

BEFORE/AFTER ANALYSIS

Fletcher Avenue Complete Streets Project

PRESENTED TO: HILLSBOROUGH COUNTY COMMUNITY TRAFFIC SAFETY TEAM



BEFORE/AFTER ANALYSIS

Traffic Volumes, Pedestrian/Bicycle Crossings, Travel Times, and Safety Before/After Analysis
Fletcher Avenue Complete Streets Project

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Agenda

- Complete Streets Improvements
- Traffic Volume Data
- Pedestrian & Bicycle Crossing Locations
- Pedestrian & Bicycle Crossing Data
- Travel Time Data
- Crash Analysis
- Before/After Conclusions



Complete Streets Improvements

- Construction began in 2014; officially opened in February 2015
- Fletcher Avenue Complete Streets Project – From Nebraska Avenue to Bruce B. Downs Boulevard
- Notable changes/improvements:
 - five mid-block pedestrian crossings added with overhead and ground-mounted RRFBs
 - one mid-block pedestrian crossing with a traffic control signal
 - LED lighting added at pedestrian crossings
 - Raised pedestrian refuge islands and raised traffic separators installed
 - Landscaping features incorporated into median
 - Bicycle lanes added to both sides of road
 - Speed limit reduced from 45 mph to 35 mph
 - Media outreach & education of the public
 - High visibility enforcement



