

final report

August 17, 2022

Traffic Impact Study

Apartments
5127 Terry Road (KY 1727)
Louisville, KY

Prepared for

Louisville Metro Planning Commission
Kentucky Transportation Cabinet



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INTRODUCTION

The site plan for the proposed apartment community shows 216 apartments on Terry Road (KY 1727) near Murray Lane in Louisville, KY. **Figure 1** displays a map of the site. Access to the site will be from two entrances on Terry Road. The northern entrance will have a right in/right out and will connect to Joy Drive. The purpose of this study is to examine the traffic impacts of the development upon the adjacent highway system. For this study, the impact area was defined to be the intersections of Terry Road with Lemmah Drive, Raggard Road, Murray Lane, and Lower Hunters Trace, and the proposed entrances on Terry Road.

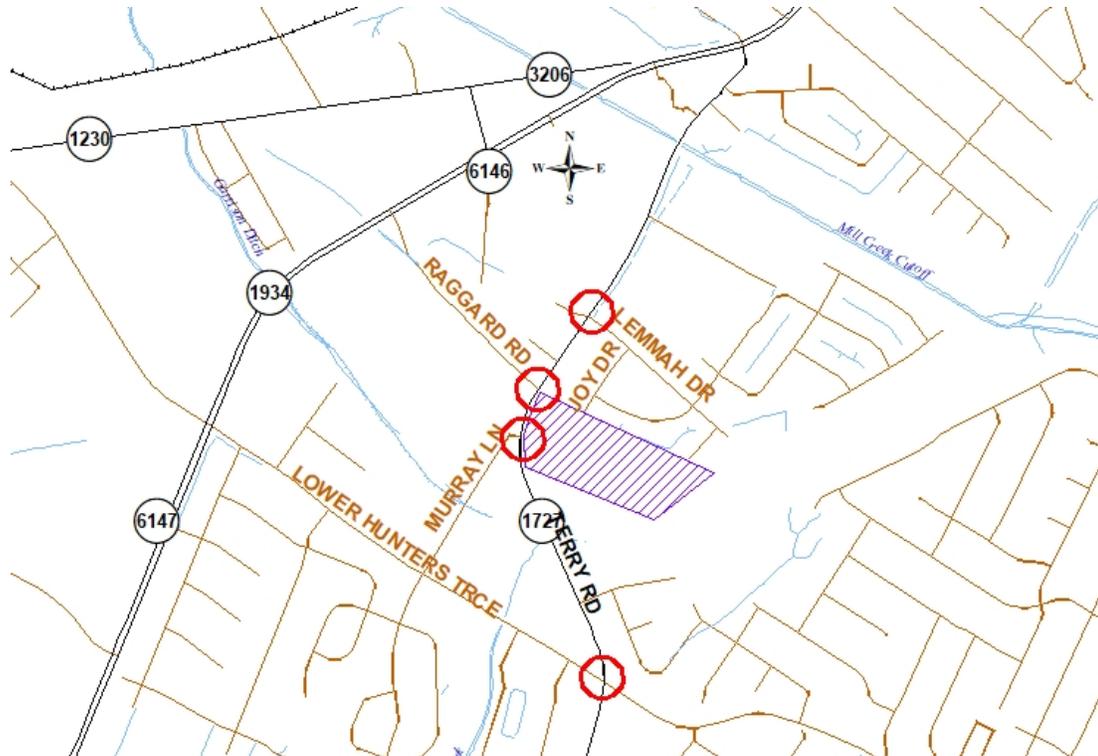


Figure 1. Site Map

EXISTING CONDITIONS

Terry Road, KY 1727, is a state-maintained road with an estimated 2022 ADT of 11,400 vehicles per day between Lower Hunters Trace and Cane Run Road (KY 1934) as estimated from the Kentucky Transportation Cabinet count at station G05. The road is a two-lane highway with eleven-foot lanes with five-foot shoulders through the study area (provided by the Kentucky Transportation Cabinet). The speed limit is 45 mph. There are no sidewalks. The intersections at Lemmah Drive, Raggard Road and Murray Lane are controlled with a stop sign. There is a left turn lane at Raggard Road. The intersection with Lower Hunters Trace is controlled with a traffic signal. There are left turn lanes on each approach and all but the eastbound approach has a right turn lane.

Peak hour traffic count for the intersections were obtained on Thursday, May 19, 2022. The peak hours varied between the intersections. **Figure 2** illustrates the existing a.m. and p.m. peak hour traffic volumes. The Appendix contains the full count data.

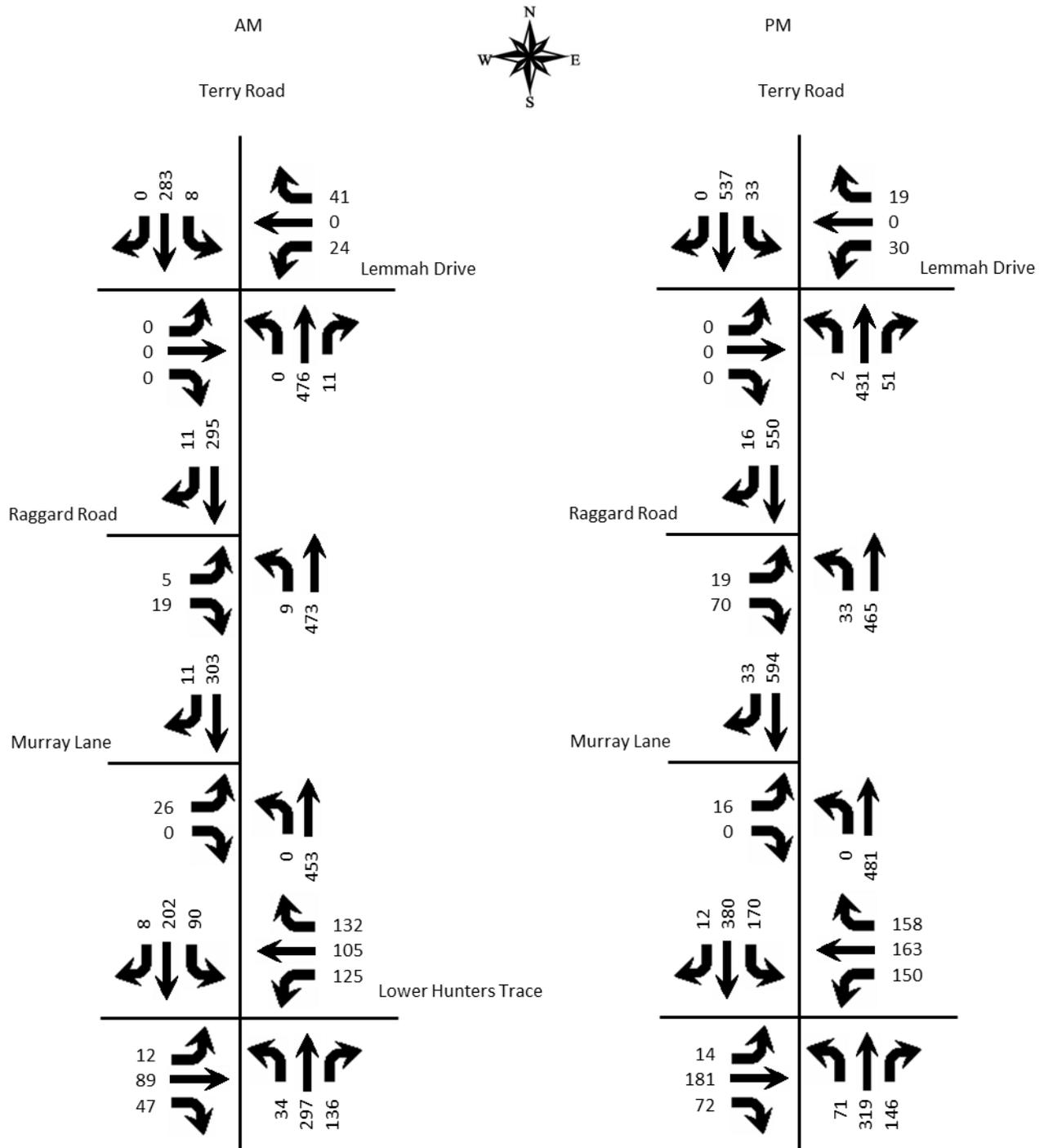


Figure 2. Existing Peak Hour Volumes

FUTURE CONDITIONS

The project completion date is 2025. An annual growth rate of 0.5 percent was applied to the 2022 thru volumes. **Figure 3** displays the 2025 No Build peak hour volumes.

to be the best match. The trip generation results are listed in **Table 1**. The trips were assigned to the highway network with the percentages shown in **Figure 4**. **Figure 5** shows the trips generated by this development and distributed throughout the road network during the peak hours. **Figure 6** displays the individual turning movements for the peak hours when the development is completed.

Table 1. Peak Hour Trips Generated by Site

Land Use	A.M. Peak Hour			P.M. Peak Hour		
	Trips	In	Out	Trips	In	Out
Multifamily (216 units)	90	22	68	113	71	42

