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16. Abstract

This report is designed to answer three basic questions:

1. Why is the Texas Department of Transportation (TxDOT) interested in moving more cargo by water?
2. What are the potential benefits of moving more cargo by water?
3. What specific steps can TxDOT or the State of Texas take to encourage more waterborne freight movements?

In this report, the authors:

- describe the need for increased utilization of marine freight options,
- look at the challenges involved, and
- describe the potential benefits of increasing the utilization of marine freight options.

The authors provide a summary of relevant programs in Europe and the activities of other gulf states. They analyze the capacity and efficiency of the Gulf Intracoastal Waterway, as this waterway will most likely be the conduit for increased coastwise shipments. They then provide several examples of activities taken by Texas ports to encourage more domestic waterborne freight shipments, along with several examples of recent start-up services. The report recommends several steps TxDOT could pursue in the short term to encourage more waterborne shipments along the coast. Finally, the report includes a chapter of Frequently Asked Questions regarding "Short Sea Shipping" or "Marine Highways" for readers who do not regularly deal with marine transportation issues. Several appendices provide detailed background material on federal issues, legislation, the Energy Independence and Security Act of 2007, and the role of waterborne freight in Texas.

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POTENTIAL POLICIES AND INCENTIVES TO ENCOURAGE MOVEMENT OF CONTAINERIZED FREIGHT ON TEXAS INLAND WATERWAYS

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DISCLAIMER

This research was performed in cooperation with the Texas Department of Transportation (TxDOT) and the Federal Highway Administration (FHWA). The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the FHWA or TxDOT. This report does not constitute a standard, specification, or regulation.

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- Scot Sullivan, P.E., project director;
- Orlando Jamandre, project advisor;
- John Sabala, project advisor; and
- Stephen Ndima, project advisor.

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EXECUTIVE SUMMARY

INTRODUCTION

This study builds on the results achieved by Project 0-5695, "Short Sea Shipping Initiatives and the Impacts on the Texas Transportation System." While Project 0-5695 explored the full range of short sea freight and passenger options that could theoretically impact the Texas transportation system, this project recommends the most effective policies and incentives that TxDOT or legislative bodies could implement in order to improve the operating climate for waterborne freight movement within the state.

The expansion of opportunities for waterborne freight transportation is critical for developing a sustainable freight system in the United States. Developing water alternatives for freight will:

- enhance the state's and the nation's total transportation capacity,
- relieve congestion in highway and rail corridors that are at or over capacity,
- improve the energy efficiency of freight transportation, and
- make the freight network less vulnerable to labor and energy shortages.

In addition to population growth, the increased reliance on international trade has created significant demand for port facilities to process containerized consumer goods and move cargo between manufacturing centers along the coast. These activities place a growing burden on the Texas road network. Almost all of the containerized cargo in Texas is presently cleared from the port area by trucks. The Port of Houston Authority's Bayport Container Terminal, which celebrated its grand opening on February 8, 2007, is the primary location through which the entire Port of Houston complex expects to eventually triple its current container handling capacity over the next 20 years. Additional deepwater container terminals may be developed along the Texas coast in locations such as Corpus Christi, Freeport, Galveston, and Texas City. The projects in Corpus Christi, Freeport, and Texas City have received construction permits from the U.S. Army Corps of Engineers (USACE) for their new container facilities and Port Freeport has already initiated construction at its Velasco Terminal. There is an almost universal consensus that the growth trend in international trade will increase even further with the expansion of the Panama Canal, which is now scheduled for completion in 2015.

POTENTIAL BENEFITS

There are several strong reasons why it is sound public policy to promote moving freight by water. These reasons include:

- improved interstate and international trade possibilities,
- energy efficiency,
- reduced emissions,
- reduced injuries and fatalities,
- ability to attract business to the state because of waterborne freight capabilities,
- congestion mitigation,
- decreased need for new highway expansions and the associated land impacts, and
- reduced wear and tear on the state's highways.

CHALLENGES

There are a number of challenges in modernizing the domestic marine transportation system so that it can expand and diversify its market. The State of Texas can address directly some of these issues, whereas the federal government or private industry must resolve others. Challenges include:

- speed of delivery/scheduled delivery,
- lack of market data,
- need for specialized container handling equipment at ports and terminals,
- Harbor Maintenance Tax issues,
- resistance by logistics managers to experiment with alternative transport,
- Jones Act issues,[1] and
- single mode focus in transport planning.

Some challenges are strictly in the federal domain. Appendix A provides a brief overview of several of these issues.

THE RESEARCH

A number of funding programs have been introduced in Europe with the goal of increasing freight transportation on river and coastal networks. Two of these programs merit further examination due to their specific targets and structure: the Freight Facilities Grant in the United Kingdom (UK) and the Marco Polo Program in the European Union (EU). These two European programs have a sufficient program history to be evaluated in terms of their viability and applicability to Texas. Other programs, such as Navigation and Inland Waterway Action and Development in Europe (NAIADES), seem to hold promise, but they are still in the introductory phase.

The Freight Facilities Grant model is possibly a relevant program for the State of Texas since neither Texas nor the UK relies extensively on navigable river systems. The UK has an extensive network of inland waterways; however, these waterways were constructed at the beginning of the industrial revolution and are too narrow and shallow to use for commercial freight movement. Therefore, the UK relies on coastal operations to displace ground-based freight transportation. Furthermore, with a significant portion of the grants concentrated in Scotland and in other areas of the UK that are not as densely populated, the UK program has shown that opening up new water corridors is an important strategic decision that can reduce the nation's carbon footprint and bring new economic opportunities. The use of CO_2 (greenhouse gas) reduction as a metric for grants is almost nonexistent in the United States. However, President Obama has expressed support for either a carbon tax or a carbon cap and trade system, which means the United States federal government could implement such a system in the near future.

[1] "Jones Act" typically refers to Section 27 of the Merchant Marine Act of 1920, which requires that all shipments by water between ports in the United States (including Puerto Rico) be carried by U.S. built vessels flying a U.S. flag and crewed by U.S. citizens.

The Marco Polo program has the potential to be a model for a short sea shipping program in the United States, since it seeks to reduce the amount of environmental and infrastructure damage tied to road transportation—a goal shared by the United States. Understanding the model and the methodology for formulating projects will help Texas become more competitive in the funding of such projects if the United States adopts the formula.

The Marco Polo program increases the use of intermodal transportation through operating subsidies based on the amount of modal shift. The program allows and encourages different types of non-road alternatives to reduce the amount of road transportation. Texas could set up categories of actions similar to the Marco Polo program to target specific types of modal shift.

Most of what the other gulf states are doing is simply a variety of methods to fund needed infrastructure. They do not focus on promoting waterborne freight as a mode. Historically, the State of Texas has not directly funded port infrastructure. However, there are several mechanisms available to TxDOT to encourage more waterborne freight along the coast. In general terms they consist of the following short-term, high-priority items:

- preventing encroachment on the Gulf Intracoastal Waterway (GIWW),
- marketing by the state,
- designating overweight freight corridors,
- instituting new air quality credits, and
- obtaining greater cost recovery from large trucks.

In order to institute these measures successfully, there must be sufficient excess capacity on the GIWW to allow significant increases in freight movement to occur. All the indicators seem to point toward a conclusion that there is significant capacity left on the Texas GIWW as a whole. Traffic management strategies could most likely lessen the peak utilization rate.

There are several private sector initiatives under way to develop coastwise shipping options. This report summarizes the following:

- Cedar Port (Houston),
- Brownsville-Houston Barge Express,
- National Shipping of America (Freeport, Texas to Chester, Pennsylvania), and
- SeaBridge Freight (Brownsville, Texas, to Port Manatee, Florida).

Additionally, a case study of an innovative approach in Virginia is presented. It involves the use of Congestion Mitigation and Air Quality funds.

CHAPTER 1: INTRODUCTION AND BACKGROUND

PROJECT PURPOSE

This study builds on the results achieved by Project 0-5695, "Short Sea Shipping Initiatives and the Impacts on the Texas Transportation System." While Project 0-5695 explored the full range of short sea freight and passenger options that could theoretically impact the Texas transportation system, this project recommends the most effective policies and incentives that TxDOT or legislative bodies could implement in order to improve the operating climate for waterborne freight movement within the state, paying particular attention to enhancing truck-competitive waterborne freight.

Given the universality of problems associated with freight congestion, the researchers examined the approaches taken by several other countries in increasing the modal share of water transport. In developing these recommendations, researchers examined the comparative experiences of Europe and Canada in addition to policies proposed or enacted by other U.S. states with reference to their applicability to the Texas situation. They also assessed the impact such policies might have on containerized freight traffic in coastal areas. The report deals more specifically with the role that can be played by greater utilization of the Gulf Intracoastal Waterway (GIWW), a marine infrastructure asset that is unique to Texas and its neighboring states. The report contains the following key elements:

- an estimate of the effectiveness of using the GIWW or coastwise shipping for containerized freight movement,
- barriers to implementing use of the GIWW or coastwise shipping for moving containerized freight, and
- strategies that Texas could use to encourage containerized freight movement by water.

In order to assess the validity of the preliminary findings, the researchers conducted a feedback session with stakeholders on February 8, 2008, in Houston, Texas. This report presents their comments on certain aspects of the study.

PROJECT BACKGROUND

The Landside Picture: Growing Congestion on All Modes

The expansion of opportunities for waterborne freight transportation is critical for developing a sustainable freight system in the United States. Developing water alternatives for freight will:

- enhance the state's and the nation's total transportation capacity,
- relieve congestion in highway and rail corridors that are at or over capacity,
- improve the energy efficiency of freight transportation, and
- make the freight network less vulnerable to labor and energy shortages.

Water corridors that have significant untapped capacity for additional freight transport already exist. Nevertheless, creating the proper conditions to facilitate the sustained growth of water

transport in order to take trucks off the highways will require a long-term plan, including investment by the public and private sectors.

Despite the overwhelming need for new freight capacity in the United States, freight corridors can only succeed if they are well positioned to serve population centers and provide measurable advantages in time, cost, or reliability over existing alternatives. There are water freight corridors in Texas that have the potential to meet one or more of these conditions.

The most clearly evident basis for the creation of a "Marine Highway" system is that it can effectively serve rapidly growing coastal populations. In Texas, the population of coastal counties increased by 52 percent, or 2.5 million persons between 1980 and 2003. Population density grew from 54 persons per square mile in 1980 to 84 persons per square mile by 2008 (*1*). Robust growth is expected to continue along most of the gulf coast for the foreseeable future and will be reflected by increasing traffic demands along already heavily traveled coastal highways such as I-10, Highway 77, and Highway 59.

Two metrics are commonly used to measure freight flows. For non-containerized freight, the typical unit is the short ton, which is 2000 pounds. For containerized freight, the unit of measure is the Twenty-foot Equivalent Unit (TEU). One 20-ft container is one TEU, while one 40-ft container is two TEUs. Likewise, container ships are classified by the number of TEUs that they can carry.

In addition to population growth, the increased reliance on international trade has created significant demand for port facilities to process containerized consumer goods and move cargo between manufacturing centers along the coast. These activities are placing a growing burden on the Texas road network. Almost all of the containerized cargo in Texas is presently cleared from the port area by trucks. The Port of Houston Authority's Bayport Container Terminal, which celebrated its grand opening on February 8, 2007, is the primary location through which the entire Port of Houston complex expects to eventually triple its current container handling capacity over the next 20 years. Additional deepwater container terminals may be developed along the Texas coast in locations such as Corpus Christi, Freeport, Galveston, and Texas City. The projects in Corpus Christi, Freeport, and Texas City have received construction permits from the U.S. Army Corps of Engineers for their new container facilities, and Port Freeport has already initiated construction at its Velasco Terminal.

The growth trend in international trade is expected to increase even further with the expansion of the Panama Canal, which is now scheduled for completion in 2015. According to a recent study conducted for TxDOT by Cambridge Systematics (*2*):

> This expansion…will significantly impact the intermodal transportation system in Texas and accelerate growth at all of the state's seaports. In the short term, these impacts will be felt most heavily on and around the Port of Houston, the state's largest container port and a key trading partner for goods shipped via the Panama Canal.

This additional growth will result in three specific effects on marine trade: 1) growth in Houston will be significant, 2) a need for feeder services to move cargo in and out of the Houston area will most likely surface, and 3) the prospects for developing significant containerized activity in Freeport and Corpus Christi will improve greatly.

Appendix E provides a detailed description of the role of waterborne freight in Texas. Historically, Texas ports have handled primarily bulk and general cargoes (petroleum, petrochemicals, steel, minerals, project cargo, etc.), yet containers make up a growing share of the total. Table 1 shows the growth in freight since 2001 in terms of tons and TEUs (*3*).

Table 1. Texas Waterborne Container Traffic.

Year	Total Tons (000 short tons)	TEUs*	Houston TEUs
2000	452,991	1,215,932	1,061,525
2001	454,765	1,215,959	1,057,869
2002	442,251	1,264,753	1,147,489
2003	473,941	1,321,561	1,243,866
2004	502,038	1,516,444	1,437,585
2005	487,100	1,677,968	1,594,366
2006	488,357	1,691,155	1,606,786

* TEU information obtained from American Association of Port Authorities, "U.S./Canada Container Traffic in TEUs (1990 – 2007)," as of May 27, 2008.

Source: American Association of Port Authorities and U.S. Army Corps of Engineers Navigation Data Center.

With new terminals and larger channels coming on line, the amount of freight will increase even more rapidly and will tend to come in significantly larger "pulses" as average vessel sizes continue to increase. Texas' transportation system has reached a point where it is no longer advisable to consider each of the modes separately—the objective must be to maximize throughput for the transportation system as a whole. One strategy for mitigating the impact of increased freight volumes, as well as lessening environmental and safety impacts on the general population, is to create the conditions necessary to move more coastal freight by water. It is an option that has seen comparatively little public investment. New marine services or expansion of existing services could take place within the GIWW or coastwise in oceangoing vessels.

Waterborne containerized cargo in Texas is highly concentrated in the Houston-Galveston-Freeport area. To be able to impact a broader geographic area, it will be necessary to: 1) establish feeder services that move cargoes to and from the Greater Houston area and other coastal areas in Texas, and 2) establish new coastal marine services that do not exist today.

POTENTIAL BENEFITS

There are several strong reasons why it is sound public policy to promote moving freight by water. These reasons include the following:

- **Improved interstate and international trade possibilities.** The marine freight transportation industry makes international trade and trade with other states possible. It can open up markets and trading relationships that had not before been possible due to high transportation costs and can preserve markets that are currently under threat due to increasing transportation costs. The system that is made up of the GIWW, the Gulf of Mexico, and the state's ship channels is heavily used by businesses that need a cost-effective solution for shipping their goods.

- **Energy efficiency.** Marine freight is the most energy efficient form of cargo transport. In a recent Texas Transportation Institute (TTI) study conducted for the Maritime Administration and the National Waterways Foundation (*4*), marine transportation was documented to be much more efficient than highway or rail modes when measuring ton-miles per gallon of fuel consumed, as shown in Figure 1.

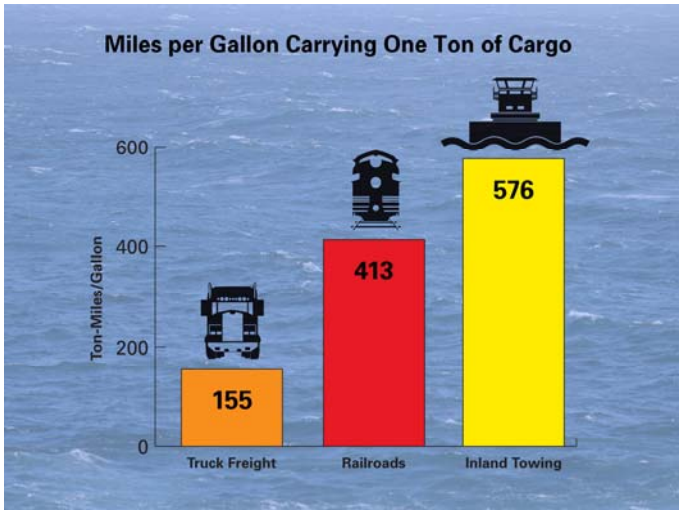

Figure 1. Ton-Miles per Gallon by Mode.

Source: A Modal Comparison of Domestic Freight Transportation Effects on the General Public," Texas Transportation Institute, December 2007.

By way of illustration, 7.23 billion ton-miles of waterborne traffic were recorded on the Texas portion of the GIWW in 2006. This resulted in a savings of five million gallons of fuel versus what would be consumed by rail to accomplish the same level of effort, or 34 million gallons versus highway transport. In an era of skyrocketing fuel prices and uncertain future supply, it is good policy to ensure that the U.S. freight sector is as fuel efficient as possible.

- **Reduced emissions.** By the same token, because less fuel is consumed by waterborne freight movements than the other modes, fewer emissions are produced. For every major pollutant tracked by the Environmental Protection Agency (EPA), marine transportation produces the smallest quantity per a given unit of effort, as shown in Figure 2 .

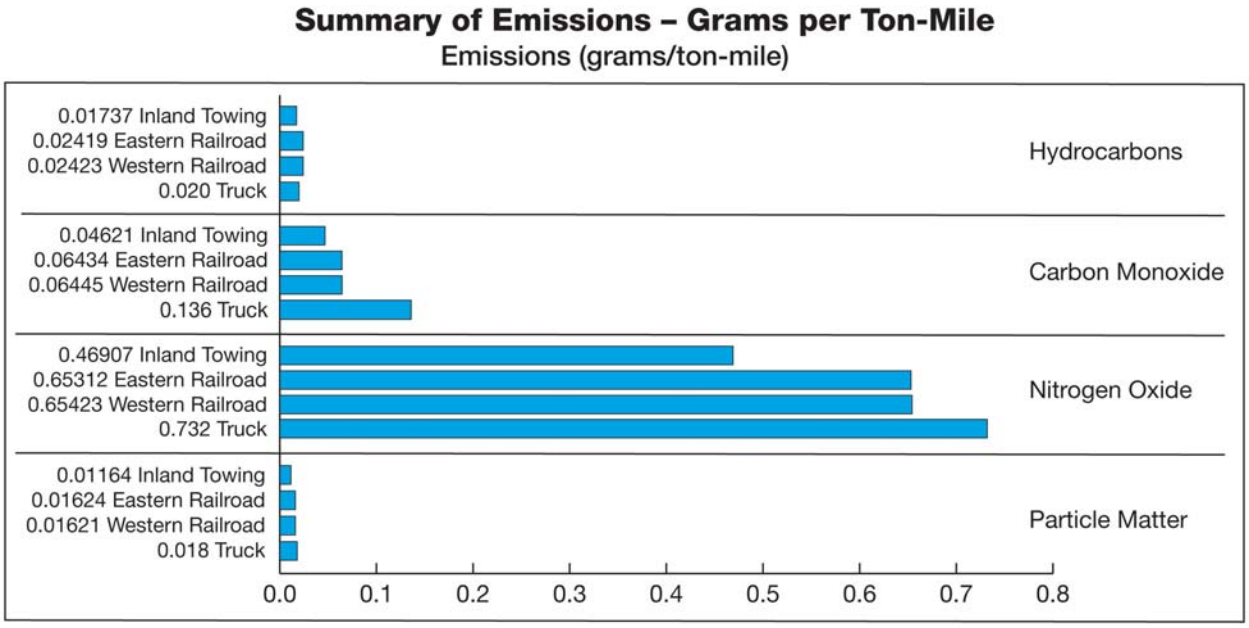

Figure 2. Summary of Emissions — Grams per Ton-Mile.
Source: A Modal Comparison of Domestic Freight Transportation Effects on the General Public," Texas Transportation Institute, December 2007.

- **Reduced injuries and fatalities.** The risk of a freight-related fatality is 155 times higher for truck than for inland marine transportation, based on ton-miles of activity. For injuries, the risk is 2172 times higher for trucks than for inland marine. Figure 3 illustrates these large differences.

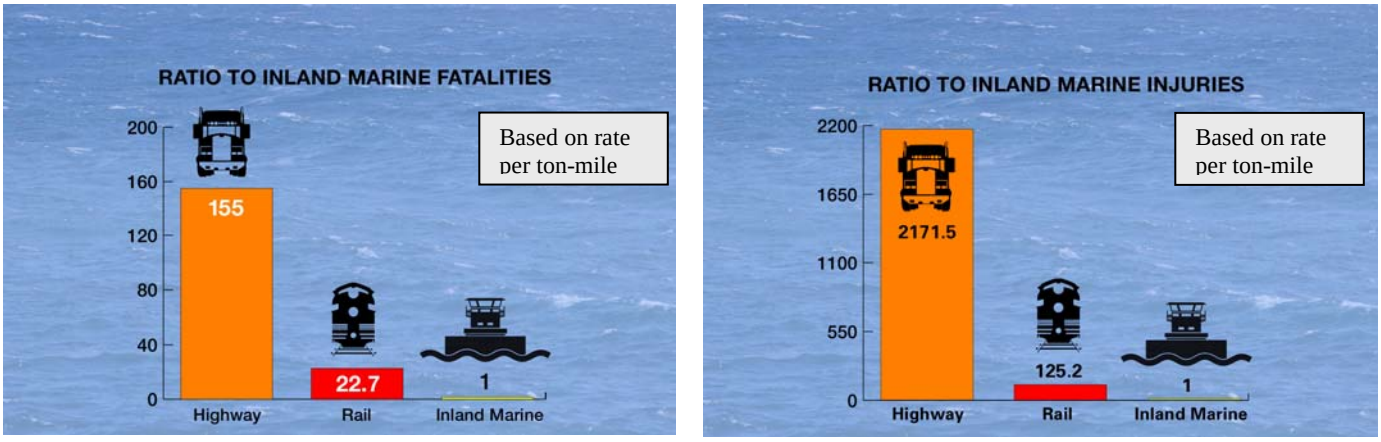

Figure 3. Ratios of Fatalities and Injuries per Ton-Mile.
Source: A Modal Comparison of Domestic Freight Transportation Effects on the General Public," Texas Transportation Institute, December 2007.

- **Waterborne freight capabilities attract businesses to all parts of the state.** In order to attract major industry to any part of the state, there must be reliable, cost-effective transportation available. There would be almost no petrochemical or refining industry in Texas if not for the availability of marine transportation.

- **Congestion mitigation.** Marine transportation provides a level of congestion mitigation for the state's highways. A jumbo box barge (195 ft × 35 ft), the standard for the GIWW, can carry 24 loaded 40-ft containers (48 TEUs) or 36 empty containers (72 TEUs). Assuming that two-thirds of the remaining capacity of the GIWW could be used for container-on-barge capacity, that tows will be one-barge tows, and that loads would consist of full containers in one direction and empty containers on the return trip, it would theoretically be possible to move 840,960 loaded TEUs in a year and 1,261,440 empty TEUs in a year. This equates to the avoidance of 1,161,547 truck trips annually. Of course, two-barge tows, which are common on the GIWW, would be twice as effective.

- **Decreased need for new highway expansions and the associated land impacts.** The greater utilization of the existing marine corridor could delay or eliminate the need to expand highway corridors in certain sections of the state. TxDOT and other transportation planners may find this desirable for a number of reasons. First, the state has a difficult time funding the maintenance of the high number of lane miles that already exist within the Texas network. New road facilities now require a complicated environmental clearance process due to the potential impact on groundwater and other resources. Many coastal areas are environmentally sensitive, which makes the environmental clearance process difficult in many parts of the coastal zone.

- **Wear and tear on the state's highways.** Studies show that a fully loaded 80,000-lb truck can cause the same amount of damage as 6000 automobiles. In its 1997 Federal Cost Allocation Study (*5*), the Federal Highway Administration calculated that trucks traveling on urban interstates caused 409 times the pavement damage caused by automobiles. Recent estimates indicate that it costs $800,000/mile to build a road for cars only; it costs $10,000,000/mile to build the same road to truck standards. The car road will last for 50 years, while the truck road will need major maintenance in 10 years.

CHALLENGES

There are a number of challenges in modernizing the domestic marine transportation system so that its market can be expanded and diversified. The State of Texas can address some of these issues directly, whereas others must be resolved by the federal government or private industry. These challenges include the following:

- **Speed of delivery/scheduled delivery.** Waterborne trade historically has been composed of high-volume bulk cargoes that are not time-sensitive. For these cargoes, cost is more important than speed. However, in today's market, more and more industries are using just-in-time (JIT) production methods that require speed, timeliness, and reliability. Inventory costs are becoming very important in the decision-making process as cargo values rise. Because of this, the slower speed of marine vessels becomes a more salient factor for longer haul deliveries. Shippers are increasingly demanding set schedules with firm delivery windows from waterborne freight services.

- **Lack of market data.** There are very limited non-proprietary market data upon which interested service providers can base routes, schedules, and equipment allocation. The data that are available are typically port-to-port data, which do not reveal the origin of the cargo or identify the end user. Without this information, it is difficult to determine which

markets a carrier should aggressively pursue or which routings it should alter to move on water.

- **Need for specialized container handling equipment at ports and terminals.** Many inland waterway terminals are not designed or equipped to handle containers efficiently. For a competitive system to develop, additional terminals will need to invest in cranes and yard space. As of 2006, 43 terminals on the entire U.S. inland waterway system were handling containers, 32 of which were located in deep draft seaports. Only seven other terminals could begin to handle containers without major investments.

- **Harbor Maintenance Tax issues.** Carriers and shippers repeatedly mention the Harbor Maintenance Tax as a deterrent to domestic coastal freight movements, particularly those of high value containerized goods, given that the tax is assessed on the value of the cargo. The Harbor Maintenance Tax is a levy (0.125 percent) placed on the value of foreign cargo imported to a port in the United States or that is transported between two U.S. coastal ports. This issue principally impacts domestic (cabotage) shipments. In these cases, the cargo is being double taxed whereas a truck or rail movement would not have to pay the additional tax.

- **Resistance by logistics managers to experiment with alternative transport.** Many logistics managers are reluctant to experiment with an alternative transportation system, particularly if they deem the alternative to be less reliable. In order to remain viable in an extremely competitive market, logistics managers must maintain a near perfect record in terms of on-time delivery. Logistics managers are required to have their shipments where they need to be on time and in good condition and cannot afford a breakdown anywhere in their logistics chain. Given the historical nature of waterborne cargo (non-time sensitive movements), many logistics managers are simply skeptical of the availability of marine commerce to meet their needs. However, because the industry is so competitive, there are a small but growing number of ambitious logistics firms looking for alternatives – particularly if those options provide a fuel cost advantage.

- **Jones Act issues.** The legal framework established in the aftermath of the First World War to restrict foreign ownership of commercial marine vessels has made it more difficult to expand the fleet of coastwise shipping vessels. Because of Jones Act requirements, carriers are not allowed to use foreign-made vessels in the trade, and the supply of domestic vessels suited for this type of activity is currently quite limited. To construct these vessels in the U.S. simply places a steep capital requirement on most start-up operators.

- **Single mode focus in transport planning.** Most transportation system planners still focus on a particular mode with only incidental attention paid to other modes. In today's freight environment, which is heavily intermodal, there must be more of a system-wide approach to planning. This change in mindset is difficult to overcome, especially when so much of the funding for transportation is allocated to a single mode.

Some challenges are strictly in the federal domain. Appendix A provides a brief overview of several of these issues.

OVERVIEW OF TEXAS PORT SYSTEM

The Texas port system is a well-developed system comprised of ports and terminals with a wide range of capabilities. Texas has more than 1000 terminal facilities on 1000 miles of channel maintained by the Corps of Engineers. These facilities range from small shallow-draft ports to some of the nation's largest port complexes. Geographically, they cover an area from Brownsville, Texas, to Sabine Pass on the Louisiana border.

Most Texas ports are autonomous local governmental entities; one (Galveston) is a municipal utility, and one (Texas City) is privately owned.

The GIWW connects Texas ports to one another and to the rest of the U.S. inland waterway system. The GIWW allows oceangoing shipping to connect with barge traffic. In 2006 the Texas portion of the GIWW transported more than 74 million tons of cargo annually, or almost 58,000 barge movements (*3*).[2] In comparison, the same cargo volume would require almost three million fully loaded semi-trailers or over 674,000 fully loaded rail cars to move.

Texas ports handle a wide variety of cargoes, such as:

- passengers,
- crude oil,
- lumber,
- paper,
- steel,
- agricultural products,
- consumer goods,
- chemicals,
- containers,
- aggregate,
- automobiles,
- construction equipment, and
- strategic military cargo.

In 2007, Houston alone handled roughly 70 percent of all container traffic in the gulf. Texas ports are home to a vibrant commercial seafood business and serve the offshore drilling and recreational boating industries.

Texas ports play a significant role in national defense efforts. Two ports—Beaumont and Corpus Christi—collectively handled one-third of the military cargo shipped in support of Operation Enduring Freedom/Iraqi Freedom. The U.S. Navy has ships homeported in Ingleside, Texas (*6*). The Ports of Houston and Beaumont are home to MARAD National Defense Reserve Fleet vessels, with training ships located in Galveston (*7*).

Existing Services

At the time of this report, there were only a few successful services in the gulf that met the researchers' definition of short sea shipping services. The services calling at Texas ports include:

- American Eagle Tankers,

[2] Tows may consist of more than one barge; therefore, the actual number of tows will be less than 58,000.

- Industrial Maritime Carriers,
- Osprey Line, and
- Richardson Marine (as of late 2008).

American Eagle Tankers is essentially a lightering service for petroleum products, and Industrial Maritime Carriers focuses on project cargo. This leaves only Osprey Line and Richardson Marine as options for transporting containerized cargo along the coast.

ORGANIZATION OF REPORT

Chapter 2 provides an overview of government programs instituted in Europe and Canada to promote more waterborne commerce. Although the researchers analyzed a wide range of programs, this report discusses only those that appear to have relevance to the situation in Texas.

Chapter 3 provides information on programs instituted by the other gulf states (Alabama, Florida, Louisiana, and Mississippi). These tend to be primarily infrastructure funding programs. The information includes the structure of the program, the amount of funding, and particular project examples where available.

Chapter 4 analyzes the capacity and efficiency of the GIWW. Various subtopics examined in this chapter include:

- waterway capacity,
- recreational boating effects,
- lock capacity,
- the role of containerization,
- the potential container carrying capacity of the GIWW, and
- comments from industry.

Chapter 5 explores mechanisms to assist and encourage waterborne freight in Texas. These include a wide range of alternatives, from the development of market information, to infrastructure issues, to indirect measures.

Chapter 6 provides six examples of what Texas ports are doing to develop more coastwise waterborne freight activity. These examples are not all inclusive and are only for purposes of illustration.

Chapter 7 provides several examples of private sector initiatives to develop short sea shipping activity in Texas. It concludes with a case study of a project being developed by the Port of Richmond, Virginia, which provides an innovative approach to developing intrastate waterborne shipping.

Chapter 8 offers some policy considerations that should be taken into account in developing programs to encourage more waterborne freight in Texas. The researchers were only able to identify one specific policy pronouncement, which was issued by the State of Mississippi. This chapter includes information on Mississippi's policies.

Chapter 9 provides a summary and conclusions derived from this research effort. It lists the specific actions TxDOT can pursue in the immediate future to encourage the development of more waterborne freight transportation along the coast.

The appendices provide additional information on several topics mentioned in the report. They are:

- Appendix A: Federal Issues
- Appendix B: Indirect Measures That Might Encourage More Waterborne Freight Transportation
- Appendix C: Legislation for Programs in Other Gulf States
- Appendix D: Summary of Short Sea Transportation Program of the Energy Independence and Security Act of 2007
- Appendix E: Role of Waterborne Freight in Texas
- Appendix F: Overweight Corridor Legislation
- Appendix G: Frequently Asked Questions

Appendix G is included for readers who may not already be familiar with "short sea shipping" or "marine highways."

CHAPTER 2: GOVERNMENT PROGRAMS IN EUROPE AND CANADA

BACKGROUND

The geography of Europe, with its high population density and substantial percentage of the population concentrated near the coast, is particularly well-suited to the development of marine transportation. The development of maritime commerce has always been critical to the European economy. Europe also faces crippling congestion over several major land corridors—a situation that has increased the attractiveness of alternative modes in many cases. In recent years the European Union has introduced a number of funding programs with the goal of increasing freight transportation on river and coastal networks. Some of these initiatives have been either incomplete or tied too closely to unique local conditions to offer much in the way of comparison to the United States. However, the Europeans have developed two wide-ranging water transport programs that the researchers consider potentially instructive to the situation in the United States. These two programs merit a detailed examination due to their specific targets and structure: the Freight Facilities Grant in the UK and the Marco Polo Program in the European Union. These are two of the European programs with a sufficient program history to be evaluated in terms of their viability and applicability to Texas. Other programs, such as NAIADES, seem to hold promise, but they are still in the introductory phase.

