final repor

June 1, 2022

Traffic Impact Study

Prospect Cove 6500 Forrest Cove Lane Louisville, KY

Prepared for

Louisville Metro Planning Commission



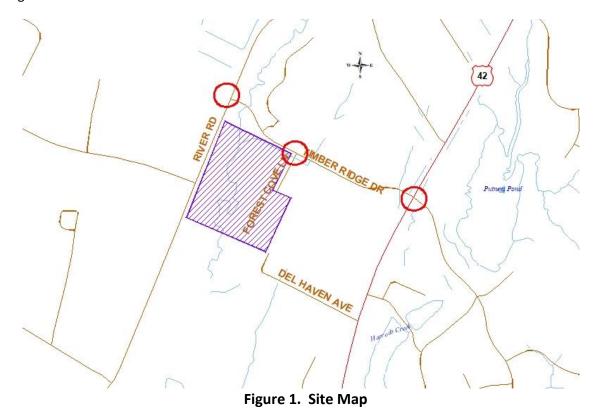


Table of Contents

INTRODUCTION	2
Figure 1. Site Map	2
EXISTING CONDITIONS	2
Figure 2. Existing Peak Hour Volumes	3
FUTURE CONDITIONS	3
Figure 3. 2025 Peak Hour No Build Volumes	3
TRIP GENERATION	3
Table 1. Peak Hour Trips Generated by Site	4
Figure 4. Trip Distribution Percentages	4
Figure 5. Peak Hour Trips Generated by Site	4
Figure 6. Build Peak Hour Volumes	5
ANALYSIS	5
Table 2. Peak Hour Level of Service	5
CONCLUSIONS	
CUNCLUSIONS	6
APPENDIX	7

INTRODUCTION

The development plan for an apartment community on Forest Cove Lane in Louisville, KY shows 178 apartment units. Figure 1 displays a map of the site. Access to the community will be from an entrance on Forest Cove Lane. 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 Forest Cove Lane with Timber Ridge Drive, Timber Ridge Drive with River Road and US 42.



EXISTING CONDITIONS

Timber Ridge Drive is maintained by the city of Prospect with an estimated 2022 ADT of 4,400 vehicles per day between Forest Cove Lane and River Road, as estimated from the turning movement count. The roadway has two twelve-foot lanes, striped bike lanes with curb and gutter. There are sidewalks along the north side and in front of the Kroger Fuel Center along the south side. The intersections of River Road and Forest Cove Lane are controlled with stop signs. The intersection with US 42 is controlled with a traffic signal. Both approaches on US 42 and Timber Ridge Drive eastbound have separate right and left turn lanes. Timber Ridge Drive eastbound has a shared left/thru lane.

Peak hour traffic count for the intersections were obtained on February 15, 2022. The a.m. peak was 7:30 to 8:30 and the p.m. peak hour varied. Figure 2 illustrates the existing a.m. and p.m. peak hour traffic volumes. The Appendix contains the full count data.

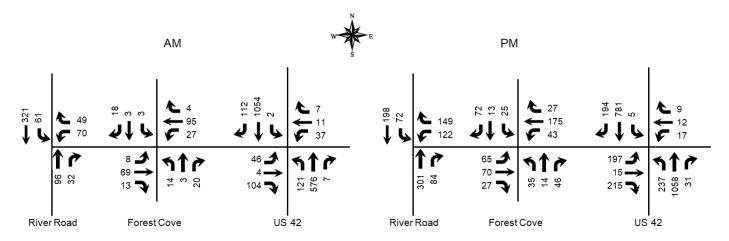


Figure 2. Existing Peak Hour Volumes

FUTURE CONDITIONS

The projected completion year for this development is 2025. To predict traffic conditions in 2025, one percent annual growth in traffic. This growth is based upon a review of the historical count data at the Kentucky Transportation Cabinet count station 111 and W01. **Figure 3** illustrates the 2025 traffic volumes without the development.

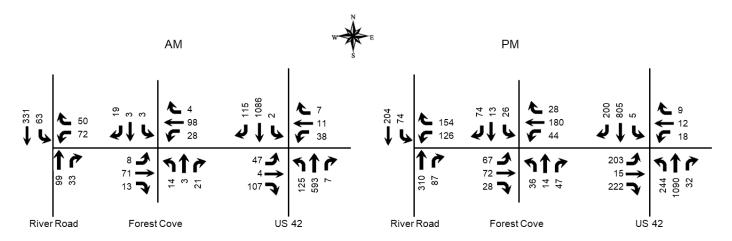


Figure 3. 2025 Peak Hour No Build Volumes

TRIP GENERATION

The Institute of Transportation Engineers <u>Trip Generation Manual</u>, 11th Edition contains trip generation rates for a wide range of developments. The land use of "Multifamily Housing Low-Rise (220)" was reviewed and determined 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

	A.M. I	Peak	Hour	P.M. F	Peak	Hour
Land Use	Trips	In	Out	Trips	In	Out
Multifamily Housing Low-Rise (178 units)	78	19	59	100	61	39

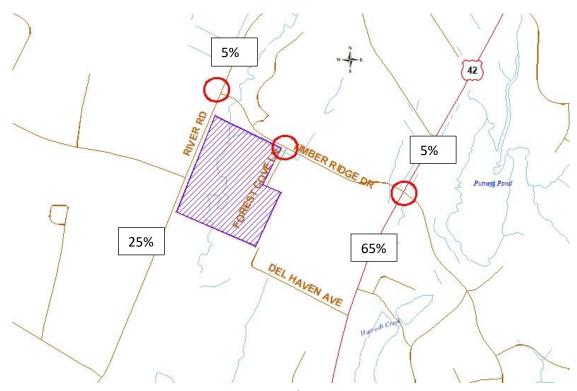


Figure 4. Trip Distribution Percentages

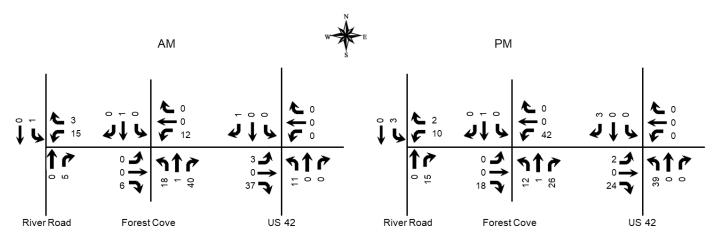


Figure 5. Peak Hour Trips Generated by Site

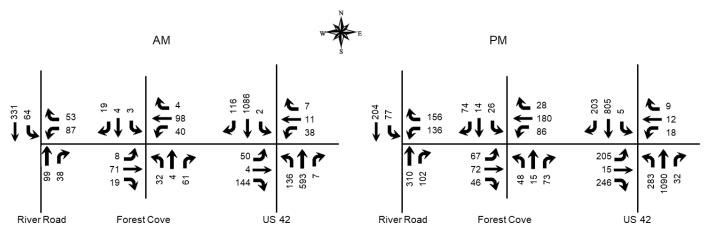


Figure 6. Build Peak Hour Volumes

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 at an intersection.

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

Table 2. Peak Hour Level of Service

		A.M.			P.M.	
Approach	2022	2025	2025	2022	2025	2025
F1	Existing	No Build	Build	Existing	No Build	Build
River Road at Timber Ridge Drive						
Timber Ridge Drive Westbound	В	В	В	В	В	С
	11.1	11.3	11.9	14.2	14.9	16.0
River Road Southbound (left)	Α	Α	Α	Α	Α	Α
	7.7	7.7	7.8	8.4	8.4	8.5
Timber Ridge Drive at Forest Cove Lane						
Timber Ridge Drive Eastbound (left)	Α	Α	Α	Α	Α	Α
	7.4	7.4	7.4	7.8	7.8	7.8
Timber Ridge Drive Westbound (left)	Α	Α	Α	Α	Α	Α
	7.4	7.4	7.5	7.5	7.5	7.6
Forest Cove Lane Northbound	Α	Α	В	В	В	В
	9.7	9.7	10.1	12.7	13.0	14.9

		A.M.			P.M.	
Approach	2022	2025	2025	2022	2025	2025
Арргоасп	Existing	No Build	Build	Existing	No Build	Build
Shopping Center Southbound	Α	Α	Α	В	В	В
	9.3	9.4	9.5	12.0	12.2	13.3
Timber Ridge Drive at US 42	В	В	С	С	С	С
	18.4	18.7	21.2	20.5	21.0	22.6
Timber Ridge Drive Eastbound	Е	Е	Е	Е	Е	Е
	60.3	60.1	58.3	66.6	65.9	63.5
Timber Ridge Drive Westbound	Е	Е	E	F	F	F
	73.5	73.6	73.6	82.5	82.9	82.9
US 42 Northbound	В	В	В	В	В	В
	10.3	10.6	12.3	11.7	12.3	13.6
US 42 Southbound	В	В	В	В	В	В
	15.1	15.6	18.2	14.7	15.4	17.8

Key: Level of Service, Delay in seconds per vehicle

The Forest Cove Lane intersection on Timber Ridge Drive was evaluated for turn lanes using the Kentucky Transportation Cabinet Highway Design Guidance Manual dated July, 2020. Using the volumes in Figure 6, the volume warrant is not met for turn lanes.

CONCLUSIONS

Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2025, there will be a minimal impact to the existing highway network, with the signalized intersection continuing to operate at acceptable levels of service. No improvements are needed at the intersections evaluated.

