

3: CTH N (Freedom Rd.) & 41 SB ON/41 SB OFF Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Total Delay (hr)	0.9	0.1	0.5	0.3	1.7	0.3	3.9
Total Del/Veh (s)	31.9	7.5	11.3	2.8	18.7	9.5	12.2
Speed Delay (hr)	0.9	0.1	0.5	0.3	1.7	0.3	3.8
Speed Del/Veh (s)	31.2	3.0	11.2	2.8	18.7	9.4	11.8
Total Stops	96	11	92	30	172	51	452
Travel Dist (mi)	16.4	10.4	17.2	39.3	50.5	18.5	152.3
Travel Time (hr)	1.5	0.5	1.1	1.7	3.2	1.0	8.9
Avg Speed (mph)	11	25	15	23	16	19	17
Fuel Used (gal)	0.7	0.4	0.7	1.8	2.7	0.8	7.2
HC Emissions (g)	4	4	4	34	38	6	90
CO Emissions (g)	265	222	205	932	1776	426	3826
NOx Emissions (g)	16	14	17	110	125	27	310
Vehicles Entered	106	69	154	364	324	123	1140
Vehicles Exited	102	68	154	368	320	119	1131
Hourly Exit Rate	204	136	308	736	640	238	2262
Input Volume	206	124	411	812	559	249	2361
% of Volume	99	110	75	91	114	96	96
Denied Entry Before	0	1	0	0	0	0	1
Denied Entry After	0	0	0	0	0	0	0

6: CTH N (Freedom Rd.) & 41 NB OFF/41 NB ON Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Total Delay (hr)	1.1	0.7	1.5	0.3	0.5	0.3	4.3
Total Del/Veh (s)	31.0	10.4	13.3	8.0	13.4	3.6	11.8
Speed Delay (hr)	1.0	0.3	1.5	0.3	0.5	0.3	3.8
Speed Del/Veh (s)	28.0	4.1	13.2	7.6	13.2	3.6	10.3
Total Stops	102	61	202	73	106	19	563
Travel Dist (mi)	16.8	32.5	27.9	8.8	15.5	31.8	133.2
Travel Time (hr)	1.6	1.8	2.5	0.7	1.1	1.4	9.1
Avg Speed (mph)	11	23	11	13	14	22	16
Fuel Used (gal)	0.8	1.1	1.4	0.4	0.7	1.5	5.8
HC Emissions (g)	11	20	21	5	4	17	79
CO Emissions (g)	396	707	548	122	164	671	2608
NOx Emissions (g)	31	56	66	16	19	65	253
Vehicles Entered	120	236	383	127	140	284	1290
Vehicles Exited	118	237	391	128	140	285	1299
Hourly Exit Rate	236	474	782	256	280	570	2598
Input Volume	255	478	954	324	239	536	2786
% of Volume	93	99	82	79	117	106	93
Denied Entry Before	2	1	0	0	0	0	3
Denied Entry After	0	1	0	0	0	0	1

9: CTH N (Freedom Rd.) & Evergreen Dr. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.1	0.5	0.2	1.9	0.5	0.2	0.4	2.5	0.5	0.3	2.7	0.1
Total Del/Veh (s)	24.3	24.4	7.0	52.9	23.2	15.1	29.6	30.5	24.8	42.4	40.8	25.6
Speed Delay (hr)	0.1	0.5	0.2	1.9	0.4	0.2	0.4	2.5	0.5	0.3	2.7	0.1
Speed Del/Veh (s)	24.1	24.3	6.8	52.7	23.0	14.7	29.6	30.5	24.8	42.0	40.6	25.3
Total Stops	11	38	62	141	38	26	37	215	59	28	202	12
Travel Dist (mi)	3.2	12.2	17.6	21.4	11.3	7.5	7.4	45.7	11.5	5.3	43.7	2.8
Travel Time (hr)	0.2	0.7	0.7	2.5	0.7	0.4	0.6	3.7	0.9	0.5	3.8	0.2
Avg Speed (mph)	16	17	26	9	16	18	12	12	12	11	11	14
Fuel Used (gal)	0.1	0.5	0.5	1.1	0.5	0.3	0.3	2.2	0.5	0.2	2.0	0.1
HC Emissions (g)	1	4	13	7	4	3	2	21	5	1	21	1
CO Emissions (g)	64	256	464	551	297	188	163	1100	211	72	928	44
NOx Emissions (g)	3	14	38	24	15	9	8	72	16	5	67	3
Vehicles Entered	17	65	93	128	69	45	48	292	74	28	232	15
Vehicles Exited	16	63	93	120	66	45	46	288	72	28	231	15
Hourly Exit Rate	32	126	186	240	132	90	92	576	144	56	462	30
Input Volume	45	138	154	217	104	86	119	616	159	60	432	28
% of Volume	71	91	121	111	127	105	77	94	91	93	107	107
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

