TRAFFIC IMPACT ANALYSIS

FOR

BRAXTON DEVELOPMENT APARTMENTS

JONESBORO, ARKANSAS

Prepared for:

Braxton Development

Prepared by:

Fisher & Arnold, Inc.
1801 Latourette Drive
Jonesboro, Arkansas 72404

April 2017

TABLE OF CONTENTS

PAGE

PURPOSE

The purpose of this study is to evaluate the impact to traffic from the proposed Apartments located on the west side of S. Caraway Road near the intersection of S. Caraway Road and Glenn Place. This study includes determining if the intersection of S. Caraway Road and Glenn Place meets any warrants for a traffic signal. This study further evaluates the Level-of-Service of the two unsignalized intersections that will provide access into the site. Figure 1 shows the location of the proposed development.

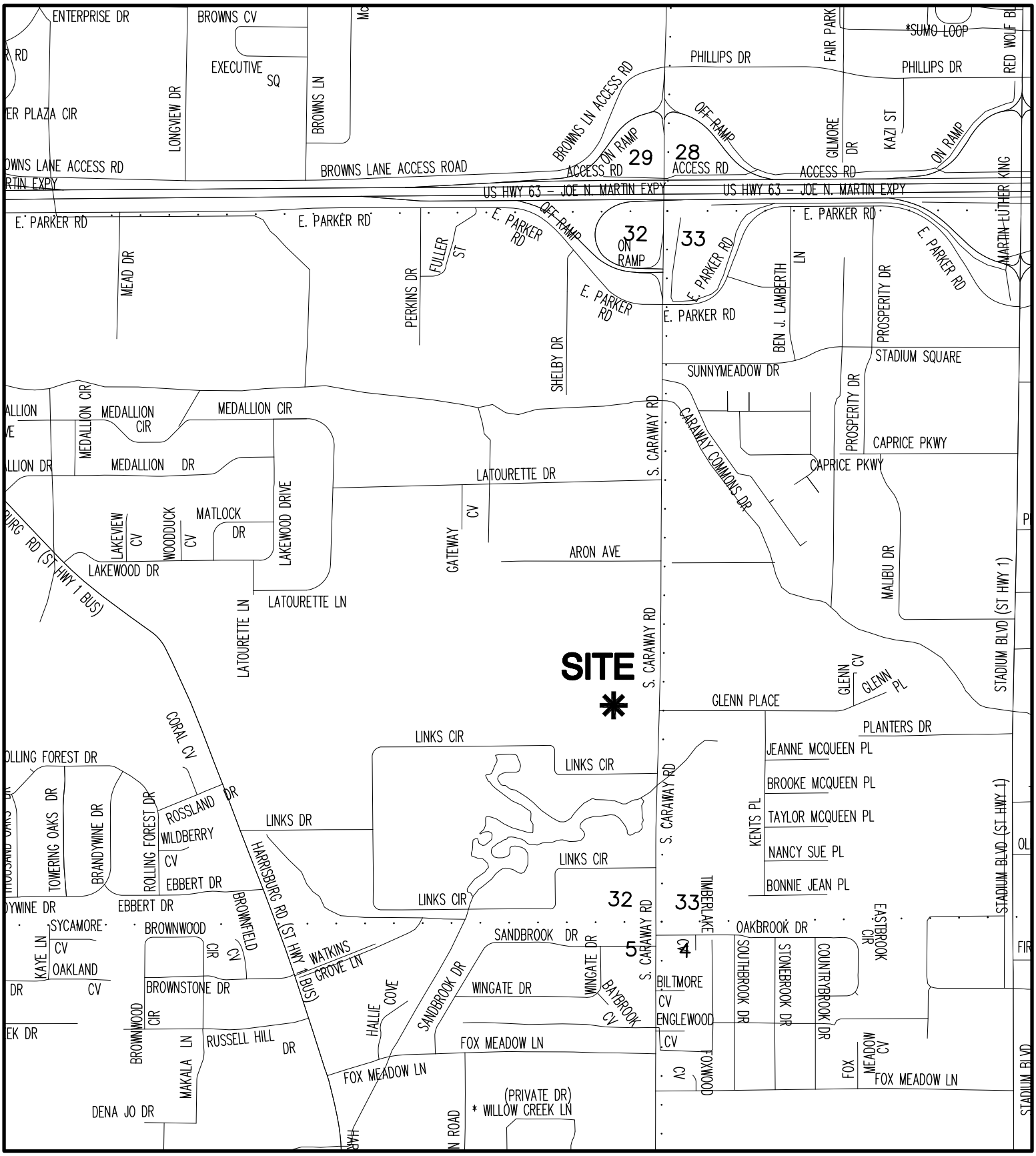


FIGURE 1

VICINITY MAP

EXISTING CONDITIONS

The Braxton Development Apartments are proposed to be constructed on the west side of S. Caraway Road across from the Glenn Place intersection. Caraway Road is a north south roadway that extends from the south side of Jonesboro, north to near the Arkansas State University Campus. This section of roadway provides access for many residential and commercial properties. The roadway adjacent to the proposed apartment complex is a two lane rural section.

Glenn Place is an east west two lane collector road that serves primarily residential properties east of S. Caraway. There is a gas station at the southeast corner of S. Caraway and Glenn Place and a car wash on the northeast corner.

S. Caraway Road and Glenn Place Intersection

Traffic counts were taken at the intersection of S. Caraway and Glenn Place on Wednesday, March 29, 2017. Traffic counts began at 5:30 A.M. and extended to 7:30 P.M. The results of this 14-hour count are shown in the Appendix.

PROPOSED DEVELOPMENT

This proposed development consists of a multi-family residential apartment complex with a total of 296 dwelling units. A total of 184 is planned for Phase 1 and a total of 112 in Phase 2. For the purpose of this study, the estimated traffic generated from the development will be the total build-out of 296 units. See Figure 2 for the preliminary site plan of the development. Access to the site is planned to include two drives off of S. Caraway Road with the main drive approximately 280 feet north of the Glenn Place intersection. The secondary drive is planned to line up directly across from Glenn Place. Both drives provide full movements with a one lane entrance, and one lane exiting the site.

As stated above the development is planned for two different phases. Phase 2 of the development is not anticipated to begin until 2019, and be completed in 2020.

TABULATIONS

PHASE I

SITE AREA: APPROX. 11.97 AC.

UNIT TABULATION:
1 BEDROOM: 68 UNITS (36.96%)
2 BEDROOM: 88 UNITS (47.83%)
3 BEDROOM: 28 UNITS (15.22%)
TOTAL: 184 UNITS
@ 15.37 UNITS/NET ACRE

PARKING TABULATION:
359 SURFACE PARKING
24 DETACHED GARAGES
20 TUCK UNDER GARAGES
401 PARKING REQUIRED
403 TOTAL PARKING PROVIDED
@ 2.19 PARKING/UNIT
@ 1.26 PARKING/BED

OPEN SPACE TABULATION:
104,300 SQ FT. REQUIRED
+/- 144,000 SQ FT. PROVIDED

PHASE II

SITE AREA: APPROX. 6.18 AC.

UNIT TABULATION:
1 BEDROOM: 42 UNITS (37.50%)
2 BEDROOM: 56 UNITS (50.10%)
3 BEDROOM: 14 UNITS (12.40%)
TOTAL: 112 UNITS
@ 18.12 UNITS/NET ACRE

PARKING TABULATION:
241 SURFACE PARKING
6 DETACHED GARAGES
10 TUCK UNDER GARAGES
242 PARKING REQUIRED
257 TOTAL PARKING PROVIDED
@ 2.29 PARKING/UNIT
@ 1.31PARKING/BED

OPEN SPACE TABULATION:
53,900 SQ FT. REQUIRED
+/- 65,000 SQ FT. PROVIDED

PHASE I + PHASE II

SITE AREA: APPROX. 18.15 AC.

UNIT TABULATION:
1 BEDROOM: 110 UNITS (37.23%)
2 BEDROOM: 144 UNITS (48.67%)
3 BEDROOM: 42 UNITS (14.10%)
TOTAL: 296 UNITS
@ 16.31 UNITS/NET ACRE

PARKING TABULATION:
600 SURFACE PARKING
30 DETACHED GARAGES
30 TUCK UNDER GARAGES
643 PARKING REQUIRED
660 TOTAL PARKING PROVIDED
@ 2.23 PARKING/UNIT
@ 1.26 PARKING/BED
* SURFACE PARKING INCLUDES
14 HANDICAP PARKING

OPEN SPACE TABULATION:
158,200 SQ FT. REQUIRED
+/- 209,000 SQ FT. PROVIDED

Figure 2
Site Plan

JONESBORO MULTI FAMILY SCHEMATIC SITE PLAN - # 4

JONESBORO, AR

BGO architects

16212
03.28.2017
Braxton Development

TRAFFIC PROJECTIONS

Traffic generated from the proposed site was estimated from the Institute of Transportation Engineers Trip Generation Manual 9th Edition. Volumes were generated for both the A.M. Peak Hour and the P.M. Peak Hour during a weekday when traffic volumes are greater. Below are the volumes anticipated for both A.M. and P.M. Peak Hours. Table 1 displays the anticipated traffic generated from the site.