APPENDIX

Traffic Counts



www.marrtraffic.com

Site 3 of 3

River Rd (South) River Rd (North)

Jefferson County, KY

Timber Ridge Dr

Date

Tuesday, February 15, 2022

Lat/Long 38.340444°, -85.625339°

Weather

Fair 43°F

0700 - 0900 (Weekday 2h Session) (02-15-2022)

All vehicles

							So	uthbou	nd	
	Riv Thru 3.1 13 15 22 21 71 28 25 33 23 109		r Rd (So	uth)			Rive	r Rd (No	orth)	
		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App
TIME		3.1	3.2	3.3	Total	3.4	3.5		3.6	Total
0700 - 0715		13	4	0	17	8	77		0	85
0715 - 0730		15	9	0	24	13	84		0	97
0730 - 0745		22	11	0	33	6	100		0	106
0745 - 0800		21	9	0	30	9	68		0	77
Hourly Total		71	33	0	104	36	329		0	365
0800 - 0815		28	8	0	36	21	80		0	101
0815 - 0830		25	4	0	29	25	73		0	98
0830 - 0845		33	7	0	40	14	70		0	84
0845 - 0900		23	7	0	30	11	47		0	58
Hourly Total		109	26	0	135	71	270		0	341
Grand Total		180	59	0	239	107	599		0	706
Approach %		75.31	24.69	0.00	-	15.16	84.84		0.00	-
Intersection %		15.67	5.13	0.00	20.80	9.31	52.13		0.00	61.44
								-		
PHF		0.86	0.73	0.00	0.89	0.61	0.80		0.00	0.90

	W	estbou	nd										
Westbound Timber Ridge Dr Left Right U-Turn App Int Total 3.8 3.9 Total Total 13 6 0 19 140 17 16 16 19 0 35 142 13 0 25 162 13 0 25 162 25 8 0 33 160 15 7 0 22 146 15 7 0 22 146 16 18 18 18 18 18 18 1													
Left		Right	U-Turn	App	Int								
3.7		3.8	3.9	Total	Total								
13		3	0	16	118								
13		6	0	19	140								
17		9	0	26	165								
16		19	0	35	142								
59		37	0	96	565								
12		13	0	25	162								
25		8	0	33	160								
15		7	0	22	146								
7		21	0	28	116								
59		49	0	108	584								
118		86	0	204	1149								
57.84		42.16	0.00	-									
10.27		7.48	0.00	17.75									
0.70		0.64	0.00	0.85	0.95								

1600 - 1800 (Weekday 2h Session) (02-15-2022)

All vehicles

	No	orthbou	nd			So	uthbou	nd	
	Rive	r Rd (So	uth)			Rive	r Rd (No	orth)	
	Thru	Right	U-Turn	App	Left	Thru		U-Turn	App
TIME	3.1	3.2	3.3	Total	3.4	3.5		3.6	Total
1600 - 1615	62	16	0	78	12	31		0	43
1615 - 1630	68	13	0	81	26	32		0	58
1630 - 1645	57	26	0	83	32	33		0	65
1645 - 1700	65	22	0	87	24	43		0	67
Hourly Total	252	77	0	329	94	139		0	233
1700 - 1715	75	23	0	98	26	35		0	61
1715 - 1730	80	22	0	102	18	47		0	65
1730 - 1745	81	13	0	94	20	55		0	75
1745 - 1800	69	26	0	95	8	61		0	69
Hourly Total	305	84	0	389	72	198		0	270
Grand Total	557	161	0	718	166	337		0	503
Approach %	77.58	22.42	0.00	-	33.00	67.00		0.00	
Intersection %	33.00	9.54	0.00	42.54	9.83	19.96		0.00	29.80
PHF	0.94	0.81	0.00	0.95	0.69	0.81		0.00	0.90

					•					
	W	'estboui	nd							
	Timl	oer Ridg	e Dr							
Left		Right	U-Turn	App	Int					
3.7		3.8	3.9	Total	Total					
18		36	0	54	175					
11		35	0	46	185					
13		39	0	52	200					
14		30	0	44	198					
56		140	0	196	758					
20		33	0	53	212					
17		43	0	60	227					
32		42	0	74	243					
53		31	0	84	248					
122		149	0	271	930					
178		289	0	467	1688					
38.12		61.88	0.00	-	,					
10.55		17.12	0.00	27.67						
0.58		0.87 0.00 0.81								



Jefferson County, KY www.marrtraffic.com

Site 2 of 3

Driveway (South) Driveway (North) Timber Ridge Dr (West) Timber Ridge Dr (East) Date

Tuesday, February 15, 2022

Weather

Lat/Long

38.339273°, -85.623572°

Fair 43°F

0700 - 0900 (Weekday 2h Session) (02-15-2022)

All vehicles

		No	orthbou	nd		Southbound						E	astboun	d			W	estbou	nd		
		Drive	eway (Sc	outh)			Drive	eway (No	orth)			Timber	Ridge Di	r (West)			Timber	Ridge D	r (East)		
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
TIME	2.1	2.2	2.3	2.4	Total	2.5	2.6	2.7	2.8	Total	2.9	2.10	2.11	2.12	Total	2.13	2.14	2.15	2.16	Total	Total
0700 - 0715	1	1	3	0	5	0	0	0	0	0	0	13	0	0	13	5	13	1	0	19	37
0715 - 0730	2	0	3	0	5	0	1	1	0	2	2	16	1	0	19	1	14	0	0	15	41
0730 - 0745	1	2	5	0	8	1	1	4	0	6	1	16	0	0	17	8	23	1	0	32	63
0745 - 0800	6	0	5	0	11	1	0	2	0	3	2	13	3	0	18	8	26	2	0	36	68
Hourly Total	10	3	16	0	29	2	2	7	0	11	5	58	4	0	67	22	76	4	0	102	209
0800 - 0815	5	1	3	0	9	1	1	4	0	6	3	22	3	0	28	4	25	0	0	29	72
0815 - 0830	2	0	7	0	9	0	1	8	0	9	2	18	7	0	27	7	21	1	0	29	74
0830 - 0845	4	1	9	0	14	0	0	2	0	2	4	11	7	0	22	4	19	0	0	23	61
0845 - 0900	5	0	7	0	12	6	0	6	0	12	3	13	2	0	18	8	18	1	0	27	69
Hourly Total	16	2	26	0	44	7	2	20	0	29	12	64	19	0	95	23	83	2	0	108	276
Grand Total	26	5	42	0	73	9	4	27	0	40	17	122	23	0	162	45	159	6	0	210	485
Approach %	35.62	6.85	57.53	0.00	-	22.50	10.00	67.50	0.00	-	10.49	75.31	14.20	0.00	-	21.43	75.71	2.86	0.00	-	
Intersection %	5.36	1.03	8.66	0.00	15.05	1.86	0.82	5.57	0.00	8.25	3.51	25.15	4.74	0.00	33.40	9.28	32.78	1.24	0.00	43.30	
		-		-														-		-	
PHF	0.58	0.38	0.71	0.00	0.84	0.75	0.75	0.56	0.00	0.67	0.67	0.78	0.46	0.00	0.80	0.84	0.91	0.50	0.00	0.88	0.94

1600 - 1800 (Weekday 2h Session) (02-15-2022)

All vehicles

		No	orthbou	nd		Southbound						E	astboun	ıd							
		Drive	eway (So	outh)			Drive	eway (N	orth)			Timber	Ridge D	r (West)			Timber	Ridge D	r (East)		
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
TIME	2.1	2.2	2.3	2.4	Total	2.5	2.6	2.7	2.8	Total	2.9	2.10	2.11	2.12	Total	2.13	2.14	2.15	2.16	Total	Total
1600 - 1615	5	3	7	0	15	4	1	18	0	23	7	15	11	0	33	9	26	1	0	36	107
1615 - 1630	11	3	14	0	28	5	2	20	0	27	15	20	9	0	44	20	24	7	0	51	150
1630 - 1645	9	2	14	0	25	9	2	14	0	25	21	34	9	0	64	12	27	6	0	45	159
1645 - 1700	3	3	13	0	19	7	4	17	0	28	19	22	7	0	48	12	25	11	0	48	143
Hourly Total	28	11	48	0	87	25	9	69	0	103	62	91	36	0	189	53	102	25	0	180	559
1700 - 1715	11	5	12	0	28	8	5	13	0	26	17	24	10	0	51	14	34	5	0	53	158
1715 - 1730	10	5	14	0	29	4	4	15	0	23	21	15	8	0	44	10	36	9	0	55	151
1730 - 1745	7	3	8	0	18	6	2	19	0	27	12	15	5	0	32	9	57	4	0	70	147
1745 - 1800	7	1	12	0	20	7	2	25	0	34	15	16	4	0	35	10	48	9	0	67	156
Hourly Total	35	14	46	0	95	25	13	72	0	110	65	70	27	0	162	43	175	27	0	245	612
Grand Total	63	25	94	0	182	50	22	141	0	213	127	161	63	0	351	96	277	52	0	425	1171
Approach %	34.62	13.74	51.65	0.00	-	23.47	10.33	66.20	0.00	-	36.18	45.87	17.95	0.00	-	22.59	65.18	12.24	0.00	-	
Intersection %	5.38	2.13	8.03	0.00	15.54	4.27	1.88	12.04	0.00	18.19	10.85	13.75	5.38	0.00	29.97	8.20	23.65	4.44	0.00	36.29	
PHF	0.80	0.70	0.82	0.00	0.82	0.78	0.65	0.72	0.00	0.81	0.77	0.73	0.68	0.00	0.79	0.77	0.77	0.75	0.00	0.88	0.97



Jefferson County, KY www.marrtraffic.com

Site 1 of 3

US-42 W (South) US-42 W (North) Timber Ridge Dr (West) Timber Ridge Dr (East) Date

Tuesday, February 15, 2022

Weather

Fair 43°F

Lat/Long

38.338345°, -85.620354°

0700 - 0900 (Weekday 2h Session) (02-15-2022)

All vehicles

		No	orthbou	nd		Southbound						E	astbour	d			W	estboui	nd		Ī
		US-4	12 W (So	uth)			US-4	12 W (No	orth)			Timber	Ridge D	r (West)			Timber	Ridge D	r (East)		
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
TIME	1.1	1.2	1.3	1.4	Total	1.5	1.6	1.7	1.8	Total	1.9	1.10	1.11	1.12	Total	1.13	1.14	1.15	1.16	Total	Total
0700 - 0715	11	92	1	0	104	0	238	21	0	259	2	1	21	0	24	8	3	0	0	11	398
0715 - 0730	21	112	4	0	137	0	298	25	0	323	9	0	22	0	31	9	1	0	0	10	501
0730 - 0745	29	105	1	0	135	0	336	20	0	356	6	0	23	0	29	13	6	0	0	19	539
0745 - 0800	34	159	1	0	194	0	248	29	0	277	13	0	23	0	36	9	4	2	0	15	522
Hourly Total	95	468	7	0	570	0	1120	95	0	1215	30	1	89	0	120	39	14	2	0	55	1960
0800 - 0815	36	146	2	0	184	2	229	29	0	260	15	2	26	0	43	11	0	3	0	14	501
0815 - 0830	22	166	3	0	191	0	241	34	0	275	12	2	32	0	46	4	1	2	0	7	519
0830 - 0845	23	141	0	0	164	4	278	22	0	304	12	0	25	0	37	8	2	4	0	14	519
0845 - 0900	35	160	2	0	197	0	239	28	0	267	6	1	38	0	45	16	2	0	0	18	527
Hourly Total	116	613	7	0	736	6	987	113	0	1106	45	5	121	0	171	39	5	9	0	53	2066
Grand Total	211	1081	14	0	1306	6	2107	208	0	2321	75	6	210	0	291	78	19	11	0	108	4026
Approach %	16.16	82.77	1.07	0.00	-	0.26	90.78	8.96	0.00	-	25.77	2.06	72.16	0.00	-	72.22	17.59	10.19	0.00	-	
Intersection %	5.24	26.85	0.35	0.00	32.44	0.15	52.33	5.17	0.00	57.65	1.86	0.15	5.22	0.00	7.23	1.94	0.47	0.27	0.00	2.68	
PHF	0.84	0.87	0.58	0.00	0.91	0.25	0.78	0.82	0.00	0.82	0.77	0.50	0.81	0.00	0.84	0.71	0.46	0.58	0.00	0.72	0.97

