298	784	282
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Tamar Drive & Blue Pool

Movement	SB
Directions Served	LR
Maximum Queue (ft)	36
Average Queue (ft)	13
95th Queue (ft)	39
Link Distance (ft)	490
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Existing Conditions

04/01/2019

Intersection: 4: Tamar Drive & Phelps Luck Drive

Movement	EB	EB	WB	SB	SB
Directions Served	LT	T	TR	L	R
Maximum Queue (ft)	103	32	10	59	99
Average Queue (ft)	36	1	0	19	57
95th Queue (ft)	79	13	5	46	87
Link Distance (ft)	206	206	875	214	214
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Tamar Drive & Sweet Wind Place

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	31	6	55
Average Queue (ft)	3	0	24
95th Queue (ft)	18	4	48
Link Distance (ft)	875	278	455
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Tamar Drive & High Tor Hill

Movement	EB	EB	WB	SB	SB
Directions Served	LT	T	TR	L	R
Maximum Queue (ft)	49	6	10	106	71
Average Queue (ft)	10	0	0	39	30
95th Queue (ft)	36	4	5	73	57
Link Distance (ft)	278	278	414		539
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				175	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 7: Spiral Cut & Tamar Drive

Movement	EB	WB	NB
Directions Served	T	LT	LR
Maximum Queue (ft)	4	36	57
Average Queue (ft)	0	2	24
95th Queue (ft)	3	15	50
Link Distance (ft)	414	196	415
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Tamar Drive & 8810-8860 Driveway

Movement	EB	EB	WB	SB
Directions Served	LT	T	T	LR
Maximum Queue (ft)	44	6	4	54
Average Queue (ft)	8	0	0	27
95th Queue (ft)	32	4	3	49
Link Distance (ft)	196	196	371	327
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Tamar Drive & Hayshed Lane

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	49	4	57	71
Average Queue (ft)	9	0	24	32
95th Queue (ft)	34	3	51	54
Link Distance (ft)	371	337	723	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 10: Cloudleap Court & Tamar Drive

Movement	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	TR	L	T	T	L	R
Maximum Queue (ft)	54	94	31	78	82	64	51
Average Queue (ft)	15	30	5	27	28	28	19
95th Queue (ft)	45	73	25	61	67	60	46
Link Distance (ft)	337	337		547		569	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			150		225		200
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 11: Foreland Garth & Tamar Drive

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	15	52	43	49
Average Queue (ft)	0	15	19	26
95th Queue (ft)	6	43	44	46
Link Distance (ft)	547	52	504	
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)			200	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 12: Tamar Drive & Airbrink Lane

Movement	EB	EB	WB	SB
Directions Served	LT	T	TR	LR
Maximum Queue (ft)	44	17	17	38
Average Queue (ft)	5	1	1	14
95th Queue (ft)	26	9	10	35
Link Distance (ft)	52	52	200	470
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 13: Old Dobbin Lane & Tamar Drive

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	79	135	121	133	86	54
Average Queue (ft)	27	57	51	45	35	26
95th Queue (ft)	63	105	88	101	66	49
Link Distance (ft)	200	200		538		675
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			175		325	
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 14: Tamar Drive & Autumn Ridge Drive

Movement	EB	EB	SB
Directions Served	LT	T	LR
Maximum Queue (ft)	40	6	43
Average Queue (ft)	4	0	17
95th Queue (ft)	22	4	39
Link Distance (ft)	538	538	258
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: Tamar Drive & Stonecutter Road

Movement	EB	SB	SB
Directions Served	LT	L	R
Maximum Queue (ft)	35	76	35
Average Queue (ft)	4	39	15
95th Queue (ft)	21	66	41
Link Distance (ft)	560	572	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 16: Snowden River Parkway & Tamar Drive

Movement	EB	EB	EB	B39	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	LT	TR	T	L	T	TR	L	T	TR	L	T
Maximum Queue (ft)	206	231	204	21	155	156	89	138	219	176	350	841
Average Queue (ft)	107	127	66	1	55	62	33	43	94	62	52	371
95th Queue (ft)	189	207	155	17	124	122	66	104	179	147	200	723
Link Distance (ft)	226	226	226	151		266	266		1271	1271		1274
Upstream Blk Time (%)	0	0	0									
Queuing Penalty (veh)	0	0	1									
Storage Bay Dist (ft)					200			325			325	
Storage Blk Time (%)											0	18
Queuing Penalty (veh)											0	5

Intersection: 16: Snowden River Parkway & Tamar Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	874	350
Average Queue (ft)	357	176
95th Queue (ft)	737	428
Link Distance (ft)	1274	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		325
Storage Blk Time (%)	13	0
Queuing Penalty (veh)	55	1

Zone Summary

Zone wide Queuing Penalty: 63

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 1: Flamepool Way & Tamar Drive

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LT	R	LTR
Maximum Queue (ft)	111	26	40	31	56
Average Queue (ft)	16	1	2	6	15
95th Queue (ft)	65	13	21	25	43
Link Distance (ft)	559	559	449		415
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				75	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Lambskin Lane/Flicker Place & Tamar Drive

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LT	LTR	LTR
Maximum Queue (ft)	56	16	63	68	31
Average Queue (ft)	4	1	12	29	2
95th Queue (ft)	29	11	46	61	16
Link Distance (ft)	449	449	298	784	282
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Tamar Drive & Blue Pool

Movement	EB	EB	SB
Directions Served	LT	T	LR
Maximum Queue (ft)	100	7	31
Average Queue (ft)	9	0	11
95th Queue (ft)	47	5	34
Link Distance (ft)	298	298	490
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 4: Tamar Drive & Phelps Luck Drive

Movement	EB	EB	WB	SB	SB
Directions Served	LT	T	TR	L	R
Maximum Queue (ft)	174	98	14	96	99
Average Queue (ft)	76	6	1	39	50
95th Queue (ft)	146	50	8	78	82
Link Distance (ft)	206	206	875	214	214
Upstream Blk Time (%)	0	0			
Queuing Penalty (veh)	0	0			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Tamar Drive & Sweet Wind Place

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	54	38
Average Queue (ft)	8	19
95th Queue (ft)	35	44
Link Distance (ft)	875	455
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Tamar Drive & High Tor Hill

Movement	EB	EB	WB	SB	SB
Directions Served	LT	T	TR	L	R
Maximum Queue (ft)	80	10	40	113	48
Average Queue (ft)	27	0	2	43	21
95th Queue (ft)	65	7	17	82	47
Link Distance (ft)	278	278	414		539
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				175	
Storage Blk Time (%)				0	
Queuing Penalty (veh)				0	

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 7: Spiral Cut & Tamar Drive

Movement	EB	WB	WB	NB
Directions Served	T	LT	T	LR
Maximum Queue (ft)	17	54	14	42
Average Queue (ft)	1	13	0	21
95th Queue (ft)	9	42	10	45
Link Distance (ft)	414	196	196	415
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Tamar Drive & 8810-8860 Driveway

Movement	EB	EB	WB	WB	SB
Directions Served	LT	T	T	TR	LR
Maximum Queue (ft)	58	12	33	35	38
Average Queue (ft)	12	0	1	2	19
95th Queue (ft)	42	6	14	16	43
Link Distance (ft)	196	196	371	371	327
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9: Tamar Drive & Hayshed Lane

Movement	EB	EB	WB	WB	SB	SB
Directions Served	LT	T	T	TR	L	R
Maximum Queue (ft)	81	42	12	40	64	65
Average Queue (ft)	29	2	1	2	26	31
95th Queue (ft)	67	22	8	17	54	56
Link Distance (ft)	371	371	337	337	723	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)					200	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 10: Cloudleap Court & Tamar Drive

Movement	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	TR	L	T	T	L	R
Maximum Queue (ft)	93	123	62	93	118	74	54
Average Queue (ft)	24	55	21	38	45	34	23
95th Queue (ft)	67	105	53	77	97	65	51
Link Distance (ft)	337	337		547		569	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			150		225		200
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 11: Foreland Garth & Tamar Drive

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	25	34	54	48	72	64
Average Queue (ft)	1	3	23	5	26	26
95th Queue (ft)	9	19	52	27	55	50
Link Distance (ft)	547	547	52	52	504	
Upstream Blk Time (%)			1	0		
Queuing Penalty (veh)			2	0		
Storage Bay Dist (ft)					200	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Tamar Drive & Airbrink Lane

Movement	EB	EB	WB	SB
Directions Served	LT	T	TR	LR
Maximum Queue (ft)	48	39	93	32
Average Queue (ft)	6	3	8	14
95th Queue (ft)	29	18	46	34
Link Distance (ft)	52	52	200	470
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	1	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Existing Conditions

04/01/2019

Intersection: 13: Old Dobbin Lane & Tamar Drive

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	152	187	199	274	203	150
Average Queue (ft)	57	92	69	106	102	67
95th Queue (ft)	112	155	134	197	169	117
Link Distance (ft)	200	200		538		675
Upstream Blk Time (%)	0	0				
Queuing Penalty (veh)	0	0				
Storage Bay Dist (ft)			175		325	
Storage Blk Time (%)			0	1		
Queuing Penalty (veh)			0	1		

Intersection: 14: Tamar Drive & Autumn Ridge Drive

Movement	EB	EB	WB	SB
Directions Served	LT	T	TR	LR
Maximum Queue (ft)	65	27	20	38
Average Queue (ft)	16	1	1	12
95th Queue (ft)	51	13	10	33
Link Distance (ft)	538	538	560	258
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Tamar Drive & Stonecutter Road

Movement	EB	EB	WB	B39	B39	SB	SB
Directions Served	LT	T	TR	T		L	R
Maximum Queue (ft)	66	71	23	96	55	60	31
Average Queue (ft)	23	3	1	5	2	24	9
95th Queue (ft)	56	32	11	59	39	51	33
Link Distance (ft)	560	560	151	226	226	572	
Upstream Blk Time (%)				0	0		
Queuing Penalty (veh)				0	0		
Storage Bay Dist (ft)						100	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Queuing and Blocking Report

Existing Conditions

04/01/2019

Intersection: 16: Snowden River Parkway & Tamar Drive

Movement	EB	EB	EB	B39	B39	WB	WB	WB	B40	NB	NB	NB
Directions Served	L	LT	TR	T	T	L	T	TR	T	L	T	TR
Maximum Queue (ft)	297	296	274	141	203	202	254	193	6	349	567	567
Average Queue (ft)	191	221	126	9	22	77	126	40	0	150	304	295
95th Queue (ft)	284	305	261	69	114	160	222	120	4	316	498	486
Link Distance (ft)	226	226	226	151	151		266	266	281		1271	1271
Upstream Blk Time (%)	7	15	2	0	2		1	0				
Queuing Penalty (veh)	15	29	3	1	7		0	0				
Storage Bay Dist (ft)						200				325		
Storage Blk Time (%)						0	3			0	8	
Queuing Penalty (veh)						0	3			0	9	

Intersection: 16: Snowden River Parkway & Tamar Drive

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	168	363	353	212
Average Queue (ft)	52	200	174	53
95th Queue (ft)	123	318	296	126
Link Distance (ft)		1274	1274	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	325			325
Storage Blk Time (%)		1	0	0
Queuing Penalty (veh)		0	2	0