FREIGHT FACILITY GRANT IN EUROPE

Brief Description

The United Kingdom has placed a heavy funding emphasis on improving trimodal transportation, particularly for inland waterways. It thereby reduces the cost of using rail or water to transport goods. Distances in Britain are typically too short to make freight rail truly competitive with truck transportation. Furthermore, as an island, Great Britain has many coastal population centers. Unlike Germany and other continental European countries, Great Britain does not have a developed navigable inland waterway system. For this reason, it has devoted its efforts in developing short sea shipping to coastal services capable of operating in open seas. Moreover, because of the environmental benefits of rail and water transportation compared to road, the UK funds multiple projects in Great Britain, Wales, and Scotland. While the program originated from the UK government, Scottish authorities review and fund the projects in Scotland.

Amount of Funding and Projects Funded

The Water Freight Grant helps companies pay operating costs of waterway transportation for up to three years and will cover up to 50 percent of the total cost. Since the aim of the program is to increase the benefits of reduced pollution and congestion through waterway usage, the government bases the amount of project funding offered on the value of the environmental benefit and the financial appraisal. To simplify the process of determining the environmental benefit, the government provides an online calculator that estimates the reduction in roadway miles that will result from an initiative. Projects providing a greater reduction in road miles receive higher levels of funding. The system does not use a precise congestion scoring system;

however, it does differentiate between congested and uncongested roads (three separate categories of congestion) and whether the vehicle mile abatement occurs within an urban or rural area. At the time of this report, the website located at http://www.dft-eb-calculator.co.uk provides a calculator to assess the benefits of new initiatives.

The amounts of funding can be quite significant. In Scotland, projects funded in the 2000 to 2007 time period include the items listed in Table 2.

Table 2. Freight Facility Grant Awards.

Award	Amount of Award (in pounds)	Date Awarded	Lorry Miles to be Reduced in Scotland Each Year
Associated British Ports	4,410,000	February-00	1,400,000
ST Services LTD – Leith	874,000	March-00	400,000
Forth Ports PLC – Leith	81,000	March-00	87,000
Safeway Stores PLC	897,000	March-00	567,000
Iggesund Paperboard	693,000	December-00	479,000
BP Oil UK Limited	10,044,000	December-00	3,675,000
WH Malcolm Limited	246,000	December-00	872,000
Thurso Building Supplies – Caithness	289,000	December-01	356,000
Forth Ports PLC– Rosyth	10,969,000	December-01	2,418,000
Peter D Stirling LTD	1,878,300	August-02	395,500
Asda Stores	74,600	November-02	881,000
Salt Union LTD	467,000	March-03	248,000
Kiers Mineral LTD	3,894,000	August-03	859,000
EWS Railway	654,000	November-03	905,000
WH Malcolm Limited	882,000	November-03	644,000
Norfrost LTD	642,000	March-04	672,000
WH Malcolm – Phase 3	137,678	July-04	1,055,000
Forth Ports – Rosyth	490,000	April-05	493,000
WH Malcolm – Phase 4	1,647,000	August-05	655,000
WH Malcolm – Phase 5	572,000	January-06	900,000
Eddie Stobart Limited	200,000	April-06	1,037,000
ATH Resources	2,200,000	November-06	2,039,000
Iverness Harbour Trust	2,300,000	March-07	790,000
Total	**44,541,578**		**21,827,500**

In the Iverness Harbour grant, for example, the port proposed starting a container feeder service that would connect the remote Harbour in the far north of Scotland with the rest of the UK and eventually to other ports in Europe. Congestion mitigation was not the principal benefit of this service; rather, the benefits were tied to gains in energy efficiency, CO_2 emissions, economic opportunity, and anticipated lower costs than road alternatives in the long run. The applicant

estimated the CO_2 and other environmental benefits to be £4.2 Million (*8*).[3] Safety benefits, though not fully quantified, were another key motivator in awarding the grant, given that the growing number of heavy trucks is blamed for the increasing number of people killed on the stretch of highway linking Aberdeen to Perth (*9*).

It is important to recognize that while the freight facilities grants in the United Kingdom may be seen as a subsidy, the practice of requiring ports to largely fund their own landside access improvements increases the cost of developing port facilities in Britain. In this sense, the financing scheme internalizes the impacts of freight generated by ports but excludes the benefits of freight that ports remove from the highway and rail systems. If viewed broadly, any roadway improvement that enhances the ability of a port to move its cargo to market could be viewed as a form of subsidy.

Applicability to Texas

The UK model is possibly relevant for the state of Texas since neither location relies extensively on navigable river systems. The United Kingdom has an extensive network of inland waterways; however, these waterways were constructed at the beginning of the industrial revolution and are too narrow and shallow for commercial freight movement. Therefore, the UK relies on coastal operations to displace ground-based freight transportation. Furthermore, with a significant portion of the grants concentrated in Scotland and in other less densely populated areas of the UK , the UK program has shown that opening up new water corridors is an important strategic decision that can reduce the nation's carbon footprint and bring new economic opportunities. The use of CO_2 reduction as a metric for grants is almost nonexistent in the United States. However, President Obama has expressed support for either a carbon tax or a carbon cap and trade system, which means the United States federal government could implement such a system in the near future.

MARCO POLO PROGRAM

Brief Description

The Marco Polo Program attempts to reduce road congestion throughout the European Union, improve intermodal transportation, and reduce the environmental impact of transportation by subsidies. The program originated in 2002 with the goal of improving the environmental performance of freight transportation throughout the European Union. The general structure of the program was solidified in 2003. Given the ambitious nature of the program the initial funding totals were relatively modest with an allocation of €75 million for the first four years of the program's authorization. The European Union authorized the second phase of the Marco Polo program in 2006. The EU authorized a more ambitious amount for Phase II— €400 million. It incorporates all of the countries in the European Union as well as countries bordering the European Union. The EU authorized the project for funding through the year 2013.

Given the steady growth in road transport as a percentage of total freight carriage in Europe, the main goal of the Marco Polo effort is simply to "maintain the traffic share (modal split) between

[3] As of October 13, 2008, the pound was equal to $1.70 U.S.

the various transport modes for the year 2010 at its 1998 level."[4] To achieve this goal, the program supports five different types of actions:

- modal shift,
- catalyst,
- motorways of the sea,
- traffic avoidance, and
- common learning.

Each action is available for funding, as long as the project is for freight transportation services. The budget for the 2008 call for proposals for the Marco Polo II program was increased to €59 million[5] compared to €57 million in 2007 (*10*).

Amounts of Funding and Funding Projects Examples

The Marco Polo grants support projects during the "high-risk" start-up phase of their existence. It offers grants to new services or existing services that have been significantly upgraded (*10*). The European Commission set basic qualifications for eligible projects (*11*). Certain rules apply for all projects. One such rule is that each project must be viable by the end of the subsidy. However, each action has its own structure for receiving a grant, as follows:

- **Modal Shift:**
  - minimum grant is 500,000 euros,
  - program pays 35 percent of the eligible cost,
  - grant is available for up to three years, and
  - project must remove 250 million ton–km from the road to another form of transportation.

- **Catalyst Shift:**
  - minimum grant is 2 million euros;
  - program pays up to 35 percent of the eligible cost, which can include infrastructure that is ancillary to the service; and
  - grant is available for up to five years.

- **Common Learning:**
  - minimum grant is 250,000 euros,
  - program pays up to 50 percent of eligible cost,
  - grant is available for up to two years, and
  - project must be innovative.

[4] Intermodal transport: The Marco Polo Programme**,** http://europa.eu/scadplus/leg/en/lvb/l24159.htm.
[5] As of October 13, 2008, the Euro was equal to $1.35 U.S.

- **Motorways of the Sea:**
  - minimum grant is 2.5 million euros,
  - program pays up to 35 percent of the eligible costs, which can include ancillary infrastructure,
  - grant is available for five years,
  - each project must remove 1.25 billion ton–km from the road, and
  - project must be innovative.

- **Traffic Avoidance:**
  - minimum grant is 1 million euros,
  - grants pays up to 35 percent of eligible cost, which can include ancillary infrastructure,
  - grant is available for five years,
  - each project must remove 500 million ton-km or 25 million vehicle-km of freight traffic, and
  - the project must be innovative and must reduce freight traffic by 10 percent of freight volume of existing services related to road transport flows.

The conditions for a grant are rigorous. Meeting the minimum thresholds is usually not sufficient. If the project applicants barely meet the minimum requirement, the program will probably not accept the project. Table 3 lists grants approved as of the end of 2006.

Table 3. Marco Polo Grant Awards.

Year	Action	Description	Contribution (in Euros)
2003	Common Learning	**Web-based Intermodal and Inland Waterway Transport Training for Europe (Ewit):** Web-based Intermodal and Inland Waterway Transport Training for Europe. Establishing a common European training platform on intermodal inland waterway transport and logistics.	361,000
2003	Modal Shift	**AIN:** Antwerp Intermodal Network. Transport of Intermodal units between the port of Antwerp and various inland container terminals by barge or train.	1,730,000
2003	Modal Shift	**UnitNet SS&I:** UnitNet Short Sea Shipping. Transport of perishables by SSS (and partly further on by barge) between Southern Spain (Cartagena, Huelva, Almeria, Algeciras, Cadiz) and Northern Europe (Rotterdam/Vlissingen).	1,500,000

Table 3. Marco Polo Grant Awards (Cont.)

Year	Action	Description	Contribution (in Euros)
2003	Modal Shift	**PORTNED:** Short sea shipping service between Portugal and Netherlands SSS. Service for high-quality paper products (mainly South-North) and stimulation of the port of Figueira da Foz, thus relieving the port of Lisbon.	980,000
2003	Modal Shift	**Project Eucon:** Improved direct Lift-on/Lift-off [Lo/Lo] (container) connections between Ireland and Continental Europe. Establishing new Lo/Lo services with modern intermodal equipment between Ireland and the Ports of Rotterdam, Antwerp, and Le Havre. Continuation of transport chain by barge as far as possible.	2,000,000
2003	Modal Shift	**Danfrance:** Setting up and operating a regular short sea shipping service with Roll-on/Roll-off (Ro/Ro) vessels between Dunkerque (as a gateway to France, Southern Europe and Southern United Kingdom) and Esbjerg (as a gateway to Denmark and Scandinavia). Four departures of Ro/Ro vessels per week in each direction.	911,000
2003	Modal Shift	**Pilotlinie Via Mare Balticum (P-VMB):** Capacity increase of existing Ro/Ro services between Kiel, Germany and Klaipeda, Lithuania (one additional ship).	600,000
2003	Modal Shift	**Consolidation of Goods Transport over the Kvarken Straits (CGTK) project:** Consolidation of Goods Transport over the Kvarken Straits. Upgrade of an existing Roll-on/Roll-off/Passenger (Ro/Pax) ferry service between Vaasa, Finland and Umea, Sweden. Investment in a new vessel meeting the demands of today's road freight transport and allowing cutting the road route around the Gulf of Bothnia.	900,000

Table 3. Marco Polo Grant Awards (Cont.)

Year	Action	Description	Contribution (in Euros)
2004	Modal Shift	**Baltic-UK Ro/Ro:** Establishment of a Ro/Ro service (trailer) between the ports of Gdynia, Poland and Immingham, UK, with two departures per week in each direction.	900,000
2004	Modal Shift	**Euro Stars:** The expansion of maritime services for trailers in the Western Mediterranean; upgraded SSS services between Italy, Spain, Tunisia, and Malta for intermodal freight (trailer and other rolling cargo); introduction of two newly built car ferries.	1,000,000
2004	Modal Shift	**RO/RO- Esperance:** Ro/Ro ferry North Spain-North France. Daily ferry services with three vessels for trailers between the ports of Santander, Spain and Dunkerque, France.	1,600,000
2004	Modal Shift	**Bridge over Europe:** Lo/Lo short sea shipping service between Spain, Bilbao, and Northwest Europe (London and Rotterdam) including railway transport in Spain, UK, and Germany.	250,000
2004	Modal Shift	**IBEDRLIM:** Short sea shipping service between ports of Limay, Setubal, Sevilha, Figueira da Foz, and Ribadeo for high-quality steel products and wood products.	1,570,000
2005	Modal Shift	**ACCESS:** Advance Contact Centre for the Enhancement of Short Sea Shipping. One stop shop, with an integrated communication interface, allowing truckers to get all the necessary information on SSS (departures, reserving space on board, port conditions, etc.).	250,000
2005	Modal Shift	**MARIS:** Expansion of maritime service for trailers between Livorno and Valencia and introduction of Piacenza - Valencia rail/sea intermodal service for containers, with two block trains per week.	2,090,000

Table 3. Marco Polo Grant Awards (Cont.)

Year	Action	Description	Contribution (in Euros)
2005	Modal Shift	**SCAPEMED:** Short sea shipping service. Large freight flows of high-quality steel products westbound from Italy to Portugal. Eastbound return cargo of high-quality paper products from Portugal to Spain to Italy.	2,103,000
2005	Modal Shift	**Alternative To The Alps Crossing (ATTAC)**: Short sea shipping service between Civitavecchia (Central Italy) and Toulon (Southern France) for the transport of trailers, semi-trailers and other rolling cargo, including oversized and overweight trailers. The service offers a fast, regular, and direct maritime service at fixed-day departures three times a week.	2,090,000
2005	Common Learning	**Shortsea XML:** Project to develop, promote and provide training for Shortsea XML, which will become the open message standard for exchanging data between all parties in a door-to-door SSS logistic chain. The aim is to make the intermodal SSS more competitive by improving customer services, reducing transport administration costs, and improving utilization of transport units.	900,000
2005	Modal Shift	**Danube RoRo Shipping (DRS):** Inland waterway transport system on the Danube shifting freight from road to inland waterways on a major transport axis between Southern Europe and Central/Western Europe.	968,141
2005	Modal Shift	**Morocco Seaways:** Short sea shipping service that connects the port of Genoa, Italy; Barcelona, Spain; and Tangier, Morocco with weekly departure on fixed days. The service will be carried out through the use of a Ro/Ro mixed goods passenger type ship with wide cargo capacity.	1,830,418

Table 3. Marco Polo Grant Awards (Cont.)

Year	Action	Description	Contribution (in Euros)
2005	Modal Shift	**Baltic Sea Shuttle (BaSS):** Short sea shipping service between the ports of Rostock, Germany and Ventspils, Latvia across the Baltic Sea. Modification and expansion of the existing ferry service between Rostock and Liepaja, Latvia and move to the Latvian port of Ventspils. The second ship will double the route capacity. A total of four round trips per week is foreseen.	1,316,000
2005	Common Learning	**2E3S.com Project:** The objective of the project is to provide operators, shippers, and students from countries, universities and training centres within the EU with training in maritime logistics, in particular, short sea shipping. Website courses will be carried out on short sea shipping routes between Italy and Spain, in particular, Barcelona-Civitavecchia and Barcelona-Genoa.	993,750
2005	Modal Shift	**Zest:** Weekly short sea Ro/Ro liner service between the post of Zeebrugge, Belgium and Esbjerd, Denmark for industrial and consumer goods transported in trailers and containers between Ireland, the UK, Flanders, and the northwestern part of France and Denmark. Using the hub function of Zeebrugge, transshipment in Zeebrugge has already extended the service to the UK (Ro/Ro) and Ireland (Lo/Lo).	867,143
2005	Modal Shift	**Baltic Timber Line (BTL):** Weekly short sea shipping container service Muuga-Fredericia with a fixed schedule linking Estonia to Denmark.	227,800

Table 3. Marco Polo Grant Awards (Cont.)

Year	Action	Description	Contribution (in Euros)
2006	Catalyst	**TRIANGLE:** A new service linking the Iberian Peninsula (Barcelona) to major destinations in Western Europe and Poland. It will be a terminal-to-terminal service between Barcelona-Rotterdam, Barcelona-Ludwigshafen, and Ludwigshafen-Poland. The new service is supplementary to existing networks, and they will form a large European Triangle.	1,635,330
2006	Catalyst	**Ecological Transport Service (ETS-ELBE):** The level of the Elbe River is affected temporarily by low water so the project proposes to introduce a scheduled transport service on inland waterways, a container system for inland waterway transport, a reduction of the transport prices in the whole chain, a rise of capacity of the inland navigation, a strengthening of the market position of the inland navigation, and a guarantee of substitute transportation.	1,635,330
Total			**34,833,582**

Not all of the projects the Marco Polo program selected for funding have succeeded and some have failed to materialize even after receiving funding authorization. For example, of the "top 19 projects" selected for modal shift in 2003, six were cancelled after the participating consortium withdrew (*12*).

In order to guide potential participants, the European Union has placed model applications for the different project types on their website. These documents use theoretical examples of modal shift actions and demonstrate how the applicant should justify a project's eligibility for public funding. While the formulas may seem daunting, the basic drivers underlying the calculations are the benefits to the environment and society, on a ton-mile basis, of using an alternative form of transport. The total benefit is then compared against other constraints placed by the program; for example, the maximum percentage of eligible total project cost under the Marco Polo program (35 percent) and the maximum duration of the grants (60 months).

In an attempt to make the process of applying for grants as straightforward as possible the European Union developed an Excel-based calculator that allows potential participants to input the key characteristics of their proposed service. Calculators are provided for the following four of five major categories of Marco Polo initiatives:

- Modal Shift Actions,

- Catalyst Actions,
- Traffic Avoidance Actions, and
- Motorways of the Seas Actions.

The Excel calculator serves as a screening tool by which potential applicants can determine the extent to which a proposed project meets minimum criteria. At first glance, it would appear that there could be overlap between these various categories; for example, if a mode is shifted to barge it may lead to traffic abatement at the same time that it is enhancing Motorways of the Seas. However, the instructions for applicants state that there can be no "mixing of action types" in applications.

In order to actually receive funding through the Marco Polo program, applicants must complete a detailed proposal describing the characteristics of the old route and the new modally shifted route (*13*). Since the reauthorization of the Marco Polo program in 2006, the new open ocean category entitled Motorways of the Sea has received significant attention. However for the current year, 2008, only two proposals were received that fit into this category. Over half of the total proposals in 2008 were tied to rail as opposed to marine transportation (*14*). Thus the ability of the Marco Polo program to systematically enhance the role of open ocean short sea services on the European continent is still an open question.

Applicability to Texas

The Marco Polo program has the potential to be a useful point of reference for a short sea shipping program in the United States, given that the U.S. also seeks to reduce the amount of environmental and infrastructure damage tied to road transportation. Understanding the model and the methodology for formulating projects will help Texas become more competitive in the funding of such projects if the United States adopts the formula. The Marco Polo program is especially notable for its comprehensiveness and ability to accommodate different types of cargo shipments. The program has focused on increasing the transparency of the funding and ensuring that multiple parties can participate. While the funding for the program is only sufficient to fund a limited number of initiatives each year, the Marco Polo program has also had another benefit, which is to heavily publicize the concept of short sea shipping and increase the understanding and interest in short sea shipping not only in the European Union but also around the world. While the economic and geographic conditions within the United States are significantly different from those in the European Union, the underlying goals of the Marco Polo program (i.e., abating excessive truck congestion and shifting freight cargo onto alternative modes) are very similar to the goals embraced by the United States and North America.

The Marco Polo program increases the use of intermodal transportation through operating subsidies based on the amount of modal shift. The program allows and encourages different types of non-road alternatives to reduce the amount of road transportation. Texas could set up categories of actions similar to the Marco Polo program to target specific types of modal shift. While the Marco Polo program attempts to improve both marine and rail shipments simultaneously, a parallel system for the United States would probably have comparatively less emphasis on rail and focus more exclusively on marine options such as container-on-barge. However the comprehensiveness of the Marco Polo program demonstrates that neither alternative mode has been sufficiently utilized in Europe nor the United States, and both of these

alternatives—rail and water—have the potential to create substantial benefits for the environmental performance of freight transportation.

CANADA'S SITUATION

Canadian researchers have investigated how government can construct a commercial environment where the natural choice for certain shippers is to use a short sea shipping option. There are two principal dimensions to this objective. The first dimension relates to ensuring that the waterborne shipping option is not rendered less attractive by externally imposed costs and/or service-related circumstances that are not equally applied to other modes. Such circumstances might include non-uniformity of charges and fees across the modes or infrastructure-related subsidies, the cost of which is not fully recovered from users of that infrastructure. Inconsistencies in the application of rules and procedures (particularly in relation to customs) are another consideration. Differences in cargo inspection procedures can also negatively impact the choice of waterborne shipping.

Canada has comparatively fewer options for establishing short sea shipping routes than the United States; however, the Canadian government has sponsored research on the feasibility of short sea shipping connecting the Atlantic seaboard of Canada with two prominent destinations in the United States. One of the most prominent researchers in Canada on the feasibility of short sea shipping is Dr. Mary Brooks, a professor at Dalhousie University. In 2006, Dr. Brooks performed a study on the feasibility of short sea routes connecting the Port of Halifax to various destinations on the East Coast (*15*). The Strategic Highway Infrastructure Program of Transport Canada, the Halifax Port Authority, and the Centre for International Business Studies, Dalhousie University sponsored this study. The study by Dr. Brooks found significant potential for short sea shipments along the Atlantic seaboard between the port of Halifax and various points in the northeast and mid-Atlantic regions of the United States. The findings indicated that short sea shipping was potentially competitive from a cost and time-in-transit perspective, particularly if the ultimate destination for the cargo was near the port. Given that the short sea shipping initiatives and the proposed routes in the Canadian study were exclusively international, part of the focus was on improving the regulatory framework for international short sea shipments as opposed to a pure focus on economics (*15*). The Canadians have also seriously examined the potential of container-on-barge shipping on the West Coast at the port of Vancouver. A 2005 study predicted that container-on-barge service in the greater Vancouver area would be potentially viable if a critical mass of cargo could be attracted (*16*).

Environmental costing is another important dimension. The government has made little progress in encouraging the choice of shippers to use the most environmentally friendly mode through the use of environmentally leveraged charges for services.

Finally, recognizing that coastal competition constitutes only a small percentage of the business of land-mode operators, there is a risk of non-compensatory pricing on those routes that compete with short sea shipping so as to discourage diversion. Such tactics would not serve the best interests of society at large.

The most difficult policy question posed by Dr. Brooks is how to encourage waterborne shipping and give it a more prominent role in the transportation system of the future. One the one hand, short sea shipping and inland water transportation must integrate into the transportation system

of the future. On the other hand, shippers are obliged to make decisions based on prevailing present conditions. The challenge, therefore, is to bridge the gap between present circumstances and future goals and objectives.

FEEDBACK FROM INDUSTRY STAKEHOLDER GROUP

Using economic incentives to encourage modal shift is not unique to Europe. What is unique is the direct linkage of modal shift with greenhouse gas reduction and the relative lack of programs that target other criteria pollutants such as nitrogen oxides or carbon monoxide. The stakeholder group generally expressed the belief that the air quality grants that have been proposed through the Texas Emissions Reduction Program (TERP) and other programs are quite complicated to meet and are biased toward the trucking industry. Rather than continuing to refine or expand these programs, stakeholders suggested the initiation of a new system of funds that is more directly tied to energy conservation and carbon reduction. Whatever program is established, it should have transparent requirements and not reward or penalize participants based on the percentage of their operating cycle that occurs within non-attainment areas.

CHAPTER 3: WHAT THE OTHER GULF STATES ARE DOING

The other four gulf states (Alabama, Florida, Louisiana, and Mississippi) have enacted a number of measures to improve maritime infrastructure. Appendix C contains the enabling legislation for these programs. The following sections of this chapter describe the most active programs and the funding associated with them.

ALABAMA CONSTITUTIONAL AMENDMENT 666 (2000 AMENDMENT ONE)

Program Description

The 2000 amendment stipulates that 28 percent of all Oil and Gas Capital Payments received by the Alabama Trust Fund during the preceding fiscal year shall be paid into the Alabama Capital Improvement Trust Fund. Funds in the Alabama Capital Improvement Trust Fund may be appropriated for capital improvements only upon the certification of the Governor, based upon the recommendation of the Director of Finance, that funds are needed for particular capital improvements. The Governor's certification for such capital improvements is contained in his or her budget for the operation of state government submitted annually to the legislature. Legislative appropriations from this fund in excess of those contained in the Governor's certification must be accompanied by legislative findings of fact explaining the appropriations that differ from or are in excess of those certified by the Governor. The foregoing notwithstanding, the legislature may appropriate funds from this trust fund for capital improvements upon a recorded majority vote of each house of the legislature.

Amount of Funding and Projects Funded

The 2000 Amendment 666 authorized $350 million intended to fund road and bridge programs throughout the state. This Amendment allocated $100 million to the Alabama State Port Authority. Of that amount, $20 million went to general cargo and container yard improvements at the main port as part of a $45 million "Phase One" port revitalization project, while the $80 million balance went to the new container terminal at Choctaw Point. Phase One of the port revitalization includes:

- a new metals cargo terminal at Pier North A,
- upgrades of track and equipment for rail interchange,
- a new forest products terminal on Pier North C,
- a metals cargo terminal on Pier D, and
- new container equipment at Pier 2.

It also included some of the engineering work for the Choctaw Point container terminal.

In 2007, Amendment 796 was ratified, authorizing an increase in the bonding authority from $350 million to $750 million. This increase was authorized primarily as part of an incentive package to attract a major steel plant investment.

Applicability to Texas

The approach Alabama took would be analogous to diverting some of the income stream received by the General Land Office. As in Alabama, this would require a constitutional amendment.

ALABAMA STATE DOCKS CAPITAL CREDIT PROJECT

Project Description

To be eligible for the Alabama State Docks capital credit, the project must have capital costs that are "not less than $8,000,000, and at which the predominant trade or business activity conducted will constitute industrial, warehousing, or research activity defined in Section 40-18-240(4) as North American Industry Classification System (NAICS) Subsector 493 (Warehousing and Storage), Industry Number 488310 (Port and Harbor Operations), or Industry Number 488320 (Marine Cargo Handling), when the trade or business is conducted on premises in which the Alabama State Port Authority has an ownership, leasehold, or other possessory interest, and such premises are used as part of the operations of the Alabama State Port Authority (*17*)." The capital credit allowed for any tax year of an investing company cannot exceed the aggregate amount that otherwise would be due from the investing company, its shareholders, partners, members, owners, or beneficiaries to the state in tax with respect to the income of the investing company generated by or arising out of the qualifying project. The Alabama State Docks Capital Credit Project is provided under Section 40-18-240 et seq., Code of Alabama 1975, which became effective August 1, 2001.

Prior to this legislation, port businesses did not qualify for the capital tax credit (Capital Investment Tax Credit incentive); this new credit provides the Port of Mobile with public/private venture opportunities. The port authority reports that it has had a few interests take advantage of this program. One was an expansion of the grain elevator, another was a new freezer terminal, and the third was the new container terminal. However, the Alabama Department of Revenue stated in a telephone conversation that no one had taken advantage of the credit.[6] It may be that businesses at the port have filed for the credit, but it had not yet been issued at the time researchers conducted the interview.

Amount of Funding and Projects Funded

Data on specific projects that took advantage of the capital credit are not available. However, the Alabama Department of Revenue reports that 38 projects claiming a capital credit under the Capital Investment Tax Credit program (the general, non-port credit) were placed in service in 2005 and 23 were placed in service in 2006. The average for the past 12 years has been 24 projects a year. The actual amount of credits for these projects averages $14,145,000 (*18*).

Applicability to Texas

Since Texas has no income tax, any type of tax credit initiative would have to involve a credit against some type of tax other than income tax. The most likely tax would be the recently created Margin Tax.

[6] Telephone conversation, November 16, 2007.

FLORIDA SEAPORT TRANSPORTATION AND ECONOMIC DEVELOPMENT PROGRAM (FSTED)

Description

In 1990, the Florida State Legislature created the Florida Seaport Transportation and Economic Development Program within the Florida Department of Transportation (FDOT) to finance seaport projects that improve the movement of people and goods, and otherwise support the interests, purposes, and requirements of Florida's seaports.

The FSTED Council manages the FSTED Program. The council consists of the 14 deepwater port directors, the Executive Director of the Governor's Office of Tourism, Trade, and Economic Development (OTTED), and the secretaries or designees of FDOT and the Department of Community Affairs (DCA). The council is responsible for preparing a five-year Florida Seaport Mission Plan which defines the goals and objectives of the seaports. Additionally, the FSTED Council meets semiannually to review project applications submitted by each of the individual seaports and recommends which projects to forward to the agencies for further review and possible recommendation for funding with state funds. OTTED, FDOT, and DCA review the list of FSTED-recommended projects to ensure each project is consistent with state statutes and local master plans.

Port projects in the mission plan must meet several requirements. State funding cannot exceed 50 percent of the total cost of a project, although the state can pay 75 percent of the cost of certain waterside dredging improvements related to seaport intermodal access. In order to be approved, a proposed project must be consistent with the seaport's comprehensive master plan and the local government's comprehensive plan, be of demonstrable economic benefit to the state, and be consistent with FDOT's adopted five-year work program. Projects must comply with Equal Employment Opportunity (EEO) hiring practices, Final Project Audit, and legislative review. Candidate projects to be financed through bondable funding must also meet statutory eligibility and consistency requirements.

The legislation provides that a port eligible for matching funds under the program may receive no more than $7 million during a calendar year, and a distribution of not more than thirty million dollars ($30,000,000) over a consecutive five (5) calendar-year period. Grant funding under the program is limited to specific types of port facilities or port transportation projects.

Projects financed through bondable funding include the following port facilities or port transportation projects at any of the 14 deepwater ports:

- dredging or deepening of channels, turning basins, or harbors;
- wharves, docks, structures, jetties, piers, storage facilities, cruise terminals, automated people-mover systems;
- vessel tracking systems, container cranes, or other equipment used in the movement of cargo or passengers in international commerce;
- acquisition of land to be used for port purposes;
- acquisition, improvement, enlargement, or extension of existing port facilities;
- certain environmental protection projects;
- transportation facilities not otherwise part of FDOT's adopted work program;
- seaport intermodal access projects identified in the five-year Florida Seaport Mission Plan;

- construction or rehabilitation of facilities in deepwater ports with operating revenues of $5 million or less, provided that such projects create economic development opportunities, capital improvements, and positive financial returns to the port;
- dredging or deepening of channels, turning basins, or harbors; and

Amount of Funding and Projects Funded

Section 311.07(2), F.S., directs the transfer from the State Transportation Trust Fund (STTF) of a minimum of $8 million annually. Actual funding has been at $15 million. The most recent budget earmarked $5 million in seaport funding for small ports.

Table 4 shows the projects selected for FY 2007, FY 2008, and FY 2009.

Table 4. FSTED Funded Projects for FY 2007, FY 2008, and FY 2009.

Port	Description	FSTED Amount FY 2007	FSTED Amount FY 2008	FSTED Amount FY 2009
Port Manatee	Construct Dry Storage Warehouse	$1,000,000	$2,950,000	$1,800,000
Port Fernandina	Infrastructure Design, Rehab and Repair Container Yard	$150,000	$350,000	$135,000
Port Jacksonville	Construction Berth #3 at Toyota Dock	$2,100,000	$2,300,000	$2,125,000
Port Pensacola	Berth 13 Bulkhead	$250,000	$250,000	$275,000
Port Panama City	Bulk Warehouse Phase II Container Yard Expansion	$1,300,000	0	$700,000
	Mobile Ship Loader and Relocate Gear Shops	0	$500,000	0
Port St. Joe	Land Purchase	$850,000	0	0
	Description not available	0	0	$680,000
Port Everglades	High Wind Bollards	$1,050,000	$2,300,000	0
	New Cruise Terminal 27	$1,050,000	0	0
	Description not available	0	0	$2,125,000
Port Palm Beach	Slip #3 Development	$800,000	0	0
Port Ft. Pierce		0	0	0
Port Canaveral	Maintenance and Dredging South Jetty Deposition Basin	$1,000,000	0	0
	Southside Cargo Terminal South Cargo Pier Improvement	0	$1,800,000	$1,800,000
Port Key West	Mallory Dock Project	0	$1,150,000	0
Port Miami	Intermodal Container Yard Equipment	$2,500,000	0	0
	Cruise Terminal Improvements	0	$2,300,000	$2,125,000
Port Tampa	Bulk Cargo Terminal	$2,600,000	0	0
	Description not available	0	0	$2,125,000
Port St. Petersburg	Wharf Repair	0	$750,000	$750,000
FDOT	Acquisition of trade data	$350,000	$350,000	$360,000
Total		**$15,000,000**	**$15,000,000**	**$15,000,000**

Source: Meeting Materials, Florida Seaport Transportation and Economic Development Council Meeting, October 30, 2007, and May 29, 2008.

