



*Tampa Bay Regional
Goods Movement Study*

White Paper 2010-3

Strategies for Preserving Freight Activity Centers



September 2010

This *Goods Movement Challenges and Opportunities Report* was prepared jointly by the Florida Department of Transportation, District 7 and the Regional Goods Movement Study Team. It is one of a series of reports that will be developed as part of the Tampa Bay Regional Goods Movement Study. The purpose of this series of “White Papers” is to both inform and provide support to leaders and transportation professionals responsible for making decisions that affect goods movement within the Tampa Bay Region. It is also a vehicle for informing the public about the importance of goods movement within the region.

The series is divided into five broad subject areas as follows:

- Freight Economics
- Freight System and Infrastructure
- Freight Trends
- Freight Challenges and Opportunities
- Freight Management

As subjects are addressed in White Papers throughout the study period they will be designated to one of the subject areas for reference. Ideas for future White Papers should be addressed to:

Daniel Lamb, FDOT D7, Systems Planning Manger
Daniel.lamb@dot.state.fl.us

or

Robert Cursey, AICP, URS Corporation
Robert_cursey@urscorp.com

Goods Movement Study Team

Florida Department of Transportation, District 7
URS Corporation
Renaissance Planning Group
Grimail Crawford, Inc.
Gannett Fleming, Inc.
Martino Planning
A. Strauss-Wieder, Inc.
Adams Traffic, Inc

Contents

Introduction 1
 Freight Activity Centers and the Tampa Bay Region..... 1
 Impacts of the Freight Activity Centers 2
 Economic Development 2
 Land Use 3
 Transportation 4
 Environment 5
 Programs and Policies 6
 Economic Development 6
 Enterprise Zones 6
 Federal Enterprise Community Designation 7
 State Qualified Targeted Industry Tax Refund Program..... 7
 Hillsborough County Impact Fee Mitigation Programs 7
 Empowerment Zones 7
 Foreign Trade Zones..... 7
 Land Use 8
 Local Comprehensive Plans 8
 Local Zoning Authority 9
 Transportation 9
 State Road Grant Fund Program 9
 FDOT Strategic Intermodal System Designation 9
 Environment 9
 Federal Clean Air Act 10
 Federal Portfields Initiative..... 10
 Brownfields Policies and Programs 10
 Case Studies 10
 Hillsborough County – Land Use Compatibility of Land around the Port of Tampa 11
 Land Expansion Protection 11
 Coordination of Transportation Priorities 11
 Opportunity for DRI Review 12
 Other Coordination and Assistance 12
 Port Manatee Encouragement Zone..... 12
 DRI Exemption 13
 Impact Fee Reductions 13
 Expedited Permit Approvals/Rezoning Options..... 13
 Extension of Foreign Trade Zone 13
 Tax Increment Finance District 13
 Atlanta Regional Commission – Freight Mobility Plan Land Use Analysis 13
 City of Baltimore – Maritime Industrial Zoning Overlay District..... 15
 Summary and Conclusions 15

Figures

Figure 1 Freight Activity Centers in the Tampa Bay Region..... 3

INTRODUCTION

The movement of goods is critical to Florida's economy and quality of life. Everything bought, sold, and consumed begins and ends as freight and must make its way through national, regional, and local transportation systems from points of production and distribution to businesses, customers, and households. Freight activity centers (FACs) have an especially strong influence on economies of regional scale and larger. The purpose of this White Paper is to define the relationship of the freight industry with an area's economic development, land use, transportation, and environmental sectors, particularly in reference to FACs; to highlight the need for considering freight in land use planning processes; and to provide guidance on how all sectors can benefit from coordinated planning for freight mobility.

Freight Activity Centers and the Tampa Bay Region

Freight activity is a fundamental element in a region's economy and vitality. Freight movement is an indicator of the economic activity in an area; people will buy, transport, and sell more goods in a strong economy and less in a struggling economy. However, the movement of goods may be perceived as disruptive to quality of life if freight mobility is not planned for and managed.

FACs are large industrial or mixed-use areas where freight-related activities are concentrated; they are the "economic engines" of a region and significant to regional, state, and national economies. They are major contributors to the region's base employment and a key component of a regional economic development plan. FACs include major industrial areas for manufacturing, warehousing, or distribution, as well as intermodal transshipment locations including airports, seaports, rail intermodal facilities, and other associated activities. Often, FACs are located in the industrial core of a city where residential, office and retail development pressures are greatest. They are also located in outlying areas with industrial growth opportunities in close proximity to regional and strategic trade corridors.

FACs provide land uses offering the highest efficiency to achieve maximum utilization of public and private investments. In these areas, freight and freight-related industries dominantly influence the land uses and characteristics of the area with heavy industry and other freight-related activities. The potential for economic growth of the freight industry usually results in physical expansion of FACs, which can have varying effects on adjacent properties, depending on the property owner and local land use policies.

The Tampa Bay region is an area of expansive freight movement and heavy industry. With multiple seaports and airports, it is a major entry point for domestic and international shipping. It is also an area facing the pressures of population and employment growth. Comprised of eight counties (Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, Polk, and Sarasota) and numerous cities and towns, the Tampa Bay region is home to Tampa and St. Petersburg, two of Florida's most populated cities. The region has experienced growth in the high tech industry, offering the infrastructure necessary for firms to quickly and effectively move products and provide services. Statistics from the Federal Highway Administration (FHWA) show that the truck traffic on our nation's highways is growing at a faster rate than automobile traffic, and with the expansion of container capacity and the growing international freight needs, the Tampa Bay region will continue to experience freight activity growth.