296 Dwelling Units

A.M. PEAK HOURS		**P.M. PEAK HOUR**	
T = 0.49 (X) + 3.73	= 149	T = 0.55 (X) + 17.65	= 180
80% Exiting 0.8 X 149	= 119	35% Exiting .35 X 180	= 63
20% Entering 0.2 X 149	= 30	65% Entering .65 X 180	= 117

X = Number of Dwelling Units
T = Total Trip Ends

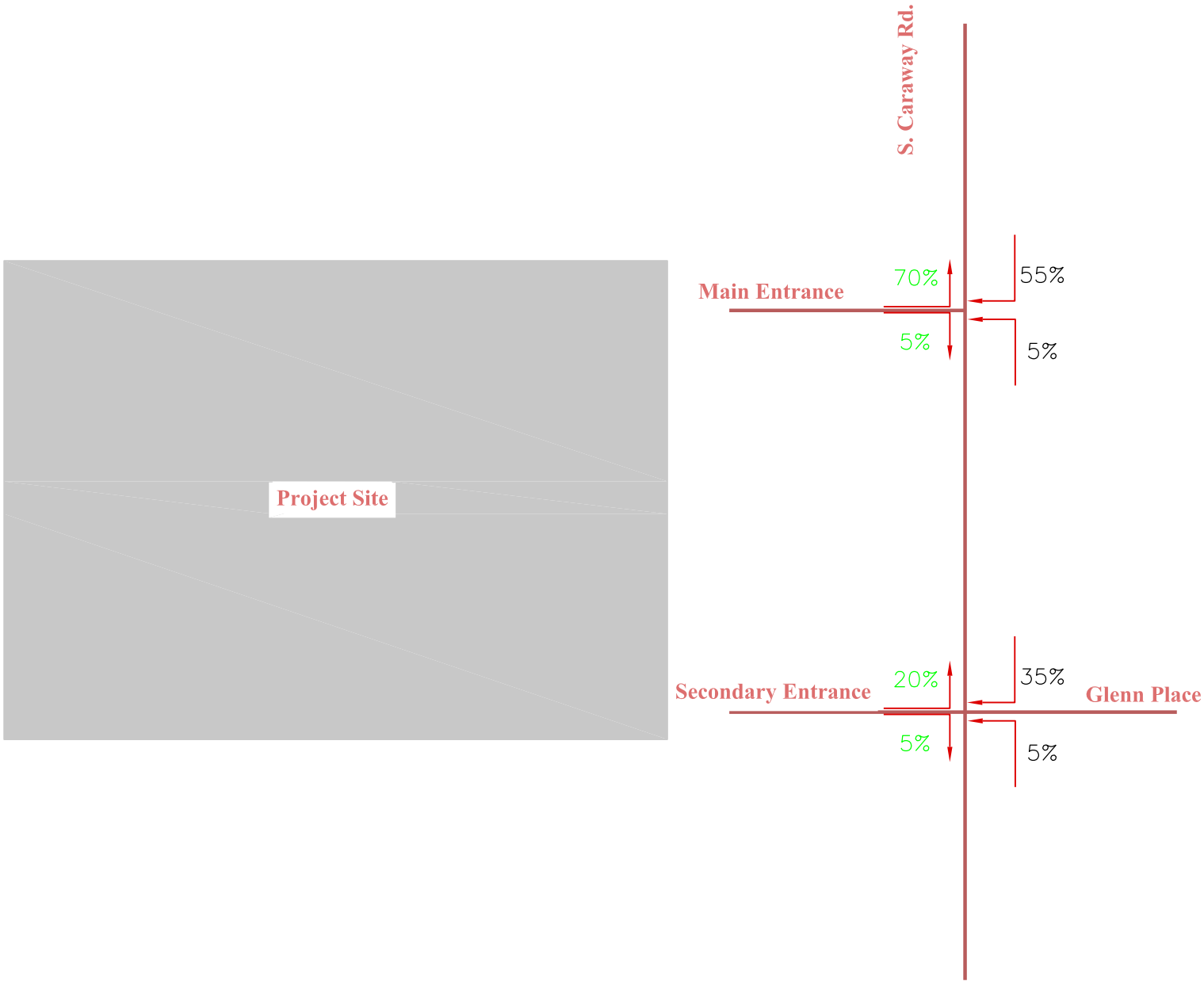
TABLE 1

TRIP GENERATION

A.M. Peak Hour		**P.M. Peak Hour**	
Enter	**Exit**	**Enter**	**Exit**
30	119	117	63

The new trips that will be generated by the development were assigned to the roadway network using the trip distributions shown in Figure 3. Figure 3 shows the trip distribution pattern for both the A.M. and the P.M. peak hour without any signalization of S. Caraway Road and Glenn Place. In the event of signalization at this intersection, distribution out of the site will change significantly. Figure 4 shows the anticipated distribution with a signal at this

intersection. The trip distribution was based upon observed traffic patterns in the area. It is estimated that 90 percent of the A.M. and P.M. traffic generated from the site will travel north from the site towards I-555. It is estimated that 90% of the projected traffic will come from this same direction during both the A.M. and P.M. Peak Hour back to the site. The traffic assignment for these peak hour volumes is shown in Figure 5 without any signalization, and Figure 6 with the signalization.



XX% – ENTERING
XX% – EXITING

Figure 3
Distribution of Peak Hour Traffic Volumes
Generated by the Project Site With No Signalization (AM/PM Peak Hour)
(Not to Scale)

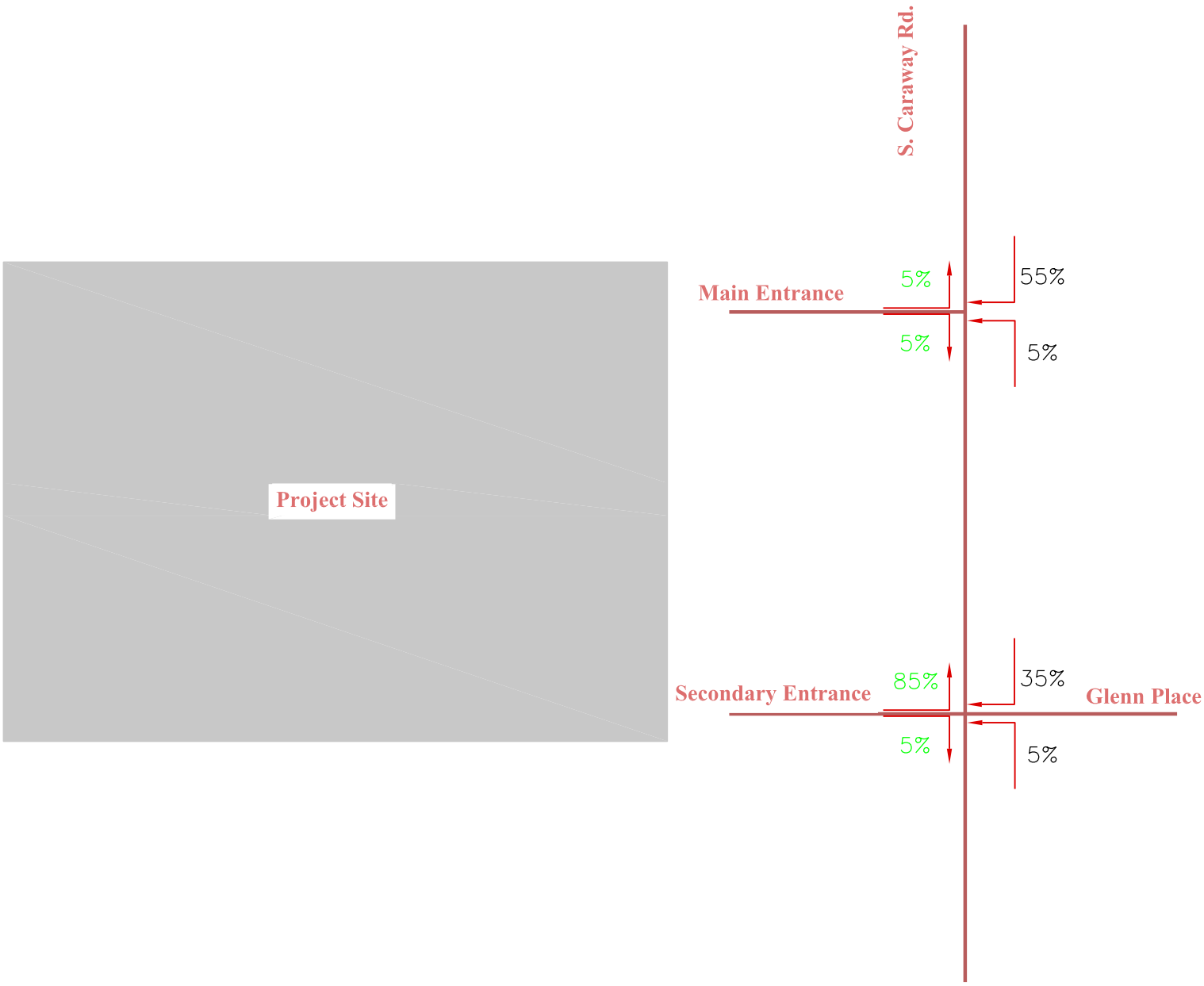


Figure 4
Distribution of Peak Hour Traffic Volumes
Generated by the Project Site (AM/PM Peak Hour)
With Signalization of S. Caraway & Glenn Place
(Not to Scale)

