Hillsborough MPO | Hillsborough County

Fletcher Avenue
Vision Zero Corridor Study
Corridor Summary

SAFE STREETS NOW
VISIONZERO
ONE TRAFFIC DEATH IS TOO MANY

Introduction

Vision Zero is a strategy to eliminate all traffic fatalities and serious injuries, while increasing safe, healthy, equitable mobility for all. A core tenant of Vision Zero is that even one serious injury or fatality is too many and that there are no "accidents" – all crashes are preventable. The Hillsborough MPO's 2017 Vision Zero Action Plan identified the Top 20 Severe Injury Crash Corridors throughout Hillsborough County.

This report focuses on the approximately 2.1 miles of Fletcher Avenue between Armenia Avenue and Nebraska Avenue and the collaborative effort between Hillsborough County and the Hillsborough County MPO to identify changes to bring the number of fatalities and serious injuries on the corridor to **ZERO**.

Top 20 Severe Injury Crash Corridors

Existing Conditions

Fletcher Avenue is a 4-lane roadway divided by a continuous center turn lane. Sidewalks exist along the entire length of the corridor with a wider, 8' sidewalk functioning as a shared use path on the north side of the road. A bike lane exists for about a half mile between North Boulevard and Florida Avenue. Traffic volumes range from 38,000 on the west end to 42,500 on the east end and are expected to grow at a rate of about 25% through 2040.

Typical Cross-Section

Seven signalized intersections exist along the corridor with the density increasing as one heads east towards I-275. Formal roadway lighting is present primarily at signalized intersections, though some off-corridor lighting does cast into Fletcher Avenue.

The corridor is served by four separate HART routes, including one MetroRapid route, with weekday service between 15- and 30-minutes at peak.

The posted speed limit along the corridor is 45 MPH. A review of cell phone data from ClearGuide captured at noon on February 19, 2020 indicated that free flow traffic speed decreases as one experiences the congestion present at the eastern end of the corridor.

Corridor Length
2.6 *miles*

Travel Lanes
4

Posted Speed Limit
45 MPH

Traffic Volume
42,500 AADT

Transit Access
4 Transit Lines

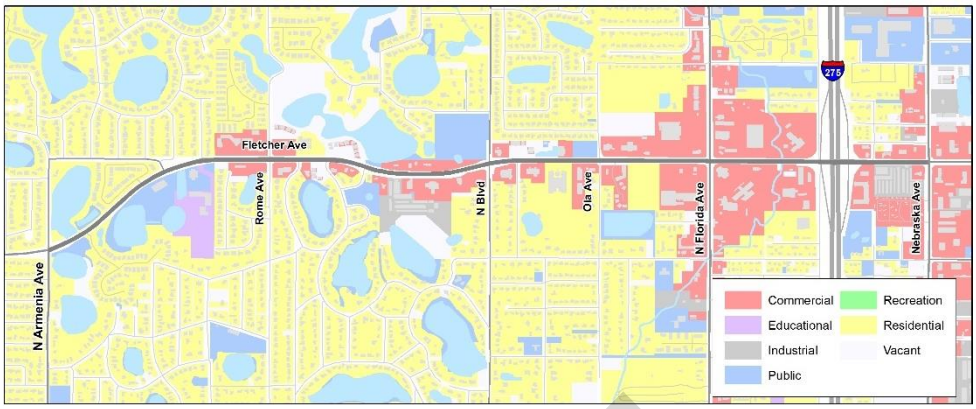
Bike/Ped
Continuous Sidewalks
Limited Bike Lanes

Location	Direction	Average Speed	Free Flow Speed
E. of Rome Ave	EB	33.5 mph	39.9 mph
E. of Rome Ave	WB	36.5 mph	41.1 mph
W. of Central Ave	EB	12.2 mph	28.0 mph
W. of Central Ave	WB	17.5 mph	25.1 mph
W. of Nebraska Ave	EB	17.8 mph	25.4 mph
W. of Nebraska Ave	WB	16.0 mph	25.0 mph