IMPACTS OF FREIGHT ACTIVITY CENTERS

The freight industry influences many facets of a community. It is responsible for the transport of goods and contributes to the sustainment of businesses and jobs and overall economic stability. FACs, because of their size and high concentrations of industrial uses and activities, can have noticeable impacts on surrounding land uses, the transportation network and traffic patterns, and the natural environment.

Economic Development

The reliable and efficient movement of freight keeps the economy strong and consumer costs down. Freight represents the economy in motion and is a major contributor to employment growth, both in the transport of goods and in warehousing and distribution sectors.

The Tampa Bay region is home to various FACs including the Port of Tampa, CSXT intermodal centers, associated warehousing and distribution facilities, and related industrial development. These centers are portrayed on **Figure 1**. Warehouse and distribution centers alone are critical components of the supply chain and provide excellent opportunities for the Tampa Bay region to create jobs and build the economy. Continued success of the region's economy depends upon identifying and anticipating the region's existing and future freight mobility needs; identifying projects that improve existing freight infrastructure, as appropriate to meet these needs; and providing efficient connections to, from, and between FACs and other parts of the state.

While improving existing facilities and transportation infrastructure is paramount to provide better transportation access, it is also critical to accommodate the growth of key FACs within the region to maximize their contribution to economic development and their role in strengthening the region's economy.

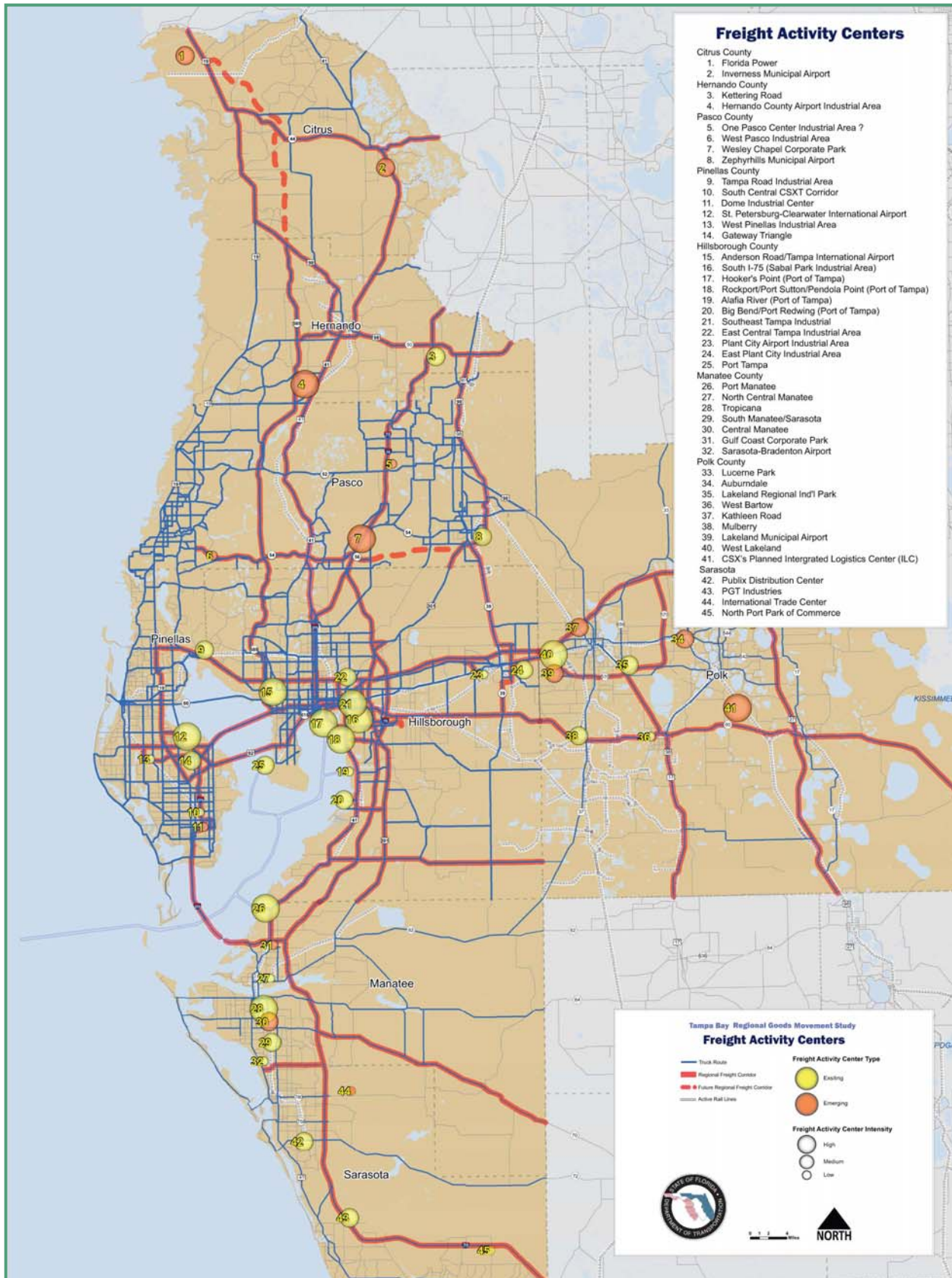
The Port Manatee Case Study, described later in this White Paper, is an example in Florida where the County has used several strategies to incentivize major shippers and port-related businesses to locate within close proximity.