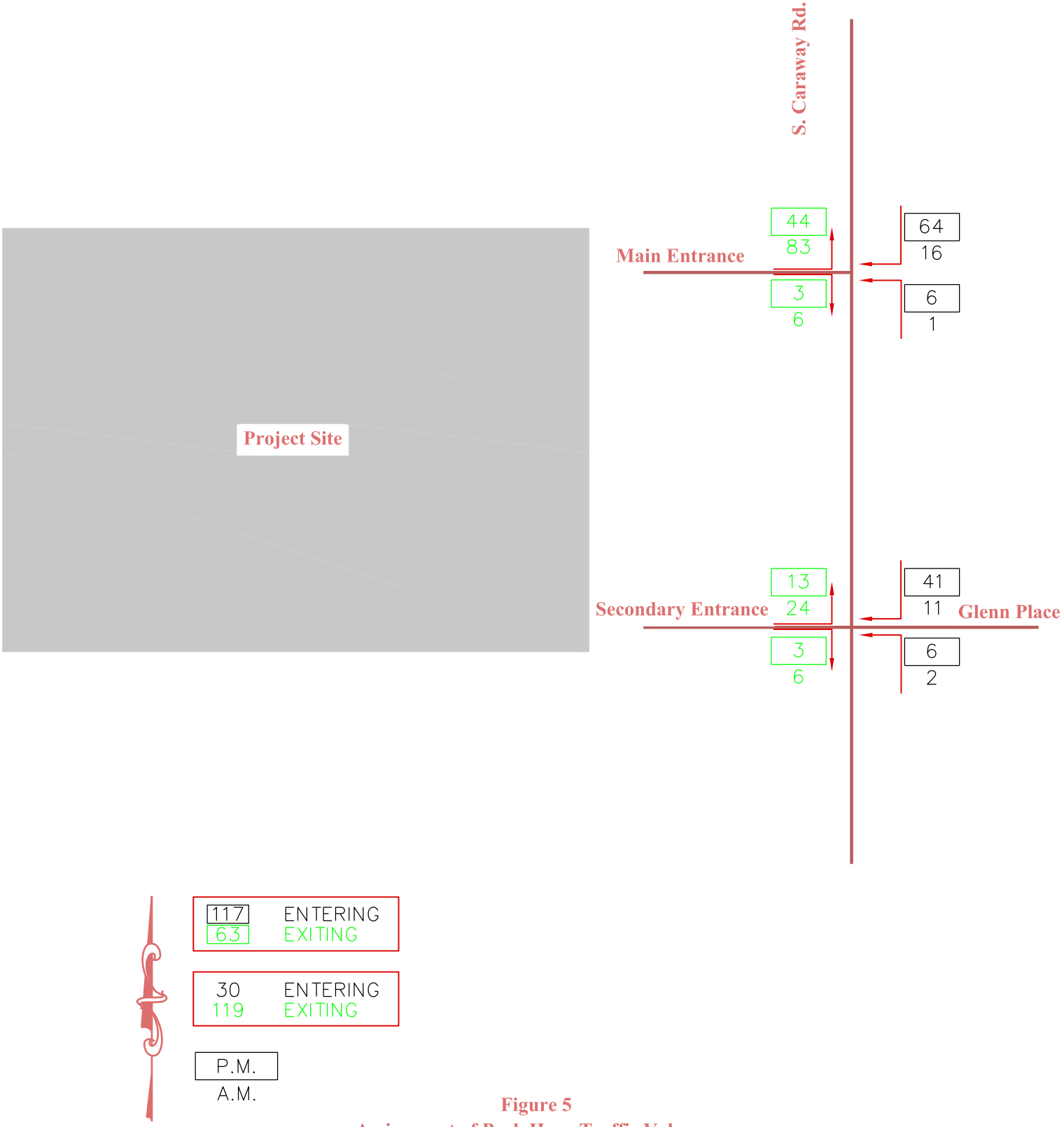


Figure 5
Assignment of Peak Hour Traffic Volumes
Generated by the Project Site With No Signalization (AM/PM Peak Hour)
(Not to Scale)

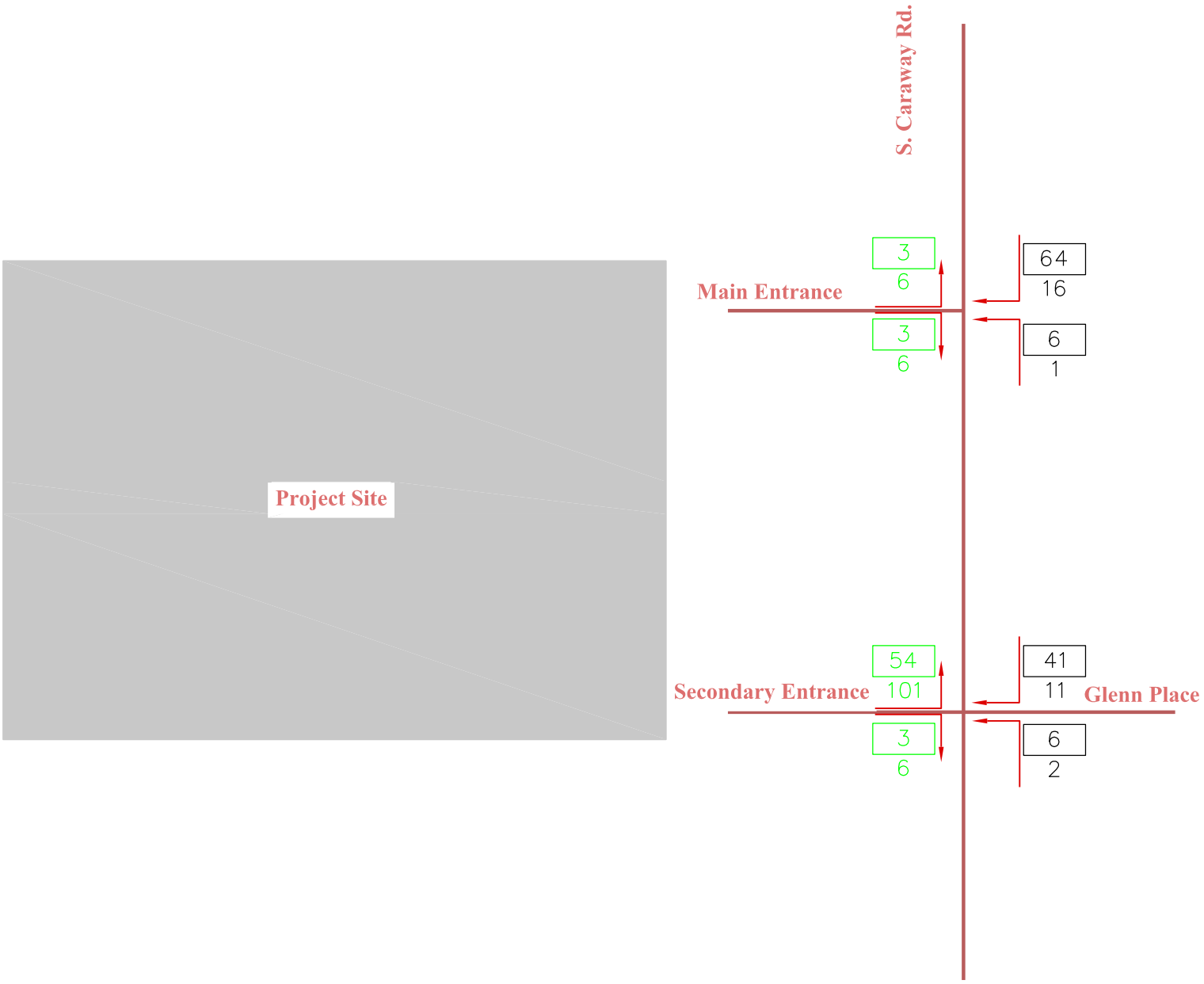


Figure 6
Assignment of Peak Hour Traffic Volumes
Generated by the Project Site (AM/PM Peak Hour)
With Signalization of S. Caraway & Glenn Place

(Not to Scale)

LEVEL-OF-SERVICE ANALYSIS

In order to determine the Level-of-Service (LOS) for these two access points for the proposed development a capacity analysis was performed at these intersections.

Traffic volumes used for the analysis included the volumes acquired from the traffic counts at the S. Caraway Road and Glenn Place intersection. Since Phase 2 of the development is not expected to be completed until 2020, a 1.5 % growth factor per year was used for the S. Caraway through traffic only. No increase in volume was calculated for Glenn Place due to the fact that the area is built out. The existing peak hour volumes are shown in Figure 7, and the 2020 volumes without the development (No build) are shown in Figure 8. Volumes projected from the proposed site was added to the intersection based upon 2020 traffic volumes and no signalization. These volumes are shown in Figures 9 and 10.

Level-of-Service (LOS) for an intersection is defined in the Highway Capacity Manual in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption and lost travel time. Six LOS are defined with letters designating each level from A to F, with LOS "A" representing the best operating conditions and LOS "F" representing the worst operating conditions. Table 2 shows the LOS for unsignalized intersections and the associated delay in seconds.

