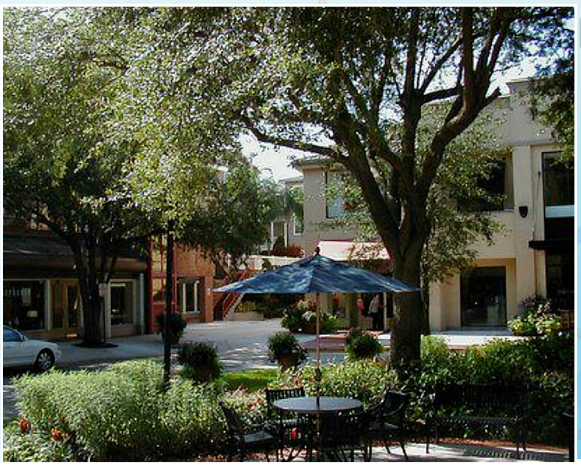
BYPASS BASICS

Considering a Bypass in Your Small and Medium-Sized Community



Prepared by CUTR for the
FDOT Systems Planning Office 2014
www.dot.state.fl.us/planning/systems/

by•pass
/ˈbīˌpas/
noun
a road passing around a town or its center to provide an alternative route for through traffic.
- Google Dictionary

WHY BUILD A BYPASS?

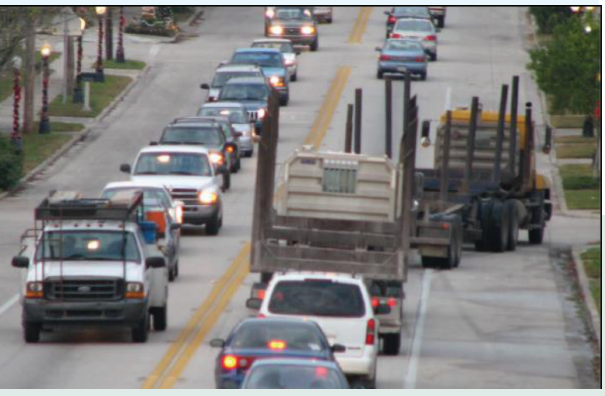
Your community may be asked to consider a bypass to relieve traffic congestion and to improve travel time for those passing through – especially trucks. Desire for a bypass is increasing for state highways on Florida's Strategic Intermodal System (SIS) that run through small- and medium-sized communities. This is because "SIS" highways are designated to provide for the statewide movement of people and goods and, therefore, are critical to the economy.

Questions to ask

Why is FDOT proposing a bypass in this community?

Statistics from recently completed bypasses in Florida:

- Bypasses circumvent communities with populations ranging from 10,000 to 90,000–most with a population under 25,000.
- The bypassed town is from 25 to 60 miles away from the central city of the nearest Metropolitan Statistical Area (MSA)
- Redirecting commercial and industrial traffic, reducing congestion, and alleviating existing or anticipated travel demand were reasons for the bypass.
- Bypass length ranges from 2.3 to 10.9 miles-most under 6 miles long.



Truck traffic often adds to congestion in small communities, adversely affecting livability.

IS A BYPASS NEEDED?

Major state highways are often the main street in small and medium-sized communities. This means they serve local, as well as regional, travel. Freight and through traffic in these communities contribute to traffic congestion and have other adverse impacts on quality of life. A highway bypass may be appropriate where heavy truck traffic causes continuing unacceptable impacts, such as noise, fumes, and vibration. It may also be appropriate where a high percentage of trips are just passing through the community. In these situations, the bypass would significantly reduce traffic congestion and pollution.

Roadways on Florida's Strategic Intermodal System (SIS) support economic activity in the state through the efficient movement of people and goods. Many highways passing through small communities and rural areas are part of this system. When a SIS highway is also a main street, trucks and other fast-moving through traffic come into conflict with slow-moving local traffic, bicyclists, and pedestrians. When designating SIS roadways, the Florida Department of Transportation (FDOT) considers issues such as community livability. FDOT discourages or tries to reduce freight movement and high-speed traffic through residential and/or commercial areas that have high levels of pedestrian activity.

A bypass should only be constructed when the roadway to be bypassed is seriously affected by congestion and the resulting bypass would not cause serious environmental damage or promote sprawl. Whether sprawl will occur, however, largely depends on the strength and quality of local government planning and development decisions.

Questions to ask

- *Is a bypass the best solution to congestion through downtown?*
- *What can be done to alleviate congestion through downtown without construction of a bypass?*
- *What alternatives have been considered and why was a bypass determined to be the best solution?*

How does a bypass affect land use?

