

**GAO**

Report to the Chairman, Committee on  
Transportation and Infrastructure,  
House of Representatives

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June 2007

# INTERMODAL TRANSPORTATION

## DOT Could Take Further Actions to Address Intermodal Barriers





Highlights of [GAO-07-718](#), a report to the Chairman, Committee on Transportation and Infrastructure, House of Representatives

## Why GAO Did This Study

Intermodal transportation enables freight and passengers to cross between different modes of transportation efficiently and can improve mobility, reduce congestion, and cut costs. In 1991 Congress called for a National Intermodal Transportation System and created the Office of Intermodalism within the Department of Transportation (DOT). However, as GAO and others have reported, there are barriers to planning and implementing intermodal projects. GAO's report examines (1) barriers that inhibit intermodal transportation; (2) actions DOT has taken to address these barriers and support Congress' goal; and (3) additional actions, if any, that DOT could take to better address barriers. GAO analyzed information from DOT and transportation experts and talked with transportation officials from various states and localities throughout the country.

## What GAO Recommends

GAO recommends that the Secretary of Transportation direct one office or administration to lead and coordinate intermodal efforts at the federal level by improving collaboration and the availability of intermodal guidance and resources.

DOT agreed to consider GAO's recommendation and provided technical comments that GAO incorporated, as appropriate.

[www.gao.gov/cgi-bin/getrpt?GAO-07-718](http://www.gao.gov/cgi-bin/getrpt?GAO-07-718).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Katherine Siggerud, 202-512-2834, [siggerudk@gao.gov](mailto:siggerudk@gao.gov).

# INTERMODAL TRANSPORTATION

## DOT Could Take Further Actions to Address Intermodal Barriers

### What GAO Found

Three key barriers inhibit intermodal transportation, according to federal, state, and local officials and published studies: limited federal funding targeted to such projects, in part due to statutory requirements; limited collaboration among the many entities and jurisdictions involved; and limited ability to evaluate the benefits of such projects. For example, officials in one state reported difficulty in securing funds to repair roads connecting port and rail facilities to nearby highways, because the nationwide benefits from increasing freight mobility were both difficult to quantify and not considered in the local transportation planning process. These three barriers impede state and local agencies' ability to carry out intermodal projects and limit DOT's ability to implement Congress' goal of a national intermodal transportation system.

DOT—through several of its operating administrations and the Office of Intermodalism—has taken a number of actions to address each barrier and support Congress' goal, but these actions fall short of creating a coordinated approach. Actions taken include distributing guidance on obtaining funding, creating working groups to improve collaboration, and developing a framework for a national freight policy. In addition, DOT proposed a reorganization in 1995 to enhance its approach to intermodal transportation and improve collaboration, but Congress did not approve it. While DOT has taken actions to address intermodal barriers and Congress' goal, no one office is coordinating these actions across the department. The Office of Intermodalism, which has responsibility for initiating and coordinating federal intermodal policy, is primarily focused on research and analysis. Furthermore, DOT is limited in its ability to address funding issues, due to the federal funding structure of transportation programs.

GAO's analysis of published studies and discussions with state and local officials surfaced some actions that DOT could take to better address barriers: increasing collaboration between DOT's own operating administrations and improving the availability of intermodal guidance and resources. In addition, designating one office or operating administration to be responsible for coordinating these and other DOT efforts to address barriers would help in moving toward Congress' vision of a National Intermodal Transportation System. However, DOT and the Congress also face other transportation challenges, including the financial condition of the Highway Trust Fund, the lack of assurance that projects that best meet mobility needs are being selected and funded, and the increase in congestion on all transportation modes. These challenges led GAO to suggest in prior work that DOT and Congress reassess all transportation modes to determine the appropriate federal role and funding strategies, and develop ways to monitor investments. Actions to improve intermodal transportation would need to be considered in the context of these current challenges.

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## Abbreviations

BTS	Bureau of Transportation Statistics
CMAQ	Congestion Mitigation and Air Quality
DOT	Department of Transportation
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
MARAD	Maritime Administration
MPO	Metropolitan Planning Organization
MTS	Marine Transportation System
NCHRP	National Cooperative Highway Research Program
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
OST	Office of the Secretary of Transportation
OST-P	Office of the Secretary of Transportation for Policy
PFC	Passenger facility charges
RITA	Research and Innovative Technology Administration
RRIF	Railroad Rehabilitation and Improvement Financing
SAFETEA-LU	Safe, Accountable, Flexible Efficient Transportation Equity Act: A Legacy for Users
SIB	State Infrastructure Bank
TPCB	Transportation Planning Capacity Building
TEA-21	Transportation Equity Act for the 21st Century
TIFIA	Transportation Infrastructure Finance and Innovation Act of 1998
TRB	Transportation Research Board

