

Table 5.27. Opening Year (2020) - I-75 SIMR and Proposed Build Alternatives Vehicle Queue Length Comparison

Intersection	Intersection Approach Difference I-75 SIMR – Proposed Build							
	Eastbound		Westbound		Northbound		Southbound	
	Max Queue (ft)		Max Queue (ft)		Max Queue (ft)		Max Queue (ft)	
	AM	PM	AM	PM	AM	PM	AM	PM
Cattlemen Road/Maxfield Drive	25	75	50	50	-225	-75	100	175
Bee Ridge Road/Maxfield Drive	800	5250	100	200	175	500	125	175
Bee Ridge Road/Cattlemen Road	100	275	-175	-200	-100	25	-125	-125
Bee Ridge Road/I-75 West Ramp Terminal	-175	25	300	175	N/A	N/A	50	100
Bee Ridge Road/I-75 East Ramp Terminal	50	50	-150	-200	375	200	N/A	N/A
Bee Ridge Road/Mauna Loa Boulevard	75	25	50	-25	125	-25	-25	25
Cattlemen Road/Center Pointe Drive	-25	-25	25	-25	200	125	150	100
Cattlemen Road/Wilkinson Road	75	125	N/A	N/A	-200	-100	-75	-175

5.11.2 Safety Analysis Comparison

A qualitative safety comparison of the I-75 SIMR and Proposed Build Alternatives was performed. The shallow crossing angles inherent to DDIs and CFIs are expected to lead to a reduction in the number of crashes at the I-75/Bee Ridge Road interchange and Bee Ridge Road/Cattlemen Road intersection for the Proposed Build Alternative. The two-phase signal timing scheme of the Proposed Build Alternative is projected to result in reduced intersection control delay and less vehicle queuing, which could reduce the number of rear-end collisions as there would be fewer unexpected stops. Also, various left-turn movements are eliminated in the Proposed Build Alternative, which could potentially reduce crash severity.

The Proposed Build Alternative provides pedestrian and bicycle facilities on Bee Ridge Road and Cattlemen Road, while the I-75 SIMR Alternative does not. The Proposed Build Alternative includes 6-ft back-of-curb sidewalks and 7-ft bicycle lanes on both sides of Bee Ridge Road and Cattlemen Road designed in accordance with the new FDOT buffered bicycle lane criteria. Pedestrian crosswalks and phasing are provided across all approaches of the Bee Ridge Road/Cattlemen Road intersection. The crossing movements in the northbound/southbound direction on the east and west sides of the Bee Ridge Road/Cattlemen Road intersection are two-stage crossings. The crossing movement in the northbound/southbound direction on the east side would require 70 seconds of combined walk (W) and flashing-don't-walk (FDW) time with the I-75 SIMR Alternative since it is a one-stage crossing. The Proposed Build Alternative reduces the required combined W and FDW time to 57 seconds for one of the two stages, which allows for an additional 13 seconds to green time for vehicles traveling in the northbound/southbound direction. The Proposed Build Alternative pedestrian crosswalk phasing scheme for the Bee Ridge Road/Cattlemen Road intersection is shown on **Figure 5.9**. These multimodal enhancements promote safe traveling conditions for all users and could potentially reduce the number of crashes related to pedestrians and bicyclists.

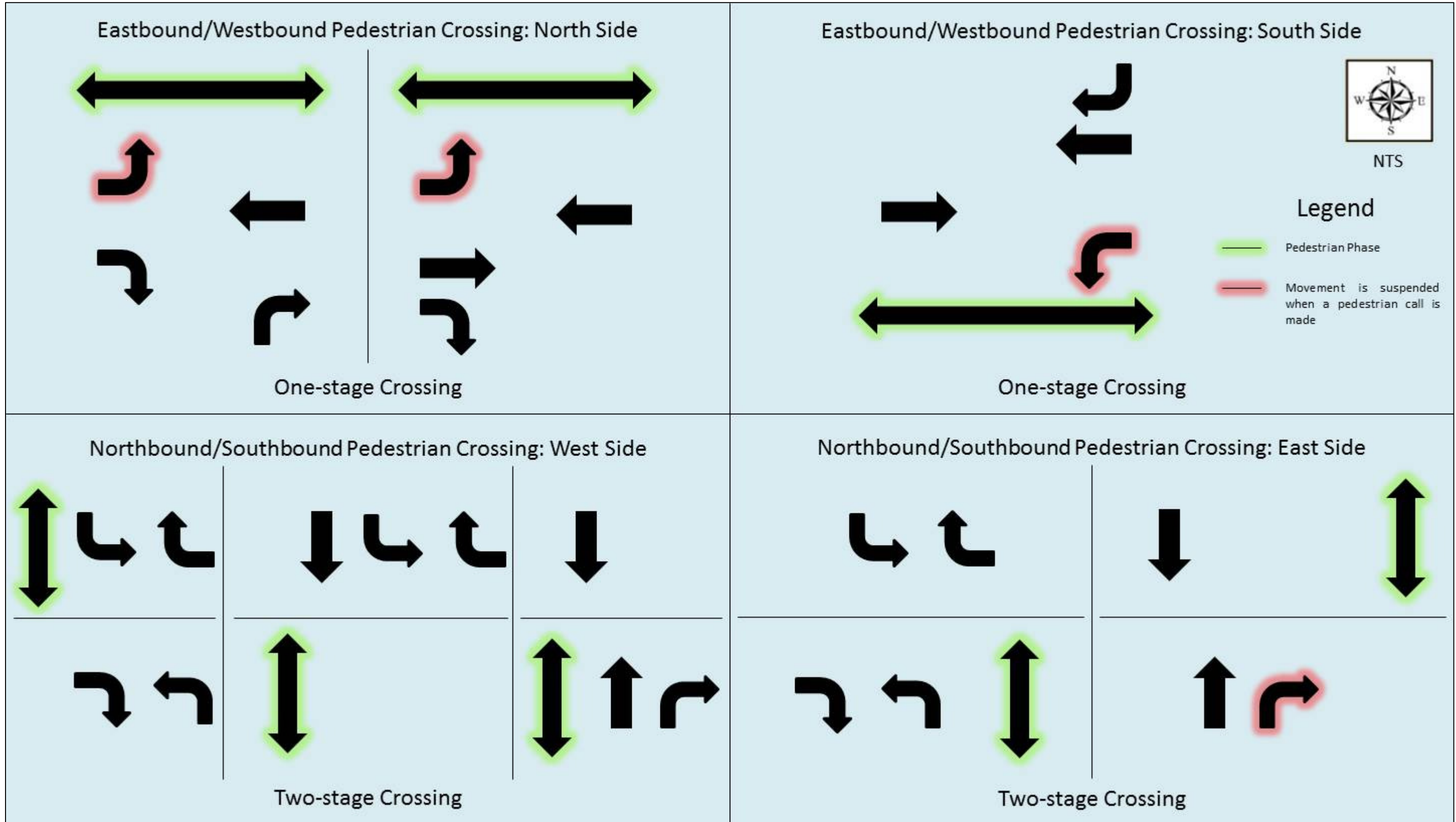


Figure 5.9. Bee Ridge Road/Cattlemen Road Pedestrian Crosswalk Phasing - Proposed Build Alternative