ClearGuide Travel Speed Data – Collected 2/19/20, 12:00 PM

Land Use and Community Indicators

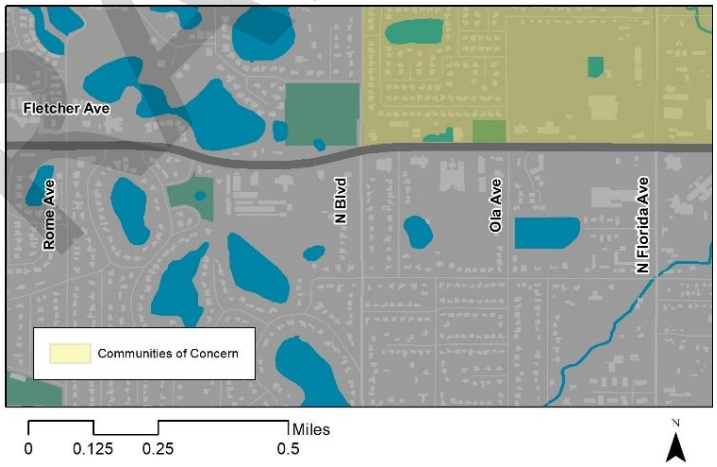
Land uses on the western end of the corridor consist of residential, office, and educational uses. To the east, uses become more intensely commercial with a significant number of driveway curb cuts.



Generalized Existing Land Use Categories

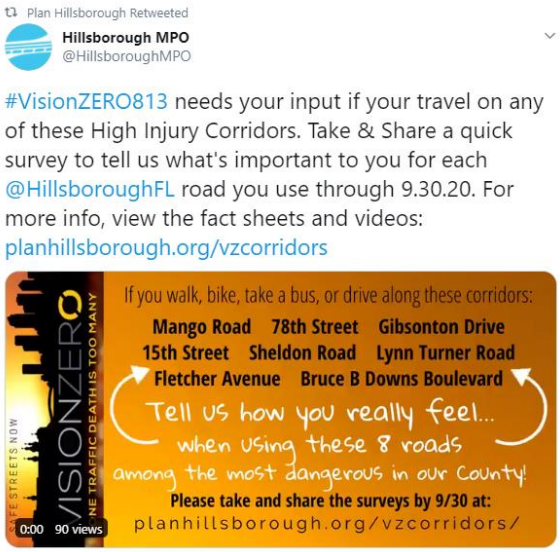
A review of Census data revealed that persons living east of North Boulevard were less likely to own a personal vehicle and therefore more likely to rely on transit, walking, or riding a bike for everyday trips. Further, these households were more likely to be under the poverty line.

Finally, the Hillsborough MPO has previously defined Communities of Concern as being a Census Block Group that have a high proportion of two or more protected classes of population, such as racial minorities, low-income groups, persons with disabilities, and those with limited English proficiency. There are three such Communities of Concern located along the north side of Fletcher Avenue between North Boulevard and Nebraska Avenue. Special care should be taken to present opportunities for these communities to move about the community safely and conveniently.



Identified Communities of Concern

Public Involvement



Soliciting and receiving input from the public is a crucial component of any transportation planning effort and especially so within the framework of Vision Zero. By engaging the public, potential problems and solutions that are discovered by on the ground familiarity with the corridor may be missed. To preserve safety during the COVID-19 pandemic, public engagement was limited to a digital survey that welcomed participation from anyone.

Of those who responded to the survey, most (89%) reported driving alone as the primary way of moving along the corridor. A smaller number (32%) reported driving with other people, and others reported riding a bike (21%) or walking (16%). No respondents reported using transit.

A large portion of respondents indicated that high traffic volumes (28%), high vehicle speeds (17%), and turning (17%) detracted from their feeling of safety when using the corridor. Several respondents who selected "Other" shared that witnessing others, especially people walking, participate in potentially dangerous behaviors like crossing outside of a marked crosswalk reduced their own feeling of safety. Access management was also raised as a major safety concern, as many driveways complicate safe access to businesses along the corridor.

Unsurprisingly, solutions to the safety issues posed by respondents included lower speeds, better access management, more traffic signals, and better pedestrian crosswalks.