Zone Summary

Zone wide Queuing Penalty: 74

Appendix D: HCM and Queuing Reports for the Build Condition

HCM Unsignalized Intersection Capacity Analysis

1: Flamepool Way & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	290	6	2	723	2	3	1	3	3	0	25
Future Volume (Veh/h)	7	290	6	2	723	2	3	1	3	3	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	8	341	7	2	851	2	4	1	4	4	0	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									3			
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		644										
pX, platoon unblocked												
vC, conflicting volume	853			348			1246	1218	174	1043	1220	852
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	853			348			1246	1218	174	1043	1220	852
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			97	99	100	98	100	90
cM capacity (veh/h)	782			1208			117	177	839	180	177	303
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	178	178	855	9	33							
Volume Left	8	0	2	4	4							
Volume Right	0	7	2	4	29							
cSH	782	1700	1208	232	280							
Volume to Capacity	0.01	0.10	0.00	0.04	0.12							
Queue Length 95th (ft)	1	0	0	3	10							
Control Delay (s)	0.5	0.0	0.0	23.1	19.6							
Lane LOS	A		A	C	C							
Approach Delay (s)	0.3		0.0	23.1	19.6							
Approach LOS				C	C							
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			50.8%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2: Lambskin Lane/Flicker Place & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

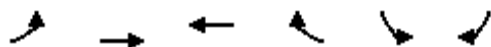
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	287	9	17	696	4	29	0	16	0	0	2
Future Volume (Veh/h)	0	287	9	17	696	4	29	0	16	0	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	326	10	19	791	5	33	0	18	0	0	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh												
Upstream signal (ft)	1164											
pX, platoon unblocked				0.97			0.97	0.97	0.97	0.97	0.97	
vC, conflicting volume	796			336			1157	1160	326	1176	1168	794
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	796			296			1145	1148	285	1164	1156	794
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			80	100	98	100	100	99
cM capacity (veh/h)	826			1223			168	189	728	160	187	388
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	326	10	19	796	51	2						
Volume Left	0	0	19	0	33	0						
Volume Right	0	10	0	5	18	2						
cSH	1700	1700	1223	1700	230	388						
Volume to Capacity	0.19	0.01	0.02	0.47	0.22	0.01						
Queue Length 95th (ft)	0	0	1	0	21	0						
Control Delay (s)	0.0	0.0	8.0	0.0	25.0	14.3						
Lane LOS			A		D	B						
Approach Delay (s)	0.0		0.2		25.0	14.3						
Approach LOS					D	B						
Intersection Summary												
Average Delay			1.2									
Intersection Capacity Utilization			52.8%		ICU Level of Service		A					
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

3: Tamar Drive & Blue Pool

Tamar Drive - Road Diet Study

04/14/2020



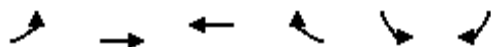
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	302	704	3	3	13
Future Volume (Veh/h)	1	302	704	3	3	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	355	828	4	4	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	832				1187	830
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	832				1187	830
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	96
cM capacity (veh/h)	801				208	370
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	1	355	832	19		
Volume Left	1	0	0	4		
Volume Right	0	0	4	15		
cSH	801	1700	1700	318		
Volume to Capacity	0.00	0.21	0.49	0.06		
Queue Length 95th (ft)	0	0	0	5		
Control Delay (s)	9.5	0.0	0.0	17.0		
Lane LOS	A			C		
Approach Delay (s)	0.0		0.0	17.0		
Approach LOS				C		
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			47.2%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

4: Tamar Drive & Phelps Luck Drive

Tamar Drive - Road Diet Study

04/14/2020



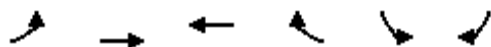
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	106	199	452	26	27	255
Future Volume (Veh/h)	106	199	452	26	27	255
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	125	234	532	31	32	300
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	TWLTL			
Median storage veh			2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	563				1032	548
vC1, stage 1 conf vol					548	
vC2, stage 2 conf vol					484	
vCu, unblocked vol	563				1032	548
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	88				93	44
cM capacity (veh/h)	1008				438	537
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2	
Volume Total	125	234	563	32	300	
Volume Left	125	0	0	32	0	
Volume Right	0	0	31	0	300	
cSH	1008	1700	1700	438	537	
Volume to Capacity	0.12	0.14	0.33	0.07	0.56	
Queue Length 95th (ft)	11	0	0	6	85	
Control Delay (s)	9.1	0.0	0.0	13.9	19.9	
Lane LOS	A			B	C	
Approach Delay (s)	3.2		0.0	19.3		
Approach LOS				C		
Intersection Summary						
Average Delay			6.0			
Intersection Capacity Utilization			47.8%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

5: Tamar Drive & Sweet Wind Place

Tamar Drive - Road Diet Study

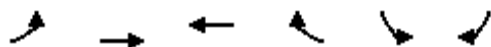
04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	216	450	9	11	28
Future Volume (Veh/h)	10	216	450	9	11	28
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	254	529	11	13	33
Pedestrians			1		4	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		TWLT	TWLT			
Median storage veh		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	544				818	538
vC1, stage 1 conf vol					538	
vC2, stage 2 conf vol					279	
vCu, unblocked vol	544				818	538
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	94
cM capacity (veh/h)	1021				527	541
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	12	254	540	46		
Volume Left	12	0	0	13		
Volume Right	0	0	11	33		
cSH	1021	1700	1700	537		
Volume to Capacity	0.01	0.15	0.32	0.09		
Queue Length 95th (ft)	1	0	0	7		
Control Delay (s)	8.6	0.0	0.0	12.3		
Lane LOS	A			B		
Approach Delay (s)	0.4		0.0	12.3		
Approach LOS				B		
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			34.2%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 6: Tamar Drive & High Tor Hill

Tamar Drive - Road Diet Study
04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	207	400	91	90	59
Future Volume (Veh/h)	20	207	400	91	90	59
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	24	244	471	107	106	69
Pedestrians		1				
Lane Width (ft)		12.0				
Walking Speed (ft/s)		3.5				
Percent Blockage		0				
Right turn flare (veh)						
Median type		TWLT	TWLT			
Median storage (veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	578				816	526
vC1, stage 1 conf vol					524	
vC2, stage 2 conf vol					292	
vCu, unblocked vol	578				816	526
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	98				80	87
cM capacity (veh/h)	996				530	552
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2	
Volume Total	24	244	578	106	69	
Volume Left	24	0	0	106	0	
Volume Right	0	0	107	0	69	
cSH	996	1700	1700	530	552	
Volume to Capacity	0.02	0.14	0.34	0.20	0.13	
Queue Length 95th (ft)	2	0	0	18	11	
Control Delay (s)	8.7	0.0	0.0	13.5	12.5	
Lane LOS	A			B	B	
Approach Delay (s)	0.8		0.0	13.1		
Approach LOS				B		
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization			38.5%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

7: Spiral Cut & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

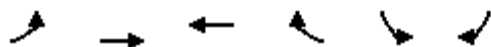
						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	287	10	7	466	25	25
Future Volume (Veh/h)	287	10	7	466	25	25
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	338	12	8	548	29	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage veh)	2		2			
Upstream signal (ft)			1088			
pX, platoon unblocked						
vC, conflicting volume			350	908		344
vC1, stage 1 conf vol				344		
vC2, stage 2 conf vol				564		
vCu, unblocked vol			350	908		344
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)				5.4		
tF (s)			2.2	3.5		3.3
p0 queue free %			99	94		96
cM capacity (veh/h)			1209	502		699
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	350	8	548	58		
Volume Left	0	8	0	29		
Volume Right	12	0	0	29		
cSH	1700	1209	1700	584		
Volume to Capacity	0.21	0.01	0.32	0.10		
Queue Length 95th (ft)	0	0	0	8		
Control Delay (s)	0.0	8.0	0.0	11.8		
Lane LOS	A		B			
Approach Delay (s)	0.0	0.1	11.8			
Approach LOS			B			
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			34.5%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Tamar Drive & 8810-8860 Driveway

Tamar Drive - Road Diet Study

04/14/2020



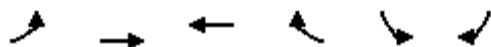
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	297	450	7	19	23
Future Volume (Veh/h)	15	297	450	7	19	23
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	18	349	529	8	22	27
Pedestrians			1		7	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			3.5		3.5	
Percent Blockage			0		1	
Right turn flare (veh)						
Median type		TWLT	TL			
Median storage veh		2	2			
Upstream signal (ft)			845			
pX, platoon unblocked						
vC, conflicting volume	544				926	540
vC1, stage 1 conf vol					540	
vC2, stage 2 conf vol					386	
vCu, unblocked vol	544				926	540
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	98				96	95
cM capacity (veh/h)	1018				497	538
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	18	349	537	49		
Volume Left	18	0	0	22		
Volume Right	0	0	8	27		
cSH	1018	1700	1700	519		
Volume to Capacity	0.02	0.21	0.32	0.09		
Queue Length 95th (ft)	1	0	0	8		
Control Delay (s)	8.6	0.0	0.0	12.7		
Lane LOS	A			B		
Approach Delay (s)	0.4		0.0	12.7		
Approach LOS				B		
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			34.1%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

9: Tamar Drive & Hayshed Lane

Tamar Drive - Road Diet Study

04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	289	377	25	45	80
Future Volume (Veh/h)	27	289	377	25	45	80
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	32	340	444	29	53	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						8
Median type		TWLT	None			
Median storage (veh)		2				
Upstream signal (ft)			402			
pX, platoon unblocked	0.91				0.91	0.91
vC, conflicting volume	473				862	458
vC1, stage 1 conf vol					458	
vC2, stage 2 conf vol					404	
vCu, unblocked vol	377				803	361
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				90	85
cM capacity (veh/h)	1080				525	625
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	32	340	473	147		
Volume Left	32	0	0	53		
Volume Right	0	0	29	94		
cSH	1080	1700	1700	977		
Volume to Capacity	0.03	0.20	0.28	0.15		
Queue Length 95th (ft)	2	0	0	13		
Control Delay (s)	8.4	0.0	0.0	12.1		
Lane LOS	A			B		
Approach Delay (s)	0.7		0.0	12.1		
Approach LOS				B		
Intersection Summary						
Average Delay			2.1			
Intersection Capacity Utilization			33.0%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

10: Cloudleap Court & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	309	25	12	359	43	33
Future Volume (vph)	309	25	12	359	43	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1542	1767	1863	1770	1554
Flt Permitted	1.00	1.00	0.45	1.00	0.95	1.00
Satd. Flow (perm)	1863	1542	835	1863	1770	1554
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	364	29	14	422	51	39
RTOR Reduction (vph)	0	13	0	0	0	34
Lane Group Flow (vph)	364	16	14	422	51	5
Confl. Peds. (#/hr)		7	7			10
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Actuated Green, G (s)	26.4	26.4	32.1	32.1	6.0	6.0
Effective Green, g (s)	26.4	26.4	32.1	32.1	6.0	6.0
Actuated g/C Ratio	0.55	0.55	0.67	0.67	0.12	0.12
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	1022	846	570	1243	220	193
v/s Ratio Prot	0.20		0.00	c0.23	c0.03	
v/s Ratio Perm		0.01	0.02			0.00
v/c Ratio	0.36	0.02	0.02	0.34	0.23	0.03
Uniform Delay, d1	6.1	4.9	3.0	3.4	19.0	18.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.0	0.3	0.5	0.1
Delay (s)	6.5	5.0	3.0	3.8	19.5	18.5
Level of Service	A	A	A	A	B	B
Approach Delay (s)	6.4			3.8	19.1	
Approach LOS	A			A	B	
Intersection Summary						
HCM 2000 Control Delay			6.4		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.37			
Actuated Cycle Length (s)			48.1		Sum of lost time (s)	15.0
Intersection Capacity Utilization			35.4%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