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United States Government Accountability Office  
Washington, DC 20548

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June 20, 2007

The Honorable James L. Oberstar  
Chairman  
Committee on Transportation and Infrastructure  
House of Representatives

Dear Chairman Oberstar:

The United States' transportation system consists of different modes—including roads, aviation, mass transit systems, railroads, and waterways—which connect, intersect, and play a critical role in providing the American public with the mobility needed to sustain national and international economic viability. Often, freight and passenger trips are intermodal in nature, in that freight and passengers use more than one mode to complete a journey. For example, a freight container may travel by ship to a port where it is transferred to a rail car, and then to a truck to complete its journey. However, this mobility is threatened by congestion across modes, which is expected to increase in the coming years. Intermodal transportation projects to improve the connections and intersections between modes can reduce congestion and costs for freight and passenger travel by improving mobility. For example, the Alameda Corridor project in the Los Angeles area created a 20-mile railroad express line that eliminated grade crossings—rail and road intersections—for freight railroads leaving the port of Los Angeles/Long Beach, resulting in reduced congestion for both freight and passenger travel through the corridor. Also, a project that extended an existing transit line to the airport at Portland, Oregon, improved the connection between aviation and surface transportation.

Recognizing the potential benefits of improving intermodal transportation, Congress established a National Intermodal Transportation System policy—consisting of all forms of transportation in a unified, interconnected manner—in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.<sup>1</sup> ISTEA also created the Office of Intermodalism within the Department of Transportation (DOT) to provide departmental leadership and coordination in supporting a more efficient

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<sup>1</sup>49 U.S.C. § 5501.

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intermodal transportation system. However, as we and others have previously reported, there are barriers to planning and implementing intermodal projects because these projects are generally more complex to plan and finance than projects involving a single mode and, therefore, often can be more difficult to implement.<sup>2</sup> Furthermore, the congressional appropriations process has traditionally been aligned with specific modes, and funding for transportation infrastructure improvements may be congressionally designated for specific projects. As a result, there is little assurance that projects, including intermodal projects—which could most efficiently meet the nation’s mobility needs—will be selected and funded.<sup>3</sup> The efficient use of federal funds is particularly important given the uncertainty surrounding the long-term viability of the Highway Trust Fund.<sup>4</sup> In addition, recent organizational changes within DOT have transferred the Office of Intermodalism from the Office of the Secretary of Transportation for Policy to the Research and Innovative Technology Administration (RITA). Consequently, you asked us to examine the barriers to intermodal transportation and how recent organizational changes in DOT may have affected how the agency is proceeding with Congress’ goal of intermodal transportation. Accordingly, this report addresses the following questions: (1) What barriers inhibit intermodal transportation? (2) What is DOT, including its Office of Intermodalism, doing to address intermodal barriers and support Congress’ goal of a National Intermodal Transportation System? (3) What actions, if any, could DOT take to better address intermodal barriers?

To identify the barriers that inhibit intermodal transportation, we reviewed reports from the National Commission on Intermodal Transportation, GAO, Transportation Research Board (TRB), and the Intermodal Transportation Institute, among others. We also conducted

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<sup>2</sup>National Commission on Intermodal Transportation (NCIT), *Toward a National Intermodal Transportation System: Final Report* (Washington, D.C.: September 1994); Transportation Research Board National Research Council (TRB NRC), *Institutional Barriers to Intermodal Transportation Policies and Planning in Metropolitan Areas* (Washington, D.C.: 1996); GAO, *Intermodal Transportation: Potential Strategies Would Redefine Federal Role in Developing Airport Intermodal Capabilities*, [GAO-05-727](#) (Washington, D.C.: July 26, 2005). GAO, *Intermodal Transportation: Challenges to and Potential Strategies for Developing Improved Intermodal Capabilities*, [GAO-06-855T](#) (Washington, D.C.: June 15, 2006).

<sup>3</sup>GAO, *21st Century Challenges: Reexamining the Base of the Federal Government*, [GAO-05-325SP](#) (Washington, D.C.: February 2005) and [GAO-06-855T](#).

<sup>4</sup>GAO, *High-Risk Series: An Update*, [GAO-07-310](#) (Washington, D.C.: January 2007).

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semistructured interviews with several industry associations to identify intermodal barriers. In addition, we conducted semistructured interviews with officials from DOT's Office of the Secretary of Transportation for Policy (OST-P) and seven operating administrations, four state-level DOTs, four metropolitan planning organizations (MPO), and several university transportation centers to understand whether and how the intermodal barriers we identified from reports and interviews impeded the planning and implementation of intermodal transportation projects for freight and passengers. We selected OST and seven operating administrations based on the specific role the office and administrations have in passenger and/or freight intermodal transportation or intermodal policy. We selected the four state DOTs and the four MPOs based on (1) recommendations from officials from DOT, university transportation centers, as well as representatives of industry associations we interviewed, that the state DOTs and MPOs were experienced in dealing with passenger and/or freight intermodal transportation; (2) the size of the population of the state and MPO area; and (3) geographic dispersion. We based our analysis of the barriers on interviews with these officials, who have been involved with intermodal projects. Through our interviews, we determined that the intermodal barriers identified applied to both freight and passenger intermodal transportation despite some differences between the two.

