Bicycle and Pedestrian Safety Action Plan
for the Broward Metropolitan Planning Organization

Advocacy Team Meeting #2
September 20, 2016
Agenda

- Introductions
- Project & Schedule Update
- Field Review Findings
- Guiding Themes
- Action Items & Performance Measures Break Out Session
- Action Items & Performance Measures Report Back
- Next Steps
Agenda

Introductions

Project & Schedule Update

Field Review Findings

Guiding Themes

Action Items & Performance Measures Break Out Session

Action Items & Performance Measures Report Back

Next Steps
Agenda

- Introductions
- Project & Schedule Update
- Field Review Findings
- Guiding Themes
- Action Items & Performance Measures Break Out Session
- Action Items & Performance Measures Report Back
- Next Steps
Data Collection & Analysis

Hot Spot Identification

Field Reviews & Further Analysis

Alternative and Countermeasure Identification

Recommendation and Performance Measure Identification

Implementation by the MPO, FDOT, Broward County, and Cities

Project & Schedule

We are Here!
Introductions

Project & Schedule Update

Field Review Findings

Guiding Themes

Action Items & Performance Measures Break Out Session

Action Items & Performance Measures Report Back

Next Steps
THE DEMONSTRATION SITES WERE CHOSEN AS REPRESENTATIVE EXAMPLES OF CONDITIONS IN BROWARD COUNTY FOR USE IN IDENTIFYING SYSTEMIC ISSUES
## Demonstration Sites and Types

<table>
<thead>
<tr>
<th>Example Site Location</th>
<th>Equivalent Site Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hallandale Beach Blvd (NE 4&lt;sup&gt;th&lt;/sup&gt; Ave to NE 26&lt;sup&gt;th&lt;/sup&gt; Ave)</td>
<td>Beach Access Corridor (BAC)</td>
</tr>
<tr>
<td>Sunrise Blvd (NE 13&lt;sup&gt;th&lt;/sup&gt; Ave to Middle River)</td>
<td>Urban Corridor (UC)</td>
</tr>
<tr>
<td>Broward Blvd at Andrews Ave</td>
<td>Urban Intersection (UI)</td>
</tr>
<tr>
<td>Oakland Park Blvd (NW 84&lt;sup&gt;th&lt;/sup&gt; Ave to Atrium West)</td>
<td>Suburban Corridor (SC)</td>
</tr>
<tr>
<td>Oakland Park Blvd at SR 7</td>
<td>Suburban Intersection (SI)</td>
</tr>
</tbody>
</table>

Samplings intended to represent all municipalities within the County.
BEACH ACCESS CORRIDOR DEMONSTRATION SITE
Hallandale Beach Boulevard from NE 4th Avenue to NE 26th Avenue

STUDY AREA | 1.30 Miles

ROADWAY CHARACTERISTICS

The corridor has a three lanes in each direction. It has intermittent right- and left-turn lanes. It also has a heavily landscaped median and both pedestrian and vehicular lighting. The corridor has 5’ - 7’ sidewalks and 4’ - 5’ marked bike lanes. The posted speed is 35 MPH. The land uses mainly consist of new and/or well kept auto-oriented shopping centers set behind large surface parking lots.

CRASH DATA - 2010 TO 2015

- **26** Pedestrian
- **62** Bicycle
- **1** Fatal
- **0** Pedestrian
- **1** Bicycle
- **81** Injury
- **25** Pedestrian
- **56** Bicycle
- **6** Property Damage
- **1** Pedestrian
- **5** Bicycle

<table>
<thead>
<tr>
<th>Peak Crash Time Periods</th>
<th>PM 12 6 9 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Peak Crash Months</th>
<th>PM 12 6 9 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>35%</td>
<td></td>
</tr>
</tbody>
</table>

- **16%** Occurred in Non-Daylight Lighting conditions
- **6%** Involved Alcohol and/or Drugs

<table>
<thead>
<tr>
<th>Peak Crash Days of the Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>35%</td>
</tr>
</tbody>
</table>

- Occurred on Monday & Thursday

FIELD REVIEW OBSERVATIONS

- Narrow Bike Lanes
- Bicyclists Riding on Sidewalks
- Objects Blocking Sidewalks
- Frequent Driveways
- Poorly Marked Driveway Crossings
- Faded Pavement Markings
- ADA Noncompliant Sidewalks and Ramps
- Missing Crosswalks
- Lack of Bicycle Markings at Conflict Areas
- Skewed Intersection Geometry
- Poor Drainage
- Out of Date Pedestrian Signal Signage
- Obstructed Views at Crosswalks
- Long Signal Times