11: Foreland Garth & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

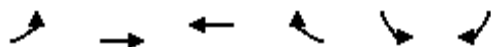
								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	298	44	56	344	27	51		
Future Volume (Veh/h)	298	44	56	344	27	51		
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Hourly flow rate (vph)	351	52	66	405	32	60		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)						8		
Median type	TWLTL		TWLTL					
Median storage veh)	2		2					
Upstream signal (ft)	497		753					
pX, platoon unblocked			0.91		0.91	0.91		
vC, conflicting volume			403		914	377		
vC1, stage 1 conf vol					377			
vC2, stage 2 conf vol					537			
vCu, unblocked vol			296		857	267		
tC, single (s)			4.1		6.4	6.2		
tC, 2 stage (s)					5.4			
tF (s)			2.2		3.5	3.3		
p0 queue free %			94		93	91		
cM capacity (veh/h)			1153		487	703		
Direction, Lane #	EB 1	WB 1	WB 2	NB 1				
Volume Total	403	66	405	92				
Volume Left	0	66	0	32				
Volume Right	52	0	0	60				
cSH	1700	1153	1700	1077				
Volume to Capacity	0.24	0.06	0.24	0.09				
Queue Length 95th (ft)	0	5	0	7				
Control Delay (s)	0.0	8.3	0.0	11.4				
Lane LOS			A	B				
Approach Delay (s)	0.0	1.2		11.4				
Approach LOS				B				
Intersection Summary								
Average Delay			1.7					
Intersection Capacity Utilization			35.0%	ICU Level of Service	A			
Analysis Period (min)			15					

HCM Unsignalized Intersection Capacity Analysis

12: Tamar Drive & Airbrink Lane

Tamar Drive - Road Diet Study

04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	337	385	8	13	15
Future Volume (Veh/h)	12	337	385	8	13	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	14	396	453	9	15	18
Pedestrians		1	1		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		TWLT	TL			
Median storage veh		2	2			
Upstream signal (ft)		920	330			
pX, platoon unblocked	0.92				0.92	0.92
vC, conflicting volume	465				886	462
vC1, stage 1 conf vol					460	
vC2, stage 2 conf vol					425	
vCu, unblocked vol	379				835	375
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	97
cM capacity (veh/h)	1086				520	617
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	14	396	462	33		
Volume Left	14	0	0	15		
Volume Right	0	0	9	18		
cSH	1086	1700	1700	569		
Volume to Capacity	0.01	0.23	0.27	0.06		
Queue Length 95th (ft)	1	0	0	5		
Control Delay (s)	8.4	0.0	0.0	11.7		
Lane LOS	A			B		
Approach Delay (s)	0.3		0.0	11.7		
Approach LOS				B		
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			31.1%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

13: Old Dobbin Lane & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

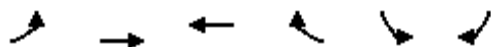
	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	↗
Traffic Volume (vph)	218	132	215	334	59	48
Future Volume (vph)	218	132	215	334	59	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1752		1769	1863	1770	1541
Flt Permitted	1.00		0.31	1.00	0.95	1.00
Satd. Flow (perm)	1752		571	1863	1770	1541
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	251	152	247	384	68	55
RTOR Reduction (vph)	26	0	0	0	0	48
Lane Group Flow (vph)	377	0	247	384	68	7
Confl. Peds. (#/hr)		3	3			5
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Actuated Green, G (s)	19.0		36.3	36.3	7.3	7.3
Effective Green, g (s)	19.0		36.3	36.3	7.3	7.3
Actuated g/C Ratio	0.35		0.68	0.68	0.14	0.14
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.0		3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	621		661	1261	241	209
v/s Ratio Prot	c0.22		c0.09	0.21	c0.04	
v/s Ratio Perm			0.17			0.00
v/c Ratio	0.61		0.37	0.30	0.28	0.04
Uniform Delay, d1	14.2		4.5	3.5	20.8	20.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2		0.4	0.3	0.6	0.1
Delay (s)	15.4		4.8	3.8	21.4	20.2
Level of Service	B		A	A	C	C
Approach Delay (s)	15.4			4.2	20.9	
Approach LOS	B			A	C	
Intersection Summary						
HCM 2000 Control Delay			9.9		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.48			
Actuated Cycle Length (s)			53.6		Sum of lost time (s)	15.0
Intersection Capacity Utilization			49.4%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

14: Tamar Drive & Autumn Ridge Drive

Tamar Drive - Road Diet Study

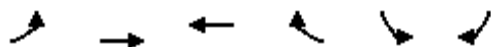
04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	257	530	4	14	19
Future Volume (Veh/h)	9	257	530	4	14	19
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	292	602	5	16	22
Pedestrians		1			1	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		0			0	
Right turn flare (veh)						
Median type		TWLT	TWLT			
Median storage veh		2	2			
Upstream signal (ft)		502	1087			
pX, platoon unblocked						
vC, conflicting volume	608				918	606
vC1, stage 1 conf vol					606	
vC2, stage 2 conf vol					312	
vCu, unblocked vol	608				918	606
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	96
cM capacity (veh/h)	969				491	496
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	10	292	607	38		
Volume Left	10	0	0	16		
Volume Right	0	0	5	22		
cSH	969	1700	1700	494		
Volume to Capacity	0.01	0.17	0.36	0.08		
Queue Length 95th (ft)	1	0	0	6		
Control Delay (s)	8.8	0.0	0.0	12.9		
Lane LOS	A			B		
Approach Delay (s)	0.3		0.0	12.9		
Approach LOS				B		
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			38.5%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 15: Tamar Drive & Stonecutter Road

Tamar Drive - Road Diet Study
04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	263	517	24	83	17
Future Volume (Veh/h)	8	263	517	24	83	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	309	608	28	98	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type		TWLT	None			
Median storage veh)		2				
Upstream signal (ft)		1046	543			
pX, platoon unblocked	0.98				0.98	0.98
vC, conflicting volume	636				949	622
vC1, stage 1 conf vol					622	
vC2, stage 2 conf vol					327	
vCu, unblocked vol	615				936	601
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				80	96
cM capacity (veh/h)	942				480	489
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	9	309	636	118		
Volume Left	9	0	0	98		
Volume Right	0	0	28	20		
cSH	942	1700	1700	578		
Volume to Capacity	0.01	0.18	0.37	0.20		
Queue Length 95th (ft)	1	0	0	19		
Control Delay (s)	8.9	0.0	0.0	14.1		
Lane LOS	A			B		
Approach Delay (s)	0.3		0.0	14.1		
Approach LOS				B		
Intersection Summary						
Average Delay			1.6			
Intersection Capacity Utilization			39.9%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

16: Snowden River Parkway & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	60	97	65	74	66	45	433	36	26	1367	422
Future Volume (vph)	195	60	97	65	74	66	45	433	36	26	1367	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.0	6.5		5.0	6.5	6.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.93		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3109		1770	3249		1770	3498		1770	3539	1583
Flt Permitted	0.95	0.98		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3109		1770	3249		1770	3498		1770	3539	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	210	65	104	70	80	71	48	466	39	28	1470	454
RTOR Reduction (vph)	0	90	0	0	65	0	0	3	0	0	0	170
Lane Group Flow (vph)	130	159	0	70	86	0	48	502	0	28	1470	284
Confl. Peds. (#/hr)	14		2	2		14						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	16.4	16.4		10.9	10.9		7.6	64.1		5.1	61.6	61.6
Effective Green, g (s)	16.4	16.4		10.9	10.9		7.6	64.1		5.1	61.6	61.6
Actuated g/C Ratio	0.14	0.14		0.09	0.09		0.06	0.53		0.04	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	6.5		5.0	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	220	424		160	295		112	1868		75	1816	812
v/s Ratio Prot	c0.08	0.05		c0.04	0.03		c0.03	0.14		0.02	c0.42	
v/s Ratio Perm												0.18
v/c Ratio	0.59	0.38		0.44	0.29		0.43	0.27		0.37	0.81	0.35
Uniform Delay, d1	48.6	47.1		51.6	51.0		54.1	15.2		55.9	24.3	17.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.6		1.9	0.6		2.6	0.4		3.1	4.0	1.2
Delay (s)	52.9	47.7		53.6	51.5		56.7	15.6		59.0	28.3	18.5
Level of Service	D	D		D	D		E	B		E	C	B
Approach Delay (s)		49.5			52.2			19.1			26.5	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			29.8				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			23.5		
Intersection Capacity Utilization			75.1%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

1: Flamepool Way & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	691	22	4	640	12	0	0	4	7	0	10
Future Volume (Veh/h)	20	691	22	4	640	12	0	0	4	7	0	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	22	743	24	4	688	13	0	0	4	8	0	11
Pedestrians								1				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								3.5				
Percent Blockage								0				
Right turn flare (veh)									3			
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		644										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	701			768			1514	1509	384	1118	1514	694
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	701			628			1420	1415	220	1000	1421	694
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	99	96	100	97
cM capacity (veh/h)	892			893			86	124	737	181	123	385
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1							
Volume Total	394	396	705	4	19							
Volume Left	22	0	4	0	8							
Volume Right	0	24	13	4	11							
cSH	892	1700	893	184	261							
Volume to Capacity	0.02	0.23	0.00	0.02	0.07							
Queue Length 95th (ft)	2	0	0	2	6							
Control Delay (s)	0.8	0.0	0.1	25.0	19.9							
Lane LOS	A		A	C	C							
Approach Delay (s)	0.4		0.1	25.0	19.9							
Approach LOS				C	C							
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			47.6%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2: Lambskin Lane/Flicker Place & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	656	42	26	624	2	30	0	23	2	0	2
Future Volume (Veh/h)	4	656	42	26	624	2	30	0	23	2	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	5	763	49	30	726	2	35	0	27	2	0	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		1164										
pX, platoon unblocked				0.90			0.90	0.90	0.90	0.90	0.90	
vC, conflicting volume	728			812			1561	1561	763	1587	1609	727
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	728			739			1567	1567	685	1596	1621	727
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			55	100	93	97	100	100
cM capacity (veh/h)	876			784			78	96	405	70	89	424
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	768	49	30	728	62	4						
Volume Left	5	0	30	0	35	2						
Volume Right	0	49	0	2	27	2						
cSH	876	1700	784	1700	121	120						
Volume to Capacity	0.01	0.03	0.04	0.43	0.51	0.03						
Queue Length 95th (ft)	0	0	3	0	60	3						
Control Delay (s)	0.2	0.0	9.8	0.0	62.7	35.9						
Lane LOS	A		A		F	E						
Approach Delay (s)	0.1		0.4		62.7	35.9						
Approach LOS					F	E						
Intersection Summary												
Average Delay			2.7									
Intersection Capacity Utilization			49.6%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