1600 - 1800 (Weekday 2h Session) (02-15-2022)

All vehicles

		No	orthbou	nd		Southbound						Е	astbour	ıd							
		US-4	12 W (Sc	uth)			US-4	12 W (No	orth)			Timber	Ridge D	r (West)			Timber	Ridge D	r (East)		
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
TIME	1.1	1.2	1.3	1.4	Total	1.5	1.6	1.7	1.8	Total	1.9	1.10	1.11	1.12	Total	1.13	1.14	1.15	1.16	Total	Total
1600 - 1615	49	269	6	0	324	4	227	47	0	278	37	6	30	0	73	3	1	1	0	5	680
1615 - 1630	66	259	7	0	332	6	173	61	0	240	45	1	44	0	90	3	0	4	0	7	669
1630 - 1645	43	243	8	0	294	1	229	51	0	281	41	2	70	0	113	6	2	4	0	12	700
1645 - 1700	64	262	8	0	334	0	174	44	0	218	57	5	38	0	100	4	1	2	0	7	659
Hourly Total	222	1033	29	0	1284	11	803	203	0	1017	180	14	182	0	376	16	4	11	0	31	2708
1700 - 1715	63	273	9	0	345	2	205	44	0	251	41	5	57	0	103	5	3	2	0	10	709
1715 - 1730	67	280	6	0	353	2	173	55	0	230	59	3	50	0	112	2	6	1	0	9	704
1730 - 1745	71	207	6	0	284	0	207	48	0	255	51	6	36	0	93	4	2	2	0	8	640
1745 - 1800	85	283	8	0	376	1	166	45	0	212	36	4	33	0	73	3	6	0	0	9	670
Hourly Total	286	1043	29	0	1358	5	751	192	0	948	187	18	176	0	381	14	17	5	0	36	2723
Grand Total	508	2076	58	0	2642	16	1554	395	0	1965	367	32	358	0	757	30	21	16	0	67	5431
Approach %	19.23	78.58	2.20	0.00	-	0.81	79.08	20.10	0.00	-	48.48	4.23	47.29	0.00	-	44.78	31.34	23.88	0.00	-	
Intersection %	9.35	38.23	1.07	0.00	48.65	0.29	28.61	7.27	0.00	36.18	6.76	0.59	6.59	0.00	13.94	0.55	0.39	0.29	0.00	1.23	
PHF	0.88	0.94	0.86	0.00	0.94	0.63	0.85	0.88	0.00	0.87	0.84	0.75	0.77	0.00	0.95	0.71	0.50	0.56	0.00	0.79	0.98

HCS Reports

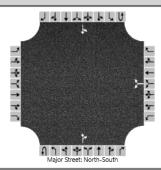
					нс	.s ket	orts									
		ŀ	HCS	Two-	Way	Stop	-Cor	ntrol	Repo	ort						
General Information		_	_	_		_		Inforr			_	_	_	_	_	
Analyst	Diane	Zimme	rman				Inters	ection			River	Road at	Timber	Ridge		
Agency/Co.	Diane	B. Zimr	merman	Traffic E	ngineerir	ng	Juriso	liction								
Date Performed	6/1/2	022					East/	West Str	eet							
Analysis Year	2022						North	n/South :	Street							
Time Analyzed	AM P	eak					Peak	Hour Fac	ctor		0.95					
Intersection Orientation	North	n-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	Prosp	ect Cov	e													
Lanes																
				ገዳ ቀጥተ ነገ		† † Y r Street: Nor		, * * C								
Vehicle Volumes and Ad	justme															
Approach		Eastl	oound			West	bound			North	bound		_	South	bound	_
Movement	U	L	Т	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	+	10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes	+	0	0	0		0	1 LR	0	0	0	1	0 TR	0	0 LT	1	0
Configuration Volume (veh/h)	+					70	LK	49			96	32		61	321	\vdash
Percent Heavy Vehicles (%)	+					1		18			90	32		13	321	\vdash
Proportion Time Blocked	+					L'		10						13		\vdash
Percent Grade (%)	+						0									
Right Turn Channelized																
Median Type Storage	\top			Undi	vided											
Critical and Follow-up H	leadwa	ys														
Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.41		6.38						4.23		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.51		3.46						2.32		
Delay, Queue Length, ar	nd Leve	l of S	ervice													
Flow Rate, v (veh/h)							125							64		L
Capacity, c (veh/h)							719							1385		
v/c Ratio							0.17							0.05		
95% Queue Length, Q ₉₅ (veh)							0.6							0.1		
Control Delay (s/veh)	-						11.1							7.7	0.4	
Level of Service (LOS)							В							A .	A	
Approach Delay (s/veh)							1.1								.6	
Approach LOS							В							ı	A	

Copyright © 2022 University of Florida. All Rights Reserved.

HCSTM TWSC Version 2022 River AM 22.xtw

Generated: 6/1/2022 2:55:09 PM

HCS Two-Way Stop-Control Report											
General Information		Site Information									
Analyst	Diane Zimmerman	Intersection	River Road at Timber Ridge								
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction									
Date Performed	6/1/2022	East/West Street									
Analysis Year	2025	North/South Street									
Time Analyzed	AM Peak No Build	Peak Hour Factor	0.95								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Prospect Cove										

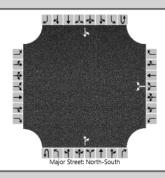


Vehicle Volumes and Ad	justme	nts															
Approach	Т	Easth	ound			West	bound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT		П	
Volume (veh/h)						72		50			99	33		63	331		
Percent Heavy Vehicles (%)						1		18						13		П	
Proportion Time Blocked																	
Percent Grade (%)							0										
Right Turn Channelized																	
Median Type Storage				Undi	vided				<u> </u>								
Critical and Follow-up H	eadwa	ys															
Base Critical Headway (sec)	\top					7.1		6.2						4.1			
Critical Headway (sec)						6.41		6.38						4.23			
Base Follow-Up Headway (sec)						3.5		3.3						2.2		П	
Follow-Up Headway (sec)						3.51		3.46						2.32			
Delay, Queue Length, an	d Leve	l of S	ervice	,													
Flow Rate, v (veh/h)	\top					$\overline{}$	128							66			
Capacity, c (veh/h)							700							1380			
v/c Ratio							0.18							0.05			
95% Queue Length, Q ₉₅ (veh)					0.7								0.2				
Control Delay (s/veh)	1				11.3								7.7	0.5			
Level of Service (LOS)					В									А	А		
Approach Delay (s/veh)		11.3										1.6					
Approach LOS					В								T A				

Copyright © 2022 University of Florida. All Rights Reserved.

HCS TIM TWSC Version 2022 River AM 25 NB.xtw Generated: 6/1/2022 2:56:24 PM

	HCS Two-Way Sto	p-Control Report							
General Information Site Information									
Analyst	Diane Zimmerman	Intersection	River Road at Timber Ridge						
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction							
Date Performed	6/1/2022	East/West Street							
Analysis Year	2025	North/South Street							
Time Analyzed	AM Peak Build	Peak Hour Factor	0.95						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description	Prospect Cove								



Vehicle Volumes and Adj	ıstme	nts															
Approach		Eastb	ound			Westl	bound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	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	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						87		53			99	38		64	331		
Percent Heavy Vehicles (%)						1		18						13			
Proportion Time Blocked																	
Percent Grade (%)							0										
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up He	adwa	ys															
Base Critical Headway (sec)						7.1		6.2						4.1			
Critical Headway (sec)						6.41		6.38						4.23			
Base Follow-Up Headway (sec)						3.5		3.3						2.2			
Follow-Up Headway (sec)						3.51		3.46						2.32			
Delay, Queue Length, and	Leve	l of Se	ervice														
Flow Rate, v (veh/h)							147							67			
Capacity, c (veh/h)							668							1373			
v/c Ratio							0.22							0.05			
95% Queue Length, Q ₉₅ (veh)							0.8							0.2			
Control Delay (s/veh)							11.9							7.8	0.5		
Level of Service (LOS)							В							А	А		
Approach Delay (s/veh)						11.9							1.7				
Approach LOS						В								A			

Copyright © 2022 University of Florida. All Rights Reserved.