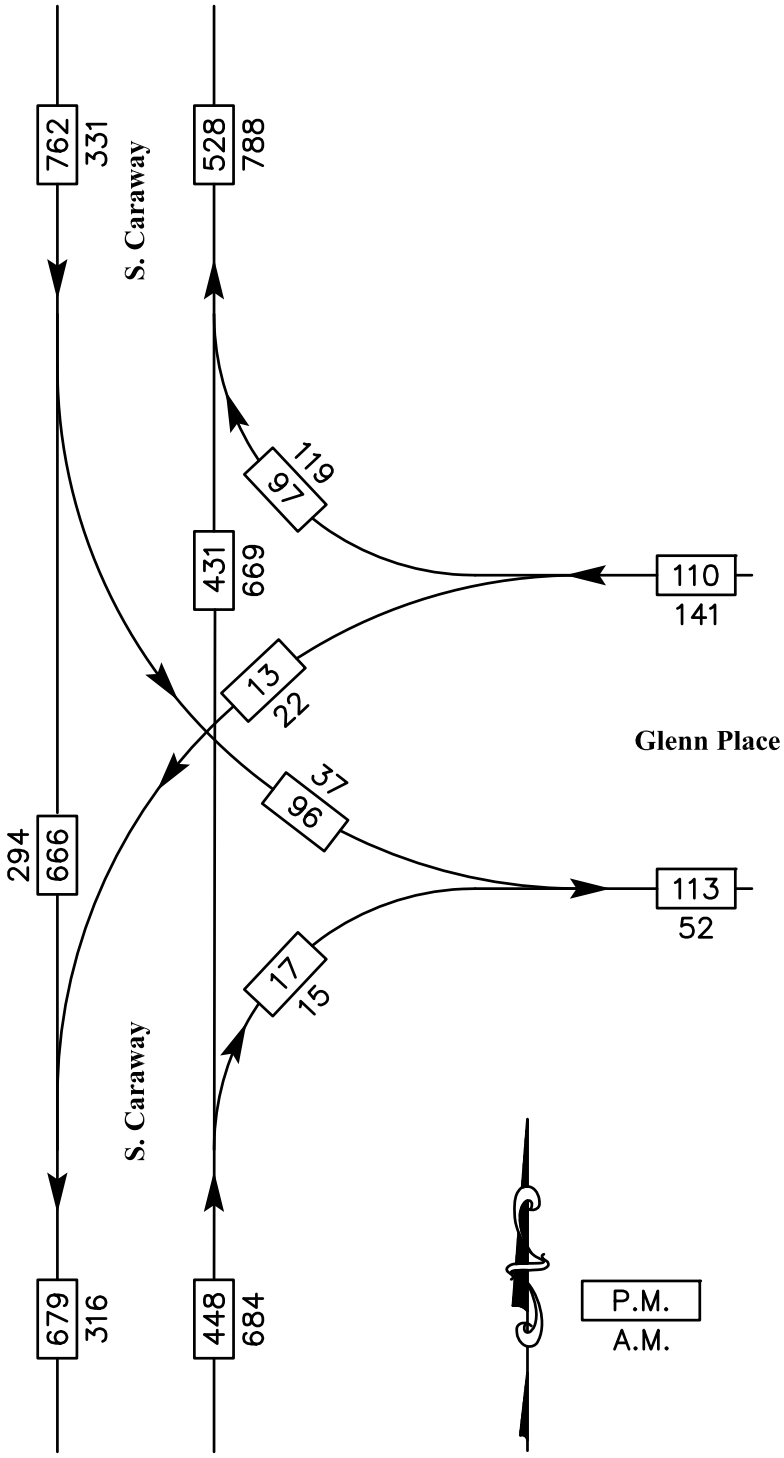


Figure 7
Existing Peak Hour Volumes
S. Caraway Road/Glenn Place

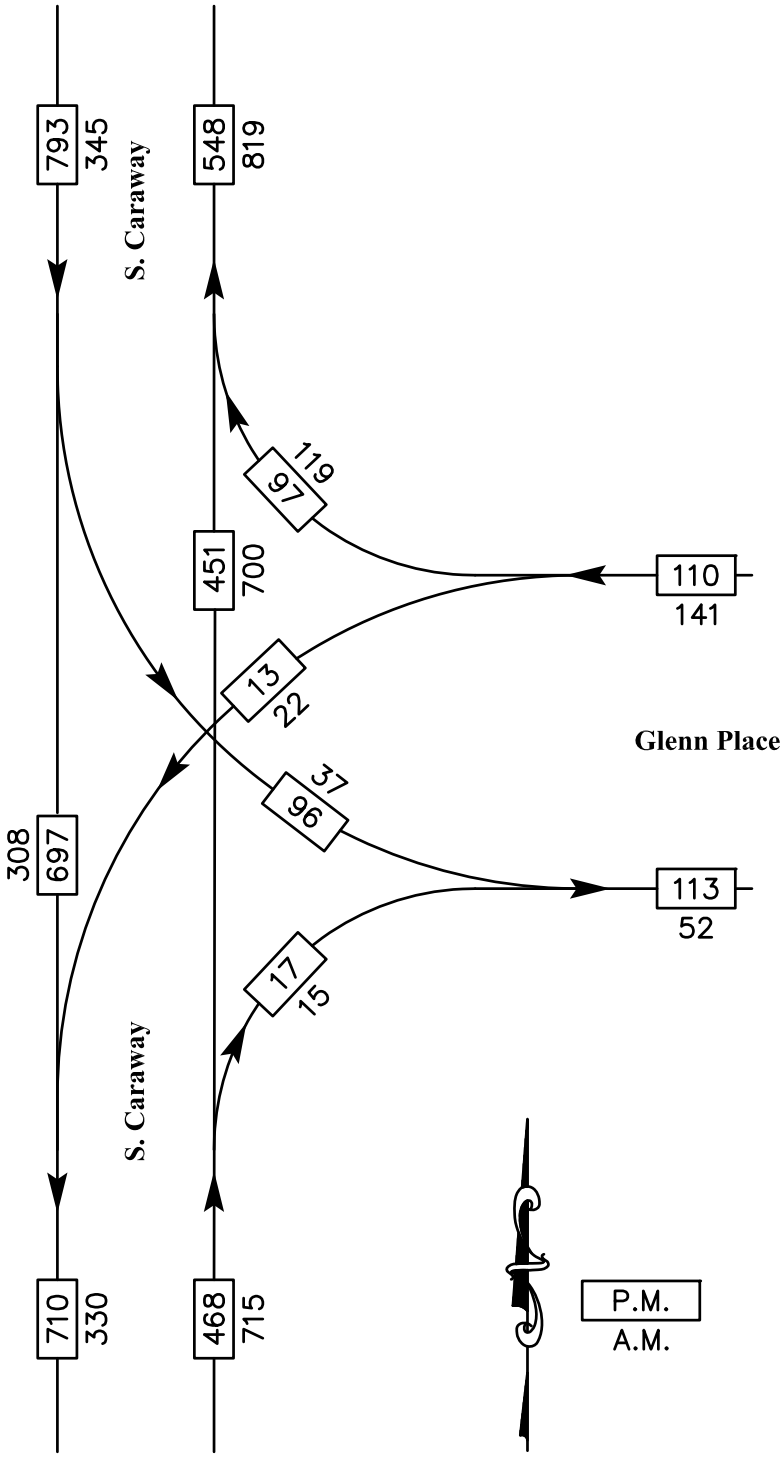


Figure 8
Peak Hour Volumes (2020 No-Build)
S. Caraway Road/Glenn Place

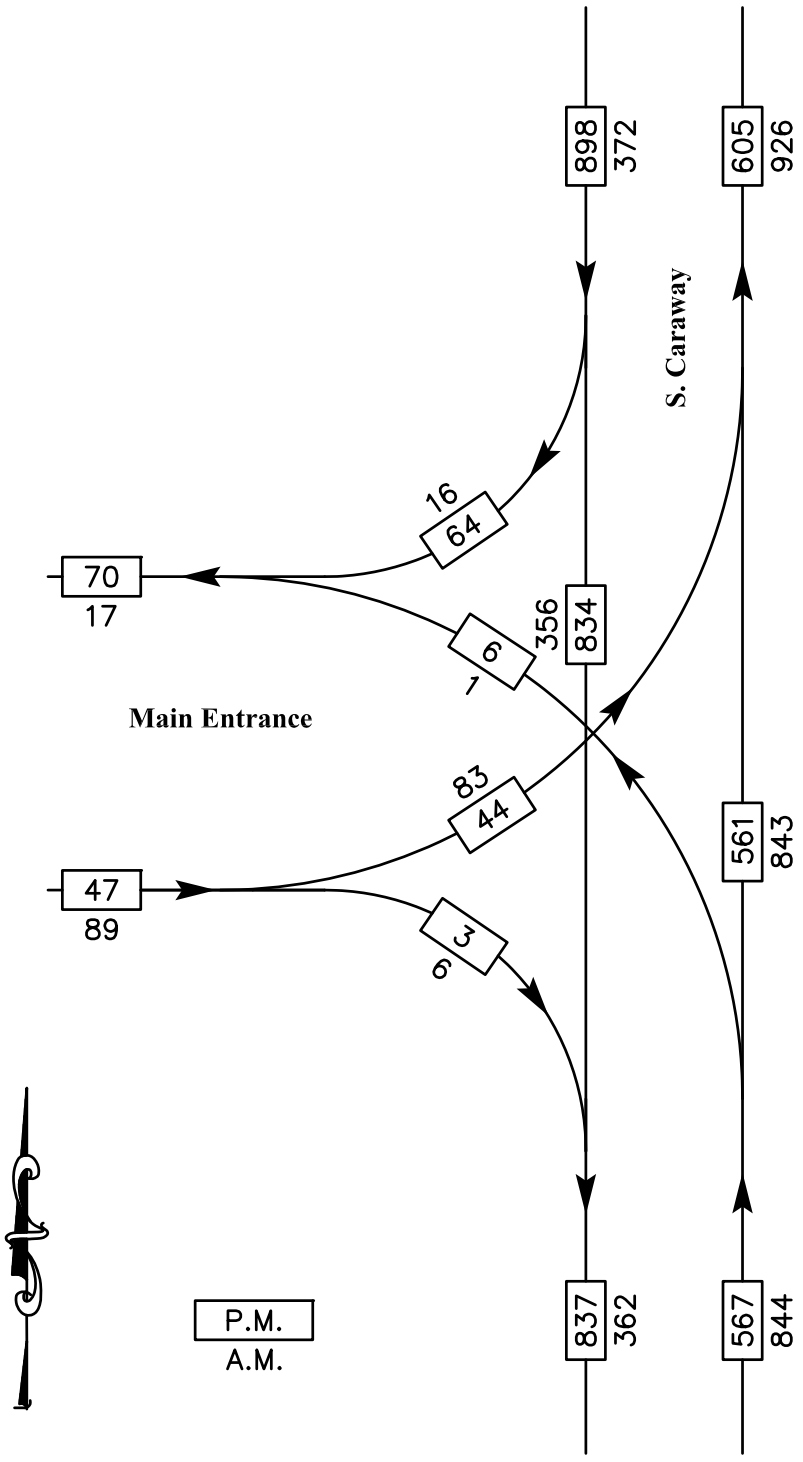


Figure 9
Proposed Peak Hour Volumes (2020 Build)
Main Entrance/South Caraway

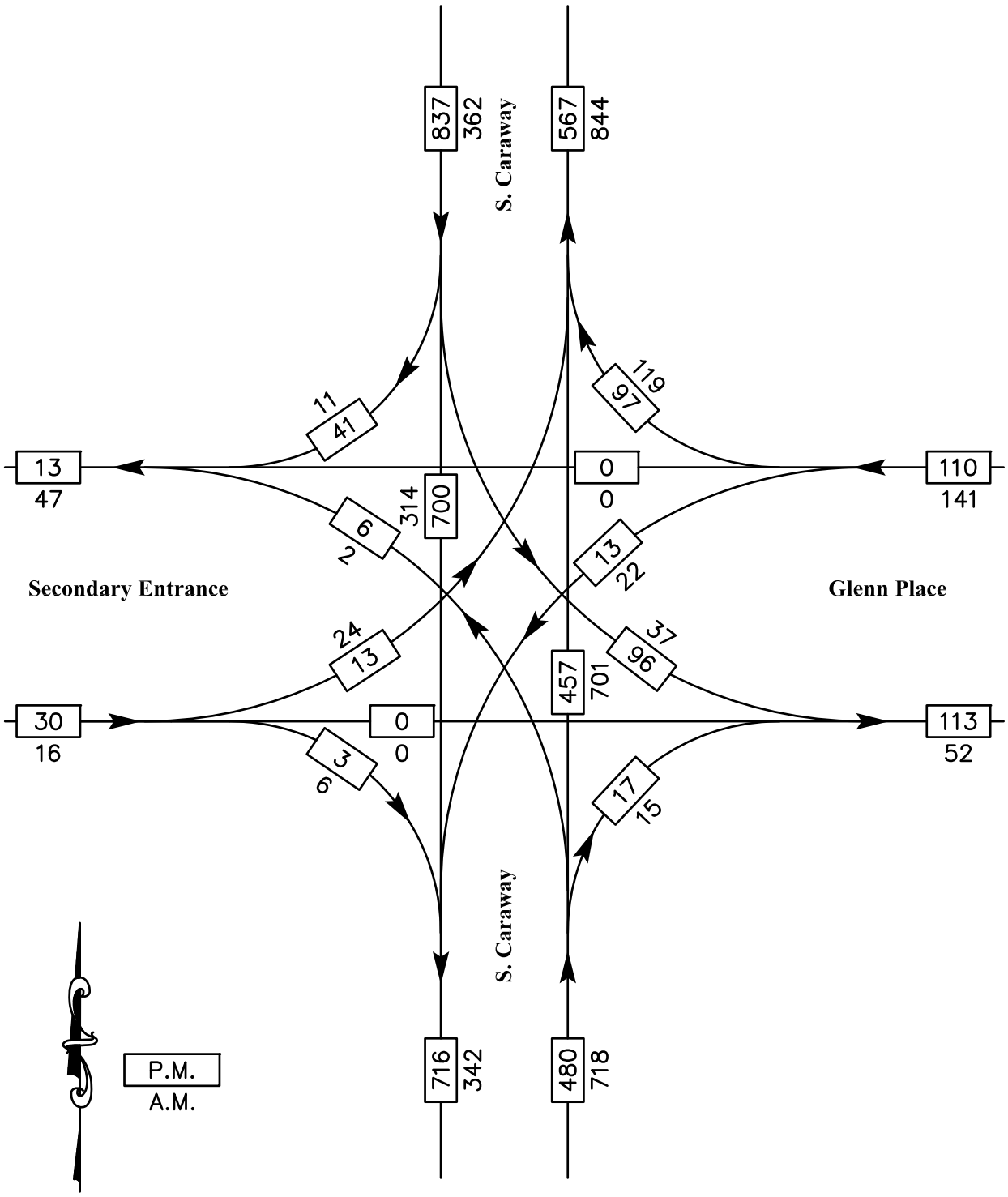


Figure 10
Proposed Peak Hour Volumes (2020 Build)
Glenn Place & Secondary Entrance/South Caraway Road

TABLE 2 LEVEL-OF-SERVICE	
Level-of-Service	**Average Total Delay (SEC/VEH)**
	Unsignalized
A	≤10
B	>10 and ≤15
C	>15 and ≤25
D	>25 and ≤35
E	>35 and ≤50
F	>50

The Highway Capacity Software Version 5.6 was used to perform the LOS analysis. The analysis for the existing conditions at S. Caraway and Glenn Place show that the stop conditions for westbound Glenn Place operates at a LOS "C" for both A.M and P.M. Peak Hours. The southbound Caraway left turn operates at a LOS "A" for the same periods. With the additional traffic projected from 2020 traffic without the development (no build), the LOS remains the same with only a slight increase in delay time. Results for this intersection analysis are shown in Tables 3 and 4, with the HCS reports in the Appendix.

Volumes from the development were then added to the S. Caraway and Glenn Place intersection for the 2020 volumes. This intersection now becomes a full 4-leg intersection. The analysis was run again and the westbound Glenn Place traffic slipped to a LOS "D" in the A.M. Peak, but remained a LOS "C" in the P.M. Peak, although delays increased. The southbound left turn into Glenn Place remained a LOS "A" for both periods.

