

TECHNICAL MEMORANDUM - FREIGHT MOBILITY NEEDS

The Sarasota/Manatee MPO's Mobility 2035 Long Range Transportation Plan emphasizes the importance of a freight transportation system that will support economic vitality and enhanced participation in the global economy. Transportation facilities that expedite the movement of goods to, within, and from the Sarasota/Manatee region are critical to the long term economic health and growth of the region. These facilities provide access to key economic generators and districts of industrial, commercial and related types of employment.

The *Freight Mobility Needs* memorandum describes freight's role in the regional economy and identifies the region's key freight activity centers (FACs). It examines the number, type, and performance of facilities serving these areas to develop an inventory of freight mobility needs in Sarasota and Manatee Counties. Long-term freight mobility needs can include new road, rail, seaport, and aviation facilities; capacity enhancements to existing facilities; and intermodal facilities that expedite the transfer of goods from one mode to another.

Freight's Economic Impact

A freight transportation system that provides good accessibility to freight activity centers is a key contributor to the economic growth of the region. The freight transportation network contributes to the region's economic vitality by delivering consumer products to markets, transporting raw materials and finished products to and from industries, moving building materials to construction sites, and distributing fuels and energy resources to power cities. As global commerce increases and local economies diversify, it is important for metropolitan areas to ensure that adequate infrastructure is in place to meet escalating demand for freight capacity and leverage transportation investments to support vibrant, livable, and economically sound communities.

For this reason, federal transportation policy has placed increased emphasis on freight mobility in the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), expanding or creating funding programs to support goods movement. Freight concerns are also likely to figure heavily in future transportation bills. Leveraging federal and State funding for freight mobility projects creates jobs and supports industries that rely on an efficient, intermodal transportation system.

The freight network in Sarasota and Manatee Counties connects the area with the greater West Central and Southwest Florida regions, as well as other parts of the state, country, and world. Efficient goods movement powers commercial and industrial enterprises and contributes to the region's base employment, meaning that jobs produced in freight and supported sectors help to generate additional jobs in the region.

The economic impacts of freight make it an important consideration in developing a long range transportation plan and a substantial contributor to livability. However, the goal of providing for efficient goods movement should be balanced with the concerns of residents, businesses, commuters and multimodal system users, including bicyclists, pedestrians and transit riders. Therefore, freight

mobility needs are identified in appropriate corridors based on an understanding of the region's FACs and the connections made within Sarasota and Manatee Counties and the surrounding West Central Florida and Southwest Florida region.

Freight Activity Centers

In assessing freight mobility and system performance, it is important to understand where freight activities are concentrated. Locations of intermodal transshipment, such as seaports or freight rail terminals, are major hubs of freight activity. Other areas with high levels of freight activity are characterized by industrial and commercial employment. Freight activity centers are major producers and attractors of truck traffic. They may be areas of existing activity or where such growth is planned to occur or where distribution activities are shifting from a local focus to a regional, national, and/or global focus. There are 11 areas in Sarasota and Manatee Counties identified as freight activity centers:

1. Port Manatee – Located north of Palmetto on the Gulf Coast, Port Manatee is the closest deepwater port to the Panama Canal in the U.S. The port handles approximately nine million tons of cargo annually, focusing especially on produce, forestry products, and petroleum products. The port has a major economic impact, contributing over \$2.3 billion to the regional economy and supporting over 20,000 jobs. Acres of land in the vicinity of the port are planned for notable industrial and port-related growth in years to come.

Port Manatee is served by US 41 and a CSX rail line with a spur to serve the docks directly. Additional roadway connections are needed and two improvements, the Port Manatee Connector and EZ Flyover, are in the planning stages.

2. Gulf Coast Corporate Park – Located at the US 41/I-275 interchange, the Gulf Coast Corporate Park is a 140-acre mixed-use commercial/residential/light industrial complex. Sysco Food Services operates a 390,000 square foot facility with over 500 employees, occupying the southeast corner of the park. About half the remaining industrial parcels have been absorbed, while commercial, office, and multifamily uses are planned in future phases. Large tracks of land surrounding the corporate park remain undeveloped and with future land use designations for industrial and mixed-use activities.
3. North Central Manatee – The area north of US 301 east of Palmetto is home to a variety of industrial and warehousing uses. US 301 provides a connection from the activity center to US 41 and I-75. A CSX rail spur links the industrial area to the main CSX line in central Palmetto. Several developable tracts are designated for industrial uses in Manatee County's future land use map.
4. Tropicana – Tropicana Products employs about 1,400 workers at its processing plant in Bradenton. The Plant is served by US 301 and by a CSX rail line. There is a small rail yard within the plant. The Tropicana facility is classified as an urban industrial use, and there is little room for expansion or additional industrial uses in the immediate vicinity.