To determine what actions DOT and its Office of Intermodalism are taking—and could take—to address intermodal barriers and support the intermodal goal, we analyzed information gathered from our interviews with officials from several of DOT's operating administrations, the Office of Intermodalism, state DOTs, MPOs, industry associations, and university transportation centers. We also analyzed agency documentation on the actions DOT has been taking to address intermodal barriers and reviewed published reports from GAO, TRB, and others about intermodal transportation issues for freight and passengers and the future of transportation policy in the United States. We assessed the reliability of the information contained in this report through interviews with knowledgeable officials and reviews of documentation and corroborating information, and we determined it was sufficiently reliable for our purposes. We conducted our work from August 2006 through May 2007, in accordance with generally accepted government auditing standards. Appendix I contains more information about our scope and methodology.

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## Results in Brief

Three key barriers inhibit intermodal transportation according to federal, state, and local officials and published studies:

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- *Limited federal funding targeted toward intermodal projects.* Federal law generally ties transportation funding to a single mode, which limits the ability of state and local transportation planning agencies to use federal funds for intermodal projects. Although there are some federal programs under which intermodal projects can be funded and one program that is specifically targeted for freight intermodal projects, all of the funds available through these programs have been congressionally designated for specific projects.
  - *Limited collaboration among stakeholders.* DOT's operating administrations and state and local transportation agencies are organized by mode—reflecting the structure of funding programs—resulting in an organizational structure that DOT's own assessments acknowledge can impede coordination between modes. In addition, collaboration between the public and private sector can also be challenging; for example, some transportation officials told us that private-sector interests in airport, rail, and freight have historically not participated in the regional planning process.
  - *Limited resources to evaluate intermodal projects.* Potential benefits of improving intermodal transportation, such as reduced congestion and improved air quality, are difficult for local planning agencies to measure and incorporate into analyses of regional transportation projects. In addition, it can be difficult to quantify benefits that are national, as opposed to local or regional.

These barriers limit DOT's ability to fully implement the intermodal goal and impede state and local agencies' ability to plan, fund, and construct intermodal projects, which are inherently more complex than those involving one mode because of the variety of funding mechanisms and stakeholders involved and the difficulty in quantifying benefits. For example, as reported by the Federal Highway Administration (FHWA) in 2000, the roads that connect ports to the national highway system, heavily used by trucks, are often in poor condition. Officials from a state DOT and two MPOs with whom we met told us that securing funds to repair these roads is difficult because the national benefits from improving these roads are difficult to quantify and not considered in the local planning process. Similarly, officials from an MPO with whom we met told us that efforts to develop a project linking passenger rail to the airport were complicated by having two different operating administrations within DOT overseeing different portions of the project. As a result of these barriers, appropriate consideration may not be given to addressing inefficient intermodal connections at the state and local level, even though these projects could yield important improvements in mobility.

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DOT—through several operating administrations and the Office of Intermodalism—is taking action to address the barriers to intermodal transportation, but collectively these actions fall short of creating a coordinated approach. For example, DOT has taken such steps as disseminating guidance on how to access funding for intermodal projects, creating working groups to improve collaboration between modes, and providing state and local governments with data on intermodal transportation. In addition, DOT took some steps, particularly with regard to freight, toward implementing Congress’ intermodal goal. For example, DOT has drafted a framework for a national freight policy, and the Office of Intermodalism is working on a plan that will help gauge the effectiveness of DOT’s freight activities. DOT also proposed a reorganization in 1995, which according to DOT officials, would have enhanced its approach to intermodal transportation and improve collaboration, but Congress did not approve it, and DOT is limited in its ability to address funding issues, which exist in statute and would need congressional action to address. While DOT has taken several actions to address each barrier and move toward Congress’ goal, DOT’s actions are not coordinated by any single office or operating administration and are therefore fragmented across the department. The Office of Intermodalism, which has responsibility for, among other things, coordinating and initiating federal intermodal policy, is primarily focused on research and analysis. No other office or operating administration within DOT has taken the lead in coordinating DOT’s efforts in its place.