HCSTM TWSC Version 2022 River AM 25 B.xtw Generated: 6/1/2022 2:57:32 PM

			HCS T													
General Information							Site	Inforn	natio	,						_
Analyst	Diane	Zimme	rman				Inters	ection			River	Road at	Timber I	Ridge		
Agency/Co.	Diane	B. Zimn	nerman	Traffic E	ngineerir	ng	Jurisd	liction								
Date Performed	6/1/2	022					East/\	Nest Stre	eet							
Analysis Year	2022						North	/South S	Street							
Time Analyzed	PM P	eak					Peak I	Hour Fac	tor		0.94					
Intersection Orientation	North	North-South Analysis Time Period (hrs) 0.25														
Project Description	Prosp	ect Cove	2													
Lanes																
				→				* -								
Vehicle Volumes and Adi	ustme	nts		7		† † † † r Street: Nor	† † r	7								
Vehicle Volumes and Adj Approach	ustme		pound	T		r Street: Nor	† † ř			North	bound			South	bound	
	ustme		oound T	R		r Street: Nor		R	U	North L	bound T	R	U	South	bound	
Approach		Eastb	_	7	Majo	r Street: Nor Westl	oound	R 9	U 1U			R 3	U 4U			
Approach Movement		Eastb	Т	R	Majo	r Street: Nor Westl	oound T			L	T	_		L	Т	
Approach Movement Priority		Eastb L 10	T 11	R 12	Majo	Westl	oound T 8	9	1U	L 1	T 2	3	4U	L 4	T 5	
Approach Movement Priority Number of Lanes		Eastb L 10	T 11	R 12	Majo	Westl	oound T 8	9	1U	L 1	T 2	3	4U	L 4 0	T 5	
Approach Movement Priority Number of Lanes Configuration		Eastb L 10	T 11	R 12	Majo	Westl L 7	oound T 8	9	1U	L 1	T 2 1	3 0 TR	4U	L 4 0 LT	T 5	
Approach Movement Priority Number of Lanes Configuration Volume (veh/h)		Eastb L 10	T 11	R 12	Majo	Westl L 7 0	oound T 8	9 0 149	1U	L 1	T 2 1	3 0 TR	4U	L 4 0 LT 72	T 5	
Approach Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%)		Eastb L 10	T 11	R 12	Majo	Westl L 7 0	T 8 1 LR	9 0 149	1U	L 1	T 2 1	3 0 TR	4U	L 4 0 LT 72	T 5	
Approach Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked		Eastb L 10	T 11	R 12	Majo	Westl L 7 0 122	T 8 1 LR	9 0 149	1U	L 1	T 2 1	3 0 TR	4U	L 4 0 LT 72	T 5	
Approach Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)		Eastb L 10	T 11	R 12 0	Majo	Westl L 7 0 122	T 8 1 LR	9 0 149	1U	L 1	T 2 1	3 0 TR	4U	L 4 0 LT 72	T 5	
Approach Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage	U	Eastb	T 11	R 12 0	U	Westl L 7 0 122	T 8 1 LR	9 0 149	1U	L 1	T 2 1	3 0 TR	4U	L 4 0 LT 72	T 5	
Approach Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage	U	Eastb	T 11	R 12 0	U	Westl L 7 0 122	T 8 1 LR	9 0 149	1U	L 1	T 2 1	3 0 TR	4U	L 4 0 LT 72	T 5	
Approach Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up H	U	Eastb	T 11	R 12 0	U	Westl L 7 0	T 8 1 LR	9 0 149 0	1U	L 1	T 2 1	3 0 TR	4U	L 4 0 LT 72 3	T 5	
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up H Base Critical Headway (sec)	U	Eastb	T 11	R 12 0	U	Westi L 7 0 122 1 1 7.1	T 8 1 LR	9 0 149 0	1U	L 1	T 2 1	3 0 TR	4U	L 4 0 LT 72 3	T 5	

Flow Rate, v (veh/h)

Capacity, c (veh/h)

Control Delay (s/veh)

Level of Service (LOS)

Approach LOS

Approach Delay (s/veh)

95% Queue Length, Q₉₅ (veh)

v/c Ratio

HCS WM TWSC Version 2022 River PM 22.xtw

14.2

288

675

0.43

2.1

В

Generated: 6/1/2022 2:59:01 PM

2.7

0.6

Α

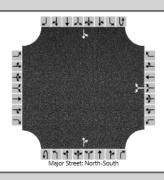
77

1144

0.07

Α

	HCS Two-Way Sto	p-Control Report							
General Information Site Information									
Analyst	Diane Zimmerman	Intersection	River Road at Timber Ridge						
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction							
Date Performed	6/1/2022	East/West Street							
Analysis Year	2025	North/South Street							
Time Analyzed	PM Peak No Build	Peak Hour Factor	0.94						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description Prospect Cove									



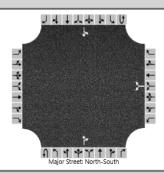
Vehicle Volumes and Ad	justme	nts														
Approach	Т	Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						126		154			310	87		74	204	
Percent Heavy Vehicles (%)						1		0						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	\top					7.1		6.2						4.1		
Critical Headway (sec)						6.41		6.20						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.51		3.30						2.23		
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	\top						298							79		
Capacity, c (veh/h)							657							1132		
v/c Ratio							0.45							0.07		
95% Queue Length, Q ₉₅ (veh)							2.4							0.2		
Control Delay (s/veh)							14.9							8.4	0.7	
Level of Service (LOS)							В							А	А	
Approach Delay (s/veh)						14.9								2.7		
Approach LOS	1					В								A		

Copyright © 2022 University of Florida. All Rights Reserved.

HCS TIM TWSC Version 2022 River PM 25 NB.xtw

Generated: 6/1/2022 3:01:22 PM

	HCS Two-Way Sto	p-Control Report						
General Information								
Analyst	Diane Zimmerman	Intersection	River Road at Timber Ridge					
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction						
Date Performed	6/1/2022	East/West Street						
Analysis Year	2025	North/South Street						
Time Analyzed	PM Peak Build	Peak Hour Factor	0.94					
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25					
Project Description Prospect Cove								

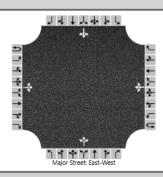


Vehicle Volumes and Ad	justme	nts																
Approach	Т	Eastb	ound			West	oound			North	bound			South	bound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0		
Configuration							LR					TR		LT				
Volume (veh/h)						136		156			310	102		77	204			
Percent Heavy Vehicles (%)						1		0						3				
Proportion Time Blocked																		
Percent Grade (%)							0											
Right Turn Channelized																		
Median Type Storage				Undi	vided													
Critical and Follow-up H	eadwa	ys																
Base Critical Headway (sec)	Т					7.1		6.2						4.1				
Critical Headway (sec)						6.41		6.20						4.13				
Base Follow-Up Headway (sec)						3.5		3.3						2.2				
Follow-Up Headway (sec)						3.51		3.30					2.23					
Delay, Queue Length, an	d Leve	l of S	ervice															
Flow Rate, v (veh/h)	\top						311							82				
Capacity, c (veh/h)							633							1116				
v/c Ratio							0.49							0.07				
95% Queue Length, Q ₉₅ (veh)		Ì					2.7						Ì	0.2				
Control Delay (s/veh)							16.0							8.5	0.7			
Level of Service (LOS)		С										А	Α					
Approach Delay (s/veh)		16					5.0					2.8						
Approach LOS	T T					С									A			

Copyright © 2022 University of Florida. All Rights Reserved.

HCSTM TWSC Version 2022 River PM 25 B.xtw Generated: 6/1/2022 3:02:05 PM

	HCS Two-Way Sto	o-Control Report	
General Information			
Analyst	Diane Zimmerman	Intersection	Timber Ridge at Forest Cove
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction	
Date Performed	6/1/2022	East/West Street	Timber Ridge Drive
Analysis Year	2022	North/South Street	Forest Cove Lane
Time Analyzed	AM Peak	Peak Hour Factor	0.94
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Prospect Cove		



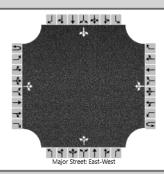
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		8	69	13		27	95	4		14	3	20		3	3	18
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)											0				0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	T	9				29					39				26	
Capacity, c (veh/h)		1499				1521					802				855	
v/c Ratio		0.01				0.02					0.05				0.03	
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.2				0.1	
Control Delay (s/veh)		7.4	0.0	0.0		7.4	0.1	0.1			9.7				9.3	
Level of Service (LOS)		А	А	Α		А	А	А			А				А	
Approach Delay (s/veh)		0	.7			1	.7			9	.7			9	.3	
Approach LOS		,	4				4			,	Д				A	

Copyright © 2022 University of Florida. All Rights Reserved.

HCSTM TWSC Version 2022 Forest AM 22.xtw

Generated: 6/1/2022 3:05:15 PM

	HCS Two-Way Stop	o-Control Report	
General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	Timber Ridge at Forest Cove
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction	
Date Performed	6/1/2022	East/West Street	Timber Ridge Drive
Analysis Year	2025	North/South Street	Forest Cove Lane
Time Analyzed	AM Peak No Build	Peak Hour Factor	0.94
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Prospect Cove		



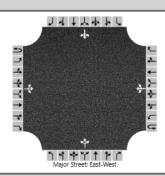
Vehicle Volumes and Adj	ustme	nts														
Approach	T		ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		8	71	13		28	98	4		14	3	21		3	3	19
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)											0			(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)	Т	4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30
Delay, Queue Length, and	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	$\overline{}$	9				30					40				27	
Capacity, c (veh/h)		1495				1519					800				853	
v/c Ratio		0.01				0.02					0.05				0.03	
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.2				0.1	
Control Delay (s/veh)		7.4	0.0	0.0		7.4	0.2	0.2			9.7				9.4	
Level of Service (LOS)		А	А	Α		А	А	Α			А				А	
Approach Delay (s/veh)		0	.7			1	.7			9	.7			9	.4	
Approach LOS		,	Α			,	4			,	Д			,	Α	

Copyright © 2022 University of Florida. All Rights Reserved.

HCSTM TWSC Version 2022 Forest AM 25 NB.xtw

Generated: 6/1/2022 3:06:13 PM

	HCS Two-Way Sto	p-Control Report	
General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	Timber Ridge at Forest Cove
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction	
Date Performed	6/1/2022	East/West Street	Timber Ridge Drive
Analysis Year	2025	North/South Street	Forest Cove Lane
Time Analyzed	AM Peak Build	Peak Hour Factor	0.94
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Prospect Cove	-	-



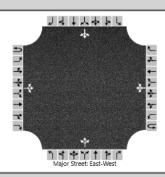
Vehicle Volumes and Adj	ustme	nts														
Approach	Т	Eastb	ound		Π	Westl	oound		Г	North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	\Box
Volume (veh/h)		8	71	19		40	98	4		32	4	61		3	4	19
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)											0				0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	$\overline{}$	4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	$\overline{}$	9				43					103				28	П
Capacity, c (veh/h)		1495				1511					804				820	
v/c Ratio	\vdash	0.01				0.03					0.13				0.03	\Box
95% Queue Length, Q ₉₅ (veh)	İ	0.0				0.1			Ì		0.4	Ì			0.1	
Control Delay (s/veh)		7.4	0.0	0.0		7.5	0.2	0.2			10.1				9.5	
Level of Service (LOS)	1	А	А	А		А	А	А			В				А	
Approach Delay (s/veh)		0	.6			2	.3			10	0.1			9	.5	
Approach LOS	Ì	,	Д			,	Д				В			,	A	

Copyright © 2022 University of Florida. All Rights Reserved.

