Road Diets – FDOT Process

Humberto Castillero, PE, PTOE
Roadway Design Office
Purpose of Guide

• Develop a statewide lane elimination review process

• Balance state & local interests
  – Multi-modal needs – Vehicles, Pedestrians, Bicycles & Transit
  – Economic development – wider sidewalks, parking
  – More livable environments – landscaping, aesthetics

• Identify profiles of issues & concerns

• Provide guidelines for development of the Concept Report
Stakeholders

- **Applicant**: the city, county, MPO, TPO, and/or private entity proposing the lane elimination project
- **District Contact**: coordinates District’s review activities and serves as point of contact for Applicant
- **District Review Team**: formally reviews information, analyses, and design concepts provided by Applicant
- **Central Office Contact**: coordinates with District Contact and tracks Central Office’s participation in lane elimination request review
Review Process – Stage 1

STAGE 1

Applicant contacts District to schedule meeting.

District provides Lane Elimination Guide to Applicant.

District Contact forms District Review Team.

Applicant provides preliminary project information >2 weeks before Initial Meeting.

Central Office is notified.

Initial Meeting held. District Review Team determines review process and methodology for Concept Report. Applicant prepares meeting notes.

District Contact provides project information to District Review Team.
Review Process – Stage 2

1. District Contact provides Draft Concept Report to District Review Team.
2. Applicant provides Draft Concept Report >30 days before Interim Meeting.
3. Applicant and District Contact schedule Interim Meeting.
4. District Contact provides consolidated review comments to Applicant >1 week before Interim Meeting.
5. Interim Meeting held. Applicant prepares meeting notes.
6. Central Office is notified.
Review Process – Stage 3

STAGE 3

1. Applicant addresses review comments in Final Concept Report.
2. Applicant submits formal Application Package to District.
3. District assesses completeness and acceptability of Application Package.
4. District internally approves or denies lane elimination request.
   - Denial: Applicant revises and resubmits formal Application Package to District.
   - Approval: District issues approval or denial letter to applicant.
5. Central Office is notified.

END
Communications Material

- Initial meeting checklist
- Methodology checklist
- Application checklist
- Content for:
  - Central Office notices
  - Review comments letter
  - Approval/denial letter
Application Package

• Includes:
  – Formal request letter
  – Approval by locals
  – Public involvement
  – Final concept report
  – Funding plan*
  – Implementation plan*
  – Project-specific requirements*

*as applicable
Goals and Objectives

- Identify potential **planning, design, construction and operational issues** in the lane elimination Concept Report
- Develop a **consistent process** for approval of lane elimination requests
- Allow for **flexibility** to balance multi-modal transportation needs along the corridor
- Improve **safety, operations and aesthetic characteristics** of corridor
## Issue Profiles

<table>
<thead>
<tr>
<th>Safety impacts</th>
<th>Design variances and exceptions</th>
<th>Freight routes/access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic operations impacts</td>
<td>Consistency with plans and programs</td>
<td>Extra-jurisdictional impacts</td>
</tr>
<tr>
<td>Pedestrian and bicyclist activity</td>
<td>Functional classification</td>
<td>Structure/utility impacts</td>
</tr>
<tr>
<td>Impacts to transit routing/stops and ridership</td>
<td>System designation</td>
<td>Costs and funding sources</td>
</tr>
<tr>
<td>Impacts on parking supply and activity</td>
<td>Access management</td>
<td>Community support</td>
</tr>
<tr>
<td>Sales tax revenue and property value impacts</td>
<td>Emergency evacuation and response</td>
<td>Other issues</td>
</tr>
<tr>
<td>Environmental issues</td>
<td>Jurisdictional transfers</td>
<td></td>
</tr>
</tbody>
</table>
Corridor Vision

• There are trade-offs & competing needs
  – Bike facilities, wider sidewalks, and transit facilities
  – On-street parking
  – Landscaping

• Many design issues are interrelated

• All stakeholders must be identified early

• Resolution to some issues will take time

• Coordination is a must
Safety

• Posted speed
  – Reduces speed 1 to 7 MPH

• Pedestrian exposure
  – Decreases number of lanes to cross

• Pedestrian crash rates & severity
  – Improves sight distance

• Bicyclists crash rates
  – Dedicates space for bicycle traveling
Traffic Operations

- Existing traffic volumes (for 4-Lane roadways the ADT is less than 20,000)
- Eliminate/reduce queuing by installation of LT lanes
- Increase in peak hour travel time
- Potential traffic diversion

Edgewater Drive - Before

After
Pedestrian & Bicyclist Activity

- Bicyclists accommodation
  - Bike lanes/shared lanes
  - Width, buffers, color texture

- Expansion or construction of sidewalks
  - Connecting major pedestrian generators

- ADA improvements and upgrades
  - Curb ramps, bulb-outs, raised islands

- Opportunities for landscape/hardscape
Transit Impacts

• Potential Delays
  – Bus volumes and headways
  – Preferential bus lanes
  – Transit Signal Priority

• Bus stop relocations
  – Near vs. far side

• Need for bus pull-outs
Parking Impacts – Lane Repurposing

• Installation of parking lanes
  – Width
  – Sight distance restrictions
  – Parallel vs. diagonal
  – Parking for persons with disabilities

• Lane Repurposing
  – Convert outside lane to on-street parking or bus lane
Environmental, Access & Emergency

- **Environmental Issues**
  - Usually provide a net positive impact
    - Shifting vehicle volumes to a multi-modal use
    - Air quality improvements
    - Opportunity for landscaping and hardscape

- **Access Management**
  - Modification/elimination median openings
  - Consolidation/relocation of driveways