Based on our analysis and our discussions with transportation officials, DOT could take additional actions to further address intermodal barriers, including increasing collaboration between operating administrations and improving availability of intermodal guidance and resources. In addition, designating one office or operating administration to be responsible for leading and coordinating these and other DOT efforts to address barriers would help in moving toward Congress’ goal of a National Intermodal Transportation System. These actions, however, would need to be considered in the context of the current challenges facing DOT and Congress, including the uncertain financial condition of the Highway Trust Fund, the lack of assurance that projects that best meet mobility needs are being selected and funded, and the increase in congestion on all modes. These issues have led us to suggest, in our reports on major challenges facing the nation and on high-risk federal programs, that DOT and Congress reassess all transportation modes to determine the appropriate federal role, assess funding alternatives, and develop ways to monitor investments to ensure performance. Any actions that DOT takes to better

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address barriers to intermodal transportation should be consistent with the direction taken by Congress and DOT in response to these challenges.

We are recommending that the Secretary of Transportation direct one office or operating administration to take the lead in coordinating intermodal activities for freight and passengers at the federal level by improving collaboration among operating administrations and the availability of intermodal guidance and resources. We recognize that the Office of Intermodalism is statutorily responsible for coordinating and initiating federal policy on intermodal transportation; however, the office does not have the resources to fully carry out these important responsibilities and is currently focused on conducting and coordinating research and analysis. As a result, DOT may want to seek legislative authority to respond to our recommendation. We provided a draft of this report to DOT for review and comment. We received written comments, in which the department agreed to consider the report's recommendation and stated that the report provides a starting point for constructive discussions between the Executive Branch and Congress on innovative solutions to intermodal challenges. (See app. II for DOT's written comments.) In addition, the department offered technical comments, which we incorporated where appropriate.

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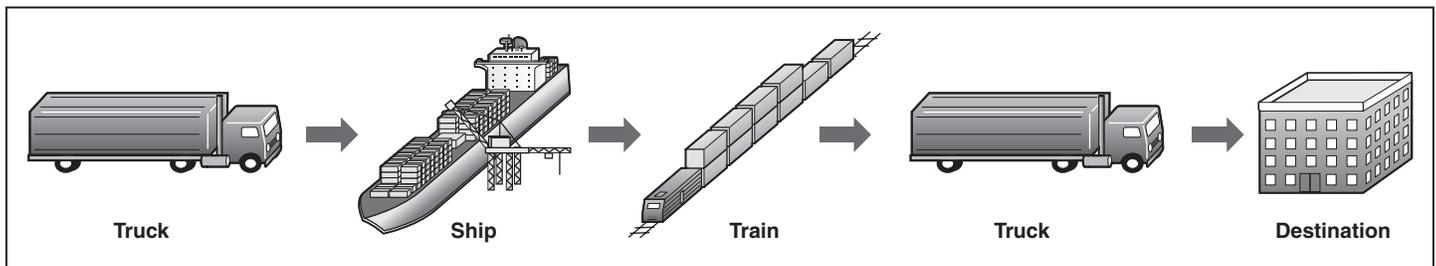
## Background

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### Intermodal Projects Offer Potential for Reducing Congestion and Achieving Other Benefits

The various modes that comprise the transportation system in the United States connect and intersect in a variety of ways, and both freight and passengers often move from one mode to another. Intermodal transportation refers to the movement of freight or passengers using more than one mode to complete a journey. For example, as shown in figure 1, freight can move from its original destination by ship and/or air to a seaport or airport, then from the seaport or airport to an intermediate distribution facility by rail or truck, then to its final destination, by rail or truck.

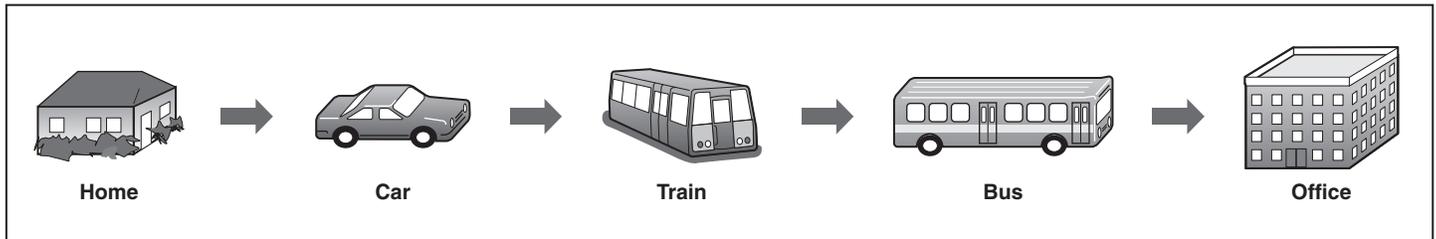
**Figure 1: Example of Intermodal Transportation for Freight**



Source: GAO.

In another example, as shown in figure 2, a passenger may drive to the local transit rail service, then transfer to a bus to reach a final destination.