HCS TIMI TWSC Version 2022 Forest AM 25 B.xtw

Generated: 6/1/2022 3:07:07 PM

	HCS Two-Way Sto	p-Control Report	
General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	Timber Ridge at Forest Cove
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction	
Date Performed	6/1/2022	East/West Street	Timber Ridge Drive
Analysis Year	2022	North/South Street	Forest Cove Lane
Time Analyzed	PM Peak	Peak Hour Factor	0.97
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Prospect Cove		



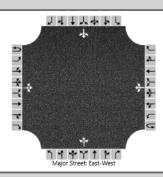
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	T	R	U	L	T	R	U	L	Т	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		65	70	27		43	175	27		35	14	46		25	13	72
Percent Heavy Vehicles (%)		0				0				0	0	2		0	0	1
Proportion Time Blocked																
Percent Grade (%)											0				0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	T	4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.22		7.10	6.50	6.21
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.32		3.50	4.00	3.31
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	Т	67				44					98				113	
Capacity, c (veh/h)		1375				1505					564				625	
v/c Ratio		0.05				0.03					0.17				0.18	
95% Queue Length, Q ₉₅ (veh)		0.2				0.1					0.6				0.7	
Control Delay (s/veh)		7.8	0.4	0.4		7.5	0.2	0.2			12.7				12.0	
Level of Service (LOS)		А	А	Α		А	А	А			В				В	
Approach Delay (s/veh)		3	.4			1	.5			12	2.7			12	2.0	
Approach LOS		,	Α			,	4				В				В	

Copyright © 2022 University of Florida. All Rights Reserved.

HCSTM TWSC Version 2022 Forest PM 22.xtw

Generated: 6/1/2022 3:09:08 PM

	HCS Two-Way Stop	o-Control Report	
General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	Timber Ridge at Forest Cove
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction	
Date Performed	6/1/2022	East/West Street	Timber Ridge Drive
Analysis Year	2025	North/South Street	Forest Cove Lane
Time Analyzed	PM Peak No Build	Peak Hour Factor	0.97
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Prospect Cove		

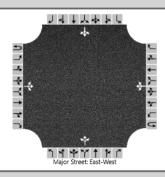


Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		67	72	28		44	180	28		36	14	47		26	13	74
Percent Heavy Vehicles (%)		0				0				0	0	2		0	0	1
Proportion Time Blocked																
Percent Grade (%)											0			(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Τ	4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.22		7.10	6.50	6.21
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.32		3.50	4.00	3.31
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	\top	69			П	45					100				116	
Capacity, c (veh/h)		1368				1501					552				615	
v/c Ratio		0.05				0.03					0.18				0.19	
95% Queue Length, Q ₉₅ (veh)		0.2				0.1					0.7				0.7	
Control Delay (s/veh)		7.8	0.4	0.4		7.5	0.3	0.3			13.0				12.2	
Level of Service (LOS)		А	Α	Α		А	А	А			В				В	
Approach Delay (s/veh)		3	.4			1	.5			13	3.0			12	2.2	
Approach LOS		,	A		Ì	,	4				В			ı	В	

Copyright © 2022 University of Florida. All Rights Reserved.

HCSTM TWSC Version 2022 Forest PM 25 NB.xtw Generated: 6/1/2022 3:12:15 PM

	HCS Two-Way Sto	p-Control Report	
General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	Timber Ridge at Forest Cove
Agency/Co.	Diane B. Zimmerman Traffic Engineering	Jurisdiction	
Date Performed	6/1/2022	East/West Street	Timber Ridge Drive
Analysis Year	2025	North/South Street	Forest Cove Lane
Time Analyzed	PM Peak Build	Peak Hour Factor	0.97
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Prospect Cove		



Vehicle Volumes and Ad	justme	nts														
Approach	T	Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		67	72	46		86	180	28		48	15	73		26	14	74
Percent Heavy Vehicles (%)		0				0				0	0	2		0	0	1
Proportion Time Blocked																
Percent Grade (%)											0				0	
Right Turn Channelized																
Median Type Storage				Undi	ivided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	\top	4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.22		7.10	6.50	6.21
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.32		3.50	4.00	3.31
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	\top	69				89					140				118	
Capacity, c (veh/h)		1368				1478					505				549	
v/c Ratio	1	0.05				0.06					0.28				0.21	
95% Queue Length, Q ₉₅ (veh)		0.2				0.2					1.1				0.8	
Control Delay (s/veh)		7.8	0.4	0.4		7.6	0.5	0.5			14.9				13.3	
Level of Service (LOS)		Α	А	Α		А	А	Α			В				В	
Approach Delay (s/veh)	1	3	.1			2	.6			14	4.9			13	3.3	
Approach LOS	1	,	Ą			,	A				В				В	

Copyright © 2022 University of Florida. All Rights Reserved.

HCS TIMU TWSC Version 2022 Forest PM 25 B.xtw

Generated: 6/1/2022 3:12:43 PM

	HCS	Sigr	alize	d Inte	rsect	ion R	esul	ts Sui	nmary	/				
4.										- 1				
nation							\rightarrow			-		- i		
		an Traffi					\rightarrow		·			2		
	DBZ						$\overline{}$		ре		·			
			Time F	Period		ak	\rightarrow							**
	US 42		Analys	is Year	2022			Analysis	Period	1> 7:	30	_ T		
	Timber Ridge		File Na	ame	US 42	AM 22.	xus						httr	٠ ٢
tion	Prospect Cove											ħ	4144	1-11
nation				FB			WF	3		NR			SB	
					R	1				_	R			T R
			_	_	-		-	_	_	\rightarrow	-	_	_	11
CHIII			40	_	104	37	-		121	370			1004	- 11
ition					Т	JI.	T_	<u>~</u>						_5
120.0	Reference Phase	6	1	15	542		, 	<u>~</u>		•	\ 4			Z
0	Reference Point	End	Croon	0.4				11	2 00	_	1	2	3	
No	Simult. Gap E/W	Off			_					—		sta.		
Fixed	Simult. Gap N/S	On	Red	3.0	0.0	2.4	3.0		0.0		5	6	7	4
			EBI	_		WBI	- [WBT	NB	L	NBT	SBI	-	SBT
е					8			4	1		6	5		2
					9.0			12.0	1.1		3.0	1.1		3.0
i, S					17.9		\neg	11.7	12.4	1	83.5	6.9		
nge Period, (Y+R c), s					6.6				_		7.5	6.5		7.5
				\neg	5.3			4.6	4.5		0.0	5.0		0.0
					10.4			5.8	5.4			2.1		
	\ - //			\neg	0.9		\neg	0.2	0.5		0.0	0.0		0.0
	()				0.99			0.85	0.98	3		0.07	,	
				-	0.00		\neg	0.00	-	_		_	-	
D				ED			WD			ND			OB	
	uits							T 5					_	
			_	$\overline{}$	-			-	-	_				R
			_	_		/	_	14	_	_		_		12
				_	$\overline{}$			+	-	_	-	_	_	11
	· //	n			-				-					158
				=	-				3.4	9.1				3.
	e Time (g ε), s		3.0	0.2	8.4		3.8		3.4	9.1	0.2	0.1	21.5	3.
			-		-				0.65	_	_	0.59	0.59	0.5
/eh/h			165		-				345			518	2109	93
			0.288	0.023	0.762		0.754	1	0.361	0.272	0.007	0.004	0.515	0.1
(Q) ft	In (90 th percentile													
				0.2	6.0		3.7		2.1	5.5	0.1	0.0	11.9	2.
(Q), ve	eh/In (90 th percenti		2.5	-	-		0.47		0.25	0.24	0.01	0.00	0.66	0.2
(Q), ve	eh/In (90 th percenti RQ) (90 th percent		0.29	0.02	0.71		0.47		0.20	_				1 44
(Q), ve	RQ) (90 th percent			-	-		56.8		11.0	9.7	8.1	10.2	14.6	11.
(Q), ve Ratio ((d ₁), s/	RQ) (90 th percent		0.29	0.02	0.71				_	9.7 0.3	8.1 0.0	10.2 0.0	14.6 0.9	-
(Q), ve Ratio ((d 1), s/ lay (d 2	RQ) (90 th percent veh		0.29 50.6	0.02 49.4	0.71 53.1		56.8		11.0	_	_			0.3
(Q), ve Ratio ((d 1), s/ lay (d 2	RQ) (90 th percent veh), s/veh 3), s/veh		0.29 50.6 1.4	0.02 49.4 0.1	0.71 53.1 11.4		56.8 16.7		11.0 0.8	0.3	0.0	0.0	0.9	0.
(Q), ve Ratio ((d 1), s/ lay (d 2 elay (d 2	RQ) (90 th percent veh), s/veh 3), s/veh		0.29 50.6 1.4 0.0	0.02 49.4 0.1 0.0	0.71 53.1 11.4 0.0		56.8 16.7 0.0		11.0 0.8 0.0	0.3	0.0	0.0	0.9	0. 0. 11.
(Q), ve Ratio ((d 1), s/ lay (d 2 elay (d 2	RQ) (90 th percent veh), s/veh 3), s/veh		0.29 50.6 1.4 0.0 52.0	0.02 49.4 0.1 0.0 49.4 D	0.71 53.1 11.4 0.0 64.4	73.5	56.8 16.7 0.0 73.5 E		11.0 0.8 0.0 11.7	0.3 0.0 10.0 B	0.0 0.0 8.1	0.0 0.0 10.2	0.9 0.0 15.5 B	0. 0. 11.
(Q), verage (Q), verage (Q), s/verage (LOS) (Q), verage (LOS)	RQ) (90 th percent veh), s/veh 3), s/veh		0.29 50.6 1.4 0.0 52.0	0.02 49.4 0.1 0.0 49.4 D	0.71 53.1 11.4 0.0 64.4 E		56.8 16.7 0.0 73.5 E		11.0 0.8 0.0 11.7 B	0.3 0.0 10.0 B	0.0 0.0 8.1 A	0.0 0.0 10.2 B	0.9 0.0 15.5 B	11. 0.3 0.0 11. B
(Q), ve Ratio ((d1), s/ lay (d2) elay (d3), s/ve e (LOS) y, s/veh lay, s/ve	RQ) (90 th percent veh), s/veh 3), s/veh th		0.29 50.6 1.4 0.0 52.0	0.02 49.4 0.1 0.0 49.4 D	0.71 53.1 11.4 0.0 64.4 E		56.8 16.7 0.0 73.5 E		11.0 0.8 0.0 11.7 B	0.3 0.0 10.0 B	0.0 0.0 8.1 A	0.0 0.0 10.2 B 15.1	0.9 0.0 15.5 B	0.0 0.0 11.
(Q), verage (Q), verage (Q), s/verage (LOS) (Q), verage (LOS)	RQ) (90 th percent (veh), s/veh 3), s/veh eh / LOS h / LOS		0.29 50.6 1.4 0.0 52.0	0.02 49.4 0.1 0.0 49.4 D	0.71 53.1 11.4 0.0 64.4 E		56.8 16.7 0.0 73.5 E		11.0 0.8 0.0 11.7 B	0.3 0.0 10.0 B	0.0 0.0 8.1 A	0.0 0.0 10.2 B 15.1	0.9 0.0 15.5 B	0.0 0.0 11.
	e in tion mation ement reh/h ation 120.0 No Fixed e in, s in, (Y+R) dway (M) ce Time in Time (in) bability bility bup Resement ement Rate (V) ation Flo Time (g) learance in/C) veh/h	Diane B. Zimmerma DBZ US 42 Timber Ridge tion Prospect Cove mation ement reh/h ation 120.0 Reference Phase 0 Reference Point No Simult. Gap E/W Fixed Simult. Gap N/S e a, (Y+R c), s dway (MAH), s ce Time (g s), s on Time (g e), s bability bility cup Results ement Rate (v), veh/h ation Flow Rate (s), veh/h/l Time (g s), s learance Time (g c), s	Diane B. Zimmerman Traffi DBZ US 42 Timber Ridge Ition Prospect Cove mation mation Prospect Cove mation 120.0 Reference Phase 6 Reference Point End No Simult. Gap E/W Off Fixed Simult. Gap N/S On Prospect Cove Mation 120.0 Reference Phase 6 Reference Point End No Simult. Gap N/S On Prixed Simult. Gap N/S On Prixed Simult. Gap N/S On Prixed Simult. Gap N/S On Drive (g s), s Diane B. Zimmerman Traffic Engin DBZ Analys Time F US 42 Analys Timber Ridge File Na tion Prospect Cove mation 120.0 Reference Phase 6 0 Reference Point End No Simult. Gap E/W Off Fixed Simult. Gap N/S On Red EBL e 1, s 1, (Y+R c), s 2, (Y+R c), s 3, (Y+R c), s 3, (Y+R c), s 4, (Y+R c), s 4, (Y+R c), s 5, (Y+R c), s 6, (Y+R c), s 7, (Y+R c), s 8, (Y+R c), s 8, (Y+R c), s 9, (Y+R c), s 10 Time (g e), s 10 Time (g e), s 10 Time (g e), s 10 Time (g c), s 10 Time (g c), s 11 Time (g s), s 12 Time (g s), s 13 Time (g s), s 14 Time (g c), s 15 Time (g c), s 16 Time (g c), s 17 Time (g c), s 18 Time (g c), s 19 Time (g c), s 10 Time (g c), s 11 Time (g c), s 12 Time (g c), s 13 Time (g c), s 14 Time (g c), s 15 Time (g c), s 16 Time (g c), s 17 Time (g c), s 18 Time (g c), s 18 Time (g c), s 19 Time (g c), s 10	Diane B. Zimmerman Traffic Engineering	Diane B. Zimmerman Traffic Engineering DBZ	Diane B. Zimmerman Traffic Engineering	Intersection Information Diane B. Zimmerman Traffic Engineering Duration, h 0.250	Diane B. Zimmerman Traffic Engineering						