5. Central Manatee – In central Manatee, south of 38th Avenue East and west of US 301, Pierce Manufacturing employs around 400 workers in a heavy duty truck manufacturing operation that specializes in emergency vehicles. Additionally, the Manasota Industrial Park is situated adjacent to the Pierce plant with light and heavy industrial, manufacturing, and warehouse operations. The Central Manatee FAC is accessible from 38th Avenue and 15th Street East, neither of which are high capacity roadways. They do, however, provide relatively easy access to US 301 and SR 70, which are major transportation facilities that connect to the Interstate system. There is considerable room for growth in the Central Manatee area, with vacant lands to the east designated for industrial uses in the future land use map. Many of these parcels would have direct access to US 301.
6. South Manatee/Sarasota – The US 301 corridor in southern Manatee County is characterized by light and heavy industrial and manufacturing uses. The broad north-south industrial corridor covers the area between 15th Street East to the west and 33rd Street to the east as it extends from 57th Avenue to 77th Avenue, narrowing to simply include sites adjacent to US 301 as it continues into northern Sarasota County. US 301 is the primary highway connection serving the FAC; the Seminole Gulf Railroad provides a rail connection that links to the CSX line in central Manatee County. The southern portions of the corridor contain vacant lands with future land use designations for industrial expansion and mixed-use development.
7. Sarasota-Bradenton International Airport – Abutting the South Manatee/Sarasota activity center is the Sarasota-Bradenton International Airport industrial area. The airport serves primarily passenger traffic, but handles a nominal amount of air cargo. Together with the light industrial uses to the north, the airport is identified as a low intensity FAC. Future industrial and mixed-use development around the airport will eventually cause the South Manatee/Sarasota and Airport FACs to function as a single high-intensity activity center.
8. Publix Distribution Center – Publix Supermarkets operates a warehouse on Sawyer Road south of Clark Road. Directly west of the Publix warehouse is a United Natural Foods distribution center and smaller light industrial uses along McIntosh Road. Clark Road provides easy access to I-75 to the east and US 41 to the west. Vacant land in the vicinity has a future land use designation of Major Employment Center, meaning that future expansion of freight activities in the area is likely.
9. PGT Industries – In North Venice, at the I-75/Laurel Road interchange, PGT Industries anchors a corporate park along with its manufacturing facility, which employs over 900 workers. Smaller light manufacturing and commercial uses are also found in the area. Parcels for further industrial and commercial activities remain available within the existing complex, but expansion opportunities beyond that appear to be limited based on the future land use designations.
10. International Trade Center – The International Trade Center on Fruitville Road east of I-75 in Sarasota is a mixed-use office, commercial, and light industrial development. It is a low intensity FAC. There are vacant lands available designated for Major Employment Centers in the future

land use map, so expansion of freight activities is likely to occur. The FAC is served only by Fruitville Road, which provides access to I-75.

11. North Port Park of Commerce – The North Port Park of Commerce is a 170-acre mixed use commercial, office, and light industrial development located at the I-75/Toledo Blade Boulevard Interchange in North Port. It is a low intensity FAC. Development in the surrounding area is primarily residential, so major expansions are unlikely to occur.

Each of these areas has distinct characteristics warranting different facilities. Port Manatee, for example, is an area of international trade and relatively intense freight activity. It is served by road, rail, and seaport facilities, and connections to proximate intermodal facilities are important to maximizing the efficiency of port operations and promoting port expansion. Major facilities like Port Manatee and Tropicana require different facilities than smaller FACs like the North Port Park of Commerce. Identifying and planning for freight mobility needs will reflect the nature of the various FACs in Sarasota and Manatee counties and their significance on a regional, national, and international scale.