**Figure 2: Example of Intermodal Transportation for Passengers**



Source: GAO.

An effective intermodal transportation system ensures a seamless transfer between modes for both freight and passengers, the ability to connect to an extended transportation network, and reliability among the different modes. As we have reported, an efficient intermodal transportation system is achieved through the successful planning and implementation of intermodal projects through the efforts of state, local, and private stakeholders.<sup>5</sup> These projects are typically initiated and developed by state and local transportation agencies, including some combination of state departments of transportation, local transportation planning entities—such as MPOs—and local transit agencies. Planning and implementing intermodal projects can also include private stakeholders, such as railroads, airlines, trucking companies, and industry and retail businesses, among others, who are involved in intermodal transportation. Projects to improve intermodal transportation can improve mobility, reduce costs for

<sup>5</sup>GAO-06-855T.

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freight shippers and travelers by providing alternative transportation options and eliminating freight bottlenecks at entrances to freight facilities, and reduce road congestion with the potential for an associated reduction in vehicle emissions and improved air quality.<sup>6</sup> Examples of some planned intermodal projects include the following:

- The Chicago Region Environmental and Transportation Efficiency (CREATE) Program in the Chicago, Illinois region, will increase the efficiency of freight and passenger rail service throughout the region by relieving congestion. (See fig. 3) The CREATE Program is a major program, composed of 78 projects—32 of those are planned to be in design or construction by 2009. Though not fully funded, some funding for the CREATE Program is from a variety of sources, including the federal government, the state of Illinois, the city of Chicago, railroads, and others. When completed, the CREATE Program has the potential to reduce congestion on area roadways, improve air quality, and improve freight and passenger mobility in part by creating 25 new roadway overpasses or underpasses to eliminate many grade crossing, creating 6 new rail overpasses to separate passenger and freight tracks, and upgrading rail tracks, switches and signal systems.

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<sup>6</sup>NCIT, *Toward a National Intermodal Transportation System: Final Report*.

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**Figure 3: Freight Rail Congestion in Chicago**



Source: Association of American Railroads (AAR).

- The Miami Intermodal Center, to be completed in 2011, will serve as a transfer point to the Miami International Airport and other destinations for various rail systems, buses, taxis, rental cars, and privately owned vehicles in Southern Florida (see fig. 4). Funding comes from several sources, including federal and state funds. When completed, the center is expected to provide efficient intermodal connectivity between the airport and Southern Florida's business and activities centers, as well as serve as a transfer point for resident commuters. The center is also expected to reduce congestion on the surrounding highways and access roads to the airport.

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**Figure 4: Computer Model of the Completed Miami Central Station**



Source: Florida Department of Transportation, Miami Intermodal Center, 2007.

Note: The station will provide rail and bus connections between various public transit systems and other modes of transportation such as Greyhound, taxis and private vehicle services.

The Warwick Intermodal Facility in Rhode Island will include a commuter and intercity rail station, a bus terminal for local and intercity buses; a consolidated rental car facility and 3,200 space parking garage; and an elevated, enclosed skywalk to the T.F. Green Airport (see fig. 5). Funding for the facility came from several sources, including federal grants and loans, among others. When completed, it is expected to improve overall traffic flow in the area, especially the consolidated car rental facility, which will eliminate rental car shuttle buses.

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**Figure 5: Computer Model of the Warwick Intermodal Facility**



Source: Rhode Island Department of Transportation.

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## Intermodal Transportation Issues Differ between Freight and Passenger Transportation

Freight and passenger intermodal transportation differ in many ways, including national versus regional significance, funding and ownership of infrastructure, and involvement with private-sector stakeholders.

Freight intermodal transportation is influenced by global and national economic activity, due to the demand of goods and the desire to get these goods from origin to destination as efficiently and as cost-effectively as possible. Benefits derived from these types of projects are often national in scope and as a result can be difficult to measure. Intermodal operations for freight movement involve both public and privately owned infrastructure, including roads, rail lines, ports, airlines, and trucks, among others. Thus, freight intermodal transportation involves both the public and private sector. For example, private companies, such as rail companies, airlines, trucking companies, and logistic companies often make decisions on where to locate intermodal transfer facilities and fund the construction of these facilities. Intermodal freight projects improve the connections between modes, which in turn improves freight mobility.

Passenger intermodal transportation, with the exception of air travel, tends to be more regional in nature. For example, passengers may

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commute to work using a combination of personal vehicles, trains, and buses—and these trips usually occur within a particular region. While these types of intermodal trips may be possible, the majority of passengers commute to work as single occupants in personal vehicles rather than using transit. Passengers generally consider alternatives to their vehicles in locations where congestion causes driving to be too costly.<sup>7</sup> Most intermodal trips are made on publicly owned and operated infrastructure; for example, transit and passenger rail infrastructure is almost wholly owned and operated by the public sector.<sup>8</sup> Passenger intermodal transportation primarily involves federal, state, and local transportation agencies and intermodal passenger projects often receive funding through these sources.