Construction of a bypass makes it easier to get to and from the surrounding land. Bypasses that are freeways will also increase access to land wherever there is an interchange. That increased accessibility generally increases development pressure around the interchange and along any intersecting streets, particularly where sewer, water, and other urban services are provided.

A transportation project like a bypass may impact land use both directly and indirectly. Direct impacts are generally immediate and include conversion of productive agricultural land and removal of existing buildings to accommodate the new roadway, as well as changes to the overall character of the affected area due to construction. For example, the removal of existing homes in the path of the planned roadway is one type of direct impact.

Indirect impacts generally occur over a long period of time. These impacts may involve changes in development and growth patterns along the road that is bypassed, as well as in the area adjacent to the bypass and between the bypass, the town, and other developed land. Land use, livability, community character, and local mobility may all be affected. Indirect impacts from transportation projects can also be cumulative – that is, one change may lead to more changes, with the resulting impact being quite large in scope. A bypass may shift where development occurs and gradually change the overall growth pattern of an entire community. Examples include intense commercial development around new interchanges, strip commercial and big box development along the bypass or intersecting roads, and low-density residential subdivisions on outlying land made more accessible.

A bypass increases access to undeveloped land.

Question to ask

Has there been or will there be a study assessing the indirect effect of the bypass on land use in the vicinity of the bypass, as well as the area between the town and the bypass?

Characteristics of planned bypasses in Florida:

- Will circumvent communities with populations ranging from 1,400 to 82,500, with most having a population near 5,000.
- The bypassed town may be from 11 to 50 miles away from the nearest major city.
- Reasons for the bypass include redirecting commercial and industrial traffic, reducing congestion, enhancing hurricane evacuation, and alleviating existing or anticipated travel demand as reasons for the bypass.
- Length ranges from 1.5 to 20 miles, with a median length of 10 miles.

HOW ARE IMPACTS TO LAND USE ANALYZED?

Evaluating how a bypass highway will affect land use and related considerations, such as livability, community character, and local mobility, is an important step in planning the project. Potential impacts are examined by FDOT through Florida's Efficient Transportation Decision Making (ETDM) process, particularly during the Sociocultural Effects (SCE) Evaluation (see Table). The SCE Evaluation is a comprehensive analysis aimed at helping communities more thoroughly understand potential bypass impacts and develop effective strategies to reduce any adverse impacts.

A new bypass on a new alignment, especially through undeveloped land, may warrant more detailed analysis to fully understand the potential indirect effects. Although land use planning activities fall outside the jurisdiction of transportation agencies, failure to consider the land use impacts of a bypass can counteract long-range transportation planning and growth management efforts. A sociocultural analysis provides an opportunity for the community and FDOT to work together to more fully consider potential bypass impacts and options.

Question to ask

How can citizens provide input regarding potential land use and related impacts?

Sociocultural Effects Evaluation Issues

SOCIAL	ECONOMIC	LAND USE	MOBILITY	AESTHETICS	RELOCATION POTENTIAL

• Demographics
• Community Goals
• Community Cohesion
• Quality of Life
• Safety/Emergency Response
• Special Community Designations
	• Business and Employment
	• Tax Base
	• Traffic Patterns
	• Business Access
	• Special Needs Patrons
		• Land Use/ Urban Form
		• Local Plan Consistency
		• Focal Points
		• Open Spce
		• Sprawl
			• Modal Choices
			  • Pedestrian
			  • Bicycle
			  • Transit
			• Connectivity
			• Public Parking
			• Traffic Circulation
			• Transportation Disadvantaged
				• Noise/Vibration
				• Viewshed
				• Compatibility
					• Residential
					• Non-residential
					• Public Facilities

Source: Project Development and Environment Manual Part 2, Chapter 9, SCE Evaluation (FDOT 2014)

Maximize Use of Infrastructure

Tax revenue from a vibrant multistory downtown building where urban infrastructure exists is often much greater per acre than that of a new big box retail store on the urban fringe.

Best bet for tax revenue: mixed-use downtown development, New Urban News, Vol. 15, No. 6, (Sept. 2010).

WHAT ARE THE ECONOMIC IMPLICATIONS OF A BYPASS?

Many preconceptions exist about the effect of a bypass on a community's economy. Some view a new bypass and the access it brings to undeveloped land as an opportunity for economic growth. Others believe that there will be a decline in sales and decreased business activity in town, particularly along the bypassed route. The reality is more likely to be a redistribution of economic activity from the downtown area toward the bypass. Many businesses will likely be national chains.