The Port Encouragement Zone

The Port Manatee Encouragement Zone (EZ) is a 5,000-acre special district designed to spur the development of Port Manatee and the immediate vicinity. The EZ offers incentives like DRI exemptions, impact fee reductions, expedited permit approvals and rezoning options, an extension of the port's foreign trade zone, and tax increment financing to improve the area's infrastructure as it develops. These incentives are intended to attract major shippers and port-related enterprises to Port Manatee and the vast greenfields between the port and I-75. The location and extents of the EZ are displayed in Figure 1.

Figure 1 – Port Manatee Encouragement Zone



Performance of the Freight Transportation System

To identify freight mobility needs, it is necessary to understand how well the existing transportation system is functioning, especially with respect to the service of the FACs described above. An analysis of freight movements on the current transportation system is presented in a map series that identifies major rail, road, aviation, and seaport facilities and the amount of truck traffic served by roadway

facilities. This analysis reveals where major freight movements are occurring in the two counties and will aid in identifying needed capacity expansions or new facilities.

The Strategic Intermodal System

The Florida Department of Transportation (FDOT) established the Strategic Intermodal System (SIS) as a statewide network of highways, railroads, waterways, airports, seaports, and spaceports that would be the target of strategic, but substantial, investments to meet the State's long term mobility, livability, and economic development goals. SIS facilities play a critical role in freight mobility. The SIS facilities in Sarasota and Manatee Counties are displayed in Figure 2 below, along with the locations of the FACs.

The SIS facilities in the Sarasota/Manatee region consist of I-75, I-275, Port Manatee and its railroad connection, and US 41 road connections from the port to I-275, and the Gulf Intracoastal Waterway. In addition, the Sarasota-Bradenton International Airport is an emerging SIS facility, as is SR 70 east of I-75 through the MPO planning area. University Parkway from the airport entrance road to I-75 is a SIS Connector facility. These facilities are critical not only to the region's transportation network, but also to the state and national networks.

The map shows that the highest intensity activity centers (Port Manatee and Tropicana) are served by SIS railroads, with the port being itself a SIS seaport connected by a SIS connector road to I-275, a SIS highway. Most of the other FACs are located along non-SIS rail lines. The Sarasota-Bradenton International Airport is a SIS facility and FAC served by University Parkway. The North Port Park of Commerce and PGT Industries have direct access to I-75, the principal SIS highway spanning Sarasota and Manatee Counties, while the Gulf Coast Corporate Park is situated adjacent to I-275 in Manatee County.

Thus, most of the major activity centers enjoy relatively easy access to high capacity facilities that provide mobility to the surrounding region and other parts of the state. Improvements to SIS facilities are planned through FDOT's SIS Multimodal Cost Feasible Plan with coordination among the FDOT districts, MPOs, city and county governments, and other partners. Additional needed improvements to SIS facilities are documented in the SIS Unfunded Needs Assessment. While FACs in Manatee and Sarasota Counties are generally well served by the SIS, needed improvements have been identified and are documented in the "Freight Mobility Needs" section of this document.

Figure 2 – Strategic Intermodal System Facilities in Sarasota and Manatee Counties



Source: Florida Department of Transportation, Strategic Intermodal System Plan, "eSIS I-Map," February 25, 2010

