What to Expect When You’re Expecting a (Highway) Bypass: Considering Land Use and Transportation Impacts of a Bypass Alternative in Small- and Medium-Sized Communities

September 2014/Version 1.3

What is a highway bypass?

*bypass*  /ˈbīˌpas/

*noun*

a road passing around a town or its center to provide an alternative route for through traffic.

- Google Dictionary
What is a highway bypass intended to do?

- Reduce traffic congestion
- Reduce effects from heavy truck traffic
  - fumes, noise, vibrations
- Reduce emergency response time
- Improve travel time
- **Support overall travel speed on the Strategic Intermodal System (SIS)**

Strategic Intermodal System (SIS)

- **STRATEGIC** - Statewide and regional significance
- **INTERMODAL** - Includes all modes
- **SYSTEM** – Integrates transportation and linkages into one integrated system
- **Serves mobility needs of people and helps Florida be economically competitive**

www.dot.state.fl.us
U.S. 301 in FDOT District 2 - Baldwin

Truck volume 18%-25%<br>US 301/US 90 intersection<br>Improve travel speed + efficiency<br>Local + through traffic<br>Up to 20 minute delays at RR crossings
Travel speed slowed by traffic signals

Relieve congestion

Improve travel speed + efficiency

Delays at RR crossing and school zone

Traffic growth 2020 = 25,300
2040 = 31,400

U.S. 301 in FDOT District 2 - Starke

www.us301northflorida.com
Highway bypass impacts to land use

- Direct impacts
  - Immediate
  - Removal of land uses and/or buildings

Photo by Scott Schrantz
Highway bypass impacts to land use

Indirect impacts to land use

- **Indirect impacts**
  - Occur over time
  - Cumulative
  - Changes in growth and development patterns

- Access to undeveloped land can affect the rate of growth and development patterns
**U.S. 301 in FDOT District 3 - Freeport**

- **5.5 miles**
- **$24.5 million**

<table>
<thead>
<tr>
<th>Year</th>
<th>Pop</th>
<th>%</th>
<th>Land Area (sq mi)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1,190</td>
<td>10.8</td>
<td>50%</td>
<td>55%</td>
</tr>
<tr>
<td>2010</td>
<td>1,787</td>
<td>16.7</td>
<td></td>
<td></td>
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</tbody>
</table>

- **Hshds**: 500 (2000), 702 (2010) - 40%
- **Density (ppsm)**: 110.4 (2000), 105.4 (2010) - 5%

- Indirect impacts to community character

**Old Post Office**
- On Main Street (US 331)

**New Post Office**
- On the US 331 Bypass
Potential economic impacts

<table>
<thead>
<tr>
<th>Preconception</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Decline in business downtown</td>
<td>• Businesses with strong local customer base stay put</td>
</tr>
<tr>
<td>• Economic growth, increased tax base</td>
<td>• Travel-related business relocate to bypass</td>
</tr>
<tr>
<td></td>
<td>• National chains attracted to bypass</td>
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<tr>
<td></td>
<td>• Growth occurs in communities near large metro areas that are growing</td>
</tr>
</tbody>
</table>

How does FDOT identify potential impacts?

• Efficient Transportation Decision-Making (ETDM) Process
  ▫ Sociocultural effects evaluation

SOCIAL
• Demographics
• Community Goals
• Community Cohesion
• Quality of Life
• Safety/Emergency Response
• Special Community Designations

ECONOMIC
• Business and Employment
• Tax Base
• Traffic Patterns
• Business Access
• Special Needs Patrons

LAND USE
• Land Use/Urban Form
• Local Plan Consistency
• Focal Points
• Open Space
• Sprawl

MOBILITY
• Modal Choices
• Pedestrian
• Bicycle
• Transit
• Connectivity
• Public Parking
• Traffic Circulation
• Transportation Disadvantaged

AESTHETICS
• Noise/Vibration
• Viewshed
• Compatibility

RELOCATION POTENTIAL
• Residential
• Non-residential
• Public Facilities

YOUR INPUT IS KEY
FDOT uses public comments to...

- Ensure that community issues are identified and addressed
- Avoid, minimize, and/or mitigate adverse effects
- Identify conceptual design solutions

Local government actions to address potential impacts = MOBILITY PLANNING
Mobility plan:
Focus & emphasis

• Focus on moving people and goods, *not vehicles*
• Put less emphasis on relieving auto congestion
• Put more emphasis on expanding and reinforcing mode choice
  ▫ transit
  ▫ sidewalks
  ▫ bike lanes
  ▫ freight

Mobility plan:
Land use & accessibility best practices

• Promote a mix of land uses in centers
• Focus major generators:
  • in urban cores
  • in district centers
  • near major public transportation stops
• Locate day to day facilities in local centers so they are accessible by walking and cycling
• Accommodate housing in existing urban areas
• Put retail and entertainment in the urban core first, then edge of core, then fringe
Mobility plan: Priority routes by mode

Mobility plan: Network and connectivity

**Mobility plan:**

**Access management**

- Limit and control access to the bypass
- Manage access on the bypassed roadway

*Photo and maps from us301starke.com*
Mobility plan:

Consider growth inducement potential

- Will the bypass induce growth or alter development patterns?
- Does the Comp Plan reflect potential land use changes?
- Analysis methods
  - simple, qualitative approach
  - planning judgment, collaborative judgment, elasticities

- If favorable conditions are found to exist, then a bypass can dramatically influence the rate and location of development

KEY VARIABLES

- Change in accessibility
- Change in property value
- Forecasted growth
- Relationship between land supply and demand
- Availability of other services - water, sewer, etc.
- Other market factors - growth trends, etc.
- Public policy - ability/inability to change land use

U.S. 301 in FDOT District 2 - Starke

Photo and maps from us301starke.com
Mobility plan: Improve livability on the bypassed road

- Rightsize using road diet

Mobility plan: Support downtown

- Install directional signage on the bypass
- Provide incentives for infill development
- Include pedestrian, bicycle, and transit facilities and amenities
- Add street trees, street furniture, and gathering places
- Control traffic speed and create minimal pedestrian crossing distances
- Maintain infrastructure
In Conclusion

- A bypass is often considered the best way to resolve issues of congestion and improve travel speed on the SIS
- Impacts should be thoroughly understood
- Indirect impacts
  - Opens up area to new development
  - Redistribute area’s economic activity
  - Affects land use, livability, community character, local mobility
- Develop mitigation plans and strategies

Questions?

FOR REPORTS, PRESENTATIONS
www.cutr.usf.edu/pcm
http://www.dot.state.fl.us/planning/systems/documents/documents.shtm

1. Impacts of Bypass Highways on Small- and Medium-Sized Communities in Florida: Knowledge Search and Evaluation of Past Studies. December 2010

- Karen E. Seggerman, AICP, CNU-A - seggerman@cutr.usf.edu
- Kristine M. Williams, AICP - kwilliams@cutr.usf.edu
- Gary Sokolow - gary.sokolow@dot.state.fl.us