Economic activity along the bypassed route is likely to change. For example, a downtown, along with its valuable infrastructure and local businesses, may experience increased vacancy rates as new, national chain stores develop adjacent

to the bypass. The new chain stores often attract more growth to the bypass, and require the community to pay for supporting infrastructure and services, such as connector roads, sewer and water lines, and fire and police protection. In addition, more local dollars spent at new national chain stores mean fewer dollars kept locally. Most profits go to owners and shareholders located outside of the community, often in other states. Some small businesses that rely on customers from pass-by traffic or those that offer goods and services sold cheaper by national chains will close, affecting both the local economy and community character.

Questions to ask

- *Has there been or will there be a study to determine the economic impact of a bypass on the community?*
- *Will such a study examine the potential change in downtown business customers?*

Such potential impacts warrant detailed analysis, not only of economic impacts to businesses, but also of the infrastructure and service cost/benefit to the community. Unfortunately, most economic studies only uncover regional shifts in economic activity, due to lack of data at the local level. Therefore, they may not bring to light important local impacts, such as changes in type of ownership or openings and closings of local businesses.

Livability in small communities may be hindered by heavy traffic and congested roads.

How can potential issues related to a bypass be resolved?

If a bypass alternative is chosen, FDOT and impacted local governments should take steps to ensure that the new bypass will be protected from poorly planned development. For example, cooperative agreements could be entered into between FDOT and affected local governments that define plans and strategies to address land use and transportation along and surrounding the bypass corridor. Interchange management plans, corridor access management plans, and master plans or overlay zones could be developed and implemented.

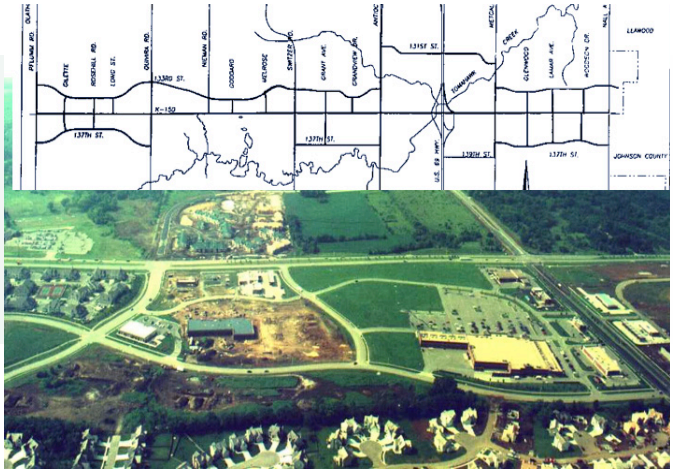
The community could also partner with FDOT to develop a mobility plan to improve or maintain local mobility within the planning area. The local jurisdiction should take the lead in preparing a mobility plan, which must be implemented by local governments, although FDOT may lend technical assistance and resources to the effort.

Implementing a mobility plan can enhance the benefits of a new bypass, while helping to minimize or avoid potentially negative impacts. A mobility plan should address:

- Land use and street network development between the community and the bypass and at least one mile beyond the bypass;
- Both land use and access around interchanges, taking care to avoid driveway access near interchange ramps;
- Both land use and access where the bypass intersects with existing roadways;
- Corridor access management along major roadways that connect the community to the bypass;
- Connections and other improvements to roadways under local jurisdiction needed to minimize use of the bypass for local traffic (e.g., parallel or connector roadways near the outlying bypass); and
- Land use and street design along the original bypassed roadway, considering options such as wider sidewalks, safe pedestrian crossings, bike lanes, transit shelters, street trees, benches, traffic calming or other amenities to enhance local mobility, community character, and livability on the bypassed corridor.

Question to ask

Does FDOT have technical and/or monetary resources to assist the community with land use and street network planning efforts to address bypass impacts?



Corridor planning should allow for access to land uses without using the main roadway.

How will access to the bypass be handled?

Potential negative impacts of a bypass on land use, livability, community character, and local mobility can be avoided or reduced through careful control of access to the bypass and along all intersecting roadways. When FDOT builds a bypass for the SIS, it is fully access controlled. This means that access is provided only via interchanges with major roadways. Where those interchanges are located will have direct implications for growth in those areas and along all major roadways leading to the interchange. When a bypass is constructed through an urban area, access is carefully controlled.

For these reasons, planning efforts should identify appropriate locations for access near interchanges and consider what type of streets and site circulation are needed to support development in those areas, as well as between the community and the bypass. Limiting access on bypasses helps to maintain the mobility sought by constructing the bypass; however, only strong land use and street network planning by affected local governments will minimize potential urban sprawl and ensure safe and convenient local mobility.

Questions to ask

- *Where will access be allowed to the bypass? What are the implications?*
- *How will property adjacent to the bypass be accessed?*
- *How can we manage access to other major roadways that intersect the bypass?*

Access Management

Managing access to major roadways can reduce crashes by 50%, increase available roadway capacity, and reduce travel time and delay. Access management is critical along all major roadways - especially those that intersect with a bypass or other limited access highway.