Land Use

Older urbanized areas often developed around the transportation of goods and services, whether waterfront port facilities or inland rail yards. It is common for transportation hubs in older cities to be centrally located with a nearby mix of business and residential uses that developed around them over time. Such areas began as industrial sending and receiving areas complete with multimodal transportation opportunities and associated warehousing and distribution facilities supporting the industries.

Areas adjacent to freight distribution and receiving areas often experience intense development pressures that affect the character of existing neighborhoods and areas available for future development. By centralizing freight terminals into areas that are already developed with the necessary infrastructure in place, the mingling of incompatible land uses, such as warehousing and residential areas, can be minimized. Environmental impacts can be also lessened by ensuring appropriate land uses are in place in areas immediately adjacent to freight handlers, such as airports, seaports, and train and truck terminals.

FIGURE 1: FREIGHT ACTIVITY CENTERS IN THE TAMPA BAY REGION



Waterfront land is essential for core activities related to deepwater port operations. In addition, areas adjacent to the waterfront are necessary for industrial uses closely related to or supporting port operations. Also attractive for residential or commercial development, recreational uses or eco-tourism, waterfront areas associated with existing freight activity can experience acute pressure for redevelopment. However, the consequences of incompatible development or land uses encroaching on FACs, whether waterfront or inland, include conflicts between sensitive land uses and the industrial nature of freight-related activities, such as dust, noise, additional truck traffic, and the potential for environmental contamination.

Providing appropriate transitional buffers between sensitive land uses and freight-related activities, as well as planning for transitional land uses, can reduce the potential for conflict. Transitional land uses might include light industrial warehousing and storage facilities, flex office space, and some commercial uses. Communities should also consider protection of available land for future expansion of freight-related operations, particularly in outer developing areas.

Several areas throughout the nation are struggling with the potential conflicts of industrial and non-industrial land uses. The Case Studies section of this White Paper discusses the approaches that public agencies have taken to acknowledge and address these conflicts.

Transportation

Few factors influence the performance of freight operations with as much magnitude as the connectivity and accessibility of the transportation network. A region's economic growth relies upon the ability to quickly and efficiently transport goods to destinations. Trucks need to be able to travel quickly on regional highways and easily maneuver through local streets to reach delivery or transfer points. Roadway congestion can significantly increase the time it takes to transport a shipment, directly affecting predictability and reliability. In the era of real-time information, shippers have been able to limit inventory and make smaller shipments, increasing the profitability of the industry. However, these business practices require a reliable transportation network to provide predictable service. Regional mobility is crucial to the success of freight operations and infrastructure deficiencies are the primary cause of congestion.

This problem is exacerbated by incompatible land uses. It is often the "last mile" that becomes the most difficult for freight movement, especially if the surrounding network has a significant amount of passenger vehicle traffic mixed with truck traffic. Designated truck routes, special purpose lanes for truck

Florida's Strategic Intermodal System (SIS) is a statewide network of high-priority transportation facilities, including the state's largest and most significant commercial service airports, spaceport, deepwater seaports, freight rail terminals, passenger rail and intercity bus terminals, rail corridors, waterways, and highways. These facilities are the workhorses of Florida's transportation system, carrying more than 99 percent of all commercial air passengers and cargo, virtually all waterborne freight tonnage, almost all rail freight, and more than 70 percent of all truck traffic and 55 percent of total traffic on the State Highway System.¹ The SIS designates the state's transportation facilities according to function into three categories: hubs, corridors, and intermodal connectors. Improvements to facilities that are part of the SIS are strategically prioritized for eligible state transportation funding. The SIS represents a fundamental shift in thinking, as facilities are viewed from a broader perspective to consider the large numbers of international, interstate, and interregional trips that have the greatest impact on economy and quality of life.²

Highways, rail lines, and waterways that connect major markets are designated as SIS intermodal corridors, based on factors including traffic levels and their ability to provide high-speed, high-capacity, limited access service in more than one direction. These connectors are identified as critical links for freight activity, in addition to other transportation purposes, and are prioritized for investments.

¹ Florida Department of Transportation, January 2010.

² Florida Transportation Commission, March 2007.

travel, and passenger-vehicle-only parkways have lessened the conflict in some areas across the nation. The freight industry needs the convenience of highway shipping and the low cost of railroad transport. Identifying and protecting freight transport corridors for both rail and road transportation modes will help Florida's transportation system to quickly and reliably transport goods.

Environment

The physical environment dictates development constraints and opportunities. Transportation projects are guided by statutory, programmatic, and regulatory requirements designed to assess the impact of transportation projects on the environment, as well as impacts likely to be absorbed by the communities in which they are located. Environmental mitigation is designed to protect streams, rivers, air, wetlands and forest, or lessen impacts from transportation projects when impacts are unavoidable. Mitigation programs include plantings, environmentally friendly dredging material disposal, and wetland creation. Environmental contamination associated with freight activities include noise; stormwater and groundwater quality compromised from spills/leaks; soil contamination; and air disposition of dust, smoke stack emissions, etc.