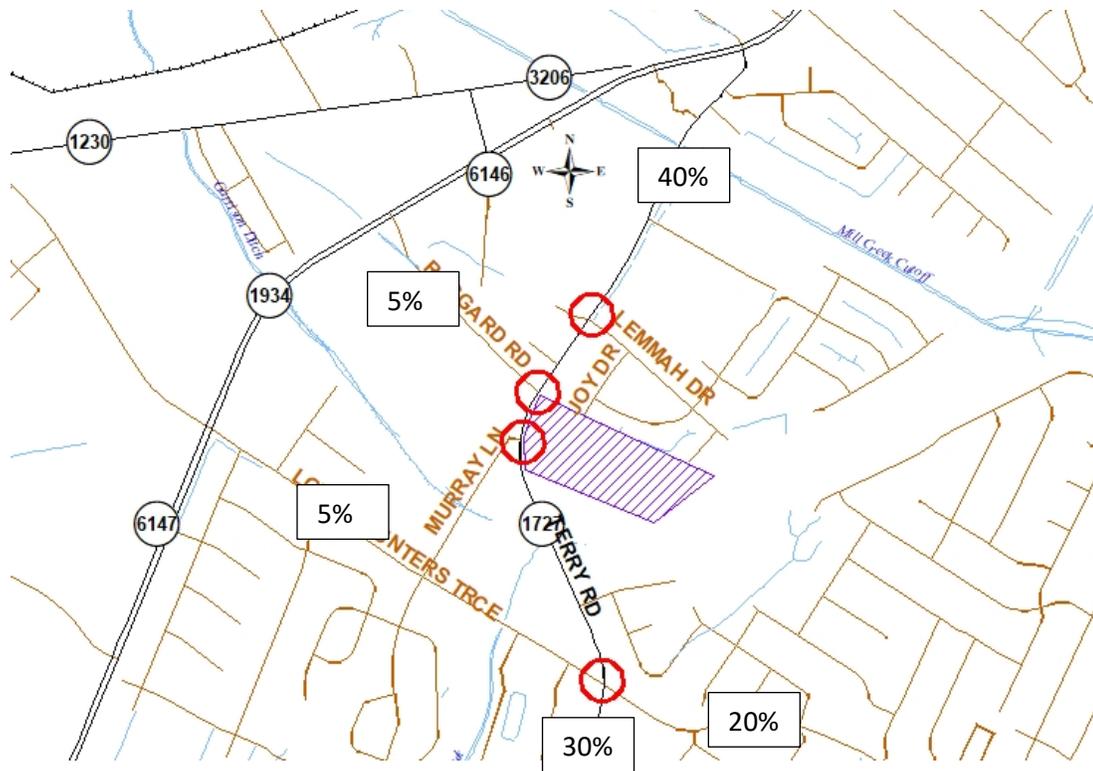


Figure 4. Trip Distribution Percentages

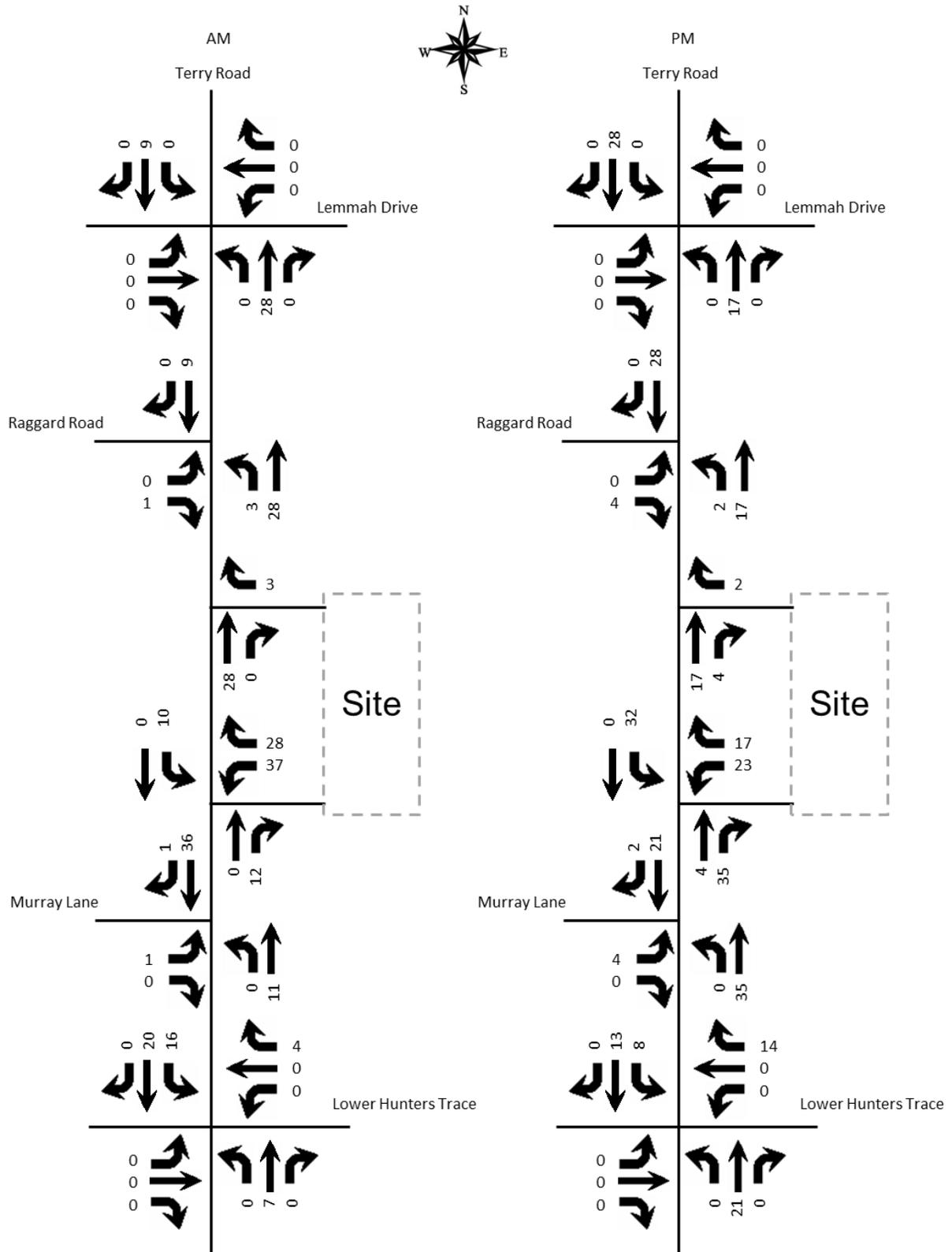


Figure 5. Peak Hour Trips Generated by Site

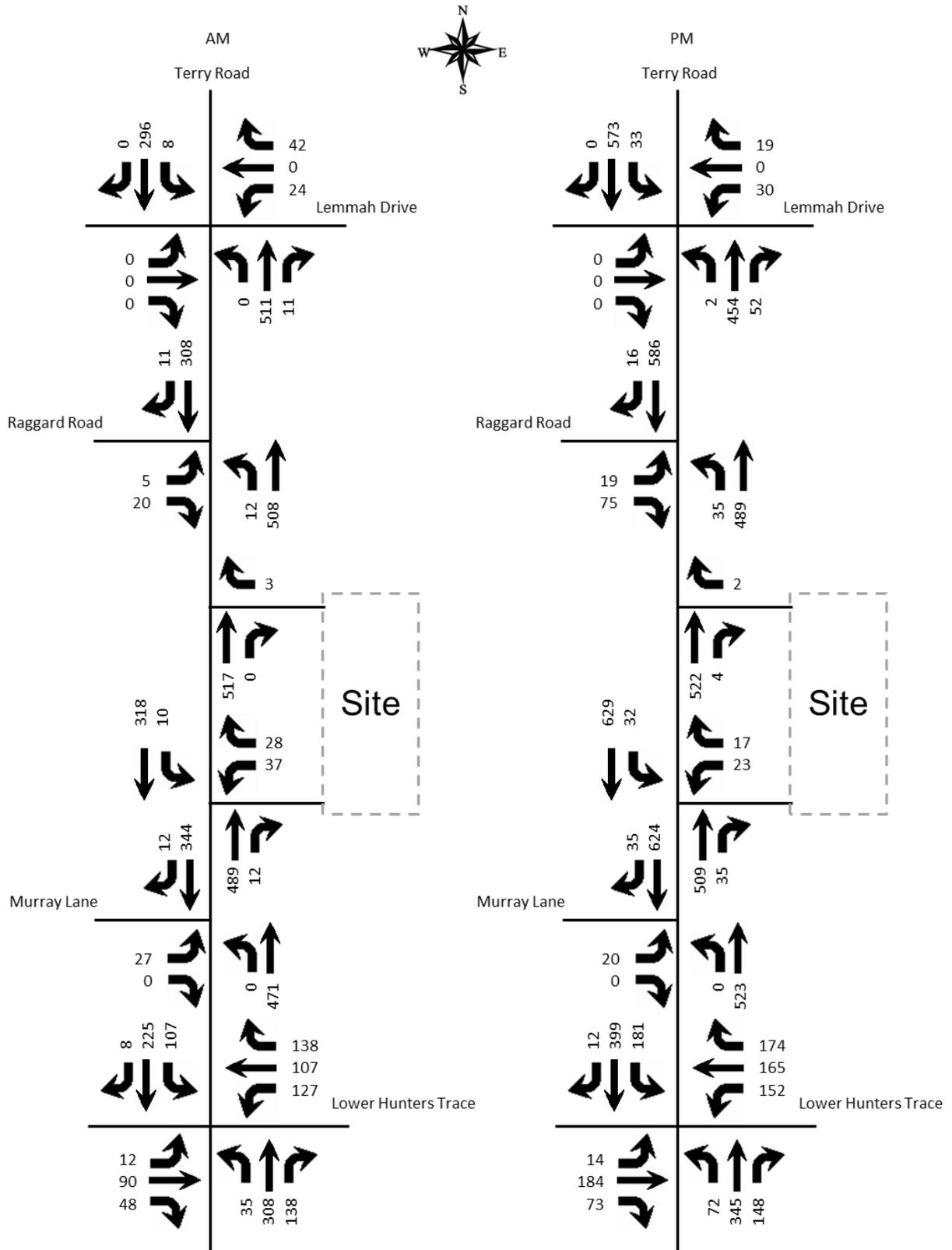


Figure 6. 2025 Build Peak Hour Volumes

ANALYSIS

The qualitative measure of operation for a roadway facility or intersection is evaluated by assigning a “Level of Service”. Level of Service is a ranking scale from A through F, “A” is the best operating condition and “F” is the worst. Level of Service results depend upon the facility that is analyzed. In this case, the Level of Service is based upon the total delay experienced for lanes at stop-controlled intersections.

To evaluate the impact of the proposed development, the vehicle delays at the intersections were determined using procedures detailed in the Highway Capacity Manual, 7th edition. Future delays and Level of Service were determined for the intersections using the HCS Streets and Two-Way Stop Controlled (version 2022) software. The delays and Level of Service are summarized in **Table 2**.

Table 2. Peak Hour Level of Service

Approach	A.M.			P.M.		
	2022 Existing	2025 No Build	2025 Build	2022 Existing	2025 No Build	2025 Build
Terry Road at Lemmah Drive						
Tatum Lane Eastbound	NA	NA	NA	NA	NA	NA
Lemmah Drive Westbound	C 16.5	C 16.7	C 17.5	C 23.4	C 23.9	D 25.6
Terry Road Northbound (left)	A 7.9	A 7.9	A 7.9	A 8.5	A 8.5	A 8.6
Terry Road Southbound (left)	A 9.0	A 9.0	A 9.1	A 8.6	A 8.6	A 8.7
Terry Road at Raggard Road						
Raggard Road Eastbound	B 11.3	B 11.4	B 11.5	B 14.3	B 14.4	B 14.9
Terry Road Northbound (left)	A 7.9	A 8.0	A 8.0	A 8.9	A 8.9	A 9.0
Terry Road at Entrance						
Entrance Westbound			B 14.1			C 16.0
Terry Road Southbound (left)			A 8.6			A 8.8
Terry Road at Murray Lane						
Murray Lane Eastbound	C 16.9	C 17.2	C 18.2	C 23.7	C 24.1	D 26.6
Terry Road Northbound (left)	A 8.0	A 8.0	A 8.1	A 8.9	A 8.9	A 9.0
Terry Road at Lower Hunters Trace						
Lower Hunters Trace Eastbound	C 30.1	C 30.1	C 30.2	C 31.1	C 31.2	C 31.3
Lower Hunters Trace Westbound	C 25.2	C 25.2	C 25.4	C 24.7	C 24.7	C 25.0

Approach	A.M.			P.M.		
	2022 Existing	2025 No Build	2025 Build	2022 Existing	2025 No Build	2025 Build
Terry Road Northbound	B 16.8	B 17.0	B 17.2	C 20.6	C 21.0	C 21.6
Terry Road Southbound	B 14.3	B 14.4	B 14.7	B 19.6	B 19.9	C 20.2

Key: Level of Service, Delay in seconds per vehicle

The entrances were evaluated for turn lanes using the Kentucky Transportation Cabinet Highway Design Guidance Manual dated July, 2020. The traffic impact policy requires using volumes for ten years beyond opening date, or 2035. The 2035 volumes were determined by using 0.5% annual growth from the 2025 volumes. **Figure 7** is the 2035 No Build and **Figure 8** is the Build. The volumes in Figure 8 were utilized to determine turn lane requirements. The primary entrance meets the volume warrants for installing a left turn lane. **Table 3** displays the level of service results for 2035.

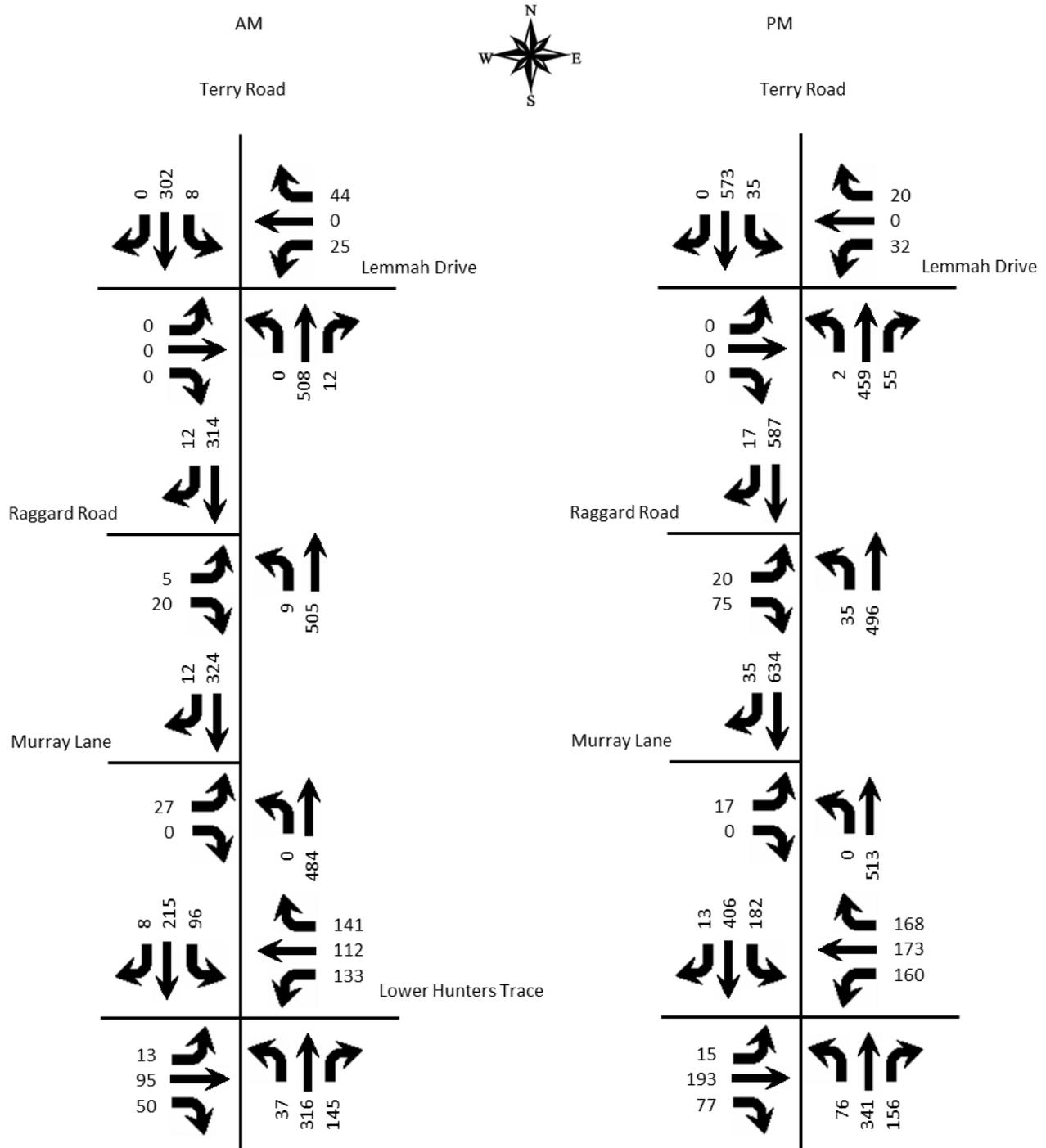


Figure 7. 2035 No Build Peak Hour Volumes

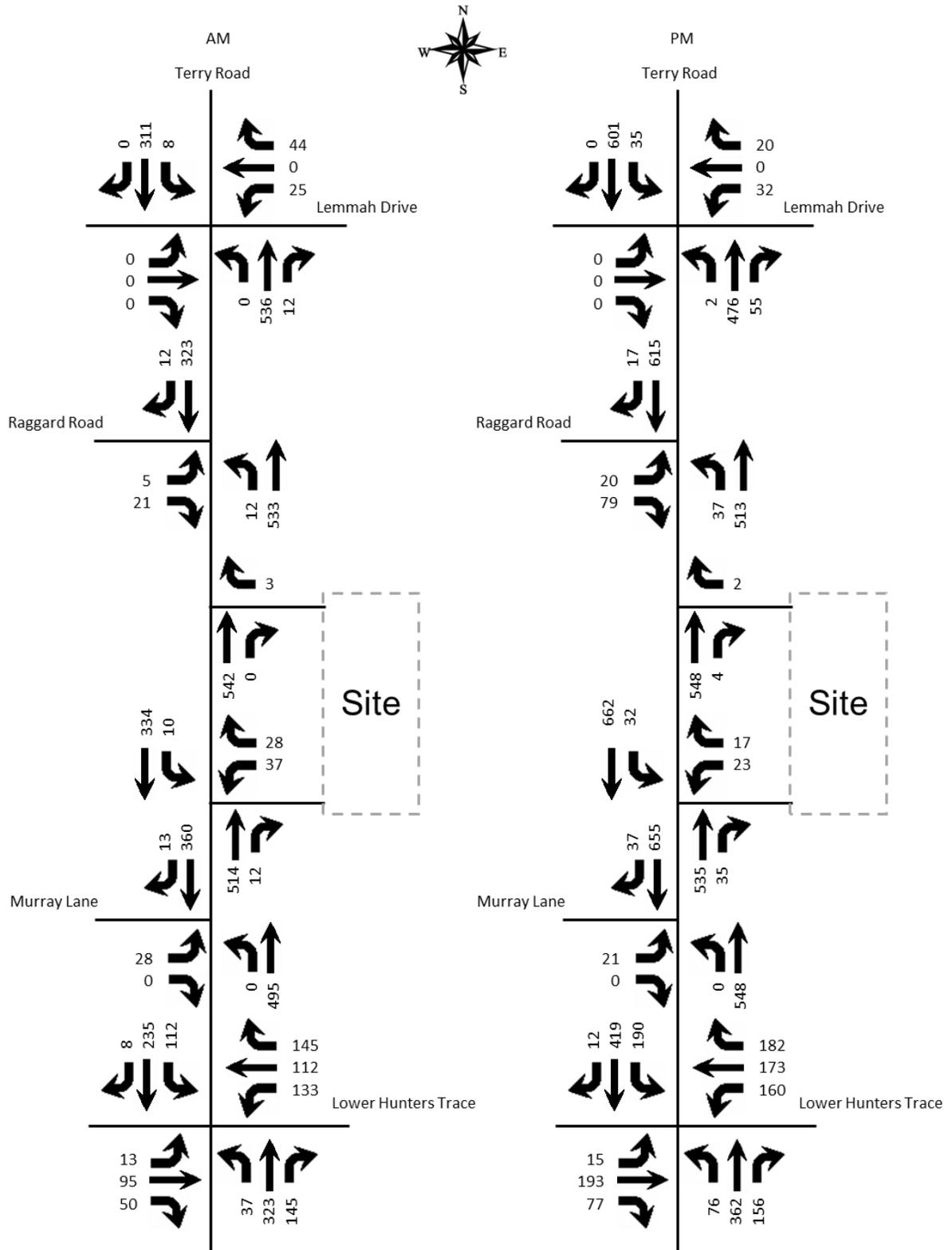


Figure 8. 2035 Build Peak Hour Volumes

Table 3. Peak Hour Level of Service 2035

Approach	A.M.			P.M.		
	2022 Existing	2035 No Build	2035 Build	2022 Existing	2035 No Build	2035 Build
Terry Road at Lemmah Drive						
Tatum Lane Eastbound	NA	NA	NA	NA	NA	NA
Lemmah Drive Westbound	C 16.5	C 17.7	C 18.6	C 23.4	D 26.6	D 28.6
Terry Road Northbound (left)	A 7.9	A 7.9	A 7.9	A 8.5	A 8.6	A 8.7
Terry Road Southbound (left)	A 9.0	A 9.1	A 9.2	A 8.6	A 8.7	A 8.8
Terry Road at Raggard Road						
Raggard Road Eastbound	B 11.3	B 11.5	B 11.7	B 14.3	B 15.0	C 15.5
Terry Road Northbound (left)	A 7.9	A 8.0	A 8.0	A 8.9	A 9.1	A 9.2
Terry Road at Entrance						
Entrance Westbound			B 14.5			C 16.7
Terry Road Southbound (left)			A 8.6			A 8.9
Terry Road at Murray Lane						
Murray Lane Eastbound	C 16.9	C 18.1	C 19.2	C 23.7	D 26.2	D 29.0
Terry Road Northbound (left)	A 8.0	A 8.0	A 8.1	A 8.9	A 9.1	A 9.2
Terry Road at Lower Hunters Trace						
Lower Hunters Trace Eastbound	C 30.1	C 30.2	C 30.3	C 31.1	C 31.5	C 31.6
Lower Hunters Trace Westbound	C 25.2	C 25.2	C 25.4	C 24.7	C 24.8	C 25.1
Terry Road Northbound	B 16.8	B 17.6	B 17.8	C 20.6	C 22.1	C 22.8
Terry Road Southbound	B 14.3	B 15.0	B 15.2	B 19.6	C 20.9	C 21.3

Key: Level of Service, Delay in seconds per vehicle

CONCLUSIONS

Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2025 and 2035, there will be a slight impact to the existing highway network. A left turn lane will be installed at the entrance on Terry Road.

