



Table 7-18: GP Lanes Predicted Average Crash Frequency (Crashes/Year)

Analysis Year	Alternative	Predicted Crash Frequency by Severity					Total	Percent Change
		K	A	B	C	PDO*		
2025	Original Build	1.010	2.666	18.289	37.028	148.755	207.747	-3%
	Preferred Build	1.002	2.645	18.142	36.729	143.693	202.211	
2045	Original Build	1.835	4.838	33.183	66.971	303.151	409.979	-4%
	Preferred Build	1.812	4.777	32.754	66.091	289.702	395.135	

K – fatal injury; A – serious injury; B – minor injury; C – possible injury

*PDO – property damage only

The analysis indicates that the predicted average crash frequencies along I-295 from US 1 to Town Center Parkway with the Original Build Alternative are estimated to be approximately 207.7 crashes per year and 410.0 crashes per year in the Opening Year (2025) and Design Year (2045), respectively. The Preferred Build Alternative decreases the predicted average crash frequencies to approximately 202.2 crashes per year and 395.1 crashes per year in the Opening Year (2025) and Design Year (2045), respectively. When compared to the Original Build Alternative, this is approximately a 3 percent decrease and a 4 percent decrease in the total predicted average crash frequency in the Opening Year (2025) and Design Year (2045), respectively.

Generally, the Preferred Build Alternative shows safety improvement along the I-295 GP lanes when compared to the Original Build Alternative. A segment by segment comparison between the two analyzed alternatives as presented in **Appendix K** shows that there is a negative safety impact at the I-295 northbound exit to Baymeadows Road. At this location the ramp exit design is proposed to be changed from a lane drop to a taper design. A parallel ramp exit design with a sufficient deceleration lane length can help to mitigate the adverse safety impacts. Additionally, the predictive safety analysis shows a slight increase in the predicted fatal and injury crashes that only involves a single vehicle in all the segments where there is an increase in the number of lanes. This observation is also supported by the HSM supplement Safety Performance Function (SPF) coefficients for single vehicle fatal and injury crashes as shown in Table 18-7, Page 18-28 of the HSM supplement. This table indicates that for all multi-vehicle crashes and single-vehicle property damage only (PDO) crashes, an increase in lanes along a corridor will decrease the predicted number of crashes. However, the increase in lanes along a

corridor is expected to increase the number of predicted single-vehicle fatal and injury crashes as shown in this table. Overall, there is a reduction in the predicted number of crashes with the Preferred Build Alternative when compared with the Original Build Alternative.

7.5 Safety Benefits

The Preferred Build Alternative shows a reduction in the predicted average crash frequency when compared to the Original Build Alternative. To compare the benefits of potential crash reduction resulting from the Preferred Build Alternative when compared to the Original Build Alternative, the predicted average crash frequencies at different severity levels were converted to monetary values by using the FDOT KABCO crash costs from Table 122.6.2 of the 2020 Florida Design Manual. **Table 7-19** provides a summary of the predicted crash costs of the two alternatives.

Table 7-19: Summary of Predicted Crash Costs

Analysis Year	Description	Crash Severity					Total	Annual Benefit
		K	A	B	C	PDO		
	Cost per Crash	\$10,670,000	\$872,612	\$174,018	\$106,215	\$7,700		
2025	Original Build	\$10,773,619	\$2,326,063	\$3,182,611	\$3,932,895	\$1,145,415	\$21,360,602	\$200,442
	Preferred Build	\$10,687,656	\$2,307,747	\$3,157,113	\$3,901,209	\$1,106,435	\$21,160,160	
2045	Original Build	\$19,582,372	\$4,222,022	\$5,774,505	\$7,113,297	\$2,334,266	\$39,026,462	\$576,157
	Preferred Build	\$19,331,514	\$4,168,457	\$5,699,810	\$7,019,820	\$2,230,703	\$38,450,305	

Source: FDOT KABCO Crash Costs, Table 122.6.2, 2020 FDOT FDM

The annual crash costs predicted for the Preferred Build Alternative are lower than the Original Build Alternative by approximately \$200,400 and \$576,200 in the Opening Year (2025) and Design Year (2045), respectively. This is approximately a **0.9 percent** and a **1.5 percent** reduction in the crash costs in the Opening Year (2025) and Design Year (2045), respectively.