Along with traffic congestion, noise with FACs may be the most noticeable impact to the public. Increased freight movement, whether it is by air, land, or sea, can result in a subsequent increase in noise sources. These additional sources of noise may have a significant effect on the overall noise levels in the immediate areas. Truck traffic, aircraft take-offs and landings, and train traffic all can contribute to noise disturbances to neighboring properties. While the correlation between noise and public health is not fully understood, the consequences can be far reaching. Studies have linked aircraft noise to a wide variety of ailments including loss of concentration, sleep deprivation, hypertension, cardiovascular, and gastrointestinal problems.

More than 50 percent of all air pollution comes from "on-road" mobile sources (vehicles); increases in truck traffic associated with new or expanding FACs will certainly affect air quality in the vicinity. Increased congestion along the region's roadways will exacerbate this problem, as trucks and other vehicles will be forced to spend more time at idle speeds, decreasing mobility while having an adverse effect on local air quality. In regards to air transport, moving one freight unit one mile by air requires far more energy (fuel) than moving the same unit one mile by motor-vehicle, train, or ship. This results in higher emission levels of pollutants such as carbon monoxide (CO) and oxides of nitrogen (NO_x). The inefficiency of aircrafts over short distances is especially dramatic. Longer trips (greater than 500 miles) made by larger planes loaded to capacity tend to offset the costs of energy intensive take-offs, lessening the efficiency differential between air and other modes of transportation.

The construction of additional roadways, traffic lanes, parking areas, and other infrastructure improvements associated with increased freight movement changes the total area of impervious surface. This increase in net impervious surface, along with the subsequent increase in vehicular traffic, can result in a negative impact on surface water quantity and quality by increasing the amount of surface water runoff and thus the net vehicular pollutants enter the watershed. Due to its high permeability, any impacts to surface waters can consequently have adverse impacts on groundwater supplies. Retention of vegetative buffers and natural areas during clearing and grading for new or expanding activity centers is a low cost method of preventing and mitigating the degradation of surface water quality.

PROGRAMS AND POLICIES

A number of existing programs and policies are available to encourage efficient and strategic freight-related activity growth. The following section describes policies and strategies that help to encourage freight-related growth in FACs and other appropriate areas, designate appropriate land uses, coordinate transportation investment decisions, and help the freight industry minimize adverse impacts to the natural, cultural, and community assets.

Economic Development

The state of Florida has a number of incentives to encourage businesses and industries to locate within specific areas, most often in economically depressed or older urban neighborhoods that could benefit from revitalization. Benefits include tax credits, fee mitigation programs, reduced duty fees, and increased access to Federal funds.

Enterprise Zones

Florida offers an assortment of tax incentives to businesses that choose to create employment within an Enterprise Zone, which is a specific geographic area targeted for economic revitalization. Enterprise Zones encourage economic growth and investment in distressed areas by offering tax advantages and incentives to businesses locating within the zone boundaries. Typically, designated Enterprise Zones are distressed inner city or rural areas noted for high unemployment, crumbling infrastructure, and minimal access to building capital. Tax incentives are offered to employers who move a business into designated Enterprise Zones that reduce the Federal tax liability of businesses, increase the expensing limits of business assets, permit the issuance of tax exempt bonds, provide for exemptions from capital gains taxation for properties that are sold, and provide wage credits that reduce the amount of Federal income tax a business has to pay. Businesses must meet stringent criteria in order to qualify for eligibility.

The Florida Economic Development Administration (EDA) designated the Tampa Bay region an Economic Development District (EDD) on April 30, 2003. Local governments within the district are now eligible for an additional 5 percent bonus (i.e., 55 percent Federal participation instead of 50 percent) under EDA-funded programs for construction projects. EDD designation also relieves local governments of annual reporting requirements for adopted Comprehensive Economic Development Strategies (CEDS). Finally, EDD designation increases access to additional Federal funding, such as for disaster preparedness and recovery, brownfield mitigation, revolving loan fund, and Southern Crescent Commission.

The Tampa Bay EDD is comprised of the four counties that make up the Tampa Bay Regional Planning Council (Hillsborough, Manatee, Pasco, and Pinellas, and all municipalities therein). The Regional Planning Council staff acts as the administrative arm of the EDD with the help of the economic development departments/staff within each municipality and other economic development practitioners contributing to the annual reporting requirements for economic development activities in the region.

Federal Enterprise Community Designation

Funding through the Federal Enterprise Community designation can be used to support housing programs, educational programs, job training, health care initiatives, and other human service needs. The City of Tampa has identified the Tampa Enterprise Community located at the center of the City as an area in need of redevelopment. It is comprised mainly of older, inner city neighborhood areas near to and east of the central business district and includes the Port of Tampa. These designations provide several incentives to encourage reinvestment and revitalization to promote economic sustainability.

State Qualified Targeted Industry Tax Refund Program

The Qualified Targeted Industry (QTI) program is one of Florida's most popular incentive programs. The QTI program is an inducement offered to businesses to encourage them to expand or to locate in the state of Florida. Companies falling in the targeted industry clusters must create a specific number of new job positions that meet or exceed state or local county average wages by a minimum of 15 percent. If they meet these guidelines, various taxes such as corporate income, sales, ad valorem, intangible personal property taxes, and insurance premiums, as well as certain other taxes qualify for tax refund.