APPENDIX

Traffic Counts



Classified Turn Movement Count || All vehicles

Louisville KY (Terry Rd)

www.marrtraffic.com

Site 4 of 4

Terry Rd (South)
Terry Rd (North)
Tatum Ln
Lemmah Dr

Date

Thursday, May 19, 2022

Weather

Fair
73°F

Lat/Long

38.172408°, -85.865950°

0700 - 0900 (Thursday 2h Session) (05-19-2022)

All vehicles

TIME	Northbound Terry Rd (South)					Southbound Terry Rd (North)					Eastbound Tatum Ln					Westbound Lemmah Dr					Int Total
	Left 4.1	Thru 4.2	Right 4.3	U-Turn 4.4	App Total	Left 4.5	Thru 4.6	Right 4.7	U-Turn 4.8	App Total	Left 4.9	Thru 4.10	Right 4.11	U-Turn 4.12	App Total	Left 4.13	Thru 4.14	Right 4.15	U-Turn 4.16	App Total	
	0700 - 0715	0	113	1	0	114	0	60	0	0	60	0	0	0	0	0	5	0	9	0	
0715 - 0730	0	130	1	0	131	4	72	0	0	76	0	0	0	0	0	10	0	13	0	23	230
0730 - 0745	0	135	3	0	138	1	81	0	0	82	0	0	0	0	0	5	0	11	0	16	236
0745 - 0800	0	98	6	0	104	3	70	0	0	73	0	0	0	0	0	4	0	8	0	12	189
Hourly Total	0	476	11	0	487	8	283	0	0	291	0	0	0	0	0	24	0	41	0	65	843
0800 - 0815	0	101	6	0	107	2	49	0	0	51	0	0	2	0	2	7	0	3	0	10	170
0815 - 0830	0	94	1	0	95	5	72	0	0	77	0	0	0	0	0	5	0	4	0	9	181
0830 - 0845	0	117	6	0	123	3	64	0	0	67	0	0	0	0	0	7	0	13	0	20	210
0845 - 0900	0	104	8	0	112	6	75	0	0	81	0	0	0	0	0	8	0	4	0	12	205
Hourly Total	0	416	21	0	437	16	260	0	0	276	0	0	2	0	2	27	0	24	0	51	766
Grand Total	0	892	32	0	924	24	543	0	0	567	0	0	2	0	2	51	0	65	0	116	1609
Approach %	0.00	96.54	3.46	0.00	-	4.23	95.77	0.00	0.00	-	0.00	0.00	100.00	0.00	-	43.97	0.00	56.03	0.00	-	
Intersection %	0.00	55.44	1.99	0.00	57.43	1.49	33.75	0.00	0.00	35.24	0.00	0.00	0.12	0.00	0.12	3.17	0.00	4.04	0.00	7.21	
PHF	0.00	0.88	0.46	0.00	0.88	0.50	0.87	0.00	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.79	0.00	0.71	0.89

1600 - 1800 (Thursday 2h Session) (05-19-2022)

All vehicles

TIME	Northbound Terry Rd (South)					Southbound Terry Rd (North)					Eastbound Tatum Ln					Westbound Lemmah Dr					Int Total
	Left 4.1	Thru 4.2	Right 4.3	U-Turn 4.4	App Total	Left 4.5	Thru 4.6	Right 4.7	U-Turn 4.8	App Total	Left 4.9	Thru 4.10	Right 4.11	U-Turn 4.12	App Total	Left 4.13	Thru 4.14	Right 4.15	U-Turn 4.16	App Total	
	1600 - 1615	1	104	16	0	121	9	133	0	0	142	0	0	0	0	0	12	0	4	0	
1615 - 1630	1	107	10	0	118	7	130	0	0	137	0	0	0	0	0	2	0	4	0	6	261
1630 - 1645	0	116	15	0	131	6	130	0	0	136	0	0	0	0	0	9	0	3	0	12	279
1645 - 1700	0	104	10	0	114	11	144	0	0	155	0	0	0	0	0	7	0	8	0	15	284
Hourly Total	2	431	51	0	484	33	537	0	0	570	0	0	0	0	0	30	0	19	0	49	1103
1700 - 1715	0	106	14	0	120	7	124	0	0	131	0	0	0	0	0	4	0	6	0	10	261
1715 - 1730	0	109	5	0	114	9	134	0	0	143	0	0	0	0	0	9	0	5	0	14	271
1730 - 1745	0	114	9	0	123	8	148	0	0	156	0	0	0	0	0	2	0	3	0	5	284
1745 - 1800	0	95	13	0	108	12	128	0	0	140	0	0	0	0	0	9	0	4	0	13	261
Hourly Total	0	424	41	0	465	36	534	0	0	570	0	0	0	0	0	24	0	18	0	42	1077
Grand Total	2	855	92	0	949	69	1071	0	0	1140	0	0	0	0	0	54	0	37	0	91	2180
Approach %	0.21	90.09	9.69	0.00	-	6.05	93.95	0.00	0.00	-	0.00	0.00	0.00	0.00	-	59.34	0.00	40.66	0.00	-	
Intersection %	0.09	39.22	4.22	0.00	43.53	3.17	49.13	0.00	0.00	52.29	0.00	0.00	0.00	0.00	0.00	2.48	0.00	1.70	0.00	4.17	
PHF	0.50	0.93	0.80	0.00	0.92	0.75	0.93	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.59	0.00	0.77	0.97

Classified Turn Movement Count || All vehicles

Louisville KY (Terry Rd)

Site 3 of 4

Terry Rd (South)
Terry Rd (North)
Raggard Rd
Driveway

Date

Thursday, May 19, 2022

Weather

Fair
73°F

Lat/Long

38.170913°, -85.867293°

0700 - 0900 (Thursday 2h Session) (05-19-2022)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Terry Rd (South)					Terry Rd (North)					Raggard Rd					Driveway					
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	
0700 - 0715	0	114	0	0	114	0	59	6	0	65	1	0	2	0	3	0	0	0	0	0	182
0715 - 0730	2	127	0	0	129	0	82	0	0	82	0	0	10	0	10	0	0	0	0	0	221
0730 - 0745	1	133	0	0	134	0	82	5	0	87	1	0	4	0	5	0	0	0	0	0	226
0745 - 0800	6	99	0	0	105	0	72	0	0	72	3	0	3	0	6	0	0	0	0	0	183
Hourly Total	9	473	0	0	482	0	295	11	0	306	5	0	19	0	24	0	0	0	0	0	812
0800 - 0815	1	105	0	0	106	0	57	3	0	60	2	0	1	0	3	0	1	0	0	0	170
0815 - 0830	1	92	0	0	93	0	71	1	0	72	1	0	2	0	3	0	0	0	0	0	168
0830 - 0845	3	121	0	0	124	0	74	2	0	76	3	0	2	0	5	0	0	0	0	0	205
0845 - 0900	1	111	0	0	112	0	83	2	0	85	5	0	7	0	12	0	0	0	0	0	209
Hourly Total	6	429	0	0	435	0	285	8	0	293	11	0	12	0	23	0	1	0	0	0	752
Grand Total	15	902	0	0	917	0	580	19	0	599	16	0	31	0	47	0	1	0	0	1	1564
Approach %	1.64	98.36	0.00	0.00	-	0.00	96.83	3.17	0.00	-	34.04	0.00	65.96	0.00	-	0.00	100.00	0.00	0.00	-	
Intersection %	0.96	57.67	0.00	0.00	58.63	0.00	37.08	1.21	0.00	38.30	1.02	0.00	1.98	0.00	3.01	0.00	0.06	0.00	0.00	0.06	
PHF	0.38	0.89	0.00	0.00	0.90	0.00	0.90	0.46	0.00	0.88	0.42	0.00	0.48	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.90

1600 - 1800 (Thursday 2h Session) (05-19-2022)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Terry Rd (South)					Terry Rd (North)					Raggard Rd					Driveway					
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	
1600 - 1615	4	118	0	0	122	0	141	3	0	144	8	0	13	0	21	0	0	0	0	0	287
1615 - 1630	12	114	0	0	126	0	128	4	0	132	5	0	11	0	16	0	0	0	0	0	274
1630 - 1645	12	127	0	0	139	0	133	5	0	138	4	0	33	0	37	0	0	0	0	0	314
1645 - 1700	5	106	0	0	111	0	148	4	0	152	2	0	13	0	15	0	0	0	0	0	278
Hourly Total	33	465	0	0	498	0	550	16	0	566	19	0	70	0	89	0	0	0	0	0	1153
1700 - 1715	7	125	0	0	132	0	130	2	0	132	1	0	11	0	12	0	0	0	0	0	276
1715 - 1730	4	110	0	0	114	0	142	1	0	143	0	0	18	0	18	0	1	0	0	0	276
1730 - 1745	5	120	0	0	125	0	146	2	0	148	3	0	17	0	20	0	0	0	0	0	293
1745 - 1800	8	101	0	0	109	0	136	1	0	137	6	0	10	0	16	0	0	0	0	0	262
Hourly Total	24	456	0	0	480	0	554	6	0	560	10	0	56	0	66	0	1	0	0	0	1107
Grand Total	57	921	0	0	978	0	1104	22	0	1126	29	0	126	0	155	0	1	0	0	1	2260
Approach %	5.83	94.17	0.00	0.00	-	0.00	98.05	1.95	0.00	-	18.71	0.00	81.29	0.00	-	0.00	100.00	0.00	0.00	-	
Intersection %	2.52	40.75	0.00	0.00	43.27	0.00	48.85	0.97	0.00	49.82	1.28	0.00	5.58	0.00	6.86	0.00	0.04	0.00	0.00	0.04	
PHF	0.69	0.92	0.00	0.00	0.90	0.00	0.93	0.80	0.00	0.93	0.59	0.00	0.53	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.92

Classified Turn Movement Count || All vehicles

Louisville KY (Terry Rd)

Site 2 of 4

Terry Rd (South)
Terry Rd (North)
Murray Ln

Date

Thursday, May 19, 2022

Weather

Fair
73°F

Lat/Long

38.169952°, -85.867805°

0700 - 0900 (Thursday 2h Session) (05-19-2022)

All vehicles

TIME	Northbound				Southbound				Eastbound				Int Total
	Terry Rd (South)				Terry Rd (North)				Murray Ln				
	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	
0700 - 0715	0	118	0	118	58	2	0	60	9	0	0	9	187
0715 - 0730	0	107	0	107	91	1	0	92	8	0	0	8	207
0730 - 0745	0	132	0	132	85	2	0	87	4	0	0	4	223
0745 - 0800	0	96	0	96	69	6	0	75	5	0	0	5	176
Hourly Total	0	453	0	453	303	11	0	314	26	0	0	26	793
0800 - 0815	0	104	0	104	53	5	0	58	5	0	0	5	167
0815 - 0830	0	86	0	86	73	3	0	76	5	0	0	5	167
0830 - 0845	0	116	0	116	68	5	0	73	6	0	0	6	195
0845 - 0900	0	110	0	110	86	3	0	89	5	1	0	6	205
Hourly Total	0	416	0	416	280	16	0	296	21	1	0	22	734
Grand Total	0	869	0	869	583	27	0	610	47	1	0	48	1527
Approach %	0.00	100.00	0.00	-	95.57	4.43	0.00	-	97.92	2.08	0.00	-	
Intersection %	0.00	56.91	0.00	56.91	38.18	1.77	0.00	39.95	3.08	0.07	0.00	3.14	
PHF	0.00	0.86	0.00	0.86	0.83	0.46	0.00	0.85	0.72	0.00	0.00	0.72	0.89

1600 - 1800 (Thursday 2h Session) (05-19-2022)

All vehicles

TIME	Northbound				Southbound				Eastbound				Int Total
	Terry Rd (South)				Terry Rd (North)				Murray Ln				
	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	
1600 - 1615	0	120	0	120	150	5	0	155	3	0	0	3	278
1615 - 1630	0	121	0	121	134	5	0	139	4	0	0	4	264
1630 - 1645	0	135	0	135	158	7	0	165	4	0	0	4	304
1645 - 1700	0	107	0	107	148	12	0	160	5	0	0	5	272
Hourly Total	0	483	0	483	590	29	0	619	16	0	0	16	1118
1700 - 1715	0	128	0	128	138	4	0	142	5	1	0	6	276
1715 - 1730	0	111	0	111	150	10	0	160	2	0	0	2	273
1730 - 1745	0	121	0	121	155	10	0	165	3	0	0	3	289
1745 - 1800	0	107	0	107	142	3	0	145	3	0	0	3	255
Hourly Total	0	467	0	467	585	27	0	612	13	1	0	14	1093
Grand Total	0	950	0	950	1175	56	0	1231	29	1	0	30	2211
Approach %	0.00	100.00	0.00	-	95.45	4.55	0.00	-	96.67	3.33	0.00	-	
Intersection %	0.00	42.97	0.00	42.97	53.14	2.53	0.00	55.68	1.31	0.05	0.00	1.36	
PHF	0.00	0.89	0.00	0.89	0.94	0.69	0.00	0.95	0.80	0.25	0.00	0.71	0.93

Classified Turn Movement Count || All vehicles

Louisville KY (Terry Rd)

Site 1 of 4
Terry Rd (South)
Terry Rd (North)
Lower Hunters Trace (West)
Lower Hunters Trace (East)

Date
Thursday, May 19, 2022

Weather
Fair
73°F

Lat/Long
38.164826°, -85.865571°

0700 - 0900 (Thursday 2h Session) (05-19-2022)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Terry Rd (South)					Terry Rd (North)					Lower Hunters Trace (West)					Lower Hunters Trace (East)					
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	
0700 - 0715	4	76	28	0	108	12	38	3	0	53	4	15	9	0	28	24	31	27	0	82	271
0715 - 0730	5	73	40	0	118	30	65	1	0	96	1	23	14	0	38	41	20	38	0	99	351
0730 - 0745	12	90	42	0	144	24	53	3	0	80	4	28	11	0	43	40	27	31	0	98	365
0745 - 0800	13	58	26	0	97	24	46	1	0	71	3	23	13	0	39	20	27	36	0	83	290
Hourly Total	34	297	136	0	467	90	202	8	0	300	12	89	47	0	148	125	105	132	0	362	1277
0800 - 0815	6	64	29	0	99	16	35	1	0	52	3	19	17	0	39	16	23	27	0	66	256
0815 - 0830	4	62	30	0	96	28	37	3	0	68	2	21	7	0	30	10	10	20	0	40	234
0830 - 0845	7	58	27	0	92	17	60	2	0	79	4	33	11	0	48	19	19	45	0	83	302
0845 - 0900	11	79	30	0	120	37	49	1	0	87	1	25	10	0	36	18	18	28	0	64	307
Hourly Total	28	263	116	0	407	98	181	7	0	286	10	98	45	0	153	63	70	120	0	253	1099
Grand Total	62	560	252	0	874	188	383	15	0	586	22	187	92	0	301	188	175	252	0	615	2376
Approach %	7.09	64.07	28.83	0.00	-	32.08	65.36	2.56	0.00	-	7.31	62.13	30.56	0.00	-	30.57	28.46	40.98	0.00	-	-
Intersection %	2.61	23.57	10.61	0.00	36.78	7.91	16.12	0.63	0.00	24.66	0.93	7.87	3.87	0.00	12.67	7.91	7.37	10.61	0.00	25.88	-
PHF	0.65	0.83	0.81	0.00	0.81	0.75	0.78	0.67	0.00	0.78	0.75	0.79	0.84	0.00	0.86	0.76	0.85	0.87	0.00	0.91	0.87