The fund received a one-time appropriation of $50 million in 2007. Table 5 shows how these funds were allocated.

Table 5. $50 Million Infrastructure Investments Economic Stimulus Program Allocations.

Ports	Projects	$50 Million Allocation
Canaveral	Southside Cargo Terminals	$3,700,000
Everglades	Phase I Terminal 18 Improvements	$2,450,000
	Southport Phase VIII Container Terminal	$5,650,000
Jacksonville	MOL/Trade PAC	$17,600,000
	Toyota Processing Terminal	
Miami	Seaboard Terminal	$2,000,000
	Cruise Terminal B and C	$4,000,000
Palm Beach	Cargo Transfer Facility	$2,250,000
Panama City	Bulk Warehouse Expansion	$1,500,000
Pensacola	Warehouse Freezer Expansion	$400,000
Tampa	Hookers Point Terminal	$10,450,000
Total		**$50,000,000**

Source: Meeting Materials, Florida Seaport Transportation and Economic Development Council Meeting, January 30-31, 2008.

Applicability to Texas

Texas has established the Port Access Account to assist ports in developing needed infrastructure. This account would function in much the same way as the FSTED program. However, the legislature has not yet funded this account.

LOUISIANA'S PORT CONSTRUCTION AND DEVELOPMENT PRIORITY PROGRAM

From the Port Construction and Development Priority Program (PCDPP) 14th Annual Report, March 2007:

> The Port Construction and Development Priority Program was created by Act 452 of the 1989 regular legislative session. In general, the purpose of the Program is to provide state participation in the construction of port infrastructure, thereby creating and/or maintaining jobs and reducing transportation costs to improve the quality of life for Louisiana's citizens. Only projects that have the highest probability of success as determined by objective standards such as technical and financial feasibility and overall impacts are funded. The Program defines the standards by which these projects are evaluated and provides a methodology by which this is accomplished. The Program's application process serves as a means to determine whether proposed projects are eligible for funding under the Program and provides the basis for a priority ranking of projects…Funding for this Program is provided by the Transportation Trust Fund. To date [March 2007] $335.5 million has been allocated which has allowed funding of 160 projects.

The program is limited to:

- construction,
- improvement,
- capital facility rehabilitation, and
- expansion of publicly owned port facilities including intermodal facilities and maritime-related industrial park infrastructure developments.

Table 6 shows the criteria used to judge the proposals.

Table 6. PCDPP Project Selection Criteria.

Feasibility Measure	Feasibility Indicator	Maximum Points	Scoring Method
Technical Feasibility	Capable of being built	45	To qualify must score a minimum of 15 points
Economic Feasibility	Benefit-cost (B-C) ratio	100	Project with the highest B-C scores 100, others are prorated
Economic Impacts	Jobs created or saved (in $)	20	Project with highest job potential scores 20, others prorated
Environmental Impacts	No adverse impacts or enhance environment	15	Projects with no adverse impacts score 10, if it enhances environment, 15
Management of Port	Return on Investment (ROI)	20	Port with highest ROI for the last five years scores 20, others prorated
Total Points Possible		**200**	

Source: Ports Association of Louisiana.

Amount of Funding and Projects Funded

Currently the program is funded at $20 million per year. As of March 2007, $335.5 million had been allocated, which has allowed funding of 160 projects.

For FY 2007, 11 applications were submitted for consideration. Nine applications met the program criteria and were recommended for construction. Of these nine, six were funded along with five continuing projects. Two of the continuing projects will require additional funding from future appropriations. Three of the newly funded projects will require funding into FY 2008. Three recommended projects were unfunded and will receive priority for funding over the next year's newly recommended projects. Table 7 shows the new projects for FY 2007.

Table 7. New PCDPP Projects for FY 2007.

Port	Project Description	Amount
Port of Iberia	Construction of Blast/Coating Facility, site stabilization, and utilities	$1,617,030
Greater Lafourche Port Commission	Construction of 2253 linear ft of bulkhead with mooring bollards and dredging	$8,243,825
Port of New Orleans	Purchase of 24-inch hydraulic dredge	$4,500,000
Alexandria Regional Port Authority	Construction of addition to existing transit shed, hard surface storage area, and gantry crane track extension	$1,818,685
Terrebonne Port Commission	Construction of dry dock facility with lift capacity of approximately 9000 short tons	$9,000,000
Greater Baton Rouge Port Commission	Rehabilitation of dock substructure at grain elevator, including towers and mooring dolphins	$2,416,050
Total		**$27,595,590**

Source: A Status Report on the Port Construction and Development Priority Program, 14th Annual Report, Louisiana Department of Transportation, March 2007.

In 2008, the state legislature appropriated $42,373,343 for the Program.

Applicability to Texas

As was mentioned in the discussion of the FSTED program, Texas has established the Port Access Account to assist ports in developing needed infrastructure. This account would function in much the same way as the FSTED and Louisiana programs. However, the legislature has not yet funded this account.

MISSISSIPPI EXPORT TAX CREDIT PROGRAM

Project Description

The Mississippi Export Tax Credit Program was designed to generate new business activity and revenues for any port in the state by giving state income tax credits to new or existing port customers. The tax credits are limited to one-half of the port authority's maritime tariff charges for receiving, handling, and wharfage, but the state caps the credit at $1,000,000 per customer for the life of the program. Bills were passed in the 2006 legislative session to reduce from $5 million to $2 million the minimum capital investment that must be made in Mississippi to be eligible for the credit and to extend the date of repeal of such credit to July 1, 2010.

According to a review conducted in 1998, this Export Tax Credit Program has essentially been a tax subsidy program that has reduced the amount of tax revenue remitted to the state by companies already doing business through the port authority. Almost all tax credits originally authorized to bolster business have accrued to existing port customers, generating only minimal new business activity for the Mississippi State Port Authority (MSPA). Figure 4 illustrates this fact.

Amount of Funding and Projects Funded

Unfortunately, recent statistics for this program are unavailable. The state contributed $3,209,742 in tax credits granted in calendar years 1994 through 1997. Tax credits of $11,472 went to 21 new customers and $3,198,270 went to 96 existing port customers.

The total of $3,209,742 in allowed tax credits represented $6,419,484 of the $24,072,625 in total maritime revenues (27 percent), or an average of $1,604,871 annually.

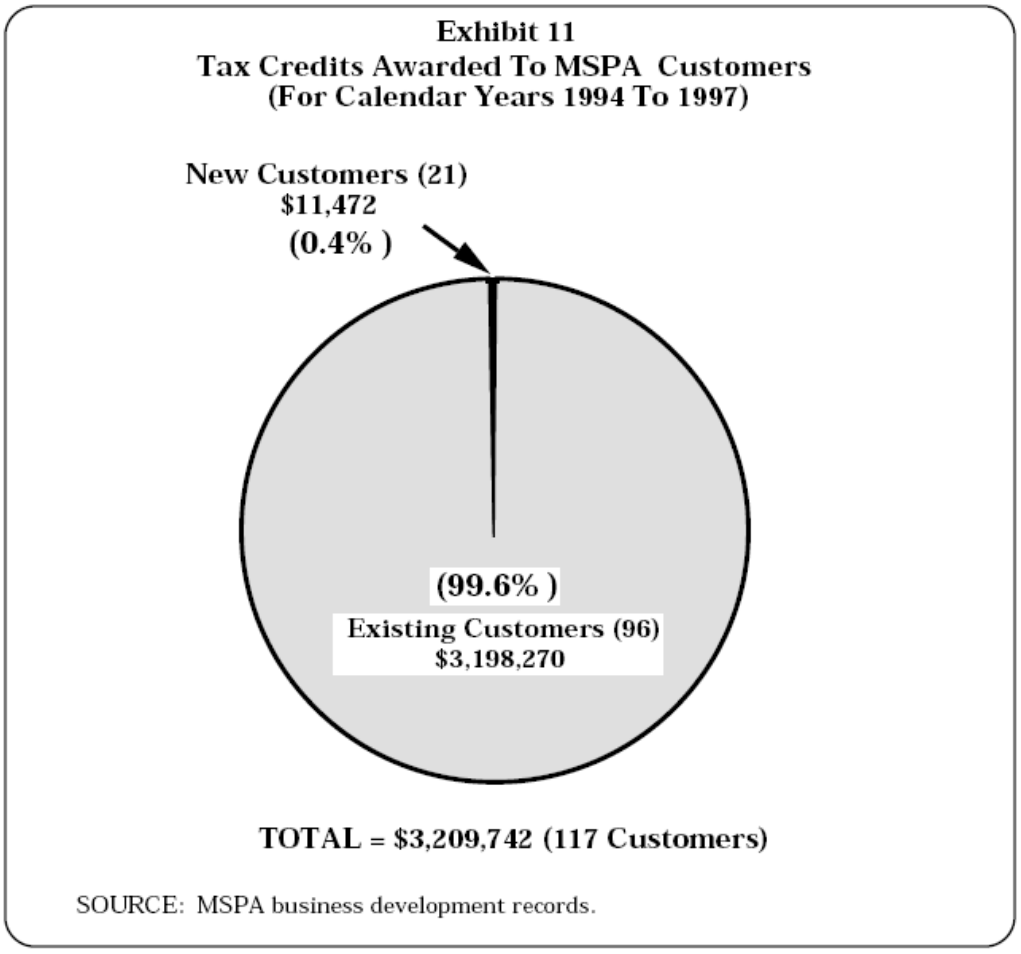

Figure 4. Split of Mississippi Tax Credits between New and Existing Customers.

Applicability to Texas

Given the findings of the 1998 report and the fact that Alabama's tax credit program has not seen much utilization, it would appear that this approach is not an effective one for Texas to pursue.

MISSISSIPPI PORT REVITALIZATION REVOLVING LOAN FUND

Project Description

The Mississippi Port Revitalization Revolving Loan Program (Port Loan Program), administered by the Mississippi Development Authority (MDA) is designed for making loans to state, county, or municipal port authorities (Local Sponsors) for the improvement of port facilities to promote commerce and economic growth in the state of Mississippi. Funding for loans to Local Sponsors is derived from the issuance of state bonds or notes.

Local Sponsors considered to be eligible applicants are state, county, and municipal ports authorized to operate in the state. In order to obtain assistance under the Port Loan Program, a Local Sponsor must submit an application to MDA, which will forward copies of such application to members of the Water Resources Council Committee for review.

Projects eligible for assistance must directly relate to the port facility and are limited to construction, expansion, improvements, rehabilitation, or repair of:

- dock and channel sites to include dredging;
- drainage systems;
- energy facilities (power generation and distribution);
- sewer systems (pipe treatment);
- transportation facilities directly affecting the site, including roads, sidewalks, bridges, rail lines, rivers, or pipelines;
- building;
- water supply systems (storage, treatment, and distribution);
- marine structures;
- equipment necessary for port operation; and
- land improvements.

The port facility may not use the loan funds for working capital or to provide facilities for utilization by a gambling vessel.

Terms:	Maximum term of ten (10) years
Amount:	The Maximum loan amount is $750,000 for any one project
Rate:	Interest rate of 3 percent per annum

Amount of Funding and Projects Funded

MDA is authorized to issue up to $12 million in bonds for this program. The researchers were unable to acquire data on specific projects funded under this program from the Mississippi Development Authority. California, Mississippi, Missouri, and Washington have established infrastructure or other revolving loan programs. Only the fund in Mississippi has offered loans so far, but not many ports have accessed the fund.

Applicability to Texas

Given the existence of several infrastructure loan programs at the state and federal level, this approach does not fill any gaps in the assistance provided to Texas ports today.

MISSISSIPPI MULTIMODAL FUND

Project Description

In 2002, the Mississippi Legislature created the Mississippi Multimodal Transportation Improvement Program, with the purpose of providing funds for non-highway transportation projects. The legislation establishes funding percentages for each mode as follows:

- 38 percent for ports,
- 34 percent for airports,
- 16 percent for transit systems, and
- 12 percent for rail.

Applicants may use the Multimodal Fund for port capital improvement projects, dredging, or the rebuilding or rehabilitation of port infrastructure.

Amount of Funding and Projects Funded

The Mississippi Department of Transportation (MDOT) included $5 million annually in its budget for FY 2005 and FY 2006. As of January 2007, the Program had funded 19 port projects, 29 airport projects, 8 rail projects, and 35 transit projects. The fund was appropriated $5 million in FY 2005, of which 38 percent or $1.9 million was disbursed to the Mississippi ports. Many of the ports reported using program funds to pay the matching portion of the projects they initiated with approved National Highway System Intermodal Connector Improvement Program (ICIP) funds. MDOT provided a total of $5 million again in FY 2006 and $10 million in FY 2007 for funding of airport, port, public transit, and railroad projects. Table 8 shows the port projects funded in FY 2006.

Table 8. FY 2006 Mississippi Ports Multimodal Projects Selected for Funding.

Port	Project Description	Amount
City of Aberdeen	Local Match—Port Access Road	$150,000
Port of Rosedale	Dry-Bulk belt loading system	$170,000
Lowndes C. Port	50 percent cost of Hydraulic Crane	$207,500
Warren Co. Port	Upgrade to 40 Ton Crane	$200,000
Natchez Port	Purchase Mobile Rail Car Mover	$200,000
Port of Pascagoula	Repair Terminal GH Warehouse Floor	$200,000
Port of Gulfport	Construct 250 foot Service Ramp	$469,605
Port Bienville	Local Match—Port and Harbor Drive	$102,895
Yellow Creek Port	Improvements to 10 mile Railroad Spur	$200,000
Total		**$1,900,000.00**

MDOT also used this fund to speed the recovery from Hurricane Katrina. The Capital Improvement program funded the following projects:

- Authorized Multimodal Capital Improvement Fund grants for the Hancock County Port and Harbor Commission for $164,000 for railroad rehabilitation. The Hancock County

Port and Harbor Commission also owns the Port Bienville Railroad, which is a part of the industrial park.

- Provided funding through a Multimodal Capital Improvement Fund grant in the amount of $102,895 to accelerate the completion of turning lanes and truck stacking lanes at the Hancock County Port and Harbor Commission.

- Authorized $570,000 for Hancock County Port to match federal funds. The Port will use the funds for planning and environmental studies to extend the railroad just across the Pearl River County line to connect with the Norfolk Southern Railroad.

- Authorized $500,000 for the State Port at Gulfport for infrastructure improvements and container handling facilities.

Applicability to Texas

As was mentioned in the discussion of the FSTED program, Texas has established the Port Access Account to assist ports in developing needed infrastructure. This account provides the mechanism to do what Mississippi has done once it is funded. However, this account has never been funded by the legislature.

FEEDBACK FROM INDUSTRY STAKEHOLDER GROUP

Industry feedback focused on the following two elements of these state programs.

1. **Direct financial assistance.** Industry, especially port authorities, felt that the appropriate mechanism already exists for direct financial assistance for port infrastructure—the Port Access Account Fund. However, stakeholders do not expect this fund to receive any appropriations in the foreseeable future. If funding were available, port authorities believe the established mechanism for distributing the funds would be acceptable. Private industry has expressed a strong concern regarding the "strings" that might be attached to state funding, and would want to have a clear understanding of any requirements that might come with direct assistance before supporting such measures.

2. **Indirect financial assistance.** Industry, especially port authorities and start-up operators, expressed strong interest in and support for a program that would function in a manner similar to the Mississippi Export Tax Credit Program. They disagreed with the researchers' hypothesis that this would not be very effective. Given that Texas has no income tax, the stakeholders suggested that the tax credit would probably be most effective if applied against the Margin Tax which took effect on January 1, 2007. They also noted that the funding for this program in Mississippi comes from the general fund and is not a diversion of gasoline tax revenues. This would need to be the case in Texas as well.

Additionally, industry representatives have pointed out the importance for government to provide incentives to new operators, but not to provide ongoing subsidies for them. Past experience shows that business initiatives that are induced by and built around subsidies often cease operations once the "start-up" subsidies have expired. Furthermore, since subsidies are often

generated as the result of a political initiative, sometimes with much fanfare, high profile failures have the propensity to damage the reputation of the industry in the marketplace and make it even more difficult for future start-up operators to regain the public's trust and succeed. The other argument against using short sea shipping as a vehicle for transportation "demonstration projects" is that there is no obvious technological barrier that is holding short sea shipping back. On the contrary, most short sea initiatives rely on very basic technology that has been around for many decades. It is simply a different way of moving freight; e.g., handling cargo that would typically be moved by truck instead by marine vessel currently used for bulk cargoes. Therefore, while start-up subsidies sometimes prove effective at introducing a new technology that does not yet have a proven market, it is comparatively more difficult to make such an argument in the establishment of a short sea shipping start-up venture. This does not preclude the possibility that some new marine technologies developed specifically for short-haul container markets could be developed and maybe more deserving of start-up public funding; however, most of the entrepreneurs identified by the researchers in the course of this study who were currently considering the development of new short sea services are seeking to use established vessel types.

CHAPTER 4: CAPACITY AND EFFICIENCY OF GIWW

BACKGROUND

Before considering various measures or programs that TxDOT could implement to encourage more waterborne freight on the GIWW, it is important to determine whether the GIWW could indeed absorb more traffic and whether the addition of significant amounts of new traffic to the GIWW would impact the level of service currently provided. To address that question, the researchers took a two-step approach. First, they analyzed the capacity of the waterway as a whole without regard to any obstacles. Then the researchers looked at the capacity of the major chokepoints on the waterway, the locks, to see the extent to which these chokepoints limit the capacity and efficiency of the waterway. From this analysis, researchers established a theoretical and practical capacity of the waterway and then performed a comparison of actual traffic to practical capacity.

WATERWAY CAPACITY

This methodology borrows heavily from a study done for the Mobile District Corps of Engineers by Taylor Engineering known as the Foley Land Cut Study (*19*), published in May 2007. In order to do a capacity analysis, actual vessel counts at strategic points on the waterway are required. Since there are none for Texas, the researchers established a proxy using data recorded at the Colorado River Locks by the Corps of Engineers. Table 9 shows the makeup of vessel traffic for "up" and "down" traffic combined in 2005.

Table 9. 2005 Colorado River Locks Vessel Traffic Counts.

Vessel Type	Number	Percent (%)
Federal Government Vessel with Barges	3	0
Recreation Vessel	20,181	63.4
Commercial Towboats with Barges	9,767	30.7
Towboats without Barges	1,892	5.9
Total Vessels	**31,843**	**100**

According to the Corps of Engineers, the length of the GIWW in Texas is 406.2 miles. Using standard separation distances from the Foley Land Cut Study and assuming that all vessels would move at 5 mph, it is possible to calculate how many vessels could theoretically be placed on the waterway at one time. (The percentage for each category is held constant.) Table 10 shows the calculation of the number for one-way traffic.

Table 10. Calculated Capacity of GIWW (one-way).

Classification	Percentage per Class (%)	Number Vessels	Length of Vessel (ft)[7]	Spacing (ft)	Total Length per Class (ft)	Length in Miles
Towboat with Barge	30.7	4,045	520	300	3,316,926	
Towboat without Barge	5.9	777	130	240	287,632	
Recreational Vessel	63.4	8,354	32	50	684,994	
Total	**100.0**	**13,176**			**4,289,552**	**406.2 miles**

The Foley Land Cut Study goes through an extensive analysis to see what the practical capacity of the waterway is, taking into account the following:

- commercial vessel concerns,
- the presence of uneducated boaters,
- non-local operators who are unfamiliar with the waterway,
- waterway access locations,
- excessive vessel speed by some boaters,
- potential traffic levels, and
- personal watercraft.

The study concludes that 17.5 percent of theoretical capacity is the actual practical capacity of the waterway at its current service level. At 17.5 percent, the number of vessels moving one-way would be:

Towboat with Barge	707
Towboat without Barge	136
Recreational Vessels	1,462
Total	2,305

To ascertain whether the Texas GIWW is approaching capacity, it is necessary to know the number of vessels on the waterway at any given time. Since this information is not available, the researchers developed the alternate method for assessing the usage described in the following paragraphs.

The Corps of Engineers reports that in 2005, 18,932 towboat trips were made in each direction on the GIWW. This equates to 2.2 towboat transits per hour in each direction (using 365 days × 24 hours). The Lock data reports 5,830 transits each direction for 2005, resulting in 0.7 towboat transits per hour. Recreational vessel transits are 1.2 per hour. Using the assumption that all vessels move at 5 mph, in one hour a five-mile gap will appear on the waterway. Table 11 shows the number of vessels that could be placed in that five-mile reach.

[7] For barges, a tow of two 195-ft barges with a 130-ft towboat is assumed. For recreational vessels, weighted average values from the Foley Land Cut Study are used.

Table 11. Calculated Capacity of Five-Mile Reach on GIWW (one-way).

Classification	Percentage per Class (%)	Number Vessels	Length of Vessel (ft)[8]	Spacing (ft)	Total Length per Class (ft)
Towboat with Barge	30.7	25	520	300	20,391
Towboat without Barge	5.9	5	130	240	1,768
Recreational Vessel	63.4	51	32	50	4,211
Total	**100.0**	**81**			**26,370**

Reducing this number to the 17.5 percent level yields 14 vessels in the following categories:

Towboat with Barge	4.4
Towboat without Barge	.8
Recreational Vessels	8.9
Total	14.1

The Lock data show recreational vessel traffic past that point, but there is no information on the recreational vessel traffic for the waterway as a whole. However, it is possible to compare towboat traffic with the practical capacity using the data for the entire waterway and the Lock data. For recreational vessel traffic, only Lock data can be used. Table 12 shows utilization rates for the GIWW based on data for the entire GIWW and for the Colorado Locks.

Table 12. Calculation of GIWW Utilization Rate.

Classification	Transits per Hour/TX GIWW	Transits per Hour/Lock	Practical Capacity	Utilization Rate Using TX GIWW	Utilization Rate Using Lock
Towboats	2.2	0.7	5.2	42%	13%
Recreational Vessels	N/A	1.2	8.9	N/A	13%

Before determining whether this utilization rate indicates true slack capacity, it is important to look at peak traffic levels. The Foley Land Cut Study determined that as much as 12 percent of an average day's transits could be on the water at one time during peak periods. Since information for recreational vessels does not exist for the entire waterway, only Lock data can be used for that classification. The Lock data indicate a potential peak of (1.9 transits/hr × 24 hours × .12) or 9.1 vessels in an hour. The practical capacity is 14.1 vessels per hour, so the utilization rate is 64 percent during peak periods. It is probably safe to assume that recreational traffic at the Locks is representative of traffic following the waterway as opposed to traffic just crossing the waterway. If 1.2 recreational vessel transits per hour are combined with the greater 2.2 towboat transits per hour, the potential peak traffic is (3.4 transits/hr × 24 hrs × .12) or 9.8 vessels per hour. This yields a utilization rate of 70 percent.

[8] For barges a tow of two 195-ft barges with a 130-ft towboat is assumed. For recreational vessels, weighted average values from the Foley Land Cut Study are used.

Recreational Boating Effects

The researchers checked with the General Land Office (GLO), the Texas Parks and Wildlife Department, and the National Oceanic and Atmospheric Administration's (NOAA) Sea Grant program, and were unable to locate any information regarding the projected level of recreational boating in Texas. Figure 5 shows the number of boating registrations in Texas from 1990 through 2006. As the graph illustrates, the number of registrations has declined over the last few years. The median value for the time period shown in the graph is 613,000. While the available data do not indicate how many of these registrations are for salt water as opposed to lakes and rivers, it is clear that the number of boating registrations does not indicate a growth trend. This lack of an upward trend most likely indicates a fairly stable situation in terms of activity on the water. Therefore, no allowance is made for potential increases in recreational boating.

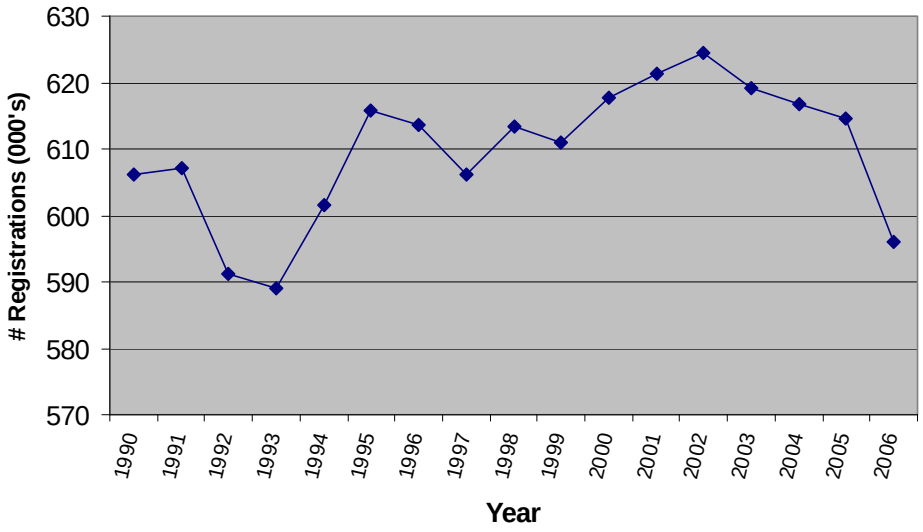

Figure 5. Boating Registrations in Texas.

LOCK CAPACITY

While there is significant capacity left on the waterway as a whole, a lack of lock capacity could constrain the capacity of the entire system. This analysis looks at locks in Texas and between the Texas/Louisiana border and New Orleans. Unfortunately, there are inconsistencies with how data are recorded at the various locks that make comparisons among the locks suspect. However, these are the only data available to the researchers, so they are used in this section to gain at least a rudimentary understanding of the situation.

For fixed marine assets, such as berths, the literature suggests a benchmark of 60 percent utilization as the threshold at which delays begin to impact the effective functionality of the asset (*20*). In fact, the California Marine Petroleum Infrastructure study (*20)* suggests the following:

- 40 to 60 percent should be a normal operating range,
- 60 to 80 percent will result in some scheduling conflicts and waiting times, and
- more than 80 percent will definitely cause queues.

Table 13 indicates that there is still significant capacity available on the Texas portion of the GIWW. Furthermore, the processing times are minimal and would not affect the overall flow of traffic significantly. The most limiting obstacles are found in Louisiana, which affects traffic between Texas and New Orleans. Several of these locks have already surpassed the utilization benchmark threshold, and their processing times are substantial.

Table 13. Calculation of Lock Capacity Utilization.

Waterway - Texas	*Distance*	*Annual Capacity (Theoretical)*	*Constraint*		*2005 Actual*		
			Proc Time	*Unavailable*			
Sabine - Galveston	83.9 mi	87876.13 tows	No constraint		Actual tows	24306	(28% of theoretical capacity)
Galveston - Corpus	189.5 mi						
Brazos East		266420.7 lockages	0.03	767.38	Actual lockages	21642	(8% of theoretical capacity)
Brazos West		269250 lockages	0.03	682.5	Actual lockages	21552	(8% of theoretical capacity)
Colorado East		145076.2 lockages	0.06	55.43	Actual lockages	19358	(13% of theoretical capacity)
Colorado West		144994.2 lockages	0.06	60.35	Actual lockages	18260	(13% of theoretical capacity)
Corpus - Brownsville	132.8 mi	139093.6 tows	No constraint		Actual tows	2676	(2% of theoretical capacity)
	406.2 mi						

Waterway - LA	*Distance*	*Annual Capacity (Theoretical)*	*Constraint*		*2005 Actual*		
			Proc Time	*Unavailable*			
MS River - Sabine	266 mi						
Bayou Boeuf Locks		43542.1 lockages	0.20	51.58	Actual lockages	27397	**(63% of theoretical capacity)**
Calcasieu Locks		29113.1 lockages	0.29	317.2	Actual lockages	23524	**(81% of theoretical capacity)**
Leland Bowman Locks		29719.48 lockages	0.29	141.35	Actual lockages	23832	**(80% of theoretical capacity)**
Algiers Locks		24066.09 lockages	0.35	336.87	Actual lockages	18965	**(79% of theoretical capacity)**
Harvey Locks		46531.5 lockages	0.18	384.33	Actual lockages	13778	(30% of theoretical capacity)

Source: U.S. Army Corps of Engineers, Lock Performance Management System.

There do not seem to be any physical constraints on expanding the system for intrastate traffic. However, for interstate traffic, there may be a serious impediment in the locking system for the Louisiana reach.

CONCLUSION

All the indicators seem to point toward a conclusion that there is significant capacity left on the Texas GIWW as a whole. Traffic management strategies could most likely lessen the peak utilization rate.

ROLE OF CONTAINERIZATION

Shippers are beginning to use containerization for products that previously moved in bulk or breakbulk modes. The recent experience of the grain market is a very good illustration of this. In 2006 an increasing number of U.S. grain exporters began shipping grain in containers. This was in part due to a shortage of bulk capacity that temporarily made containerized shipments less expensive than bulk (*21*). Today, containerized shipments of wheat, soybeans, rice, sorghum, barley, and specialty products such as peas and lentils are moving in record volumes in the U.S. export market. There are a variety of reasons why grain shippers (as well as other nontraditional containerized shippers) have moved in this direction:

- Convenience – shipping in containers makes for easier handling of the commodity throughout the supply chain.
- Flexibility – containers serve as in-route storage of the product and may be easily diverted or moved to another destination to meet demand, especially for specialty products, such as peas, sunflower seeds, and lentils.

- Faster payment – moving by container units allows the product to be delivered more quickly.

Multi-cargo ships and containers are alternatives for moving smaller amounts of grain. These are typically food-grade soybeans and pulses and high value grains. Grain can be shipped in cargo holds or in containers filled with mini-bags, bulk bags, or a liner so that grain may be poured directly into the container. Containerization of specialty grains helps prevent poor handling that results from bulk transport systems. Where bulk systems require handling the grain directly three or four times, if not more, during the transportation process, grain loaded into a container is not handled until unloading at its final destination. Not only does this prevent reduced quality grain, but damage and theft problems are also minimized. Containers can be loaded and unloaded anywhere that has truck or rail access, such as the farm, a country grain elevator, or intermodal facility, and sealed until reaching the destination.

In addition, the container can act as storage anywhere along the transport route. The farm or intermodal facility can easily store the grain in the container until it is purchased. Ports with inadequate storage facilities will also benefit from the storage abilities of containers. Container leasing companies have quoted prices as low as 33 cents per day for leasing a container for storage. Many developing nations are unable to handle, transport, or store bulk shipments of grain, making containerized shipments an effective way of moving grain into these countries, whether it is being sold or sent under a food aid program.

For customers requiring a just-in-time service, container shipping is the most feasible way of meeting such demand. The reduced time in transit not only offers a means of marketing for the producer that bulk systems cannot provide, but also helps to reduce costs such as inventory holds, and increases reliability. As the Internet and other new communication technologies are realized, marketing grain directly from the farm to overseas destinations becomes more realistic. Containerization will make these direct shipments possible and timely.

POTENTIAL CONTAINER CAPACITY

The current level of traffic is approximately 2.2 tows per hour in each direction for the Texas reach of the GIWW. As explained earlier, this represents a utilization rate of approximately 42 percent. At 100 percent there would theoretically be 5.2 tows per hour in each direction.

A jumbo box barge (195 ft × 35 ft) can carry 24 loaded 40-ft containers (48 TEUs) or 36 empty containers (72 TEUs). Assuming that two-thirds of the remaining capacity of the GIWW could be used for container-on-barge capacity, that tows will be one-barge tows, and that loads would consist of full containers in one direction and empty containers on the return trip, it would theoretically be possible to move 840,960 (2 tows/hr × 48 TEU × 24 hours × 365 days) loaded TEUs in a year and 1,261,440 (2 tows/hr × 72 TEU × 24 hours ×365 days) empty TEUs in a year. Two barges per tow could double the results. This would mean a theoretical capacity of 1,681,920 loaded TEUs each year and 2,522,880 empties.