TABLE 3 S. CARAWAY ROAD AND GLENN PLACE Existing Conditions					
Approach	**Movement**	**LEVEL OF SERVICE**			
		AM Peak Hour (LOS)	**Average Delay (sec/veh)**	**PM Peak Hour (LOS)**	**Average Delay (sec/veh)**
Westbound	Left/Right	C	21.6	C	16.7
Northbound	Through	-	-	-	-
	Right	-	-	-	-
Southbound	Left	A	9.4	A	8.7
	Through	-	-	-	-

TABLE 4 S. CARAWAY ROAD AND GLENN PLACE Projected 2020 Traffic (No Build)					
Approach	**Movement**	**LEVEL OF SERVICE**			
		AM Peak Hour (LOS)	**Average Delay (sec/veh)**	**PM Peak Hour (LOS)**	**Average Delay (sec/veh)**
Westbound	Left/Right	C	23.0	C	17.5
Northbound	Through	-	-	-	-
	Right	-	-	-	-
Southbound	Left	A	9.5	A	8.8
	Through	-	-	-	-

The newly added eastbound traffic from the proposed development will operate at a LOS "E" for the A.M. Peak Hour and slip to a LOS "F" for the P.M. Peak Hour. This is due to the volume of the left turn movement out of the site. This analysis was run with only one lane exiting the site. The analysis was run again utilizing an additional lane exiting the site for right turns. The results changed little since the vast majority of the vehicles are turning left to go north on S. Caraway. The results of this analysis are shown in Table 5. The HCS Reports are in the Appendix.

The main entrance to the north was also analyzed. The results show that the eastbound movement out of the site will operate at a LOS "E" for both the A.M. and P.M. Peak Hours. The results were also run with an additional lane out of the site. This additional lane, again did not decrease delays significantly. The results are shown in Table 6 with the HCS Reports in the Appendix.