1600 - 1800 (Thursday 2h Session) (05-19-2022)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Terry Rd (South)					Terry Rd (North)					Lower Hunters Trace (West)					Lower Hunters Trace (East)					
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	
1600 - 1615	17	75	26	0	118	41	89	4	0	134	2	49	19	0	70	35	47	41	0	123	445
1615 - 1630	18	73	39	0	130	39	93	1	0	133	1	45	14	0	60	51	39	37	0	127	450
1630 - 1645	15	81	34	0	130	51	89	3	0	143	4	46	18	0	68	26	41	54	0	121	462
1645 - 1700	16	78	26	0	120	43	99	3	0	145	3	44	22	0	69	36	48	27	0	111	445
Hourly Total	66	307	125	0	498	174	370	11	0	555	10	184	73	0	267	148	175	159	0	482	1802
1700 - 1715	22	87	47	0	156	37	99	5	0	141	6	46	18	0	70	37	35	40	0	112	479
1715 - 1730	21	76	30	0	127	37	95	5	0	137	5	43	18	0	66	31	46	29	0	106	436
1730 - 1745	14	82	25	0	121	47	107	2	0	156	1	36	12	0	49	29	40	37	0	106	432
1745 - 1800	15	74	27	0	116	46	90	1	0	137	2	33	17	0	52	38	35	27	0	100	405
Hourly Total	72	319	129	0	520	167	391	13	0	571	14	158	65	0	237	135	156	133	0	424	1752
Grand Total	138	626	254	0	1018	341	761	24	0	1126	24	342	138	0	504	283	331	292	0	906	3554
Approach %	13.56	61.49	24.95	0.00	-	30.28	67.58	2.13	0.00	-	4.76	67.86	27.38	0.00	-	31.24	36.53	32.23	0.00	-	-
Intersection %	3.88	17.61	7.15	0.00	28.64	9.59	21.41	0.68	0.00	31.68	0.68	9.62	3.88	0.00	14.18	7.96	9.31	8.22	0.00	25.49	-
PHF	0.81	0.92	0.78	0.00	0.86	0.83	0.96	0.60	0.00	0.97	0.58	0.98	0.82	0.00	0.95	0.74	0.85	0.73	0.00	0.93	0.96

HCS Reports

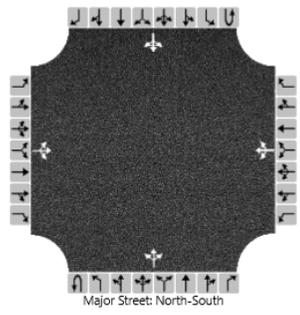
HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Lemmah Dr							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Lemmah Dr							
Analysis Year	2022							North/South Street	Terry Road							
Time Analyzed	AM Peak							Peak Hour Factor	0.89							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		24	0	41		0	476	11		8	283	0
Percent Heavy Vehicles (%)		3	3	3		8	0	2		0				25		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.18	6.50	6.22		4.10				4.35		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.57	4.00	3.32		2.20				2.43		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			0				73			0				9		
Capacity, c (veh/h)			0				386			1253				916		
v/c Ratio							0.19			0.00				0.01		
95% Queue Length, Q ₉₅ (veh)							0.7			0.0				0.0		
Control Delay (s/veh)							16.5			7.9	0.0	0.0		9.0	0.1	0.1
Level of Service (LOS)							C			A	A	A		A	A	A
Approach Delay (s/veh)							16.5			0.0				0.4		
Approach LOS							C			A				A		

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Lemmah Dr							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Lemmah Dr							
Analysis Year	2025							North/South Street	Terry Road							
Time Analyzed	AM Peak No Build							Peak Hour Factor	0.89							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		24	0	42		0	483	11		8	287	0
Percent Heavy Vehicles (%)		3	3	3		8	0	2		0				25		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.18	6.50	6.22		4.10				4.35		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.57	4.00	3.32		2.20				2.43		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			0			74				0				9		
Capacity, c (veh/h)			0			382				1249				910		
v/c Ratio						0.19				0.00				0.01		
95% Queue Length, Q ₉₅ (veh)						0.7				0.0				0.0		
Control Delay (s/veh)						16.7				7.9	0.0	0.0		9.0	0.1	0.1
Level of Service (LOS)						C				A	A	A		A	A	A
Approach Delay (s/veh)						16.7				0.0				0.3		
Approach LOS						C				A				A		

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Road at Lemmah Dr		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Lemmah Dr		
Analysis Year	2025			North/South Street	Terry Road		
Time Analyzed	AM Peak Build			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		0	0	0		24	0	42		0	511	11		8	296	0	
Percent Heavy Vehicles (%)		3	3	3		8	0	2		0				25			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.18	6.50	6.22		4.10				4.35		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.57	4.00	3.32		2.20				2.43		

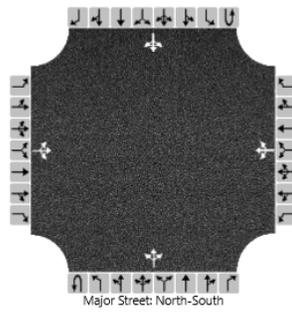
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			0			74				0				9		
Capacity, c (veh/h)			0			362				1238				885		
v/c Ratio						0.21				0.00				0.01		
95% Queue Length, Q ₉₅ (veh)						0.8				0.0				0.0		
Control Delay (s/veh)						17.5				7.9	0.0	0.0		9.1	0.1	0.1
Level of Service (LOS)						C				A	A	A		A	A	A
Approach Delay (s/veh)						17.5				0.0				0.4		
Approach LOS						C				A				A		

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Road at Lemmah Dr		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Lemmah Dr		
Analysis Year	2035			North/South Street	Terry Road		
Time Analyzed	AM Peak No Build			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		0	0	0		25	0	44		0	508	12		8	302	0	
Percent Heavy Vehicles (%)		3	3	3		8	0	2		0				25			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.18	6.50	6.22		4.10				4.35		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.57	4.00	3.32		2.20				2.43		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			0			78				0				9		
Capacity, c (veh/h)			0			361				1231				886		
v/c Ratio						0.21				0.00				0.01		
95% Queue Length, Q ₉₅ (veh)						0.8				0.0				0.0		
Control Delay (s/veh)						17.7				7.9	0.0	0.0		9.1	0.1	0.1
Level of Service (LOS)						C				A	A	A		A	A	A
Approach Delay (s/veh)						17.7				0.0				0.3		
Approach LOS						C				A				A		

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Lemmah Dr							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Lemmah Dr							
Analysis Year	2035							North/South Street	Terry Road							
Time Analyzed	AM Peak Build							Peak Hour Factor	0.89							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		25	0	44		0	536	12		8	311	0
Percent Heavy Vehicles (%)		3	3	3		8	0	2		0				25		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.18	6.50	6.22		4.10				4.35		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.57	4.00	3.32		2.20				2.43		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			0				78			0				9		
Capacity, c (veh/h)			0				342			1221				862		
v/c Ratio							0.23			0.00				0.01		
95% Queue Length, Q ₉₅ (veh)							0.9			0.0				0.0		
Control Delay (s/veh)							18.6			7.9	0.0	0.0		9.2	0.1	0.1
Level of Service (LOS)							C			A	A	A		A	A	A
Approach Delay (s/veh)					18.6				0.0				0.3			
Approach LOS					C				A				A			

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Lemmah Dr							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Lemmah Dr							
Analysis Year	2022							North/South Street	Terry Road							
Time Analyzed	PM Peak							Peak Hour Factor	0.97							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		30	0	19		2	431	51		33	537	0
Percent Heavy Vehicles (%)		3	3	3		3	0	10		0				10		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.50	6.30		4.10				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.00	3.39		2.20				2.29		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			0				51			2				34		
Capacity, c (veh/h)			0				246			1027				1027		
v/c Ratio							0.21			0.00				0.03		
95% Queue Length, Q ₉₅ (veh)							0.8			0.0				0.1		
Control Delay (s/veh)							23.4			8.5	0.0	0.0		8.6	0.4	0.4
Level of Service (LOS)							C			A	A	A		A	A	A
Approach Delay (s/veh)							23.4			0.1				0.9		
Approach LOS							C			A				A		

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Lemmah Dr							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Lemmah Dr							
Analysis Year	2025							North/South Street	Terry Road							
Time Analyzed	PM Peak No Build							Peak Hour Factor	0.97							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6
Number of Lanes	0	1	0		0	1	0		0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		30	0	19		2	437	52		33	545	0
Percent Heavy Vehicles (%)		3	3	3		3	0	10		0				10		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.50	6.30		4.10				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.00	3.39		2.20				2.29		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			0				51			2					34	
Capacity, c (veh/h)			0				241			1020					1021	
v/c Ratio							0.21			0.00					0.03	
95% Queue Length, Q ₉₅ (veh)							0.8			0.0					0.1	
Control Delay (s/veh)							23.9			8.5	0.0	0.0		8.6	0.4	0.4
Level of Service (LOS)							C			A	A	A		A	A	A
Approach Delay (s/veh)					23.9				0.1				0.9			
Approach LOS					C				A				A			

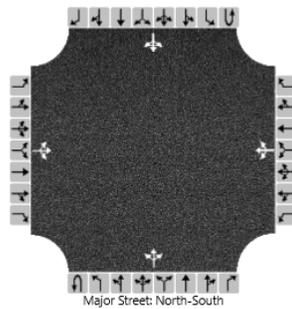
HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Lemmah Dr							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Lemmah Dr							
Analysis Year	2025							North/South Street	Terry Road							
Time Analyzed	PM Peak Build							Peak Hour Factor	0.97							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		30	0	19		2	454	52		33	573	0
Percent Heavy Vehicles (%)		3	3	3		3	0	10		0				10		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.50	6.30		4.10				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.00	3.39		2.20				2.29		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			0				51			2					34	
Capacity, c (veh/h)			0				225			995					1005	
v/c Ratio							0.22			0.00					0.03	
95% Queue Length, Q ₉₅ (veh)							0.8			0.0					0.1	
Control Delay (s/veh)							25.6			8.6	0.0	0.0		8.7	0.4	0.4
Level of Service (LOS)							D			A	A	A		A	A	A
Approach Delay (s/veh)					25.6				0.1				0.9			
Approach LOS					D				A				A			

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Lemmah Dr							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Lemmah Dr							
Analysis Year	2035							North/South Street	Terry Road							
Time Analyzed	PM Peak No Build							Peak Hour Factor	0.97							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	0	0		32	0	20		2	459	55		35	573	0
Percent Heavy Vehicles (%)		3	3	3		3	0	10		0				10		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.50	6.30		4.10				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.00	3.39		2.20				2.29		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			0				54			2					36	
Capacity, c (veh/h)			0				220			995					998	
v/c Ratio							0.24			0.00					0.04	
95% Queue Length, Q ₉₅ (veh)							0.9			0.0					0.1	
Control Delay (s/veh)							26.6			8.6	0.0	0.0		8.7	0.5	0.5
Level of Service (LOS)							D			A	A	A		A	A	A
Approach Delay (s/veh)					26.6				0.1				0.9			
Approach LOS					D				A				A			

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Road at Lemmah Dr		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Lemmah Dr		
Analysis Year	2035			North/South Street	Terry Road		
Time Analyzed	PM Peak Build			Peak Hour Factor	0.97		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		0	0	0		32	0	20		2	476	55		35	601	0	
Percent Heavy Vehicles (%)		3	3	3		3	0	10		0				10			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1					4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.50	6.30		4.10					4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2					2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.00	3.39		2.20					2.29		

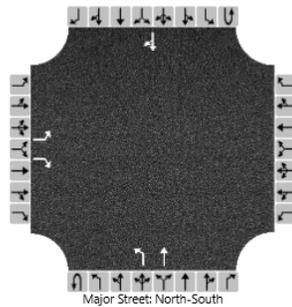
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			0				54			2					36		
Capacity, c (veh/h)			0				206			971					983		
v/c Ratio							0.26			0.00					0.04		
95% Queue Length, Q ₉₅ (veh)							1.0			0.0					0.1		
Control Delay (s/veh)							28.6			8.7	0.0	0.0			8.8	0.5	0.5
Level of Service (LOS)							D			A	A	A			A	A	A
Approach Delay (s/veh)							28.6			0.1					0.9		
Approach LOS							D			A					A		

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Raggard Rd		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Raggard Road		
Analysis Year	2022			North/South Street	Terry Road		
Time Analyzed	AM Peak			Peak Hour Factor	0.90		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6	
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0	
Configuration		L		R						L	T					TR	
Volume (veh/h)		5		19						9	473				295	11	
Percent Heavy Vehicles (%)		60		5						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No															
Median Type Storage		Left Only												1			

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		7.00		6.25						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		4.04		3.35						2.20						

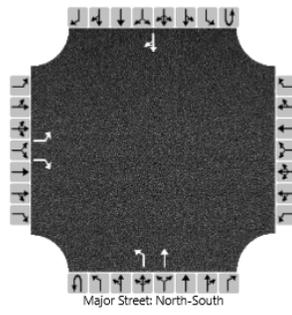
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		6		21						10								
Capacity, c (veh/h)		356		701						1230								
v/c Ratio		0.02		0.03						0.01								
95% Queue Length, Q ₉₅ (veh)		0.0		0.1						0.0								
Control Delay (s/veh)		15.3		10.3						7.9								
Level of Service (LOS)		C		B						A								
Approach Delay (s/veh)		11.3									0.1							
Approach LOS		B									A							

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Raggard Rd		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Raggard Road		
Analysis Year	2025			North/South Street	Terry Road		
Time Analyzed	AM Peak No Build			Peak Hour Factor	0.90		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0
Configuration		L		R						L	T					TR
Volume (veh/h)		5		19						9	480				299	11
Percent Heavy Vehicles (%)		60		5						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type Storage		Left Only											1			

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		7.00		6.25						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		4.04		3.35						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		6		21						10							
Capacity, c (veh/h)		352		697						1226							
v/c Ratio		0.02		0.03						0.01							
95% Queue Length, Q ₉₅ (veh)		0.0		0.1						0.0							
Control Delay (s/veh)		15.4		10.3						8.0							
Level of Service (LOS)		C		B						A							
Approach Delay (s/veh)		11.4								0.1							
Approach LOS		B								A							

