

MIAMI-DADE METROPOLITAN PLANNING ORGANIZATION

Pedestrian Improvements at Railroad Crossings

Safety and Security for All



JANUARY 2013

The Miami-Dade MPO is proactively evaluating a portion of the County's 273 railroad crossings for the purpose of identifying where improvements are needed to ensure the safety of bicyclists and pedestrians. The report, *Pedestrian Improvements at Railroad Crossings* examines the development of a toolbox of strategies to improve the safety at crossings, provides a methodology for evaluating the safety of crossings, recommends improvements for 10 crossings, and identifies funding sources to help implement these improvements. The full report can be found at www.miamidade.gov/mpo/.



Developing a Strategy

The railroad crossings evaluated are located on both the CSX and FEC railroad lines. Both of these railroads currently carry freight, or cargo. The CSX railroad north of the Airport Expressway (112) is also used for passenger service, Tri-Rail's commuter service and Amtrak. Studies are currently underway that would return passenger service to the FEC railroad as well. There are different standards for crossings, depending upon whether the railroad is used for freight or passenger service, but the MPO's goal is to develop a strategy for maintaining them all in a safe and consistent manner.



Updated technology improves the safety of pedestrians at railroad crossings.



Why does it matter?

Although the safety record in Miami-Dade County is quite good, vigilance and maintaining awareness are important as rail movements and vehicular/pedestrian traffic continue to increase into the future.

Not all of the pedestrian crossings in the County enjoy the same level of pedestrian treatment. Some have very pedestrian-friendly pathways while others offer less. Despite having the proper equipment in place, people ignore the warnings that has the potential for disastrous consequences.



Renovated pedestrian pathway located Bayside in Miami



Pedestrian pathway located at SW 137th Ave in Miami



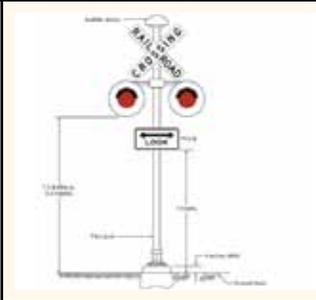
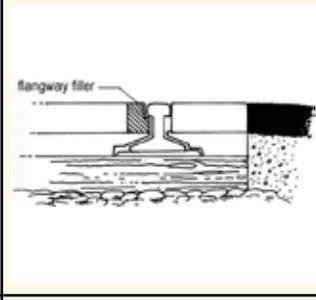
Pedestrian ignoring the safety of the crossing guard



A Toolbox of Strategies

Much research has been done and even more has been learned from experience over the years. The goal is to develop a plan for implementing improvements countywide that will improve pedestrian crossings to a state-of-the-art standard over the coming years. The improvements can be seen as a “toolbox” of strategies and techniques that we will adapt to the needs of each individual location.

The following illustrate some of the more effective measures we could employ:

PROJECT TOOLBOX - SAMPLE SOLUTIONS			
<p>FLASHING LIGHT SIGNAL Type of Improvement: Warning device with visual and audible cues Timeframe to Implement: 2-5 years Cost to Implement: Medium</p>			
<p>PAVEMENT MARKINGS AND TEXTURING Type of Improvement: Pavement Timeframe to Implement: 1-2 years Cost to Implement: Low</p>			
<p>FLANGEWAY GAP EXTENSION Type of Improvement: Pavement Timeframe to Implement: 2-5 years Cost to Implement: Low</p>			
<p>PEDESTRIAN GATES Type of Improvement: Physical barrier Timeframe to Implement: ≥5 years Cost to Implement: High</p>			
<p>SIDEWALK (NEW AND EXTENSIONS) Type of Improvement: Connectivity/Pavement Timeframe to Implement: 2-5 years Cost to Implement: Medium</p>			

Narrowing Our Focus

With over 270 crossings in the County, the MPO had to narrow its focus on those crossings with the greatest potential for pedestrian traffic. To identify these crossings, priority was given to those with a high probability of attracting pedestrians and that were missing key safety features. Some of the criteria used to identify these crossings include:

- Locations within 1/4 mile of schools
- Locations within 1/4 mile from a bus stop
- Locations that did not have sidewalks
- Locations that did not have gates
- Presence of automobile safety features
- Level of train activity



Pedestrian RR Crossing Locations

A scale of 100 points was developed for ranking the crossings. As a result of the ranking, the following 10 crossings were identified as most in need of safety improvements:

- FEC Crossing at W 18th Street
- FEC Crossing at W 15th Street
- FEC Crossing at W 19th Street
- FEC Crossing at W 20th Street
- FEC Crossing at W 13th Street
- CSX Crossing at Dunad Avenue
- FEC Crossing at NE 151st Street
- CSX Crossing at NW 36th Street
- CSX Crossing at NW 54th Street/ Hialeah Dr.
- CSX Crossing at SW 137th Avenue/ Tallahassee Road



Source: FDOT Rail Office

Recommended Safety Improvements

The following examples are recommendations to help improve the safety of pedestrians and bicyclist crossing railroad tracks.

