East Sligh Avenue Segment 1
Group 4
University of South Florida
CGN6933 Sustainable Transportation Spring 2019
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April 18, 2019
Goal 1: Enhance safety and travel behaviors.

- Objectives
  - Reduce the number of collisions involving property damage, serious injury, fatality and pedestrians by 30 percent.
  - Reduce the number of crashes caused by distracted or impaired behavior by 30 percent.
Goals and Objectives

- **Goal 2: Increase the viability of non-motorized travel options.**
  - **Objectives**
    - Eliminate all redundant driveways and improve overall sidewalk conditions and width by 1 foot.
    - Reduce vehicle miles travel by 20 percent.
Goals and Objectives

- Goals 3: Enhance aesthetics, social inclusion, economic activity and environmental quality.

  - Objectives
    - Introduce a series of five landscaping, art and stormwater management elements.
    - Identify address and redevelop all sites of potential contamination, with emphasis on low density abandoned parcels.
E. Sligh From N. Florida Ave To N. Nebraska Ave
Existing Conditions Almanac

- East Sligh From N. Florida to N. Nebraska, 0.5 miles.
- No Transit Stations on E. Sligh.
  - Extensive bus routes are found on N. Florida and N. Nebraska.
  - Limited, to no, amenities offered at surrounding bus stops.
- No active buffered or non-buffered bicycle lanes
- 5 Pedestrian Crossings
  - Improvements are aimed at achieving ADA standards and applying NACTO guidelines for curbside and crosswalk design.
Existing Conditions

- Right of way varies 53 ft-66 ft.
  - 10-11 feet travel lanes
  - 4.5 foot sidewalk w/ grass buffer and gutter
  - 4 lane undivided
Existing Conditions

Narrow, steep and unaccommodating sidewalks.

Overgrown shrubs intruding on sidewalk with redundant driveways.
Existing Conditions

Poor road conditions on side streets

Poor Sidewalk Conditions

Faded Markings.
Crash Data

- 2015-2019 (5-Year Period)

- 226 Total Crashes
- 448 Total Vehicles Involved

- 118 Property Damage
- 107 Injury
- 1 Fatality

Map showing locations of crashes with categories: Property Damage, Injury, Fatality.
Crash Data

Bike and Pedestrian Data

- 06/07/2013 to 05/07/2018
- 13 Incidents involving cyclists and pedestrians 10 resulting injuries.
- No report of aggressive or intoxicated behavior

Vehicle Motion

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Crash</th>
<th>Injuries</th>
<th>Peds</th>
<th>Bike</th>
<th>Intersection</th>
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<td>2</td>
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<td>Turning Left</td>
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<td>6</td>
<td>6</td>
<td>1</td>
<td>2</td>
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<td>2</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
Map of Activity Centers

Off Street Parking Areas

Owner: City of Tampa
Type: Fitness Center
Acres: 7.97

Owner: Tampa Baptist Church
Property Type: Church
Acres: 4.13

Owner: Huracan Realty LLC
Property Type: Supermarket
Acres: 0.67

Source: https://gis.hcpafl.org/gissearch/
Zoning

**RO Residential Office:** Primarily for low density residential development and low intensity office uses compatible with residential neighborhoods. Minimum lot size is 5000 square feet, 1 unit per 5000 sq. ft. Maximum height is 35 feet.

**CG Commercial-general:** Variety of retail and commercial service activities can be conducted compatible with surrounding uses and residential districts. Minimum lot size is 10000 square feet. Maximum height is 45 feet.

**RS Residential Single Family:** Provides areas primarily for low density single-family detached dwellings. Maximum height is 35 feet.

**CN Commercial-neighborhood:** This district provides areas for limited retail and personal services in residential neighborhoods.

**CI Commercial-intensive:** This district provides areas for intense commercial activity, permitting heavy commercial and service uses. Minimum lot size is 10000 square feet. Maximum height is 45 feet.
Traffic Count

- Traffic counts by FDOT stations indicate slightly higher traffic volumes.

- Traffic volumes east of I-275 indicate the corridor could be a potential candidate for a road diet.

- To accommodate a road diet, future travel demands will need to be shifted to other forms of transportation.