3: Tamar Drive & Blue Pool

Tamar Drive - Road Diet Study

04/14/2020



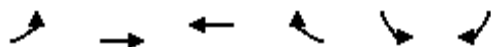
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	673	646	5	5	6
Future Volume (Veh/h)	8	673	646	5	5	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	792	760	6	6	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	766				1573	763
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	766				1573	763
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	98
cM capacity (veh/h)	847				120	404
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	9	792	766	13		
Volume Left	9	0	0	6		
Volume Right	0	0	6	7		
cSH	847	1700	1700	193		
Volume to Capacity	0.01	0.47	0.45	0.07		
Queue Length 95th (ft)	1	0	0	5		
Control Delay (s)	9.3	0.0	0.0	25.0		
Lane LOS	A			C		
Approach Delay (s)	0.1		0.0	25.0		
Approach LOS				C		
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			45.4%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

4: Tamar Drive & Phelps Luck Drive

Tamar Drive - Road Diet Study

04/14/2020



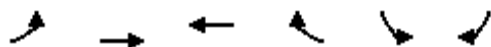
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	255	423	454	90	57	197
Future Volume (Veh/h)	255	423	454	90	57	197
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	287	475	510	101	64	221
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	TWLTL			
Median storage veh)			2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	611				1610	560
vC1, stage 1 conf vol					560	
vC2, stage 2 conf vol					1049	
vCu, unblocked vol	611				1610	560
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	70				71	58
cM capacity (veh/h)	968				221	527
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2	
Volume Total	287	475	611	64	221	
Volume Left	287	0	0	64	0	
Volume Right	0	0	101	0	221	
cSH	968	1700	1700	221	527	
Volume to Capacity	0.30	0.28	0.36	0.29	0.42	
Queue Length 95th (ft)	31	0	0	29	51	
Control Delay (s)	10.3	0.0	0.0	27.8	16.7	
Lane LOS	B			D	C	
Approach Delay (s)	3.9		0.0	19.2		
Approach LOS				C		
Intersection Summary						
Average Delay			5.1			
Intersection Capacity Utilization			56.8%	ICU Level of Service		B
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

5: Tamar Drive & Sweet Wind Place

Tamar Drive - Road Diet Study

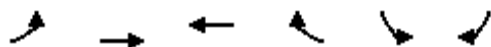
04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	458	526	17	14	18
Future Volume (Veh/h)	22	458	526	17	14	18
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	26	539	619	20	16	21
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		TWLT	TL			
Median storage veh		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	640				1221	630
vC1, stage 1 conf vol					630	
vC2, stage 2 conf vol					591	
vCu, unblocked vol	640				1221	630
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				96	96
cM capacity (veh/h)	943				410	481
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	26	539	639	37		
Volume Left	26	0	0	16		
Volume Right	0	0	20	21		
cSH	943	1700	1700	448		
Volume to Capacity	0.03	0.32	0.38	0.08		
Queue Length 95th (ft)	2	0	0	7		
Control Delay (s)	8.9	0.0	0.0	13.8		
Lane LOS	A			B		
Approach Delay (s)	0.4		0.0	13.8		
Approach LOS				B		
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			38.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 6: Tamar Drive & High Tor Hill

Tamar Drive - Road Diet Study
04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	56	416	513	125	85	30
Future Volume (Veh/h)	56	416	513	125	85	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	65	484	597	145	99	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLT	TWLT			
Median storage veh		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	742				1284	670
vC1, stage 1 conf vol					670	
vC2, stage 2 conf vol					614	
vCu, unblocked vol	742				1284	670
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	92				74	92
cM capacity (veh/h)	865				383	457
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2	
Volume Total	65	484	742	99	35	
Volume Left	65	0	0	99	0	
Volume Right	0	0	145	0	35	
cSH	865	1700	1700	383	457	
Volume to Capacity	0.08	0.28	0.44	0.26	0.08	
Queue Length 95th (ft)	6	0	0	25	6	
Control Delay (s)	9.5	0.0	0.0	17.7	13.5	
Lane LOS	A			C	B	
Approach Delay (s)	1.1		0.0	16.6		
Approach LOS				C		
Intersection Summary						
Average Delay			2.0			
Intersection Capacity Utilization			52.6%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

7: Spiral Cut & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

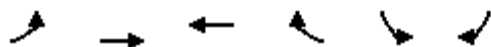
	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱		↲	↱	↲	
Traffic Volume (veh/h)	475	26	32	625	13	21
Future Volume (Veh/h)	475	26	32	625	13	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	516	28	35	679	14	23
Pedestrians				1		
Lane Width (ft)				12.0		
Walking Speed (ft/s)				3.5		
Percent Blockage				0		
Right turn flare (veh)						
Median type	TWLTL		TWLTL			
Median storage veh)	2		2			
Upstream signal (ft)				1088		
pX, platoon unblocked					0.97	
vC, conflicting volume			544		1279	531
vC1, stage 1 conf vol					530	
vC2, stage 2 conf vol					749	
vCu, unblocked vol			544		1272	531
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			97		96	96
cM capacity (veh/h)			1025		382	548
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	544	35	679	37		
Volume Left	0	35	0	14		
Volume Right	28	0	0	23		
cSH	1700	1025	1700	470		
Volume to Capacity	0.32	0.03	0.40	0.08		
Queue Length 95th (ft)	0	3	0	6		
Control Delay (s)	0.0	8.6	0.0	13.3		
Lane LOS	A		B			
Approach Delay (s)	0.0	0.4	13.3			
Approach LOS	B					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			43.2%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Tamar Drive & 8810-8860 Driveway

Tamar Drive - Road Diet Study

04/14/2020

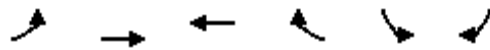


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	475	643	34	17	14
Future Volume (Veh/h)	21	475	643	34	17	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	24	552	748	40	20	16
Pedestrians		5			5	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		0			0	
Right turn flare (veh)						
Median type		TWLT	TL			
Median storage veh		2	2			
Upstream signal (ft)			845			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	793				1373	778
vC1, stage 1 conf vol					773	
vC2, stage 2 conf vol					600	
vCu, unblocked vol	649				1347	631
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				94	96
cM capacity (veh/h)	775				355	396
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	24	552	788	36		
Volume Left	24	0	0	20		
Volume Right	0	0	40	16		
cSH	775	1700	1700	372		
Volume to Capacity	0.03	0.32	0.46	0.10		
Queue Length 95th (ft)	2	0	0	8		
Control Delay (s)	9.8	0.0	0.0	15.7		
Lane LOS	A			C		
Approach Delay (s)	0.4		0.0	15.7		
Approach LOS				C		
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			47.5%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 9: Tamar Drive & Hayshed Lane

Tamar Drive - Road Diet Study

04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	417	625	67	37	52
Future Volume (Veh/h)	75	417	625	67	37	52
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	453	679	73	40	57
Pedestrians		3				
Lane Width (ft)		12.0				
Walking Speed (ft/s)		3.5				
Percent Blockage		0				
Right turn flare (veh)						8
Median type		TWLTL	None			
Median storage veh		2				
Upstream signal (ft)			402			
pX, platoon unblocked	0.78				0.78	0.78
vC, conflicting volume	752				1332	718
vC1, stage 1 conf vol					716	
vC2, stage 2 conf vol					617	
vCu, unblocked vol	536				1284	492
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	90				89	87
cM capacity (veh/h)	801				354	446
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	82	453	752	97		
Volume Left	82	0	0	40		
Volume Right	0	0	73	57		
cSH	801	1700	1700	759		
Volume to Capacity	0.10	0.27	0.44	0.13		
Queue Length 95th (ft)	9	0	0	11		
Control Delay (s)	10.0	0.0	0.0	15.2		
Lane LOS	B			C		
Approach Delay (s)	1.5		0.0	15.2		
Approach LOS				C		
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			55.4%		ICU Level of Service	B
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

10: Cloudleap Court & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	414	40	52	635	57	37
Future Volume (vph)	414	40	52	635	57	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1534	1767	1863	1770	1554
Flt Permitted	1.00	1.00	0.36	1.00	0.95	1.00
Satd. Flow (perm)	1863	1534	660	1863	1770	1554
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	481	47	60	738	66	43
RTOR Reduction (vph)	0	22	0	0	0	37
Lane Group Flow (vph)	481	25	60	738	66	6
Confl. Peds. (#/hr)		12	12			9
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Actuated Green, G (s)	30.2	30.2	38.8	38.8	7.8	7.8
Effective Green, g (s)	30.2	30.2	38.8	38.8	7.8	7.8
Actuated g/C Ratio	0.53	0.53	0.69	0.69	0.14	0.14
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	994	818	522	1277	243	214
v/s Ratio Prot	0.26		0.01	c0.40	c0.04	
v/s Ratio Perm		0.02	0.07			0.00
v/c Ratio	0.48	0.03	0.11	0.58	0.27	0.03
Uniform Delay, d1	8.3	6.3	3.8	4.6	21.9	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.0	0.1	1.0	0.6	0.1
Delay (s)	9.1	6.3	3.9	5.7	22.5	21.2
Level of Service	A	A	A	A	C	C
Approach Delay (s)	8.8			5.5	22.0	
Approach LOS	A			A	C	
Intersection Summary						
HCM 2000 Control Delay			8.0		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.59			
Actuated Cycle Length (s)			56.6		Sum of lost time (s)	15.0
Intersection Capacity Utilization			49.6%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

11: Foreland Garth & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

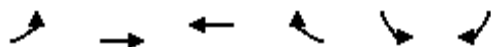
	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↖	↗	↖	↗
Traffic Volume (veh/h)	406	45	74	650	37	61
Future Volume (Veh/h)	406	45	74	650	37	61
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	478	53	87	765	44	72
Pedestrians	6				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	1				0	
Right turn flare (veh)						8
Median type	TWLT			TWLT		
Median storage veh	2			2		
Upstream signal (ft)	559			703		
pX, platoon unblocked			0.83		0.88	0.83
vC, conflicting volume			533		1452	506
vC1, stage 1 conf vol					506	
vC2, stage 2 conf vol					945	
vCu, unblocked vol			340		1206	308
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			91		86	88
cM capacity (veh/h)			1014		308	609
Direction, Lane #	EB 1	WB 1	WB 2	NB 1		
Volume Total	531	87	765	116		
Volume Left	0	87	0	44		
Volume Right	53	0	0	72		
cSH	1700	1014	1700	813		
Volume to Capacity	0.31	0.09	0.45	0.14		
Queue Length 95th (ft)	0	7	0	12		
Control Delay (s)	0.0	8.9	0.0	14.3		
Lane LOS		A		B		
Approach Delay (s)	0.0	0.9		14.3		
Approach LOS				B		
Intersection Summary						
Average Delay			1.6			
Intersection Capacity Utilization			44.2%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