Copyright © 2022 University of Florida, All Rights Reserved.

HCS™ Streets Version 2022

Generated: 6/1/2022 3:29:58 PM

		нся	Sigr	nalize	d Inte	rsect	ion R	esult	s Sun	nmary						
General Inform	antion								ntersec	tian Inf				I d J, de L I	s u	
	iation	Diana B. Zimmarma	n Troffi	o Engin	ooring			\rightarrow	Duration		0.250			TITI		
Agency		Diane B. Zimmerma	ın ırallı			Lun 4	2022	-		,	-		2			
Analyst		DBZ				Jun 1,		$\overline{}$	Area Typ	e	Other		景之	. !		
Jurisdiction					Period	AM Pe		_	PHF	Davisal	0.97	20				
Urban Street US 42					sis Year	-	No Build		Analysis	Period	1> 7:3	30	- 5			
Intersection Timber Ridge					ame	US 42	AM 25	NB.xu	S				- 4	1111		
Project Descrip	tion	Prospect Cove												NINT	PT [1]	
Demand Inforr	nation				EB			WE	2		NB			SB		
				L	T	R	1	T	R	L	T	R	L	T	F	
Approach Movement Demand (v), veh/h			47	4	107	38	11	7	125	593	7	2	1086	11		
Demand (v), v	en/n		-	47	4	107	30	11	/	125	593	/		1006	111	
Signal Informa	tion					T	JĮ.		R		_				K	
Cycle, s	120.0	Reference Phase	6	1	7			_3	\equiv			\ 4			₩	
Offset, s	0	Reference Point	End		5	\ \frac{1}{1}	⁷ 11					1	2	3		
Uncoordinated	No	Simult. Gap E/W	Off	Green		5.6	70.1	5.2	11.6		_ l					
Force Mode	Fixed	Simult. Gap E/W	On	Yellow Red	3.5	0.0	5.1 2.4	3.6	3.6	0.0	`	Y 5	Y	7	-	
- orce wode	rixed	Silliuit. Gap IV/S	OII	reu	3.0	0.0	2.4	3.0	13.0	10.0		3		,	-	
Timer Results				EBI		EBT	WBI		WBT	NBI		NBT	SBI		SBT	
					-	8	VVB	-	4	1 1	-	6 6	5	-	2	
Assigned Phase				_				_		_	_			_		
Case Number				-	-	9.0	_	-	12.0	1.1	-	3.0	1.1	-	3.0	
Phase Duration, s				_	_	18.2	_	-	11.8	12.5	_		6.9		77.6	
Change Period, (Y+R c), s					_	6.6		_	6.6	6.5			6.5		7.5	
Max Allow Headway (<i>MAH</i>), s						5.3		_	4.6	4.5			5.0		0.0	
Queue Clearance Time (g s), s					_	10.6		_	5.9	5.5	-		2.1	_		
Green Extension Time (g e), s						1.0		_	0.2	0.6	$\overline{}$	0.0	0.0	$\overline{}$	0.0	
Phase Call Probability						1.00		_	0.85	0.99	•		0.07	7		
Max Out Proba	bility					0.00			0.00	0.00)		0.00)		
M		14			ED			\A/D			NID			0.0		
Movement Gro		suits		.	EB			WB	T 5		NB			SB		
Approach Move				L	T	R	L	T	R	L	T	R	L	T	F	
Assigned Move				3	8	18	7	4	14	1	6	16	5	2	12	
Adjusted Flow I	<u> </u>	,-		48	4	110	$\overline{}$	58	-	129	611	7	2	1120	11	
		ow Rate (s), veh/h/l	n	1753	1900	1497		1770		1697	1724	1610	1810	1795	158	
Queue Service				3.1	0.2	8.6		3.9	1	3.5	9.5	0.2	0.1	22.6	4.	
Cycle Queue C		e Time (g c), s		3.1	0.2	8.6		3.9		3.5	9.5	0.2	0.1	22.6	4.	
Green Ratio (g				0.10	0.10	0.10		0.04		0.64	0.63	0.63	0.59	0.58	0.5	
Capacity (c), v				169	183	144		76		334	2175	1016	506	2097	92	
Volume-to-Cap				0.287	0.023	0.765		0.759		0.386	0.281	0.007	0.004	0.534	0.1	
Back of Queue	(Q), f	t/In (90 th percentile)													
Back of Queue	(Q), ve	eh/In (90 th percenti	le)	2.5	0.2	6.1		3.7		2.2	5.7	0.1	0.0	12.5	2.	
Queue Storage	Ratio (RQ) (90 th percent	ile)	0.29	0.02	0.73		0.47		0.26	0.25	0.01	0.00	0.70	0.2	
Uniform Delay ((d 1), s	/veh		50.4	49.1	52.9		56.8		11.5	9.9	8.2	10.4	15.1	11	
Incremental De	lay (d 2), s/veh		1.3	0.1	11.3		16.8		0.9	0.3	0.0	0.0	1.0	0.	
Initial Queue De				0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.	
Control Delay (51.7	49.2	64.2		73.6		12.4	10.3	8.2	10.4	16.1	11	
Level of Service				D	D	E		E		В	В	А	В	В	В	
Approach Delay				60.1	1	Е	73.6	3	E	10.6	3	В	15.6	3	В	
Intersection De							3.7						В			
Multimodal Re	sults				EB			WB			NB			SB		
	Score	/LOS		2.47	7	В	2.47	7	В	1.66	3	В	2.08	3	В	
Pedestrian LOS	00010	, 200														