Hillsborough County Impact Fee Mitigation Programs

Hillsborough County offers fee mitigation programs for transportation and fire impact fees, as well as water/wastewater impact fees as alternatives to companies that do not qualify for the Florida QTI program.

Empowerment Zones

Empowerment Zones are Federally designated to support job creation and business development opportunities in economically distressed areas. Employers in urban Empowerment Zones are eligible for wage tax credits for every employee hired that lives within Empowerment Zone boundaries; increased tax expensing for equipment purchases; and the ability to write-off the cost of the depreciable and tangible personal property purchased (up to \$37,000). All Empowerment Zone neighborhoods are eligible to receive tax-exempt bond financing to finance property, renovations, and/or expansions. Empowerment Zone property also is eligible for Enterprise Zone benefits.

Foreign Trade Zones

The United States Department of Commerce established the Tampa Foreign-Trade Zone in 1982 as one of 18 foreign-trade zones in the state of Florida. The Tampa Foreign-Trade Zone is part of a network of zones throughout the 50 states and Puerto Rico. The Tampa Foreign-Trade Zone is managed by the Tampa Foreign-Trade Zone Board, Inc., a non-profit corporation. The board consists of representatives from the City of Tampa, Hillsborough County, the Tampa Port Authority, the Hillsborough County Aviation Authority, and the Greater Tampa Chamber of Commerce.

By definition, a foreign-trade zone is a secured area located within the United States (U.S.), but technically considered to be outside the territory of U.S. Customs. Therefore, foreign-trade zones offer the ability to defer, reduce, or even eliminate Customs duties on products, resulting in tremendous savings for businesses located within the zone. For example, no duty is due for imported goods that are stored, assembled, or manufactured in a foreign-trade zone. When the finished goods are entered into Customs territory, duty is paid only on the goods entered, not on materials or parts used in production. Additionally, users of a zone do not have to pay duty on goods processed and then exported from the zone or on goods damaged, destroyed, or consumed in the foreign-trade zone.

Businesses located within foreign-trade zones that import and then assemble parts, often have a different duty rate for the components than the finished product. The foreign-trade zone allows payment of the lower of the two rates - either on the parts or on the assembled goods - when a product is entered into U.S. Customs territory. Foreign-trade zones can reduce costs associated with the flow of goods into and out of the country because U.S. quota restrictions do not apply to merchandise admitted to zones. This means that goods in foreign-trade zones can be transformed into non-quota products or can be stored duty-free in zones until a quota opens and the goods are entered into the U.S. market.

Finally, a zone-to-zone transfer allows users to transfer merchandise from one zone to another and permits duties to be deferred until the product is removed from the final zone for entry into U.S. Customs territory.

Land Use

Local land use planning and zoning in Florida is authorized by statewide legislation contained in Chapter 163, Part II of the Florida Statutes. Between 1984 and 1986 the Florida Legislature adopted a series of laws that established its growth management system. Growth management in Florida began with adoption of a statewide comprehensive plan and establishment of regional planning councils authorized to prepare and adopt comprehensive regional policy plans consistent with the state comprehensive plan. On June 1, 2009, SB 360, which provides revisions to Chapter 163, was signed into law. The intent of SB 360 was to direct development toward urban centers and to remove the layer of state oversight on transportation concurrency. Although SB 360 eliminates state-mandated transportation concurrency review, it contains a requirement that local governments are now to incorporate strategies and policies for land use and transportation, including alternative transportation modes, in support of a regional transportation vision.

Below is a summary of the local planning and land use framework that impacts FACs.

Local Comprehensive Plans

Florida's Growth Management Act was adopted by the Legislature in 1985 and requires all of Florida's 67 counties and 410 municipalities to adopt a comprehensive plan to guide future growth and development. Required elements include future land use, housing, transportation, infrastructure, coastal management, conservation, recreation and open space, intergovernmental coordination, and capital improvements. The "concurrency" provision included in the Growth Management Act requires facilities and services to be available concurrent with the impacts of development.

Florida comprehensive plans often designate Urban Service Areas (USAs) as part of a growth management strategy. USAs are geographically defined areas planned for urban services and targeted for future growth. Typically, USAs are large enough to accommodate growth within a 20-year planning horizon. USAs also represent an area within which government spending is prioritized in order to provide and maximize the effectiveness of infrastructure investments to accommodate new residents in a fiscally sound manner. The Hillsborough County and City of Tampa comprehensive plans both contain policies and objectives addressing growth management issues relative to the Port of Tampa, including the designation of a Port Activity Center boundary.

Local Zoning Authority

Local zoning authority stems from Section 3202 of Chapter 163, which states, in part, that within 1 year of submission of a comprehensive plan for review pursuant to Section 163.3167(2), each county and municipality shall adopt or amend and enforce land development regulations that are consistent with and implement their adopted comprehensive plan. Such regulations are required to contain a number of specific provisions to ensure the compatibility of adjacent uses and provide for adequate open space including the subdivision of land and regulation of the use of land and water for those land use categories included in the land use element. There are also opportunities for the creation of specialized industrial zoning overlay districts that would reduce the potential conflicts between mixed-use developments and industrial uses. Existing overlay districts in the U.S. include the Maritime Industrial Overlay District in Baltimore and the Harnett County Airport Overlay District in North Carolina,

Transportation

Several policies are in place in Florida that recognizes transportation facilities that are critical to freight movement and thus crucial for FACs. These tools help to allocate dollars to the highways, rail links, and intermodal facilities that are heavily used by the freight industry.