Queue Lengths

The queue lengths for both the main entrance and secondary entrance of Glenn Place were also evaluated. With just the one-lane exiting the site, an average of one to three vehicles can be expected in the queue for the Peak Hour. The Site Plan currently provides enough distance for 3 vehicles to queue up to exit the site, therefore the distance should be adequate at both access points. However, even though the analysis has the average of no more than 3 vehicles in the queue, there could be the occasional rush of traffic at certain periods that cause this number to increase due to the inconsistency of traffic volumes

TABLE 5 S. CARAWAY ROAD AND GLENN PLACE Proposed Conditions (Build)					
Approach	**Movement**	**LEVEL OF SERVICE**			
		AM Peak Hour (LOS)	**Average Delay (sec/veh)**	**PM Peak Hour (LOS)**	**Average Delay (sec/veh)**
Eastbound	Left/Right	E	48.0	F	66.5
Westbound	Left	D	25.9	C	21.5
Northbound	Left	A	8.0	A	9.4
	Through	-	-	-	-
	Right	-	-	-	-
Southbound	Left	A	9.5	A	8.8
	Through	-	-	-	-
	Right	-	-	-	-

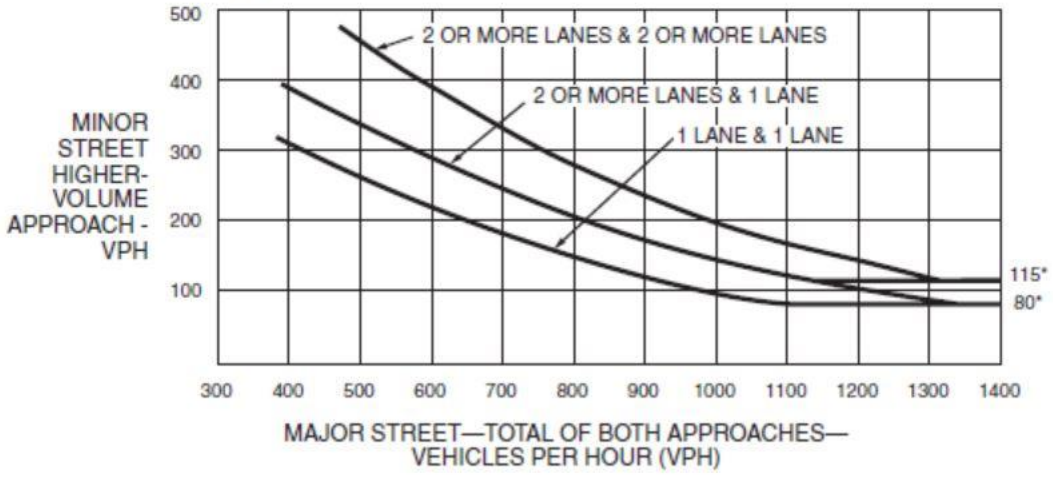
TABLE 6 S. CARAWAY ROAD AND MAIN ENTRANCE Proposed Conditions (Build)					
Approach	**Movement**	**LEVEL OF SERVICE**			
		AM Peak Hour (LOS)	**Average Delay (sec/veh)**	**PM Peak Hour (LOS)**	**Average Delay (sec/veh)**
Eastbound	Left/Right	E	43.7	E	49.6
Northbound	Left	A	8.1	B	10.1
	Through	-	-	-	-
Southbound	Through	-	-	-	-
	Right	-	-	-	-

SIGNAL WARRANT ANALYSIS

The Manual on Uniform Traffic Control Devices (MUTCD) outlines 8 different warrants to justify the installation of a traffic signal. The traffic signal should not be installed unless one or more of these warrants are satisfied. After reviewing the volumes from the existing traffic counts, only one warrant was considered for evaluation - Warrant 2, Four-Hour Vehicular Volume. The MUTCD states the following concerning this particular warrant.

The need for a traffic control signal shall be considered if an engineering study finds that, for each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all fall above the applicable curve in Figure 4C-1 for the existing combination of approach lanes. On the minor street, the higher volumes shall not be required to be on the same approach during each of these 4 hours.

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

The volumes for the total approach for S. Caraway along with volumes from Glenn Place were compiled for the 14 hour period mentioned previously. The warrant was checked for each of these hours which included all of the right turn movements out of Glenn Place. This warrant was also checked if you use just 75% of the right turns out of Glenn Place. None of the left turns were reduced in either comparison. The results of this signal warrant analysis determine that five of the 14 hours do satisfy the warrant if all right turns are included in the analysis. This would satisfy the Four-Hour Vehicular Volume Warrant. When the right turns are reduced to 75% of the volume, only one of the fourteen hour periods meet the warrant. Therefore, this warrant is not satisfied if the Right Turns are reduced to 75% of their values. The results are shown in Table 7.

TABLE 7 Four-Hour Vehicle Volume Warrant							
Start Time	Caraway			Glenn Place	Warrant Met	Glenn Place Westbound Approach Total	Warrant Met
	Southbound	Northbound	Total Approach	Westbound	Y/N	75% Right Turns	Y/N
5:30 AM	11	28	39	14		11	
5:45 AM	25	39	64	7		5	
6:00 AM	17	39	56	6		5	
6:15 AM	35	52	87	12		9	
Hourly Total	88	158	246	39	N	30	N
6:30 AM	31	79	110	23		18	
6:45 AM	46	72	118	22		18	
7:00 AM	65	77	142	30		24	
7:15 AM	74	174	248	39		31	
Hourly Total	216	402	618	114	N	91	N
7:30 AM	78	228	306	48		38	
7:45 AM	95	174	269	38		29	
8:00 AM	84	108	192	16		13	
8:15 AM	57	89	146	25		20	
Hourly Total	314	599	913	127	Y	100	N
8:30 AM	75	111	186	26		20	
8:45 AM	59	97	156	21		16	
9:00 AM	56	82	138	18		14	
9:15 AM	53	69	122	13		10	
Hourly Total	243	359	602	78	N	59	N
9:30 AM	68	73	141	17		13	
9:45 AM	71	79	150	23		18	
10:00 AM	65	71	136	10		9	
10:15 AM	63	72	135	16		13	
Hourly Total	267	295	562	66	N	53	N
10:30 AM	59	77	136	13		10	
10:45 AM	76	95	171	12		10	
11:00 AM	85	84	169	12		9	
11:15 AM	80	85	165	9		7	
Hourly Total	300	341	641	46	N	36	N
11:30 AM	78	66	144	19		15	
11:45 AM	103	77	180	16		12	
12:00 PM	136	90	226	17		14	
12:15 PM	109	104	213	29		23	
Hourly Total	426	337	763	81	N	64	N

TABLE 7, CONTINUED							
Start Time	Caraway			Glenn Place	Warrant Met	Glenn Place Westbound Approach Total	Warrant Met
	Southbound	Northbound	Total Approach	Westbound	Y/N	75% Right Turns	Y/N
12:30 PM	105	87	192	18		14	
12:45 PM	92	101	193	27		21	
1:00 PM	115	81	196	14		11	
1:15 PM	97	74	171	21		16	
Hourly Total	409	343	752	80	N	62	N
1:30 PM	111	97	208	32		25	
1:45 PM	100	72	172	21		17	
2:00 PM	122	72	194	14		11	
2:15 PM	112	100	212	18		15	
Hourly Total	445	341	786	85	N	68	N
2:30 PM	127	99	226	32		25	
2:45 PM	136	116	252	32		25	
3:00 PM	132	129	261	19		15	
3:15 PM	142	89	231	22		18	
Hourly Total	537	433	970	105	Y	83	N
3:30 PM	140	117	257	16		13	
3:45 PM	160	110	270	25		20	
4:00 PM	147	121	268	28		21	
4:15 PM	151	95	246	30		23	
Hourly Total	598	443	1041	99	Y	77	N
4:30 PM	179	108	287	25		20	
4:45 PM	170	111	281	27		21	
5:00 PM	192	135	327	24		19	
5:15 PM	212	98	310	33		26	
Hourly Total	753	452	1205	109	Y	85	Y
5:30 PM	188	104	292	26		20	
5:45 PM	160	88	248	22		17	
6:00 PM	156	92	248	22		18	
6:15 PM	163	94	257	24		19	
Hourly Total	667	378	1045	94	Y	74	N
6:30 PM	135	64	199	27		21	
6:45 PM	114	89	203	27		21	
7:00 PM	100	71	171	27		21	
7:15 PM	114	88	202	16		13	
Hourly Total	463	312	775	97	N	77	N

SUMMARY

The purpose of the study was to evaluate the impact to traffic from the Proposed Apartment Complex on the west side of S. Caraway Road near the Glenn Place Intersection. This study included a Level-of-Service (LOS) Analysis of the two proposed access points, with one of these points being the intersection of S. Caraway Road and Glenn Place. In addition to this analysis a Traffic Signal Warrant Analysis was also performed at the existing intersection of S. Caraway Road and Glenn Place.

The results of the LOS Analysis determined that the existing intersection of S. Caraway and Glenn Place would only be slightly impacted by the development. Delays would increase for Glenn Place by 4 seconds or less during peak hours. The Analysis did show however that during Peak Hours, traffic exiting the proposed development would experience delays at both access points with LOS being an "E" or an "F". Although these delays are not desirable, they are consistent with other access points along S. Caraway approaching from the west. Queuing lengths from vehicles exiting the site would normally be able to be accommodated within the area provided by the site plan which provides storage for 3 vehicles. There could however be short periods of time when more than 3 vehicles are in the queue, but this should happen infrequently.

The Traffic Signal Warrant Analysis revealed that at the existing intersection of S. Caraway Road and Glenn Place, the Four-Hour Vehicular Volume Warrant is satisfied, if you include all right turns coming out of Glenn Place. Any reduction of these right turns will cause this intersection to fail to meet this warrant.