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## Federal Policies and Funding Have Generally Focused on Individual Modes

Historically, federal transportation policy and funding to improve transportation infrastructure have generally focused on individual modes rather than intermodal transportation. Federal policy for surface transportation, aviation, and passenger rail are established through separate legislation and draw funding from separate sources. For example, the planning and funding for most modes of surface transportation is addressed under the Safe, Accountable, Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) while the planning and funding of U.S. airports is addressed under Vision 100-Century of Aviation Reauthorization Act.<sup>9</sup> The federal government is a significant funding source for many surface transportation plans and projects; for example, federal funding for highways and transit systems comes mainly from federal motor fuel tax revenues deposited into the Highway Trust Fund. While most of this funding is specifically linked to highway or transit uses, some funding flexibility between highway and transit is allowed under

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<sup>7</sup>Handman, Arthur, “Intermodalism—A Solution for Highway Congestion at the Millennium?” *The Review of Policy Research*, vol. 19, no. 2 (2002).

<sup>8</sup>Passenger rail uses private-sector rail in some regions where intercity rail is colocated with freight rail lines and vice versa. The owner operator situation can be complicated by publicly owned facilities being operated by the private sector (ports, rail yards, etc.).

<sup>9</sup>Federal policy for aviation is established through legislation separate from surface transportation policy. The planning and funding of U.S. airports is addressed under Vision 100-Century of Aviation Reauthorization Act, which will expire in October 2007. This act authorizes funds for airport development and capital improvements, and while it does encourage the development of intermodal connections between airports and other local surface transportation systems, the primary focus of funding is on airfield and terminal infrastructure.

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some programs. Federal programs provide limited support for investment in railroad infrastructure, with railroad investments largely financed by the private sector, with the exception of intercity passenger rail. The Rail Passenger Service Act of 1970 created the National Railroad Passenger Corporation (Amtrak) to provide nationwide passenger rail service, and the federal government has provided funding for both capital and operating expenditures to Amtrak.<sup>10</sup> Federal transportation infrastructure funding programs are overseen by different agencies within DOT, including aviation by the Federal Aviation Administration (FAA), transit by the Federal Transit Administration (FTA), and highways by FHWA, among others.

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## ISTEA Established an Intermodal Goal

With the passage of ISTEA in December 1991, Congress established a policy for a National Intermodal Transportation System, which ISTEA defines as “all forms of transportation in a unified, interconnected manner, including the transportation systems of the future, to reduce energy consumption and air pollution while promoting economic development and supporting the Nation’s preeminent position in international commerce.” ISTEA included some provisions to facilitate the implementation of this intermodal goal by DOT, state governments, and local governments:

- Allowed the use of certain federal highway program funds for either highway or transit projects.
- Established specific planning guidelines to help metropolitan areas prioritize the highway and transit needs of the entire region with the goal of promoting an integrated transportation system. For example, laws and regulations<sup>11</sup> require each state to carry out an intermodal statewide transportation planning process, including the development of a statewide transportation plan and transportation improvement program that

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<sup>10</sup>As we have reported, Amtrak relies heavily on federal subsidies—over \$1 billion annually in recent years—and operating losses have remained high. In addition, Amtrak will require billions of dollars to address deferred maintenance and achieve a “state of good repair,” which is the outcome expected from the capital investment needed to restore Amtrak’s right-of-way (track, signals, and auxiliary structures), other infrastructure (e.g., stations), and equipment to a condition that requires only routine maintenance. GAO, *Intercity Passenger Rail: National Policy and Strategies Needed to Maximize Public Benefits from Federal Expenditures*, GAO-07-15 (Washington, D.C.: Nov. 13, 2006).

<sup>11</sup>23 U.S.C. § 135, 49 U.S.C. § 5304, 23 C.F.R. Part 450, 49 C.F.R. Part 613.

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facilitates the efficient, economic movement of people and goods.

- Created DOT's Office of Intermodalism, which was charged with coordinating federal policy on intermodal transportation and initiating policies to promote efficient intermodal transportation in the United States.
- Created the Intermodal Transportation Advisory Council consisting of the Administrators or designees from FHWA, FAA, the Maritime Administration (MARAD), the Federal Railroad Administration (FRA), and FTA to provide recommendations on how best to coordinate federal policy on intermodal transportation and initiate policies to promote efficient intermodal transportation in the United States.<sup>12</sup>
- Required states to develop and implement six management systems for managing highway pavement, bridges, highway safety, traffic congestion, public transportation facilities and equipment, and intermodal transportation facilities and systems. The management system required for intermodal transportation facilities and systems provided for the improvement and integration of all of a state's transportation systems, including methods of achieving the optimum yield from such systems, methods for increasing productivity in the state, methods for increasing use of advanced technologies, and methods to encourage the use of innovative marketing techniques, such as just-in-time deliveries.
- Required the formation of a National Commission on Intermodal Transportation to report on intermodal transportation and recommend policies that would need to be adopted to achieve the national goal of an efficient intermodal transportation system.