9: CTH N (Freedom Rd.) & Evergreen Dr. Performance by movement

Movement	All
Total Delay (hr)	9.8
Total Del/Veh (s)	31.6
Speed Delay (hr)	9.8
Speed Del/Veh (s)	31.4
Total Stops	869
Travel Dist (mi)	189.8
Travel Time (hr)	15.1
Avg Speed (mph)	13
Fuel Used (gal)	8.5
HC Emissions (g)	83
CO Emissions (g)	4337
NOx Emissions (g)	274
Vehicles Entered	1106
Vehicles Exited	1083
Hourly Exit Rate	2166
Input Volume	2158
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

12: CTH N (Freedom Rd.) & Moasis Dr. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.3	0.5	1.4	10.2	1.4	13.6	0.1	0.3	0.1	0.6	0.3	0.0
Total Del/Veh (s)	433.8	312.6	38.4	970.1	836.5	381.6	14.8	2.8	2.3	30.8	2.8	2.7
Speed Delay (hr)	2.3	0.5	1.3	9.0	1.3	8.5	0.1	0.3	0.1	0.6	0.3	0.0
Speed Del/Veh (s)	433.7	312.5	38.3	849.8	794.0	239.0	14.8	2.8	2.3	29.8	2.7	2.3
Total Stops	20	6	125	32	6	139	12	6	10	73	35	3
Travel Dist (mi)	2.9	1.0	20.4	3.7	0.6	17.5	1.9	49.8	14.2	4.7	28.9	2.8
Travel Time (hr)	2.4	0.6	2.2	10.4	1.4	14.3	0.1	2.1	0.7	0.8	1.5	0.2
Avg Speed (mph)	1	2	9	0	0	2	14	24	21	6	20	17
Fuel Used (gal)	0.6	0.1	0.9	2.4	0.3	3.6	0.1	2.1	0.6	0.4	1.6	0.1
HC Emissions (g)	0	0	6	42	0	10	0	27	4	9	46	2
CO Emissions (g)	44	11	181	639	19	350	25	901	184	176	1201	51
NOx Emissions (g)	2	1	20	40	0	26	2	97	17	21	134	6
Vehicles Entered	19	6	126	34	6	120	15	384	110	73	446	43
Vehicles Exited	8	4	124	9	1	98	15	386	109	72	447	43
Hourly Exit Rate	16	8	248	18	2	196	30	772	218	144	894	86
Input Volume	50	6	212	118	11	400	30	800	204	114	888	88
% of Volume	32	133	117	15	18	49	100	96	107	126	101	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	15	1	59	0	0	0	0	0	0

12: CTH N (Freedom Rd.) & Moasis Dr. Performance by movement

Movement	All
Total Delay (hr)	30.8
Total Del/Veh (s)	79.1
Speed Delay (hr)	24.4
Speed Del/Veh (s)	62.5
Total Stops	467
Travel Dist (mi)	148.4
Travel Time (hr)	36.7
Avg Speed (mph)	5
Fuel Used (gal)	12.8
HC Emissions (g)	145
CO Emissions (g)	3782
NOx Emissions (g)	367
Vehicles Entered	1382
Vehicles Exited	1316
Hourly Exit Rate	2632
Input Volume	2921
% of Volume	90
Denied Entry Before	0
Denied Entry After	75

20: CTH N (Freedom Rd.) Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.8	0.1	0.0	0.2	0.4	0.2	0.1	1.4	0.2	0.1	1.8	0.3
Total Del/Veh (s)	26.0	15.0	3.6	25.5	19.8	14.8	37.1	14.4	8.8	31.9	14.8	12.9
Speed Delay (hr)	0.8	0.1	0.0	0.2	0.4	0.2	0.1	1.4	0.1	0.1	1.8	0.3
Speed Del/Veh (s)	25.8	14.9	3.5	25.1	19.5	14.5	37.0	14.1	8.5	31.9	14.8	12.9
Total Stops	106	17	2	27	47	36	6	173	32	18	242	56
Travel Dist (mi)	15.7	3.9	0.4	3.7	8.2	5.7	0.9	45.1	7.9	1.7	51.8	10.7
Travel Time (hr)	1.4	0.2	0.0	0.4	0.7	0.4	0.1	2.9	0.5	0.2	3.7	0.8
Avg Speed (mph)	11	16	21	10	12	13	9	15	17	9	14	14
Fuel Used (gal)	0.7	0.1	0.0	0.2	0.4	0.2	0.0	1.7	0.2	0.1	2.1	0.4
HC Emissions (g)	5	1	0	1	4	1	0	16	1	0	45	4
CO Emissions (g)	189	28	2	39	136	75	6	533	61	9	1037	125
NOx Emissions (g)	17	2	0	3	13	5	1	53	5	1	134	13
Vehicles Entered	110	27	3	31	69	48	7	348	61	13	432	83
Vehicles Exited	109	27	3	32	70	47	7	353	62	15	429	84
Hourly Exit Rate	218	54	6	64	140	94	14	706	124	30	858	168
Input Volume	234	50	10	50	150	100	10	700	100	50	918	159
% of Volume	93	108	60	128	93	94	140	101	124	60	93	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