		нся	Sigr	nalize	d Inte	rsect	ion R	esult	s Sun	nmary						
General Inforn	antion								Intersec	tion Inf		4,441	s t			
	iation	Diane B. Zimmerma	n Troffi	o Engin	ooring			\rightarrow			0.250		ĺ	TITI		
Agency			an Iraiii			lun 4	2000	$\overline{}$	Duration		_					
Analyst		DBZ		Analysis Date Jun 1, 2022 Time Period AM Peak					Area Typ	е	Other			. ;	ه	
Jurisdiction						_		_	PHF	D : 1	0.97				~	
Urban Street US 42					sis Year	-			Analysis	Perioa	1> 7:3	30				
Intersection Timber Ridge					ame	US 42	2 AM 25	B.xus						ጎተተሰ		
Project Descrip	tion	Prospect Cove												M I SP T	N U	
Demand Inform	nation				EB			WE	2		NB			SB		
				L	T	R	L	T	R	T L	T	R	L	T	F	
Approach Movement			50	4	-	_	11	_	_	593	7	2	1086	-		
Demand (v), v	en/n		_	50	4	144	38	11	/	136	593	/		1000	11	
Signal Informa	tion						JŲ.		8						K	
Cycle, s	120.0	Reference Phase	6	1	7			_3	Ξ			\ 4			₹	
Offset, s	0	Reference Point	End		1	Sir						1	2	3		
Uncoordinated	No	Simult. Gap E/W	Off	Green		6.2	66.2	5.2	14.8		_ l		-4-			
Force Mode	Fixed			Yellow Red	3.5	0.0	5.1 2.4	3.6	3.6	0.0	`	5	Y	7	+	
1 STOC WIDGE	I INCU	Omituit. Gap 19/3	OII	ricu	10.0	0.0	2.4	3.0	3.0	10.0						
Timer Results				EBI		EBT	WBI		WBT	NBI		NBT	SBI		SBT	
Assigned Phase					-	8	VVDI		4	1	-	6	5			
5						9.0			12.0	1.1			1.1		2	
Case Number						21.4			11.8	13.1		79.9	6.9		73.7	
Phase Duration, s				_			_			6.5			6.5		_	
Change Period, (Y+Rc), s				_	_	6.6	_	-							7.5	
Max Allow Headway (MAH), s				_		5.3	_	_	4.6	4.5			5.0	_	0.0	
Queue Clearance Time (g s), s				_	-	13.6	_		5.9	6.1	_		2.1	_		
Green Extension Time (g e), s				_	-	1.2	_	_	0.2	0.6	\rightarrow	0.0	0.0		0.0	
Phase Call Pro				_	_	1.00	_	_	0.85	0.99	_		0.07	_		
Max Out Proba	bility					0.00			0.00	0.00)		0.00)	_	
Mayamant Cr	un Boo	uulto.			EB			WB			NB			SB		
Movement Gro		uits		L	T	R	L	T	R	-	T	R	L	Т		
Approach Move				3	8	18	7	4	14	L	6	16	5	2	R	
		\		_	_		/	<u> </u>	14	1	_		_		12	
Adjusted Flow		,,		52	4	148	-	58		140	611	7	2	1120	12	
		ow Rate (s), veh/h/l	n	1753	1900	1497	-	1770	-	1697	1724	1610	1810	1795	158	
Queue Service		- ,.		3.2	0.2	11.6		3.9		4.1	10.3	0.2	0.1	24.4	4.	
Cycle Queue C		e iime (<i>g</i> c), s		3.2	0.2	11.6		3.9		4.1	10.3	0.2	0.1	24.4	4.	
Green Ratio (g				0.12	0.12	0.12		0.04		0.62	0.60	0.60	0.55	0.55	0.5	
Capacity (c), v				216	234	185		76		321	2081	972	479	1980	87	
Volume-to-Cap				0.238	0.018	0.803		0.759		0.437	0.294	0.007	0.004	0.565	0.1	
		/In (90 th percentile														
	• • •	eh/ln (90 th percenti		2.6	0.2	7.7		3.7		2.7	6.1	0.1	0.0	13.6	2.	
		RQ) (90 th percent	tile)	0.30	0.02	0.92		0.47		0.31	0.27	0.01	0.01	0.76	0.3	
Uniform Delay (d 1), s/veh				47.5	46.2	51.2		56.8		13.4	11.5	9.5	12.1	17.5	13	
Incremental Delay (d 2), s/veh				0.8	0.0	10.9		16.8		1.1	0.4	0.0	0.0	1.2	0.	
				0.0	0.0	0.0	$oxed{oxed}$	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Initial Queue D				48.3	46.2	62.1		73.6		14.5	11.8	9.5	12.1	18.7	13	
Initial Queue De Control Delay (Level of Service (LOS)			D	D	E		E		В	В	Α	В	В	В	
Initial Queue Do Control Delay (Level of Service		Approach Delay, s/veh / LOS			3	Е	73.6	3	E	12.3	3	В	18.2	2	В	
Initial Queue Do Control Delay (Level of Service		7 200				21	1.2						С			
Initial Queue Do Control Delay (Level of Service Approach Dela	y, s/veh															
Initial Queue D Control Delay (Level of Service Approach Dela Intersection De	y, s/veh lay, s/ve				EP			\A/D			MP			CP.		
Initial Queue Do Control Delay (Level of Service Approach Dela	y, s/veh lay, s/ve	h/LOS		2.47	EB	В	2.46	WB	В	1.66	NB	В	2.09	SB	В	

		HCS	Sigr	nalize	d Inte	rsecti	ion Re	esul	ts Su	mmar	У				
General Inform	nation								Interes	ction In	formati	l u	4.441	is U	
Agency	nution	Diane B. Zimmerma	n Traffi	ic Engin	eering			\rightarrow	Duratio		0.250			1111	
Analyst		DBZ	iii iiaiii			Jun 1,	2022	$\overline{}$	Area Ty		Othe				
Jurisdiction		1002		Time F		PM Pe		-	PHF	рс	0.98		→ <u>→</u>		4
Urban Street US 42					is Year	-	Jak	\rightarrow		s Period	_	30	4		
Intersection Timber Ridge					ame	$\overline{}$	PM 22.	_	Analys	o i cilou	17 11				
Project Descrip	ntion	Prospect Cove		1 110 140	41110	00 12	1 101 22.	Auo					7	A 1 4 Y	3+ (*
r roject Beson	7.11011	i respect cove													
Demand Infor	mation				EB		Т	WE	3		NB		\top	SB	
Approach Move	ement			L	Т	R	L	T	R	L	T	R	L	T	F
Demand (v), veh/h			197	15	215	17	12	9	237	1058	3 31	5	781	19	
Cianal Inform	-tion					T	1 111:		2						
Signal Informa	1	Deference Dhace	0	1	6		111		\equiv						+
Cycle, s	140.0	Reference Phase	6 End	1	5	517	7 S	" 3	2			1	2	3	
Offset, s	0	Reference Point	End	Green		2.4	83.9	4.7	14						
Uncoordinated				Yellow		3.5	5.1	3.6				7	Ψ		-4
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	2.4	3.0	3.0	0.0		5	6	1	¥
Timer Results				EBI		EBT	WBI		WBT	NE	BL	NBT	SBL		SBT
Assigned Phase					8			4	1	_	6	5		2	
Case Number					9.0		+	12.0	1.1	\rightarrow	3.0	1.1		3.0	
Phase Duration, s				\rightarrow	20.8		\neg	11.3	16.	_	100.3	7.6	-	91.4	
Change Period, (Y+R c), s					-	6.6		\dashv	6.6	6.5	\rightarrow	7.5	6.5	-	7.5
Max Allow Headway (<i>MAH</i>), s						5.2		\neg	4.7	4.5	_	0.0	5.0	_	0.0
Queue Clearance Time (g s), s				\rightarrow	12.2		\rightarrow	5.1	8.9	-		2.2	\rightarrow		
Green Extension						2.0		\neg	0.1	1.1		0.0	0.0	_	0.0
Phase Call Pro		(3-),-				1.00		\rightarrow	0.78	1.0			0.18	\rightarrow	
Max Out Proba					\rightarrow	0.00		\neg	0.00	0.0	_		0.00	\rightarrow	
Mayamant Cr	D	lée			EB			WB			NB			SB	
Movement Gro	•	Suits		L	Т	R	L	T	T R	1	T	R	L	T	R
Assigned Move				3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow		\ veh/h		121	96	117	-	39	14	242	1080	32	5	797	19
		ow Rate (s), veh/h/l	n	1810	1810	1560		1714		1795	-	1572	1810	1766	156
Queue Service		, ,,		9.0	7.0	10.2		3.1		6.9	20.3	1.0	0.2	16.3	8.
		g s), s e Time (g c), s		9.0	7.0	10.2		3.1		6.9	20.3	1.0	0.2	16.3	8.
Green Ratio (¿		c fille (gc), s		0.10	0.10	0.10		0.03	+	0.68	0.66	0.66	0.2	0.60	0.6
Capacity (c),				184	184	159		57		511	2380	1043	333	2118	93
Volume-to-Cap		atio (X)			0.520	-		0.678	3	0.473		0.030	0.015	0.376	0.2
	-	t/In (90 th percentile)	0.000	3.020	0.740		3.370		0.470	0.404	0.000	0.010	0.070	0.2
	,,	eh/In (90 th percenti	,	7.1	5.7	7.1		2.9		4.6	11.1	0.6	0.1	9.6	5.
		RQ) (90 th percent		0.79	0.67	0.82		0.38		0.51	0.47	0.07	0.01	0.54	0.5
Uniform Delay	,			60.5	59.6	61.1		66.9		9.9	11.4	8.1	11.5	14.5	12
Incremental De				5.5	3.2	9.2		15.6	-	0.8	0.6	0.1	0.0	0.5	0.
Initial Queue D		**		0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.
Control Delay (66.1	62.9	70.3		82.5		10.7	12.0	8.2	11.5	15.0	13
Level of Servic	. ,.			E	62.5 E	70.3		62.5		B	B	A	B	B	E
Approach Dela				66.6		E	82.5	_	F	11.		В	14.7		В
Intersection Dela				00.0		20				1111			C 14.7		
	y, 5/40	, 200				20									
Multimodal Re	sults				EB			WB			NB			SB	
Multimodal Results						-	0.47			4.0	0		0.00		P
Pedestrian LOS	S Score	/LOS		2.48	5	В	2.47		В	1.6	6	В	2.23	3	В

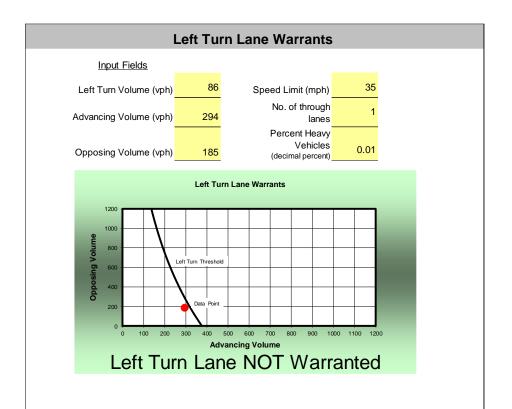
Copyright © 2022 University of Florida, All Rights Reserved. HCS™ Streets Version 2022 Generated: 6/1/2022 3:34:01 PM