Complete Streets Improvements



Added Bicycle Lanes



Added Raised Traffic Separators

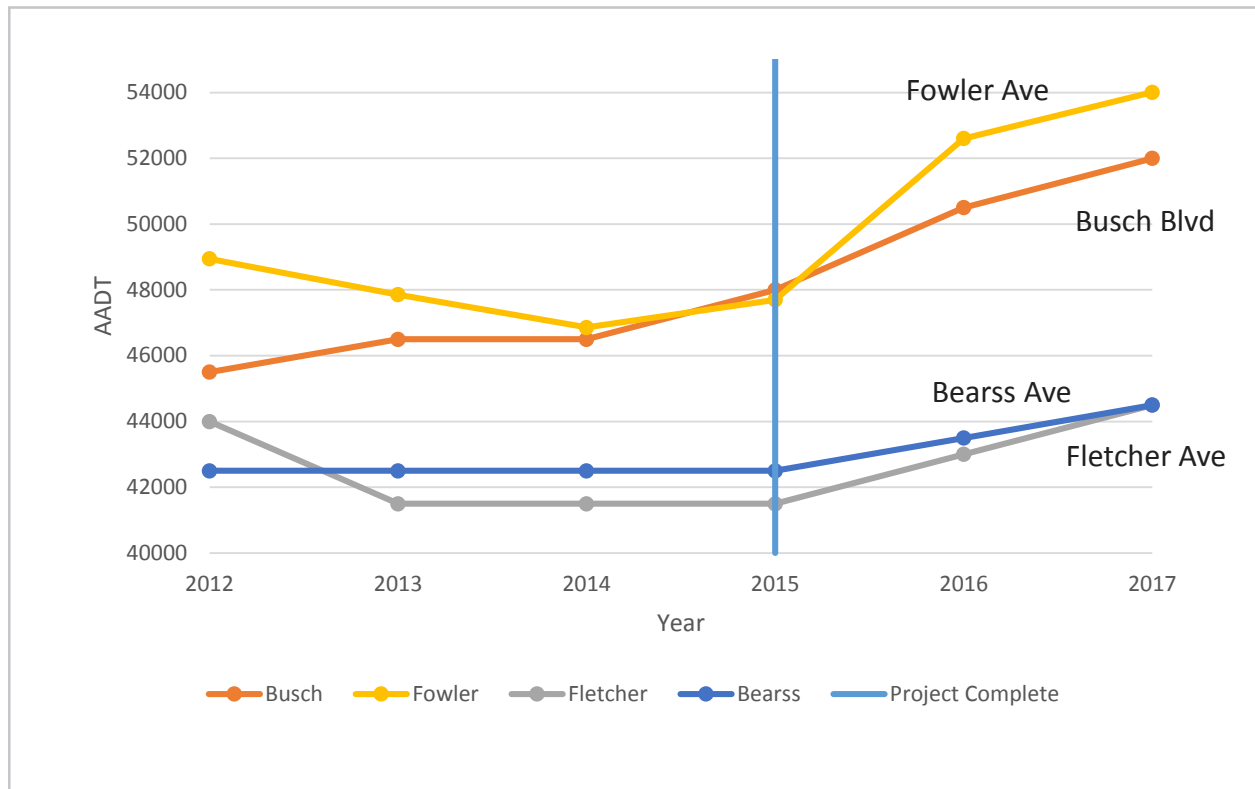


Replaced Two-Way Left Turn Lanes (TWLFL)



Added Ped Refuge Islands & Mid-Block Crosswalks

Traffic Volume Data

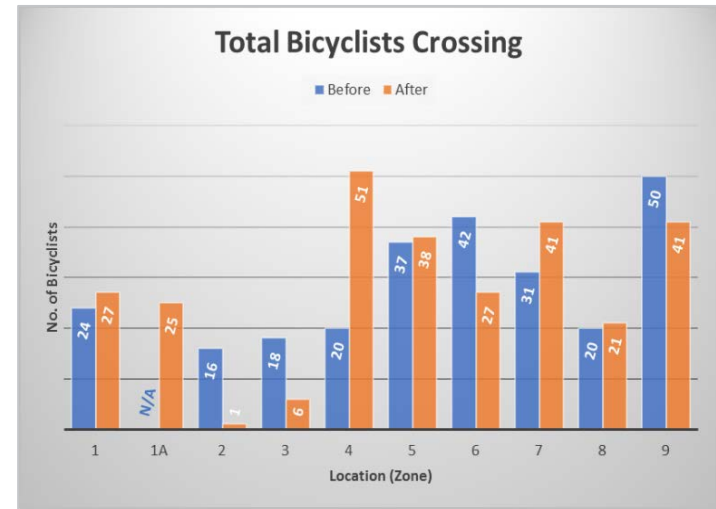
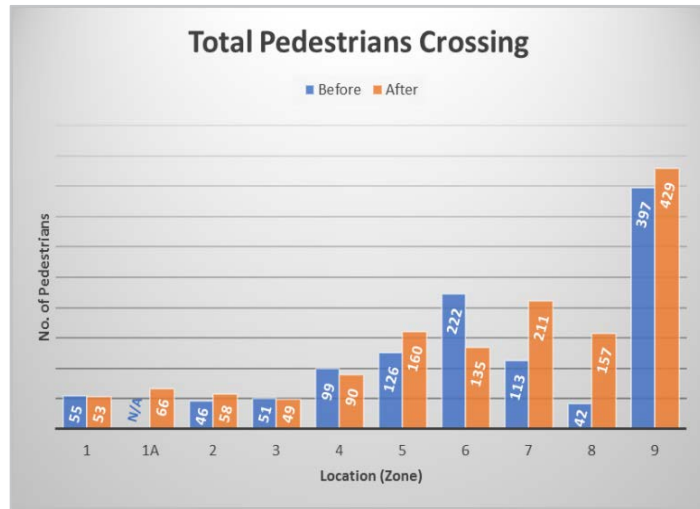


- Portable Traffic Monitoring Site AADT Data:
 - +2% on Fletcher Ave and Bearss Ave
 - +7% on Fowler Ave
 - +9% on Busch Blvd