Crashes

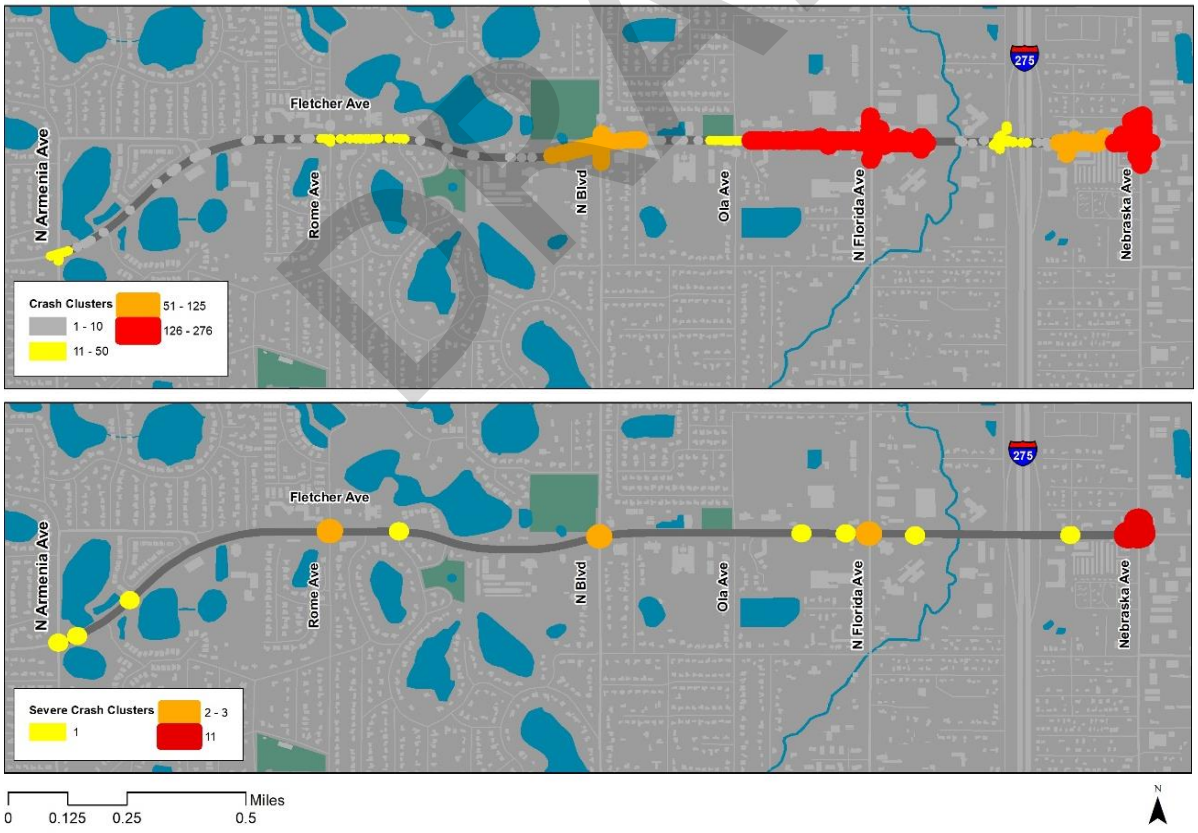
There were 929 total crashes along this stretch of Fletcher Avenue during the 5-year analysis period (2014 – 2018). Significantly, there was a total of 26 severe injury crashes that resulted in two deaths and 28 serious injuries. Understanding where, when, and why these crashes are occurring is a major step towards ensuring that no other life is lost along Fletcher Avenue. Although interventions are selected specifically to target these severe injury crashes, any of the strategies are likely to have a positive impact on reducing overall crashes along Fletcher Avenue.

Total Crashes
929

Severe Crashes
26

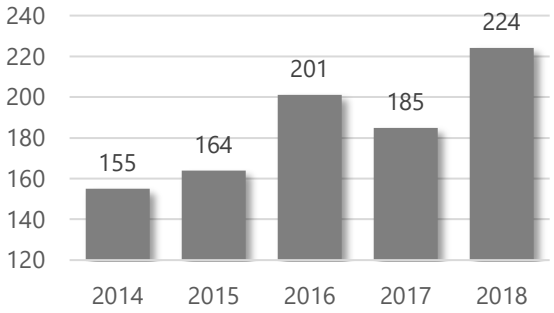
Bike/Ped Crashes
31

Upon a review of where crashes are most concentrated into clusters, Nebraska Avenue, Florida Avenue, and North Boulevard emerged as high crash locations both for all and severe crash types. For severe injury crashes, Rome Avenue served as the only location where there was no significant overlap. In addition, while most severe crashes occurred at signalized intersections, there are a few locations along the corridor where severe injury crashes have occurred.

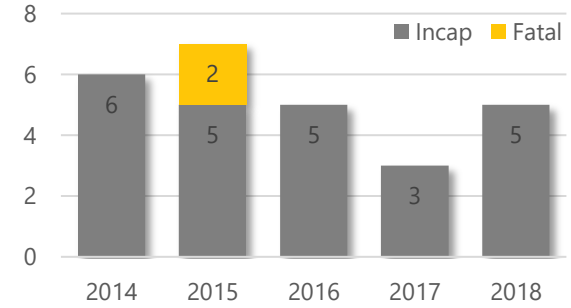


Total Crash and Severe Injury Crash Clusters

When reviewing crashes on an annual basis, a distinct upward trend is observed for total crashes, while severe injury crashes are generally fairly level aside from a notable dip in 2017.