APPENDIX

Study Name 03.29.17 Jonesboro (S. Caraway and Glenn) TMC
Start Date 03/29/2017
Start Time 5:30 AM
Site Code
Project Jonesboro: S. Caraway and Glenn

Turning Movement Data

Type Road
Classification Totals

Start Time	Caraway Southbound			Glenn Westbound			Caraway Northbound			Intersection Total
	Thru	Left	App Total	Right	Left	App. Total	Right	Thru	App. Total	
5:30 AM	10	1	11	14	0	14	0	28	28	53
5:45 AM	22	3	25	7	0	7	0	39	39	71
6:00 AM	16	1	17	5	1	6	0	39	39	62
6:15 AM	30	5	35	12	0	12	1	51	52	99
Hourly Total	78	10	88	38	1	39	1	157	158	285
6:30 AM	26	5	31	22	1	23	2	77	79	133
6:45 AM	41	5	46	17	5	22	0	72	72	140
7:00 AM	58	7	65	23	7	30	2	75	77	172
7:15 AM	66	8	74	31	8	39	4	170	174	287
Hourly Total	191	25	216	93	21	114	8	394	402	732
7:30 AM	72	6	78	39	9	48	8	220	228	354
7:45 AM	85	10	95	35	3	38	2	172	174	307
8:00 AM	71	13	84	14	2	16	1	107	108	208
8:15 AM	50	7	57	22	3	25	2	87	89	171
Hourly Total	278	36	314	110	17	127	13	586	599	1040
8:30 AM	70	5	75	25	1	26	0	111	111	212
8:45 AM	50	9	59	19	2	21	1	96	97	177
9:00 AM	52	4	56	18	0	18	1	81	82	156
9:15 AM	46	7	53	13	0	13	2	67	69	135
Hourly Total	218	25	243	75	3	78	4	355	359	680
9:30 AM	56	12	68	15	2	17	0	73	73	158
9:45 AM	66	5	71	20	3	23	2	77	79	173
10:00 AM	57	8	65	6	4	10	2	69	71	146
10:15 AM	57	6	63	12	4	16	3	69	72	151
Hourly Total	236	31	267	53	13	66	7	288	295	628
10:30 AM	58	1	59	11	2	13	3	74	77	149
10:45 AM	68	8	76	9	3	12	0	95	95	183
11:00 AM	78	7	85	11	1	12	0	84	84	181
11:15 AM	69	11	80	8	1	9	1	84	85	174
Hourly Total	273	27	300	39	7	46	4	337	341	687
11:30 AM	68	10	78	15	4	19	1	65	66	163
11:45 AM	97	6	103	16	0	16	5	72	77	196
12:00 PM	118	18	136	14	3	17	3	87	90	243
12:15 PM	94	15	109	25	4	29	2	102	104	242
Hourly Total	377	49	426	70	11	81	11	326	337	844

Start Time	Caraway Southbound			Glenn Westbound			Caraway Northbound			Intersection Total
	Thru	Left	App Total	Right	Left	App. Total	Right	Thru	App. Total	
12:30 PM	93	12	105	16	2	18	1	86	87	210
12:45 PM	76	16	92	23	4	27	2	99	101	220
1:00 PM	106	9	115	13	1	14	6	75	81	210
1:15 PM	81	16	97	20	1	21	4	70	74	192
Hourly Total	356	53	409	72	8	80	13	330	343	832
1:30 PM	95	16	111	29	3	32	4	93	97	240
1:45 PM	85	15	100	15	6	21	1	71	72	193
2:00 PM	109	13	122	11	3	14	1	71	72	208
2:15 PM	89	23	112	13	5	18	1	99	100	230
Hourly Total	378	67	445	68	17	85	7	334	341	871
2:30 PM	110	17	127	28	4	32	7	92	99	258
2:45 PM	115	21	136	28	4	32	1	115	116	284
3:00 PM	114	18	132	15	4	19	4	125	129	280
3:15 PM	118	24	142	17	5	22	3	86	89	253
Hourly Total	457	80	537	88	17	105	15	418	433	1075
3:30 PM	120	20	140	14	2	16	7	110	117	273
3:45 PM	132	28	160	22	3	25	7	103	110	295
4:00 PM	123	24	147	27	1	28	9	112	121	296
4:15 PM	127	24	151	27	3	30	3	92	95	276
Hourly Total	502	96	598	90	9	99	26	417	443	1140
4:30 PM	147	32	179	21	4	25	4	104	108	312
4:45 PM	154	16	170	24	3	27	3	108	111	308
5:00 PM	170	22	192	20	4	24	3	132	135	351
5:15 PM	178	34	212	30	3	33	6	92	98	343
Hourly Total	649	104	753	95	14	109	16	436	452	1314
5:30 PM	164	24	188	23	3	26	5	99	104	318
5:45 PM	135	25	160	22	0	22	2	86	88	270
6:00 PM	139	17	156	16	6	22	4	88	92	270
6:15 PM	144	19	163	19	5	24	5	89	94	281
Hourly Total	582	85	667	80	14	94	16	362	378	1139
6:30 PM	113	22	135	23	4	27	1	63	64	226
6:45 PM	100	14	114	24	3	27	8	81	89	230
7:00 PM	81	19	100	23	4	27	2	69	71	198
7:15 PM	99	15	114	11	5	16	4	84	88	218
Hourly Total	393	70	463	81	16	97	15	297	312	872
Grand Total	4968	758	5726	1052	168	1220	156	5037	5193	12139
Approach %	86.8%	13.2%	-	86.2%	13.8%	-	3.0%	97.0%	-	-
Total %	40.9%	6.2%	-	8.7%	1.4%	-	1.3%	41.5%	-	-
Lights	4894	751	-	1035	164	-	147	4987	-	11978
% Lights	98.5%	99.1%	-	98.4%	97.6%	-	94.2%	99.0%	-	98.7%
Mediums	74	7	-	17	4	-	9	46	-	157
% Mediums	1.5%	0.9%	-	1.6%	2.4%	-	5.8%	0.9%	-	1.3%
Articulated Trucks	-	-	-	-	-	-	-	4	-	4
% Articulated Trucks	-	-	-	-	-	-	-	0.1%	-	0.0%
Bicycles	-	-	-	-	-	-	-	-	-	0
Pedestrians	-	-	-	-	6	-	-	-	-	6

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Rick Gafford*	Intersection	*S. Caraway and Glenn Place*
Agency/Co.	*Fisher Arnold*	Jurisdiction	*Jonesboro, AR*
Date Performed	*4/6/2017*	Analysis Year	*2017*
Analysis Time Period	*AM Peak*		

Project Description *D10323*

East/West Street: *Glenn Place*	North/South Street: *S. Caraway*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*669*	*15*	*37*	*294*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*727*	*16*	*40*	*319*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*22*	*0*	*119*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*23*	*0*	*129*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*40*		*152*				
C (m) (veh/h)		*864*		*367*				
v/c		*0.05*		*0.41*				
95% queue length		*0.15*		*1.98*				
Control Delay (s/veh)		*9.4*		*21.6*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*21.6*					
Approach LOS	--	--	*C*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Rick Gafford*	Intersection	*S. Caraway and Glenn Place*
Agency/Co.	*Fisher Arnold*	Jurisdiction	*Jonesboro, AR*
Date Performed	*4/6/2017*	Analysis Year	*2017*
Analysis Time Period	*PM Peak*		

Project Description *D10323*

East/West Street: *Glenn Place*	North/South Street: *S. Caraway*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*431*	*17*	*96*	*666*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*468*	*18*	*104*	*723*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*13*	*0*	*97*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*14*	*0*	*105*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*104*		*119*				
C (m) (veh/h)		*1077*		*425*				
v/c		*0.10*		*0.28*				
95% queue length		*0.32*		*1.13*				
Control Delay (s/veh)		*8.7*		*16.7*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*16.7*					
Approach LOS	--	--	*C*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Rick Gafford*	Intersection	*S. Caraway and Glenn Place*
Agency/Co.	*Fisher Arnold*	Jurisdiction	*Jonesboro, AR*
Date Performed	*4/6/2017*	Analysis Year	*2020*
Analysis Time Period	*AM Peak (No Build)*		

Project Description *D10323*

East/West Street: *Glenn Place* | North/South Street: *S. Caraway*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*700*	*15*	*37*	*308*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*760*	*16*	*40*	*334*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*22*	*0*	*119*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*23*	*0*	*129*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*40*		*152*				
C (m) (veh/h)		*840*		*349*				
v/c		*0.05*		*0.44*				
95% queue length		*0.15*		*2.13*				
Control Delay (s/veh)		*9.5*		*23.0*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*23.0*					
Approach LOS	--	--	*C*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Rick Gafford*	Intersection	*S. Caraway and Glenn Place*
Agency/Co.	*Fisher Arnold*	Jurisdiction	*Jonesboro, AR*
Date Performed	*4/6/2017*	Analysis Year	*2020*
Analysis Time Period	*PM Peak (No Build)*		