20: CTH N (Freedom Rd.) Performance by movement

Movement	All
Total Delay (hr)	5.6
Total Del/Veh (s)	16.1
Speed Delay (hr)	5.6
Speed Del/Veh (s)	16.0
Total Stops	762
Travel Dist (mi)	155.8
Travel Time (hr)	11.2
Avg Speed (mph)	14
Fuel Used (gal)	6.2
HC Emissions (g)	80
CO Emissions (g)	2240
NOx Emissions (g)	247
Vehicles Entered	1232
Vehicles Exited	1238
Hourly Exit Rate	2476
Input Volume	2531
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

Total Network Performance

Total Delay (hr)	55.8
Total Del/Veh (s)	81.8
Speed Delay (hr)	48.5
Speed Del/Veh (s)	71.2
Total Stops	3134
Travel Dist (mi)	1130.0
Travel Time (hr)	93.9
Avg Speed (mph)	13
Fuel Used (gal)	57.4
HC Emissions (g)	702
CO Emissions (g)	26495
NOx Emissions (g)	2244
Vehicles Entered	2335
Vehicles Exited	2252
Hourly Exit Rate	4504
Input Volume	17167
% of Volume	26
Denied Entry Before	4
Denied Entry After	76

Queuing and Blocking Report

Baseline

2/1/2013

Intersection: 3: CTH N (Freedom Rd.) & 41 SB ON/41 SB OFF

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	T	T	T	T	R
Maximum Queue (ft)	96	92	56	176	50	74	224	307	100
Average Queue (ft)	54	62	17	82	20	28	119	106	56
95th Queue (ft)	90	85	51	138	43	68	205	221	126
Link Distance (ft)	823	823			534	534	765	765	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			120	550					75
Storage Blk Time (%)							14	2	
Queuing Penalty (veh)							34	5	

Intersection: 6: CTH N (Freedom Rd.) & 41 NB OFF/41 NB ON

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	R	L	T	T
Maximum Queue (ft)	118	133	157	309	265	100	99	238	133
Average Queue (ft)	52	68	62	145	138	73	77	45	18
95th Queue (ft)	94	108	119	266	241	137	114	170	74
Link Distance (ft)	730	730		318	318			534	534
Upstream Blk Time (%)				0					
Queuing Penalty (veh)				0					
Storage Bay Dist (ft)			265			75	75		
Storage Blk Time (%)					18	4	9	0	
Queuing Penalty (veh)					60	16	24	0	

Intersection: 9: CTH N (Freedom Rd.) & Evergreen Dr.

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	TR	LT	TR
Maximum Queue (ft)	160	118	288	160	281	364	290	294
Average Queue (ft)	68	50	167	79	166	201	169	159
95th Queue (ft)	125	102	252	141	269	330	264	259
Link Distance (ft)	995	995	888	888	765	765	996	996
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report

Baseline

2/1/2013

Intersection: 12: CTH N (Freedom Rd.) & Moasis Dr.

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	R	LT	R	L	T	TR	L	TR
Maximum Queue (ft)	242	120	134	918	918	50	14	47	166	42
Average Queue (ft)	114	77	82	570	550	18	1	16	75	3
95th Queue (ft)	225	115	118	1119	1127	44	7	45	154	20
Link Distance (ft)	853	853	853	903	903		605	605		318
Upstream Blk Time (%)				36	38					
Queuing Penalty (veh)				0	0					
Storage Bay Dist (ft)						55			145	
Storage Blk Time (%)						0			2	
Queuing Penalty (veh)						1			10	

Intersection: 20: CTH N (Freedom Rd.)

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	177	72	179	199	223	206	264
Average Queue (ft)	117	29	106	104	128	143	178
95th Queue (ft)	172	67	165	173	201	200	256
Link Distance (ft)	754	754	630	678	678	605	605
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty: 150