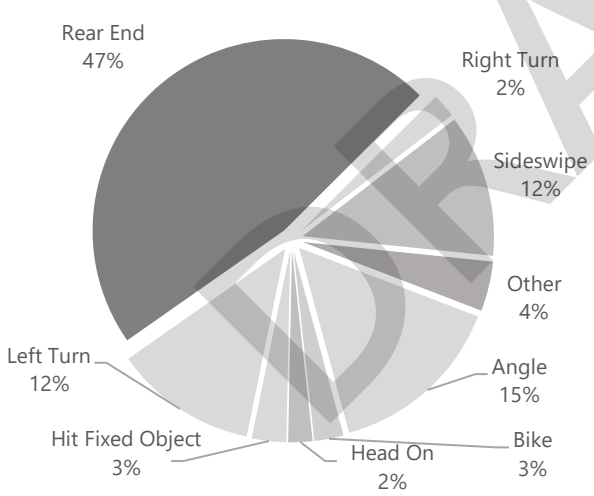


Annual Distribution of All Crashes

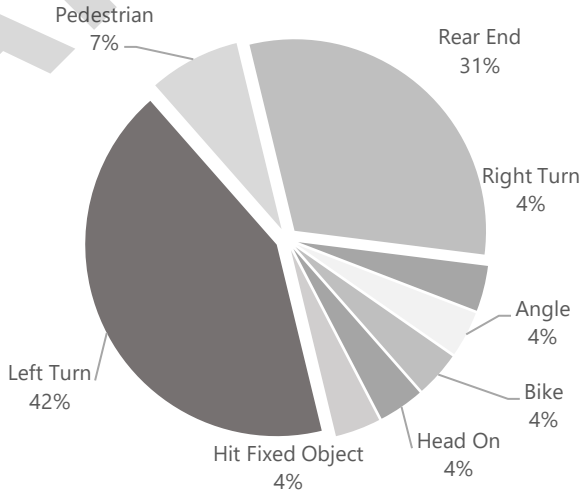


Annual Distribution of Severe Injury Crashes

When comparing trends in crash types between all crashes and severe injury crashes, one finds that Left Turn and Pedestrian crash types more likely to result in a severe injury crash. This indicates that potential countermeasures specifically addressing turning movements and pedestrian facilities, such as improved crosswalks or sidewalks, are needed.

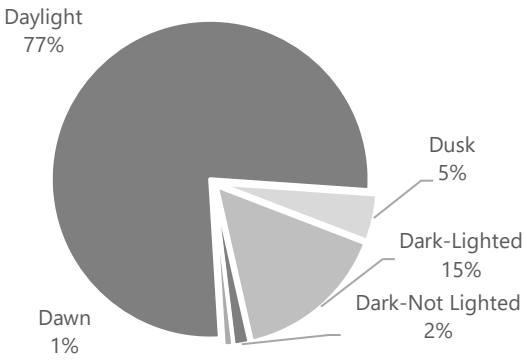


Crash Types of All Crashes

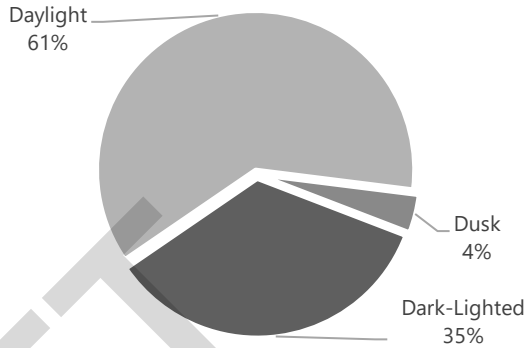


Crash Types of Severe Crashes

Another indicator of potential countermeasures is the lighting conditions under which crashes occurred. According to the data, more severe injury crashes occurred outside of daylight hours, indicating that lighting along the corridor may be deficient and contributing to death and serious injury.



Lighting of All Crashes



Lighting of Severe Crashes

Given that changing behavior is one of the ways that Vision Zero seeks to create safer streets, an in-depth review of crash reports for records that resulted in a severe injury was also performed. This information, depicted below, shows that the primary contributing causes were failing to yield right-of-way or operating a motor vehicle in a careless manner. This information indicates that speed is likely a significant factor in contributing to crashes along the corridor.