State Road Grant Fund Program

The State Road Grant Fund Program is an incentive program designed to alleviate transportation problems that adversely impact a specific company's location or expansion decision. The elimination of the problem must serve as an inducement for a company's location, retention, or expansion project in Florida and result in jobs being created and/or retained in Florida. Dollars are allocated to a local government to alleviate the transportation problem, not directly to the company.

FDOT Strategic Intermodal System Designation

Statewide and regionally significant transportation facilities are recognized by Florida Department of Transportation (FDOT) and designated as part of the SIS to support Florida's economic competitiveness and economic diversification. As such, FDOT allocates 75 percent of its discretionary capacity funds to the SIS and Emerging SIS.¹ Prioritizing transportation investments according to the SIS policy directives strengthens the linkage between transportation, economic development, and land use planning and assist rural areas of critical economic concern by coordinating multiple planning efforts to create a truly multimodal transportation system. The SIS ultimately helps FDOT to address system needs from an integrated network level and expedite consensus projects.

Environment

Several Federal and state initiatives have been implemented to lessen the environmental impacts of FACs to the environment and surrounding community including noise, air, water, and soil pollution.

¹ Florida Department of Transportation, January 2010.

Federal Clean Air Act

The Federal Clean Air Act requires states to develop State Implementation Plans (SIP) that explain how each state will attain air quality standards. While transportation activities are not the only actions considered in the SIP, a significant component of the SIP examines mobile sources of pollution from cars, trucks, buses, off-road vehicles, planes, ships, etc. If the standards are not met, states may be subject to sanctions that include possible loss of Federal highway funds. Florida HB 697 sets forth new rules relating to the reduction of greenhouse gasses and promotes strategies to address reduction in greenhouse gas emissions from the transportation sector. In order to comply with the new requirements, freight movement-related strategies will be required to address reduced energy usage and greenhouse gas emissions from freight transportation modes.

Federal Portfields Initiative

The National Oceanic and Atmospheric Administration is leading a Federal interagency effort to focus on redevelopment of brownfields in ports and harbors around the country to develop environmentally sound port facilities. The Port of Tampa was one of three pilot communities selected for targeted assistance. Through this designation, the Tampa Port Authority has the opportunity to work with Federal agencies to improve the economic and social conditions in the general Port area. Following completion of the pilot efforts, consideration will be given toward program expansion.

Brownfields Policies and Programs

The Brownfields Redevelopment Program empowers communities, local governments, and other stakeholders in economic development to work together to prevent, assess, clean up, and reuse brownfields. A brownfield site is property which may be complicated by actual or perceived environmental contamination during the expansion, redevelopment, or reuse of the property. The reuse of property is an important component of sound land use policy. Productive reuse of urban land helps prevent the premature development of farmland, open space, and natural areas and reduces the public cost for installing new water, sewer, and highway infrastructure. The redevelopment of brownfield sites continues to gain momentum in Florida and across the nation. Florida offers incentives to businesses that locate in brownfield sites, which are underutilized industrial or commercial sites due to actual or perceived environmental contamination. The Brownfield Redevelopment Bonus Refund is available to encourage brownfield redevelopment and job creation.

CASE STUDIES

Many areas throughout the nation are experiencing the challenging dynamics of balancing the preservation of FACs in urban and suburban areas with residential and other development pressures that these areas attract. The challenge is to provide good transportation accessibility for the freight industry to sustain economic growth and productivity, while also providing appropriate buffers and transitional land uses that preserve communities and environmental assets. The following case studies provide examples of communities that have acknowledged these difficulties and have taken steps to address the land use and transportation conflicts.

Hillsborough County – Land Use Compatibility of Land around the Port of Tampa

Hillsborough County, Florida has added language in its comprehensive plan to incorporate the Tampa Port Authority Master Plan and ensure that the goals within the master plan are achieved. The County recognizes the economic importance of the Port of Tampa and the substantial economic benefits that are realized from the freight industry's success in the area. The language in the comprehensive plan attempts to balance the desire to expand the industrial uses for economic growth while at the same time protecting the surrounding community with minimal impact to the county residents. The language goes beyond simply "considering" freight activity and promises that future decisions will further the Port's goals.

Land Expansion Protection

The following policies included in the Hillsborough County Comprehensive Plan protect the land around the Port for the port-related uses and expansion while also encouraging that land developing around the periphery of the port's boundary is compatible with the Port.

- *Encourage related maritime industries and discourage the encroachment of incompatible land uses (Objective 14).*
- *Ensure that growth/development in and around ports and airports is compatible with ports' and airports' operations and expansion plans, as identified in their master plans (Policy 6.4.3 a).*
- *Give priority to the use of land for expansion of existing port and airport facilities and the planning and development of new facilities where forecasted demands so indicate (Policy 6.4.3 b).*
- *Support the Tampa Port Authority's efforts to continue to seek acquisition of other appropriate lands for future port expansion and diversification in accordance with the Tampa Port Authority Master Plan (Objective 6.8).*

Coordination of Transportation Priorities

Hillsborough County has pledged to coordinate the development of transportation priorities at multiple levels of planning with the needs and goals of the Port of Tampa. This coordination ranges from the development and implementation of broad policies and programs identified in general planning documents to the prioritization of funding for specific projects. For example, the Hillsborough County Comprehensive Plan includes the following policies that address coordination of transportation priorities:

- *Ensure port, airport, and related facility needs are considered when prioritizing roadway and transit service improvements in the County's Capital Improvements or Transportation Improvement Program and Capital Improvements Element (Policy 6.3.1).*
- *Ensure port and airport activity levels are coordinated with key transportation and capital improvement planning (Policy 6.3.3).*
- *Collaborate with the Tampa Port Authority and CSXT during the development of the Capital Improvement Program to be considered in allocating transportation improvement funds (Policy 6.4.4).*

Opportunity for DRI Review

Hillsborough County acknowledges that new developments, especially large-scale developments, have the potential to affect transportation accessibility and land use compatibility with the FACs within the County. As such, the County seeks the advice of the Tampa Port Authority and Hillsborough County Aviation Authority during the Development of Regional Impact (DRI) review process.

- *The County shall provide the Port and Aviation Authorities the opportunity to review and comment on Developments of Regional Impact that affect the transportation or terminal access to the port and airports, and/or significantly impact land uses in their environs (Policy 6.3.4).*

Other Coordination and Assistance

The Hillsborough County Comprehensive Plan also includes policies that aim to strengthen the coordination between the County and the Tampa Port Authority to share monetary and personnel resources and information, and to integrate planning between the two agencies.

- *The County shall assist the Tampa Port Authority in pursuing needed surface transportation improvements recommended in the Port of Tampa Surface Transportation Plan (Policy 6.3.7).*
- *Maximize economic benefits and minimize adverse impacts to public health, safety, and welfare from port and aviation facilities through ongoing coordination with the Port and Aviation Authorities (Objective 6.7).*
- *The County and the Port and Aviation Authority's members shall meet as needed to discuss those topics of importance to the public health, safety, and welfare of citizens, including plans for port expansion; impacts upon adjacent natural resources and land uses including residential neighborhoods; and additional stormwater runoff caused by port expansion (summarized from Policy 6.7.1).*
- *The County shall support the Tampa Port Authority's efforts to assure coordination of its submerged land management and permitting programs, participate in efforts to establish regional wetland and bay bottom management strategies, support and implement estuarine resource restoration research and management programs, offset ecological impacts, manage and maintain bird nesting and feeding habits, and incorporate stormwater treatment capability (summarized from Objective 6.8).*

Port Manatee Encouragement Zone

The purpose of the Port Manatee Encouragement Zone is to attract major shippers and port-related businesses to locate within the 5,000 acres of land neighboring Port Manatee. The Encouragement Zone was initiated by Manatee County in February 2008 and updates have been made to the Manatee County Comprehensive Plan and Land Development Code.

The Encouragement Zone is similar to Florida's Enterprise Zones in that it provides incentives to businesses to boost economic development. Discounted impact fees are provided to port-related businesses (e.g. distribution centers) interested in locating in the zone. The following incentives/regulatory tools are used in the zone.

DRI Exemption

This is an extension of the Florida seaports' DRI exemption in that it not only applies to development within the port's boundary, but also exempts DRI review within three miles of the Port's boundary. This was signed into law in May 2009.

Impact Fee Reductions

Manatee County passed an ordinance in May 2009 exempting 50 percent of local transportation impact fees on developments within the Encouragement Zone.

Expedited Permit Approvals/Rezoning Options

Manatee County will consider employing an expedited permitting process for businesses located within the Encouragement Zone. In addition, the County will facilitate a change in zoning to accommodate a business in the zone.

Extension of Foreign-Trade Zone

Generally, a Foreign-Trade Zone is a designated area that is not subject to U.S. Customs processes. It is a means by which companies can lower costs and increase profits. Port Manatee is located within Foreign-Trade Zone 169 and businesses within the Encouragement Zone (depending on the nature of their business) may be allowed to be a part of Port's foreign-trade zone.

Tax Increment Finance District

The Tax Increment Finance (TIF) District enables the county to reinvest specified revenues collected in the Encouragement Zone to fund future port-related economic development activities, such as infrastructure and capital improvement projects to attract new business. The boundaries of the TIF District begin at the coastline of Tampa Bay on the west including Port Manatee, to just east of Interstate 75 (I-75), south to approximately Buckeye Road, and north to the Manatee-Hillsborough County line.

Atlanta Regional Commission – Freight Mobility Plan Land Use Analysis

As part of the Atlanta Regional Freight Mobility Plan development process, the Atlanta Regional Commission (ARC) conducted a land use assessment to: "*seek 'peaceful coexistence' of freight and non-freight uses, preserve and enhance efficient and safe access and mobility for freight transportation, and facilitate smart transportation and land use planning.*"² As part of the land use assessment, the ARC conducted several case studies within its planning boundary to examine the interactions between industrial and non-industrial uses within close proximity of each other and to gain perspectives on the connections between freight transportation and land use.

The case studies highlighted specific needs of each area relative to the challenges of different land uses. Results of the case studies within the Atlanta region included the need to: "*coordinate freight and non-freight uses and ensure adequate segregation of land uses.*" The final report addresses several of the land use conflicts that arise in areas with simultaneous population and freight activity growth:

² Atlanta Regional Commission, 2007.