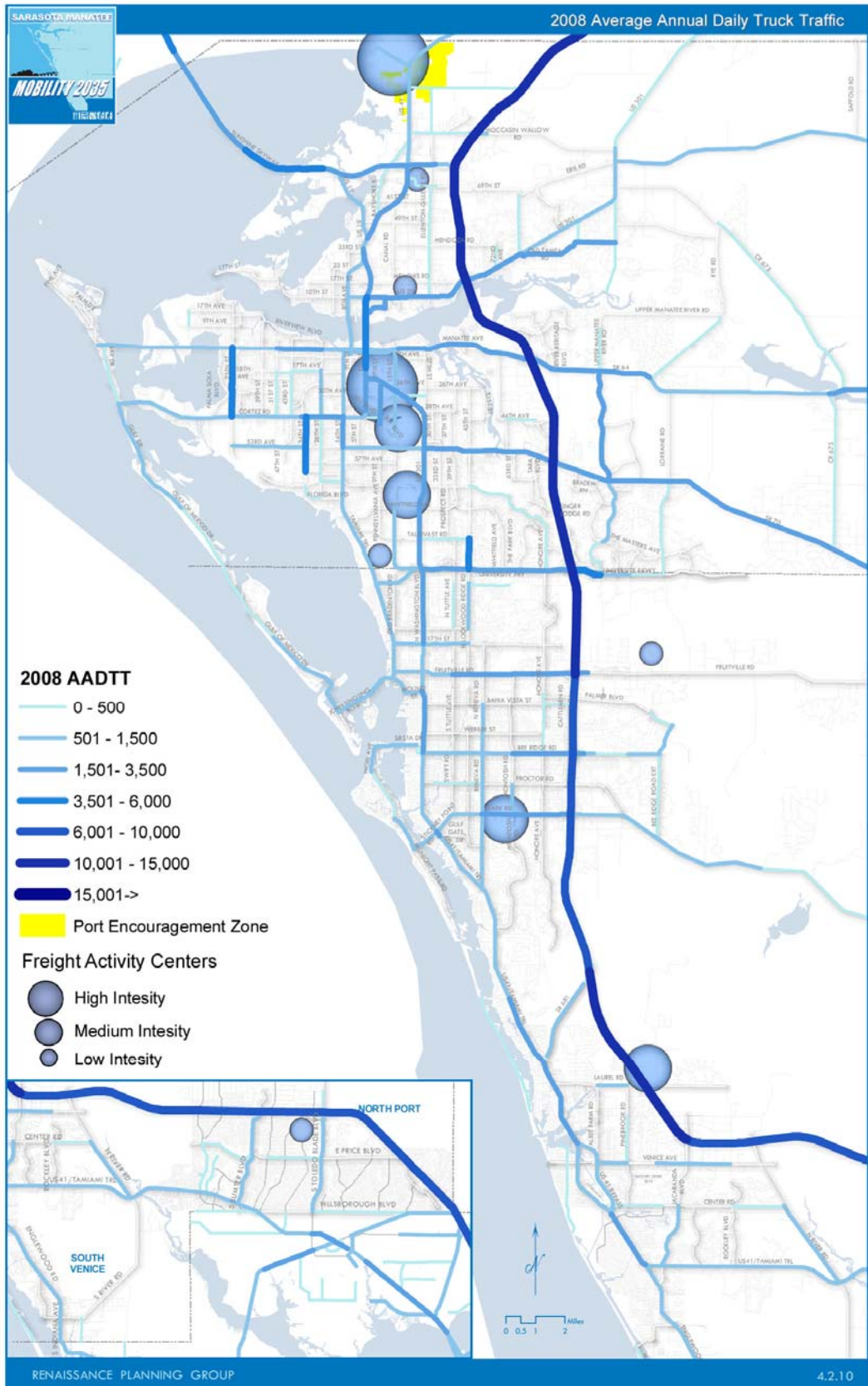
Truck Traffic Analysis

FACs are significant producers and attractors of truck traffic. Providing for the efficient movement of trucks delivering raw materials to producers and finished products to markets within and beyond Sarasota and Manatee Counties is important to maintain the area's economic competitiveness and attract new businesses and grow employment. An analysis of which roads are hosting the largest volumes and proportions of truck traffic is provided to guide the development of an inventory of freight mobility needs. Vehicles classified as trucks according to the FDOT classification system include single unit trucks, combination trailer trucks, and multi-trailer trucks (vehicle classes 4-13).

Figure 3 shows the average number of daily truck trips on major roads in Manatee and Sarasota Counties in 2008. The map reveals the significance of I-75 to freight mobility within and beyond the bi-county area. Other major freight corridors include I-275, US 41 and US 301, SR 70 and SR 64, and portions of 75th Street and 34th Street in Bradenton and University Parkway and Fruitville Road in Sarasota.