Contributing Cause	Records
Failed to Yield Right-of-Way	9
Operated MC in Careless or Negligent Manner	8
No Contributing Action	2
Not Coded	2
Followed too Closely	1
Improper Passing	1
Other Contributing Actions	1
Ran Red Light	1
Wrong Side of Wrong Way	1

Potential Countermeasures

The focus of Vision Zero is to eliminate all traffic-related deaths and serious injuries. The countermeasures identified for Fletcher Avenue are designed to move the County closer to this goal while at the same time are aimed at improving overall safety, comfort, and mobility throughout the corridor.

The countermeasure for Fletcher Avenue are divided into two categories, corridor-wide and site specific – the corridor-wide countermeasures are potential improvements or strategies that could be applied throughout the corridor, where feasible, or should be considered and incorporated into future transportation projects along the corridor, the site-specific countermeasures are suggested improvements that should be considered at specific locations along the corridor. The following is an overview of the identified countermeasures designed to help bring the number of fatal and serious injury crashes on Fletcher Avenue to zero.

Corridor-Wide Suggestions

Speed Management By reducing vehicle speeds, the severity of crashes is also reduced. Currently Fletcher Avenue has a posted speed limit of 45 MPH, west of Florida Avenue and 40 MPH between Florida Avenue and Nebraska Avenue. Based on a review of crash data and public input, a revised target speed of 35 MPH is proposed.

Signal Timing and Phasing To further enforce the proposed target speed, consider adjusting traffic signal timing and phasing to progress vehicles at 35 MPH or slower. Further, consider installing educational signage (ex. "Traffic Signals Timed for 35 MPH") to encourage driver education and compliance.

Flashing Yellow Arrows Implementation of a Flashing Yellow Arrow (FYA) is proved to reduce the severity and occurrence of left turn crashes. Consider installation of FYAs at Armenia Avenue, Rome Avenue, and North Boulevard.

Traffic Signal Backplates Consider applying high-visibility, retroreflective traffic signal backplates throughout the corridor to increase visibility of and compliance with existing traffic signals. Care should be taken especially on east-west approaches along the corridor.

Roadway Lighting The corridor does not currently have consistently applied roadway lighting. Consider conducting a corridor-wide lighting study to assess where lighting is deficient and opportunities to cost effectively install lights, such as on existing utility poles.

Crosswalk Markings Although pedestrian crosswalks existing throughout the corridor, they are not currently consistently marked. Consider installing high-visibility crosswalks (i.e., ladder style) at all signalized intersections and consistently marking crosswalks along unsignalized intersections and driveways.

Pedestrian Curb Ramps While generally of a sufficient width to serve as a shared-use path, the north sidewalk is hindered by narrow curb ramps. Consider upgrading the width of these curb ramps to better accommodate use by people biking and to enhance access for those with reduced mobility.

Sidewalk and Pavement Marking Maintenance Consider performing an audit to identify, program, and complete general maintenance of sidewalks and pavement markings. These needs include heaved or cracked sidewalks, obstructions within the sidewalk clear path, and general pavement markings such as lane markings or stop bars.

Pedestrian Signal Actuation An automatic recall walk phase encourages compliance with safe, predictable crossing behaviors for people walking. Although this feature is present at some intersections, consider its application on all approaches corridor-wide and especially at Florida and Nebraska Avenues.

Bus Stops Several transit stops along the corridor are currently located in such a way that they obstruct the sidewalk clear path, reducing the effective width. Consider coordinating relocation of these facilities outside of the clear path with HART. If relocation is infeasible, consider widening the sidewalk behind these facilities to maintain the clear path.

Streetscape Considering providing landscaped, raised medians where feasible. Landscaped, raised medians help reinforce compliance with the target speed of a roadway while enhancing aesthetics and comfort. This countermeasure also promotes safer turning behaviors, reducing angle and turning crashes.

Site Specific Suggestions

A comprehensive set of site-specific suggestions were identified to address specific crash trends and related issues throughout the corridor. Generally, these suggestions include raised median islands, channelized turn lanes, enhanced crossings, and an additionally traffic signal. The accompanying technical memorandum includes a detailed list of these suggestions along with conceptual drawings to help visualize the improvements. Many of the site-specific suggestions are intended to support the proposed 35 MPH target speed for Fletcher Avenue and to help address the number of left turn and angle crashes that have accounted for over 46% of the fatal and serious injury crashes along the corridor.

Suggested improvements along Fletcher Ave west of Rome Ave