It is reasonable to assume that an operator will not manage to fill every barge and industry will not be able to take advantage of the entire unutilized capacity. Table 14 shows the number of TEUs that could be moved by barge at various percentages of theoretical capacity:

Table 14. Theoretical Container-on-Barge Capacity in TEUs with One Barge per Tow.

	25%	50%	75%	100%
Empty	315,360	630,720	946,080	1,261,440
Loaded	210,240	420,480	630,720	840,960
Total	525,600	1,051,200	1,576,800	2,102,400

Table 15 shows the theoretical capacities with two barges per tow.

Table 15. Theoretical Container-on-Barge Capacity in TEUs with Two Barges per Tow.

	25%	50%	75%	100%
Empty	630,720	1,261,440	1,892,160	2,522,880
Loaded	420,480	840,960	1,261,440	1,681,920
Total	1,051,200	2,102,400	3,153,600	4,204,800

Not all containers are 40-ft containers. Twenty-foot containers are also common, and there is a small percentage of other container dimensions. The researchers examined the statistics for the seven U.S. container ports that handled between 1.5 and 2.5 million TEUs in 2006. (The Port of Houston handled 1.6 million.) The statistics indicate that for this group, 1.81 TEUs equal one container, or one truck trip. (The Port of Houston is closer to 1.6, but this analysis uses the weighted average.) The theoretical TEU capacities shown in Table 16 equate to the following number of truck trips:

Table 16. Theoretical Number of Truck Trips that Could Be Avoided.

	25%	50%	75%	100%
Truck Trips Avoided—1 barge per tow	290,387	580,773	871,160	1,161,547
Truck Trips Avoided – 2 barges per tow	580,773	1,161,547	1,742,320	2,323,094

At a level of just 25 percent of capacity utilization, anywhere from 290,000 to 580,000 truck trips could be removed from Texas coastal highways each year.

To put matters in perspective, the one container-on-barge operation in Texas, Osprey Line, states on its website that it moved 70,000 containers over the last two years. This indicates a reduction of anywhere from 70,000 to 140,000 truck trips during that period.

FEEDBACK FROM INDUSTRY STAKEHOLDER GROUP

Industry experts stated that capacity has to be viewed not only from the perspective of the physical infrastructure but also the availability of barges and tugs, which is in some cases the prohibitive factor. With regard to boosting or retaining capacity, representatives stated that there should be a greater focus on preventing encroachment both along the shoreline as well as vertical encroachment from sources such as the Galveston Railroad Bridge (see the discussion in the section on non-funding measures). When the utilization efficiency of barges decreases due to the need to light load or wait at locks, more barges are needed to haul the same amount of freight. If light loading and long lock queuing could be eliminated, there would be significantly more barge and tug capacity in the system—more cargo could be moved with the same amount of traffic. This would help to keep rates low and reliable. One representative stated that it is the uncertainty in all aspects of the marine system that holds down modal shift, noting that the trucking industry rarely sees the type of price spikes that are seen in the barge industry.

CHAPTER 5: MECHANISMS TO ASSIST AND ENCOURAGE WATERBORNE FREIGHT IN TEXAS

BACKGROUND

One method of promoting more waterborne freight is to simply provide money to carriers and infrastructure providers. However, this is not a practical, long-term solution; there are other measures that government can take to ensure the long-term health of the system and to enable carriers (both existing and start-up) to be more competitive in the freight transportation marketplace. This chapter discusses several of these measures in detail. Table 17 at the end of Chapter 9 provides a summary of the state agencies that would be expected to implement these measures or provide significant support for them.

The federal government has also begun to investigate how it can stimulate short sea shipping. The Energy Independence and Security Act of 2007 included measures to identify and test short shipping opportunities. Although this report focuses on measures at the state level, Appendix D provides a summary of the provisions of the act related to short sea shipping to allow the reader to understand the potential impact of the legislation on state efforts.

Research has not revealed any freight opportunities that TxDOT could immediately "jump start." TxDOT and other state agencies facilitate rather than generate coastwise marine freight initiatives. There has been a fairly steady stream of inquiries and visits at Texas ports regarding waterborne freight opportunities along the coast. Research, in conjunction with these inquiries, has revealed a number of measures the state could take to increase waterborne freight efficiency and effectiveness, and thereby encourage shippers to use the marine mode more frequently.

FIX THE GIWW

Obstacles/Impediments

One of the most obvious measures government can take to encourage more waterborne commerce is to reduce physical impediments to the efficient operation of tows on the GIWW. The major impediments GIWW operators face today are the following:[9]

1. Galveston bridge,
2. Brazos Flood Gates,
3. Colorado Flood Gates,
4. High Island Wiggle,
5. Freeport Wiggle,
6. Caney Creek Wiggle,
7. Lack of depth (need 12 ft authorized depth), and
8. Shoreside development.

[9] Interview with Raymond Butler, Gulf Intracoastal Canal Association, November 15, 2007.

1. Galveston bridge: The opening for barge traffic through the I-45 Causeway and Galveston Island Railroad Bridge is only 120-ft wide for a distance of about 800 ft. According to TxDOT's Gulf Intracoastal Waterway 2005-2006 Legislative Report (*22*), the towing industry identified this spot as the greatest hazard to navigation on the entire GIWW.[10] The new highway bridge, which is nearing completion, will have a 300-ft opening for navigation interests. The current restrictions in place for the railroad bridge are as follows (*23*):

- Tows of all empty barges are limited to 600 ft in length (not including the towing vessel).
- All tows, loaded or empty, are restricted to a maximum width of 70 ft.
- Mixed tows made up of loaded and empty barges are unrestricted in length provided that at least half of the barges are loaded. Mixed tows with a majority of empty barges are treated as an all-empty tow.
- Tows made up of all loaded barges are unrestricted in length.
- Tows with operating bow steering units, whether loaded or empty, are unrestricted in length.
- All empty tows made up of more than one barge must have an assist vessel when transiting westbound.

According to a study of allisions[11] occurring from 1992 to 2001 (*24*), the Galveston Railroad Bridge was the fourth most frequently struck bridge in the United States. It is one of only two structures on the GIWW to be ranked in the top 30 (the other being Bayou Dularge Bridge, Houma, Louisiana at 13th).

The Galveston bridge is being handled as a federal matter under the Truman-Hobbs Act (*25*). However, strong support from TxDOT has been instrumental in acquiring the funding that has been appropriated to date. It is also important for TxDOT to take an active role in ensuring that the design of the new structure provides adequate horizontal and vertical clearances for towing operators. Additionally, rail capacity over the Galveston railroad bridge could be a future concern. Recently conducted studies of commuter rail to and from Galveston Island to the mainland indicate that the potential for increased freight rail traffic from existing Port of Galveston facilities or increased port activities on Pelican Island could increase the time when the bridge is down and blocks GIWW traffic. These factors must be considered in planning the design and capacity of improvements to the railroad bridge.

2 & 3. Locks and Floodgates. While these are not major impediments, they do create inefficiencies. These structures are the responsibility of the Corps of Engineers, but TxDOT, as the non-federal sponsor, has input into decisions made by the Corps concerning these assets. Conversations with industry personnel indicate that it would help to increase the size of the locks and/or to move them a greater distance from the river. At present, they are close enough to the river that a tow trying to cross the river and enter the second lock has difficulty in lining up the tow for a safe approach.[12] The Corps has also stated that if it could restore the flow of the San

[10] This was confirmed during the industry feedback session on February 8, 2007.
[11] An allision is the striking of a moving vessel against a stationary vessel that is at anchor, aground, etc. or fixed object such as piers, wharves, etc.
[12] Interview with Raymond Butler, Gulf Intracoastal Canal Association; and Matt Woodruff, Kirby Marine, February 8, 2008.

Bernard River, the current in the Brazos River might be reduced, thereby reducing the number of instances in which the operation of the flood gates would be necessary.[13]

4, 5, & 6. Wiggles. The Corps of Engineers has studied Items 4, 5, and 6 above and determined that the cost of the improvements would be greater than the projected benefits.[14]

Observations on 1 through 6. According to conversations with operators, removing impediments would not necessarily change the tow configurations, but it would definitely enhance efficiency and make the industry more competitive. According to the Gulf Intracoastal Canal Association, a safe rule of thumb is that it costs $7500 a day for a tow to sit idle and approximately $10,000 a day to actually move freight; therefore, a savings in the number of hours required to transport freight can make a significant difference.

The current regulations limiting tow sizes in the GIWW (33CFR162.75) are:

> On waterways 150 feet wide or less, tows which are longer than 1,180 feet, including the towing vessel, but excluding the length of the hawser, or wider than one-half of the bottom width of the channel or 55 feet, whichever is less will not be allowed, except when the District Commander has given special permission or the waterway has been exempted from these restrictions by the District Commander…Separate permission must be received from the District Commander for each overlength or overwidth movement.

The Coast Guard provided further guidance in Eighth Coast Guard District Special Notice to Mariners, Gulf of Mexico, 00-2007:

> For the reach between the west side of the Calcasieu Locks and the Pelican Island Cut, for tows made up of empty barges on the off or shallow side, a width of up to 110 feet will be allowed, provided that, if the width exceeds 55 feet, the overall length shall not exceed 750 feet including the length of the hawser.
>
> Between miles 352 WHL[15] (Pelican Island Cut) and mile 363 WHL, tows of up to 72 feet in width will be allowed, provided that the overall length shall not exceed 750 feet including the towboat but excluding the length of the hawser.
>
> Between 363 WHL and mile 670.6 WHL (Brownsville Ship Channel), for twos made up of empty barges on the off or shallow side, a width of up to 110 feet will be allowed, provided that if the width exceeds 55 feet, the overall length shall not exceed 750 feet including the towboat, but excluding the length of the hawser. This exemption to the regulations does not apply to the Brazos River Floodgates (Mile 400.8 WHL) or the Colorado River Locks (Mile 441.5 WHL) since these Government-owned facilities have a horizontal clearance of 75 feet.

[13] Interview with Johnny Rozsypal, United States Army Corps of Engineers, Galveston District, December 5, 2007.
[14] Interview with Rick Medina, United States Army Corps of Engineers, Galveston District, December 5, 2007.
[15] WHL = West of Harvey Locks.

It is important to note that the primary tow size restriction is for the entire length of the GIWW, regardless of where it is located. This would indicate that simply removing any given obstacle will not result in a change in the tow size regulations unless other obstacles that limit tow size are also removed.

7. Maintain channel depth. A recent analysis conducted by the Texas Transportation Institute (*26*) shows that a loss of just 9 to 10 inches of draft can increase the cost of waterborne movements by more than $103,000,000 annually. The Corps is responsible for performing the dredging of the channel, but with recent shortfalls in the Corps' budget, it will probably be necessary for the State of Texas, as local sponsor, to advocate for adequate funding for the dredging.

8. Protect the GIWW. The state may need to take an active role in controlling any waterfront development along the GIWW that would encroach on the navigable waterway or encourage more recreational activity in the waterway itself. As a rule, the general public does not understand the maneuverability constraints inherent in barge operations. Encouraging unnecessary interaction between recreational users and commercial users simply increases the likelihood of a serious incident. Recreational vessels that are simply crossing the waterway between the gulf and the mooring site are not typically a serious problem.

Summary of GIWW Physical Concerns

The information summarized above would indicate that the three issues where TxDOT could have the most influence in the efficiency of GIWW operations would be:

- supporting funding for the replacement of the Galveston railroad bridge,
- promoting efforts to avoid dangerous shoreside developments, and
- keeping the channel dredged to its project dimensions (125 ft × 12 ft).

MARKETING

The state can assist the ports with localized and statewide market studies to identify and pursue emerging markets. The Texas Department of Transportation, possibly in cooperation with other state agencies and local and regional economic development agencies, could work to identify niche markets and promote the use of public port facilities.

The goals of a statewide marketing campaign might include the following:

- Gain public awareness of the port facilities.
- Promote the benefits of water borne transportation and the positive economic impacts of the maritime sector.
- Assist with business negotiations and provide incentives to encourage prospective industrial tenants to use the Texas public port facilities.
- Provide funding for localized niche market analysis and port development studies needed to help struggling smaller ports identify and move into new markets.

Additionally, a statewide marketing promotion effort could undertake:

- data collection and analysis,
- identification of public policy options for maritime development,

- building stakeholder coalitions with other states (especially states along the GIWW), and
- promoting national waterways agendas.

One example of a marketing effort conducted by a gulf state is the Strategic Economic Development Plan (SEDP) for Louisiana Ports that was recently commissioned by the Ports Association of Louisiana (PAL). This is a statewide plan that is intended to evaluate current conditions, establish Louisiana's role, identify competitors and competitiveness, and ultimately develop a strategic plan for Louisiana and its ports to capitalize on trends in the domestic and international marketplace.

To complete the SEDP, PAL has procured the services of a consulting team of professional strategic planners and economic impact experts. The consulting team includes:

- Shaw Environmental & Infrastructure, Inc.,
- Norbridge,
- University of New Orleans,
- University of Louisiana at Lafayette, and
- Louisiana State University.

The project began in November 2007 and should be completed in February 2009. The planning process was heavily dependent on periodic planning conferences and stakeholder committee briefings to gather the necessary input for creation of an effective plan. The planning conferences were attended by the leadership of each port jurisdiction and facilitated by the strategic consulting team. Following each conference, the consulting team hosted briefings to inform both public and private stakeholders of the progress made to date, explain future direction, and provide an opportunity for input and feedback. More than 200 individuals or entities will participate in the creation of the plan.

DESIGNATING OVERWEIGHT FREIGHT CORRIDORS

Overweight corridors allow heavy loads to move by water and then between the water and a storage or staging area without having to incur the cost of transloading or dividing the cargo. Other states have established such corridors with great success, most notably California and Washington. Several Texas ports have stated that such corridors in their area would greatly enhance efficiencies and their competitive position. Legislation that was passed by the Texas legislature in 1997 (SB 1631) paved the way for the designation of specific overweight corridors. The legislation related to the corridors discussed below is included in Appendix F of this report.

This legislation authorized several key activities for TxDOT, including the following:

- The department may contract with a third party to act as the department's agent in the processing of a permit application and the distribution of a permit issued by the department under this section.
- An agreement entered into under this section may provide for a third party to act as the agent of the state in the processing of a permit application and the distribution of a permit issued by the state under this section.
- The Texas Transportation Commission may adopt rules for the payment of a fee.

Brownsville

In 1997, the state legislature passed legislation that permitted overweight freight haulers from Mexico to use two state roads to reach the Port of Brownsville. Under the program established by the Port of Brownsville, shippers can order specialized oversize/overweight permits online. The permits cover travel between Gateway International Bridge or the Veterans International Bridge at Los Tomates and the Port of Brownsville[16] for vehicles weighing no more than the Mexican Legal Weight Limit or 125,000 lb and not exceeding the allowable permittable axle load. Additionally, the dimensions of the load and vehicle may not exceed 12 ft wide, 15 ft 6 inches high, or 110 ft long.

Regulations can be found in the Texas Administrative Code, Title 43, Part 1, Chapter 28, Subchapter G "Port of Brownsville Port Authority Permits."

Victoria

In 2003, the Port of Victoria also received legislative permission to create a mile-long heavy truck corridor linking its own industrial park to a barge terminal. In addition to transport efficiency, safety was also a factor.

Chambers County

In 2005, the Texas legislature authorized haulers of ocean-going cargo containers to carry loads up to 25 percent over the 80,000-lb legal weight limit on portions of two state roads (five miles) connecting the Cedar Crossing Business Park to a barge terminal. The location across from the port posed a challenge for shippers who wanted to use the maximum capacity of cargo containers but were precluded by state weight limits. To be legal, they had to divide loads and have trucks take a 20-mile detour to the port.

Regulations can be found in the Texas Administrative Code, Title 43, Part 1, Chapter 28, Subchapter H, "Chambers County Permits."

California

San Francisco

Regulations governing the weight and size of trucks moving over California highways are complex and, by comparison with laws of other states, somewhat restrictive. This can be a problem for cargo moving in trades where heavy loads are commonplace. Relief from some of these problems is available to carriers using Port of San Francisco facilities.

The Port of San Francisco, in conjunction with the San Francisco Department of Parking and Traffic, has established an "Overweight Corridor," that connects all the major cargo handling facilities and that is also accessible to the many trucking and warehousing

[16] (1) State Highway 48/State Highway 4 between the Gateway International Bridge and the entrance to the Port of Brownsville or (2) U.S. Highway 77/U.S. Highway 83 and State Highway 48/State Highway 4 between the Veterans International Bridge at Los Tomates and the entrance to the Port of Brownsville.

facilities situated along Third Street between the freeways and the waterfront. It is permissible, under permit, to haul vehicles with a total weight of 93,000 lb as opposed to the 80,000-lb limit applicable to roadways strictly under State of California jurisdiction. This allows cargo payloads of approximately 50,000 to 60,000 lb. The San Francisco Department of Parking and Traffic grants the truck permits per tractor at a cost of $90 and are valid for one year. The permits stipulate the following authorizations:

- any style chassis is okay,
- permits valid for one year,
- only one permit required per tractor,
- any tractor is okay,
- no signs or placards required,
- $500,000 insurance required — auto liability,
- open 24 hours,
- normal speed limits apply, and
- 20-ft or 40-ft containers are okay.

Los Angeles/Long Beach (LA/LB)

The LA/LB heavy container corridor was created to aid in the movement of overweight 40-ft or larger ocean-going containers on designated City streets in and around the Port of Los Angeles. The City of Los Angeles, City of Long Beach, and State of California Department of Public Works approved a measure that allows permits to be granted for overweight container loads in the Port area. The permits allow the gross vehicle weight of the truck, chassis, container, and contents to be at 95,000 lb or 43,130 kg (with proper equipment).

Based on the route to be followed, the respective agency(ies) will issue the appropriate overweight permit(s). When traveling within multiple city jurisdictions, permits will be required from each jurisdiction.

When traveling on City of Los Angeles highways (including the Port of Los Angeles) carriers must obtain an Overweight Vehicle Special Permit from the City of Los Angeles Public Works Division. Additional requirements include proof of auto liability insurance for $1 million and a California Highway Patrol (CHP) 407F Vehicle inspection Report. The permits are for 30 days.

When traveling on City of Long Beach highways (including the Port of Long Beach), an Overweight Vehicle Special Permit must be obtained from the City of Long Beach Public Works Division and County of Los Angeles. Additional requirements include proof of auto liability/worker's compensation insurance for $1 million and a CHP 407F Vehicle Inspection Report. The City of Long Beach issues annual and single trip permits.

The County of Los Angeles issues annual permits that require proof of auto liability insurance for $1 million.

When traveling on a California state highway, the California Department of Transportation (CALTRANS) requires an Overweight Vehicle Special Permit. CALTRANS issues annual permits.

Washington

Oroville

A new law in Washington State allows large trucks to use a stretch of roadway in the northern portion of the state that was previously off-limits. After winning unanimous support in the state's Senate and House, Gov. Chris Gregoire signed SB6857 into law, opening up a four-mile stretch of State Route 97 to large trucks.

The new law authorizes the Washington State Department of Transportation (WSDOT) to designate the portion of roadway from the Canadian border to the city of Oroville as a heavy-haul industrial corridor. The bill allows overweight vehicles to travel along the designated stretch of roadway. The heavy-haul distinction would authorize WSDOT to issue special permits to overweight vehicles operating in the corridor up to a gross vehicle weight of 137,788 lb. Special permits would cost $100 each month, or $1,000 annually.

STATE'S SHIPMENTS

TxDOT could consider giving preference to marine transportation for materials it purchases when such an option makes sense logistically. Additionally, the Texas Military Preparedness Commission could work with the port authorities to assist with the development of needed infrastructure. While these measures may not produce a large amount of cargo, they would show that the State of Texas supports that industry and they may be enough to "tip the scales" in favor of some operators.

TEAM WITH ENVIRONMENTALISTS

Studies show that inland barge transportation is superior to other modes in terms of environmental effects. The State of Texas could look into building a cooperative effort with environmental organizations to develop and promote waterborne freight movements. The persistent effort by European environmental groups to lower the carbon intensity of freight transportation has been a strong motivational force in fostering the development of the Marco Polo program in Europe. There are several groups that might be willing to lend their political and social influence to assist certain waterborne projects.

INDIRECT MEASURES

TTI has identified in previous research (*27,28*) certain measures which the state could implement to improve air quality in metropolitan areas. By encouraging such measures, TxDOT could both

mitigate the level of congestion and air pollution in the state and indirectly encourage shippers to give more serious consideration to the marine option. Appendix B lists these measures.

Greater Cost Recovery from Large Trucks

The Federal Highway Administration's (FHWA) 1997 Federal Highway Cost Allocation Study reported that trucks were responsible for 40 percent of FHWA program costs, while accounting for less than 10 percent of total vehicle miles traveled (VMT). Studies show that only the very lightest combination trucks pay their share of federal highway cost responsibility. The most common combination vehicles, those registered at weights between 75,000 and 80,000 lb, now pay only 80 percent of their share of federal highway costs and combinations registered between 80,000 and 100,000 lb pay only half their share of federal highway costs. In a 2002 Texas highway allocation study conducted by the Center for Transportation Research (*29*), it was determined that five-axle combination trucks generate 16.4 percent of revenues but generate 29.7 percent of highway maintenance costs. Requiring a higher percentage of cost recovery from the larger trucks will have the practical effect of inserting the true cost to the public into the mode selection process of shippers. Based on the inherent advantages of marine transportation, this will most likely result in more waterborne shipments.

Air Quality Credits

Many industrial concerns today are able to "bank" credits for reduced air pollution and sell these credits on the open market to firms who need them to build new plants or expand existing facilities. Air quality concerns in the United States have typically focused on Nitrogen Oxides (NOx) and particulate matter in nonattainment areas. This has the practical effect of discouraging investment in marine equipment to improve air quality since credit is typically only given for reductions that occur within a nonattainment area. Europe has focused on CO_2 as the main pollutant of concern. Instituting such an approach in the United States (or at least in Texas), would allow all modes and types of equipment to compete on an equal footing for funding or emission credits and would reduce the overall environmental burden caused by freight movements.

California

California has a program called the Carl Moyer Memorial Air Quality Standards Attainment Program (*30*). This program is interesting because it places a value on certain emissions. According to the California Air Resources Board, the incentives offered under this program are grants that cover the incremental cost of cleaner on-road (>14,000 lb. Gross Vehicle Weight Rating), off-road, marine, locomotive, stationary agricultural pump engines, forklifts, and airport ground support equipment.

Participating local air district offices throughout the state make these grants available. The grants help offset the cost of retrofits and are also available for offsetting the purchase of a new vehicle. The new technology must generate a 15 percent reduction in emissions in order to be eligible for the grant. Private companies or public agencies that operate heavy-duty diesel vehicles can apply for the grants.

The program has a cost-effectiveness criterion—an allowable cost per ton of pollutant reduced. According to the program's status report, this cost-effectiveness level is based on the Moyer Program funds and available motor vehicle registration funds. In the first three years of the program, the cost-effectiveness limits were $12,000, $12,000, and $13,000 per ton of NO_x reduced, respectively. During the same time period, the cost-effectiveness averaged $5,000, $5,000, and $4,000 per ton of NO_x reduced, respectively (*31*).

VESSEL TRAFFIC SERVICES

The Coast Guard has established a Vessel Traffic Service in the Houston-Galveston and Port Arthur areas. Installing such a service at all of the deepwater ports in Texas would help GIWW operators by better managing potential conflicts between ship channel traffic and GIWW traffic in each port area. This will become increasingly important as foreign trade volumes continue to grow.

Additionally, the U.S. Coast Guard has established a safety zone around all liquefied natural gas (LNG) carriers in which no other vessel is allowed to penetrate. As LNG shipments begin in the State of Texas, this will further complicate freight movements along the GIWW. Freeport LNG, located on Quintana Island near Freeport, Texas, received its first commercial delivery in April 2008. The Golden Pass LNG Project, near Port Arthur, Texas, is expected to be operational in 2009. The Federal Energy Regulatory Commission has also approved permits for the Ingleside Energy Project, the Cheniere LNG Project, and the Vista del Sol Project in Corpus Christi; the Sempra Project in Port Arthur; and the Calhoun LNG Project in Port Lavaca, Texas.

CONTAINER FEE OR FREIGHT FEE

As a means of funding its efforts to promote waterborne commerce, the state could institute a container fee or freight fee and reserve a certain percentage of revenue to water transportation. The LA/LB area has implemented this approach and is under consideration in the State of Washington. This is probably the most controversial of the potential measures, given that some may argue that the additional fees will dampen commerce to the point where improved infrastructure will not be needed (at least not to the same degree). It is too early to tell how this will play out in LA/LB, and it has not been analyzed for Texas.

CONSERVATION EASEMENTS

The researchers identified conservation easements as a potential tool to control waterfront development. They recommend further research into the feasibility of TxDOT using this tool to protect marine "right-of-way."

FEEDBACK FROM INDUSTRY STAKEHOLDER GROUP

Industry supports the conclusion that the removal of the three physical obstacles mentioned above is very important to the efficiency and safety of GIWW operations. They agree that these three areas are appropriate areas for TxDOT's active involvement.

Industry—port authorities in particular—indicates that a more active role by the State of Texas in identifying target industries and marketing the GIWW would be of great value. Specifically, the identification of nascent industries (such as biodiesel) that do not already have established supply chains would help in attracting more freight to the waterways. Stakeholders also pointed out that the ability to define and identify the supply chain for certain industries would allow port authorities and others to focus on opportunities to improve the overall performance of logistics operations. Additionally, a more active role by the Office of the Governor, Economic Development and Tourism in marketing port facilities would aid greatly as well. There was a certain degree of alarm expressed at the extent to which recreational activity is overwhelming commercial activity along certain stretches of the GIWW.

Industry agrees that it is very important to have a constructive relationship with environmental groups. Industry stakeholders expressed concern that asking environmentalists to support waterborne freight movement may simply encourage environmental activists to "raise the bar" to a higher level. In other words, it may never be possible to satisfy the activists that industry is being responsible. There was not strong support for the State of Texas to pursue this approach. Most importantly, the stakeholders were clear that water transportation providers should be forthright about what they can and cannot do to aid environmental causes and not overpromise.

Industry stakeholders want to avoid the perception of being against trucks or rail and therefore would not actively support measures to penalize the use of trucks or rail for freight movements. Industry *would* be interested in being able to take greater advantage of air quality improvement incentives if those incentives are set up in a way that does not favor the trucking industry. Current incentives are such that they encourage industry to upgrade equipment that primarily remains within a nonattainment area, but not the entire fleet, since incentives are based on actual reductions in emissions adjusted by the percentage of operations that occur in a nonattainment area. Industry also indicated that it might help the towing industry to have a program similar to EPA's SmartWay Transportation Partnership that focuses on fuel efficiency improvements and greenhouse gas emissions reductions.[17] While it would not provide financial assistance, it would enable proactive carriers to better market their services to corporations who require reduced environmental impacts from their providers.

Port authorities have also commented on the value of creating corridors between docking facilities and distribution facilities that would allow overweight and/or overdimensional cargoes to move without penalty. This would have the effect of encouraging heavier loads to move by water to a port facility and then to a distribution facility where the cargo could be divided into smaller loads as needed, as opposed to attempting to move these loads over the roads or railroads. This concept is already in place at the Port of Brownsville.

[17] Information on this program is available at http://www.epa.gov/smartway/.

CHAPTER 6: WHAT PORTS ARE DOING

BACKGROUND

Several Texas ports have undertaken specific measures to attract more domestic freight shipments, whether coastwise or via the GIWW. The following are six examples of ports that are either working with start-up operators or instituting programs to attract them. Other ports are engaged in similar activities; these ports are included strictly for purposes of specific illustrations.

Beaumont

Port of Beaumont staff worked with the City of Beaumont Director of Public Works and his staff to create a special corridor for fully loaded containers between a neighboring industrial plant, ExxonMobil, and the port facilities. These fully loaded containers are typically too heavy for most street and highway weight limits. The corridor allows carriers to transport these containers on a specified route directly from the plant to the port. This way the manufacturer can source-load the containers at its plant and dray them fully loaded to the port for transport by barge to a container load center or intermodal rail facility. Additionally, the port worked out incentive handling arrangements with a terminal stevedore to help make the business attractive.

Brownsville

The Port of Brownsville has taken an active role in assisting SeaBridge Freight in its attempts to set up a container service between Brownsville and Tampa, Florida. Both parties have shared their long-term strategic thinking and have found how the two can work together. The port has hosted several work/promotion sessions with the local freight community to explore the possibilities. SeaBridge finds the Port's long-term development plans to be a good fit with its objectives.

Corpus Christi

In 2010, Naval Station Ingleside will revert to the Port of Corpus Christi. The Port has engaged a master planner to help define the best use for these properties and to find an investor or investors who would commit the resources to redevelopment that would recapture the jobs lost due to the base closure. In its planning for the site, the port has targeted an area for the development of "short sea shipping" operators, and has met with several potential operators interested in using the site.

Freeport

Port Freeport has been working with a start-up venture known as National Shipping of America (NSA) for some time. The Port has not been willing to discuss its dealings with NSA, but NSA executives have pointed out several items that merit mention here.[18]

[18] Telephone interview with Torey Presti, President, National Shipping of America, April 18, 2008.

NSA states that it likes Freeport for several reasons. It is closer to the gulf, which means less steaming time and fewer weather issues. Freeport has a lot of land and minimal gate issues. As in the case of SeaBridge/Brownsville, NSA believes that Freeport's long-term plans will benefit its operation. The development of the Velasco Terminal is very important to NSA, but probably the most important issue will be the acquisition of a second gantry crane. NSA absolutely must have two cranes; a 12-14 hour turnaround time is mandatory. To date the Port has not made any specific promises or concessions.

Houston

Richardson Stevedoring is already moving steel and pipe from Houston to Cedar Crossing. This initiative, the company claims, is already taking 20,000 trucks off the road per year. It is an internal mode shift since Richardson employed the trucks and now hires the barges. Additionally, Richardson has announced the creation of a new service between Houston and Brownsville to be operated by Richardson Marine LP. This service targets maquiladora cargo northbound and items such as synthetic resin southbound for Monterrey industry. This company has indicated that marketing is probably one of the most helpful things the state could do to enhance the viability of this service. Because the service will be open to any shipper, letting potential shippers know that the service a) exists and b) studies such as those sponsored by TxDOT have shown that the service is potentially viable under the right conditions could be highly useful. Additional research into origins and destinations for cargoes leaving the port of Houston would also be beneficial.

Victoria

Victoria has taken three concrete steps in its attempt to promote more domestic waterborne shipments.

In 2005, the Port of Victoria signed a Memorandum of Understanding with the Port of Houston Authority in which the two entities pledged to work together to develop container-on-barge service between the two locations.

In 2004, the Port of Victoria signed a Memorandum of Understanding with the Port of Galveston. In this case, the cooperation between the two ports involved the development of agricultural storage facilities at the Port of Victoria and the export of agricultural products through the new Galveston Bulk Terminal at Pier 35 at the Port of Galveston. The intent is to reduce transportation costs for Texas farmers in delivering their goods to market. The Port of Victoria and the Farmer's Co-op of El Campo signed an agreement to build and manage an export facility on the port rail line near the barge loading dock. As part of the first phase, the Co-op constructed two 200,000 bushel bins with a capacity to load at 50,000 bushels per hour on a five-acre site. The cost of the entire facility was in the neighborhood of $2 million.

The Port of Victoria was also authorized by the state legislature in 2003 to establish an overweight/oversize vehicle corridor using FM 1432. The Port has not implemented this corridor due to lack of demand at the present time.

CHAPTER 7: CURRENT PRIVATE SECTOR INITIATIVES

The concept of moving truckloads to water gained momentum around the country in 2007 and 2008, partially in response to soaring fuel costs. In some cases the U.S. Maritime Administration (MARAD) has actively supported and promoted certain initiatives as part of its own marine highways initiative. There are several initiatives currently underway in Texas. In some cases new infrastructure is being provided that will be conducive to short sea shipping; in other cases shippers are using existing infrastructure to create a new service in order to handle containerized goods previously moved by truck. The following sections provide brief descriptions of recent or planned initiatives in Texas, as well as an example of an innovative initiative from Virginia.