Pedestrian & Bicycle Crossing Count Locations



Pedestrian & Bicycle Crossing Data

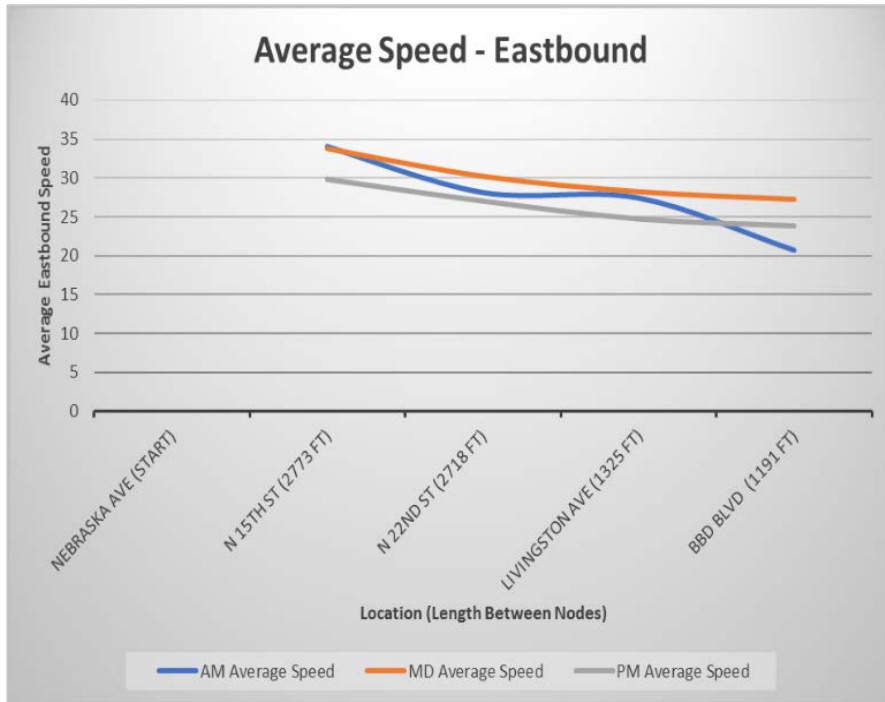


Compliance per Zone with Controlled Mid-Block Crossings

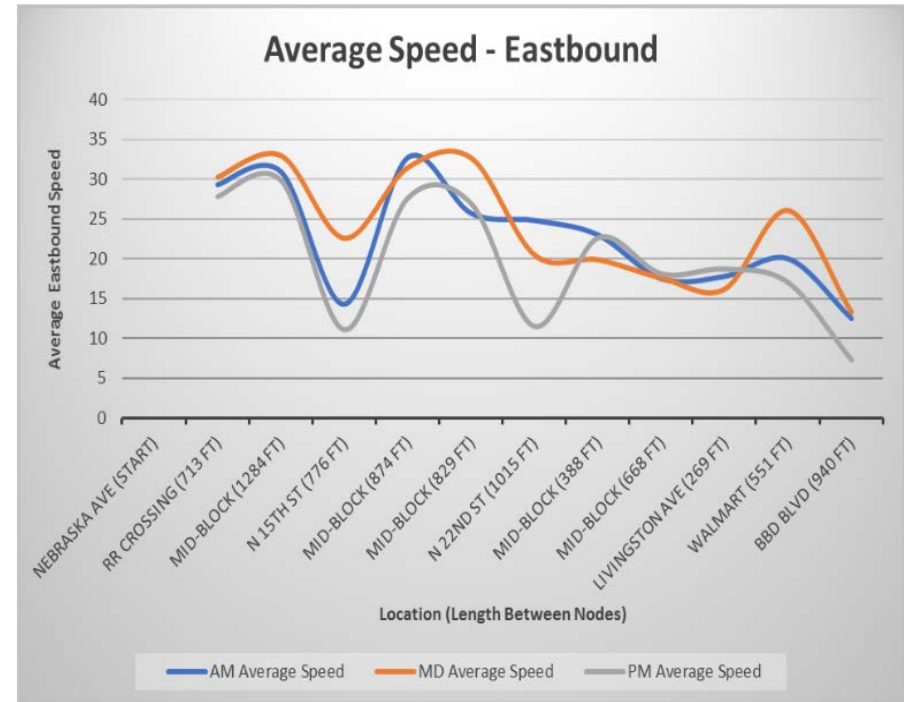
Study Zone	Traffic Control	People Crossing Within Crosswalk	People Within Crosswalk That Used Pushbutton	Vehicles Yielding For People Within Crosswalk
1A	RRFB	74 (81%)	95%	96%
4	RRFB	123 (87%)	95%	96%
5	RRFB	131 (66%)	92%	96%
7	RRFB	188 (75%)	90%	95%
8	RRFB	137 (77%)	88%	89%
9	Mid-Block Traffic Signal	358 (76%)	87%	83%
Total Average		168.5 (77%)	89.5%	92.5%

