“Designing for People, Place & Profits”

Billy L. Hattaway, P.E. Transportation Director
Florida’s Challenges with Safety:

- Dangerous by Design 2016
  - 8 of top 10 in Florida
  - Total Crashes: 395,813  15% increase (2014-2016)
  - Injuries: 254,166  11% increase
  - Fatalities: 3,178  27% increase
  - Pedestrian Fatalities: 667  10% increase
  - Bicyclist Fatalities: 140  3% increase
How We Got Here

Fowler Ave, Tampa
Land Development Patterns

1585 Anna Catherine Dr, Eastwood Park, Orange County, FL
13415 Summer Rain Dr, Avalon Park, Orange County, FL
7.1 mile drive, yet only 70' apart
Land Development Patterns
The Implications of Speed

- Hit by a vehicle traveling at 20 MPH: 9 out of 10 pedestrians survive.
- Hit by a vehicle traveling at 30 MPH: 5 out of 10 pedestrians survive.
- Hit by a vehicle traveling at 40 MPH: only 1 out of 10 pedestrians survives.
Roundabouts vs Traffic Circles
Vehicle Conflicts

8 Conflict Points
- Crossing (0)
- Diverging (4)
- Converging (4)

32 Conflict Points
- Crossing (16)
- Diverging (8)
- Converging (8)
Pedestrian/Vehicle Conflicts

8 Conflict Points

16 Conflict Points
Remember to yield at all entrances. Traffic in the circle has the right-of-way.

Bike Lane Ends Here
Bicyclists have two options:
1. Merge with traffic and circulate as a vehicle
2. Mount the sidewalk and use crosswalks
Modern Roundabout/Road Diets
Orlando: A History of Leadership

- 1,100 Acres
- 250 Acres of Lakes
- **32 Street Connections**
- 18,000 Residents
- 125 Businesses
- Mixed Use
- Publix, CVS
- 20 Neighborhood Parks
- “A” Rated Schools
- 50 miles of Trails

- Single Family
- Town Homes
- Apartments
- Condominiums
- Live/Work

Baldwin Park
Orlando: A History of Leadership

Central Avenue
City of Orlando’s Safety Initiatives

- Bike/Walk Central Florida
  - Best Foot Forward ($60,000/year)

- Vision Zero Network
  - Vision Zero Action Plan
  - Focus on High Crash Corridors/City/County/State

- National Complete Streets Coalition
  - Safe Streets Academy

- Street Network/Land Development Initiative
Orlando Stops:

- Reduction in Right Angle Crashes of over 65%.
- Reduction in all crashes of 11%.
- Tickets issued by OPD officers
- Dedication of fines directly to safety improvements for pedestrian/bike and other transportation safety efforts
Orlando Walks Sidewalk Program: targets priority areas: schools, parks, bus routes, shopping, and SunRail Stations. Completed 47 miles of sidewalk connections.


Pedestrian Crossing Enhancement Program: 3 rectangular rapid flashing beacon (RRFB’s) pedestrian crossings installed. Experiencing driver yield rates of up to 45%.
Midblock Crossings
Rectangular Rapid Flashing Beacons (RRFB)
High intensity Activated crossWalk “Beacon” (HAWK)
State and Local Partnerships

Context Classification System

C1  C2  C2T  C3R  C3C  C4  C5  C6
### Design Speed

<table>
<thead>
<tr>
<th>Context Classification</th>
<th>Allowable Design Speed Range (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FDM</strong></td>
<td></td>
</tr>
<tr>
<td>C1 Natural</td>
<td>55-70</td>
</tr>
<tr>
<td>C2 Rural</td>
<td>55-70</td>
</tr>
<tr>
<td>C2T Rural Town</td>
<td>25-45</td>
</tr>
<tr>
<td>C3 Suburban</td>
<td>35-55</td>
</tr>
<tr>
<td>C4 Urban General</td>
<td>30-45</td>
</tr>
<tr>
<td>C5 Urban Center</td>
<td>25-35</td>
</tr>
<tr>
<td>C6 Urban Core</td>
<td>25-30</td>
</tr>
</tbody>
</table>

FDM – Florida Design Manual
### Lanes Widths for Travel Lanes

<table>
<thead>
<tr>
<th>Context Classification</th>
<th>Minimum Lane Widths (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FDM</strong></td>
<td></td>
</tr>
<tr>
<td>C1 Natural</td>
<td>12</td>
</tr>
<tr>
<td>C2 Rural</td>
<td>12</td>
</tr>
<tr>
<td>C2T Rural Town</td>
<td>11</td>
</tr>
<tr>
<td>C3 Suburban</td>
<td>10</td>
</tr>
<tr>
<td>C4 Urban General</td>
<td>10</td>
</tr>
<tr>
<td>C5 Urban Center</td>
<td>10</td>
</tr>
<tr>
<td>C6 Urban Core</td>
<td>10</td>
</tr>
</tbody>
</table>

25-35 mph
### Sidewalk Widths

<table>
<thead>
<tr>
<th>Context Classification</th>
<th>Standard Sidewalk Widths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FDM</td>
</tr>
<tr>
<td>C1 Natural</td>
<td>---</td>
</tr>
<tr>
<td>C2 Rural</td>
<td>---</td>
</tr>
<tr>
<td>C2T Rural Town</td>
<td>8 feet</td>
</tr>
<tr>
<td>C3 Suburban</td>
<td>6 feet</td>
</tr>
<tr>
<td>C4 Urban General</td>
<td>8 feet</td>
</tr>
<tr>
<td>C5 Urban Center</td>
<td>10 feet</td>
</tr>
<tr>
<td>C6 Urban Core</td>
<td>12 feet</td>
</tr>
</tbody>
</table>
City of Orlando’s Future Initiatives

• Context Classification of City Corridors
• Conversion of One-Way Streets
• Increased Use of Modern Roundabouts
• Expansion of Cycle Tracks/Trails
• Integrated Land Use/Corridor Studies
Central Business District – Concept Development

Alternative 1B
Lake Eola District – Concept Development

Alternative 1B
Neighborhood District – Concept Development

Alternative 1
Milk District – Concept Development

Alternative 2B
QUESTIONS?

Billy L. Hattaway, P.E. Transportation Director
billy.hattaway@cityoforlando.net