CEDAR PORT

A case in which new infrastructure has been provided is the Cedar Crossing barge dock near Houston, Texas. In 2008, the Cedar Port public dock was opened by Chambers County Improvement District No. 1 (CCID 1) with the goal of attracting shippers of containerized and bulk goods to move between the Port of Houston complex and industrial facilities in Chambers County. The Cedar Crossing Industrial Park currently hosts several major distributors of consumer goods including Home Depot, Wal-Mart, and General Electric. In total there are over five million square feet of distribution facilities in the Cedar Crossing Industrial Park.

According to Joseph Urey of Greens Port at Cedar Crossing, the Cedar Crossing barge terminal was developed specifically to serve containers. The parties that had the most prominent role in bringing the project to fruition were County Commissioner Bill Wallace, Osprey Line, and Excel Plastics. The first client to show a sustained interest in using the barge dock for this purpose was Excel, which manufactures and containerizes its product locally and was interested in lowering transportation costs by switching to barges for transferring the containers to the Barbours Cut Container Terminal for export. This modal shift would have also allowed Excel to stuff its containers to a greater maximum weight limit. For this reason, an overweight corridor was designated in Chambers County leading to the dock. The cost to complete this infrastructure project was approximately $4 million. The funding was approved in 2007 by CCID 1. This entity functions as a municipal utility district with taxing authority. According to Mr. Urey, with its present assets the container terminal at Cedar Crossing could process up to 300 containers per day. Furthermore, the dock is a public facility and any stevedore can utilize it.[19]

BROWNSVILLE-HOUSTON BARGE EXPRESS

One prominent Texas initiative that will not require any change to the existing infrastructure is the Brownsville-Houston barge shuttle that Richardson Stevedoring and Schaefer Stevedoring, in coordination with the Port of Brownsville, are developing. This service will depart every 14 days from Houston carrying a mix of cargo including containerized cargoes to the Port of Brownsville. It will then return to Houston with steel and other non-containerized cargoes. The stakeholders in this initiative are committed to seeing that the service runs on a fixed schedule

[19] Telephone interview, August 14, 2008.

regardless of cargo availability. This service will be open to any shipper and could handle containerized or non-containerized loads on both the northbound and southbound legs. As a brown water service, this initiative would utilize the GIWW and should be particularly competitive for overweight containers that must be subdivided in order to move over the roadway. The service would compete most directly with trucking as there is currently no rail service between these two origin and destination points that would compete with the barge. Furthermore, there seems to be little interest on the part of the railroads in adopting short-haul intermodal services in the immediate future. It appears, therefore, that under the right conditions the Brownsville-Houston link could take trucks off of Highway 77, Highway 59, and the roadway network in and around Houston.

This service was originally scheduled to begin in August of 2008; however, it was temporarily postponed due to the impact of Hurricane Dolly, which hit the Port of Brownsville in July of 2008, and Hurricane Ike which came ashore in the Houston-Galveston area in September of 2008. The maiden voyage for the Brownsville-Houston Barge Express is currently slated for early September. The cargo for the initial voyage has already been booked.

NATIONAL SHIPPING OF AMERICA

National Shipping of America is a Jones Act carrier that is currently planning a domestic Container Service to link Port Freeport, Texas, to the Port of Chester, Pennsylvania (near Philadelphia). NSA would be an open ocean service that would be particularly well suited to overweight and hazardous material carriers. The service would principally handle containerized cargo, but could also handle a limited amount of bulk cargo. The service would rely on a single self-propelled containership that would complete the rotation between the Port of Chester, Pennsylvania, and Port Freeport every 14 days. NSA plans to offer door-to-door service that would include arranging local truck service at both ports. At the time of this report's publication, NSA did not have a firm date for the initiation of service. The current constraints for beginning service are continued maintenance on the vessel and the need for an additional mobile harbor crane at Port Freeport.

SEABRIDGE FREIGHT

SeaBridge Freight is a blue water carrier that plans to establish container barge service linking the Port of Brownsville to Port Manatee in Florida. This service would initially transport a 600 TEU oceangoing barge with a 4200 horsepower tug providing service every 10 days. Unlike the previously mentioned Brownsville-Houston Barge Express, this service would not utilize the GIWW. SeaBridge Freight would lease equipment from a third party and would not own the barge or the tug. The service is designed to take advantage of the overweight truck corridor leading from Brownsville to Mexico. For several years the Port of Brownsville has been capable of handling a small container service. Similarly, Port Manatee is a rapidly developing port near Tampa Bay that offers a 40-ft channel depth, one million square feet of warehousing capability, access to the CSX railroad, and cold storage capability. The port acquired a mobile harbor crane in 2008, which means that its ability to handle containerized cargo is equivalent to that of the Port of Brownsville. CSX is currently constructing a 1200-acre logistics center that will aid the port in processing containers.

SeaBridge is developing its master plan in three phases. In the first phase, the carrier will provide a single service every 10 days. In the second phase, they will increase the frequency to once every five days, and in the third phase, SeaBridge will substitute a faster service that will cut transit time to 2.5 days. At this point, the service would be competitive on a time basis with a single operator trucking service. SeaBridge will launch its service when it has managed to secure one full year of financing.[20]

CASE STUDY: PORT OF RICHMOND, VIRGINIA

One intriguing case that is currently under development is on the James River in Virginia. The plan is to move containerized cargo from the Port of Virginia to the Port of Richmond, an inland river port capable of handling containers. This initiative is notable in that the location of the destination is only 70 miles by water from the Port of Virginia at Hampton Roads. It is, however, 90 miles by road so the marine distance is more direct. The Richmond Metropolitan Planning Organization (Richmond MPO) is leading this initiative. At the Port of Virginia at Hampton Roads, three different terminals will participate in supplying containers to the Port of Richmond. The initial goal is to divert containerized cargoes bound for distribution within 30 miles of the Richmond area. Another longer-term opportunity is to develop a distribution center at the Richmond site since there are no bridge and tunnel restrictions around Richmond. The location at Richmond provides access to both the Norfolk Southern and the CSX rail yards.

One potential advantage that the Port of Richmond has for handling a feeder service such as the James River container barge is that the Port of Richmond already receives deep draft vessels from overseas, specifically from Europe and Iceland. This means that inbound containers from Europe to the Port of Virginia would not need to clear customs at the Port of Virginia. Rather, they could receive a Richmond bill of lading and be processed at the Port of Richmond. The exclusive service provider, which is a ship agent and broker named T. Parker Host, will initially move one barge shipment per week. The executive director of the Port of Richmond, David McNeel, believes that the service will be competitive with trucking because shippers will not have to move the containers through the port gates or the congested road network in and around the Port of Virginia but could clear their containers directly at Richmond and supply local distribution centers. Unlike some other container-on-barge initiatives, this service would not initially target overweight containers, but would be available to any shipper who would otherwise ship the container over the road. Loaded barges could also leave the Port of Virginia en route to Richmond after the Port has shut down its gates for truckers for the day. Therefore, despite the fact that the transit time for the barge is 7 to 8 hours and the drive time from the port of Virginia is only 2 hours, there may be opportunities to save delivery time by using the barge if the gates have already closed for the day. Mr. McNeel, who recently joined the Port of Richmond, is a former terminal manager at Houston's Barbours Cut Container Terminal and has compared this initiative to the Osprey operation that was in existence during his tenure at Houston.[21]

[20] Telephone interview with Port Manatee Port Director, June 28, 2008.
[21] Telephone interview with David McNeel, August 19, 2008.

The initiative is competitive in part because it has received a substantial grant in Congestion Mitigation and Air Quality (CMAQ) funding from the federal government. In Virginia, the Richmond regional MPO was able to receive CMAQ funding directly. In order to determine that this container-on-barge project met the criteria for the grant, the MPO had a competitive project selection process. As a freight project, the container-on-barge initiative competed against other projects that were freight oriented. At present the project will receive approximately one-third of the cost from CMAQ ($2.3 million) over the course of the next three years. The Richmond MPO hopes that this project will help the Richmond area avoid being placed in non-attainment status for air quality. Without the project, the MPO estimates that the Richmond area may fall into non-attainment by 2010. As part of the agreement, the tug will need to run on low sulfur diesel.

The first shipment is planned for October of 2008. Funding from the CMAQ grant in the first year will be $800,000–$900,000. The Virginia Port Authority will be a partner in the project and will act as a fiduciary agent.

The project is notable for the speed at which it went from inception to delivery. The project received funding only six months after it was first proposed. The MPO approved the funds in the spring of 2008, and the Commonwealth was approved the project in July 2008.

The volume of cargo expected to move in the initial period (3-5 years) is 1600 containers per week. This number excludes bulk shipments such as steel or timber which may be able to piggyback onto the service. It also does not include a second inter-terminal container barge service that is now under consideration and may widen the market share of barge service at the Port of Virginia. This new initiative resulted from a truck ban placed by the City of Norfolk that has greatly increased the cost of drayage moving between the Portsmouth Marine Terminal and Norfolk International Terminal. The truck ban ordinance, which can be accessed at the following link, http://www.norfolk.gov/truck_ordinance/default.asp, bans four-axle vehicles on the principal road corridor used to ship containers between terminals (Hampton Boulevard) between 4PM and 6AM. Trucks may still access the terminal by using a circuitous route that is far more costly. For this reason, an inter-terminal barge is a more effective means to deliver containers between terminals in the times when road access is restricted. Therefore, it is an example that not only by positive incentives can drive mode shift to barge, but restrictions on alternative modes can as well.

CHAPTER 8: POLICY CONSIDERATIONS

Currently, TxDOT is the non-federal sponsor for the GIWW. This means TxDOT must provide adequate dredged material disposal sites and pay the non-federal share for any projects requiring such a share. However, TxDOT has no direct funding or oversight responsibilities for the state's ports and waterways. The role that TxDOT plays in furthering waterborne commerce and activities is in providing and maintaining adequate intermodal connections. This is a critical responsibility due to the increasingly interconnected nature of the state's transportation system. The Texas ports and waterways system requires seamless connections with the highway and railroad systems in order to maximize the efficient intermodal transfer of goods.

The state could choose to explicitly promote the use of modal alternatives to highways and rail, especially for freight transport. However, the state must obviously give consideration to the issue of market distortions. These distortions can take place in the areas of taxation, legal requirements, infrastructure investments, and subsidies. Equal standards for environment, safety, and social concerns should be enacted and consistently enforced across the modes. There must be a compelling public interest to justify any measure which would encourage one mode or discourage another. That said, one could make the argument that putting a priority on rail and waterway development would rebalance the historical emphasis on road infrastructure investment.

The State of Mississippi has identified several policies and action steps that it proposes to encourage the development of increased waterborne freight activity. These might be instructive for policy makers in Texas.

- Promote the preservation and enhancement of port operational capacity.
- Promote highway and rail access to port facilities and coordinate marine interests with other modes.
- Evaluate critical commercial navigation areas and recommend to the proper officials recreational restrictions to promote safety.
- Encourage the use of energy-efficient modes including public transportation, rail, and water transport.
- Establish mechanisms for identifying waterfront land that may be needed for port or marine transport use and take appropriate steps to preserve the availability of land for such use.
- Assist in grant acquisition for port improvement and maintenance programs.
- Support state and local efforts with respect to the national dredging policy.
- Support clarification of the roles and policies of state and federal agencies involved in the process and the responsibilities of various permitting agencies.
- Support "wetlands mitigation banking" which would consist of land acquired in advance of the need for wetlands mitigation, and held for use as needed.
- Identify present relative levels of state and federal support for each of the various modes of freight transportation, including taxation, regulation, capital investment, and operating subsidy.
- Assist ports in obtaining Free Trade Zone (FTZ) status and development of same.

- Ensure [MDOT] staffing focus/expertise in the economics, management, and viability of the state's major freight modes, including trucking, rail, air, and ports and waterways.
- Consider access to ports, airports, and industrial park facilities as a weighted evaluation factor in highway project programming.
- Support ports in negotiating with railroads for improvement of service, upgrading, and rehabilitation of facilities.

CHAPTER 9: CONCLUSIONS AND NEXT STEPS

TYPES OF MEASURES

Measures that state agencies can be classified as short-term or long-term. Other measures are items which only the legislature can address. A short-term measure to address waterborne freight project development will encompass the following three elements:

- The measure will not require substantial changes in channel depth, port capital asset, or regulatory changes.
- The measure will present positive benefit-cost ratios when congestion mitigation, safety, and air quality considerations are taken into account.
- The measure will include the active involvement of participating port authorities.

Longer-term measures would have the following two elements:

- The measure will remove impediments to increased usage of marine highways for freight traffic.
- The measure will encourage greater utilization of marine transportation.

The following sections list several *short-term* measures that state agencies can take to address the needs of waterborne freight in Texas.

PREVENT ENCROACHMENT ON THE GIWW

The state should take an active role in controlling any waterfront development along the GIWW that would encroach on the navigable waterway or encourage more recreational activity in the waterway itself. As a rule, the general public does not understand the maneuverability constraints inherent in barge operations. Encouraging unnecessary interaction between recreational users and commercial users simply increases the likelihood of a serious incident. Restricting the "right-of-way" in which barges can maneuver also decreases the effective capacity of the waterway and increases transit times. As local sponsor for the GIWW, TxDOT must actively discourage any development that would decrease capacity or increase operating costs unnecessarily.

MARKETING BY THE STATE

Provision of Data

The state can assist ports and potential operators with localized and statewide market studies to identify and pursue emerging markets. The state should fund research which will identify the origin and final destination of cargo that originates in Texas or is imported into the state. It should also analyze traffic flows between the state's ports and the Mexican border. TxDOT,

possibly in cooperation with other state agencies and local and regional economic development agencies, should work to identify niche markets and promote the use of public port facilities.

Promotion

The state should actively participate in promoting awareness of Texas marine ports and terminals and the potential benefits of marine transportation. The goals of a statewide marketing campaign might include:

- gaining public awareness of the port facilities,
- promoting the benefits of waterborne transportation and the positive economic impacts of the maritime sector,
- assisting with business negotiations and providing incentives to encourage prospective industrial tenants to use the Texas public port facilities, and
- provide funding for localized niche market analysis and port development studies needed to help struggling smaller ports identify and move into new markets.

Additionally, a statewide marketing promotion effort could identify public policy options for maritime development, build stakeholder coalitions with other states (especially states along the GIWW), and promote national waterways agendas.

DESIGNATING OVERWEIGHT FREIGHT CORRIDORS

Overweight corridors allow heavy loads to move by water and then between the water and a storage or staging area without having to incur the cost of transloading the cargo. Other states have established such corridors with great success, most notably California and Washington. Several Texas ports have stated that such corridors in their area would greatly enhance efficiencies and their competitive position. Legislation that was passed by the Texas legislature in 1997 (SB 1631) paved the way for the designation of specific overweight corridors. This legislation authorized several key activities for TxDOT, as follows:

- The department may contract with a third party to act as the department's agent in the processing of a permit application and the distribution of a permit issued by the department under this section.
- An agreement entered into under this section may provide for a third party to act as the agent of the state in processing a permit application and the distribution of a permit issued by the state under this section.
- The Texas Transportation Commission may adopt rules for the payment of a fee.

The legislature has specifically authorized three overweight corridors, two of which were actually implemented. The two that were implemented are Brownsville (SB 1271, 1997) and Chambers County (HB 1044, 2005). A corridor was also authorized for the Port of Victoria in 2003 (SB 20), but has not been implemented. Other ports could take advantage of such a corridor along specific routes.

Marine carriers can handle containers and general cargoes that greatly exceed the limits for Texas highways. TxDOT should work with Texas port authorities to identify potential overweight corridors that would enable shippers to take advantage of the load capacities that

water offers without damaging the state's highways. Planners for such corridors should take into account the concentration of freight movements in the area and the landside transportation patterns for freight.

AIR QUALITY CREDITS

Many industrial concerns today are able to "bank" credits for reduced air pollution and sell these credits on the open market to firms who need them to build new plants or expand existing facilities. Air quality concerns in the United States have typically focused on NOx and particulate matter in non-attainment areas. This has the practical effect of discouraging investment in marine equipment to improve air quality since credit is typically only given for reductions that occur within a non-attainment area. Europe has focused on CO_2 as the main pollutant of concern. Instituting such an approach in the United States (or at least in Texas), would allow all modes and types of equipment to compete on an equal footing for funding or emission credits and would reduce the overall environmental burden caused by freight movements.

GREATER COST RECOVERY FROM LARGE TRUCKS

The Federal Highway Administration's *1997 Federal Highway Cost Allocation Study* reported that trucks were responsible for 40 percent of FHWA program costs, while accounting for less than 10 percent of total vehicle miles traveled. Studies show that only the very lightest combination trucks pay their share of federal highway cost responsibility. The most common combination vehicles, those registered at weights between 75,000 and 80,000 lb, now pay only 80 percent of their share of federal highway costs and combinations registered between 80,000 and 100,000 lb pay only half their share of federal highway costs. In a 2003 Texas highway allocation study conducted by the Center for Transportation Research (*29*), researchers determined that five-axle combination trucks generate 16.4 percent of revenues but generate 29.7 percent of highway maintenance costs. Requiring a higher percentage of cost recovery from the larger trucks will have the practical effect of inserting the true cost to the public into the mode selection process of shippers. Based on the advantages described in Chapter 2, this will most likely result in more waterborne shipments.

SUMMARY

Research shows that growth in water transportation has the potential to benefit Texas and that the state can take steps in the near term to improve the competitiveness of waterborne transportation in order to take unnecessary trucks off of the highway network. Furthermore, many of these actions should involve the active participation of the Texas Department of Transportation. Table 17 provides a summary of the measures discussed in this chapter and indicates which state and federal agencies should take lead or important secondary roles in implementing each measure.

Table 17. Potential Measures and Responsible Agencies.

	TxDOT	USACE	Ports	GLO	Office of Econ Dev	TCEQ
Short-Term Measures						
Prevent encroachment	s	P		s		
Market research	P				P	
Develop potential overweight corridors	P		s			
Higher cost recovery from large trucks	P					
Legislative						
All infrastructure funding issues	P		s			
Authorize proposed overweight corridors	P		s			
Air quality credits	s					P

P = Primary agency
s = Support agency

Agency Codes:

TxDOT = Texas Department of Transportation
USACE = U.S. Army Corps of Engineers
GLO = Texas General Land Office
Office of Econ Dev = Governor's Office of Economic Development
TCEQ = Texas Council on Environmental Quality

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APPENDIX A:
FEDERAL ISSUES

There are certain issues and programs that are federal in nature that industry believes should be brought to TxDOT's attention in order to ensure that TxDOT programs and policies are informed by these issues. In the industry feedback session that was held by the research team on February 8, 2007, several of these issues and programs were mentioned, as follows:

- It would be helpful to rescind the Harbor Maintenance Tax (HMT) on domestic shipments and apply it only to international shipments. Currently, any shipment that arrives at a U.S. port from overseas and then moves to another U.S. port must pay the HMT twice. While this is not typically a deal breaker for short sea shipping operators, it is an obstacle to be overcome. Furthermore, the tax is assessed to the shippers. The carrier must be able to process the paperwork for each individual shipper serviced by its vessel. Some participants noted that the Harbor Maintenance Tax was not typically enforced and so its role is sometimes overstated. Another opinion was that the mere presence of the HMT on paper is a substantial disincentive to shippers who may otherwise be attracted to water transportation due to the fact that it adds uncertainty (i.e., there may be future enforcement actions).

  There are several pieces of legislation pending in Congress that deal with this issue of the Harbor Maintenance Tax. None of them has made it beyond committee referrals at this point.

  - **HR 981/S 1683 Great Lakes Short Sea Shipping Enhancement Act of 2007** – To amend the Internal Revenue Code of 1986 to exempt from the harbor maintenance tax certain commercial cargo loaded or unloaded at United States ports in the Great Lakes Saint Lawrence Seaway System. This was referred to committee in February 2007 and has not seen any activity since then. S 1683 is identical to HR 981. It was referred to committee in June 2007 and has not seen any activity since that time.

  - **S 2345 American Infrastructure Investment and Improvement Act of 2007** – This Act contains the same basic provisions as HR 981 and S 1683. It was placed on the Senate Legislative Calendar in November 2007, but has not seen any activity since that time.

  - **HR 1499/S 3199 Short Sea Shipping Promotion Act of 2007** – To amend the Internal Revenue Code of 1986 to exempt from the Harbor Maintenance Tax certain commercial cargo loaded or unloaded at United States ports. (This covers all domestic trade plus trade with Canada via the Great Lakes.) This was referred to committee in March 2007 and has not seen any activity since

that time. A companion bill to HR 1499 has been introduced in the Senate—S 3199. This bill has been referred to the Senate Finance Committee.

- **HR 1701 Blue Water Highway Act of 2007** – To amend the Internal Revenue Code of 1986 to provide an exemption from the harbor maintenance tax for certain shipping between United States mainland ports. (This would cover only domestic shipments.) This was referred to committee in March 2007 and has not seen any activity since.

- The Coast Guard has established a Vessel Traffic Service in the Houston-Galveston area. Installing such a service at all of the deepwater ports in Texas would help GIWW operators by better managing potential conflicts between ship channel traffic and GIWW traffic in each port area. This will become increasingly important as foreign trade volumes continue to grow. Additionally, the Coast Guard has established a safety zone around LNG carriers in which no other vessel is allowed to penetrate. As LNG shipments begin in the State of Texas, this will further complicate freight movements along the GIWW.

- The recently enacted Energy Independence and Security Act of 2007 contains language designed to encourage the development of Short Sea Shipping. Industry representatives have expressed a concern that if the act allows new operators to take advantage of programs like the Capital Construction Fund, this would be unfair to current operators that have had to conduct business without any such aid.

APPENDIX B:
INDIRECT MEASURES THAT MIGHT ENCOURAGE MORE WATERBORNE FREIGHT TRANSPORTATION

Table B-1. Possible Indirect Measures to Encourage Waterborne Freight.

Action	Description	Sample Applications (known, potential)	Comments
VMT[1]-based registration fees	Base vehicle registration fees on VMT driven in previous year. e.g.: 25K VMT/year -- $700 20K VMT/year -- $400 15K VMT/year -- $200-300 etc. 6K VMT/year -- base fee	Could be applied statewide or by region, but would have most impact in urban areas with public transit, bike/ped facilities, or other alternative modes of travel.	Car insurance companies already use VMT per year as a measure; no special equipment needed to implement; fee collection could be part of annual safety inspection. Less effective in rural areas, where people have few choices other than to drive. Fee would have to be 10¢ per mile or more for major impact.
Encourage EPA to set/tighten emissions standards for trucks/sport utility vehicles (SUVs)	Encourage EPA to tighten the emissions standards for light trucks and SUVs to bring them more in line with standards for other passenger vehicles.		Standards would need to continue to be increased gradually during coming years.
Progressive registration fees for high emitters	Higher registration fees for high-emitting vehicle models.	Members of the European Parliament (MEPs) considering a proposal: vehicle's weight and amount of emissions should be taken into account when assessing new toll fees.	
Increase tolls during daytime traffic periods	Raise tolls during day and lower or eliminate them at night.	SR 91 and I-15, California	This measure may reduce some trips, combine others through ridesharing, and divert some to less costly evening periods.

[1] Vehicle Miles Traveled
According to the Intergovernmental Forum on Transportation Finance's "Financing Transportation in the 21st Century," p. 61, a VMT-based tax or fee is judged to be practical for widespread use only sometime after 2017.

Table B-1. Possible Indirect Measures to Encourage Waterborne Freight (Cont.)

Action	Description	Sample Applications (known, potential)	Comments
VMT fee/tax	Charge a fee or tax for VMT per year.	Could be applied statewide or by region, but would have most impact in urban areas with public transit, bike/ped facilities, or other alternative modes of travel.	Car insurance companies already use VMT per year as a measure; no special equipment needed to implement; fee collection could be part of annual safety inspection. Less effective in rural areas, where people have few choices other than to drive.
Require certification to operate in a nonattainment county	Extends inspection and maintenance (I/M) requirements to vehicles not registered in a non-attainment county. "Non-resident" vehicles must pass and hold certification for the area's I/M requirements in order to drive in that area.		Would require significant resources to track and enforce.
Limit access for high-emitting vehicles	Limit access to major urban arterials for high emitters (such as heavy trucks) during peak hours.		Would require enforcement.
Divert trucks out of nonattainment areas	Require through-traffic trucks to travel around rather than through non-attainment areas.		Would require enforcement.
Speed limits for heavy trucks	Enforce current speed limit laws for trucks; limit speeds at night, when trucks tend to run fast.		Would require enforcement.
Truck curfews	Establish curfews for heavy trucks in non-attainment areas to prohibit night-time high-speed travel.		Requires enforcement.

Additionally, as TxDOT and local agencies seek to better manage truck flows, other measures could be taken, such as:

- designated truck routes,
- truck management strategies,
- sign placement,
- dynamic signs,
- speed restrictions,
- additional lanes,
- lane restrictions,
- scheduling of shipping/receiving (delivery at night),

- peak period truck bans on freeways and major arterials,
- freight and delivery consolidation, and
- congestion pricing.

APPENDIX C:
LEGISLATION FOR PROGRAMS IN OTHER GULF STATES

FSTED Program

CHAPTER 311

FLORIDA SEAPORT TRANSPORTATION AND ECONOMIC DEVELOPMENT PROGRAM

311.07 Florida seaport transportation and economic development funding.--

(1) There is created the Florida Seaport Transportation and Economic Development Program within the Department of Transportation to finance port transportation or port facilities projects that will improve the movement and intermodal transportation of cargo or passengers in commerce and trade and that will support the interests, purposes, and requirements of ports located in this state.

(2) A minimum of $8 million per year shall be made available from the State Transportation Trust Fund to fund the Florida Seaport Transportation and Economic Development Program.

(3)(a) Program funds shall be used to fund approved projects on a 50-50 matching basis with any of the deepwater ports, as listed in s. 403.021(9)(b), which is governed by a public body or any other deepwater port which is governed by a public body and which complies with the water quality provisions of s. 403.061, the comprehensive master plan requirements of s. 163.3178(2)(k), and the local financial management and reporting provisions of part III of chapter 218. Program funds also may be used by the Seaport Transportation and Economic Development Council to develop with the Florida Trade Data Center such trade data information products which will assist Florida's seaports and international trade.

(b) Projects eligible for funding by grants under the program are limited to the following port facilities or port transportation projects:

1. Transportation facilities within the jurisdiction of the port.

2. The dredging or deepening of channels, turning basins, or harbors.

3. The construction or rehabilitation of wharves, docks, structures, jetties, piers, storage facilities, cruise terminals, automated people mover systems, or any facilities necessary or useful in connection with any of the foregoing.

4. The acquisition of vessel tracking systems, container cranes, or other mechanized equipment used in the movement of cargo or passengers in international commerce.

5. The acquisition of land to be used for port purposes.

6. The acquisition, improvement, enlargement, or extension of existing port facilities.

7. Environmental protection projects which are necessary because of requirements imposed by a state agency as a condition of a permit or other form of state approval; which are necessary for environmental mitigation required as a condition of a state, federal, or local environmental permit; which are necessary for the acquisition of spoil disposal sites and improvements to existing and future spoil sites; or which result from the funding of eligible projects listed in this paragraph.

8. Transportation facilities as defined in s. 334.03(31) which are not otherwise part of the Department of Transportation's adopted work program.

9. Seaport intermodal access projects identified in the 5-year Florida Seaport Mission Plan as provided in s. 311.09(3).

10. Construction or rehabilitation of port facilities as defined in s. 315.02, excluding any park or recreational facilities, in ports listed in s. 311.09(1) with operating revenues of $5 million or less, provided that such projects create economic development opportunities, capital improvements, and positive financial returns to such ports.

(c) To be eligible for consideration by the council pursuant to this section, a project must be consistent with the port comprehensive master plan which is incorporated as part of the approved local government comprehensive plan as required by s. 163.3178(2)(k) or other provisions of the Local Government Comprehensive Planning and Land Development Regulation Act, part II of chapter 163.

(4) A port eligible for matching funds under the program may receive a distribution of not more than $7 million during any 1 calendar year and a distribution of not more than $30 million during any 5-calendar-year period.

(5) Any port which receives funding under the program shall institute procedures to ensure that jobs created as a result of the state funding shall be subject to equal opportunity hiring practices in the manner provided in s. 110.112.

(6) The Department of Transportation shall subject any project that receives funds pursuant to this section and s. 320.20 to a final audit. The department may adopt rules and perform such other acts as are necessary or convenient to ensure that the final audits are conducted and that any deficiency or questioned costs noted by the audit are resolved.

311.09 Florida Seaport Transportation and Economic Development Council.--

(1) The Florida Seaport Transportation and Economic Development Council is created within the Department of Transportation. The council consists of the following 17 members: the port director, or the port director's designee, of each of the ports of Jacksonville, Port Canaveral, Fort Pierce, Palm Beach, Port Everglades, Miami, Port Manatee, St. Petersburg, Tampa, Port St. Joe, Panama City, Pensacola, Key West, and Fernandina; the secretary of the Department of Transportation or his or her designee; the director of the Office of Tourism, Trade, and Economic Development or his or her designee; and the secretary of the Department of Community Affairs or his or her designee.

(2) The council shall adopt bylaws governing the manner in which the business of the council will be conducted. The bylaws shall specify the procedure by which the chairperson of the council is elected.

(3) The council shall prepare a 5-year Florida Seaport Mission Plan defining the goals and objectives of the council concerning the development of port facilities and an intermodal transportation system consistent with the goals of the Florida Transportation Plan developed pursuant to s. 339.155. The Florida Seaport Mission Plan shall include specific recommendations for the construction of transportation facilities connecting any port to another transportation mode and for the efficient, cost-effective development of transportation facilities or port facilities for the purpose of enhancing international trade, promoting cargo flow, increasing cruise passenger movements, increasing port revenues, and providing economic benefits to the state. The council shall update the 5-year Florida Seaport Mission Plan annually and shall submit the plan no later than February 1 of each year to the President of the Senate; the Speaker of the House of Representatives; the Office of Tourism, Trade, and Economic Development; the Department of Transportation; and the Department of Community Affairs. The council shall develop programs, based on an examination of existing programs in Florida and other states, for the training of minorities and secondary school students in job skills associated with employment opportunities in the maritime industry, and report on progress and recommendations for further action to the President of the Senate and the Speaker of the House of Representatives annually.

(4) The council shall adopt rules for evaluating projects which may be funded under ss. 311.07 and 320.20. The rules shall provide criteria for evaluating the economic benefit of the project, measured by the potential for the proposed project to maintain or increase cargo flow, cruise passenger movement, international commerce, port revenues, and the number of jobs for the port's local community.

(5) The council shall review and approve or disapprove each project eligible to be funded pursuant to the Florida Seaport Transportation and Economic Development Program. The council shall annually submit to the Secretary of Transportation; the director of the Office of Tourism, Trade, and Economic Development; and the Secretary of Community Affairs a list of projects which have been approved by the council. The list shall specify the recommended funding level for each project; and, if staged

implementation of the project is appropriate, the funding requirements for each stage shall be specified.

(6) The Department of Community Affairs shall review the list of projects approved by the council to determine consistency with approved local government comprehensive plans of the units of local government in which the port is located and consistency with the port master plan. The Department of Community Affairs shall identify and notify the council of those projects which are not consistent, to the maximum extent feasible, with such comprehensive plans and port master plans.

(7) The Department of Transportation shall review the list of projects approved by the council for consistency with the Florida Transportation Plan and the department's adopted work program. In evaluating the consistency of a project, the department shall determine whether the transportation impact of the proposed project is adequately handled by existing state-owned transportation facilities or by the construction of additional state-owned transportation facilities as identified in the Florida Transportation Plan and the department's adopted work program. In reviewing for consistency a transportation facility project as defined in s. 334.03(31) which is not otherwise part of the department's work program, the department shall evaluate whether the project is needed to provide for projected movement of cargo or passengers from the port to a state transportation facility or local road. If the project is needed to provide for projected movement of cargo or passengers, the project shall be approved for consistency as a consideration to facilitate the economic development and growth of the state in a timely manner. The Department of Transportation shall identify those projects which are inconsistent with the Florida Transportation Plan and the adopted work program and shall notify the council of projects found to be inconsistent.