Travel Time Data

Before Project Construction

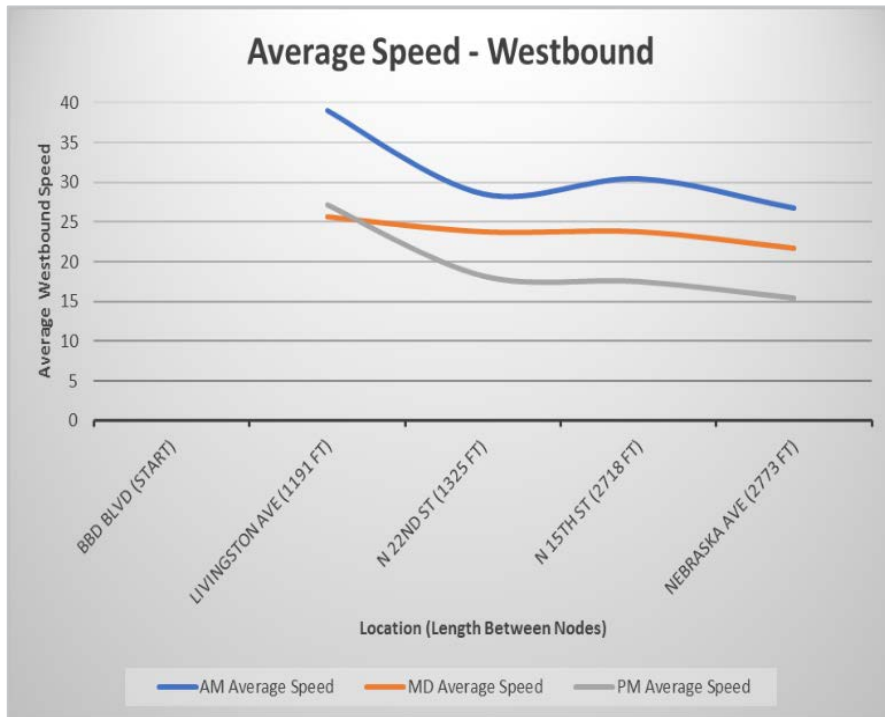


After Project Construction

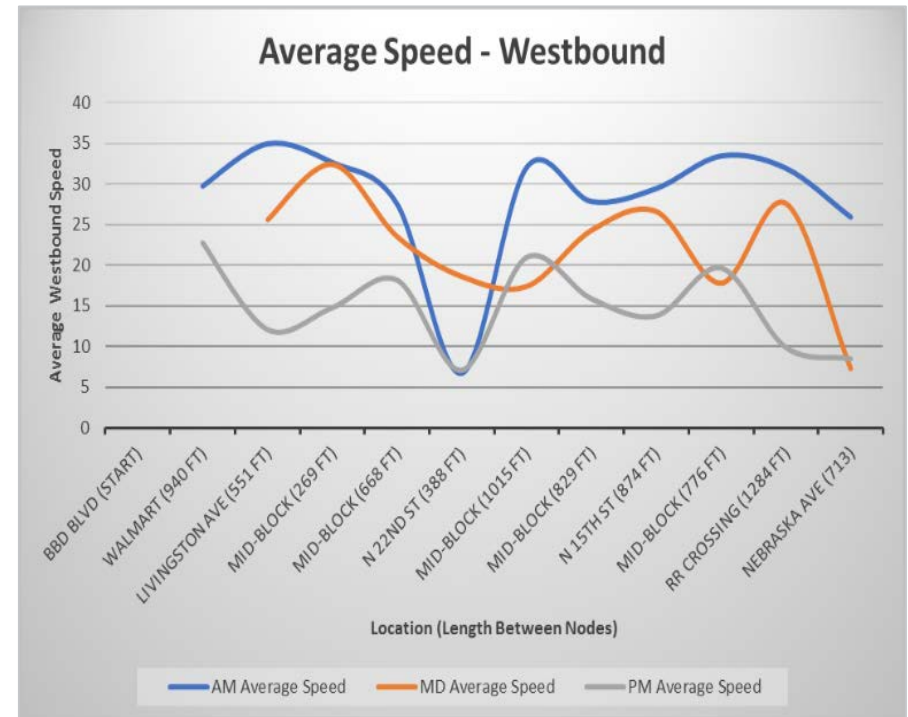


Travel Time Data

Before Project Construction



After Project Construction

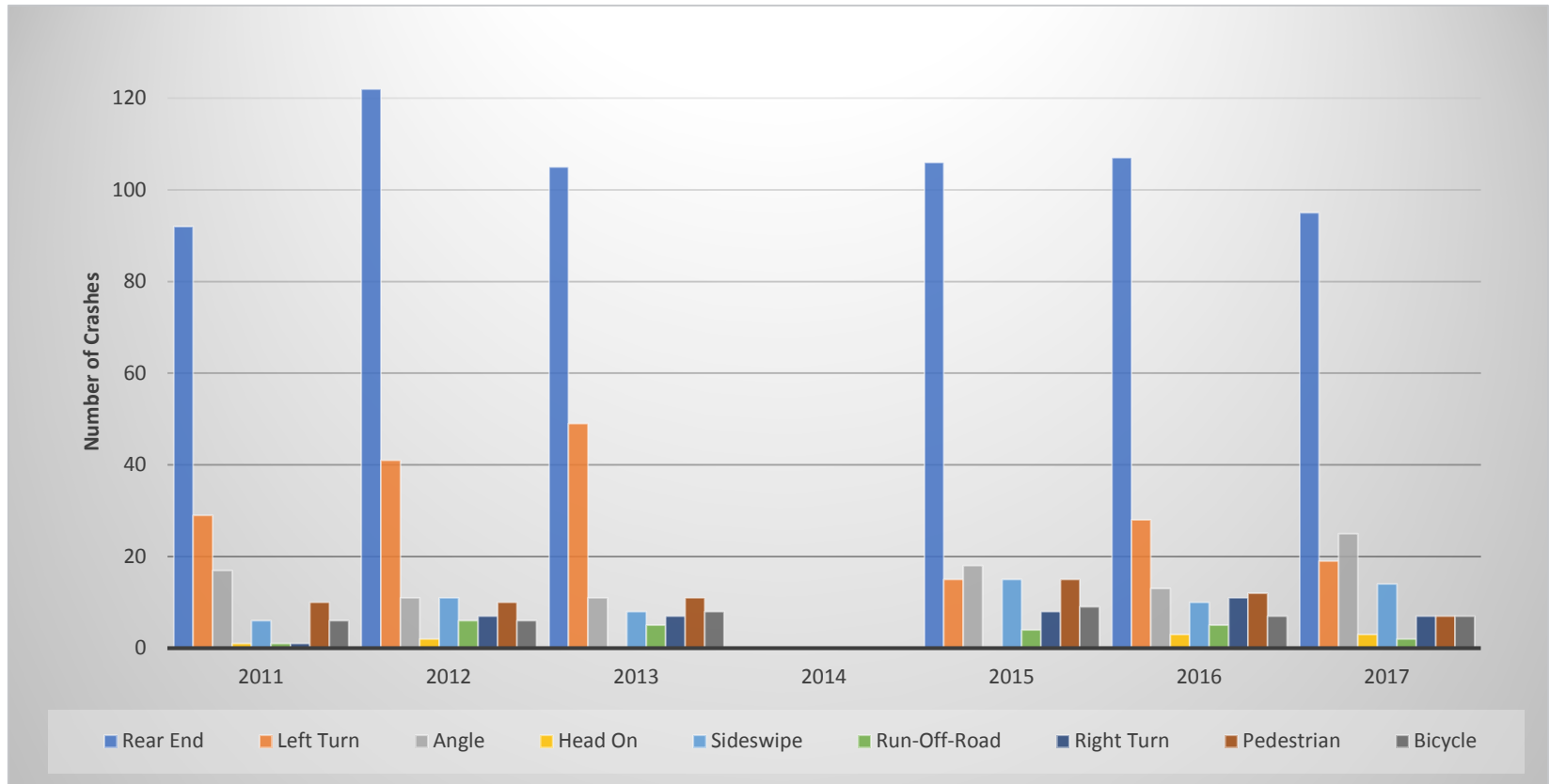


Travel Time Data

Peak Time	Before (Seconds)			After (Seconds)			Average Difference (Seconds)	Percent Difference (%)