While ISTEA viewed different transportation modes as part of a larger transportation network, it maintained separate funding for the individual modes. Also, it provided few requirements or resources for DOT, state governments, and local governments in shifting toward an intermodal approach. TRB concluded in 2003 that the goal of a national intermodal transportation system is appropriate, but it is too broad to be attainable

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<sup>12</sup>This is the same provision that the Office of Intermodalism is given express responsibility for carrying out in its authorizing statute. Under the law, the board is supposed to provide recommendations on how best to fulfill this section, and the Office of Intermodalism is supposed to carry out the section.

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through the limited means available within the historical scope of the federal surface transportation act or any other single federal program.<sup>13</sup>

In an attempt to achieve the intermodal goal set forth in ISTEA, DOT developed a plan to reorganize its operating administrations to help promote intermodal planning and decision making within the department. In 1995, DOT proposed consolidating its 10 operating administrations into three: surface, aviation, and Coast Guard. The surface administration would be called the Intermodal Transportation Administration and would encompass FHWA, FTA, FRA, the National Highway Traffic Safety Administration (NHTSA), and part of MARAD. As part of this reorganization, DOT also proposed streamlining its existing field structure, which included 161 surface transportation field offices. Congress set aside DOT's reorganization proposal and maintained its organizational structure. Although DOT was not able to carry out its reorganization plans at the headquarters level, the agency was able to streamline its field office structure. According to DOT officials, consolidating the field offices improved communication among field office personnel, simplified efforts for customers, and achieved resource efficiencies.

Subsequent legislation modified and retained some of the intermodal provisions and requirements established in ISTEA. For example, the National Highway System Designation (NHS) Act of 1995 made the requirement for states to develop and implement six management systems, including the intermodal transportation management program, optional.<sup>14</sup> The Transportation Equity Act for the 21st Century (TEA-21), enacted in 1998, and SAFETEA-LU, enacted in 2005, both retained the basic policy and programs established by ISTEA. The Norman Y. Mineta Research and Special Programs Improvement Act of 2004 (Pub. L. No. 108-426) transferred the Office of Intermodalism to the newly created RITA.<sup>15</sup>

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<sup>13</sup>TRB, *Special Report 271: Freight Capacity for the 21st Century* (Washington, D.C.: 2003).

<sup>14</sup>The congestion management system in certain areas was not made optional by the NHS Act. Six states—Florida, North Carolina, Ohio, Oregon, Washington, and Wisconsin—have defined, or are in the process of defining, statewide strategic multimodal transportation systems, which contain only the most critical components of passenger and freight transportation infrastructure.

<sup>15</sup>The Norman Y. Mineta Research and Special Programs Improvement Act was passed on November 30, 2004. The actual transfer of the Office of Intermodalism to RITA took place on February 22, 2005.

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## Three Key Barriers Inhibit Intermodal Transportation

Three key barriers emerge as inhibiting progress on intermodal transportation, according to our discussions with transportation officials whom we interviewed and our review of previous work on the subject: (1) limited federal funding targeted toward intermodal projects, (2) limited collaboration among stakeholders from different modes and levels of government, and (3) limited resources to evaluate intermodal projects. These barriers have limited DOT's ability to fully implement the goal of a National Intermodal Transportation System that Congress set forth in ISTEA and impede state and local agencies' ability to plan, fund, and construct intermodal projects, which are inherently more complex than those involving one mode due to the variety of stakeholders and funding mechanisms that are involved.

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## Limited Federal Funding Targeted for Intermodal Projects

Although ISTEA allowed flexibility in the uses of highway and transit funding, federal funding for transportation projects has traditionally been tied to a single transportation mode, and according to our discussions and past studies, this single-mode approach has limited the ability of state and local agencies to use federal funds for intermodal transportation projects.<sup>16</sup> In addition, federal financial support for highways and transit systems comes mainly from federal highway user fees, with the revenue generated from these fees generally targeted for highway or transit projects.<sup>17</sup> Intermodal projects—which involve two or more modes—may or may not meet the criteria to receive funding under some federal programs, even though these intermodal projects may yield the best improvements in mobility. For example:

- Officials from one MPO with whom we met described a local project involving poorly aligned rail and highway bridges on a major navigation channel. One of the transportation agencies involved applied for funding through the Truman-Hobbs program,<sup>18</sup> a federally managed fund for rail and road infrastructure that intersects with maritime transportation, to fix the down-river rail bridge to increase navigation safety and reduce rail-

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<sup>16</sup>NCIT, *Toward a National Intermodal Transportation System: Final Report*; [GAO-06-855T](#); and Committee on the Intermodal Challenge, *Global Intermodal Freight: State of Readiness for the 21st Century*, Report of a Conference.