12: Tamar Drive & Airbrink Lane

Tamar Drive - Road Diet Study

04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	454	707	12	5	17
Future Volume (Veh/h)	13	454	707	12	5	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	14	504	786	13	6	19
Pedestrians		5	3		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		TWLT	TL			
Median storage veh		2	2			
Upstream signal (ft)		974	288			
pX, platoon unblocked	0.86				0.89	0.86
vC, conflicting volume	803				1332	802
vC1, stage 1 conf vol					796	
vC2, stage 2 conf vol					535	
vCu, unblocked vol	693				1159	691
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	95
cM capacity (veh/h)	776				375	381
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	14	504	799	25		
Volume Left	14	0	0	6		
Volume Right	0	0	13	19		
cSH	776	1700	1700	379		
Volume to Capacity	0.02	0.30	0.47	0.07		
Queue Length 95th (ft)	1	0	0	5		
Control Delay (s)	9.7	0.0	0.0	15.2		
Lane LOS	A			C		
Approach Delay (s)	0.3		0.0	15.2		
Approach LOS				C		
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			49.5%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

13: Old Dobbin Lane & Tamar Drive

Tamar Drive - Road Diet Study

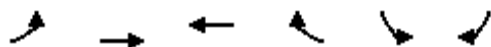
04/14/2020

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	309	150	175	428	291	310
Future Volume (vph)	309	150	175	428	291	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.96
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1764		1769	1863	1770	1526
Flt Permitted	1.00		0.20	1.00	0.95	1.00
Satd. Flow (perm)	1764		377	1863	1770	1526
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	329	160	186	455	310	330
RTOR Reduction (vph)	21	0	0	0	0	247
Lane Group Flow (vph)	468	0	186	455	310	83
Confl. Peds. (#/hr)		5	5			10
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Actuated Green, G (s)	22.3		38.6	38.6	16.3	16.3
Effective Green, g (s)	22.3		38.6	38.6	16.3	16.3
Actuated g/C Ratio	0.34		0.59	0.59	0.25	0.25
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.0		3.0	5.0	3.0	3.0
Lane Grp Cap (vph)	606		466	1108	444	383
v/s Ratio Prot	c0.27		0.07	c0.24	c0.18	
v/s Ratio Perm			0.17			0.05
v/c Ratio	0.77		0.40	0.41	0.70	0.22
Uniform Delay, d1	19.0		8.4	7.1	22.1	19.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5		0.6	0.5	4.7	0.3
Delay (s)	24.6		9.0	7.6	26.8	19.5
Level of Service	C		A	A	C	B
Approach Delay (s)	24.6			8.0	23.1	
Approach LOS	C			A	C	
Intersection Summary						
HCM 2000 Control Delay			18.0		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.69			
Actuated Cycle Length (s)			64.9		Sum of lost time (s)	15.0
Intersection Capacity Utilization			64.0%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

14: Tamar Drive & Autumn Ridge Drive

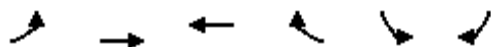
Tamar Drive - Road Diet Study
04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	587	588	6	4	15
Future Volume (Veh/h)	32	587	588	6	4	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	35	645	646	7	4	16
Pedestrians		2			6	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		0			1	
Right turn flare (veh)						
Median type		TWLT	TL			
Median storage veh		2	2			
Upstream signal (ft)		541	1006			
pX, platoon unblocked	0.96				0.90	0.96
vC, conflicting volume	659				1370	658
vC1, stage 1 conf vol					656	
vC2, stage 2 conf vol					715	
vCu, unblocked vol	620				1244	618
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	96				99	97
cM capacity (veh/h)	913				368	464
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	35	645	653	20		
Volume Left	35	0	0	4		
Volume Right	0	0	7	16		
cSH	913	1700	1700	441		
Volume to Capacity	0.04	0.38	0.38	0.05		
Queue Length 95th (ft)	3	0	0	4		
Control Delay (s)	9.1	0.0	0.0	13.6		
Lane LOS	A			B		
Approach Delay (s)	0.5		0.0	13.6		
Approach LOS				B		
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			42.0%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 15: Tamar Drive & Stonecutter Road

Tamar Drive - Road Diet Study
04/14/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	551	582	101	33	12
Future Volume (Veh/h)	40	551	582	101	33	12
Sign Control	Free		Free	Stop		
Grade	0%		0%	0%		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	44	605	640	111	36	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type	TWLTL		None			
Median storage veh	2					
Upstream signal (ft)	1004		543			
pX, platoon unblocked	0.94				0.94	0.94
vC, conflicting volume	751				1388	696
vC1, stage 1 conf vol					696	
vC2, stage 2 conf vol					693	
vCu, unblocked vol	704				1381	645
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	95				90	97
cM capacity (veh/h)	841				359	444
Direction, Lane #	EB 1	EB 2	WB 1	SB 1		
Volume Total	44	605	751	49		
Volume Left	44	0	0	36		
Volume Right	0	0	111	13		
cSH	841	1700	1700	488		
Volume to Capacity	0.05	0.36	0.44	0.10		
Queue Length 95th (ft)	4	0	0	8		
Control Delay (s)	9.5	0.0	0.0	15.4		
Lane LOS	A			C		
Approach Delay (s)	0.6	0.0		15.4		
Approach LOS				C		
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			46.8%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

16: Snowden River Parkway & Tamar Drive

Tamar Drive - Road Diet Study

04/14/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	145	99	78	126	28	114	1196	178	52	845	443
Future Volume (vph)	340	145	99	78	126	28	114	1196	178	52	845	443
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.0	6.5		5.0	6.5	6.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	0.98		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1610	3190		1770	3434		1770	3471		1770	3539	1583
Flt Permitted	0.95	0.98		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1610	3190		1770	3434		1770	3471		1770	3539	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	366	156	106	84	135	30	123	1286	191	56	909	476
RTOR Reduction (vph)	0	20	0	0	12	0	0	6	0	0	0	233
Lane Group Flow (vph)	212	396	0	84	153	0	123	1471	0	56	909	243
Confl. Peds. (#/hr)	1		1	1		1						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	26.1	26.1		12.7	12.7		16.1	89.1		8.6	81.6	81.6
Effective Green, g (s)	26.1	26.1		12.7	12.7		16.1	89.1		8.6	81.6	81.6
Actuated g/C Ratio	0.16	0.16		0.08	0.08		0.10	0.56		0.05	0.51	0.51
Clearance Time (s)	6.0	6.0		6.0	6.0		5.0	6.5		5.0	6.5	6.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	262	520		140	272		178	1932		95	1804	807
v/s Ratio Prot	c0.13	0.12		c0.05	0.04		c0.07	c0.42		0.03	0.26	
v/s Ratio Perm												0.15
v/c Ratio	0.81	0.76		0.60	0.56		0.69	0.76		0.59	0.50	0.30
Uniform Delay, d1	64.5	64.0		71.2	71.0		69.5	27.3		74.0	25.9	22.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.6	6.5		6.8	2.7		11.0	2.9		9.0	1.0	1.0
Delay (s)	81.1	70.5		78.0	73.6		80.5	30.2		83.0	26.9	23.6
Level of Service	F	E		E	E		F	C		F	C	C
Approach Delay (s)		74.1			75.1			34.0			28.0	
Approach LOS		E			E			C			C	
Intersection Summary												
HCM 2000 Control Delay			40.8			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			160.0			Sum of lost time (s)			23.5			
Intersection Capacity Utilization			78.8%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Intersection: 1: Flamepool Way & Tamar Drive

Movement	EB	EB	WB	NB	NB	SB
Directions Served	LT	TR	LTR	LT	R	LTR
Maximum Queue (ft)	83	11	18	25	31	51
Average Queue (ft)	5	1	1	3	2	17
95th Queue (ft)	37	11	17	17	15	44
Link Distance (ft)	559	559	449	386		414
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)					75	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Lambskin Lane/Flicker Place & Tamar Drive

Movement	WB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	34	57	31
Average Queue (ft)	5	21	3
95th Queue (ft)	23	43	18
Link Distance (ft)		776	288
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Tamar Drive & Blue Pool

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	25	40
Average Queue (ft)	1	13
95th Queue (ft)	9	38
Link Distance (ft)		496
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	120	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
Option 1

04/14/2020

Intersection: 4: Tamar Drive & Phelps Luck Drive

Movement	EB	WB	SB	SB
Directions Served	L	TR	L	R
Maximum Queue (ft)	91	35	61	152
Average Queue (ft)	35	2	21	66
95th Queue (ft)	75	14	52	113
Link Distance (ft)		875	220	220
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	120			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Tamar Drive & Sweet Wind Place

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	35	10	63
Average Queue (ft)	3	0	24
95th Queue (ft)	17	7	53
Link Distance (ft)		277	461
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Tamar Drive & High Tor Hill

Movement	EB	EB	SB	SB
Directions Served	L	T	L	R
Maximum Queue (ft)	37	6	90	60
Average Queue (ft)	9	0	41	30
95th Queue (ft)	32	4	73	54
Link Distance (ft)		277		545
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	70		175	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Spiral Cut & Tamar Drive

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	24	64
Average Queue (ft)	2	28
95th Queue (ft)	15	54
Link Distance (ft)		421
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 8: Tamar Drive & 8810-8860 Driveway

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	39	6	32	61
Average Queue (ft)	5	0	1	26
95th Queue (ft)	25	4	14	51
Link Distance (ft)		197	372	333
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 9: Tamar Drive & Hayshed Lane

Movement	EB	WB	SB	SB
Directions Served	L	TR	L	R
Maximum Queue (ft)	43	9	69	59
Average Queue (ft)	10	0	27	32
95th Queue (ft)	36	4	55	54
Link Distance (ft)		337	729	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Option 1

04/14/2020

Intersection: 10: Cloudleap Court & Tamar Drive

Movement	EB	EB	WB	WB	NB
Directions Served	T	R	L	T	L
Maximum Queue (ft)	142	39	42	121	69
Average Queue (ft)	40	5	4	39	26
95th Queue (ft)	104	25	23	102	55
Link Distance (ft)	337			223	568
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		240	60		
Storage Blk Time (%)				3	
Queuing Penalty (veh)				0	

Intersection: 11: Foreland Garth & Tamar Drive

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	4	44	58	52
Average Queue (ft)	0	13	18	22
95th Queue (ft)	3	39	45	42
Link Distance (ft)	153		513	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		120		200
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 12: Tamar Drive & Airbrink Lane

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	35	6	15	37
Average Queue (ft)	5	0	1	11
95th Queue (ft)	24	4	15	29
Link Distance (ft)		377	244	467
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	75			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Option 1

04/14/2020

Intersection: 13: Old Dobbin Lane & Tamar Drive

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	189	110	123	95	61
Average Queue (ft)	78	53	40	34	26
95th Queue (ft)	149	95	94	70	51
Link Distance (ft)	244		441		687
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)		175		325	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 14: Tamar Drive & Autumn Ridge Drive

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	36	56
Average Queue (ft)	4	19
95th Queue (ft)	21	42
Link Distance (ft)		252
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: Tamar Drive & Stonecutter Road

Movement	EB	WB	SB	SB
Directions Served	L	TR	L	R
Maximum Queue (ft)	39	4	79	31
Average Queue (ft)	4	0	39	16
95th Queue (ft)	21	4	69	41
Link Distance (ft)		151	566	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			100
Storage Blk Time (%)	0		0	
Queuing Penalty (veh)	0		0	

