

SAFETY ANALYSIS

7.0 SAFETY ANALYSIS

Crash data for the I-275 ramps were provided by FDOT and crash data for 31st Street South was provided by the City. Crash data was provided for the six-year period from January 1, 2013 to December 31, 2018. **Table 7-1** shows the total number of crashes.

Table 7-1: I-275 at 31st Street South Interchange Study Area – Crash Summary (2013-2018)

Year	Total Number of Crashes	Number of Fatal Crashes	Number of Fatalities	Number of Injury Crashes	Number of Injuries	Number of Property Damage Only (PDO) Crashes
2013	12	1	1	2	2	9
2014	21	0	0	8	8	13
2015	18	0	0	4	5	14
2016	14	0	0	5	7	9
2017	14	0	0	4	4	10
2018	19	0	0	7	8	12
Total	98	1	1	30	34	67

As shown in **Table 7-1**, 98 crashes occurred in the I-275 at 31st Street South Interchange study area, of which one was a fatal crash and 30 were injury crashes, resulting in one fatality and 34 injuries. 67 of crashes resulted in property damaged only (PDO). There were four crashes involving bicyclists and two crashes involving pedestrians. The crash frequency for the I-275 at 31st Street South interchange study area is 16.3 crashes per year. **Table 7-2** summarizes the types of crashes.

The 2018 Annual Average Daily Traffic (AADT) volume taken during the data collection process were used to determine the crashes per million vehicles entering the intersection. The intersection crash rate for the I-275 at 31st Street South intersection is 2.35 crashes per million entering vehicles.

The most predominant crash types are hit fixed object with 39 crashes (40%), rear end with 20 crashes (20%), and angle with 19 crashes (19%).

The build alternative improvements for the I-275 ramps and 31st Street South intersection include a traffic signal and adding a left turn lane in the eastbound approach. A crash modification factor (CMF) of 0.54 was obtained from the CMF Clearinghouse (CMF ID: 7966). This CMF represents a reduction of 46% in total crashes at the intersection. Therefore, the improvement is expected to reduce 46% of the 40 crashes that occur at the intersection.

SAFETY ANALYSIS

Table 7-2: I-275 at 31st Street South Interchange Study Area – Type of Crashes

Type of Crash	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017	Year 2018	Total
Hit Fixed Object	7	9	10	3	6	4	39
Hit Non-Fixed Object	1	0	0	0	0	0	1
Single Vehicle	1	2	0	1	0	1	5
Angle	1	2	1	3	3	9	19
Rear End	1	4	5	4	4	2	20
Sideswipe	0	1	1	1	0	1	4
Bike	0	1	0	1	1	1	4
Run Off Road	1	0	0	0	0	0	1
Pedestrian	0	1	0	0	0	1	2
Right Turn	0	0	1	0	0	0	1
Left Turn	0	0	0	1	0	0	1
U-Turn	0	1	0	0	0	0	1
Total	12	21	18	14	14	19	98

The crash data and the CMF 7966 information are included in **Appendix J**.