		HCS	Sigr	nalize	d Inte	rsect	ion R	esult	s Sun	ımary					
General Inforn	antion								ntersec	tian Inf				4.441	K U
	iauon	Diana B. Zimmarma	n Troff	o Engin	ooring			_			0.250		ı İ	TITI	
Agency		Diane B. Zimmerma	ın ıralı			lup 1	2022	$\overline{}$	Duration		-		2		
Analyst		DBZ				Jun 1,		\rightarrow	Area Typ	е	Other			. !	
Jurisdiction Urban Street US 42					Period	PM Pe		_	PHF	D i i	0.98	20			
Intersection Timber Ridge					sis Year	-	No Build		Analysis	Perioa	1> 4:0	30	- 5		
Ü					ame	US 42	PM 25	NB.xu	S				- 4	ንተተሰ	
Project Descrip	tion	Prospect Cove												NINT	RT ID
Demand Inform	mation				EB			WE	3		NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	F
Demand (v), veh/h			203	15	222	18	12	_	244	1090	_	5	805	20	
Signal Informa				l	6		11/7	1 2	\equiv						4
Cycle, s	140.0	Reference Phase	6		5	507	7 5 1	™ É	2) "	2	3	~
Offset, s	0	Reference Point	End	Green	1.1	2.8	82.8	4.7	14.9	0.0					
Uncoordinated	No	Simult. Gap E/W	Off	Yellow	3.5	3.5	5.1	3.6	3.6	0.0	_	Y	V		
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	2.4	3.0	3.0	0.0		5	6	7	Y
						EDT	W/D		MDT	ND	_	NDT	SBI		ODT
Timer Results				EBI	-	EBT	WBL		WBT	NBI	-	NBT		-	SBT
Assigned Phase			_	_	8		-	4	1	_	6	5	_	2	
Case Number				_	-	9.0		-	12.0	1.1		3.0	1.1 7.6	-	3.0
Phase Duration, s				_	_	21.5		_	11.3	16.9	-	99.6		-	90.3
Change Period, (Y+Rc), s				-	-	6.6		-	6.6	6.5	_	7.5		_	7.5
Max Allow Headway (MAH), s					_	5.2		_	4.6	4.5	-	0.0	5.0	\rightarrow	0.0
Queue Clearance Time (g s), s				_	_	12.8		-	5.2	9.2	_		2.2	-	
Green Extension Time (g e), s				_	-	2.1		_	0.1	1.1	-	0.0	0.0	$\overline{}$	0.0
Phase Call Pro				_	-	1.00		-	0.79	1.00	_		0.18	_	
Max Out Proba	Dility					0.00		_	0.00	0.00	<u> </u>		0.00	,	
Movement Gro	oup Res	ults			EB			WB			NB			SB	
Approach Move				L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move				3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow I), veh/h		124	98	124		40		249	1112	33	5	821	20
		ow Rate (s), veh/h/l	n	1810	1810	1560		1715		1795	1795	1572	1810	1766	156
Queue Service		, ,,		9.2	7.2	10.8		3.2		7.2	21.5	1.0	0.2	17.3	8.6
Cycle Queue C		, ,,		9.2	7.2	10.8		3.2		7.2	21.5	1.0	0.2	17.3	8.0
Green Ratio (g		(3-7,-		0.11	0.11	0.11		0.03		0.68	0.66	0.66	0.60	0.59	0.5
Capacity (c), \				193	193	166		58		498	2360	1034	317	2089	92
Volume-to-Cap		tio (X)		0.644				0.688		0.500	0.471		0.016	0.393	0.2
		/In (90 th percentile)												
Back of Queue		eh/In (90 th percenti		7.2	5.8	7.5		3.0		4.8	11.7	0.6	0.1	10.1	5.3
	Queue Storage Ratio (RQ) (90 th percentile)			0.80	0.68	0.86		0.39		0.54	0.49	0.07	0.01	0.57	0.6
Back of Queue	Ratio (rc) (90 th percent	Uniform Delay (d 1), s/veh		59.1	60.7		66.9		10.5	11.9	8.4	12.0	15.2	13.
Back of Queue Queue Storage				60.0				16.0		0.9	0.7	0.1	0.0	0.6	0.6
Back of Queue Queue Storage Uniform Delay	(d 1), s	/veh	,	60.0 5.0	2.9	9.2				_	0.0	0.0	0.0	0.0	0.0
Back of Queue Queue Storage	(d 1), s. lay (d 2	/veh), s/veh	,		-	9.2		0.0		0.0	0.0	0.0	■ 0.0	0.0	
Back of Queue Queue Storage Uniform Delay Incremental De Initial Queue De	(d 1), s lay (d 2 elay (d	/veh), s/veh 3), s/veh		5.0	2.9	-				11.4	12.6	8.4	12.1	15.8	14.
Back of Queue Queue Storage Uniform Delay Incremental De	(d 1), sa lay (d 2 elay (d d), s/ve	/veh), s/veh 3), s/veh		5.0 0.0	2.9 0.0	0.0		0.0							_
Back of Queue Queue Storage Uniform Delay Incremental De Initial Queue De Control Delay (Level of Service	(d 1), sa elay (d 2 elay (d d), s/ve e (LOS)	/veh), s/veh 3), s/veh		5.0 0.0 65.0	2.9 0.0 62.0 E	0.0 69.9 E	82.9	0.0 82.9 F	F	11.4 B	12.6 B	8.4	12.1 B	15.8 B	_
Back of Queue Queue Storage Uniform Delay Incremental De Initial Queue De Control Delay ((d 1), s _i elay (d 2 elay (d d), s/vee (LOS)	/veh), s/veh 3), s/veh eh		5.0 0.0 65.0 E	2.9 0.0 62.0 E	0.0 69.9		0.0 82.9 F	F	11.4	12.6 B	8.4 A B	12.1	15.8 B	В
Back of Queue Queue Storage Uniform Delay Incremental De Initial Queue Do Control Delay (Level of Service Approach Delay Intersection De	(d 1), Sa elay (d 2 elay (d d), s/ve e (LOS) y, s/veh lay, s/ve	/veh), s/veh 3), s/veh eh		5.0 0.0 65.0 E	2.9 0.0 62.0 E	0.0 69.9 E		0.0 82.9 F	F	11.4 B	12.6 B	8.4 A B	12.1 B 15.4	15.8 B	В
Back of Queue Queue Storage Uniform Delay Incremental De Initial Queue De Control Delay (Level of Service Approach Delay	(d1), selay (d2 elay (d2 elay (d), s/vel e (LOS) y, s/veh lay, s/vel	/veh), s/veh 3), s/veh eh / LOS		5.0 0.0 65.0 E	2.9 0.0 62.0 E	0.0 69.9 E		0.0 82.9 F	F	11.4 B	12.6 B	8.4 A B	12.1 B 15.4	15.8 B	14. B

		HCS	Sigr	nalize	d Inte	rsect	ion R	esul	ts Su	mmar	У				_
General Inforr	nation								Intoreo	ction In	formati	1 2	الطياراة	b L	
Agency	iiatioii	Diane B. Zimmerma	n Traffi	c Engin	eering			\rightarrow	Duratio		0.250			7111	
Analyst		DBZ	ııı ııaııı			Jun 1,	2022	\rightarrow	Area Ty		Other				
Jurisdiction		DUZ		Time F		PM Pe		\rightarrow	PHF	, pc	0.98				
Urban Street US 42					sis Year			\rightarrow		s Period	_	30	4		
Intersection Timber Ridge					ame	$\overline{}$	PM 25			3 1 01100	12 4.	00			
Project Descrip	otion	Prospect Cove		T IIC IV	anic	100 42	I IVI ZU	D.Xu3						A TAY	14 (*
r roject besch	MOH	1 Tospect Cove													
Demand Infor	mation				EB		Т	WE	В		SB				
Approach Mov	ement			L	Т	R	L	Т	R	L	Т	R	L	T	F
Demand (v), v	/eh/h			205	15	246	18	12	2 9	283	1090	32	5	805	20
Signal Inform	ntion					1	1 11:		2						_
Signal Informa	1	Deference Dhace	0	-	2		1	La	$\not\equiv$						↔
Cycle, s	140.0	Reference Phase	6 End		5	517	7 51	" 3	2			1	2	3	_
Offset, s	0 No	Reference Point	End	Green		4.8	78.5	4.7							
Uncoordinated			Yellow		3.5	5.1 2.4	3.6				7	Ψ		4	
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	2.4	3.0	3.0	0.0		3	6	- 1	¥
Timer Results				EBI		EBT	WBI	. T	WBT	NE	SL	NBT	SBI	_	SBT
Assigned Phase					8		\top	4	1		6	5	-	2	
Case Number					9.0		\neg	12.0	1.	1	3.0	1.1		3.0	
Phase Duration, s					23.8		\neg	11.3	18	-	97.3	7.6	\neg	86.0	
Change Period, (Y+R c), s					6.6			6.6	6.	5	7.5	6.5		7.5	
Max Allow Headway (<i>MAH</i>), s					\neg	5.2		\neg	4.6	4.	5	0.0	5.0	\neg	0.0
Queue Clearance Time (g s), s					15.0		\neg	5.2	11.	0		2.2			
Green Extension Time (g e), s				\neg	2.3		\neg	0.1	1.3	3	0.0	0.0	$\overline{}$	0.0	
Phase Call Pro	bability	,,				1.00			0.79	1.0	0		0.18	3	
Max Out Proba	bility					0.00			0.00	0.0	0		0.00)	
Movement Gre	oun Res	ulte			EB			WB		_	NB			SB	
Approach Mov		uito		L	T	R	L	T	R	L	T	R	L	T	R
Assigned Move				3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow) veh/h		126	99	149	-	40	+ ' '	289	1112	33	5	821	20
-		ow Rate (s), veh/h/l	n	1810	1810	1560		1715	,	1795	1795	1572	1810	1766	156
Queue Service		1 ,		9.2	7.1	13.0		3.2	+-	9.0	22.6	1.1	0.2	18.6	9.
		e Time (g c), s		9.2	7.1	13.0		3.2		9.0	22.6	1.1	0.2	18.6	9.
Green Ratio ((30),0		0.12	0.12	0.12		0.03		0.66	0.64	0.64	0.57	0.56	0.5
Capacity (c),				223	223	192		58		497	2302	1008	305	1980	87
Volume-to-Cap		tio (X)		0.564	0.445			0.688	3	0.581	_		0.017	0.415	0.2
		/In (90 th percentile)												
		eh/In (90 th percenti		7.1	5.7	8.6		3.0		5.8	12.4	0.7	0.1	10.9	5.
		RQ) (90 th percent		0.78	0.67	0.99		0.39		0.65	0.52	0.07	0.02	0.62	0.6
Uniform Delay	(d 1), si	/veh		57.8	57.0	59.5		66.9	_	12.1	13.1	9.2	13.7	17.6	15
Incremental De	<u> </u>			3.2	2.0	9.2		16.0		1.3	0.7	0.1	0.0	0.6	0.
Initial Queue D				0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.
Control Delay (d), s/veh				61.0	58.9	68.7		82.9		13.4	13.8	9.3	13.8	18.3	16
Control Delay (e (LOS)			Е	Е	Е		F		В	В	Α	В	В	В
	y, s/veh	/LOS		63.5	5	Е	82.9		F	13	6	В	17.8	3	В
Level of Servic		h / LOS				22	2.6						С		
Control Delay (Level of Servic Approach Dela Intersection De	lay, s/ve	117 200													
Level of Servic Approach Dela Intersection De										_					
Level of Servic Approach Dela	sults			2.48	EB	В	2.47	WB	В	1.6	NB	В	2.24	SB	В

Copyright © 2022 University of Florida, All Rights Reserved.

HCS™ Streets Version 2022



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.