Intersection: 16: Snowden River Parkway & Tamar Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	TR	L	T	TR	L	T	TR	L	T	T
Maximum Queue (ft)	195	224	186	161	143	102	106	202	186	297	603	618
Average Queue (ft)	98	105	66	61	66	38	34	92	63	36	363	344
95th Queue (ft)	171	183	132	125	125	76	82	182	154	163	550	546
Link Distance (ft)	225	225	225		266	266		1271	1271		1274	1274
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)				200			325			325		
Storage Blk Time (%)				0							11	6
Queuing Penalty (veh)				0							3	27

Intersection: 16: Snowden River Parkway & Tamar Drive

Movement	SB
Directions Served	R
Maximum Queue (ft)	350
Average Queue (ft)	140
95th Queue (ft)	378
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	325
Storage Blk Time (%)	0
Queuing Penalty (veh)	1

Zone Summary

Zone wide Queuing Penalty: 32

Queuing and Blocking Report
Option 1

04/14/2020

Intersection: 1: Flamepool Way & Tamar Drive

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	R	LTR
Maximum Queue (ft)	248	220	73	31	46
Average Queue (ft)	36	15	4	4	15
95th Queue (ft)	160	109	34	22	41
Link Distance (ft)	559	559	449		414
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				75	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Lambskin Lane/Flicker Place & Tamar Drive

Movement	EB	WB	NB	SB
Directions Served	LT	L	LTR	LTR
Maximum Queue (ft)	103	51	74	36
Average Queue (ft)	7	12	26	3
95th Queue (ft)	53	39	53	18
Link Distance (ft)	449		776	288
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		120		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Tamar Drive & Blue Pool

Movement	EB	EB	SB
Directions Served	L	T	LR
Maximum Queue (ft)	30	49	35
Average Queue (ft)	3	3	10
95th Queue (ft)	18	39	33
Link Distance (ft)		297	496
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	120		
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Queuing and Blocking Report
Option 1

04/14/2020

Intersection: 4: Tamar Drive & Phelps Luck Drive

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	136	127	50	101	121
Average Queue (ft)	67	9	5	39	57
95th Queue (ft)	123	78	28	79	96
Link Distance (ft)		204	875	220	220
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		2			
Storage Bay Dist (ft)	120				
Storage Blk Time (%)	2				
Queuing Penalty (veh)	7				

Intersection: 5: Tamar Drive & Sweet Wind Place

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	31	13	56
Average Queue (ft)	10	0	21
95th Queue (ft)	34	5	48
Link Distance (ft)		277	461
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Tamar Drive & High Tor Hill

Movement	EB	WB	SB	SB
Directions Served	L	TR	L	R
Maximum Queue (ft)	61	23	114	52
Average Queue (ft)	23	2	46	22
95th Queue (ft)	53	12	88	50
Link Distance (ft)		414		545
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	70		175	
Storage Blk Time (%)	0			
Queuing Penalty (veh)	1			

Intersection: 7: Spiral Cut & Tamar Drive

Movement	EB	WB	NB
Directions Served	TR	L	LR
Maximum Queue (ft)	17	45	55
Average Queue (ft)	1	10	19
95th Queue (ft)	9	35	47
Link Distance (ft)	414		421
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		50	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		1	

Intersection: 8: Tamar Drive & 8810-8860 Driveway

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	38	45	22	61
Average Queue (ft)	9	2	1	20
95th Queue (ft)	33	17	8	48
Link Distance (ft)		197	372	333
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	1	0		

Intersection: 9: Tamar Drive & Hayshed Lane

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	80	16	45	57	66
Average Queue (ft)	29	1	3	26	28
95th Queue (ft)	62	11	20	55	55
Link Distance (ft)		372	337	729	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				200
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Intersection: 10: Cloudleap Court & Tamar Drive

Movement	EB	EB	WB	WB	NB
Directions Served	T	R	L	T	L
Maximum Queue (ft)	203	89	84	240	78
Average Queue (ft)	75	10	26	99	34
95th Queue (ft)	152	51	68	205	67
Link Distance (ft)	337			261	568
Upstream Blk Time (%)				0	
Queuing Penalty (veh)				1	
Storage Bay Dist (ft)		240	60		
Storage Blk Time (%)	0		0	10	
Queuing Penalty (veh)	0		1	5	

Intersection: 11: Foreland Garth & Tamar Drive

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	50	61	62	63	63
Average Queue (ft)	3	22	3	23	26
95th Queue (ft)	22	53	27	52	48
Link Distance (ft)	180		370	517	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		120		200	
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 12: Tamar Drive & Airbrink Lane

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	48	151	74	28
Average Queue (ft)	9	17	5	8
95th Queue (ft)	36	84	39	23
Link Distance (ft)		370	199	463
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)	75			
Storage Blk Time (%)		1		
Queuing Penalty (veh)		0		

Intersection: 13: Old Dobbin Lane & Tamar Drive

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	207	146	202	208	169
Average Queue (ft)	140	62	99	118	81
95th Queue (ft)	219	114	175	198	139
Link Distance (ft)	199		480		685
Upstream Blk Time (%)	3				
Queuing Penalty (veh)	12				
Storage Bay Dist (ft)		175		325	
Storage Blk Time (%)		0	1		
Queuing Penalty (veh)		0	1		

Intersection: 14: Tamar Drive & Autumn Ridge Drive

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	43	6	21	29
Average Queue (ft)	13	0	1	11
95th Queue (ft)	39	4	12	32
Link Distance (ft)		480	383	252
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Tamar Drive & Stonecutter Road

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	52	100	21	74	35
Average Queue (ft)	20	4	1	27	11
95th Queue (ft)	48	49	11	60	35
Link Distance (ft)		383	151	566	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	50				100
Storage Blk Time (%)	1	1		0	
Queuing Penalty (veh)	6	0		0	

Intersection: 16: Snowden River Parkway & Tamar Drive

Movement	EB	EB	EB	B39	B39	WB	WB	WB	B40	NB	NB	NB
Directions Served	L	LT	TR	T	T	L	T	TR	T	L	T	TR
Maximum Queue (ft)	298	294	243	98	126	199	285	225	7	349	492	489
Average Queue (ft)	199	212	117	11	19	74	133	47	1	136	320	316
95th Queue (ft)	303	304	247	64	95	161	242	140	7	305	480	476
Link Distance (ft)	225	225	225	151	151		266	266	281		1271	1271
Upstream Blk Time (%)	11	16	1	1	1		2	0				
Queuing Penalty (veh)	22	30	2	2	4		0	0				
Storage Bay Dist (ft)						200				325		
Storage Blk Time (%)						0	5			0	8	
Queuing Penalty (veh)						0	4			0	9	

Intersection: 16: Snowden River Parkway & Tamar Drive

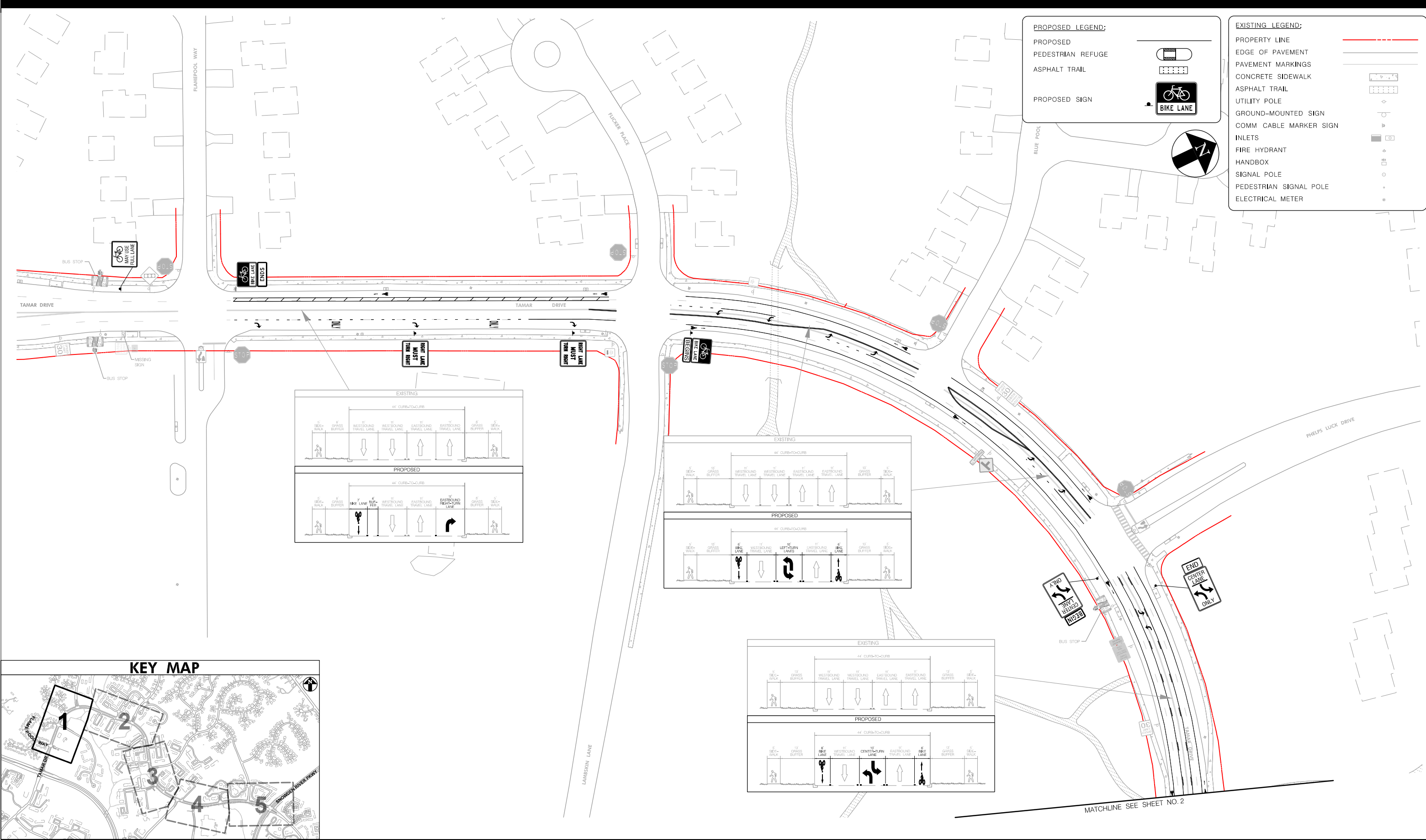
Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	142	336	305	129
Average Queue (ft)	52	211	184	46
95th Queue (ft)	112	316	293	91
Link Distance (ft)		1274	1274	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	325			325
Storage Blk Time (%)		0	0	
Queuing Penalty (veh)		0	0	

