COMPLETE STREET DESIGN CONCEPT
( HENDERSON BLVD)
DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING

SUSTAINABLE TRANSPORTATION 2018
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Overview of the Presentation

- Goals and Objectives
- Existing Conditions (Henderson Blvd)
- 2025 Design Concepts
- 2040 Design Concepts
- Proposed TDM measures to reduce VMT
Goals and Objectives

Goal 1: Enhance Safety for all modes of transport

- Reduce collision at intersection by 60%
- Eliminate traffic fatalities and serious injuries by 70%
- Implement traffic calming to induce slower speeds and increase driver awareness by 15%

Goal 2: Improve accessibility and mobility for all modes

- Improve pedestrian and bicycle facilities.
- Promote modes of transportation other than the automobile
- Increase usage of the bike share service
Goal 3: Increase economic vitality, environmental quality and livability of the corridor

- Promote a mix of uses in close proximity, including active uses on the ground floor.
- Reduce or eliminate surface parking lots through redevelopment by 30%
- Provide green space, parklets and allow street artists to encourage social interaction and activity on the street.
- Apply green infrastructure and energy harvesting treatments to improve environmental quality
Overview of the segment 1 (Henderson Blvd)

CITY: TAMPA
COUNTY: HILLSBOROUGH
STREET NAME: HENDERSON BLVD
Intersections on Henderson Blvd

On a stretch of one mile of street from S Dale Mabry to W Kennedy we observed that Henderson Blvd has 7 intersections.
AADT Count-20900
Observed from Dale Mabry to W Swann Ave
AADT COUNT

AADT-10000
Observed from W Swann Ave to S Matanzas Ave
Zoning of Street (Henderson Blvd)

CG - COMMERCIAL GENERAL
CN - COMMERCIAL NEIGHBOURHOOD
RM-24 - RESIDENTIAL MULTI FAMILY
RS60 - RESIDENTIAL SINGLE FAMILY
OP1 - OFFICE PROFESSIONAL
RO-1 - RESIDENTIAL OFFICE
RS100 - RESIDENTIAL SINGLE FAMILY
PD - PLANNED DEVELOPMENT
CI - COMMERCIAL INTENSIVE
RS50 - RESIDENTIAL SINGLE FAMILY
Existing Condition (Street Dimensions)

Street Name: Henderson Blvd (S Dale Mabry to W Kennedy Blvd)
Length of Street: 1 Mile
Width of Street: 50 feet
Width of Shoulder: 8 feet
Speed Limit: 40 mph
5 lane Divided Highway
Intersections: 7
Four Point Intersection.

W Azeele St

W Swann Ave

W Horatio St
Bus Stops & Sidewalks.
HART ROUTE & CROSSING
Total Crashes by Intersection

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Dale Mabry</td>
<td>38</td>
</tr>
<tr>
<td>AZEELE St.W</td>
<td>22</td>
</tr>
<tr>
<td>Steering Ave.S</td>
<td>15</td>
</tr>
<tr>
<td>Lykes Ave.W</td>
<td>2</td>
</tr>
<tr>
<td>Cleveland St.W</td>
<td>3</td>
</tr>
<tr>
<td>Kennedy Blvd.W</td>
<td>4</td>
</tr>
<tr>
<td>Horatio St.W</td>
<td>2</td>
</tr>
<tr>
<td>Lincoln Ave S</td>
<td>3</td>
</tr>
<tr>
<td>Inman Ave W</td>
<td>4</td>
</tr>
</tbody>
</table>
Event Lightning & Intersection Condition

- **Daylight**: 73%
- **Night**: 24%
- **Dusk**: 3%

**Bar Chart**:
- **Not at Intersection**: 42
- **Four way intersection**: 43
- **T Intersection**: 7
- **Y Intersection**: 2

**Legend**:
- Daylight
- Night
- Dusk

**Types of Intersections**:
- Four way intersection
- T Intersection
- Y Intersection
Driver Condition & Causes

- Apparently Normal: 97
- Physically Impaired: 1
- Under influence of Drugs/Alcohol: 4

Causes:
- Failed to yield right of way: 25
- Failed to keep in proper lane: 12
- Followed too closely: 9
- Ran stop sign: 7
Existing Condition (Henderson Blvd)
Henderson Blvd 2025/2040
Activity Center

Benefits

Faster community interaction and social engagement

Transform underutilized street space into vibrant parking space.

Attract Pedestrians
Parklet Program
Pedestrian refuge island

- Two islands are provided, one on each side of center running transit.
- Islands can be used as locations for pedestrians to cross street in addition to accessing transit.
- Marked or raised crosswalks from curb to each transit boarding island.
Raised Crosswalks

- Raised Crosswalks provide an elevated surface above the travel lane that attracts attention of drivers and encourages lower speed.
- Raising the road surface typically by 3-6 inches or height of curb over short crossing distance.
- The flat area may be made of brick paver.
Painted Intersection
What's in 2040 plan?

- Provide a framework for desired growth and development.
- Seek to improve quality of life and the economy.
- Balance demands and future investments managing the budget.
Permeable Pavement

- Perforated parking pavement can be used on off street parking so that excess water can be infiltrated.
- And they can be used in the parking lots which are across the roads.
- This can restrict the excess runoff to drainage and hence pollution can be restricted occurred by runoff.
- Increase in vegetation will not allow the water to runoff, as it will help in ground water recharge.
Sterling Crossing
Starling Crossing

- An innovative new design concept named Starling Crossing which uses object tracking and LED’s to adjust virtual markers on the road.
- Uses LED’s to paint road with markings that guide pedestrians safely across the road.
- Unbroken stop markings appear across the lane, signaling oncoming vehicles to stop.
Measures Proposed to reduce VMT

- Explore ways to increase sustainable infrastructure practices for transportation infrastructure to enhance multi modal transportation system.
- Educate people on multimodal road safety for bicyclist, pedestrians and public transport.
- Explore transit pass subsidies or other ways to reduce transit fairs.
- 1% increase in transit frequency saves 0.5% in VMT
- Provide a small additional cooperate income tax credit for companies accessible by public transport.
- Impose higher prices on vehicles with higher per mile GHG emissions.