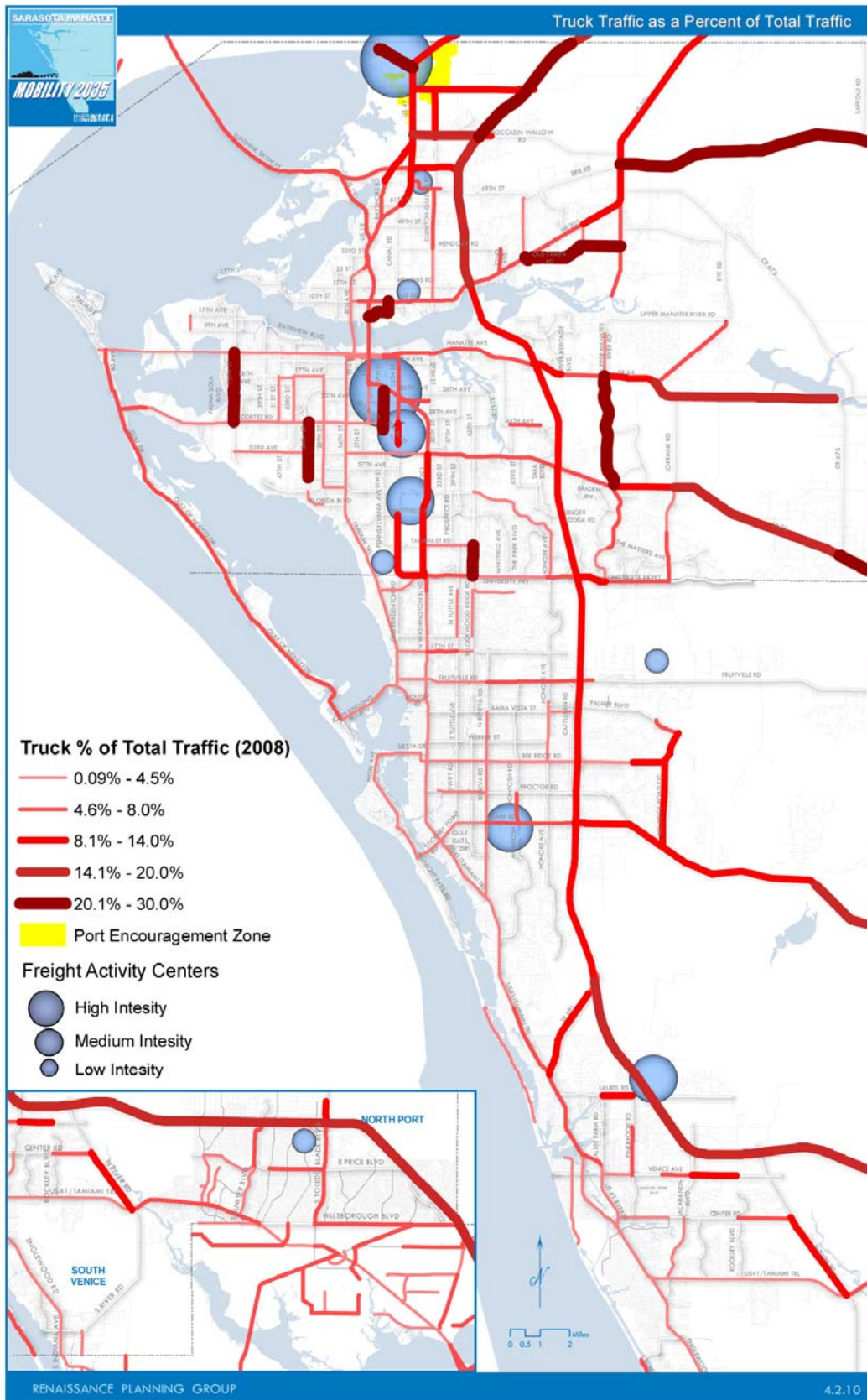
Figure 4 displays what percent of total traffic on major roads is truck traffic. Although the major spines of I-75, US 41, and US 301 carry high volumes of truck traffic, trucks comprise a relatively low percentage of total traffic on these facilities. Shorter road segments that link major arterials and provide access to the counties' FACs show the highest shares of truck traffic. These segments may provide low utility for passenger trips in some instances (such as Piney Point Road serving Port Manatee) or traverse rural areas in making connections to other parts of the state (Wauchula Road and SR 70 in the eastern portions of Manatee County).