Zone Summary

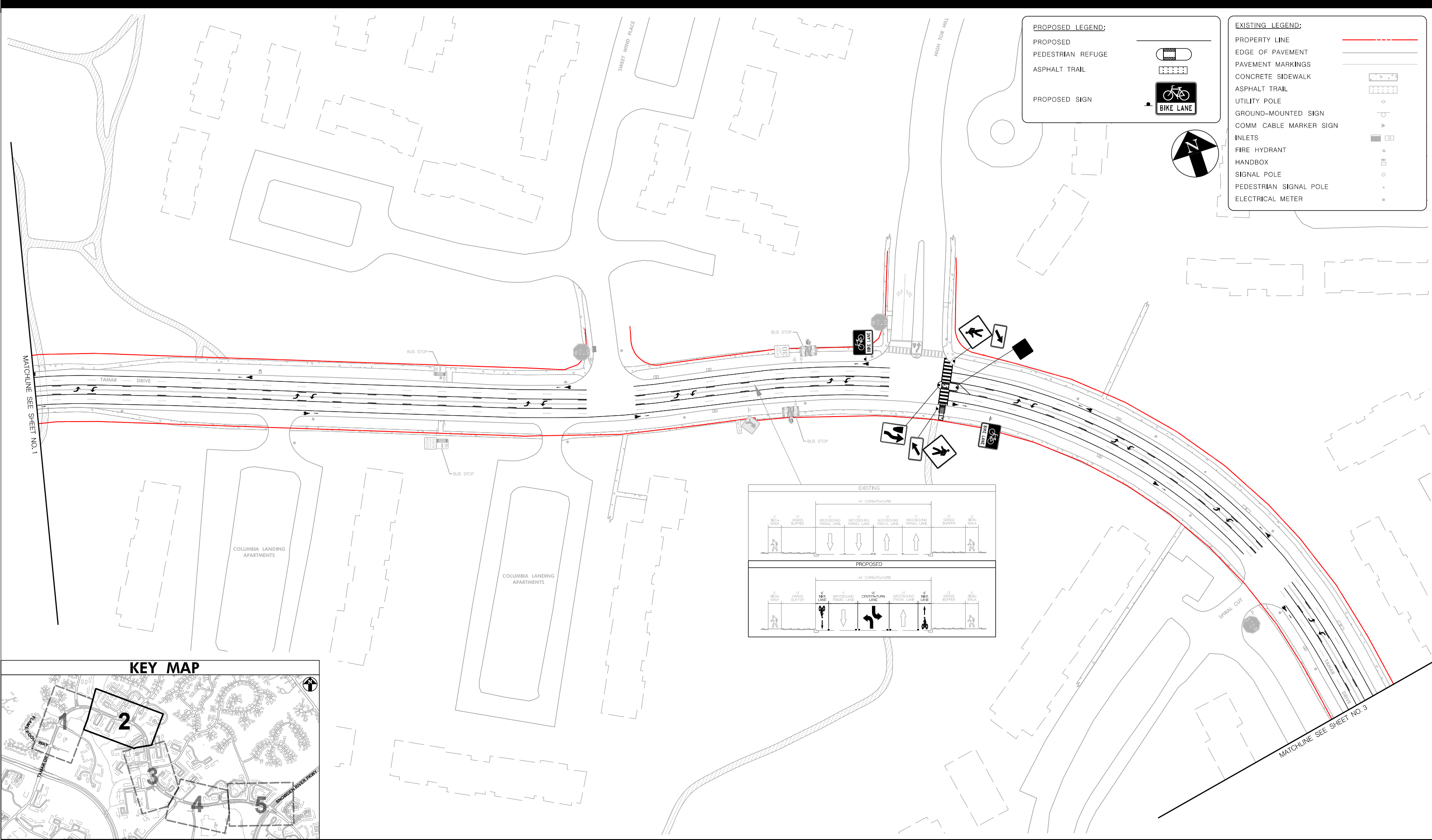
Zone wide Queuing Penalty: 113

Appendix E: Conceptual Design Plans for the Recommended Concept

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FILE NAME: \\2014 69 Howard County Traffic PA1292014 \$1,360,383.00 Task 28 Road Diets\dwg\TamarDr_RoadDiet.dgn



OPERATOR:ckeller - PLOTTED: Tuesday, August 06, 2019 AT 12:21 PM
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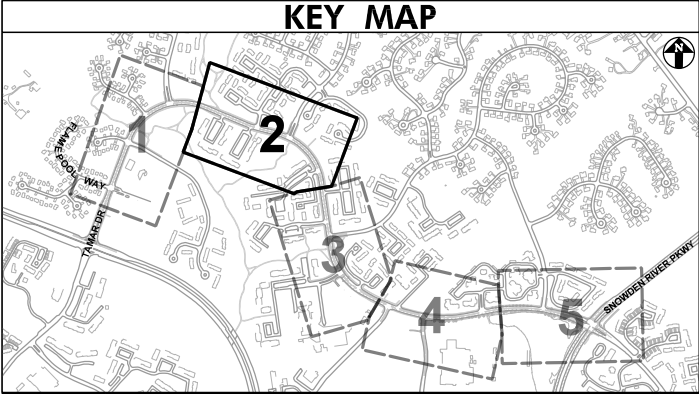
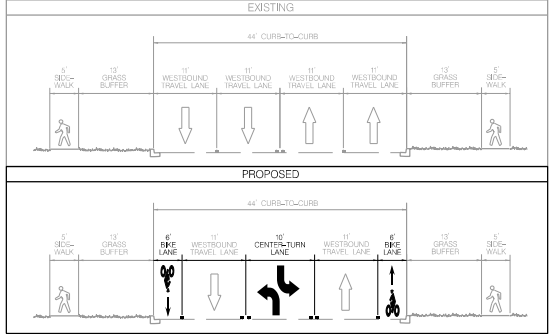


PROPOSED LEGEND:

- PROPOSED
- PEDESTRIAN REFUGE
- ASPHALT TRAIL
- PROPOSED SIGN

EXISTING LEGEND:

- PROPERTY LINE
- EDGE OF PAVEMENT
- PAVEMENT MARKINGS
- CONCRETE SIDEWALK
- ASPHALT TRAIL
- UTILITY POLE
- GROUND-MOUNTED SIGN
- COMM CABLE MARKER SIGN
- INLETS
- FIRE HYDRANT
- HANDBOX
- SIGNAL POLE
- PEDESTRIAN SIGNAL POLE
- ELECTRICAL METER

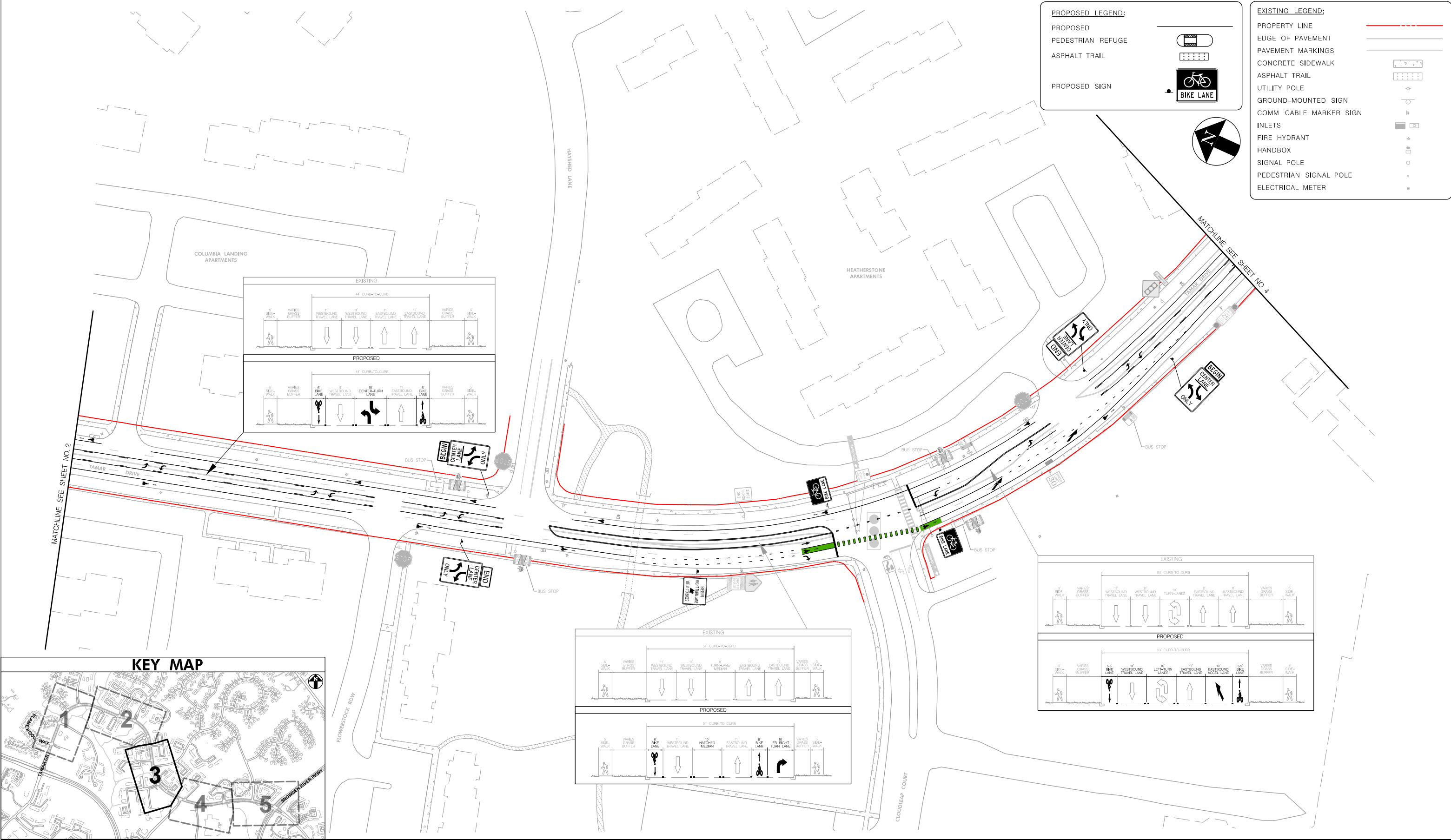
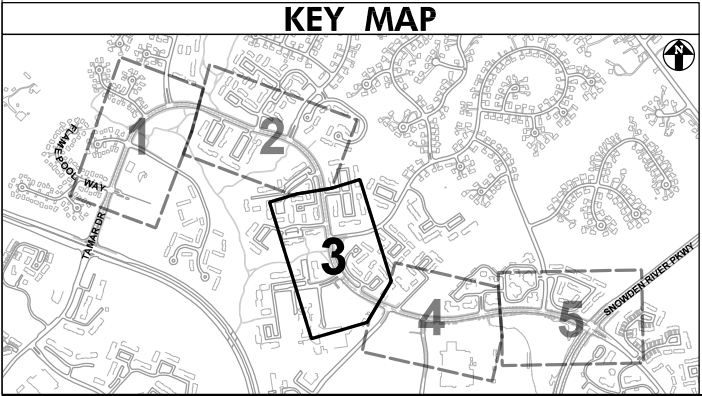


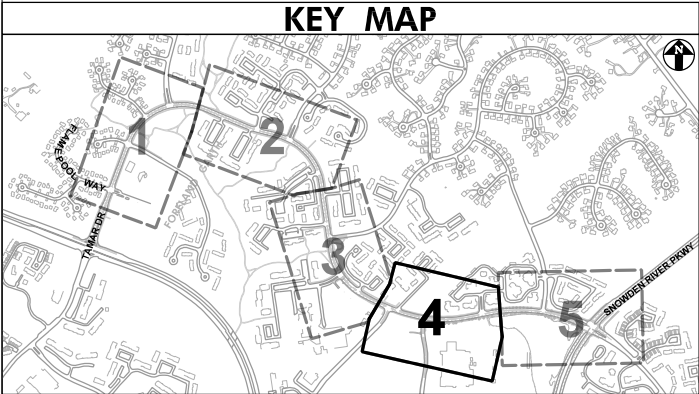
OPERATOR:ckeller - PLOTTED: Tuesday, August 06, 2019 AT 12:21 PM
FILE NAME: \\2014 69 Howard County Traffic PA1292014 \$1,360,383.00 Task 28 Road Diets.dwg\\TamarDr_RoadDiet.dgn