Bicycle Connections

- No bicycle paths on East Sligh segment
- Limited connectivity to activity centers.
- A connected bike network would be consistent with Hillsborough County’s Imagine 2040 Long Range Transportation Plan
- Included in TBARTA’s Regional Multi Use Trail Network as a “Conceptual Trail”
Functional Classification

Sligh Avenue:
Hillsborough, Arterial

N. Nebraska and I-275:
State, Principal Arterial

North Florida:
State, Arterial
Speed Limits

- Speed reduction mechanisms to consider include: landscaped median (with pedestrian refuge), lane shifts, roundabouts, street trees and on-street parking.

- Passive vs. protective street design
2025 Improvements

- **2025**
  - Enhancement to all side street crosswalks applying PROWAG and NACTO standards.
  - Left turn lane elimination at N. Florida intersection, bike lane and increased sidewalk width.
  - All improvements fit within the existing right of way
Crosswalk 2025

Proposed flashing beacon crosswalk to connect residential side streets with recreational area.
2025 Crosswalks and Surface Enhancements

Improved crosswalks for non-signalized streets

N Wellington
N Branch
E. Sligh Ave
N Dixon
N Navin
Crosswalk design guidelines (NACTO Urban street design Guide)

- Stripe all signalized crossings to reinforce yielding of vehicles turning during a green signal phase.

- Street lighting should be provided at all intersections, with additional care and emphasis taken at and near crosswalks.

- Accessible curb ramps are required by the Americans with Disabilities Act (ADA) at all crosswalks.
N. Florida Ave. Intersection Curb Ramps
Bike Lanes

- Bike lanes will be included throughout the entire segment, approximately 0.5 miles.
- Combining both bike lanes and buffered bike lanes for some portions.
2025 Design Improvements N. Florida Intersection
2040 Improvements

- All improvements take place within the existing right of way, no acquisition for additional right of way required.
- Channelized off ramp
- Implementing bike lanes and wider sidewalks
- Solar flashing crosswalk lights
- Underpass lighting and art
- Additional landscaping and stormwater management
- Additional recreational and transit amenities
2040 Channelized Right-turning Lane (off-ramp)
Asymmetrical three-lane road/ lane elimination
2040 N. Nebraska Right Turn Lane Elimination
Integrate pervious strips into median section. Using native landscaping and maximum 2% gentle side slope to direct flow into the facility.

Future and current traffic projections support a road diet for Sligh Ave East of I-275. Grid network and enhanced non motorized travel options will allow for successfully diversion of traffic flow, if needed.
Stormwater Drain Relocation - N Dixon Ave Intersection
Stormwater Drain Relocation - N Dixon Ave Intersection

Existing stormwater drain

Proposed stormwater drain
Stormwater Drain Relocation - N Central Ave Intersection
Stormwater Management

- Integrated into the landscaping of design improvements will be stormwater management elements; including bioswales and pervious strips
- NACTO Urban Street Design
2040 Safety and Art Improvement For I-275

Light Emitting Metallic Palm Trees And Landscaped Median Will Enhance Aesthetics and Safety For the Corridor
2040 MPO Green ARtery/ Walk Bike Plan

- The City of Tampa and the MPO plan a loop trail linking downtown Tampa to Palmetto Beach, Ybor City, Rowlett Park, Sulphur Springs, Lowry Park and along the Hillsborough River back to downtown Tampa.

- E. Sligh and The Hillsborough River play a central role

American Legion Park
TDM Measure to further reduce VMT

- In addition to protected bike lanes further TDM measures can include:
  - Congestion pricing
  - Carsharing/ Bike sharing
  - Telework
  - Standardized wayfinding
  - Unlimited transit passes or transit subsidies
Solar roads

France

China
Why Solar Roads?

- Illuminated lighting
- Renewable energy
- Safer driving condition
- High durability (20 to 40 years)
- Less pollution
- Pay for itself
Solar Road
Future Plug in Charging Stations

- Electric cars sale has increased to 81% in 2018.
- USA is second large country in usage of electric vehicles.
- By 2030 there are 130 million electric vehicles on the road.
- 90% of passenger cars will be electric in USA by 2040.

*http://fortune.com/2018/05/31/electric-vehicles-international-energy-agency/
Thank You!

Any Questions?
www.cutr.usf.edu