(8) The Office of Tourism, Trade, and Economic Development, in consultation with Enterprise Florida, Inc., shall review the list of projects approved by the council to evaluate the economic benefit of the project and to determine whether the project is consistent with the Florida Seaport Mission Plan. The Office of Tourism, Trade, and Economic Development shall review the economic benefits of each project based upon the rules adopted pursuant to subsection (4). The Office of Tourism, Trade, and Economic Development shall identify those projects which it has determined do not offer an economic benefit to the state or are not consistent with the Florida Seaport Mission Plan and shall notify the council of its findings.

(9) The council shall review the findings of the Department of Community Affairs; the Office of Tourism, Trade, and Economic Development; and the Department of Transportation. Projects found to be inconsistent pursuant to subsections (6), (7), and (8) and projects which have been determined not to offer an economic benefit to the state pursuant to subsection (8) shall not be included in the list of projects to be funded.

(10) The Department of Transportation shall include in its annual legislative budget request a Florida Seaport Transportation and Economic Development grant program for expenditure of funds of not less than $8 million per year. Such budget shall include

funding for projects approved by the council which have been determined by each agency to be consistent and which have been determined by the Office of Tourism, Trade, and Economic Development to be economically beneficial. The council may submit to the department a list of approved projects that could be made production-ready within the next 2 years. The list shall be submitted as part of the needs and project list prepared pursuant to s. 339.135.

(11) The council shall meet at the call of its chairperson, at the request of a majority of its membership, or at such times as may be prescribed in its bylaws. However, the council must meet at least semiannually. A majority of voting members of the council constitutes a quorum for the purpose of transacting the business of the council. All members of the council are voting members. A vote of the majority of the voting members present is sufficient for any action of the council, except that a member representing the Department of Transportation, the Department of Community Affairs, or the Office of Tourism, Trade, and Economic Development may vote to overrule any action of the council approving a project pursuant to subsection (5). The bylaws of the council may require a greater vote for a particular action.

(12) Members of the council shall serve without compensation but are entitled to receive reimbursement for per diem and travel expenses as provided in s. 112.061. The council may elect to provide an administrative staff to provide services to the council on matters relating to the Florida Seaport Transportation and Economic Development Program and the council. The cost for such administrative services shall be paid by all ports that receive funding from the Florida Seaport Transportation and Economic Development Program, based upon a pro rata formula measured by each recipient's share of the funds as compared to the total funds disbursed to all recipients during the year. The share of costs for administrative services shall be paid in its total amount by the recipient port upon execution by the port and the Department of Transportation of a joint participation agreement for each council-approved project, and such payment is in addition to the matching funds required to be paid by the recipient port. Except as otherwise exempted by law, all moneys derived from the Florida Seaport Transportation and Economic Development Program shall be expended in accordance with the provisions of s. 287.057. Seaports subject to competitive negotiation requirements of a local governing body shall abide by the provisions of s. 287.055.

311.14 Seaport freight-mobility planning.--

(1) The Florida Seaport Transportation and Economic Development Council, in cooperation with the Office of the State Public Transportation Administrator within the Department of Transportation, shall develop freight-mobility and trade-corridor plans to assist in making freight-mobility investments that contribute to the economic growth of the state. Such plans should enhance the integration and connectivity of the transportation system across and between transportation modes throughout Florida for people and freight.

(2) The Office of the State Public Transportation Administrator shall act to integrate freight-mobility and trade-corridor plans into the Florida Transportation Plan developed pursuant to s. 339.155 and into the plans and programs of metropolitan planning organizations as provided in s. 339.175. The office may also provide assistance in expediting the transportation permitting process relating to the construction of seaport freight-mobility projects located outside the physical borders of seaports. The Department of Transportation may contract, as provided in s. 334.044, with any port listed in s. 311.09(1) or any such other statutorily authorized seaport entity to act as an agent in the construction of seaport freight-mobility projects.

311.22 Additional authorization for funding certain dredging projects.--

(1) The Florida Seaport Transportation and Economic Development Council shall establish a program to fund dredging projects in counties having a population of fewer than 300,000 according to the last official census. Funds made available under this program may be used to fund approved projects for the dredging or deepening of channels, turning basins, or harbors on a 25-percent local matching basis with any port authority, as such term is defined in s. 315.02(2), which complies with the permitting requirements in part IV of chapter 373 and the local financial management and reporting provisions of part III of chapter 218.

(2) The council shall adopt rules for evaluating the projects that may be funded pursuant to this section. The rules must provide criteria for evaluating the economic benefit of the project. The rules must include the creation of an administrative review process by the council which is similar to the process described in s. 311.09(5)-(12), and provide for a review by the Department of Community Affairs, the Department of Transportation, and the Office of Tourism, Trade, and Economic Development of all projects submitted for funding under this section.

(3) For the 2006-2007 fiscal year only and notwithstanding the matching basis specified in subsection (1), funding for projects in subsection (1) shall require a minimum 25 percent match of funds received pursuant to this section. This subsection expires July 1, 2007.

Florida Strategic Intermodal System

339.61 Florida Strategic Intermodal System; legislative findings, declaration, and intent.--

(1) There is hereby created the Florida Strategic Intermodal System. For purposes of funding projects under the system, the department shall allocate from the State Transportation Trust Fund in its program and resource plan a minimum of $60 million each year, beginning in the 2004-2005 fiscal year. This allocation of funds is in addition to any funding provided to this system by any other provision of law.

(2) The Legislature finds that increasing demands are continuing to be placed on the state's transportation system by a fast-growing economy, continued population growth, and projected increases in freight movement, international trade, and tourism. The Legislature also finds that the state's growing regional and intercity economic centers will increase the demand for interregional and intercity travel and that the evolving service-based and information-based industries will change the type of transportation system that business and industry demand, increasing the importance of speed and reliability. The Legislature further finds that our transportation system must be designed and operated in such a way that it preserves the abundance of natural and manmade amenities that have been so successful in attracting new residents, businesses, and tourists to this state. Therefore, the Legislature declares that the designation of a strategic intermodal system, composed of facilities and services of statewide and interregional significance, will efficiently serve the mobility needs of Florida's citizens, businesses, and visitors and will help Florida become a worldwide economic leader, enhance economic prosperity and competitiveness, enrich quality of life, and reflect responsible environmental stewardship. To that end, it is the intent of the Legislature that the Strategic Intermodal System consist of transportation facilities that meet a strategic and essential state interest and that limited resources available for the implementation of statewide and interregional transportation priorities be focused on that system.

(3) Funds paid into the State Transportation Trust Fund pursuant to s. 201.15(1)(d) for the purposes of the Florida Strategic Intermodal System are hereby annually appropriated for expenditure to support that program.

339.62 System components.--The Strategic Intermodal System shall consist of appropriate components of:

(1) The Florida Intrastate Highway System established under s. 338.001.

(2) The National Highway System.

(3) Airport, seaport, and spaceport facilities.

(4) Rail lines and rail facilities.

(5) Selected intermodal facilities; passenger and freight terminals; and appropriate components of the State Highway System, county road system, city street system, inland waterways, and local public transit systems that serve as existing or planned connectors between the components listed in subsections (1)-(4).

(6) Existing or planned corridors that serve a statewide or interregional purpose.

339.63 System facilities designated; additions and deletions.--

(1) The initial Strategic Intermodal System shall include all facilities that meet the criteria recommended by the Strategic Intermodal Steering Committee in a report titled "Steering Committee Final Report: Recommendations for Designating Florida's Strategic Intermodal System" dated December 2002.

(2) The Strategic Intermodal System and the Emerging Strategic Intermodal System include three different types of facilities that each form one component of an interconnected transportation system which types include:

(a) Existing or planned hubs that are ports and terminals including airports, seaports, spaceports, passenger terminals, and rail terminals serving to move goods or people between Florida regions or between Florida and other markets in the United States and the rest of the world;

(b) Existing or planned corridors that are highways, rail lines, waterways, and other exclusive-use facilities connecting major markets within Florida or between Florida and other states or nations; and

(c) Existing or planned intermodal connectors that are highways, rail lines, waterways or local public transit systems serving as connectors between the components listed in paragraphs (a) and (b).

(3) After the initial designation of the Strategic Intermodal System under subsection (1), the department shall, in coordination with the metropolitan planning organizations, local governments, regional planning councils, transportation providers, and affected public agencies, add facilities to or delete facilities from the Strategic Intermodal System described in paragraphs (2)(b) and (c) based upon criteria adopted by the department.

(4) After the initial designation of the Strategic Intermodal System under subsection (1), the department shall, in coordination with the metropolitan planning organizations, local governments, regional planning councils, transportation providers, and affected public agencies, add facilities to or delete facilities from the Strategic Intermodal System described in paragraph (2)(a) based upon criteria adopted by the department. However, an airport that is designated as a reliever airport to a Strategic Intermodal System airport which has at least 75,000 itinerant operations per year, has a runway length of at least 5,500 linear feet, is capable of handling aircraft weighing at least 60,000 pounds with a dual wheel configuration which is served by at least one precision instrument approach,

and serves a cluster of aviation-dependent industries, shall be designated as part of the Strategic Intermodal System by the Secretary of Transportation upon the request of a reliever airport meeting this (sic) criteria.

339.64 Strategic Intermodal System Plan.--

(1) The department shall develop, in cooperation with metropolitan planning organizations, regional planning councils, local governments, the Statewide Intermodal Transportation Advisory Council and other transportation providers, a Strategic Intermodal System Plan. The plan shall be consistent with the Florida Transportation Plan developed pursuant to s. 339.155 and shall be updated at least once every 5 years, subsequent to updates of the Florida Transportation Plan.

(2) In association with the continued development of the Strategic Intermodal System Plan, the Florida Transportation Commission, as part of its work program review process, shall conduct an annual assessment of the progress that the department and its transportation partners have made in realizing the goals of economic development, improved mobility, and increased intermodal connectivity of the Strategic Intermodal System. The Florida Transportation Commission shall coordinate with the department, the Statewide Intermodal Transportation Advisory Council, and other appropriate entities when developing this assessment. The Florida Transportation Commission shall deliver a report to the Governor and Legislature no later than 14 days after the regular session begins, with recommendations as necessary to fully implement the Strategic Intermodal System.

(3)(a) During the development of updates to the Strategic Intermodal System Plan, the department shall provide metropolitan planning organizations, regional planning councils, local governments, transportation providers, affected public agencies, and citizens with an opportunity to participate in and comment on the development of the update.

(b) The department also shall coordinate with federal, regional, and local partners the planning for the Strategic Highway Network and the Strategic Rail Corridor Network transportation facilities that either are included in the Strategic Intermodal System or that provide a direct connection between military installations and the Strategic Intermodal System. In addition, the department shall coordinate with regional and local partners to determine whether the road and other transportation infrastructure that connect military installations to the Strategic Intermodal System, the Strategic Highway Network, or the Strategic Rail Corridor is regionally significant and should be included in the Strategic Intermodal System Plan.

(4) The Strategic Intermodal System Plan shall include the following:

(a) A needs assessment.

(b) A project prioritization process.

(c) A map of facilities designated as Strategic Intermodal System facilities; facilities that are emerging in importance that are likely to become part of the system in the future; and planned facilities that will meet the established criteria.

(d) A finance plan based on reasonable projections of anticipated revenues, including both 10-year and 20-year cost-feasible components.

(e) An assessment of the impacts of proposed improvements to Strategic Intermodal System corridors on military installations that are either located directly on the Strategic Intermodal System or located on the Strategic Highway Network or Strategic Rail Corridor Network.

(5) STATEWIDE INTERMODAL TRANSPORTATION ADVISORY COUNCIL.--

(a) The Statewide Intermodal Transportation Advisory Council is created to advise and make recommendations to the Legislature and the department on policies, planning, and funding of intermodal transportation projects. The council's responsibilities shall include:

1. Advising the department on the policies, planning, and implementation of strategies related to intermodal transportation.

2. Providing advice and recommendations to the Legislature on funding for projects to move goods and people in the most efficient and effective manner for the State of Florida.

(b) MEMBERSHIP.--Members of the Statewide Intermodal Transportation Advisory Council shall consist of the following:

1. Six intermodal industry representatives selected by the Governor as follows:

a. One representative from an airport involved in the movement of freight and people from their airport facility to another transportation mode.

b. One individual representing a fixed-route, local-government transit system.

c. One representative from an intercity bus company providing regularly scheduled bus travel as determined by federal regulations.

d. One representative from a spaceport.

e. One representative from intermodal trucking companies.

f. One representative having command responsibilities of a major military installation.

2. Three intermodal industry representatives selected by the President of the Senate as follows:

a. One representative from major-line railroads.

b. One representative from seaports listed in s. 311.09(1) from the Atlantic Coast.

c. One representative from an airport involved in the movement of freight and people from their airport facility to another transportation mode.

3. Three intermodal industry representatives selected by the Speaker of the House of Representatives as follows:

a. One representative from short-line railroads.

b. One representative from seaports listed in s. 311.09(1) from the Gulf Coast.

c. One representative from intermodal trucking companies. In no event may this representative be employed by the same company that employs the intermodal trucking company representative selected by the Governor.

(c) Initial appointments to the council must be made no later than 30 days after the effective date of this section.

1. The initial appointments made by the President of the Senate and the Speaker of the House of Representatives shall serve terms concurrent with those of the respective appointing officer. Beginning January 15, 2005, and for all subsequent appointments, council members appointed by the President of the Senate and the Speaker of the House of Representatives shall serve 2-year terms, concurrent with the term of the respective appointing officer.

2. The initial appointees, and all subsequent appointees, made by the Governor shall serve 2-year terms.

3. Vacancies on the council shall be filled in the same manner as the initial appointments.

(d) Each member of the council shall be allowed one vote. The council shall select a chair from among its membership. Meetings shall be held at the call of the chair, but not less frequently than quarterly. The members of the council shall be reimbursed for per diem and travel expenses as provided in s. 112.061.

(e) The department shall provide administrative staff support and shall ensure that council meetings are electronically recorded. Such recordings and all documents received, prepared for, or used by the council in conducting its business shall be preserved pursuant to chapters 119 and 257.

Alabama Amendment 666

Amendment 666 to the Alabama Constitution states the following:

Section I. The Legislature finds that the capital improvements and technology required by many governmental programs could be more efficiently funded through the establishment of a special trust fund dedicated to funding such improvements. Additionally, municipal and county governments require assistance in the funding of capital improvements. In order to meet these requirements, it is necessary and prudent to redistribute a portion of the Oil and Gas Capital Payments now being paid into the Alabama Trust Fund under Amendment No. 450 to the Constitution of Alabama of 1901. Accordingly, this amendment establishes the County and Municipal Government Capital Improvement Fund and the Alabama Capital Improvement Trust Fund to be administered in accordance with the provisions of this amendment. Finally, the Legislature finds that it is necessary and desirable to issue general obligations bonds for the purposes of (i) making substantial capital improvements to the state dock facilities at the Port of Mobile, (ii) promoting economic development and industrial recruitment in the state, (iii) providing local government match monies required to issue federal grant revenue bonds for road and bridge improvements and (iv) providing funds to municipal governments for infrastructure improvements.

Section II. As used in this amendment, the following words and phrases shall have the following respective meanings:

“Alabama Trust Fund” means the irrevocable, permanent trust fund created by Amendment No. 450 to the Constitution of Alabama of 1901.

“Alabama Capital Improvement Trust Fund” means one of the special trust funds created by this amendment.

“Capital Improvements” means capital outlay projects that include the planning, designing, inspection, purchasing, construction, reconstruction, improvement, repair or renovation of permanent buildings, docks, structures and sites therefor for the executive, legislative or judicial branches of state government. The term “Capital Improvement” shall also mean the construction or improvement of roads and bridges in the highway system; payment of debt service on the bonded indebtedness issued by the State of Alabama or any public corporation or authority of the State of Alabama; funding economic development and industrial recruitment activities; and the procurement of technical equipment, including computer and telecommunications equipment, required for the operation of any governmental entity.

“County and Municipal Capital Improvement Trust Fund” means one of the special trust funds created by this amendment.

“Docks Improvements” means the acquisition, development, construction, improvement, expansion and modernization of the state docks facilities (including, without limitation, cargo handling facilities) at the Port of Mobile.

“Docks Improvement Costs” means all costs and expenses incurred in connection with the Capital Improvements, including, without limitation, the following:

(a) The costs of acquiring, constructing, installing and equipping Docks Improvements, including all obligations incurred for labor and to contractors, subcontractors, builders and materialmen.

(b) The costs of acquiring land or rights in land and any costs incidental thereto, including recording fees.

(c) The costs of contract bonds and of insurance of all kinds that may be required or necessary during the acquisition, construction or installation of Docks Improvements.

(d) The costs of architectural and engineering services, including test borings, surveys, environmental mitigation, supervision of construction and the like with respect to Docks Improvements.

(e) The costs of acquiring and installing fixtures and equipment, excavation, removal and demolition of structures, and provisions for drainage, stormwater retention, installation of utilities, and similar facilities, and paving.

(f) Interest accruing with respect to General Obligation Bonds for a period of up to two years after the issuance of such General Obligation Bonds.

(g) All costs, expenses and fees incurred in connection with the issuance of General Obligation Bonds, including, without limitation, all legal, accounting, financial, printing, recording, filing and other fees and expenses.

(h) The costs for obtaining bond insurance, letters of credit, or other forms of credit enhancement or liquidity facilities.

(i) All other costs of a nature comparable to or required in connection with those described.

(j) Reimbursement to any person of any of the foregoing costs incurred by such person either for its own account, or for the account of the State of Alabama and without regard to when incurred.

“Economic Development Costs” means the costs and expenses incurred or to be incurred by the state in connection with economic development projects and the recruitment of industrial prospects to the state including, without limitation, site preparation and infrastructure improvements, the costs of training and educating workers in the state and

acquiring and constructing training facilities in the state, together with the costs, expenses and fees incurred in connection with the issuance of General Obligation Bonds for such purposes and the costs for obtaining bond insurance and other forms of credit enhancement on General Obligation Bonds issued for such purposes, and the reimbursement to any person of any of the foregoing costs incurred by such person either for its own account or for the account of the State of Alabama, its agencies or authorities.

"Fiscal Year" means the period beginning October 1 and ending September 30 of the following calendar year.

"General Fund" means the general fund in the State Treasury of the State of Alabama.

"General Obligation Bonds" means bonds, including refunding bonds, to be issued by the State of Alabama for the purpose of financing Docks Improvements Costs, Economic Development Costs, Local Government Match Funds and Municipal Infrastructure Costs, as provided in this amendment.

"Local Government Match Funds" means the monies required to be provided by the State of Alabama as a condition to the issuance of federal grant revenue bonds for road and bridge improvements, together with the costs, expenses and fees incurred in connection with the issuance of General Obligation Bonds for such purposes and the costs of obtaining bond insurance and other forms of credit enhancement on General Obligation Bonds for such purposes.

"Municipal Infrastructure Costs" means the cost of acquiring and constructing municipal infrastructure improvements through the Alabama Department of Transportation, together with the costs, expenses and fees incurred in connection with the issuance of General Obligation Bonds for such purposes and the costs of obtaining bond insurance and other forms of credit enhancement on General Obligation Bonds for such purposes.

"Oil and Gas Capital Payment" means any payment (including any royalty payment) received by the state or any agency or instrumentality thereof as all or part of the consideration for the sale, leasing or other disposition by the state or any agency or instrumentality thereof of any right to explore and drill for or to produce oil, gas or other hydrocarbon minerals in any area on the water side of the high water mark of Mobile Bay or in any other offshore area and shall include any revenue by the state from federal oil and gas leases off the coast of Alabama. Any royalty or other payment, with the exception of any taxes heretofore or hereafter levied, that is based upon or determined with respect to, the production of oil, gas or other hydrocarbon minerals and that is paid to the state or any agency or instrumentality thereof regardless of the time of such payment shall be considered an oil and gas capital payment.

"Realized Capital Gains" means gains from the sale or exchange of assets of the Alabama Trust Fund, other than fixed income assets, to the extent they exceed losses from the sale of such assets. The amount of gain or loss on the sale of an asset shall be determined by subtracting from the proceeds of selling the asset its fair market value as of the end of the

immediately preceding fiscal year, or, in the case of the fiscal year in which this amendment is ratified, its fair market value as of the first business day following ratification of this amendment.

“Trust Income” means the Trust Income as defined in Amendment Numbers 450 and 488 to the Constitution of Alabama of 1901.

“Unrealized Capital Gains” means the excess of the fair market value of the Alabama Trust Fund on the last day of the fiscal year over the fair market value of the Trust Fund on the last day of the immediately preceding fiscal year. The fair market value of the Trust Fund on the last day of a fiscal year shall be determined without including the Trust Income for the fiscal year; realized capital gains for the fiscal year; or the fair market value of fixed income assets. For the fiscal year beginning October 1, 2001, the fair market value of the assets on September 30, 2002, shall be determined without regard to the fair market value on the date of transfer of the assets transferred from the Alabama Heritage Trust Fund.

Section III. Distributions of Trust Income and capital gains earned by the Alabama Trust Fund shall be made annually in accordance with the following:

(a) In any fiscal year in which the Trust Income exceeds $60,000,000, ten percent (10%) of the Trust Income shall be distributed to the Municipal Government Capital Improvement Fund created in Section 11-66-4, Code of Alabama 1975, and ten percent (10%) of the Trust Income shall be distributed to the County Government Capital Improvement Fund created in Section 11-29-4, Code of Alabama 1975. The Director of Finance shall certify such amounts to the State Comptroller, who shall make the required distributions not later than April 15 of the following fiscal year. The distributions provided for in this section shall be in lieu of and not in addition to the distributions required by Sections 11-29-5 and 11-66-5, Code of Alabama 1975. The remainder of the Trust Income shall be paid into the General Fund, except as provided by Amendment 543 to the Constitution of Alabama of 1901. Provided, however, the fiscal year following the first fiscal year that the Forever Wild Land Trust receives fifteen million dollars ($15,000,000) from the trust income of the Alabama Trust Fund, one-fourth (1/4) of one percent of the trust income earned from the Alabama Trust Fund shall be allocated to the Alabama Senior Services Trust Fund. This allocation shall increase each fiscal year by one-fourth (1/4) of one percent of the trust income earned from the Alabama Trust Fund; provided, however, that in no event shall such trust income paid to the Alabama Senior Services Trust Fund exceed five million dollars ($5,000,000) in any one fiscal year.

(b) Notwithstanding any other provision of this constitution, within 30 days following the end of each fiscal year, the Board of Trustees of the Alabama Trust Fund may transfer up to seventy-five percent (75%) of the realized capital gains for such fiscal year. The amount distributed shall be divided as follows: ten percent (10%) to the County Government Capital Improvement Fund created in Section 11-29-4, Code of Alabama 1975, and ten percent (10%) to the Municipal Government Capital Improvement Fund created in Section 11-66-4, Code of Alabama 1975, and the remainder of such realized

capital gains shall be paid into the General Fund, except that a portion of such realized capital gains shall be distributed in the same manner as and deemed to be a part of trust income for purposes of the distributions required under Sections 7 and 13 of Amendment 543 to the Constitution of Alabama of 1901.

(c) Notwithstanding any other provision of this constitution, within 30 days following the end of each fiscal year, the Board of Trustees of the Alabama Trust Fund may transfer up to seventy-five percent (75%) of the unrealized capital gains for such fiscal year. The amount distributed shall be divided as follows: ten percent (10%) to the County Government Capital Improvement Fund created in Section 11-29-4, Code of Alabama 1975, and ten percent (10%) to the Municipal Government Capital Improvement Fund created in Section 11-66-4, Code of Alabama 1975, and the remainder of such unrealized capital gains shall be paid into the General Fund except that a portion of such unrealized capital gains shall be distributed in the same manner as and deemed to be a part of trust income for purposes of the distributions required under Sections 7 and 13 of Amendment 543 to the Constitution of Alabama of 1901.

Section IV. Beginning on October 1 immediately following the ratification of this amendment, 35% of all Oil and Gas Capital Payments paid into the Alabama Trust Fund in any fiscal year shall be transferred by the State Treasurer to the special trust funds created by this amendment in the following manner: (a) an amount equal to seven percent (7%) of all Oil and Gas Capital Payments received by the Alabama Trust Fund during the preceding fiscal year shall be paid into the County and Municipal Government Capital Improvement Trust Fund; and (b) an amount equal to twenty-eight percent (28%) of all Oil and Gas Capital Payments received by the Alabama Trust Fund during the preceding fiscal year shall be paid into the Alabama Capital Improvement Trust Fund.

Section V. (a) Funds in the Alabama Capital Improvement Trust Fund shall be invested by the Board of Trustees in such kinds of investments as are authorized for the investment of the Alabama Trust Fund. All income of such funds (determined in the same manner as Trust Income of the Alabama Trust Fund) shall be deposited into the General Fund.

(b) Funds in the County and Municipal Government Capital Improvement Trust Fund shall be invested by the Board of Trustees in such kinds of investments as are authorized for the investment of the Alabama Trust Fund. All income of such fund (determined in the same manner as Trust Income of the Alabama Trust Fund) shall be deposited into the County and Municipal Government Capital Improvement Trust Fund subject to distribution pursuant to Section VI.

(c) The Board of Trustees shall determine from time to time the asset allocation of investments in the Alabama Trust Fund and shall determine the annual amount of Realized and Unrealized Capital Gains to be transferred to the General Fund. The Secretary-Treasurer of The Retirement Systems of Alabama shall be the initial manager of 50 percent of the assets, and financial institutions and other corporate entities with general trust powers shall be the initial manager or managers of 50 percent of the assets

in the Alabama Trust Fund, subject to guidelines provided by the Board of Trustees. The Board of Trustees shall have the power to appoint another person or persons to manage all or any portion of the assets in the Alabama Trust Fund upon a two-thirds vote of the Board of Trustees.

Section VI. On April 1 of each year, the State Comptroller shall distribute one-half of all Trust Income earned during the preceding fiscal year from the investment of funds contained in the County and Municipal Government Capital Improvement Trust Fund to the Municipal Government Capital Improvement Fund created by Section 11-66-4, Code of Alabama 1975, and one-half of said Trust Income to the County Government Capital Improvement Fund created by Section 11-29-4, Code of Alabama 1975. Distributions of Trust Income to the Municipal Government Capital Improvement Fund shall be administered in accordance with Section 11-66-6, Code of Alabama 1975. Distributions of Trust Income to the County Government Capital Improvement fund shall be administered in accordance with Section 11-29-6, Code of Alabama 1975.

Section VII. Funds in the Alabama Capital Improvement Trust Fund may be appropriated for Capital Improvements only upon the certification of the Governor, based upon the recommendation of the Director of Finance, that funds are needed for particular Capital Improvements. The Governor's certification for such Capital Improvements shall be contained in his or her budgets for the operation of state government submitted annually to the Legislature. Legislative appropriations from this Fund that are in excess of those contained in the Governor's certification must be accompanied by legislative findings of fact explaining the appropriations that differ from or are in excess of those certified by the Governor. The foregoing notwithstanding, the Legislature may appropriate funds from this trust fund for Capital Improvements upon a recorded majority vote of each house.

Section VIII. The State of Alabama is authorized to become indebted and to sell and issue its interest-bearing General Obligation Bonds, in addition to all other bonds of the state, in an aggregate principal amount not exceeding $350 million. The General Obligation Bonds issued pursuant to this amendment shall be general obligations of the State, and the full faith and credit of the State are hereby irrevocably pledged for the prompt and faithful payment of the principal, interest and redemption premium (if any) on the General Obligation Bonds.

Section IX. The Governor, the Director of Finance, the Commissioner of Revenue, the Chairman of the Senate Finance and Taxation General Fund Committee and the Chairman of the House Ways and Means General Fund Committee are hereby constituted a Bond Commission with full authority, except as herein specified or limited, to determine the terms and conditions of the General Obligation Bonds and to provide for the sale and issuance thereof. No member of the Bond Commission shall receive compensation in any form for any services performed by him or her in and about his or her duties as a member or officer of the Bond Commission. The Bond Commission shall meet at the call of the Governor, who is hereby designated its chairman. Three members of the Bond Commission (at least one of which shall be the Chairman of the Senate

Finance and Taxation-General Fund Committee or the Chairman of the Ways and Means-General Fund Committee) shall constitute a quorum for the transaction of business, and all proceedings of the Bond Commission shall be reduced to writing, recorded in a substantial record book and filed with the Director of Finance, who is hereby designated as the Secretary of the Bond Commission and who shall keep the records of the proceedings of the Bond Commission.

Section X. The proceeds of the General Obligation Bonds shall be paid into the State Treasury, shall be kept continually invested pending the expenditure thereof, and shall, together with the income derived from the investment and reinvestment thereof (including income derived from the investment and reinvestment of previously derived income), be retained in one or more separate accounts of the State Treasury until expended for the purposes authorized in this amendment and in the manner provided by law. The proceeds of such General Obligation Bonds, together with the investment income derived from said proceeds, shall be used solely for the purpose of paying Docks Improvement Costs, Economic Development Costs, Local Government Match Funds and/or Municipal Infrastructure Costs. Not more than $50 million of the proceeds of such General Obligation Bonds shall be spent for local government match funds and not more than $15 million of such proceeds shall be spent for municipal infrastructure costs.

Section XI. There is hereby appropriated for the payment of the General Obligation Bonds such monies out of the Alabama Capital Improvement Fund as are necessary to pay principal of, interest on and redemption premium (if any) on the General Obligation Bonds. Monies in the Alabama Capital Improvement Trust Fund are also hereby appropriated for the payment of principal of, interest on and redemption premium (if any) on bonds authorized to be issued pursuant to Amendments Nos. 618, 619 and 620 of the Constitution of Alabama of 1901.

In 2007, Amendment 796 was enacted (HB10, Act 2007-5) which increased the total amount of bonding authority granted under Amendment 666 to the Constitution of Alabama of 1901, as amended, from $350 million to $750 million; provided for competitive bidding of the bonds; and to require the Bond Commission to contract with businesses or individuals which reflect the racial and ethnic diversity of the State. The additional $400 million was part of an incentive package designed to lure the Thyssen-Krup steel mill and other major industries into Alabama.

Alabama State Docks Capital Credit

SB393

By Senators Butler and Biddle

Enrolled, An Act,

This bill would offer tax incentives offered (sic) for new and existing businesses who invest in the Alabama State Port Authority infrastructure. The bill would provide that the tax incentive would be a credit against Alabama income tax liability with respect to income generated by or arising out of an investment, equal to five percent of the capital costs annually for 20 years. The bill would provide that each taxpayer claiming the credit, upon obtaining the prior written approval of the Governor, Finance Director, and Alabama State Port Authority and upon the minimum investment criteria having been met, would be entitled to the credit by filing a statement claiming the credit with the Department of Revenue. The bill would provide that the sum of the capital credit and certain other incentives would not exceed the capital costs of the project. The bill would provide that the capital credit would not be available for new projects after December 31, 2005, unless the Legislature, by joint resolution, votes to continue or reinstate the capital credit.

To provide a credit against Alabama income tax liability with respect to income generated by or arising out of a project undertaken by certain new businesses that invest in the Alabama State Port Authority infrastructure and certain expansions of certain existing businesses; to provide that the credit against Alabama income tax shall be five percent of capital costs annually for 20 years; to provide that each investing company, with respect to a project, or its shareholders, partners, members, owners, or beneficiaries, shall be entitled to receive the credit upon the prior written approval of the Governor, Finance Director, and Alabama State Port Authority, the filing by the investing company of a statement of intent to claim the credit with the Department of Revenue, and compliance with the requirements of the act with respect to minimum capital costs; to provide that the capital credit authorized by this act shall not exceed the capital costs of the project; and to provide that the capital credit authorized by this act shall not be available for new projects after December 31, 2005, unless the Legislature, by joint resolution, votes to continue or reinstate the availability of the capital credit for such new projects. To amend Sections 40-9B-3 and 40-9B-6, Code of Alabama 1975, relating to tax incentives for certain industrial development; and to include incentives for investments in the Alabama State Docks Department infrastructure under a new Section 40-9B-9, which provides the procedure and method for obtaining the incentives.