- **Emergency Evacuation**
  - Evacuation capacity
  - Emergency response
Design, Utilities, Classification & Funding

- **Design Variations/Exceptions**
  - Usually for lane and median widths
  - May require sight distance evaluations due to landscaping components

- **Utilities**
  - Generally not impacted if improvements are within existing right of way

- **Functional Classification**
  - Can affect the degree of mobility/access function

- **Cost and Funding Sources**
  - Low in cost, specially if coordinated with 3R projects
SR 693/Pasadena Avenue

Project Location:
City of South Pasadena

2/3 mile
SR 693/Pasadena Avenue

- Applicant: City of South Pasadena
- Purpose and Need:
  - Economic Development
  - Bike/Pedestrian/Transit enhancements
- Concept: From 6 lanes to 4 lanes, bike lanes, bus bays & pedestrian amenities
- Considerations:
  - Lack of Funding for project
  - Pedestrian crossing
  - Business access
  - Located in between jurisdictions
  - Transitions to project termini
  - Hurricane Evacuation
SR 693 Typical Section
SR 693 Concept Improvements

1. Re-route bike lane to original location between sidewalk and planting strip.
2. Provide opportunities to reinforce wayfinding and cognition of bus bay.
3. Provide 11' wide (9.5' + 1.5' gutter) indented bus bay.
4. Reduce sidewalk width from standard 7' to 5' to accommodate provision of bus bay.
5. Reduce bike lane width from standard 5' to 4' (4'+1.5' gutter).
6. Route bike lane to abut travel lane to ensure visibility of cyclists and increase safety.
7. 5' wide bike lane separated from travel lanes by 7' wide planter strip.
8. Provide 4 (2+2) 11' wide through travel lanes and center 12' turn lane.
9. Increase opportunities for street planting and traffic calming.
Outcome

- City council received public opposition.

- Opposition centered around impacts to vehicular traffic.

- City council voted to remove any reference to lane reduction from their Corridor Redevelopment Plan.
Nebraska Avenue

- 3.15 Miles
- Before: 4-lane undivided urban arterial
- After: 2-lane arterial with
  - Bike lanes
  - Combination of:
    - Two-way left turn lane
    - Painted/textured medians
    - Bus pull outs (Bus Bays)
- Construction 2007-08 (498 construction days)
- $11.1 million (initially 3R project)
Nebraska Avenue

Before Condition

After Condition
Nebraska Avenue - Pedestrian

- Mid Block Crosswalks
- Intersection Enhancements
- Median Refuges
- Sidewalk & ADA enhancements
Nebraska Avenue - Bicyclists
Nebraska Avenue - Transit

Bus Lane

Bus Stop
## Nebraska Avenue – Before & After Data

<table>
<thead>
<tr>
<th></th>
<th>Before 2004-06</th>
<th>After 2009-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>AADT</td>
<td>17,900</td>
<td>15,000</td>
</tr>
<tr>
<td>Crashes/Yr.</td>
<td>174</td>
<td>71</td>
</tr>
<tr>
<td>Severe Crashes/Yr.</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Ped. Crashes/Yr.</td>
<td>7</td>
<td>&lt;3</td>
</tr>
<tr>
<td>Bicyclist Crashes/Yr.</td>
<td>5.0</td>
<td>5.6 *</td>
</tr>
</tbody>
</table>

59% reduction in overall vehicle crashes.
57% reduction in pedestrian crashes.
*This change is not statistically significant. No bicyclist counts were taken before and after for comparison.*
Nebraska Avenue - Benefits

- Pedestrians – reduced crossing distances
- Bicyclists – installed bike lanes
- Drivers – improved LOS
  - Reduced speeding/crashes by eliminating conflicts
  - Made vehicle movement more predictable
  - Provided LT pockets (corridor/intersections)
- Space – efficient multi-modal use
- Economic Enhancement
- Livability Improvements
- Cost Effective – 3R project implementation
# Concept Reports

## Sample of Current Lane Elimination Concept Reports

<table>
<thead>
<tr>
<th>Status</th>
<th>Location</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td>SR 5 / US Highway 1</td>
<td>From 6 to 4 lanes</td>
<td>Wider median, buffered bike lanes, landscape</td>
</tr>
<tr>
<td>Approved</td>
<td>SR 811 (Dixie Highway)</td>
<td>From 6 to 4 lanes</td>
<td>Buffered bike lanes, landscape</td>
</tr>
<tr>
<td>Approved</td>
<td>Hillsborough Boulevard</td>
<td>From 6 to 4 lanes</td>
<td>Buffered bike lanes, TWLT Median</td>
</tr>
<tr>
<td>Approved</td>
<td>SR 569/US Highway 41</td>
<td>From 6 to 4 lanes</td>
<td>Buffered bike lanes, intersection improvements</td>
</tr>
<tr>
<td>Under Review</td>
<td>SR 9(NW 27 Avenue)</td>
<td>From 6 to 4 lanes</td>
<td>Outside lane repurpose for Bus Rapid Transit</td>
</tr>
<tr>
<td>Under Review</td>
<td>SR 7/US Highway 441</td>
<td>From 6 to 4 lanes</td>
<td>On-street parking, bike lanes, landscape</td>
</tr>
<tr>
<td>Under Review</td>
<td>SR 804 (Boynton Beach Blvd)</td>
<td>From 4 to 2 lanes</td>
<td>TWLT Median, Bike Lanes</td>
</tr>
<tr>
<td>Under Review</td>
<td>SR 811 (Wilton Drive)</td>
<td>From 4 to 2 lanes</td>
<td>TWLT Median, Bike Lanes</td>
</tr>
</tbody>
</table>