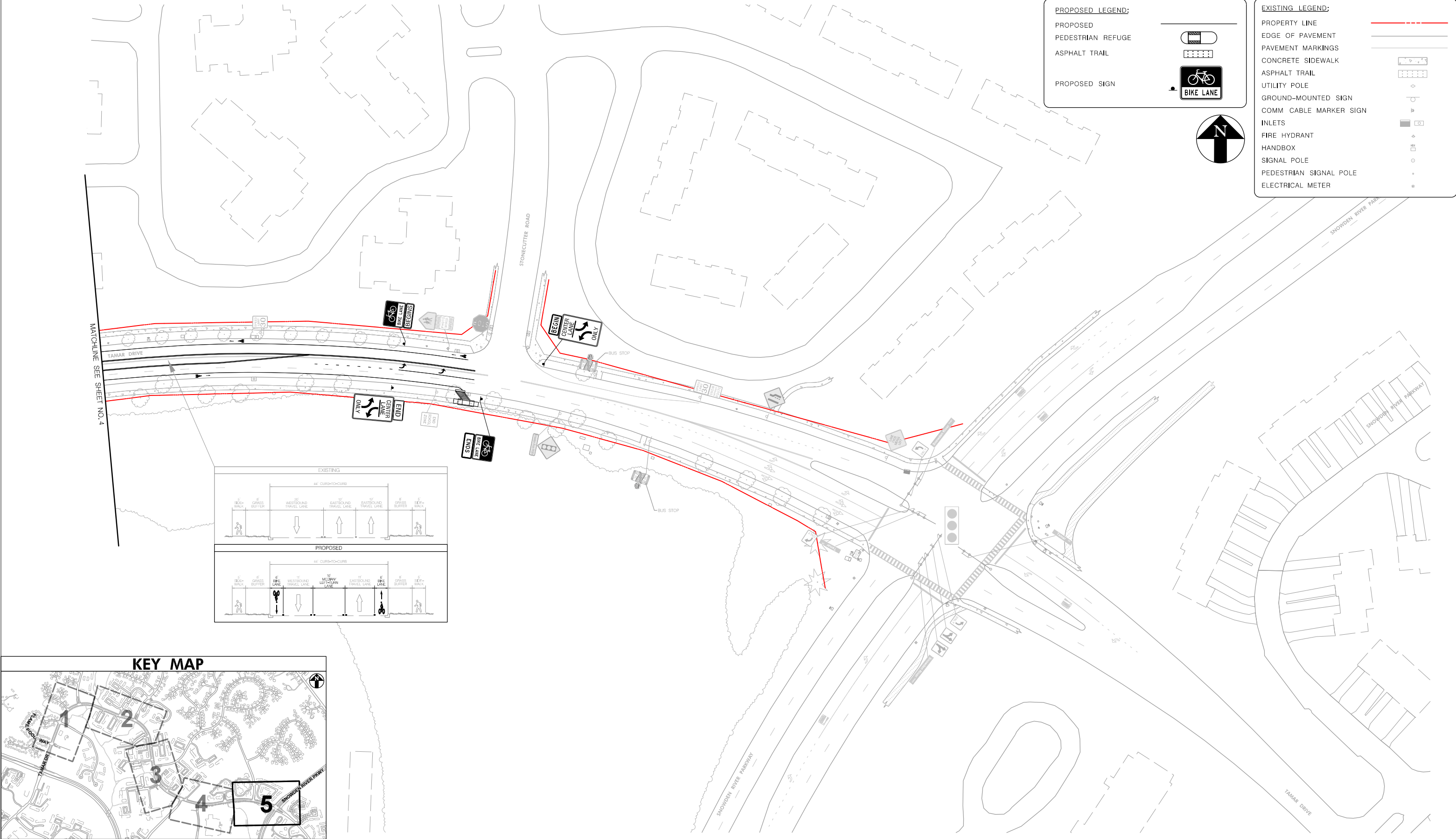
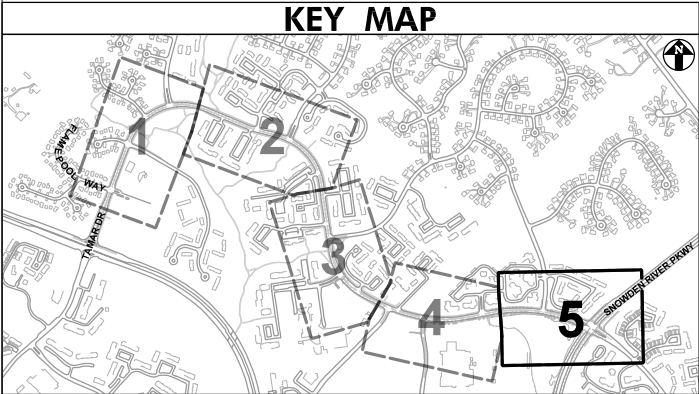
Tamar Drive Road Diet: From Flamepool Way to Snowden River Parkway

50' 0 50' 100'
SCALE: 1" = 50'



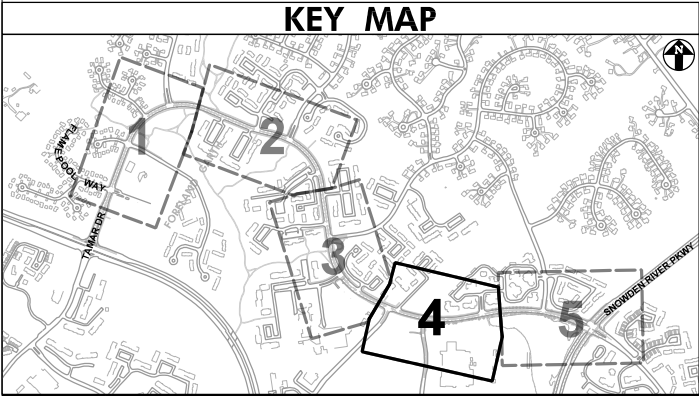


OPERATOR:ckeller - PLOTTED: Tuesday, August 06, 2019 AT 12:21 PM
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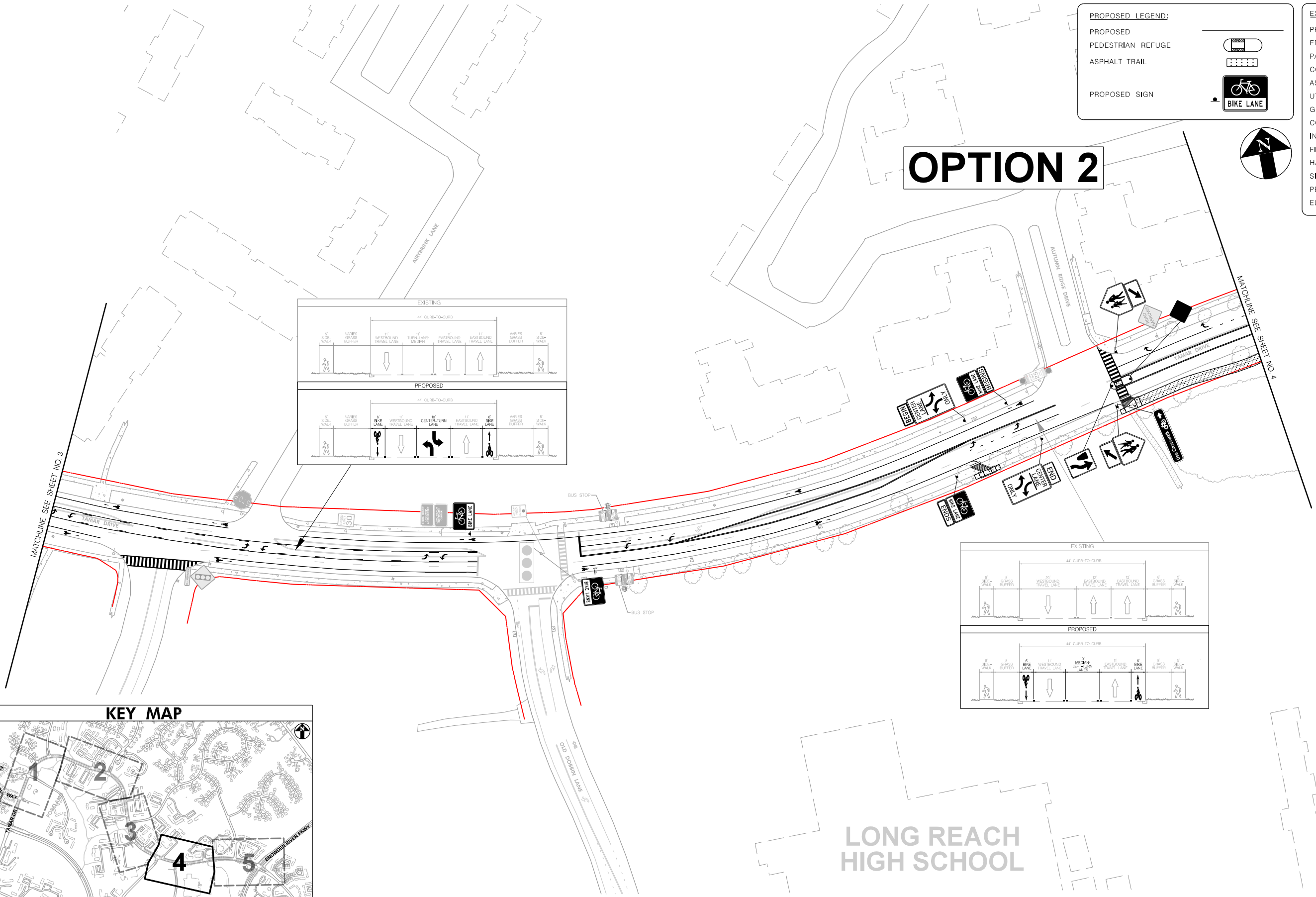
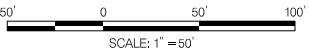


Tamar Drive Road Diet: From Flamepool Way to Snowden River Parkway

OPERATOR:ckeller - PLOTTED: Tuesday, August 06, 2019 AT 12:21 PM
FILE NAME: \\2014 69 Howard County Traffic PA1292014 \$1,360,383.00 Task 28 Road Diets\dwg\TamarDr_RoadDiet.dgn



Tamar Drive Road Diet: From Flamepool Way to Snowden River Parkway



PROPOSED LEGEND:

PROPOSED
PEDESTRIAN REFUGE
ASPHALT TRAIL
PROPOSED SIGN

EXISTING LEGEND:

PROPERTY LINE
EDGE OF PAVEMENT
PAVEMENT MARKINGS
CONCRETE SIDEWALK
ASPHALT TRAIL
UTILITY POLE
GROUND-MOUNTED SIGN
COMM CABLE MARKER SIGN
INLETS
FIRE HYDRANT
HANDBOX
SIGNAL POLE
PEDESTRIAN SIGNAL POLE
ELECTRICAL METER