HCS Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	Diane Zimmerman							Intersection	Terry Rd at Raggard Rd									
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction										
Date Performed	8/17/2022							East/West Street	Raggard Road									
Analysis Year	2025							North/South Street	Terry Road									
Time Analyzed	AM Peak Build							Peak Hour Factor	0.90									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Terry Road																	
Lanes																		
<p>Major Street: North-South</p>																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0		
Configuration		L		R						L	T					TR		
Volume (veh/h)		5		20						12	508				308	11		
Percent Heavy Vehicles (%)		60		5						0								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized		No																
Median Type Storage		Left Only									1							
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		7.00		6.25						4.10								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		4.04		3.35						2.20								
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)		6		22						13								
Capacity, c (veh/h)		336		688						1215								
v/c Ratio		0.02		0.03						0.01								
95% Queue Length, Q ₉₅ (veh)		0.1		0.1						0.0								
Control Delay (s/veh)		15.9		10.4						8.0								
Level of Service (LOS)		C		B						A								
Approach Delay (s/veh)		11.5								0.2								
Approach LOS		B								A								

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Rd at Raggard Rd							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Raggard Road							
Analysis Year	2035							North/South Street	Terry Road							
Time Analyzed	AM Peak No Build							Peak Hour Factor	0.90							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0
Configuration		L		R						L	T					TR
Volume (veh/h)		5		20						9	505				314	12
Percent Heavy Vehicles (%)		60		5						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type Storage		Left Only								1						
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		7.00		6.25						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		4.04		3.35						2.20						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		6		22						10						
Capacity, c (veh/h)		338		682						1208						
v/c Ratio		0.02		0.03						0.01						
95% Queue Length, Q ₉₅ (veh)		0.1		0.1						0.0						
Control Delay (s/veh)		15.8		10.5						8.0						
Level of Service (LOS)		C		B						A						
Approach Delay (s/veh)		11.5								0.1						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	Diane Zimmerman							Intersection	Terry Rd at Raggard Rd									
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction										
Date Performed	8/17/2022							East/West Street	Raggard Road									
Analysis Year	2035							North/South Street	Terry Road									
Time Analyzed	AM Peak Build							Peak Hour Factor	0.90									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Terry Road																	
Lanes																		
<p>Major Street: North-South</p>																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6		
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0		
Configuration		L		R						L	T					TR		
Volume (veh/h)		5		21						12	533				323	12		
Percent Heavy Vehicles (%)		60		5						0								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized		No																
Median Type Storage		Left Only									1							
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		7.00		6.25						4.10								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		4.04		3.35						2.20								
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)		6		23						13								
Capacity, c (veh/h)		323		673						1197								
v/c Ratio		0.02		0.03						0.01								
95% Queue Length, Q ₉₅ (veh)		0.1		0.1						0.0								
Control Delay (s/veh)		16.3		10.5						8.0								
Level of Service (LOS)		C		B						A								
Approach Delay (s/veh)		11.7								0.2								
Approach LOS		B								A								

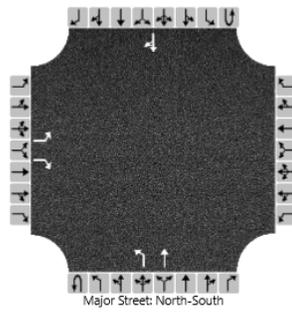
HCS Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	Diane Zimmerman							Intersection	Terry Rd at Raggard Rd								
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction									
Date Performed	8/17/2022							East/West Street	Raggard Road								
Analysis Year	2022							North/South Street	Terry Road								
Time Analyzed	PM Peak							Peak Hour Factor	0.92								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Terry Road																
Lanes																	
<p>Major Street: North-South</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0	
Configuration		L		R						L	T					TR	
Volume (veh/h)		19		70						33	465				550	16	
Percent Heavy Vehicles (%)		16		1						3							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No															
Median Type Storage		Left Only												1			
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1		6.2						4.1							
Critical Headway (sec)		6.56		6.21						4.13							
Base Follow-Up Headway (sec)		3.5		3.3						2.2							
Follow-Up Headway (sec)		3.64		3.31						2.23							
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		21		76						36							
Capacity, c (veh/h)		322		499						960							
v/c Ratio		0.06		0.15						0.04							
95% Queue Length, Q ₉₅ (veh)		0.2		0.5						0.1							
Control Delay (s/veh)		16.9		13.5						8.9							
Level of Service (LOS)		C		B						A							
Approach Delay (s/veh)		14.3									0.6						
Approach LOS		B									A						

HCS Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	Diane Zimmerman							Intersection	Terry Rd at Raggard Rd									
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction										
Date Performed	8/17/2022							East/West Street	Raggard Road									
Analysis Year	2025							North/South Street	Terry Road									
Time Analyzed	PM Peak No Build							Peak Hour Factor	0.92									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Terry Road																	
Lanes																		
<p>Major Street: North-South</p>																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0		
Configuration		L		R						L	T					TR		
Volume (veh/h)		19		71						33	472				558	16		
Percent Heavy Vehicles (%)		16		1						3								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized		No																
Median Type Storage		Left Only									1							
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		6.56		6.21						4.13								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		3.64		3.31						2.23								
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)		21		77						36								
Capacity, c (veh/h)		318		493						952								
v/c Ratio		0.06		0.16						0.04								
95% Queue Length, Q ₉₅ (veh)		0.2		0.6						0.1								
Control Delay (s/veh)		17.1		13.7						8.9								
Level of Service (LOS)		C		B						A								
Approach Delay (s/veh)		14.4								0.6								
Approach LOS		B								A								

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	Terry Rd at Raggard Rd
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction	
Date Performed	8/17/2022	East/West Street	Raggard Road
Analysis Year	2025	North/South Street	Terry Road
Time Analyzed	PM Peak Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Terry Road		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0	
Configuration		L		R						L	T					TR	
Volume (veh/h)		19		75						35	489				586	16	
Percent Heavy Vehicles (%)		16		1						3							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No															
Median Type Storage		Left Only											1				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.56		6.21						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.64		3.31						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		21		82						38								
Capacity, c (veh/h)		304		474						928								
v/c Ratio		0.07		0.17						0.04								
95% Queue Length, Q ₉₅ (veh)		0.2		0.6						0.1								
Control Delay (s/veh)		17.7		14.2						9.0								
Level of Service (LOS)		C		B						A								
Approach Delay (s/veh)		14.9									0.6							
Approach LOS		B									A							

HCS Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	Diane Zimmerman							Intersection	Terry Rd at Raggard Rd									
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction										
Date Performed	8/17/2022							East/West Street	Raggard Road									
Analysis Year	2035							North/South Street	Terry Road									
Time Analyzed	PM Peak No Build							Peak Hour Factor	0.92									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Terry Road																	
Lanes																		
<p>Major Street: North-South</p>																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6		
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0		
Configuration		L		R						L	T					TR		
Volume (veh/h)		20		75						35	496				587	17		
Percent Heavy Vehicles (%)		16		1						3								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized		No																
Median Type Storage		Left Only									1							
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		6.56		6.21						4.13								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		3.64		3.31						2.23								
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)		22		82						38								
Capacity, c (veh/h)		302		473						926								
v/c Ratio		0.07		0.17						0.04								
95% Queue Length, Q ₉₅ (veh)		0.2		0.6						0.1								
Control Delay (s/veh)		17.8		14.2						9.1								
Level of Service (LOS)		C		B						A								
Approach Delay (s/veh)		15.0								0.6								
Approach LOS		B								A								

HCS Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	Diane Zimmerman							Intersection	Terry Rd at Raggard Rd									
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction										
Date Performed	8/17/2022							East/West Street	Raggard Road									
Analysis Year	2035							North/South Street	Terry Road									
Time Analyzed	PM Peak Build							Peak Hour Factor	0.92									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Terry Road																	
Lanes																		
<p>Major Street: North-South</p>																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6		
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0		
Configuration		L		R						L	T					TR		
Volume (veh/h)		20		79						37	513				615	17		
Percent Heavy Vehicles (%)		16		1						3								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized		No																
Median Type Storage		Left Only									1							
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		6.56		6.21						4.13								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		3.64		3.31						2.23								
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)		22		86						40								
Capacity, c (veh/h)		289		454						902								
v/c Ratio		0.08		0.19						0.04								
95% Queue Length, Q ₉₅ (veh)		0.2		0.7						0.1								
Control Delay (s/veh)		18.4		14.8						9.2								
Level of Service (LOS)		C		B						A								
Approach Delay (s/veh)		15.5								0.6								
Approach LOS		C								A								

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Entrance							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Entrance							
Analysis Year	2025							North/South Street	Terry Road							
Time Analyzed	AM Peak							Peak Hour Factor	0.90							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	1	1	0
Configuration							LR					TR		L	T	
Volume (veh/h)						37		28			489	12		10	318	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Left Only								1		
Critical and Follow-up Headways																
Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						72								11		
Capacity, c (veh/h)						466								1024		
v/c Ratio						0.16								0.01		
95% Queue Length, Q ₉₅ (veh)						0.5								0.0		
Control Delay (s/veh)						14.1								8.6		
Level of Service (LOS)						B								A		
Approach Delay (s/veh)						14.1								0.3		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Entrance							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Entrance							
Analysis Year	2035							North/South Street	Terry Road							
Time Analyzed	AM Peak							Peak Hour Factor	0.90							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	1	1	0
Configuration							LR					TR		L	T	
Volume (veh/h)						37		28			514	12		10	334	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Left Only								1		
Critical and Follow-up Headways																
Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						72								11		
Capacity, c (veh/h)						449								1000		
v/c Ratio						0.16								0.01		
95% Queue Length, Q ₉₅ (veh)						0.6								0.0		
Control Delay (s/veh)						14.5								8.6		
Level of Service (LOS)						B								A		
Approach Delay (s/veh)						14.5								0.3		
Approach LOS						B								A		

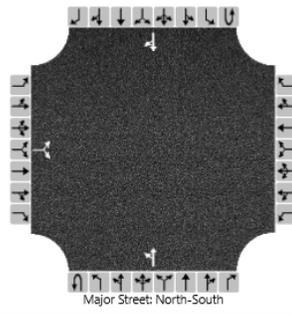
HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Entrance							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Entrance							
Analysis Year	2025							North/South Street	Terry Road							
Time Analyzed	PM Peak							Peak Hour Factor	0.92							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	1	1	0
Configuration							LR					TR		L	T	
Volume (veh/h)						23		17			509	35		32	629	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Left Only								1		
Critical and Follow-up Headways																
Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						43								35		
Capacity, c (veh/h)						371								994		
v/c Ratio						0.12								0.03		
95% Queue Length, Q ₉₅ (veh)						0.4								0.1		
Control Delay (s/veh)						16.0								8.8		
Level of Service (LOS)						C								A		
Approach Delay (s/veh)						16.0								0.4		
Approach LOS						C								A		

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Road at Entrance							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Entrance							
Analysis Year	2035							North/South Street	Terry Road							
Time Analyzed	PM Peak							Peak Hour Factor	0.92							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p style="text-align: center;">Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	1	1	0
Configuration							LR					TR		L	T	
Volume (veh/h)						23		17			548	35		32	662	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type Storage							Left Only								1	
Critical and Follow-up Headways																
Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						43								35		
Capacity, c (veh/h)						350								959		
v/c Ratio						0.12								0.04		
95% Queue Length, Q ₉₅ (veh)						0.4								0.1		
Control Delay (s/veh)						16.7								8.9		
Level of Service (LOS)						C								A		
Approach Delay (s/veh)						16.7								0.4		
Approach LOS						C								A		

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Murray Ln		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Murray Lane		
Analysis Year	2022			North/South Street	Terry Road		
Time Analyzed	AM Peak			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		26		0						0	453				303	11	
Percent Heavy Vehicles (%)		0		0						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

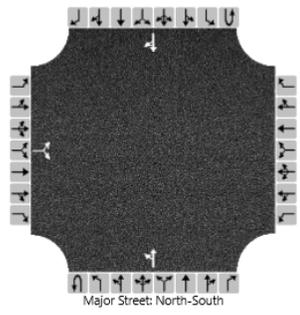
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			29							0							
Capacity, c (veh/h)			331							1217							
v/c Ratio			0.09							0.00							
95% Queue Length, Q ₉₅ (veh)			0.3							0.0							
Control Delay (s/veh)			16.9							8.0	0.0						
Level of Service (LOS)			C							A	A						
Approach Delay (s/veh)		16.9									0.0						
Approach LOS		C									A						

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Murray Ln		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Murray Lane		
Analysis Year	2025			North/South Street	Terry Road		
Time Analyzed	AM Peak No Build			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		26		0						0	460				308	11	
Percent Heavy Vehicles (%)		0		0						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

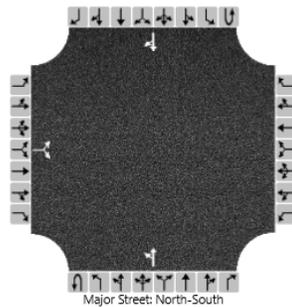
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			29							0						
Capacity, c (veh/h)			325							1211						
v/c Ratio			0.09							0.00						
95% Queue Length, Q ₉₅ (veh)			0.3							0.0						
Control Delay (s/veh)			17.2							8.0	0.0					
Level of Service (LOS)			C							A	A					
Approach Delay (s/veh)		17.2									0.0					
Approach LOS		C									A					

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Murray Ln		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Murray Lane		
Analysis Year	2025			North/South Street	Terry Road		
Time Analyzed	AM Peak Build			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		27		0						0	471				344	12	
Percent Heavy Vehicles (%)		0		0						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

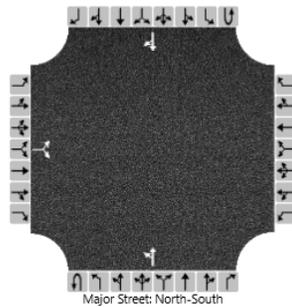
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			30							0						
Capacity, c (veh/h)			302							1170						
v/c Ratio			0.10							0.00						
95% Queue Length, Q ₉₅ (veh)			0.3							0.0						
Control Delay (s/veh)			18.2							8.1	0.0					
Level of Service (LOS)			C							A	A					
Approach Delay (s/veh)		18.2									0.0					
Approach LOS		C									A					

HCS Two-Way Stop-Control Report			
General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	Terry Rd at Murray Ln
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction	
Date Performed	8/17/2022	East/West Street	Murray Lane
Analysis Year	2035	North/South Street	Terry Road
Time Analyzed	AM Peak No Build	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Terry Road		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		27		0						0	484				324	12	
Percent Heavy Vehicles (%)		0		0						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

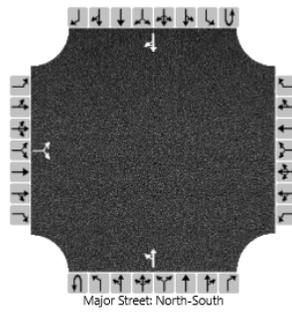
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			30							0								
Capacity, c (veh/h)			305							1192								
v/c Ratio			0.10							0.00								
95% Queue Length, Q ₉₅ (veh)			0.3							0.0								
Control Delay (s/veh)			18.1							8.0	0.0							
Level of Service (LOS)			C							A	A							
Approach Delay (s/veh)		18.1									0.0							
Approach LOS		C									A							

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Murray Ln		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Murray Lane		
Analysis Year	2035			North/South Street	Terry Road		
Time Analyzed	AM Peak Build			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		28		0						0	495				360	13	
Percent Heavy Vehicles (%)		0		0						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

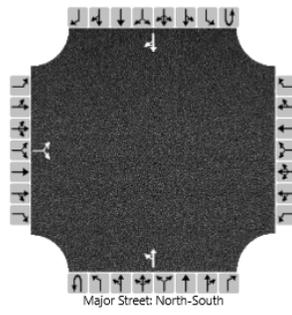
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			31							0						
Capacity, c (veh/h)			284							1151						
v/c Ratio			0.11							0.00						
95% Queue Length, Q ₉₅ (veh)			0.4							0.0						
Control Delay (s/veh)			19.2							8.1	0.0					
Level of Service (LOS)			C							A	A					
Approach Delay (s/veh)		19.2									0.0					
Approach LOS		C									A					