Rightsize Roadways

Rightsizing techniques, such as a road diet, can be applied to update streets to more appropriately fit their context. A road diet reduces the number of automobile traffic lanes, replacing them with any combination of landscaping treatments, wider sidewalks, bicycle lanes, on-street parking, etc. Excess capacity on a bypassed roadway may be eliminated while improving local mobility and community character. By removing travel lanes and providing enhancements for non-automobile travel, a re-designed street supports local mobility as well as community character and livability. Results include slower traffic, fewer crashes, and increased bicycle and pedestrian safety.

If a bypass is constructed, what will happen to the old road through downtown?

Often, a major roadway that also serves as a community's main street has undergone changes over time to increase its capacity and accommodate large trucks. Such changes may have robbed the main street area of its character by removing natural and cultural features, such as street trees and historic structures. The area may also be less pedestrian and bicycle friendly, as traffic lanes replaced the area for sidewalks, bicycles and parking and created wide areas of pavement that are difficult and unsafe to cross.

After construction of a bypass, the original main street roadway that was bypassed is likely to have less traffic and be out of scale with the needs and desired character of the surrounding area. The community should work with FDOT in evaluating the roadway for possible projects that discourage its use for high-speed, high-volume traffic movement and increase focus on local mobility and community character. Projects may include a road diet and the addition of pedestrian, bicycle, and transit facilities and amenities.

Construction of a bypass can result in a downtown that is attractive to pedestrians and bicyclists.

In addition, a well-thought out plan is important to ensure continued viability of the downtown or bypassed area. The area may be devoid of design details essential to placemaking, such as landscaping, benches, bike racks, and trees. Plans, therefore, may include steps to improve the character and livability of the bypassed roadway. Strategies contained in a local mobility plan, or a downtown development plan, should contribute to the long-term viability of the downtown and preserve the improved regional mobility intended by the bypass. Key factors to address include:

- Signage and advertising on the bypass directing travelers to the downtown or bypassed area;
- Development plan or "main street" program including incentives for infill development;
- Pedestrian, bicycle, and transit facilities and amenities;
- Community facilities, including the addition of street trees, street furniture, art and gathering places;
- Street design an-d traffic calming to control traffic speed and improve pedestrian crossings; and
- Infrastructure maintenance.

Question to ask

Does FDOT have technical and/or monetary resources to assist the community in developing a plan for downtown that encourages redevelopment and supports economic activity even after traffic through downtown is reduced?

Common Facts and Myths

Myth: Bypasses are an **economic development** tool that will increase the tax base.

Reality: The actual impact of bypasses on the economy of small communities is mixed. The economies of smaller communities (<2000 population) are more likely to be adversely impacted by a bypass.

Fact: Bypasses **reduce traffic congestion** on the original route through the CBD.

Explanation: The difference in travel time between the old facility and the bypass will determine how many vehicles will divert to the bypass.

Myth: The new bypass will encourage urban **sprawl**.

Reality: The likelihood of sprawl is dependent on the region's growth rate, the functional class of the roadway, the comprehensive plans in place before the bypass is constructed, and the scale of development permitted near the bypass.

Myth: The bypass route will draw **population** away from the bypassed CBD.

Reality: Bypassed cities do not experience universal population loss; however, small communities may experience population loss.

Fact: Bypasses improve the speed and reliability of **freight movement**.

Explanation: Because the bypass circumvents traffic congestion and traffic control devices, trucks tend to choose the bypass instead of the original route. Thus, travel time and reliability of freight movement improves.

Myth: **Businesses will relocate** out of the CBD to the bypass route, incurring relocation costs and reducing local tax base.

Reality: Regional retail (big box) and travel-related businesses will locate on the bypass route if access is available; however, CBDs with a strong identity as a destination for local shoppers may strengthen due to a reduction in traffic delays.

Myth: Occupants of the CBD often **dislike a bypass** following construction.

Reality: Those who live, work or run businesses downtown are commonly happy to have the traffic, congestion, and pollution removed from their downtowns.

The information in this brochure is provided to inform stakeholders and the general public about highway bypasses, so they can ask the right questions and make informed decisions. If a bypass alternative is chosen, this information will help communities ensure that the necessary local plans and strategies are in place to support the bypass, strengthen the local economy, and enhance the character and transportation system of the community.

For more information contact:

Florida Department of Transportation
Office of Systems Planning/Systems Management
850-414-4900
www.dot.state.fl.us/planning/systems/

Center for Urban Transportation Research
Planning and Corridor Management
www.cutr.usf.edu