BE IT ENACTED BY THE LEGISLATURE OF ALABAMA:

Section 1. As used in this act, the following terms shall have the following meanings:

(1) CAPITAL COSTS. All costs and expenses incurred by one or more investing companies in connection with the acquisition, construction, installation, and equipping of a qualifying project during the period commencing with the date on which the acquisition, construction, installation, and equipping commences and ending on the date on which the qualifying project is placed in service, including, without limitation, all of the following:

a. The costs of acquiring, constructing, installing, equipping, and financing a qualifying project, including all obligations incurred for labor and to contractors, subcontractors, builders, and materialmen.

b. The costs of acquiring land or rights in land and any cost incidental thereto, including recording fees.

c. The costs of contract bonds and of insurance of all kinds that may be required or necessary during the acquisition, construction, or installation of a qualifying project.

d. The costs of architectural and engineering services, including test borings, surveys, estimates, plans, and specifications, preliminary investigations, environmental mitigation, and supervision of construction, as well as for the performance of all the duties required by or consequent upon the acquisition, construction, and installation of a qualifying project.

e. The costs associated with installation of fixtures and equipment; surveys, including archaeological and environmental surveys; site tests and inspections; subsurface site work; excavation; removal of structures, roadways, cemeteries, and other surface obstructions; filling, grading, paving, and provisions for drainage, storm water retention, installation of utilities, including water, sewer, sewage treatment, gas, electricity, communications, and similar facilities; off-site construction of utility extensions to the boundaries of the property.

f. All other costs of a nature comparable to those described, including, without limitation, all project costs which are required to be capitalized for federal income tax purposes pursuant to 26 U.S.C. §263A.

g. Costs otherwise defined as capital costs that are incurred by the investing company where the investing company is the lessee under a lease that contains a term of not less than five years and is characterized as a capital lease for federal income tax purposes. Capital costs shall not include property owned or leased by the investing company or a related party before the commencement of the acquisition, construction, installation, or equipping of the qualifying project unless such property was physically located outside

the state for a period of at least one year prior to the date on which the qualifying project was placed in service.

h. Costs either paid or incurred by the Alabama State Port Authority for the benefit of a qualifying project where the costs are treated as costs paid by an investing company with respect to the qualifying project for federal income tax purposes, except that the costs shall not include amounts contributed by the Alabama State Port Authority to a qualifying project as a capital contribution or gift except to the extent that an investing company has cost basis in the contribution or gift for federal income tax purposes; or a related party to an investing company to the extent the costs are included in or taken into account in determining federal income tax basis of the investing company in the qualifying project, whether or not incurred by an investing company.

(2) CAPITAL CREDIT. An annual amount equal to five percent of the capital costs of the qualifying project, such amount to be credited or allowed in accordance with Section 4 hereof and other provisions of law, against the state income tax liability generated by or arising out of the qualifying project in each of the 20 years commencing with the year during which the qualifying project is placed in service and continuing for 19 consecutive years thereafter.

(3) DEPARTMENT. The Alabama Department of Revenue.

(4) INDUSTRIAL, WAREHOUSING, OR RESEARCH ACTIVITY. Any trade or business described in the 1997 North American Industry Classification System within Subsector 493 (Warehousing and Storage), Industry Number 488310 (Port and Harbor Operations), or Industry Number 488320 (Marine Cargo Handling), when the trade or business is conducted on premises in which the Alabama State Port Authority has an ownership, leasehold, or other possessory interest and such premises are used as part of the operations of the Alabama State Port Authority, including the above trades and businesses as they may hereafter be reclassified in any subsequent publication of the NAICS or similar classification system developed in conjunction with the United States Department of Commerce or Office of Management and Budget.

(5) INVESTING COMPANY. Any corporation, partnership, limited liability company, proprietorship, trust, or other business entity, regardless of form, making a qualifying investment.

(6) PROJECT. Any land, building, or other improvement, and all real and personal properties deemed necessary or useful in connection therewith, whether or not previously in existence, located or to be located in the state.

(7) QUALIFYING INVESTMENT. The undertaking by one or more investing companies of a qualifying project.

(8) QUALIFYING PROJECT. A project to be sponsored or undertaken by one or more investing companies that have a capital cost of not less than eight million dollars

($8,000,000), and at which the predominant trade or business activity conducted will constitute industrial, warehousing, or research activity.

(9) RELATED PARTY. A person or entity that bears a relationship to an investing company described in Section 267(b), (c), or (e) of the Internal Revenue Code of 1986, as amended.

(10) TAX YEAR. The applicable taxable year as the term is defined in Section 40-18-1(11), Code of Alabama 1975.

Section 2. An investing company seeking the capital credit shall, prior to the date on which a qualifying project is placed in service, obtain the written approval of the Governor, Finance Director, and Alabama State Port Authority and shall file with the department a written statement of intent to claim the capital credit provided in this act. The filing by an investing company shall constitute a filing on behalf of the shareholders, partners, members, owners, or beneficiaries of the investing company entitled to the capital credit in accordance with subsection (b) of Section 5. The statement shall contain a description of the qualifying project; the date on which the acquisition, construction, installation, or equipping of the qualifying project was commenced or is expected to commence; the actual or if not known the estimated capital costs of the qualifying project; the name of each investing company, or the name or names of its shareholders, partners, members, owners, or beneficiaries to become entitled to the capital credit; and any other information required by the department.

Section 3. Each investing company shall, upon securing the approvals and filing of the statement required by Section 2 and upon the making of qualified investments, be entitled to the capital credit, such credit to be allocated and available in accordance with subsection (b) of Section 4. The department shall enter into written agreements with an investing company or companies specifying the method by which income generated by or arising out of the project will be determined, and with respect to qualifying projects undertaken by partnerships, limited liability companies, or other joint ventures, the allocation and treatment of the capital credit provided pursuant to this article.

Section 4. (a) The Legislature recognizes that a substantial number of businesses are organized as limited liability companies, partnerships, and other types of business entities and that certain business entities, organized as corporations, elect to be treated as “S” corporations under federal and state tax laws, and that it is essential that the capital credit amount shall be available on a pass-through basis in the manner hereinafter provided.

(b) Each investing company, or its shareholders, partners, members, owners, or beneficiaries shall be entitled to the capital credit for each tax year of an investing company with respect to which a capital credit is provided pursuant to this article. The capital credit shall be allowed as follows:

(1) The owner of an investing company which is a proprietorship shall receive a credit against the individual income tax levied by Section 40-18-5, Code of Alabama 1975, that

otherwise would be owed to the state in any year by the owner with respect to the income of the investing company generated by or arising out of the qualifying project.

(2) An investing company which is an Alabama C corporation as defined in Section 40-18-160, Code of Alabama 1975, or which is an Alabama S corporation and which is subject to taxation under Section 40-18-174 or Section 40-18-175, Code of Alabama 1975, shall receive a credit against the corporate income tax levied by Section 40-18-31, Section 40-18-174, or Section 40-18-175, Code of Alabama 1975, that otherwise would be owed to the state in any year by the investing company with respect to the income generated by or arising out of the qualifying project.

(3) The shareholders of an investing company which is an Alabama S corporation as defined in Section 40-18-160, Code of Alabama 1975, and whose taxable income is subject to determination under Section 40-18-161, Code of Alabama 1975, each shall receive a credit against the individual income tax levied by Section 40-18-5, Code of Alabama 1975, that otherwise would be owed to the state in any year by each shareholder of the investing company with respect to income of the investing company generated by or arising out of the qualifying project.

(4) The partners, members, or owners of an investing company, the income of which is subject to taxation under Section 40-18-24, Code of Alabama 1975, each shall receive a credit against the corporate income tax levied by Section 40-18-31, Code of Alabama 1975, or against the individual income tax levied by Section 40-18-5, Code of Alabama 1975, whichever is applicable to each such partner, member, or owner that otherwise would be owed to the state in any year by each partner, member, or owner of the investing company with respect to income of the investing company generated by or arising out of the qualifying project.

(5) An investing company which is a trust or estate having income subject to taxation under subsection (c) of Section 40-18-25, Code of Alabama 1975, shall receive a credit against the income tax levied by Section 40-18-5, Code of Alabama 1975, that otherwise would be owed to the state in any year by the investing company on the income generated by or arising out of the qualifying project.

(6) The beneficiaries of an investing company which is a trust or estate the income of which is subject to taxation under subsection (d) of Section 40-18-25, Code of Alabama 1975, each shall receive a credit against the corporate income tax levied by Section 40-18-31, Code of Alabama 1975, or against the individual income tax levied by Section 40-18-5, Code of Alabama 1975, whichever is applicable to each beneficiary, that otherwise would be owed to the state in any year by each beneficiary of the investing company with respect to income of the investing company generated by or arising out of the qualifying project.

(7) A shareholder, partner, member, owner, or beneficiary which is eligible to receive a credit under subdivision (3), (4), or (6) of this subsection and which is an Alabama S corporation, or which has income which is subject to taxation under Section 40-18-24,

Code of Alabama 1975, or Section 40-18-25(d), Code of Alabama 1975, solely for purposes of the application of this subsection, shall be treated as though the shareholder, partner, member, owner, or beneficiary were also an investing company.

(8) The capital credit allowed under this subsection for any tax year of an investing company shall not exceed the aggregate amount which otherwise would be due from the investing company, its shareholders, partners, members, owners, or beneficiaries to the state in tax with respect to the income of the investing company generated by or arising out of the qualifying project, determined after the application of all other deductions, losses, or credits permitted under Titles 40 and 41, Code of Alabama 1975, for the taxable year, and determined by applying the maximum rate applicable to individuals under Section 40-18-5, Code of Alabama 1975, or the rate applicable to corporations under Section 40-18-31, Code of Alabama 1975, as the case may be.

(9) No amount described in this subsection shall be carried forward or back by any investing company, shareholders partners, members, owners, or beneficiaries with respect to a prior or subsequent year.

Section 5. The capital credit shall be reduced or eliminated with respect to a qualifying project at the time the sum of all capital credits received or allowed with respect to a qualifying project equals 100 percent of the capital costs of the qualifying project, all to the end that the aggregate amount of capital credits shall not exceed 100 percent of the capital costs of the qualifying project.

Section 6. The department shall report annually to the Legislature and the public as to qualifying projects with respect to which capital credits are claimed during the year. The report shall be due on the fifth legislative day of each regular session and shall state the number of qualifying projects, the capital costs of each qualifying project and the total amount of capital credits claimed during the year.

Section 7. The department shall adopt regulations to carry out the provisions of this act. The department shall audit each investing company periodically to monitor compliance by the investing company with the provisions hereof which are conditions to the availability of capital credits for each year.

Section 8. At the time of filing any tax return with the department in which any capital credit is claimed under this act, the chief executive officer, the chief financial officer, or the person signing the tax return on behalf of the investing company shall file with the department an affidavit stating that the investing company was, during the tax year for which a capital credit is claimed, in compliance with this act which are conditions to the qualification for and the availability of the capital credit herein authorized. The affidavit shall certify that the sum of all capital credits therefor received or allowed, when added to the capital credit claimed in the return, does not exceed the capital costs of the qualifying project.

Section 9. Each investing company receiving a capital credit shall maintain or cause to be maintained records with respect to the qualifying project sufficient to allow the income of the investing company to be identified separately from other income of such investing company subject to Alabama income taxation. In order to limit the capital credit to the income tax liability attributable to the income generated by or arising from the qualified project within the state, the department shall promulgate regulations respecting the determination of income generated by or arising from the qualified project and the income tax attributable to such income.

Section 10. Capital credits authorized by this article shall not be available for new qualifying projects after December 31, 2005, unless the Legislature, by joint resolution, votes to continue or reinstate the capital credit for new projects after that date. No action or inaction on the part of the Legislature shall reduce or suspend any capital credit in any past or future calendar year with respect to any investing company which files a statement of intent pursuant to Section 40-18-191, Code of Alabama 1975, on or prior to December 31, 2005, it being the sole intention of this section that failure of the Legislature to adopt a joint resolution continuing the capital credit for periods after December 31, 2005, shall affect only the availability of the capital credit to new qualifying projects after that date, and shall not affect qualifying projects which have established their eligibility to receive capital credits under Section 2 on or prior to December 31, 2005.

Section 11. The administration of this article by the department shall be governed by the provisions of the Taxpayers' Bill of Rights and the Uniform Revenue Procedures Act contained in Chapter 2A, Title 40, Code of Alabama 1975.

Section 12. Sections 40-9B-3 and 40-9B-6, Code of Alabama 1975, are amended to read as follows:

"§40-9B-3.

"For purposes of this chapter, the following words and phrases mean:

"(1) ABATE, ABATEMENT. A reduction or elimination of a taxpayer's liability for tax. An abatement of transaction taxes imposed under Chapter 23 of this title, shall relieve the seller from the obligation to collect and pay over the transaction tax as if the sale were to a person exempt, to the extent of the abatement, from the transaction tax.

"(2) CONSTRUCTION RELATED TRANSACTION TAXES. The transaction taxes imposed by Chapter 23 of this title, on tangible personal property and taxable services incorporated into an industrial development property, the cost of which may be added to capital account with respect to the property, determined without regard to any rule which permits expenditures properly chargeable to capital account to be treated as current expenses.

“(3) EDUCATION TAXES. Ad valorem taxes that must, pursuant to the Constitution of Alabama of 1901, as amended, legislative act, or the resolution or other action of the governing board authorizing the tax, be used for educational purposes or for capital improvements for education and local construction related transaction taxes levied for educational purposes or for capital improvements for education.

“(4) INDUCEMENT. Refers to an agreement, or an “inducement agreement,” entered into between a private user and a public authority or county or municipal goverment (sic) and/or a resolution or other official action, an “inducement resolution,” “inducement letter,” or “official action” adopted by a public authority or county or municipal government, in each case expressing, among other things, the present intent of such public authority or county or municipal government to issue bonds in connection with the private use property therein described.

“(5) INDUSTRIAL DEVELOPMENT PROPERTY. Real and/or personal property acquired in connection with establishing or expanding an industrial or research enterprise in Alabama.

“(6) INDUSTRIAL OR RESEARCH ENTERPRISE. a. Any trade or business described in 1987 Standard Industrial Classification Industry Group Number 0724, Major Groups 20 to 39, inclusive, 50 and 51, Industrial Group Number 737, and Industry Numbers 4613, 8731, 8733, and 8734, as set forth in the Standard Industrial Classification Manual published by the United States Government Office of Management and Budget.

“b. With respect to abatements granted in accordance with Section 40-9B-9, and only with respect to such abatements, “industrial or research enterprise” means any trade or business described in the 1997 North American Industry Classification System within Subsector 493 (Warehousing and Storage), Industry Number 488310 (Port and Harbor Operations), or Industry Number 488320 (Marine Cargo Handling), when such trade or business is conducted on premises in which the Alabama State Docks Department has an ownership, leasehold, or other possessory interest and such premises are used as part of the operations of the Alabama State Docks Department.

“c. “Industrial or research enterprise” includes the above-described trades and business and any others as may hereafter be reclassified in any subsequent publication of the NAICS or similar industry classification system developed in conjunction with the United States Department of Commerce or Office of Management and Budget.

“(7) MAJOR ADDITION. Any addition to an existing industrial development property that equals the lesser of: 30 percent of the original cost of the industrial development property or two million dollars ($2,000,000). For purposes of this subsection, the original cost of existing industrial development property shall be the amount of industrial development property with respect to which an abatement was granted under this chapter when the property was constructed, or if the existing industrial development property was constructed before January 1, 1993, the maximum amount that would have been allowed if the provisions of this chapter had applied at the time it was constructed. Only property

that constitutes industrial development property shall be taken into account in making the determination in the previous sentence.

“(8) MAXIMUM EXEMPTION PERIOD. A period equal to the shorter of: a. Ten years from and after: 1. The date of initial issuance by a county, city, or public authority of bonds to finance any costs of a private use property, or 2. If no such bonds are ever issued, the later of: (i) the date on which title to such property was acquired by or vested in such county, city, or public authority, or (ii) the date on which such property is or becomes owned, for federal income tax purposes, by a private user; or b. The weighted average economic life of the assets comprising such property, determined consistently with the provisions of 26 U.S.C. §147(b) and measured from the date such property is placed in service.

“(9) MORTGAGE AND RECORDING TAXES. The taxes imposed by Chapter 22 of this title.

“(10) NONEDUCATIONAL AD VALOREM TAXES. Ad valorem taxes imposed by the state, counties, municipalities, and other taxing jurisdictions of Alabama that are not required to be used for educational purposes or for capital improvements for education.

“(11) PERSON. Includes any individual, partnership, trust, estate, or corporation.

“(12) PRIVATE USER. Any individual, partnership, or corporation organized for profit that is or will be treated as the owner of private use property for federal income tax purposes.

“(13) PRIVATE USE INDUSTRIAL PROPERTY. Private use property that also constitutes industrial development property.

“(14) PRIVATE USE PROPERTY. Any real and/or personal property which is or will be treated as owned by a private user for federal income tax purposes even though title may be held by a public authority or municipal or county government.

“(15) PUBLIC AUTHORITY. A corporation created for public purposes pursuant to a provision of the Constitution of Alabama of 1901, or a general or local law that authorized it to issue bonds, the interest on which is exempt from the Alabama income tax, as in effect on May 21, 1992.

“(16) PUBLIC INDUSTRIAL AUTHORITY. A public authority authorized to issue bonds to acquire, construct, equip, or finance industrial development property.

“§40-9B-6.

“(a) Any person who proposes to become a private user of industrial development property or of a major addition may apply to the governing body of any municipality, county, or public industrial authority, at or about the time that the private user is

requesting inducement, for an abatement of all of the taxes allowed to be abated under Section 40-9B-4 with respect to such property. The application shall contain information that will permit the governing body to which it is submitted to make a reasonable cost/benefit analysis as to the proposed industrial development property and to determine the maximum exemption period for the abatement of noneducational ad valorem taxes.

“(b) The abatements granted by the governing body shall be embodied in an agreement, which may be the same as the inducement, between the governing body and the private user, setting forth:

“(1) The estimated amount of each abatement and the maximum exemption period.

“(2) Good-faith projections by the private user of: the amount to be invested; the number of individuals to be employed, initially and in the succeeding three years; and the payroll.

“(c) The private user shall file with the Department of Revenue within 90 days after the granting of the abatements a copy of the agreement required by subsection (b), the contents of which the department shall use solely for its statistical and record-keeping activities but shall otherwise keep confidential unless consented to in writing by the private user.”

Section 13. Section 40-9B-9 is added to the Code of Alabama 1975, to read as follows:

§40-9B-9.

With respect to industrial development property for the establishment or expansion of an industrial or research enterprise as defined in Section 40-9B-3(6)(b), Code of Alabama 1975, the governing body of a municipality, county, or public industrial authority shall not grant the abatements provided for in this chapter without first receiving the written approval of the Governor, Finance Director, and Director of the Alabama State Docks Department.

Section 14. This act shall become effective on the first day of the third month following its passage and approval by the Governor, or its otherwise becoming law.

Mississippi Port Revitalization Revolving Loan Fund

MISSISSIPPI CODE OF 1972
As Amended

SEC. 57-61-41. Port Revitalization Revolving Loan Fund.

Notwithstanding any provision of this chapter to the contrary, the Mississippi Development Authority shall utilize not more than Twelve Million Dollars ($12,000,000.00) out of the proceeds of bonds authorized to be issued in this chapter to be made available to state, county or municipal port and airport authorities through a Port Revitalization Revolving Loan Fund for the purpose of making loans to port authorities for the improvement of port and airport facilities to promote commerce and economic growth. Proceeds shall not be made available to provide any facilities for utilization by a gaming vessel.

In exercising its authority, the Mississippi Development Authority shall work in conjunction with the Water Resources Council to establish criteria and guidelines to govern loans made pursuant to this section.

Mississippi Export Tax Credit

MISSISSIPPI CODE OF 1972
As Amended

SEC. 27-7-22.7. Income tax credit for charges for using certain public port facilities.

(1) As used in this section, the term "port" means a state, county or municipal port or harbor established pursuant to Sections 59-5-1 through 59-5-69, Sections 59-7-1 through 59-7-519, 59-9-1 through 59-9-85 or Sections 59-11-1 through 59-11-11.

(2) For any income taxpayer utilizing the port facilities at any port for the export of cargo that is loaded on a carrier calling at any such port, a credit against the taxes imposed pursuant to this chapter shall be allowed in the amounts provided in this section.

(3) Except as otherwise provided by subsection (5) of this section, the amount of the credit allowed pursuant to this section shall be the total of the following charges on export cargo paid by the corporation:

(a) Receiving into the port;
(b) Handling to a vessel; and
(c) Wharfage.

(4) The credit provided for in this section shall not exceed fifty percent (50%) of the amount of tax imposed upon the taxpayer for the taxable year reduced by the sum of all other credits allowable to such taxpayer under this chapter, except credit for tax payments made by or on behalf of the taxpayer. Any unused portion of the credit may be carried forward for the succeeding five (5) years. The maximum cumulative credit that may be claimed by a taxpayer pursuant to this section and for the period of time beginning on January 1, 1994, and ending on December 31, 2005, is limited to One Million Two Hundred Thousand Dollars ($1,200,000.00).

(5) To obtain the credit provided for in this section, a taxpayer must provide to the State Tax Commission a statement from the governing authority of the port certifying the amount of charges paid by the taxpayer for which a credit is claimed and any other information required by the State Tax Commission.

(6) The purpose of the tax credit provided for in this section is to promote the increased use of ports and related facilities in this state, particularly by those taxpayers which would not otherwise use such ports and related facilities without the benefit of such tax credit, and increase the number of port related jobs and other economic development benefits associated with the increased use of such ports and related facilities. It is the intent of the Legislature that in determining whether or not such tax credit will be continued in future years, the attainment of the purposes set forth in this subsection must

be demonstrated by the material contained in the reports prepared by the Mississippi Development Authority under Section 27-7-22.9.

Louisiana Port Construction and Development Priority Program

Louisiana Revised Statutes Title 34: 3451-3463

Louisiana Port Construction and Development Priority Program

CHAPTER 47. PORT CONSTRUCTION AND DEVELOPMENT PRIORITY PROGRAM

§3451. Definitions

As used in this Chapter, unless the context clearly indicates otherwise, the following definitions shall apply:

(1) "Construction or development project" means a program of construction or development, either new or continuing, that will be planned and implemented with the primary goal of improving ports and harbors in the state.

(2) "Department" means the Department of Transportation and Development.

(3) "Joint committee" means the House Committee on Transportation, Highways and Public Works and the Senate Committee on Transportation, Highways and Public Works, functioning as a joint legislative committee.

(4) "Port authority" means the governing authority of any port area or port, harbor, and terminal district.

(5) "Port construction or development priority program" means the priority list of projects submitted by the department and approved by the joint committee pursuant to this Chapter.

Acts 1989, No. 452, §1, eff. June 30, 1989.

§3452. Methodology for port project evaluation

A.(1) Applications for funding of any port construction or development project may be submitted by any port authority on a quarterly basis, except as provided in R.S. 34:3456. Applications shall be submitted to the department no later than the first of March, June, September, and December of each calendar year for consideration of funding or funding obligation authority in the following fiscal years. Applications submitted in accordance with the provisions of this Chapter shall be subject to the provisions of R.S. 39:101 through 128. Information to be provided in the application shall include but not be limited to the following:

(a) Description of the project and demonstration of immediate need for the project.

(b) Preliminary project design and cost estimate.

(c) Description of project area.

(2) Project applications shall not be subjected to formal review and evaluation until the information required in the application has been submitted.

B. Applications shall be reviewed by the department and any other appropriate state agencies within sixty days after receipt of such applications by the department.

C. Procedures for review and evaluation shall be developed by the department. Prior to implementing the review and evaluation procedures, the department shall secure the approval of these procedures by the joint committee in accordance with the Administrative Procedure Act. The procedures and a set of guidelines for completing project applications shall be made available to eligible port authorities upon request.

D. The department may contract with the Louisiana State University Ports and Waterways Institute for any of the duties associated with the development of the port priority program, including but not limited to the development, review, and evaluation of plans and specifications, and the development of the port priority program list. However, development of and authority over the final determination of the port priority list shall remain with the department and the joint committee as provided in this Chapter.

E. The department shall insure that an inventory is maintained of ports, navigable waterways, and water transportation facilities, public and private, with respect to their location, capacities, and capabilities and serve as a clearinghouse for inquiries for ports and waterways information, data, and technical and research assistance.

F. The department shall have prepared each year a summary report containing projections of state, federal, local, and private financial requirements for expanding or renovating existing ports and waterways facilities, constructing new ones, and maintaining these facilities.

Acts 1989, No. 452, §1, eff. June 30, 1989; Acts 1998, 1st Ex. Sess., No. 161, §1, eff. May 7, 1998; Acts 2006, No. 18, §1, eff. May 4, 2006.

§3453. Priority list of projects; public hearings; final program

Each quarter, the department shall prepare and shall furnish a prioritized list of projects, based on the applications received by the department during that quarter, to the joint committee. The joint committee shall receive the prioritized list of projects from the department for each of the first three quarters of the year, and shall call a public hearing within thirty days of receiving the list in order to receive public testimony regarding any project on the list. At such hearing, the joint committee shall vote to either accept, reject, or modify the list. Each quarter, the department shall reprioritize the list of projects to reflect the cumulative list of projects recommended by the department. After application recommendations for the last quarter are made by the department, the department shall submit the final port construction and development priority program for the ensuing fiscal year to the joint committee for approval. Prior to the convening of the regular session of the legislature, the joint committee shall hold a public hearing for the purpose of reviewing the final program for the ensuing fiscal year. Prior to such hearing, the department shall publish the appropriate official notice in the necessary journals. The final program shall be based upon the anticipated revenues to be appropriated by the legislature or other funding obligation authority and the projects shall be listed in order of priority. When this final construction program is presented to the legislature for funding or funding obligation authority for the ensuing fiscal year, the legislature shall not add any projects to this final construction program. Any project recommended by the department and approved by the joint committee but for which funds are unavailable in the fiscal year for which it was approved shall remain on the prioritized list of projects

and shall be carried forward to the next fiscal year. Such project shall retain its place on the prioritized list of projects and shall receive a higher priority over newly recommended projects in the next fiscal year.

Acts 1989, No. 452, §1, eff. June 30, 1989; Acts 1998, 1st Ex. Sess., No. 161, §1, eff. May 7, 1998; Acts 2006, No. 18, §1, eff. May 4, 2006.

§3454. Supplemental list of projects

The department also shall provide to the joint committee annually a supplemental list of projects proposed to be commenced or authorized within the ensuing four years which are in various stages of planning and preparation. The supplemental list shall be subject to change by the department until the department finally approves each project for construction.

Acts 1989, No. 452, §1, eff. June 30, 1989; Acts 1998, 1st Ex. Sess., No. 161, §1, eff. May 7, 1998; Acts 2006, No. 18, §1, eff. May 4, 2006.

§3455. Projects undertaken by the department

A. After adoption of the department's recommendations by the joint committee, the approved list of projects shall be forwarded to the department for implementation. The approved list shall be implemented by the department by the use of funds appropriated, funding obligation authority, or pursuant to the cash management program as provided by R.S. 48:251(D). Funding or funding obligation authority shall be allocated to projects in accordance with the prioritized list of projects approved by the joint committee. Funding obligation authority may be granted or authorized for a project from funds appropriated or obligated for another project or projects within the Port Priority Construction and Development Program provided that such authority does not impede such project or projects. Such funding obligation authority shall be extinguished for a project at such time as funds are made available for obligation for the project. The department shall not delete, add, or substitute any projects for those approved by the joint committee, except as provided in R.S. 34:3456; however, the secretary of the department may, at his discretion, authorize projects to be undertaken and financed due to an emergency out of the secretary's emergency fund.

B. No port project shall be undertaken by the department except those included in the approved program listing which are funded or which have funding obligation authority for that fiscal year with the exception of projects undertaken and financed out of the secretary's emergency fund.

Acts 1989, No. 452, §1, eff. June 30, 1989; Acts 1998, 1st Ex. Sess., No. 64, §2, eff. July 1, 1998; Acts 1998, 1st Ex. Sess., No. 161, §1, eff. May 7, 1998; Acts 2006, No. 18, §1, eff. May 4, 2006.

§3456. Commencement of projects; substitutions; Port of New Orleans

A. The projects planned for the year for which appropriations have been made or which have funding obligation authority shall be commenced in that year; however, if a project cannot be commenced within the year for which it is authorized, the secretary of the department shall file with the project records a public statement as to the factors causing the delay, and the next priority project shall be substituted therefor. When the

delaying factors have been overcome, the delayed project shall be placed in the highest priority for the next ensuing fiscal year. Projects which have been funded or which have obligation authority shall retain such funding or authority until the project is completed and the project costs are liquidated.

B. The Port of New Orleans or its successor shall be prohibited from participating in the port priority program for five consecutive years from the first fiscal year in which such priority program is funded by the legislature only if, as, and when House Bill No. 80 of the 1989 Regular Session of the Legislature is finally adopted and approved by the electorate*.

Acts 1989, No. 452, §1, eff. June 30, 1989; Acts 1998, 1st Ex. Sess., No. 161, §1, eff. May 7, 1998.

*NOTE: SEE NOW CONST. ART. VII, §27.

§3457. Allocation, reallocation of funds; deposit to Transportation Trust Fund

A. The Transportation Trust Fund shall be the source of state funds provided for any port project on the priority list approved pursuant to the provisions of this Chapter. Prior to the commencement of any work, the department shall require the presiding officer of each port authority involved in a project to execute an agreement and statement of sponsorship to provide a ten percent local match for the cost of construction of the project including the cost of any items stipulated under the provisions of Paragraph (1) of this Subsection. The department shall further stipulate that such agreement include but not be limited to the following:

(1) Agreement by the port authority to furnish all lands, easements, rights of way, and spoil disposal areas necessary to construct, operate, and maintain the project without cost to the state, unless such lands, easements, rights of way, and spoil disposal areas are critical to the project being applied for.

(2) Agreement by the port authority to furnish all engineering services for the project, including consultant engineering services, if required, without cost to the state, unless such services are provided by the department as authorized in R.S. 34:3458(B).

(3) Agreement by the port authority to assume all maintenance and operation costs for the project as may be required without cost to the state.

B. Any monies allocated for any project not needed for said project may be reallocated for the completion of any other project or projects specified. Any monies not needed for the completion of said projects shall be deposited in and credited to the Transportation Trust Fund.

Acts 1989, No. 452, §1, eff. June 30, 1989. Amended by Acts 1993, No. 476, §1; Acts 1998, 1st Ex. Sess., No. 161, §1, eff. May 7, 1998.

§3457.1. Reimbursement for project construction

A sponsoring port authority may make application under the provisions of this Chapter to utilize its own funds for project construction and to be reimbursed by the Port Construction and Development Priority Program provided that all program criteria are met in accordance with the provisions of this Chapter, the project is listed in the

recommended construction program, and all program criteria are met in accordance with the program's "Procedural Manual for Funded Projects" and the rules and regulations promulgated by the department to implement the provisions of this Chapter.

Acts 2006, No. 18, §1, eff. May 4, 2006.

§3458. Preparation of plans and specifications; letting of bids for construction; supervision of construction

A. Port authorities located in a parish with a population of fifty thousand persons or more shall be responsible for the preparation of plans and specifications for their respective port project. These authorities shall also be responsible for the letting of bids for construction, and the supervision of construction for all projects, all in accordance with the provisions of this Chapter.

B. For port authorities located in a parish with a population of less than fifty thousand persons, the department may prepare the necessary plans and specifications, may let the contract for bid, and may supervise the construction of the project.

Acts 1989, No. 452, §1, eff. June 30, 1989.

§3459. Inspection

A. The department shall approve the engineering and construction plans for any proposed projects that are prepared by consultant or contract engineers for any recipient port authority. The department may inspect the construction of a project at any time to assure project compliance.

B. The department shall inspect a complete project with the consultant or contract engineer. The engineer shall certify that construction is in accordance with plans and specifications. The department may inspect a completed project at any time to assure that the project is being maintained in accordance with project specifications and agreements.

Acts 1989, No. 452, §1, eff. June 30, 1989.

§3460. System of administration

Each recipient authority shall adopt a system of administration which shall require approval of the department for any expenditures made out of state and local matching funds, and no recipient authority shall expend any funds without the approval of the department. Each recipient authority shall adopt a system of administration which shall include the development of a capital improvement program on a selective basis, centralized purchasing of equipment and supplies, centralized accounting, and selective maintenance and construction based upon engineering plans and inspections. Funds appropriated for a project shall not be expended for any other purpose. All contracts for materials, construction, or services shall be advertised and awarded to the lowest responsible bidder in accordance with the provisions of R.S. 38:2212.