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Murray Ln		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Murray Lane		
Analysis Year	2022			North/South Street	Terry Road		
Time Analyzed	PM Peak			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		16		0						0	481				594	33	
Percent Heavy Vehicles (%)		0		0						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

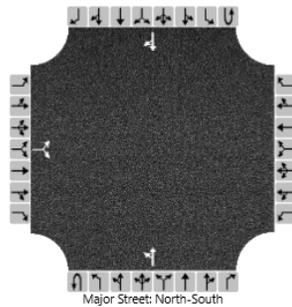
Flow Rate, v (veh/h)			17							0						
Capacity, c (veh/h)			210							921						
v/c Ratio			0.08							0.00						
95% Queue Length, Q ₉₅ (veh)			0.3							0.0						
Control Delay (s/veh)			23.7							8.9	0.0					
Level of Service (LOS)			C							A	A					
Approach Delay (s/veh)		23.7									0.0					
Approach LOS		C									A					

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	Diane Zimmerman							Intersection	Terry Rd at Murray Ln							
Agency/Co.	Diane B. Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	8/17/2022							East/West Street	Murray Lane							
Analysis Year	2025							North/South Street	Terry Road							
Time Analyzed	PM Peak No Build							Peak Hour Factor	0.92							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Terry Road															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		16		0						0	488				603	33
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			17							0						
Capacity, c (veh/h)			205							913						
v/c Ratio			0.08							0.00						
95% Queue Length, Q ₉₅ (veh)			0.3							0.0						
Control Delay (s/veh)			24.1							8.9	0.0					
Level of Service (LOS)			C							A	A					
Approach Delay (s/veh)		24.1								0.0						
Approach LOS		C								A						

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Murray Ln		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Murray Lane		
Analysis Year	2025			North/South Street	Terry Road		
Time Analyzed	PM Peak Build			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		20		0						0	523				624	35	
Percent Heavy Vehicles (%)		0		0						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

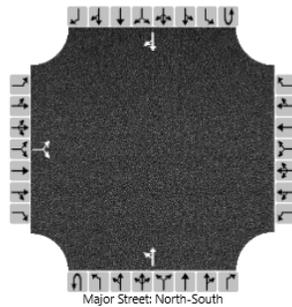
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			22							0								
Capacity, c (veh/h)			188							894								
v/c Ratio			0.12							0.00								
95% Queue Length, Q ₉₅ (veh)			0.4							0.0								
Control Delay (s/veh)			26.6							9.0	0.0							
Level of Service (LOS)			D							A	A							
Approach Delay (s/veh)		26.6									0.0							
Approach LOS		D									A							

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Murray Ln		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Murray Lane		
Analysis Year	2035			North/South Street	Terry Road		
Time Analyzed	PM Peak No Build			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		17		0						0	513				634	35	
Percent Heavy Vehicles (%)		0		0						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

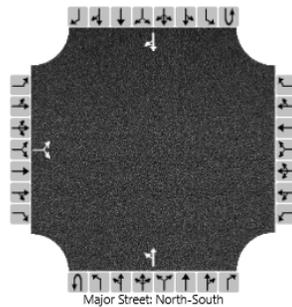
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			18							0							
Capacity, c (veh/h)			188							885							
v/c Ratio			0.10							0.00							
95% Queue Length, Q ₉₅ (veh)			0.3							0.0							
Control Delay (s/veh)			26.2							9.1	0.0						
Level of Service (LOS)			D							A	A						
Approach Delay (s/veh)		26.2									0.0						
Approach LOS		D									A						

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Diane Zimmerman			Intersection	Terry Rd at Murray Ln		
Agency/Co.	Diane B. Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	8/17/2022			East/West Street	Murray Lane		
Analysis Year	2035			North/South Street	Terry Road		
Time Analyzed	PM Peak Build			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Terry Road						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	10U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		21		0						0	548				655	37	
Percent Heavy Vehicles (%)		0		0						0							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			23							0							
Capacity, c (veh/h)			173							867							
v/c Ratio			0.13							0.00							
95% Queue Length, Q ₉₅ (veh)			0.4							0.0							
Control Delay (s/veh)			29.0							9.2	0.0						
Level of Service (LOS)			D							A	A						
Approach Delay (s/veh)		29.0									0.0						
Approach LOS		D									A						

HCS Signalized Intersection Results Summary

General Information				Intersection Information						Diagram										
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250															
Analyst	Diane Zimmerman		Analysis Date	8/17/2022			Area Type					Other								
Jurisdiction				Time Period	AM Peak							PHF	0.88							
Urban Street	Terry Road		Analysis Year	2022			Analysis Period					1> 7:00								
Intersection	Lower Hunters Trace		File Name	Terry AM 22.xus																
Project Description	Terry Road Apartments																			
Demand Information				EB			WB			NB			SB							
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R								
Demand (v), veh/h	12	89	47	125	105	132	34	297	136	90	202	8								
Signal Information																				
Cycle, s	69.0	Reference Phase	2	Green	3.1	2.0	25.0	1.4	5.1	7.9	Red	3.0	0.0	1.6	2.6	0.0	2.4			
Offset, s	0	Reference Point	End	Yellow	3.5	0.0	4.3	3.5	0.0	3.6	Red	3.0	0.0	1.6	2.6	0.0	2.4			
Uncoordinated	Yes	Simult. Gap E/W	On	Force Mode	Fixed	Simult. Gap N/S	On													
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT									
Assigned Phase	7			4			3			8			5		2		1		6	
Case Number	1.1			3.0			1.1			3.0			1.1		3.0		1.1		4.0	
Phase Duration, s	7.5			13.9			12.5			19.0			9.6		30.9		11.7		32.9	
Change Period, (Y+R _c), s	6.1			6.0			6.1			6.0			6.5		5.9		6.5		5.9	
Max Allow Headway (MAH), s	4.0			5.1			4.0			5.1			4.0		4.0		4.0		4.0	
Queue Clearance Time (g _s), s	2.5			5.5			6.7			7.8			3.0		11.8		4.4		8.4	
Green Extension Time (g _e), s	0.0			2.4			0.2			2.4			0.0		2.6		0.2		2.6	
Phase Call Probability	0.23			1.00			0.93			1.00			0.52		1.00		0.86		1.00	
Max Out Probability	0.00			0.00			0.02			0.00			0.00		0.00		0.00		0.00	
Movement Group Results				EB			WB			NB			SB							
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R								
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16								
Adjusted Flow Rate (v), veh/h	14	101	53	142	119	150	39	338	155	102	239									
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1885	1447	1781	1885	1598	1598	1856	1572	1725	1813									
Queue Service Time (g _s), s	0.5	3.5	2.3	4.7	3.8	5.8	1.0	9.8	4.8	2.4	6.4									
Cycle Queue Clearance Time (g _c), s	0.5	3.5	2.3	4.7	3.8	5.8	1.0	9.8	4.8	2.4	6.4									
Green Ratio (g/C)	0.13	0.11	0.11	0.22	0.19	0.19	0.41	0.36	0.36	0.44	0.39									
Capacity (c), veh/h	276	216	166	354	354	300	454	672	570	456	710									
Volume-to-Capacity Ratio (X)	0.049	0.468	0.322	0.401	0.337	0.500	0.085	0.502	0.271	0.224	0.336									
Back of Queue (Q), ft/ln (95 th percentile)																				
Back of Queue (Q), veh/ln (95 th percentile)	0.3	2.8	1.5	3.3	2.9	3.8	0.6	6.6	2.7	1.5	4.1									
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
Uniform Delay (d ₁), s/veh	26.0	28.6	28.1	22.9	24.3	25.1	12.7	17.2	15.6	12.4	14.7									
Incremental Delay (d ₂), s/veh	0.1	2.2	1.6	0.7	0.8	1.8	0.1	0.6	0.3	0.2	0.3									
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
Control Delay (d), s/veh	26.1	30.8	29.7	23.6	25.1	26.9	12.8	17.7	15.8	12.6	15.0									
Level of Service (LOS)	C	C	C	C	C	C	B	B	B	B	B									
Approach Delay, s/veh / LOS	30.1			C			25.2			C			16.8		B		14.3		B	
Intersection Delay, s/veh / LOS	20.1						C													
Multimodal Results				EB			WB			NB			SB							
Pedestrian LOS Score / LOS	2.12			B			1.92			B			2.09		B		2.09		B	
Bicycle LOS Score / LOS	0.77			A			1.17			A			1.36		A		1.05		A	

HCS Signalized Intersection Results Summary

General Information				Intersection Information				Diagram																			
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250																						
Analyst	Diane Zimmerman			Analysis Date	8/17/2022																						
Jurisdiction				Time Period	AM Peak																						
Urban Street	Terry Road			Analysis Year	2025 No Build																						
Intersection	Lower Hunters Trace			File Name	Terry AM 25 NB.xus																						
Project Description	Terry Road Apartments																										
Demand Information				EB			WB			NB			SB														
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R															
Demand (v), veh/h	12	90	48	127	107	134	35	301	138	91	205	8															
Signal Information																											
Cycle, s	69.2	Reference Phase	2																								
Offset, s	0	Reference Point	End																								
Uncoordinated	Yes	Simult. Gap E/W	On	Green	3.2	2.0	25.0	1.4	5.2	8.0																	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	4.3	3.5	0.0	3.6																	
				Red	3.0	0.0	1.6	2.6	0.0	2.4																	
Timer Results				EBL			EBT			WBL			WBT			NBL			NBT			SBL			SBT		
Assigned Phase				7			4			3			8			5			2			1			6		
Case Number				1.1			3.0			1.1			3.0			1.1			3.0			1.1			4.0		
Phase Duration, s				7.5			14.0			12.6			19.1			9.7			30.9			11.7			32.9		
Change Period, (Y+R _c), s				6.1			6.0			6.1			6.0			6.5			5.9			6.5			5.9		
Max Allow Headway (MAH), s				4.0			5.1			4.0			5.1			4.0			4.0			4.0			4.0		
Queue Clearance Time (g _s), s				2.5			5.5			6.7			7.9			3.0			12.0			4.5			8.5		
Green Extension Time (g _e), s				0.0			2.5			0.2			2.5			0.0			2.7			0.2			2.7		
Phase Call Probability				0.23			1.00			0.94			1.00			0.53			1.00			0.86			1.00		
Max Out Probability				0.00			0.00			0.03			0.00			0.00			0.00			0.00			0.00		
Movement Group Results				EB			WB			NB			SB														
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R												
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16															
Adjusted Flow Rate (v), veh/h	14	102	55	144	122	152	40	342	157	103	242																
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1885	1447	1781	1885	1598	1598	1856	1572	1725	1814																
Queue Service Time (g _s), s	0.5	3.5	2.4	4.7	3.9	5.9	1.0	10.0	4.9	2.5	6.5																
Cycle Queue Clearance Time (g _c), s	0.5	3.5	2.4	4.7	3.9	5.9	1.0	10.0	4.9	2.5	6.5																
Green Ratio (g/C)	0.14	0.12	0.12	0.23	0.19	0.19	0.41	0.36	0.36	0.44	0.39																
Capacity (c), veh/h	276	218	167	356	358	304	450	670	568	451	707																
Volume-to-Capacity Ratio (X)	0.049	0.469	0.326	0.405	0.339	0.502	0.088	0.510	0.276	0.229	0.343																
Back of Queue (Q), ft/ln (95 th percentile)																											
Back of Queue (Q), veh/ln (95 th percentile)	0.3	2.9	1.5	3.3	2.9	3.9	0.6	6.8	2.8	1.5	4.2																
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																
Uniform Delay (d ₁), s/veh	26.1	28.6	28.1	22.8	24.3	25.1	12.8	17.3	15.7	12.5	14.9																
Incremental Delay (d ₂), s/veh	0.1	2.2	1.6	0.7	0.8	1.8	0.1	0.6	0.3	0.3	0.3																
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
Control Delay (d), s/veh	26.1	30.9	29.7	23.5	25.1	26.9	12.9	17.9	15.9	12.8	15.2																
Level of Service (LOS)	C	C	C	C	C	C	B	B	B	B	B																
Approach Delay, s/veh / LOS	30.1	C		25.2	C		17.0	B		14.4	B																
Intersection Delay, s/veh / LOS	20.2						C																				
Multimodal Results				EB			WB			NB			SB														
Pedestrian LOS Score / LOS	2.12			B			1.92			B			2.09			B											
Bicycle LOS Score / LOS	0.77			A			1.18			A			1.06			A											

HCS Signalized Intersection Results Summary

General Information				Intersection Information						Diagram																	
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250																						
Analyst	Diane Zimmerman		Analysis Date	8/17/2022			Area Type					Other															
Jurisdiction				Time Period	AM Peak							PHF	0.88														
Urban Street	Terry Road		Analysis Year	2025 Build			Analysis Period					1> 7:00															
Intersection	Lower Hunters Trace		File Name	Terry AM 25 B.bus																							
Project Description	Terry Road Apartments																										
Demand Information				EB			WB			NB			SB														
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R												
Demand (v), veh/h				12	90	48	127	107	138	35	308	138	107	225	8												
Signal Information																											
Cycle, s	69.5	Reference Phase	2	Green	3.2	2.2	25.0	1.4	5.2	8.0	Yellow	3.5	0.0	4.3	3.5	0.0	3.6	Red	3.0	0.0	1.6	2.6	0.0	2.4			
Offset, s	0	Reference Point	End	Uncoordinated	Yes	Simult. Gap E/W	On	Force Mode	Fixed	Simult. Gap N/S	On																
Timer Results				EBL			EBT			WBL			WBT			NBL			NBT			SBL			SBT		
Assigned Phase				7			4			3			8			5			2			1			6		
Case Number				1.1			3.0			1.1			3.0			1.1			3.0			1.1			4.0		
Phase Duration, s				7.5			14.0			12.7			19.2			9.7			30.9			11.9			33.1		
Change Period, (Y+R _c), s				6.1			6.0			6.1			6.0			6.5			5.9			6.5			5.9		
Max Allow Headway (MAH), s				4.0			5.1			4.0			5.1			4.0			4.0			4.0			4.0		
Queue Clearance Time (g _s), s				2.5			5.5			6.7			8.1			3.1			12.4			5.0			9.2		
Green Extension Time (g _e), s				0.0			2.5			0.2			2.5			0.0			2.8			0.2			2.8		
Phase Call Probability				0.23			1.00			0.94			1.00			0.54			1.00			0.90			1.00		
Max Out Probability				0.00			0.00			0.03			0.00			0.00			0.00			0.00			0.00		
Movement Group Results				EB			WB			NB			SB														
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R												
Assigned Movement				7	4	14	3	8	18	5	2	12	1	6	16												
Adjusted Flow Rate (v), veh/h				14	102	55	144	122	157	40	350	157	122	265													
Adjusted Saturation Flow Rate (s), veh/h/ln				1810	1885	1447	1781	1885	1598	1598	1856	1572	1725	1815													
Queue Service Time (g _s), s				0.5	3.5	2.4	4.7	3.9	6.1	1.1	10.4	4.9	3.0	7.2													
Cycle Queue Clearance Time (g _c), s				0.5	3.5	2.4	4.7	3.9	6.1	1.1	10.4	4.9	3.0	7.2													
Green Ratio (g/C)				0.14	0.12	0.12	0.23	0.19	0.19	0.41	0.36	0.36	0.44	0.39													
Capacity (c), veh/h				276	218	167	356	358	304	436	667	565	448	710													
Volume-to-Capacity Ratio (X)				0.049	0.469	0.326	0.405	0.339	0.516	0.091	0.525	0.277	0.271	0.373													
Back of Queue (Q), ft/ln (95 th percentile)																											
Back of Queue (Q), veh/ln (95 th percentile)				0.3	2.9	1.5	3.3	3.0	4.1	0.6	7.0	2.8	1.8	4.7													
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00														
Uniform Delay (d ₁), s/veh				26.2	28.7	28.3	22.9	24.4	25.3	13.0	17.6	15.8	12.7	15.1													
Incremental Delay (d ₂), s/veh				0.1	2.2	1.6	0.7	0.8	1.9	0.1	0.6	0.3	0.3	0.3													
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
Control Delay (d), s/veh				26.2	31.0	29.8	23.6	25.2	27.2	13.0	18.2	16.1	13.0	15.4													
Level of Service (LOS)				C	C	C	C	C	C	B	B	B	B	B													
Approach Delay, s/veh / LOS				30.2 / C			25.4 / C			17.2 / B			14.7 / B														
Intersection Delay, s/veh / LOS				20.3						C																	
Multimodal Results				EB			WB			NB			SB														
Pedestrian LOS Score / LOS				2.12 / B			1.92 / B			2.09 / B			2.09 / B														
Bicycle LOS Score / LOS				0.77 / A			1.19 / A			1.39 / A			1.13 / A														