	Eastbound	Westbound	Average	Eastbound	Westbound	Average		
7 AM – 9 AM	289 (4.8 min)	216 (3.6 min)	253	268 (4.5 min)	219 (3.7 min)	244	-9	-4%
11 AM – 1 PM	214 (3.6 min)	268 (4.5 min)	241	240 (4.0 min)	281 (4.7 min)	261	20	8%
4 PM – 6 PM	247 (4.1 min)	399 (6.7 min)	323	334 (5.6 min)	430 (7.2 min)	382	59	18%

- Predominant direction in AM Peak is eastbound
 - EB travel time decreased (-21 sec avg)
 - WB travel time remained about the same (+3 sec avg)
- No predominant direction in Midday Peak
- Predominant direction in PM Peak is westbound
 - EB travel time increased (+87 sec avg)
 - WB travel time increased (+31 sec avg)

Crash Analysis



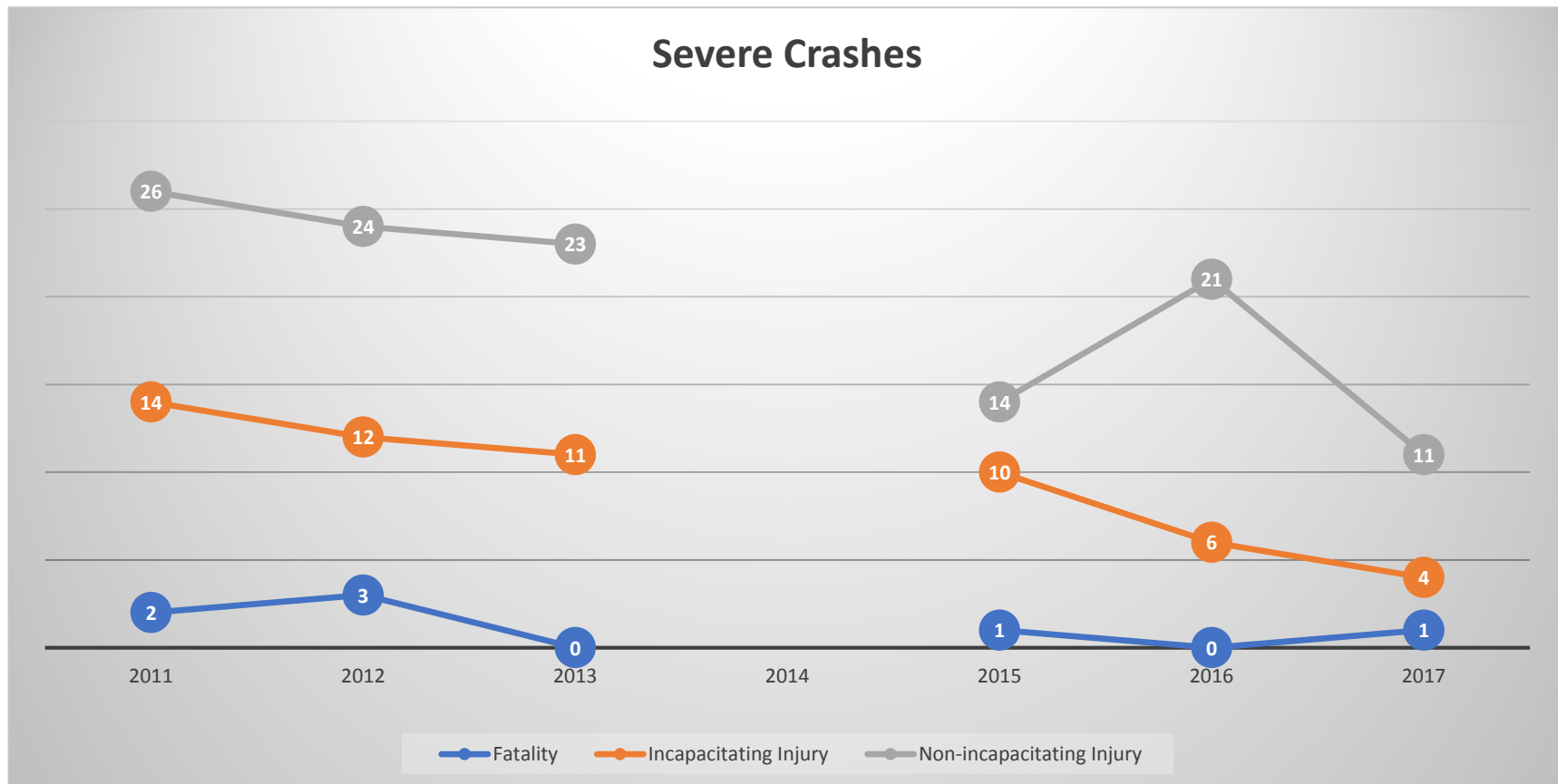
➤ Before:

- 632 total crashes
- 319 rear ends
- 119 left turns
- 31 pedestrian crashes
- 20 bicycle crashes
- Avg crash rate = 6.697 crashes/MVM

➤ After:

- 602 total crashes (-5%)
- 308 rear ends (-3%)
- 62 left turns (-48%)
- 34 pedestrian crashes (+10%)
- 23 bicycle crashes(+15%)
- Avg crash rate = 6.402 crashes/MVM (-4%)

Crash Analysis



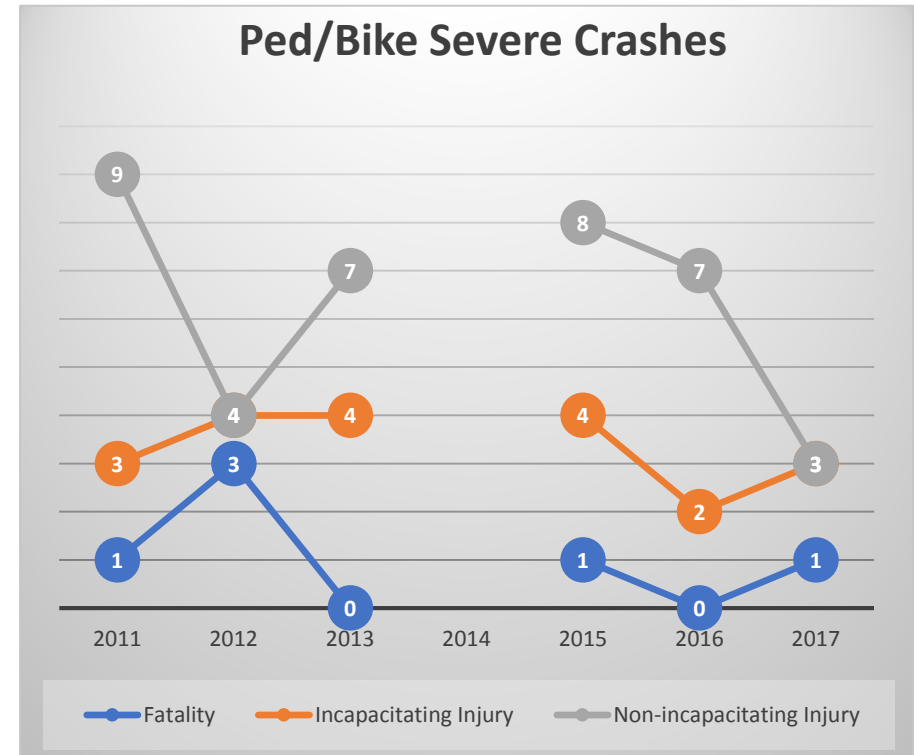
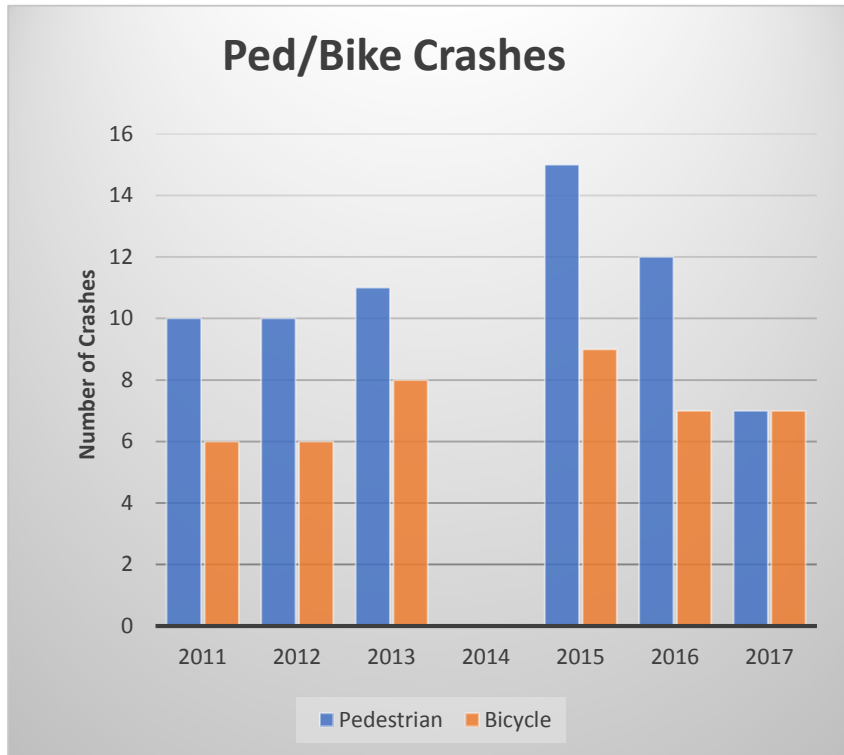
➤ Before:

- 73 non-incapacitating injuries
- 37 incapacitating injuries
- 5 fatalities

➤ After:

- 46 non-incapacitating injuries (-37%)
- 20 incapacitating injuries (-46%)
- 2 fatalities (-60%)

Crash Analysis



- Ped/Bike crashes increased by 6 total (3 ped, 3 bike)
- Ped/Bike volumes increased by 13% (186 additional crossings per day)
- Ped/Bike non-incapacitating injuries were reduced by 10% (20 > 18)
- Ped/Bike incapacitating injuries were reduced by 18% (11 > 9)
- Ped/Bike fatalities were reduced by 50% (4 > 2)

Conclusions

- Average daily traffic volumes on Fletcher Avenue have increased since the completion of the project, but at a lower rate than other parallel roadways.
- Overall, the average speeds of vehicles decreased within the study segment and the average travel times increased.
- Pedestrian and bicyclist volumes along the corridor also increased after the project was completed.
- A majority of the pedestrians, bicyclists, and vehicles utilize the installed facilities properly.
- Overall total number of vehicle crashes was reduced as well as crash severity.
- There was an increase in pedestrian and bicycle crashes. However, taking into account the additional volume of pedestrian and bicycle activity, the pedestrian/bicycle crash rate decreased.
- The severity of the pedestrian and bicycle crashes was also reduced within the project area.