

Traffic Analysis

Jenkins Island Access Management System

Based on our conversation, we analyzed the proposed median U-turn intersections on US 278 for 65,000 ADT. We also analyzed the intersections for 75,000 ADT and 85,000 ADT – all for the proposed 2035 design year. The following presents a brief description of the results of the analysis.

Table: Intersection LOS Summary

Intersection	Control	Movement	Condition Design Year (Projected ADT)	AM Peak			PM Peak			Weekend		
				LOS	Delay (Sec)	v/c	LOS	Delay (Sec)	v/c	LOS	Delay (Sec)	v/c
Blue Heron Point Road @ US 278	Signal	Overall	2035 (65,000)	B	10.8	0.86	A	8.0	0.63	A	6.5	0.73
			2035 (75,000)	C	20.5	0.95	A	9.6	0.70	A	8.9	0.83
			2035 (85,000)	E	63.7	1.07	B	12.0	0.77	B	17.8	0.93
Median U-Turn east of Jenkins Road	Signal	Overall	2035 (65,000)	B	14.2	0.44	B	10.4	0.87	B	12.4	0.63
			2035 (75,000)	B	14.3	0.49	C	26.2	1.01	B	12.7	0.70
			2035 (85,000)	B	14.8	0.54	E	71.8	1.13	B	12.9	0.78

- For 65,000 ADT (which is an increase of around 20% from 2015 ADT), both the intersections are expected to operate at acceptable LOS B or better for AM, PM, and Weekend peak periods.
- For 75,000 ADT (which is an increase of around 38% from 2015 ADT), both the intersections are expected to operate at acceptable LOS C or better for AM, PM, and Weekend peak periods.
- For 85,000 ADT (which is an increase of around 55% from 2015 ADT), the intersection of Blue Heron Point@US278 is expected to operate at LOS E during AM Peak period and the intersection of Median U-Turn east of Jenkins Road is expected to operate at LOS E during PM Peak period.

For reference, the capacity analysis of the intersections as shown in the original report (*dated November 20, 2015*) is included below. It should be noted that based on the Low Country Regional Transportation Model, a 7% increase of traffic volume from 2015 was considered to estimate the 2035 traffic volumes.

Table 4.3 Intersection LOS Summary – Build Condition – Alternative 2A

Intersection	Control	Movement	Condition	AM Peak			PM Peak			Weekend		
				LOS	Delay (Sec)	v/c	LOS	Delay (Sec)	v/c	LOS	Delay (Sec)	v/c
Blue Heron Point Road @ US 278	Signal	Overall	2020	A	5.2	0.71	A	6.9	0.56	A	5.6	0.65
			2035	A	5.4	0.74	A	7.1	0.58	A	5.7	0.67
Crosstree Drive @ US 278	Stop	NBR	2020	D	34.9	0.35	A	9.8	0.10	B	10.1	0.07
			2035	E	41.1	0.41	A	9.9	0.10	B	10.3	0.07
Jenkins Road @ US 278	Stop	SBR	2020	A	9.9	0.03	D	29.5	0.19	B	10.5	0.03
			2035	B	10.0	0.03	D	32.1	0.22	B	10.6	0.04
Median U-Turn east of Jenkins Road	Signal	Overall	2020	B	12.8	0.39	A	8.4	0.72	B	10.6	0.53
			2035	B	12.8	0.40	A	8.9	0.75	B	10.8	0.55

Note: Table 4.3 from *Preliminary Project Planning & Environmental Screening Report – Jenkins Island Access Management System – Nov 20, 2015* (page 34)