Acts 1989, No. 452, §1, eff. June 30, 1989.

§3461. Audit of distribution to recipient port authorities

The state monies distributed to the recipient authorities and the local matching funds shall be audited by the legislative auditor or a certified public accountant at least biennially pursuant to R.S. 24:513(A) and shall issue and distribute all audit reports pursuant to R.S. 24:516(A). To the extent that funds available to the legislative auditor permit, the audits of each recipient port authority of the use of the monies shall include an investigation of any failure to comply with the recommendations for planning, design, and construction adopted by the department. The recipient port authority shall certify annually to the legislative auditor that the funds made available under this Chapter have been expended in accordance with the standards established by law.

Acts 1989, No. 452, §1, eff. June 30, 1989.

§3462. Report of any misuse of funds

If the legislative auditor determines that any expenditures by the recipient port authority have not been made in accordance with this Chapter, he shall promptly report the facts of such expenditure to the Legislative Audit Advisory Council. The council shall make further investigation of the matter as it deems necessary.

Acts 1989, No. 452, §1, eff. June 30, 1989.

§3463. Misuse of funds; withholding of distribution; notification of district attorney

A.(1) If, on the basis of the report of the legislative auditor, or from its own investigation, the Legislative Audit Advisory Council, hereinafter referred to as the "council," determines that there has been a misuse by a recipient port authority of funds from the program, it shall then determine whether a partial or total withholding of the authority's appropriation for any remaining portion of the current fiscal year shall be necessary. Should the council determine that it is necessary to withhold all or any part of the authority's appropriation, the council shall send notification of its determination to the co-chairmen of the joint committee and to each member of the legislature who represents any portion of the authority.

(2) If, thirty days after the co-chairmen and the members of the legislature are notified, the council determines that the misuse has not yet ceased, the council shall, by written resolution, instruct the state treasurer to immediately suspend distributions to the port authority of funds appropriated for the program. The suspension of funds shall remain in effect until the Legislative Audit Advisory Council verifies, in writing, to the state treasurer that the offending authority is again in compliance with this Chapter. Such written verification shall be given when the legislative auditor certifies to the council that, to the best of his knowledge, the authority is in compliance with this Chapter or, in the absence of said certification, when the council determines that the authority is in compliance with this Chapter. Upon receipt of the council's written verification, the state treasurer shall reinstate the distribution of funds and distribute all funds previously withheld to the affected recipient port authority.

(3) The council shall report any action it has taken with regard to the suspension of funds to the joint committee and to the legislature at the next regular session, along

with any recommendations it may have for forfeiture of suspended funds by those authorities which are still in noncompliance with this Chapter. Forfeiture of funds can be authorized only by the legislature.

B. In any case where there has been a determination made by the council that there has been a misuse by a recipient port authority of funds appropriated for the program, the council shall furnish a copy of the written resolution directing the state treasurer to withhold funds to the district attorney of the parish or parishes where the misuse of funds occurred. The district attorney shall, within thirty days, advise the chairman of the council as to action he has taken or proposes to take in connection with the misuse of funds cited in the resolution. Where future action is proposed by the district attorney, the council shall set a date for receipt of further advice in the matter. Where such advice is not forthcoming from the district attorney, or where it is evident that suitable action has not been taken, the council shall report the matter to the joint committee and to the legislature at its next regular session for whatever action the joint committee and the legislature deems advisable under the circumstances.

Acts 1989, No. 452, §1, eff. June 30, 1989.

APPENDIX D:
SUMMARY OF SHORT SEA TRANSPORTATION PROGRAM OF THE ENERGY INDEPENDENCE AND SECURITY ACT OF 2007[1]

General Information

The Energy Independence and Security Act was enacted in December 2007. In this bill, a federally designated program for short sea shipping was developed and defined. The bill defined short sea transportation as carriage by vessel of cargo "in intermodal cargo containers and loaded by crane on the vessel" or by wheeled technology.[2] Moreover, the vessel must be loaded in a United States (US) port and unloaded in a US port or Canadian port that is located in the Great Lakes Saint Lawrence Seaway System. The opposite is also possible where the voyage begins in Canada and ends in the US. The definition helps to set the objectives of the program.

The Short Sea shipping transportation program was defined as a strategy to reduce roadway traffic. The bill seeks to help increase the amount of short sea transportation by adding more vessels and greater shipper utilization. The congress also seeks to develop and increase port infrastructure to this end. The overall program seeks to promote the development of short sea transportation in the private and public sector and has performance measures to evaluate success. The development may include private-public partnerships that address issues and improvements in facilities and infrastructure.

While the federal government, specifically the Secretary of Transportation, will be undertaking the designation of short sea transportation routes, the states will be asked to supply information. Moreover, the federal government will be helping state and local agencies expand and/or develop more comprehensive marine transportation strategies. However, the federal government wants the state governments to explain the ways in which short sea shipping can help relieve congestion within their state. The federal government also wants information on what bottlenecks might prevent the success of short sea shipping. The federal government wants to involve the states that will be using short sea shipping to help in designing the short sea transportation program.

Projects

As part of the legislation, the Secretary can designate certain routes as potential short sea opportunities, and thus allow the project to receive funding. For the project to be designated a short sea project, the project must achieve one of the following components:

- the use of a marine vessel to transport goods that will displace freight VMT, or

[1] This document is an informal summary. For further details, please see the latest version of the bill at http://thomas.loc.gov.
[2] The Library of Congress, "Energy Independence Bill and Security Act of 2007." Online. Available: http://thomas.loc.gov/cgi-bin/query/D?c110:8:./temp/~c110ppxZcn. January 20, 2008.

- a reduction in the amount of vehicles on the road by providing transportation services to freight and/or passengers.

Interagency Coordination

Since short sea shipping is a possible solution to the US road congestion and environmental problems, the law has placed a provision that private industry, the Environmental Protection Agency (EPA), and other federal, local and state agencies need to come together to produce a report that will identify and find solutions to the impediments that hinder short sea shipping.

Short Sea Transportation Report Requirement

The Short Sea Transportation project is a 'pilot program.' After one year of this program, the EPA and Department of Transportation (DOT) will produce a report to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the activities conducted under the program, and any recommendations for further legislative or administrative action.

Research on Short Sea Transportation

The law calls for the DOT and EPA to work together to fund research. The research should include the benefits of using short sea transportation for the environment and the transportation system. It should also include research on technologies and other improvements that can help reduce the cost of short sea shipping and increase the efficiency of intermodal transfers.

Capital Construction Fund

The Capital Construction Fund law has been changed to allow for new short sea transportation projects, as defined by this new law, to receive funding.

APPENDIX E:
ROLE OF WATERBORNE FREIGHT IN TEXAS

When measured by 2006 tonnage, five of the nation's top 25 ports are located in Texas:[1] Houston (2), Beaumont (5), Corpus Christi (6), Texas City (14), and Freeport (25). Texas ports move approximately 20 percent of total U.S. port tonnage. In addition to its deepwater ports, Texas also has significant shallow draft navigation activity, with over 400 miles of the Gulf Intracoastal Waterway (GIWW) being the major waterway in the state. Numerous channels and rivers link the waterway to major industrial centers in the state's deepwater ports.

In total, the state of Texas shipped or received over 488 million tons of cargo by water in 2006, the second highest in the nation behind Louisiana (a difference of less than 1.6 million tons). Over 222 million tons of crude and refined petroleum and other commodities moved on the Houston Ship Channel alone in 2006. Table E-1 shows the waterborne commerce figures for the state of Texas for 2006, the most current year for which figures are complete.

As shown in Table E-1, in 2006, Texas docks shipped approximately 117 million tons out of the state, received over 313 million tons coming into the state, and handled 58 million tons moving within the state. Exports made up about 78 million tons of cargo shipped out of the state, with petroleum products and chemicals making up about 73 percent of this amount. Some 1.9 million tons of the export traffic (2.5 percent) was destined for Canada, led by petroleum products, Non-Ferrous Ores and Scrap, and Chemicals Excluding Fertilizers. The leading commodities shipped to domestic destinations were Petroleum Products and Chemicals Excluding Fertilizers.

Texas docks shipped commodities via water to more than 30 other states plus Puerto Rico. Florida was the leading destination state for waterborne cargo shipped from Texas, receiving over 13.1 million tons. The Florida-bound trade primarily uses oceangoing vessels and coastal barges that ply the open waters of the Gulf of Mexico, but smaller amounts of cargo also move in inland waterway barges using the GIWW. Shipments to Florida are dominated by Petroleum Products and Chemicals Excluding Fertilizer. Louisiana is the second largest destination state for shipments from Texas, but unlike Florida most of this traffic moves via the GIWW. Table E-2 summarizes exports from Texas to other states.

[1] Numbers in parentheses indicate national ranking based on tonnage.

Table E-1. Texas 2006 Foreign and Domestic Waterborne Commerce Movements to, from and within the State.
(Tonnages in Thousands).

Commodity	Shipped	Received	Within	Total
Coal, Lignite, and Coal Coke	369	179	90	638 638
Crude Petroleum	3,513	199,304	1697	204,514
Petroleum Products	53,722	46,631	37,576	137,929
Chemical Fertilizers	703	991	73	1,767
Chemicals Excluding Fertilizers	33,653	16,053	16,421	66,127
Lumber, Logs, Wood Chips, and Pulp	287	1,535	0	1,822
Sand, Gravel, Shells, Clay, Salt, and Slag	629	5,926	1,970	8,525
Iron Ore, Iron, and Steel Waste and Scrap	907	74	0	981
Non-Ferrous Ores and Scrap	1,300	10,358	0	11,658
Primary Non-Metal Products	473	5,793	0	6,266
Primary Metal Products	990	15,569	46	16,605
Food and Food Products	15,014	2,504	79	17,597
Manufactured Goods	2,544	3,800	116	6,460
Unknown and Not Elsewhere Classified Products	3,267	4,716	253	8,236
	117,371	313,433	58,321	488,487

Source: Waterborne Commerce Statistics Center

Table E-2. GIWW Shipments to Other States.

Total Shipments To	Commodity	
	Tons	Top Product
Florida	13,111,023	Petroleum Products
Louisiana	12,675,559	Petroleum Products
Alabama	1,604,167	Chemicals Excluding Fertilizers
Illinois	1,367,513	Chemicals Excluding Fertilizers
Indiana	969,164	Unknown and Not Elsewhere Classified Products
Kentucky	941,337	Unknown and Not Elsewhere Classified Products
West Virginia	842,509	Chemicals Excluding Fertilizers
Puerto Rico	828,699	Petroleum Products
New Jersey	830,942	Petroleum Products
Exports to Canada	1,928,589	Petroleum Products
Exports to Other Countries	76,094,583	Petroleum Products

Of the more than 313 million tons of cargo unloaded at Texas docks in 2006 from origins outside the state reported in Table E-1, 91 percent was foreign imports. Import traffic received at Texas docks is dominated by foreign crude oil (69 percent). Texas received domestic waterborne movements from 25 other states plus Puerto Rico and the Virgin Islands. Major commodities received domestically from other states were Petroleum Products and Chemicals Excluding Fertilizers. Louisiana is the leading state of origin for domestic waterborne shipments into Texas (64 percent of the total).

About 13.5 percent of total Texas waterborne traffic moved from one Texas dock to another. Most of this traffic was Petroleum Products (64 percent); chemicals made up about 28 percent of waterborne cargo within Texas.

The GIWW is the nation's third busiest waterway with the Texas portion handling 60 percent of all GIWW traffic. In 2006, over 74 million short tons of cargo were moved on the Texas portion of the waterway. This was accomplished by approximately 109,558 one-way barge trips.

APPENDIX F:
OVERWEIGHT CORRIDOR LEGISLATION

Brownsville

S.B. No. 1276

AN ACT

relating to permits for overweight vehicles in certain counties.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Chapter 623, Transportation Code, is amended by adding Subchapter K to read as follows:

SUBCHAPTER K. PORT AUTHORITY PERMITS

Sec. 623.210. OPTIONAL PROCEDURE. This subchapter provides an optional procedure for the issuance of a permit for the movement of oversize or overweight vehicles carrying cargo on state highways located in counties contiguous to the Gulf of Mexico or a bay or inlet opening into the gulf and bordering the United Mexican States.

Sec. 623.211. DEFINITION. In this subchapter, "port authority" means a port authority created or operating under Section 52, Article III, or Section 59, Article XVI, Texas Constitution.

Sec. 623.212. PERMITS BY PORT AUTHORITY. The department may authorize a port authority to issue permits for the movement of oversize or overweight vehicles carrying cargo on state highways located in counties contiguous to the Gulf of Mexico or a bay or inlet opening into the gulf and bordering the United Mexican States.

Sec. 623.213. MAINTENANCE CONTRACTS. A port authority issuing permits under this subchapter shall make payments to the department to provide funds for the maintenance of state highways subject to this subchapter.

Sec. 623.214. PERMIT FEES. (a) A port authority may collect a fee for permits issued under this subchapter. Such fees shall not exceed $80 per trip.

(b) Fees collected under Subsection (a) shall be used solely to provide funds for the payments provided for under Section 623.213 less administrative costs which shall not exceed 10 percent of the fees collected. Such fees shall be deposited in State Highway Fund 6.

Sec. 623.215. PERMIT REQUIREMENTS. (a) A permit issued under this subchapter must include:

(1) the name of the applicant;

(2) the date of issuance;

(3) the signature of the director of the port authority;

(4) a statement of the kind of cargo being transported over State Highway 48 between the Gateway International Bridge and the entrance to the Port of Brownsville, the maximum weight and dimensions of the equipment, and the kind and weight of each commodity to be transported provided the gross weight of such equipment and commodities shall not exceed 125,000 pounds;

(5) a statement of any condition on which the permit is issued;

(6) a statement that the cargo shall be transported over the most direct route from the Gateway International Bridge to the entrance of the Port of Brownsville using State Highway 48;

(7) the name of the driver of the vehicle in which the cargo is to be transported; and

(8) the location where the cargo was loaded.

(b) A port authority shall report to the department all permits issued under this subchapter.

Sec. 623.216. TIME OF MOVEMENT. A permit issued under this subchapter shall specify the time in which movement authorized by the permit is allowed.

Sec. 623.217. SPEED LIMIT. Movement authorized by a permit issued under this subchapter shall not exceed the posted speed limit or 55 miles per hour, whichever is less. Violation of this provision shall constitute a moving violation.

Sec. 623.218. ENFORCEMENT. The Department of Public Safety shall have authority to enforce the provisions of this subchapter.

Sec. 623.219. EXPIRATION. This Act expires March 1, 2001.

SECTION 2. This Act takes effect September 1, 1997.

SECTION 3. The importance of this legislation and the crowded condition of the calendars in both houses create an emergency and an imperative public necessity that the constitutional rule requiring bills to be read on three several days in each house be suspended, and this rule is hereby suspended.

AN ACT

relating to an optional procedure for the issuance of a permit by a certain county for the movement of oversize or overweight vehicles.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Chapter 623, Transportation Code, is amended by adding Subchapter M to read as follows:

SUBCHAPTER M. CHAMBERS COUNTY PERMITS

Sec. 623.250. OPTIONAL PROCEDURE. This subchapter provides an optional procedure for the issuance of a permit by Chambers County for the movement of oversize or overweight vehicles carrying cargo on certain state highways located in Chambers County.

Sec. 623.251. DEFINITION. In this subchapter, "county" means Chambers County.

Sec. 623.252. ISSUANCE OF PERMITS. (a) The Texas Transportation Commission may authorize the county to issue permits for the movement of oversize or overweight vehicles carrying cargo on state highways located in Chambers County.

(b) A permit issued under this subchapter may authorize:

(1) the transport of cargo only on the following roads in Chambers County:

(A) Farm-to-Market Road 1405; and

(B) the frontage road of State Highway 99 located in the Cedar Crossing Business Park; and

(2) the movement of equipment and commodities weighing 100,000 pounds or less.

Sec. 623.253. MAINTENANCE CONTRACTS. The county shall make payments to the department to provide funds for the maintenance of state highways subject to this subchapter.

Sec. 623.254. PERMIT FEES. (a) The county may collect a fee for permits issued under this subchapter. The fee may not exceed $80 per trip.

(b) Fees collected under Subsection (a) may be used only to provide funds for the payments under Section 623.253 and for the county's administrative costs, which may not exceed 15 percent of the fees collected. The fees shall be deposited in the state highway fund. Fees deposited in the state highway fund under this section are exempt from the application of Section 403.095, Government Code.

Sec. 623.255. PERMIT REQUIREMENTS. (a) A permit issued under this subchapter must include:

(1) the name of the applicant;

(2) the date of issuance;

(3) the signature of the designated agent for the county;

(4) a statement of the kind of cargo being transported, the maximum weight and dimensions of the equipment, and the kind and weight of each commodity to be transported;

(5) a statement of any condition on which the permit is issued;

(6) a statement that the cargo may be transported in Chambers County only over Farm-to-Market Road 1405 and the frontage road of State Highway 99 located in the Cedar Crossing Business Park; and

(7) the location where the cargo was loaded.

(b) The county shall report to the department all permits issued under this subchapter.

Sec. 623.256. TIME OF MOVEMENT. A permit issued under this subchapter must specify the time during which movement authorized by the permit is allowed.

Sec. 623.257. SPEED LIMIT. Movement authorized by a permit issued under this subchapter may not exceed the posted speed limit or 55 miles per hour, whichever is less. A violation of this provision constitutes a moving violation.

Sec. 623.258. ENFORCEMENT. The Department of Public Safety has authority to enforce this subchapter.

Sec. 623.259. RULES. The Texas Transportation Commission may adopt rules necessary to implement this subchapter.

SECTION 2. This Act takes effect immediately if it receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this Act takes effect September 1, 2005.

S.B. No. 20

AN ACT

relating to the issuance of certain permits for overweight vehicles; providing a penalty.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Chapter 623, Transportation Code, is amended by adding Subchapter L to read as follows:

SUBCHAPTER L. VICTORIA COUNTY NAVIGATION DISTRICT PERMITS

Sec. 623.230. OPTIONAL PROCEDURE. This subchapter provides an optional procedure for the issuance of a permit by the Victoria County Navigation District for the movement of oversize or overweight vehicles carrying cargo on state highways located in Victoria County.

Sec. 623.231. DEFINITION. In this subchapter, "district" means the Victoria County Navigation District.

Sec. 623.232. ISSUANCE OF PERMITS. The Texas Transportation Commission may authorize the district to issue permits for the movement of oversize or overweight vehicles carrying cargo on state highways located in Victoria County.

Sec. 623.233. MAINTENANCE CONTRACTS. The district shall make payments to the department to provide funds for the maintenance of state highways subject to this subchapter.

Sec. 623.234. PERMIT FEES. (a) The district may collect a fee for permits issued under this subchapter. The fees shall not exceed $80 per trip.

(b) Fees collected under Subsection (a) shall be used solely to provide funds for the payments provided for under Section 623.233 less administrative costs, which shall not exceed 15 percent of the fees

collected. The fees shall be deposited in the state highway fund. Fees deposited in the state highway fund under this section are exempt from the application of Section 403.095, Government Code.

Sec. 623.235. PERMIT REQUIREMENTS. (a) A permit issued under this subchapter must include:

(1) the name of the applicant;

(2) the date of issuance;

(3) the signature of the director of the district;

(4) a statement of the kind of cargo being transported over Farm-to-Market Road 1432 to and from the Victoria Barge Canal and up to but not past the intersection with State Highway 185, the maximum weight and dimensions of the equipment, and the kind and weight of each commodity to be transported, provided that the gross weight of such equipment and commodities shall not exceed 125,000 pounds;

(5) a statement of any condition on which the permit is issued;

(6) a statement that the cargo shall only be transported to and from the Victoria Barge Canal using Farm-to-Market Road 1432 and may not be transported over State Highway 185;

(7) the name of the driver of the vehicle in which the cargo is to be transported; and

(8) the location where the cargo was loaded.

(b) The district shall report to the department all permits issued under this subchapter.

Sec. 623.236. TIME OF MOVEMENT. A permit issued under this subchapter shall specify the time in which movement authorized by the permit is allowed.

Sec. 623.237. SPEED LIMIT. Movement authorized by a permit issued under this subchapter shall not exceed the posted speed limit or 55 miles per hour, whichever is less. Violation of this provision shall constitute a moving violation.

Sec. 623.238. ENFORCEMENT. The Department of Public Safety shall have authority to enforce the provisions of this subchapter.

Sec. 623.239. RULES. The Texas Transportation Commission may adopt rules necessary to implement this subchapter.

SECTION 2. This Act takes effect September 1, 2003.

State of Washington

SUBSTITUTE SENATE BILL 6857

Passed Legislature - 2008 Regular Session

State of Washington 60th Legislature 2008 Regular Session

By Senate Transportation (originally sponsored by Senators Morton, Swecker, Haugen, King, Spanel, Parlette, and Delvin)

READ FIRST TIME 02/12/08.

AN ACT Relating to heavy haul industrial corridors; and amending RCW 46.44.0915.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

Sec. 1. RCW 46.44.0915 and 2005 c 311 s 1 are each amended to read as follows:

(1) (a) Except as provided in (b) of this subsection, the department of transportation, with respect to state highways maintained within port district property, may, at the request of a port commission, make and enter into agreements with port districts and adjacent jurisdictions or agencies of the districts, for the purpose of identifying, managing, and maintaining short heavy haul industrial corridors within port district property for the movement of overweight sealed containers used in international trade.

(b) The department of transportation shall designate that portion of state route number 97 from the Canadian border to milepost 331.22 as a heavy haul industrial corridor for the movement of overweight vehicles to and from the Oroville railhead. The department may issue special permits to vehicles operating in the heavy haul industrial

corridor to carry weight in excess of weight limits established in RCW 46.44.041, but not to exceed a gross vehicle weight of 137,788 pounds.

(2) Except as provided in subsection (1)(b) of this section, the department may issue special permits to vehicles operating in ((the)) a heavy haul industrial corridor to carry weight in excess of weight limits established in RCW 46.44.041. However, the excess weight on a single axle, tandem axle, or any axle group must not exceed that allowed by RCW 46.44.091 (1) and (2), weight per tire must not exceed six hundred pounds per inch width of tire, and gross vehicle weight must not exceed one hundred five thousand five hundred pounds.

(3) The entity operating or hiring vehicles under subsection (1)(b) of this section or moving overweight sealed containers used in international trade must pay a fee for each special permit of one hundred dollars per month or one thousand dollars annually, beginning from the date of issue, for all movements under the special permit made on state highways within ((the)) a heavy haul industrial corridor. Within a port district property, under no circumstances are the for hire carriers or rail customers responsible for the purchase or cost of the permits. All funds collected, except the amount retained by authorized agents of the department under RCW 46.44.096, must be forwarded to the state treasurer and deposited in the motor vehicle fund.

(4) For purposes of this section, an overweight sealed container used in international trade, including its contents, is considered nondivisible when transported within a heavy haul industrial corridor defined by the department.

(5) Any agreement entered into by the department as authorized under this section with a port district adjacent to Puget Sound and located within a county that has a population of more than seven hundred thousand, but less than one million, must limit the applicability of any established heavy haul corridor to that portion of state route no. 509 beginning at milepost 0.25 in the vicinity of East 'D' Street and ending at milepost 3.88 in the vicinity of Taylor Way.

(6) The department of transportation may adopt reasonable rules to implement this section.

Passed by the Senate February 16, 2008.
Passed by the House March 5, 2008.
Approved by the Governor March 20, 2008.
Filed in Office of Secretary of State March 21, 2008.

SUBSTITUTE HOUSE BILL 1181

AS AMENDED BY THE SENATE

Passed Legislature - 2005 Regular Session

State of Washington 59th Legislature 2005 Regular Session

By House Committee on Transportation (originally sponsored by Representatives Flannigan, Ericksen, Wallace, Woods, Chase and Kilmer; by request of Department of Transportation)

READ FIRST TIME 03/07/05.

AN ACT Relating to transferring overweight sealed ocean-going containers between ocean marine terminals and railheads; and adding a new section to chapter 46.44 RCW.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

NEW SECTION. **Sec. 1.** A new section is added to chapter 46.44 RCW to read as follows:

(1) The department of transportation, with respect to state highways maintained within port district property, may, at the request of a port commission, make and enter into agreements with port districts and adjacent jurisdictions or agencies of the districts, for the purpose of identifying, managing, and maintaining short heavy haul industrial corridors within port district property for the movement of overweight sealed containers used in international trade.

(2) The department may issue special permits to vehicles operating in the heavy haul industrial corridor to carry weight in excess of weight limits established in RCW 46.44.041. However, the excess weight on a single axle, tandem axle, or any axle group must not exceed that allowed by RCW 46.44.091 (1) and (2), weight per tire must not exceed

six hundred pounds per inch width of tire, and gross vehicle weight must not exceed one hundred five thousand five hundred pounds.

(3) The entity operating or hiring vehicles moving overweight sealed containers used in international trade must pay a fee for each special permit of one hundred dollars per month or one thousand dollars annually, beginning from the date of issue, for all movements under the special permit made on state highways within the heavy haul industrial corridor. Under no circumstances are the for hire carriers or rail customers responsible for the purchase or cost of the permits. All funds collected, except the amount retained by authorized agents of the department under RCW 46.44.096, must be forwarded to the state treasurer and deposited in the motor vehicle fund.

(4) For purposes of this section, an overweight sealed container used in international trade, including its contents, is considered nondivisible when transported within a heavy haul industrial corridor defined by the department.

(5) Any agreement entered into by the department as authorized under this section with a port district adjacent to Puget Sound and located within a county that has a population of more than seven hundred thousand, but less than one million, must limit the applicability of any established heavy haul corridor to that portion of state route no. 509 beginning at milepost 0.25 in the vicinity of East 'D' Street and ending at milepost 3.88 in the vicinity of Taylor Way.

(6) The department of transportation may adopt reasonable rules to implement this section.

Passed by the House April 18, 2005.
Passed by the Senate April 7, 2005.
Approved by the Governor May 9, 2005.
Filed in Office of Secretary of State May 9, 2005.

APPENDIX G:
FREQUENTLY ASKED QUESTIONS

The following questions and answers cover many of the questions that surface when the topic of "Short Sea Shipping" or "Marine Highways" is discussed.

Q1: Does short sea only refer to containers?

Answer: No. In Texas, proposed shifts to water have often focused on bulk cargoes or general cargoes such as steel. While some definitions of short sea in the past referenced only containers, the more common definition these days includes all "commercial cargo" moving between domestic ports. This definition would thereby exclude military cargoes but would include any cargo, regardless of form, that is destined for consumers or a diverse base of commercial clients.

Q2: With just-in-time manufacturing, will shippers need faster transit times than short sea will provide in order to meet their delivery windows?

Answer: In general, shippers can make adjustments to accommodate for slower transit times provided that deliveries are reliable. With careful planning, slower modes of transit can be just as effective in providing the right inventory at the right time. For many shippers, the factor that is more burdensome and unavoidable is the high cost of energy. Without the availability of alternative modes, shippers will be trapped by spiraling energy prices and will have no recourse but to pass the higher costs to consumers. The quest for greater speed in freight transportation in the 1990s was driven by inexpensive energy costs and was effective at lowering pipeline inventory, but the high cost of fuel is causing many businesses to rethink their supply chain strategies. Rapid delivery times are not a matter of necessity for most types of commodities.

Q3: Why is Texas an appropriate market for short sea shipping?

Answer: Texas already has a well developed coastal marine system due to the Gulf Intracoastal Waterway and the various shallow and deepwater ports that are served by the waterway. Texas also has a rapidly growing coastal population, and the need to move cargo significant distances between these population centers makes the transportation cost by truck either prohibitively costly or undesirable due to increased congestion.

Q4: What entities within Texas are pursuing short sea opportunities?

Answer: Short Sea shipping opportunities are being pursued by several Texas ports, ship operators, stevedores, and investors. Ports in Texas that have expressed a sustained interest in Short Sea Shipping include, but are not limited to, the Port of Beaumont, the Port of Brownsville, the Port of Corpus Christi, Port Freeport, the Port of Galveston, the Port of Houston, and the Port of Victoria.

Companies that are pursuing domestic short sea initiatives in Texas at present include Osprey Line (a subsidiary of Kirby Corporation) which runs containerized barge shipments between Houston and New Orleans; Houston-based Couch Lines, which can move containerized and non-containerized cargo along the GIWW; California-based National Shipping of America, which is planning an open ocean transit from Port Freeport (and potentially the Port of Brownsville) to the East Coast; SeaBridge, which is planning to move containerized cargo between the Port of Brownsville and Port Manatee, Florida; and Richardson Marine, which in conjunction with Schaefer Stevedoring, has a started a GIWW barge service between Houston and Brownsville.

Q5: What is the U.S. Maritime Administration doing to promote short sea shipping?

Answer: Several years ago, the U.S. Maritime Administration (MARAD) launched an initiative to promote short sea shipping. More recently, MARAD has launched what it calls the Marine Highway initiative, which is aimed at identifying key corridors in which short sea services could remove a considerable amount of current and future road/rail freight traffic. While MARAD does not currently have the resources to directly fund or subsidize short sea operators, it has worked to inform the public and policymakers about the general advantages of short sea shipping and call attention to new services as they are proposed. MARAD has advocated for the removal of the Harbor Maintenance Tax, which some short sea advocates believe has inhibited adoption of short sea options by shippers.

Q6: What types of vessels are currently being proposed for use in short sea shipping?

Answer: Various vessel designs have been proposed for future short sea service; however, the most frequently cited example is a modified barge and tow combination. Barges and tugs are typically preferred over self-propelled vessels due to their comparatively lower cost, flexibility of operation, and low crewing requirements. The choice of vessel depends on factors such as the route (protected waterway versus open ocean), minimum acceptable speed, and others.

Q7: Can the U.S. shipbuilding industry build the short sea vessels necessary to move containerized and other road competitive cargoes?

Answer: The U.S. shipbuilding industry has contracted steadily in the last few decades and has become more specialized. Many types of vessels are still constructed in the United States, including advanced military vessels, oil and platform service ships, tugboats, and barges. There is a lack of container carrying vessels and general cargo ships currently constructed in the United States. This is tied to policies that favor the use of foreign built ships for international commerce, not a lack of technology or capital that would be required to build such ships should the need arise. The designs of short sea vessels are very similar to other vessel types that are regularly built in the U.S. There is no long-term technological barrier to the construction of short sea vessels in the U.S.

Q8: If short sea vessels were built in the United States, as would be required by the Jones Act, would they be prohibitively expensive?

Answer: The Jones Act does require marine vessels engaged in the conveyance of goods between two domestic ports to be built and flagged in the United States. Commercial marine vessels are expensive to build and both labor and material costs have increased significantly in recent years. On the other hand, the cost situation in Europe is similar to that of the U.S. and this has not prevented Europe from producing its own fleet of vessels. Because the U.S. does not currently build these vessels in significant quantities, the cost to build a single "custom order" vessel is quite high. However, if a market for these vessels was created through a national prioritization plan, the unit production cost would likely come down significantly. In the past few years, materials cost, as a percentage of total cost, has been increasing. Should this trend continue, it will lower the potential cost advantage that could be obtained from constructing ships in foreign countries. The Jones Act will continue to be a constraint, but perhaps not as significant as it once was.

Q9: What is the breakeven distance where short sea can compete with trucking?

Answer: It was previously assumed that short sea shipping was appropriate for distances that were equal to or longer than that of intermodal rail (i.e., greater than 500 miles). This assumption is based on the fact that there are fixed costs associated with loading and unloading cargo—containerized or otherwise—at the port of departure and the port of arrival. Recent research indicates that the breakeven distance for short sea can be lowered if 1) the landside routing is congested and/or circuitous, 2) if cargo is loaded by wheeled conveyance, 3) if the cargo has characteristics that make it unsuitable or undesirable to move over the road, or 4) the waterborne leg can offer a much lower cost than the alternatives. Several short sea initiatives currently in the planning stages in Texas and other states are significantly less than 500 miles. For example, the James River project which aims to move containerized cargo between Hampton Roads, VA, and Richmond, VA, will cover a distance of less than 100 miles.[1] However, this operation will be receiving subsidies from a CMAQ (Congestion Management & Air Quality) grant to the Richmond Metropolitan Planning Organization, so this may not be an accurate test of distance.

[1] R.G. Edmonson, "Marad chief says short-sea is taking hold." Gulf Shipper, May 5, 2008.