- Objects Blocking the Sidewalk
- Narrow Bike Lanes & Poorly Marked Driveway Crossings
- Missing Pedestrian Crosswalks
- Poor Visibility Due to Vegetation
- ADA Noncompliance

Type BAC
URBAN CORRIDOR DEMONSTRATION SITE
Sunrise Boulevard from NE 13th Avenue to Middle River

STUDY AREA | 1 Mile

ROADWAY CHARACTERISTICS

The corridor has a three lanes in each direction. It has intermittent right- and left-turn lanes. It also has median with intermittent landscaping, cobra style vehicular lighting, and dynamic message signs. The corridor has 5’ - 7’ sidewalks and no marked bike lanes or paved shoulders. The posted speed is 35 MPH. The land uses are redeveloping; new buildings front the street while older buildings and shopping centers are set behind large surface parking lots.

CRASH DATA - 2010 TO 2015

- **Pedestrian**: 26
  - Fatal: 3
  - Injury: 22
  - Property Damage Only: 1
- **Bicycle**: 19
  - Fatal: 0
  - Injury: 22
  - Property Damage Only: 1

- **Peak Crash Time Periods**: 11%
- **Peak Crash Months**: 44%
  - Occurred in April, June, & October
- **Peak Crash Days of the Week**: 52%
  - Occurred on Tuesday, Friday, and Saturday

- **47%**: Occurred in Non-Daylight Lighting Conditions
- **13%**: Involved Alcohol and/or Drugs

FIELD REVIEW OBSERVATIONS

- No Bike Lanes
- Bicyclists Riding on Sidewalks
- Objects Blocking Sidewalks
- Narrow Sidewalks
- ADA Noncompliant Sidewalks and Ramps
- Missing Crosswalks
- Lack of Crossing Opportunities
- Illegal Mid-Block Crossings
- Frequent Driveways
- Poorly Marked Driveway Crossings
- Inattentive Drivers (Especially at Driveways and Intersections)
- Vehicles Blocking Crosswalks
- Lack of Shade/Sheriff
- Lack of Bicycle Markings at Conflict Areas
- Poor Drainage
- Too Much/Poor Signage
- Long Signal Times
URBAN INTERSECTION DEMONSTRATION SITE
Broward Boulevard at Andrews Avenue

STUDY AREA | Intersection Study

ROADWAY CHARACTERISTICS

Broward Boulevard has three lanes in each direction and Andrews Avenue has two lanes in each direction. Both roads are divided with intermittent right- and left-turn lanes. At the intersection, each leg has left turn lanes. The roads have cement or lightly vegetated medians and cobra-style vehicular lighting. The corridor has 6’ or wider sidewalks and no marked bike lanes, although Broward Boulevard has paved shoulders that could potentially be widened and converted into bike lanes in the future. The intersection is located in the most urban part of Fort Lauderdale and is surrounded by high rise, mixed use buildings arranged in a generally walkable manner.

CRASH DATA - 2010 TO 2015

33 Pedestrian
22 Bicycle

Peek Crash Time Periods

11% PM 4-6 12%
9%
3%

14% PM 6-9 12%
9%
3%

49% Occurred in Non-Daylight Lighting Conditions

18% Involved Alcohol and/or Drugs

Peak Crash Months

35% Occurred in March & November

Peak Crash Days of the Week

56% Occurred on Tuesday, Friday, and Saturday

FIELD REVIEW OBSERVATIONS

- Illegal Mid-Block Crossings
- Inattentive Drivers (Especially at Driveways and Intersections)
- Vehicles Blocking Crosswalks
- Speeding/Agressive Driving
- ADA Noncompliant Sidewalks and Ramps
- No Bike Lanes
- Missing/Faded Crosswalks
- Lack of Crossing Opportunities
- Objects Blocking Sidewalks
- Broken/Out of Date Pedestrian Signage and Signals
- Poor Pedestrian Access to Adjacent Development
- Wide Intersection/Excessive Pavement/Wide Turn Radius
- Lack of Bicycle Markings at Conflict Areas
- Long Signal Times
- Poor Lighting
SUBURBAN CORRIDOR DEMONSTRATION SITE
Oakland Park Boulevard from NW 84th Avenue to Atrium West