Figure 3 – Average Annual Daily Truck Traffic, 2008



Source: Florida Department of Transportation 2008 Traffic Data

Figure 4 – Truck Traffic as Percent of Total Traffic, 2008



Source: Florida Department of Transportation 2008 Traffic Data

Freight Mobility Needs

Understanding the importance of freight mobility to the local and regional economy, a list of freight mobility needs is included in the long range transportation plan based on the locations of freight activity centers and performance of major freight mobility corridors. The needs identified are taken from the master list of multimodal transportation needs developed for the Mobility 2035 Plan. Some needed improvements have received prior study to one degree or another, such as the Port Manatee Connector and EZ Flyover projects, while others are included in larger planning efforts like Florida's SIS Strategic Plan. Finally, other needs are identified that have not received attention in previous plans or studies, but need to be identified to ensure the long term viability of the freight network in Sarasota and Manatee Counties.

Port Manatee Connector

In 2008, FDOT and the Federal Highway Administration (FHWA) commenced a Project Development and Environment (PD&E) Study for a proposed high speed connection linking Port Manatee to I-75. The PD&E Study involves analyzing alternative east-west alignments, a new or improved interchange on I-75, and potential improvements to local roads in the Port Manatee area. The purpose of the Port Manatee Connector and associated improvements is to provide the required transportation infrastructure to aid the economic development of the port, attract new shippers and port-related businesses, and boost the regional economy. The study area extends from south of I-275 to north Valroy Road in southern Hillsborough County and west of U.S. 41 to east of I-75. The PD&E Study is expected to be complete by 2011.

EZ Flyover

As the name suggests, the EZ Flyover project is intended to provide quick access from Port Manatee to the Encouragement Zone (EZ). Currently, trucks coming from the port must cross US 41 before entering the EZ. The crossing requires leaving the port security area and then re-entering the security area, as well as breaking down large loads into smaller loads to conform to weight restrictions on US 41. Moreover, traffic on US 41 can slow down truck movements. These factors create inefficiencies and increase the costs of handling shipments through Port Manatee. The EZ Flyover project involves creating a grade separated connection between the port and the EZ to eliminate these inefficiencies, although an interim at-grade solution is proposed for the near term.

SIS Strategic Plan and Needs Plan

FDOT adopted an updated Strategic Plan for the SIS in January, 2010. The Strategic Plan calls for investment in the State's major transportation corridors and facilities serving long-haul freight trips around Florida, as well as to other states and countries. As a partner to FDOT in developing an updated long range SIS Multimodal Cost Feasible Plan, the MPO will have the opportunity to put forward freight mobility projects that improve interregional connectivity, increase intermodal connectivity, and/or enhance the region and State's economic competitiveness. The Cost Feasible Plan serves as input to FDOT's Work Program. Some improvements may be outstanding needs catalogued in the 2006

Unfunded Needs Assessment that will be carried forward. These improvements are listed among the needed freight mobility projects identified in Table 1.

Other Needs

In addition to projects in the planning stages and long-term SIS needs, the data displayed in Figures 3 and 4 above suggest some other needed improvements to enhance the freight transportation network. Mobility Plan 2035 need projects that address these needs and the goal of supporting economic vitality and increased participation in the global economy are included in Table 1.

Table 1 –Freight Mobility Improvements Needs

Facility	From/At	To	Project
Port Manatee Connector	US 41	East of I-75	New 4 Lane Highway
EZ Flyover	Port Manatee	Encouragement Zone	New/enhanced road
Erie Rd	US 301	69th St	Add 2 lanes (2 to 4)
US 301	CR 675	Moccasin Wallow Rd	Add 2 lanes (2 to 4)
44th Ave	Morgan Johnson Rd	45th St	New 4 Lane road
44th Ave	Creekwood Blvd	Morgan Johnson Rd	Add 2 lanes (2 to 4)
44th Ave	Lakewood Ranch Blvd	Creekwood Blvd	New 4 Lane road / Overpass
44th Ave E	Pope Rd	Lakewood Ranch Blvd	Add 2 lanes (2 to 4)
44th Ave E	Lorraine Rd	Pope Rd	New 4 lane road
I-75	Sumter Blvd	Hillsborough County Line	Widen [6+4 managed]
Bee Ridge Rd	Cattleman Rd	Oakhurst Blvd	Add 2 lanes (4 to 6)
SR 64	I-75	39th St NE	Add 2 lanes (4 to 6)
US 301	Erie Rd	CR 675	Add 2 lanes (2 to 4)
I-75	Charlotte County Line	Sumter Blvd	Widen [6+4 managed]
I-75	Sumter Blvd	Hillsborough County	ITS
US 19 / I-275	I-75	Pinellas County	ITS
SR 70	Lorraine Rd	Creekwood Blvd	ITS
University Pkwy	Lorraine Rd	US 41 (Tamiami Trail)	ITS
I-75	Charlotte County	Sumter Blvd	ITS
I-75	Port Manatee Connector		Interchange
I-75	SR 681		Interchange
Port Manatee	Extension parallel to South Dock St		Railyard
Port Manatee	CSX Interchange Holding		Railyard
CSX	Tampa to Palmetto		Double Track
CSX	Palmetto to Bradenton		Double Track
Port Manatee	Widen South Dock St		Internal Road