HCS Signalized Intersection Results Summary

General Information				Intersection Information																							
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250																						
Analyst	Diane Zimmerman	Analysis Date	8/17/2022	Area Type	Other																						
Jurisdiction		Time Period	AM Peak	PHF	0.88																						
Urban Street	Terry Road	Analysis Year	2035 No Build	Analysis Period	1> 7:00																						
Intersection	Lower Hunters Trace	File Name	Terry AM 35 NB.xus																								
Project Description	Terry Road Apartments																										
Demand Information				EB			WB			NB			SB														
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R												
Demand (v), veh/h				13	95	50	133	112	141	37	316	145	96	215	8												
Signal Information																											
Cycle, s	70.0	Reference Phase	2																								
Offset, s	0	Reference Point	End																								
Uncoordinated	Yes	Simult. Gap E/W	On	Green	3.4	1.9	25.0	1.5	5.3	8.4																	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	4.3	3.5	0.0	3.6																	
				Red	3.0	0.0	1.6	2.6	0.0	2.4																	
Timer Results				EBL			EBT			WBL			WBT			NBL			NBT			SBL			SBT		
Assigned Phase				7			4			3			8			5			2			1			6		
Case Number				1.1			3.0			1.1			3.0			1.1			3.0			1.1			4.0		
Phase Duration, s				7.6			14.4			12.9			19.7			9.9			30.9			11.8			32.8		
Change Period, (Y+R _c), s				6.1			6.0			6.1			6.0			6.5			5.9			6.5			5.9		
Max Allow Headway (MAH), s				4.0			5.1			4.0			5.1			4.0			4.0			4.0			4.0		
Queue Clearance Time (g _s), s				2.5			5.7			7.0			8.3			3.1			12.8			4.7			9.0		
Green Extension Time (g _e), s				0.0			2.6			0.3			2.6			0.0			2.8			0.2			2.8		
Phase Call Probability				0.25			1.00			0.95			1.00			0.56			1.00			0.88			1.00		
Max Out Probability				0.00			0.00			0.04			0.00			0.00			0.00			0.00			0.00		
Movement Group Results				EB			WB			NB			SB														
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R												
Assigned Movement				7	4	14	3	8	18	5	2	12	1	6	16												
Adjusted Flow Rate (v), veh/h				15	108	57	151	127	160	42	359	165	109	253													
Adjusted Saturation Flow Rate (s), veh/h/ln				1810	1885	1447	1781	1885	1598	1598	1856	1572	1725	1814													
Queue Service Time (g _s), s				0.5	3.7	2.5	5.0	4.1	6.3	1.1	10.8	5.3	2.7	7.0													
Cycle Queue Clearance Time (g _c), s				0.5	3.7	2.5	5.0	4.1	6.3	1.1	10.8	5.3	2.7	7.0													
Green Ratio (g/C)				0.14	0.12	0.12	0.23	0.20	0.20	0.41	0.36	0.36	0.43	0.38													
Capacity (c), veh/h				282	225	173	362	369	313	438	663	562	434	698													
Volume-to-Capacity Ratio (X)				0.052	0.479	0.328	0.417	0.345	0.512	0.096	0.542	0.293	0.251	0.363													
Back of Queue (Q), ft/ln (95 th percentile)																											
Back of Queue (Q), veh/ln (95 th percentile)				0.4	3.0	1.6	3.5	3.1	4.2	0.6	7.4	3.0	1.6	4.6													
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00													
Uniform Delay (d ₁), s/veh				26.0	28.8	28.2	22.6	24.3	25.2	13.1	17.9	16.2	13.0	15.4													
Incremental Delay (d ₂), s/veh				0.1	2.2	1.6	0.8	0.8	1.8	0.1	0.7	0.3	0.3	0.3													
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
Control Delay (d), s/veh				26.1	31.0	29.8	23.3	25.1	27.0	13.2	18.6	16.4	13.3	15.7													
Level of Service (LOS)				C	C	C	C	C	C	B	B	B	B	B													
Approach Delay, s/veh / LOS				30.2 C			25.2 C			17.6 B			15.0 B														
Intersection Delay, s/veh / LOS				20.6						C																	
Multimodal Results				EB			WB			NB			SB														
Pedestrian LOS Score / LOS				2.12 B			1.92 B			2.10 B			2.09 B														
Bicycle LOS Score / LOS				0.78 A			1.21 A			1.42 A			1.09 A														

HCS Signalized Intersection Results Summary

General Information				Intersection Information																							
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250																						
Analyst	Diane Zimmerman	Analysis Date	8/17/2022	Area Type	Other																						
Jurisdiction		Time Period	AM Peak	PHF	0.88																						
Urban Street	Terry Road	Analysis Year	2035 Build	Analysis Period	1> 7:00																						
Intersection	Lower Hunters Trace	File Name	Terry AM 35 B.xus																								
Project Description	Terry Road Apartments																										
Demand Information				EB			WB			NB			SB														
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R															
Demand (v), veh/h	13	95	50	133	112	145	37	323	145	112	235	8															
Signal Information																											
Cycle, s	70.3	Reference Phase	2																								
Offset, s	0	Reference Point	End																								
Uncoordinated	Yes	Simult. Gap E/W	On	Green	3.4	2.1	25.0	1.5	5.4	8.4																	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	4.3	3.5	0.0	3.6																	
				Red	3.0	0.0	1.6	2.6	0.0	2.4																	
Timer Results				EBL			EBT			WBL			WBT			NBL			NBT			SBL			SBT		
Assigned Phase	7			4			3			8			5			2			1			6					
Case Number	1.1			3.0			1.1			3.0			1.1			3.0			1.1			4.0					
Phase Duration, s	7.6			14.4			13.0			19.8			9.9			30.9			12.0			33.0					
Change Period, (Y+R _c), s	6.1			6.0			6.1			6.0			6.5			5.9			6.5			5.9					
Max Allow Headway (MAH), s	4.0			5.1			4.0			5.1			4.0			4.0			4.0			4.0					
Queue Clearance Time (g _s), s	2.5			5.8			7.0			8.5			3.1			13.2			5.2			9.7					
Green Extension Time (g _e), s	0.0			2.7			0.3			2.6			0.0			3.0			0.2			3.0					
Phase Call Probability	0.25			1.00			0.95			1.00			0.56			1.00			0.92			1.00					
Max Out Probability	0.00			0.00			0.04			0.00			0.00			0.00			0.01			0.00					
Movement Group Results				EB			WB			NB			SB														
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R															
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16															
Adjusted Flow Rate (v), veh/h	15	108	57	151	127	165	42	367	165	127	276																
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1885	1447	1781	1885	1598	1598	1856	1572	1725	1815																
Queue Service Time (g _s), s	0.5	3.8	2.5	5.0	4.1	6.5	1.1	11.2	5.3	3.2	7.7																
Cycle Queue Clearance Time (g _c), s	0.5	3.8	2.5	5.0	4.1	6.5	1.1	11.2	5.3	3.2	7.7																
Green Ratio (g/C)	0.14	0.12	0.12	0.24	0.20	0.20	0.40	0.36	0.36	0.43	0.39																
Capacity (c), veh/h	282	226	173	362	369	313	424	660	559	431	701																
Volume-to-Capacity Ratio (X)	0.052	0.478	0.328	0.418	0.345	0.526	0.099	0.556	0.295	0.295	0.394																
Back of Queue (Q), ft/ln (95 th percentile)																											
Back of Queue (Q), veh/ln (95 th percentile)	0.4	3.1	1.6	3.5	3.1	4.3	0.6	7.6	3.1	1.9	5.1																
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																
Uniform Delay (d ₁), s/veh	26.1	28.9	28.3	22.7	24.4	25.3	13.3	18.2	16.3	13.2	15.6																
Incremental Delay (d ₂), s/veh	0.1	2.2	1.6	0.8	0.8	2.0	0.1	0.7	0.3	0.4	0.4																
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
Control Delay (d), s/veh	26.2	31.1	29.9	23.4	25.2	27.3	13.4	18.9	16.6	13.6	16.0																
Level of Service (LOS)	C	C	C	C	C	C	B	B	B	B	B																
Approach Delay, s/veh / LOS	30.3			C			25.4			C			17.8			B			15.2			B					
Intersection Delay, s/veh / LOS	20.7												C														
Multimodal Results				EB			WB			NB			SB														
Pedestrian LOS Score / LOS	2.12			B			1.92			B			2.10			B			2.09			B					
Bicycle LOS Score / LOS	0.78			A			1.22			A			1.43			A			1.15			A					

HCS Signalized Intersection Results Summary

General Information				Intersection Information																							
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250																						
Analyst	Diane Zimmerman	Analysis Date	8/17/2022	Area Type	Other																						
Jurisdiction		Time Period	PM Peak	PHF	0.96																						
Urban Street	Terry Road	Analysis Year	2022	Analysis Period	1> 4:15																						
Intersection	Lower Hunters Trace	File Name	Terry PM 22.xus																								
Project Description	Terry Road Apartments																										
Demand Information				EB			WB			NB			SB														
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R															
Demand (v), veh/h	14	181	72	150	163	158	71	319	146	170	380	12															
Signal Information																											
Cycle, s	76.6	Reference Phase	2																								
Offset, s	0	Reference Point	End																								
Uncoordinated	Yes	Simult. Gap E/W	On	Green	4.8	2.3	25.0	1.6	5.6	12.8																	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	4.3	3.5	0.0	3.6																	
				Red	3.0	0.0	1.6	2.6	0.0	2.4																	
Timer Results				EBL			EBT			WBL			WBT			NBL			NBT			SBL			SBT		
Assigned Phase	7			4			3			8			5			2			1			6					
Case Number	1.1			3.0			1.1			3.0			1.1			3.0			1.1			4.0					
Phase Duration, s	7.7			18.8			13.3			24.4			11.3			30.9			13.6			33.2					
Change Period, (Y+R _c), s	6.1			6.0			6.1			6.0			6.5			5.9			6.5			5.9					
Max Allow Headway (MAH), s	4.0			5.1			4.0			5.1			4.0			4.0			4.0			4.0					
Queue Clearance Time (g _s), s	2.5			9.3			7.2			8.9			4.2			13.4			6.9			15.7					
Green Extension Time (g _e), s	0.0			3.5			0.3			3.5			0.1			3.3			0.3			3.3					
Phase Call Probability	0.27			1.00			0.96			1.00			0.79			1.00			0.98			1.00					
Max Out Probability	0.00			0.00			0.05			0.00			0.00			0.00			0.04			0.00					
Movement Group Results				EB			WB			NB			SB														
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R												
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16															
Adjusted Flow Rate (v), veh/h	15	189	75	156	170	165	74	332	152	177	408																
Adjusted Saturation Flow Rate (s), veh/h/ln	1711	1826	1560	1810	1841	1547	1668	1841	1598	1781	1875																
Queue Service Time (g _s), s	0.5	7.3	3.2	5.2	5.9	6.9	2.2	11.4	5.4	4.9	13.7																
Cycle Queue Clearance Time (g _c), s	0.5	7.3	3.2	5.2	5.9	6.9	2.2	11.4	5.4	4.9	13.7																
Green Ratio (g/C)	0.19	0.17	0.17	0.28	0.24	0.24	0.39	0.33	0.33	0.42	0.36																
Capacity (c), veh/h	291	306	261	352	443	372	336	601	521	445	668																
Volume-to-Capacity Ratio (X)	0.050	0.616	0.287	0.445	0.383	0.442	0.220	0.553	0.292	0.398	0.611																
Back of Queue (Q), ft/ln (95 th percentile)																											
Back of Queue (Q), veh/ln (95 th percentile)	0.4	5.8	2.1	3.8	4.4	4.4	1.4	8.0	3.3	3.2	9.3																
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																
Uniform Delay (d ₁), s/veh	25.5	29.6	27.9	22.3	24.3	24.7	16.3	21.2	19.2	15.4	20.3																
Incremental Delay (d ₂), s/veh	0.1	2.9	0.9	0.9	0.8	1.2	0.3	0.8	0.3	0.6	0.9																
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
Control Delay (d), s/veh	25.5	32.5	28.7	23.1	25.1	25.9	16.6	22.0	19.5	16.0	21.2																
Level of Service (LOS)	C	C	C	C	C	C	B	C	B	B	C																
Approach Delay, s/veh / LOS	31.1 C			24.7 C			20.6 C			19.6 B																	
Intersection Delay, s/veh / LOS	22.9						C																				
Multimodal Results				EB			WB			NB			SB														
Pedestrian LOS Score / LOS	2.12 B			1.92 B			2.10 B			2.10 B																	
Bicycle LOS Score / LOS	0.95 A			1.30 A			1.41 A			1.45 A																	