BEFORE: CSX Crossing at NW 54th Street/Hialeah Drive



AFTER:



Truncated Dome

Flangeway Gap Extension

Stop Line - Pedestrian

Sidewalk Extension

BEFORE: FEC Crossing at W 18th Street



AFTER:

Sidewalk Extension

Grass Strip



Flangeway Gap Extension

Stop-Line Pedestrian

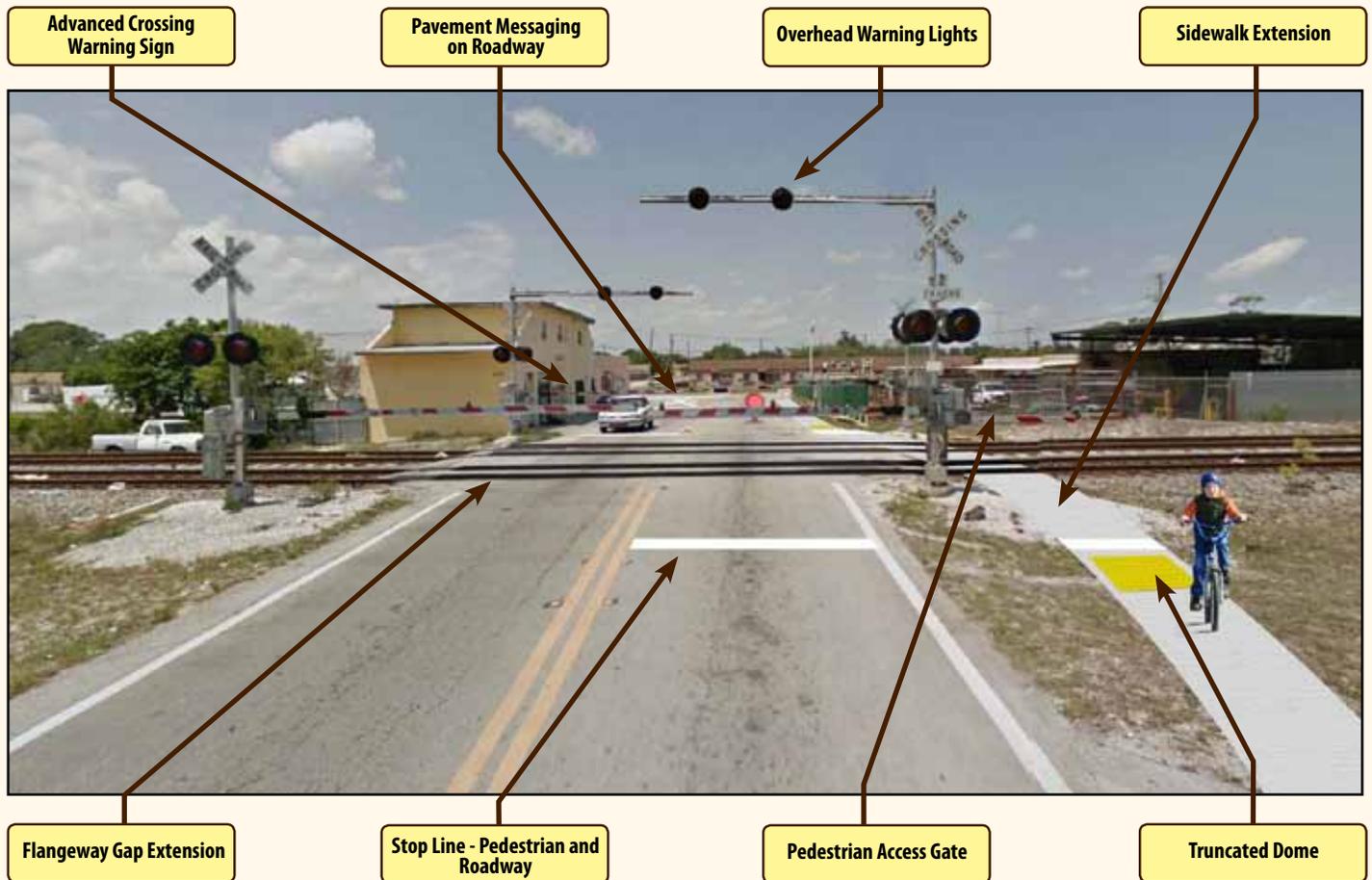
Truncated Domes

Gates Pedestrian Access and Roadway

BEFORE: CSX Crossing at Dunad Avenue



AFTER:



The Cost and Funding Solutions

The cost of the improvements depends upon the solution, but they typically range from as little as \$20 for a pedestrian stop line to \$130,000 or more for pedestrian and automobile gates, depending on the location. The average cost to improve the ten (10) crossings evaluated in this study was \$105,000. There are various sources of funding that may become available including:

FEDERAL PROGRAMS -

- MAP-21
- Transportation Alternative Funds
- Surface Transportation Program
- Congestion Mitigation and Air Quality Improvement Program
- Highway Safety Improvement Program

STATE PROGRAMS -

- Highway-Rail Grade Crossing Safety Improvement Program

Next Steps

Every year, the Florida Department of Transportation, District 6, conducts its own evaluation of railroad crossings. The first step will be to review crossings that are already programmed for future improvements and ensure the necessary bicycle and pedestrian features are included.

The MPO will also reach out to communities throughout the County to determine their priorities for improvements. This will help establish a process for the Transportation Improvement Program to select improvements for pedestrian crossings in future years.

The key is to start somewhere. By programming several locations each year, steady progress will be made that people will see at a cost that is reasonable and attainable. This will improve our grade crossings making them safer and better for our pedestrians in the future.

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