Facility	From/At	To	Project
Port Manatee	Northside Rail Extension		Internal Rail
Port Manatee	Rail Ladder Tracks/Transfer Yard		Internal Rail
Port Manatee	Rail Bridge "South Port"		Internal Rail
Port Manatee	Maintenance Dredging		Dredging Channel
Port Manatee	Dredging, Berths 1 and 2		Dredging Channel
Port Manatee	Dredging, Berths 3 and 4		Dredging Channel

Evaluating Freight Mobility Needs

Although there are a large number of needed improvements for enhanced freight mobility in Manatee and Sarasota Counties, not all of the projects identified will be cost affordable over the next 20 to 25 years. For this reason, improvements need to be prioritized to ensure that financial resources are properly allocated to best meet long term freight mobility needs. A set of performance measures is provided as a tool for determining the relative importance of each freight mobility project to aid in overall project prioritization for the 2035 LRTP.

The performance measures listed correspond to objectives supporting Goal 4.0 that pertain to freight movements. A performance measure may be listed more than once if it speaks to multiple objectives. Data needed to support each performance measure are identified in the right hand column of Table 2.

Table 2 – Objectives, Performance Measures, and Data Needs for Evaluating Freight Mobility Needs

Goal 4.0 Support Economic Vitality and Ensure Continued and Enhanced Participation in the Global Economy		
OBJECTIVES	PERFORMANCE MEASURES	DATA NEEDS
Objective 4.1 Strengthen regional access to the region’s economic engines, including Port Manatee, Sarasota-Bradenton International Airport, the central business districts, economic energy zones and other major employment centers to support and sustain job creation.	Available capacity of freight network serving freight activity centers	Volume to capacity ratios on freight corridor roadway links CSXT freight rail capacity
	Level of service for roadways serving freight activity centers	Volume to capacity ratios on freight corridor links
	Hours of delay on freight transportation system	Vehicle hours of delay by 24 hour period
	Number of freight transport modes serving freight activity centers	GIS data of freight transport modes

Objective 4.2 Maintain and improve safe, secure, and efficient access to regional and statewide passenger and freight intermodal hubs, particularly through measures that give priority to regional travel on I-75 and I-275.	Available capacity of freight network serving intermodal hubs	Volume to capacity ratios on freight corridor roadway links CSXT freight rail capacity
	Level of service for roadways serving intermodal hubs	Volume to capacity ratios on freight corridor links
	Hours of delay on freight transportation system	Vehicle hours of delay by 24 hour period
	Number of freight transport modes serving intermodal hubs	GIS data of freight transport modes
Objective 4.3 Support the maintenance and expansion of intermodal freight facilities that provide for the regional, national, and international shipments of goods and materials in cooperation with sea ports, airports, railroads, shippers and carriers in the metropolitan area.	Available capacity of freight network serving intermodal freight facilities	Volume to capacity ratios on freight corridor roadway links CSXT freight rail capacity
	Level of service impact from freight facilities for roadways serving these facilities	Volume to capacity ratios on freight corridor links
Objective 4.4 Enhance multimodal connectivity of major commercial and industrial centers of the metropolitan area to support their long-term economic viability.	Available capacity of freight transportation system	Volume to capacity ratios on freight corridor roadway links CSXT freight rail capacity
	Hours of delay on freight transportation system	Vehicle hours of delay by 24 hour period
	Length of off-peak travel periods for truck travel	Hourly traffic counts on freight roadway network
	Average travel speed on freight transportation system	Average travel speed by roadway link