STUDY AREA | 1 Mile

ROADWAY CHARACTERISTICS

The corridor has a three lanes in each direction. It has intermittent right- and left-turn lanes. There are access roads in some areas as well. It also has median with intermittent landscaping. The corridor has 5’ - 6’ sidewalks separated from the roadway; and while there are no marked bike lanes, it does have paved shoulders that could potentially be widened and converted into bike lanes in the future. The posted speed is 45 MPH. The land uses generally consist of auto-oriented shopping centers and big box retail set behind large surface parking lots.

CRASH DATA - 2010 TO 2015

- 28 Pedestrian
- 9 Bicycle
- 1 Fatal
- 0 Bicycle
- 34 Injury
- 26 Bicycle
- 1 Property Damage
- 2 Fire
- 8 Property Damage
- 0 Bicycle

Peak Crash Time Periods
- PM
- 13%
- PM
- 12%
- 10%
- 12%
- 16%
- 8%
- 2%
- 12%
- 0%
- 0%

Peak Crash Months
- 30%
- Occurred in June & December
- 0%

Peak Crash Days of the Week
- 46%
- Occurred on Thursday & Friday 27%
- 16%
- 11%
- 15%
- 5%
- 30%

FIELD REVIEW OBSERVATIONS

- Illegal Mid-Block Crossings
- Inattentive Drivers (Especially at Driveways and Intersections)
- Vehicles Blocking Crosswalks
- Speeding/Agressive Driving
- ADA Noncompliant Sidewalks and Ramps
- No Bike Lanes
- Missing/Faded Crosswalks
- Lack of Crossing Opportunities
- Objects Blocking Sidewalks
- Broken/Out of Date Pedestrian Signage and Signals
- Frequent Driveways
- Poorly Marked Driveway Crossings
- Wide Intersection/Excessive Pavement
- Lack of Bicycle Markings at Conflict Areas
- Long Signal Times
- Poor Lighting

Type SC
SUBURBAN INTERSECTION DEMONSTRATION SITE
Oakland Park Boulevard at SR 7

STUDY AREA | Intersection Study

ROADWAY CHARACTERISTICS

Oakland Park Boulevard and SR 7 are each 6 lane, divided roads with intermittent right- and left-turn lanes. At the intersection, each leg has dual left turn lanes and right turn lanes. The roads have cement or lightly vegetated medians and cobra style vehicular lighting. The corridor has 6 sidewalks and no marked bike lanes, although SR 7 has paved shoulders that could potentially be widened and converted into bike lanes in the future. The intersection is surrounded by large shopping centers with big box stores and out parcel development set behind expansive surface parking lots.

CRASH DATA - 2010 TO 2015

- **46** Pedestrian
- **17** Bicycle
  - 1 Fatal
  - 1 Fatality
  - 49 Injury
  - 37 Injury
  - 12 Property Damage Only
  - 13 Property Damage Only
- **32%** Occurred in Non-Daylight Lighting conditions
- **8%** Involved Alcohol and/or Drugs
- **13%** Occurred in January, February, & August
- **35%** Occurred in January, February, & August
- **23%** Occurred on Friday

FIELD REVIEW OBSERVATIONS

- Illegal Mid-Block Crossings
- Inattentive Drivers (Especially at Driveways and Intersections)
- Vehicles Blocking Crosswalks
- ADA Noncompliant Sidewalks and Ramps
- No Bike Lanes
- Bicyclists Riding on Sidewalks
- Lack of Crossing Opportunities
- Objects Blocking Sidewalks
- Narrow Sidewalks
- Frequent Driveways
- Poorly Marked Driveway Crossings
- Poor Pedestrian Access to Adjacent Development
- Lack of Shade/Shelter
- Lack of Bicycle Markings at Conflict Areas
- Long Signal Times
- Buses Bunching and Stopped in Road
- Broken/Out of Date Pedestrian Signage and Signals
### Types of Plans