Project Description *D10323*

East/West Street: *Glenn Place*	North/South Street: *S. Caraway*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*451*	*17*	*96*	*697*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*490*	*18*	*104*	*757*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*13*	*0*	*97*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*14*	*0*	*105*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*104*		*119*				
C (m) (veh/h)		*1057*		*405*				
v/c		*0.10*		*0.29*				
95% queue length		*0.33*		*1.21*				
Control Delay (s/veh)		*8.8*		*17.5*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*17.5*					
Approach LOS	--	--	*C*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Rick Gafford*	Intersection	*S. Caraway and Glenn Place*
Agency/Co.	*Fisher Arnold*	Jurisdiction	*Jonesboro, AR*
Date Performed	*4/6/2017*	Analysis Year	*2020*
Analysis Time Period	*AM Peak (Build 1 Lane)*		

Project Description *D10323*

East/West Street: *Glenn Place/Secondary Entrance*	North/South Street: *S. Caraway*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*2*	*701*	*15*	*37*	*314*	*11*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*2*	*761*	*16*	*40*	*341*	*11*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*24*	*0*	*6*	*22*	*0*	*119*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*26*	*0*	*6*	*23*	*0*	*129*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*2*	*40*		*152*			*32*	
C (m) (veh/h)	*1218*	*839*		*321*			*115*	
v/c	*0.00*	*0.05*		*0.47*			*0.28*	
95% queue length	*0.00*	*0.15*		*2.42*			*1.05*	
Control Delay (s/veh)	*8.0*	*9.5*		*25.9*			*48.0*	
LOS	*A*	*A*		*D*			*E*	
Approach Delay (s/veh)	--	--	*25.9*			*48.0*		
Approach LOS	--	--	*D*			*E*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Rick Gafford*	Intersection	*S. Caraway and Glenn Place*
Agency/Co.	*Fisher Arnold*	Jurisdiction	*Jonesboro, AR*
Date Performed	*4/6/2017*	Analysis Year	*2020*
Analysis Time Period	*PM Peak (Build 1 Lane)*		

Project Description *D10323*

East/West Street: *Glenn Place/Secondary Entrance*	North/South Street: *S. Caraway*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*6*	*457*	*17*	*96*	*700*	*41*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*6*	*496*	*18*	*104*	*760*	*44*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*	*0*	*3*	*13*	*0*	*97*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*14*	*0*	*3*	*14*	*0*	*105*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*6*	*104*		*119*			*17*	
C (m) (veh/h)	*829*	*1052*		*336*			*75*	
v/c	*0.01*	*0.10*		*0.35*			*0.23*	
95% queue length	*0.02*	*0.33*		*1.56*			*0.79*	
Control Delay (s/veh)	*9.4*	*8.8*		*21.5*			*66.5*	
LOS	*A*	*A*		*C*			*F*	
Approach Delay (s/veh)	--	--	*21.5*			*66.5*		
Approach LOS	--	--	*C*			*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Rick Gafford*	Intersection	*S. Caraway and Glenn Place*
Agency/Co.	*Fisher Arnold*	Jurisdiction	*Jonesboro, AR*
Date Performed	*4/6/2017*	Analysis Year	*2020*
Analysis Time Period	*AM Peak (Build 2 Lanes)*		

Project Description *D10323*

East/West Street: *Glenn Place/Secondary Entrance*	North/South Street: *S. Caraway*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*2*	*701*	*15*	*37*	*314*	*11*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*2*	*761*	*16*	*40*	*341*	*11*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*24*	*0*	*6*	*22*	*0*	*119*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*26*	*0*	*6*	*23*	*0*	*129*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration	*LT*		*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*		*LT*		*R*
v (veh/h)	*2*	*40*		*152*		*26*		*6*
C (m) (veh/h)	*1218*	*839*		*321*		*96*		*702*
v/c	*0.00*	*0.05*		*0.47*		*0.27*		*0.01*
95% queue length	*0.00*	*0.15*		*2.42*		*1.00*		*0.03*
Control Delay (s/veh)	*8.0*	*9.5*		*25.9*		*55.9*		*10.2*
LOS	*A*	*A*		*D*		*F*		*B*
Approach Delay (s/veh)	--	--	*25.9*			*47.3*		
Approach LOS	--	--	*D*			*E*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Rick Gafford*	Intersection	*S. Caraway and Glenn Place*
Agency/Co.	*Fisher Arnold*	Jurisdiction	*Jonesboro, AR*
Date Performed	*4/6/2017*	Analysis Year	*2020*
Analysis Time Period	*PM Peak (Build 2 Lanes)*		

Project Description *D10323*

East/West Street: *Glenn Place/Secondary Entrance*	North/South Street: *S. Caraway*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*6*	*457*	*17*	*96*	*700*	*41*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*6*	*496*	*18*	*104*	*760*	*44*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*	*0*	*3*	*13*	*0*	*97*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*14*	*0*	*3*	*14*	*0*	*105*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration	*LT*		*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*		*LT*		*R*
v (veh/h)	*6*	*104*		*119*		*14*		*3*
C (m) (veh/h)	*829*	*1052*		*336*		*64*		*397*
v/c	*0.01*	*0.10*		*0.35*		*0.22*		*0.01*
95% queue length	*0.02*	*0.33*		*1.56*		*0.75*		*0.02*
Control Delay (s/veh)	*9.4*	*8.8*		*21.5*		*76.4*		*14.1*
LOS	*A*	*A*		*C*		*F*		*B*
Approach Delay (s/veh)	--	--	*21.5*			*65.4*		
Approach LOS	--	--	*C*			*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Rick Gafford*
Agency/Co.	*Fisher Arnold*
Date Performed	*4/6/2017*
Analysis Time Period	*AM Peak (Build 1 Lane)*

Site Information

Intersection	*S. Caraway and Main Entrance*
Jurisdiction	*Jonesboro, AR*
Analysis Year	*2020*

Project Description *D10323*

East/West Street: *Main Entrance* | North/South Street: *S. Caraway*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*1*	*843*			*356*	*16*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*1*	*916*	*0*	*0*	*386*	*17*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*83*	*0*	*6*			
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*90*	*0*	*6*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*1*						*96*	
C (m) (veh/h)	*1167*						*185*	
v/c	*0.00*						*0.52*	
95% queue length	*0.00*						*2.62*	
Control Delay (s/veh)	*8.1*						*43.7*	
LOS	*A*						*E*	
Approach Delay (s/veh)	--	--					*43.7*	
Approach LOS	--	--					*E*	

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Rick Gafford*
Agency/Co.	*Fisher Arnold*
Date Performed	*4/6/2017*
Analysis Time Period	*PM Peak (Build 1 Lane)*

Site Information

Intersection	*S. Caraway and Main Entrance*
Jurisdiction	*Jonesboro, AR*
Analysis Year	*2020*

Project Description *D10323*

East/West Street: *Main Entrance* | North/South Street: *S. Caraway*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*6*	*561*			*834*	*64*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*6*	*609*	*0*	*0*	*906*	*69*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*44*	*0*	*3*			
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*47*	*0*	*3*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*6*						*50*	
C (m) (veh/h)	*716*						*129*	
v/c	*0.01*						*0.39*	
95% queue length	*0.03*						*1.63*	
Control Delay (s/veh)	*10.1*						*49.6*	
LOS	*B*						*E*	
Approach Delay (s/veh)	--	--					*49.6*	
Approach LOS	--	--					*E*	

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Rick Gafford*
Agency/Co.	*Fisher Arnold*
Date Performed	*4/6/2017*
Analysis Time Period	*AM Peak (Build 2 Lane)*

Site Information

Intersection	*S. Caraway and Main Entrance*
Jurisdiction	*Jonesboro, AR*
Analysis Year	*2020*

Project Description *D10323*

East/West Street: *Main Entrance* | North/South Street: *S. Caraway*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*1*	*843*			*356*	*16*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*1*	*916*	*0*	*0*	*386*	*17*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*83*	*0*	*6*			
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*90*	*0*	*6*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*0*	*0*
Configuration	*LT*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*					*LT*		*R*
v (veh/h)	*1*					*90*		*6*
C (m) (veh/h)	*1167*					*177*		*659*
v/c	*0.00*					*0.51*		*0.01*
95% queue length	*0.00*					*2.52*		*0.03*
Control Delay (s/veh)	*8.1*					*44.7*		*10.5*
LOS	*A*					*E*		*B*
Approach Delay (s/veh)	--	--				*42.6*		
Approach LOS	--	--				*E*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Rick Gafford*
Agency/Co.	*Fisher Arnold*
Date Performed	*4/6/2017*
Analysis Time Period	*PM Peak (Build 2 Lane)*

Site Information

Intersection	*S. Caraway and Main Entrance*
Jurisdiction	*Jonesboro, AR*
Analysis Year	*2020*

Project Description *D10323*

East/West Street: *Main Entrance* | North/South Street: *S. Caraway*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*6*	*561*			*834*	*64*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*6*	*609*	*0*	*0*	*906*	*69*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*44*	*0*	*3*			
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*47*	*0*	*3*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*0*	*0*
Configuration	*LT*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*					*LT*		*R*
v (veh/h)	*6*					*47*		*3*
C (m) (veh/h)	*716*					*124*		*322*
v/c	*0.01*					*0.38*		*0.01*
95% queue length	*0.03*					*1.57*		*0.03*
Control Delay (s/veh)	*10.1*					*50.8*		*16.3*
LOS	*B*					*F*		*C*
Approach Delay (s/veh)	--	--				*48.7*		
Approach LOS	--	--				*E*		