HCS Signalized Intersection Results Summary

General Information				Intersection Information																							
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250																						
Analyst	Diane Zimmerman	Analysis Date	8/17/2022	Area Type	Other																						
Jurisdiction		Time Period	PM Peak	PHF	0.96																						
Urban Street	Terry Road	Analysis Year	2025 No Build	Analysis Period	1> 4:15																						
Intersection	Lower Hunters Trace	File Name	Terry PM 25 NB.xus																								
Project Description	Terry Road Apartments																										
Demand Information				EB			WB			NB			SB														
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R												
Demand (v), veh/h				14	184	73	152	165	160	72	324	148	173	386	12												
Signal Information																											
Cycle, s	77.1	Reference Phase	2																								
Offset, s	0	Reference Point	End																								
Uncoordinated	Yes	Simult. Gap E/W	On	Green	4.8	2.4	25.0	1.6	5.7				13.1														
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	4.3	3.5	0.0				3.6														
				Red	3.0	0.0	1.6	2.6	0.0	2.4																	
Timer Results				EBL			EBT			WBL			WBT			NBL			NBT			SBL			SBT		
Assigned Phase				7			4			3			8			5			2			1			6		
Case Number				1.1			3.0			1.1			3.0			1.1			3.0			1.1			4.0		
Phase Duration, s				7.7			19.1			13.4			24.7			11.3			30.9			13.7			33.3		
Change Period, (Y+R _c), s				6.1			6.0			6.1			6.0			6.5			5.9			6.5			5.9		
Max Allow Headway (MAH), s				4.0			5.1			4.0			5.1			4.0			4.0			4.0			4.0		
Queue Clearance Time (g _s), s				2.5			9.5			7.3			9.0			4.2			13.7			7.0			16.1		
Green Extension Time (g _e), s				0.0			3.5			0.3			3.5			0.1			3.4			0.3			3.4		
Phase Call Probability				0.27			1.00			0.97			1.00			0.80			1.00			0.98			1.00		
Max Out Probability				0.00			0.00			0.05			0.00			0.00			0.00			0.05			0.00		
Movement Group Results				EB			WB			NB			SB														
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R												
Assigned Movement				7	4	14	3	8	18	5	2	12	1	6	16												
Adjusted Flow Rate (v), veh/h				15	192	76	158	172	167	75	338	154	180	415													
Adjusted Saturation Flow Rate (s), veh/h/ln				1711	1826	1560	1810	1841	1547	1668	1841	1598	1781	1875													
Queue Service Time (g _s), s				0.5	7.5	3.3	5.3	6.0	7.0	2.2	11.7	5.6	5.0	14.1													
Cycle Queue Clearance Time (g _c), s				0.5	7.5	3.3	5.3	6.0	7.0	2.2	11.7	5.6	5.0	14.1													
Green Ratio (g/C)				0.19	0.17	0.17	0.28	0.24	0.24	0.39	0.32	0.32	0.42	0.36													
Capacity (c), veh/h				292	309	264	352	448	376	331	597	518	440	667													
Volume-to-Capacity Ratio (X)				0.050	0.619	0.288	0.449	0.384	0.443	0.227	0.565	0.298	0.410	0.621													
Back of Queue (Q), ft/ln (95 th percentile)																											
Back of Queue (Q), veh/ln (95 th percentile)				0.4	5.9	2.2	3.8	4.5	4.5	1.4	8.2	3.4	3.3	9.5													
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00													
Uniform Delay (d ₁), s/veh				25.5	29.7	28.0	22.2	24.3	24.7	16.5	21.5	19.5	15.6	20.5													
Incremental Delay (d ₂), s/veh				0.1	2.9	0.8	0.9	0.8	1.2	0.3	0.8	0.3	0.6	1.0													
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
Control Delay (d), s/veh				25.6	32.6	28.8	23.1	25.1	25.9	16.9	22.4	19.8	16.2	21.5													
Level of Service (LOS)				C	C	C	C	C	C	B	C	B	B	C													
Approach Delay, s/veh / LOS				31.2			C			24.7			C			21.0			C			19.9			B		
Intersection Delay, s/veh / LOS				23.1						C																	
Multimodal Results				EB			WB			NB			SB														
Pedestrian LOS Score / LOS				2.12			B			1.92			B			2.10			B			2.10			B		
Bicycle LOS Score / LOS				0.95			A			1.31			A			1.42			A			1.47			A		

HCS Signalized Intersection Results Summary

General Information				Intersection Information				Diagram											
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250														
Analyst	Diane Zimmerman			Analysis Date	8/17/2022														
Jurisdiction				Time Period	PM Peak														
Urban Street	Terry Road			Analysis Year	2025 Build														
Intersection	Lower Hunters Trace			File Name	Terry PM 25 B.xus														
Project Description	Terry Road Apartments																		
Demand Information				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (v), veh/h				14	184	73	152	165	174	72	345	148	181	399	12				
Signal Information																			
Cycle, s	77.6	Reference Phase	2																
Offset, s	0	Reference Point	End																
Uncoordinated	Yes	Simult. Gap E/W	On	Green	4.8	2.7	25.0	1.6	5.7	13.2									
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	4.3	3.5	0.0	3.6									
				Red	3.0	0.0	1.6	2.6	0.0	2.4									
Timer Results				EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase				7	4	3	8	5	2	1	6								
Case Number				1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0								
Phase Duration, s				7.7	19.2	13.4	24.9	11.3	30.9	14.0	33.6								
Change Period, (Y+R _c), s				6.1	6.0	6.1	6.0	6.5	5.9	6.5	5.9								
Max Allow Headway (MAH), s				4.0	5.1	4.0	5.1	4.0	4.0	4.0	4.0								
Queue Clearance Time (g _s), s				2.5	9.6	7.3	9.8	4.2	14.8	7.3	16.7								
Green Extension Time (g _e), s				0.0	3.6	0.3	3.6	0.1	3.5	0.3	3.5								
Phase Call Probability				0.27	1.00	0.97	1.00	0.80	1.00	0.98	1.00								
Max Out Probability				0.00	0.00	0.05	0.00	0.00	0.00	0.07	0.00								
Movement Group Results				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Assigned Movement				7	4	14	3	8	18	5	2	12	1	6	16				
Adjusted Flow Rate (v), veh/h				15	192	76	158	172	181	75	359	154	189	428					
Adjusted Saturation Flow Rate (s), veh/h/ln				1711	1826	1560	1810	1841	1547	1668	1841	1598	1781	1875					
Queue Service Time (g _s), s				0.5	7.6	3.3	5.3	6.0	7.8	2.2	12.8	5.6	5.3	14.7					
Cycle Queue Clearance Time (g _c), s				0.5	7.6	3.3	5.3	6.0	7.8	2.2	12.8	5.6	5.3	14.7					
Green Ratio (g/C)				0.19	0.17	0.17	0.29	0.24	0.24	0.38	0.32	0.32	0.42	0.36					
Capacity (c), veh/h				292	311	266	352	449	377	323	593	515	427	670					
Volume-to-Capacity Ratio (X)				0.050	0.617	0.286	0.449	0.383	0.480	0.232	0.606	0.299	0.442	0.639					
Back of Queue (Q), ft/ln (95 th percentile)																			
Back of Queue (Q), veh/ln (95 th percentile)				0.4	6.0	2.2	3.8	4.5	4.9	1.4	8.8	3.5	3.5	9.9					
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
Uniform Delay (d ₁), s/veh				25.6	29.8	28.1	22.3	24.5	25.1	16.8	22.1	19.7	15.9	20.8					
Incremental Delay (d ₂), s/veh				0.1	2.8	0.8	0.9	0.8	1.3	0.4	1.0	0.3	0.7	1.0					
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Control Delay (d), s/veh				25.7	32.7	28.9	23.2	25.2	26.5	17.1	23.1	20.0	16.6	21.8					
Level of Service (LOS)				C	C	C	C	C	C	B	C	C	B	C					
Approach Delay, s/veh / LOS				31.3	C	25.0	C	21.6	C	20.2	C								
Intersection Delay, s/veh / LOS				23.4						C									
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS				2.12	B	1.92	B	2.10	B	2.10	B	2.10	B						
Bicycle LOS Score / LOS				0.95	A	1.33	A	1.46	A	1.51	B								

HCS Signalized Intersection Results Summary

General Information				Intersection Information						Diagram																	
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250																						
Analyst	Diane Zimmerman	Analysis Date	8/17/2022	Area Type	Other																						
Jurisdiction		Time Period	PM Peak	PHF	0.96																						
Urban Street	Terry Road	Analysis Year	2035 No Build	Analysis Period	1> 4:15																						
Intersection	Lower Hunters Trace	File Name	Terry PM 35 NB.xus																								
Project Description	Terry Road Apartments																										
Demand Information				EB			WB			NB			SB														
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R															
Demand (v), veh/h	15	193	77	160	173	168	76	341	156	182	406	13															
Signal Information																											
Cycle, s	78.6	Reference Phase	2	Green	4.9	2.7	25.0	1.7	5.9	13.8																	
Offset, s	0	Reference Point	End	Yellow	3.5	0.0	4.3	3.5	0.0	3.6																	
Uncoordinated	Yes	Simult. Gap E/W	On	Red	3.0	0.0	1.6	2.6	0.0	2.4																	
Force Mode	Fixed	Simult. Gap N/S	On																								
Timer Results				EBL			EBT			WBL			WBT			NBL			NBT			SBL			SBT		
Assigned Phase	7			4			3			8			5			2			1			6					
Case Number	1.1			3.0			1.1			3.0			1.1			3.0			1.1			4.0					
Phase Duration, s	7.8			19.8			13.8			25.7			11.4			30.9			14.2			33.6					
Change Period, (Y+R _c), s	6.1			6.0			6.1			6.0			6.5			5.9			6.5			5.9					
Max Allow Headway (MAH), s	4.0			5.1			4.0			5.1			4.0			4.0			4.0			4.0					
Queue Clearance Time (g _s), s	2.6			10.0			7.6			9.5			4.4			14.8			7.5			17.4					
Green Extension Time (g _e), s	0.0			3.7			0.3			3.7			0.1			3.6			0.3			3.6					
Phase Call Probability	0.29			1.00			0.97			1.00			0.82			1.00			0.98			1.00					
Max Out Probability	0.00			0.00			0.07			0.00			0.00			0.00			0.07			0.00					
Movement Group Results				EB			WB			NB			SB														
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R															
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16															
Adjusted Flow Rate (v), veh/h	16	201	80	167	180	175	79	355	163	190	436																
Adjusted Saturation Flow Rate (s), veh/h/ln	1711	1826	1560	1810	1841	1547	1668	1841	1598	1781	1875																
Queue Service Time (g _s), s	0.6	8.0	3.5	5.6	6.4	7.5	2.4	12.8	6.1	5.5	15.4																
Cycle Queue Clearance Time (g _c), s	0.6	8.0	3.5	5.6	6.4	7.5	2.4	12.8	6.1	5.5	15.4																
Green Ratio (g/C)	0.20	0.18	0.18	0.30	0.25	0.25	0.38	0.32	0.32	0.42	0.35																
Capacity (c), veh/h	296	320	273	356	462	388	313	585	508	424	661																
Volume-to-Capacity Ratio (X)	0.053	0.629	0.294	0.468	0.390	0.451	0.253	0.607	0.320	0.447	0.660																
Back of Queue (Q), ft/ln (95 th percentile)																											
Back of Queue (Q), veh/ln (95 th percentile)	0.4	6.3	2.3	4.1	4.8	4.8	1.6	8.9	3.8	3.7	10.3																
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																
Uniform Delay (d ₁), s/veh	25.6	30.1	28.2	22.2	24.5	24.9	17.3	22.7	20.4	16.3	21.5																
Incremental Delay (d ₂), s/veh	0.1	2.9	0.8	1.0	0.8	1.2	0.4	1.0	0.4	0.7	1.1																
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
Control Delay (d), s/veh	25.7	33.0	29.1	23.1	25.2	26.1	17.8	23.7	20.7	17.1	22.6																
Level of Service (LOS)	C	C	C	C	C	C	B	C	C	B	C																
Approach Delay, s/veh / LOS	31.5	C		24.8	C		22.1	C			20.9	C															
Intersection Delay, s/veh / LOS	23.8						C																				
Multimodal Results				EB			WB			NB			SB														
Pedestrian LOS Score / LOS	2.12	B		1.92	B		2.10	B			2.10	B															
Bicycle LOS Score / LOS	0.98	A		1.35	A		1.47	A			1.52	B															

HCS Signalized Intersection Results Summary

General Information				Intersection Information						Diagram														
Agency	Diane B. Zimmerman Traffic Engineering			Duration, h	0.250																			
Analyst	Diane Zimmerman		Analysis Date	8/17/2022			Area Type					Other												
Jurisdiction		Time Period	PM Peak			PHF	0.96																	
Urban Street	Terry Road		Analysis Year	2035 Build			Analysis Period					1> 4:15												
Intersection	Lower Hunters Trace		File Name	Terry PM 35 B.xus																				
Project Description	Terry Road Apartments																							
Demand Information				EB			WB			NB			SB											
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R												
Demand (v), veh/h	15	193	77	160	173	182	76	362	156	190	419	13												
Signal Information																								
Cycle, s	79.1	Reference Phase	2	Green	5.0	3.1	25.0	1.7	6.0	13.9	Yellow	3.5	0.0	4.3	3.5	0.0	3.6	Red	3.0	0.0	1.6	2.6	0.0	2.4
Offset, s	0	Reference Point	End	Uncoordinated	Yes	Simult. Gap E/W	On	Force Mode	Fixed	Simult. Gap N/S	On													
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT													
Assigned Phase	7	4	3	8	5	2	1	6																
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0																
Phase Duration, s	7.8	19.9	13.8	25.9	11.5	30.9	14.5	34.0																
Change Period, (Y+R _c), s	6.1	6.0	6.1	6.0	6.5	5.9	6.5	5.9																
Max Allow Headway (MAH), s	4.0	5.1	4.0	5.1	4.0	4.0	4.0	4.0																
Queue Clearance Time (g _s), s	2.6	10.1	7.6	10.3	4.5	16.0	7.8	18.1																
Green Extension Time (g _e), s	0.0	3.8	0.3	3.8	0.1	3.8	0.3	3.8																
Phase Call Probability	0.29	1.00	0.97	1.00	0.82	1.00	0.99	1.00																
Max Out Probability	0.00	0.00	0.07	0.00	0.00	0.00	0.10	0.00																
Movement Group Results				EB			WB			NB			SB											
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R												
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16												
Adjusted Flow Rate (v), veh/h	16	201	80	167	180	190	79	377	163	198	450													
Adjusted Saturation Flow Rate (s), veh/h/ln	1711	1826	1560	1810	1841	1547	1668	1841	1598	1781	1875													
Queue Service Time (g _s), s	0.6	8.1	3.5	5.6	6.4	8.3	2.5	14.0	6.1	5.8	16.1													
Cycle Queue Clearance Time (g _c), s	0.6	8.1	3.5	5.6	6.4	8.3	2.5	14.0	6.1	5.8	16.1													
Green Ratio (g/C)	0.20	0.18	0.18	0.30	0.25	0.25	0.38	0.32	0.32	0.42	0.35													
Capacity (c), veh/h	297	321	274	357	463	389	306	581	505	411	665													
Volume-to-Capacity Ratio (X)	0.053	0.626	0.292	0.467	0.389	0.487	0.259	0.649	0.322	0.481	0.677													
Back of Queue (Q), ft/ln (95 th percentile)																								
Back of Queue (Q), veh/ln (95 th percentile)	0.4	6.4	2.3	4.1	4.8	0.3	1.6	9.5	3.8	3.9	10.7													
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00													
Uniform Delay (d ₁), s/veh	25.7	30.2	28.3	22.3	24.6	25.3	17.6	23.3	20.6	16.7	21.7													
Incremental Delay (d ₂), s/veh	0.1	2.8	0.8	1.0	0.8	1.3	0.4	1.2	0.4	0.9	1.2													
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
Control Delay (d), s/veh	25.8	33.0	29.2	23.2	25.4	26.6	18.1	24.5	21.0	17.5	22.9													
Level of Service (LOS)	C	C	C	C	C	C	B	C	C	B	C													
Approach Delay, s/veh / LOS	31.6	C	25.1	C	22.8	C	21.3	C																
Intersection Delay, s/veh / LOS	24.2						C																	
Multimodal Results				EB			WB			NB			SB											
Pedestrian LOS Score / LOS	2.12	B	1.92	B	2.11	B	2.10	B																
Bicycle LOS Score / LOS	0.98	A	1.37	A	1.51	B	1.56	B																

Left Turn Lane Warrants

Input Fields

Left Turn Volume (vph)	32	Speed Limit (mph)	45
Advancing Volume (vph)	694	No. of through lanes	1
Opposing Volume (vph)	570	Percent Heavy Vehicles (decimal percent)	0.01



Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Right Turn Lane Warrants

Input Fields

Right Turn Volume (vph)	35	Speed Limit (mph)	45
Advancing Volume (vph)	570		



Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.