<table>
<thead>
<tr>
<th>Vision</th>
<th>Master Plan</th>
<th>Action Plan</th>
<th>LRTP</th>
<th>Corridor Study</th>
<th>Safety &amp; Operational Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspirational document or statement that defines a desired future.</td>
<td>Identifies and defines the ultimate desired network of facilities and treatments to achieve the vision.</td>
<td>Identifies strategic institutional changes needed to achieve the vision and how those changes can be accomplished.</td>
<td>Identifies and categorizes projects and programs by time frame and funding sources.</td>
<td>Identifies context sensitive improvements and projects for a corridor.</td>
<td>Identifies design, operational, maintenance, and other implementable projects to improve a study area based on a specific safety or operational issue.</td>
</tr>
</tbody>
</table>
From Goals to Guiding Themes

A-Team Original Six Goals

- Design roads for users of all ages and abilities
- Identify and designate bicycle and pedestrian priority areas
- Educate all road users on the rights and responsibilities of all modes
- Ensure that transit and land use decisions support bicyclists and pedestrians
- Build consensus and improve collaboration among partners
- Increase enforcement of laws related to pedestrian and bicycle safety

Resulting Action Plan Themes

- Set the Stage
- Create Safe Streets
- Prevent Aggressive Behavior
- All Hands on Deck
Guiding Themes

Set the Stage
- Enact transportation and land use plans and policies to better support multimodal transportation.

Create Safe Streets
- Implement complete streets projects and evaluation measures that go beyond a focus on vehicles and prioritize walking, bicycling, and riding transit.

Prevent Aggressive Behavior
- Enhance training of law enforcement officers on pedestrian and bicycle issues, conduct targeted enforcement, and take legal action.

All Hands on Deck
- Coordinate decision makers and find and support advocates to move forward an agreed upon vision for pedestrian and bicycle safety.
## Breakout Group Activity: Action Items

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description of system wide issues either observed or seen through data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme</td>
<td>Related guiding theme</td>
</tr>
<tr>
<td>Category</td>
<td>General category of issues</td>
</tr>
<tr>
<td>E’s</td>
<td>Related 5 E’s</td>
</tr>
<tr>
<td>Action Item</td>
<td>Description of system wide action items based on professional judgment, research, and national best practices</td>
</tr>
<tr>
<td>Lead Agency</td>
<td>Identified Lead Champions</td>
</tr>
<tr>
<td>Support Agencies</td>
<td>Identified supporting Champions</td>
</tr>
</tbody>
</table>
Breakout Group Activity: Performance Measures

**Collisions in Seattle**
- Running total of fatalities and serious injuries in 2016: 74

**Pedestrians**
- Pedestrian fatalities and injuries out of total collisions involving pedestrians in 2016: 101/112

**Vision Zero Seattle’s Goal**
- Collisions resulting in fatalities or serious injuries by 2030: 0

**Bicyclists**
- Cyclist fatalities and injuries out of total collisions involving cyclists in 2016: 25/36

**Collisions by Age**
- Collisions ranked by age group of drivers involving fatalities and serious injuries:
  - 16-29 years: [Graph]
  - 30-39 years: [Graph]
  - 50-59 years: [Graph]
  - 40-49 years: [Graph]

**Mode of Travel**
- Breakdown of fatalities and serious injuries by mode of travel:

**Top Contributing Factors**
- Contributing factors ranked by frequency for collisions involving fatalities and serious injuries:
  - Contributing Factor: Frequency
  - Inattention: [Graph]
  - Did not Grant: [Graph]
  - Under the Inf...: [Graph]
  - Did not Grant...: [Graph]

**Example Dashboard**
Seattle, WA
Breakout Group Activity

Group 1
Create Safe Streets

Group 2
Set the Stage

Group 3
Prevent Aggressive Behavior & All Hands On Deck

45 Minutes!
Agenda

- Introductions
- Project & Schedule Update
- Field Review Findings
- Guiding Themes
- Action Items & Performance Measures Break Out Session
- Action Items & Performance Measures Report Back
- Next Steps
Agenda

- Introductions
- Project & Schedule Update
- Field Review Findings
- Guiding Themes
- Action Items & Performance Measures Break Out Session
- Action Items & Performance Measures Report Back
- Next Steps
Next Steps

1. Summarize the A-team’s feedback and incorporate into the overall BPSAP
2. Present to the MPO’s Committees and Board on Nov. 16th and Dec. 8th
3. Prepare the draft BPSAP document
4. Hold final A-Team meeting to gather final thoughts and determine post BPSAP next steps in early 2017
5. Present to the MPO’s Committees and Board in Spring 2017 for final adoption