“Few planning documents or processes reviewed discuss the unique characteristics and impacts of freight-intensive land uses in terms of land use conflicts, mobility or quality of life. Addressing development of these types of facilities without recognition of their unique activities and impacts results in the potential for poorly coordinated land uses and consequent negative impacts on the transportation system, businesses, visitors and residents.”³

While there is no clear comprehensive solution, the ARC does resolve to evaluate and pursue the following objectives in future Regional Transportation Plan (RTP) and Regional Development Plan (RDP) updates:

- *Preserve freight mobility as the region continues to develop,*
- *Coordinate freight and non-freight land uses and mobility needs,*
- *Ensure adequate segregation and protection of different land uses, and*
- *Build goods movement and logistics needs into land development and site design.*

In the plan's final report, the ARC acknowledges several key land use issues in the Atlanta region that are valid for any region in the nation, where urban density requires the close proximity of freight and non-freight land uses.

High population growth can pressure residential development to encroach upon the City's industrial corridors, which causes freight access problems for the industries that are already there. Residential uses often cause access problems because of neighborhood restrictions like noise abatement policies that prevent truck drivers from arriving at a location before or after rush hour, no-truck routes that require drivers to take a circuitous approach, and heavy congestion along previously adequate access routes. The issue is not that industrial and residential areas need to be made separate, which may be undesirable and probably is impractical. From a freight logistics standpoint, the issue is access, through the retention of clear, efficient truck routes into industrial centers as residential areas develop.

The historical freight development especially in the Atlanta region is characterized by sprawl. Freight companies originally located within the urban core have moved outside of the city and away from the congestion, eventually finding themselves too far away from the local market. Redevelopment of older freight areas is now an attractive possibility for many industrial companies. However, many large distributors need new modern facilities, rather than the un-used facilities that currently exist. Areas that are otherwise prime for freight location including superb road access and interstate proximity would require expensive upgrade investments.

³ Atlanta Regional Commission, February 2008.

City of Baltimore – Maritime Industrial Zoning Overlay District

The Maritime Industrial Zoning Overlay District (MIZOD) was enacted in 2004 in an effort to reduce increasing conflicts between mixed-use development and maritime shipping by demarcating deep water areas in industrial precincts and reserving them for industrial use. In general, it is difficult and costly for maritime and mixed uses to co exist. Maritime shipping activity creates noise, dust, substantial truck traffic, unattractive and extensive outdoor storage areas, and 24-hour activity, all of which conflict with housing, entertainment, and office uses. Yet, maritime users must have access to deep water; they also must invest in expensive infrastructure and dredging that can only be justified if a long amortization period can be assured. The expensive dredging required to maintain shipping access is also most cost effective when terminal sites are clustered together and not scattered among uses for which deep water access is not necessary.

A recent Baltimore Development Corporation study reported that needed investment in port facilities may be deferred due to uncertainty as to the City's policy regarding change of use. Once deep water sites are redeveloped for mixed use, it would be very difficult, if not impossible, to regain them for maritime use, irrespective of future need or economic necessity. Zoning is one of the few practical methods available for assuring the availability of deep water land for maritime shipping use. However, the recent success of mixed-use redevelopment on the waterfront presented the City with a policy decision regarding the relative importance of two critical City objectives:

- Expansion of the new business and residential uses made possible by waterfront redevelopment and
- Preservation for maritime use of the deep water access essential to the Port of Baltimore.

The goal of establishing the MIZOD was to balance the needs of both mixed use and maritime shipping, maximizing each to the extent possible without harming the other. Therefore, the waterfront in the deep water sections of the harbor was categorized into two areas: Mixed-Use and Maritime Industrial. In the first, mixed use would be allowed, enabled, and encouraged. In the second, maritime uses would be protected by the MIZOD by prohibiting conversion of land to non-industrial uses. The intention of demarcating the waterfront into clearly defined mixed-use and maritime industrial areas was to help streamline the development process by avoiding costly and time-consuming delays associated with site-by-site decision-making regarding change of use. Importantly, it is intended to protect the integrity of the maritime area, avoiding the leapfrogging of mixed use into maritime areas that has begun to threaten continued investment in the maritime commerce of the Port of Baltimore.

SUMMARY AND CONCLUSIONS

The preservation of FACs is important to sustained economic growth and prosperity for the region. Providing good transportation accessibility to existing and new FACs and efficient connections between these centers and defined Strategic Trade corridors is a prominent factor to the region's economic growth. Strategies that buffer these areas from and minimize encroachment of non-compatible land uses will enhance the region's ability to compete economically with other regions. The region must invest in

the preservation and expansion of the freight industry through land use, transportation, and economic development policies and implementation strategies.

Intense development pressures in areas adjacent to FACs can be counterbalanced by the following strategies:

- Centralizing freight activity in areas that are already developed with existing infrastructure,
- Ensuring appropriate land uses are in place in areas immediately adjacent to freight handlers, and
- Planning for and providing appropriate transitional buffers and land uses between sensitive land uses and freight-related activities.

Improving coordination of land use and transportation decisions among state governments and local agencies can ensure that future growth of FACs is manageable and sustainable.

Incompatible land uses contributes to a greater mix of heavy truck traffic and passenger vehicle traffic resulting in neighborhood concerns about the disruptive truck activity in local communities and business centers. The challenges of balancing freight activity growth and achieving other community goals is difficult. A coordinated planning approach that uses the available policy tools and incentives to achieve a balanced land use and transportation strategy will produce the best results for a strong economy.