<sup>17</sup>[GAO-04-744](#).

<sup>18</sup>Under the Truman-Hobbs Act, the federal government provides funds toward the cost of altering publicly owned highway and railroad bridges that obstruct the free movement of marine traffic.

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bridge lifts.<sup>19</sup> Because the funds were expressly linked to the maritime aspect of the project, it was determined that the benefits to the highway from increased safety and reduced bridge lifts could not be included in the cost-benefit analysis needed to secure funds to address the issue.

- Officials from one state DOT with whom we met said they wanted to reduce highway congestion by transferring freight that travels on trucks to trains by improving the capacity and efficiency on the freight rail line. Officials said they were unable to use highway funds for this purpose, even though it may have been the most effective way to reduce congestion on the highway.

Several surface transportation and aviation funding and credit programs have broad criteria and can be used more easily to fund intermodal projects, but funding available through these programs can be limited when compared with the total cost of intermodal projects, and projects must meet certain criteria to qualify for funding. An example of a program that can be used to fund intermodal projects is the credit assistance program authorized by the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA). TIFIA provides federal credit assistance for surface transportation projects, including passenger bus and rail facilities. TIFIA covers a portion of the total cost of an intermodal project; specifically, the amount of TIFIA credit assistance may not exceed 33 percent of eligible project costs. In addition, to qualify for TIFIA assistance, the project must generate a revenue stream, from user charges or other nonfederal dedicated funding sources. To date, approximately \$3.2 billion of TIFIA credit assistance has been loaned. For example, the Warwick Intermodal Facility in Rhode Island has received \$42 million in TIFIA credit assistance, which is 19 percent of the project cost. The TIFIA credit assistance will be secured by customer facility charges levied on automobile rentals available at the facility. Another example of a program that can be used to fund intermodal projects is the Congestion Mitigation and Air Quality (CMAQ) Improvement program. CMAQ funds can only be used for transportation projects that will reduce transportation-related emissions in nonattainment or maintenance areas and intermodal projects must compete for funds with all other types of projects.<sup>20</sup> In addition, as

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<sup>19</sup>Lift-span rail bridges are those that, when river traffic needs to pass under the bridge, a span of the bridge is raised vertically using two high towers and counterweights located on either side of the navigational channel to provide adequate clearance.

<sup>20</sup>Federal air quality standards exist for certain air pollutants (known as criteria pollutants). Geographic areas that have levels of a criteria pollutant above those allowed by the standards are called nonattainment areas. Areas that did not meet the standards for a criteria pollutant in the past but have reached attainment are known as maintenance areas.

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we have previously reported, FTA's New Starts program is a significant source of funding for intermodal capabilities at airports that are part of a rail transit system. However, like other federal funding programs, the New Starts program, will contribute only a portion of the total project costs, subject to local matching funds, which can be derived from local agencies such as metropolitan transportation authorities, transit agencies, and airport authorities. Although, local transportation officials said it can be difficult to secure local funds for intermodal projects at airports because these agencies could potentially have different funding priorities, making it difficult to build the unified local support necessary to secure funding.<sup>21</sup> Additionally, intermodal capabilities at airports can be funded with passenger facility charges (PFC), which local officials said was difficult to secure for intermodal uses because of requirements that PFCs be used for projects on airport property for airport development and capacity improvements, not ground-access projects.<sup>22</sup>

Some federal programs can provide funding for intermodal projects, and one program is targeted specifically for freight intermodal projects; however, funding for these programs has been congressionally designated to specific projects. The congressional designation of funds for particular projects may not result in the highest priority projects being funded. Programs included in SAFETEA-LU, such as the Projects of National and Regional Significance and National Corridor Infrastructure Improvement Program, can provide funding for intermodal projects. The Projects of National and Regional Significance program provides \$1.8 billion for transportation infrastructure projects that have relevance and produce benefits on a national or regional level. Benefits could include improving economic productivity, facilitating international trade, relieving congestion, and improving safety. This program includes projects such as the Heartland Corridor, which will enable double-stacked international and domestic maritime containers to be transported by rail between the Hampton Roads region of Virginia and locations in the Midwest by increasing tunnel clearances and modifying other overhead obstructions in western Virginia, West Virginia, and through to Columbus, Ohio. FHWA has promulgated guidance for potential grant recipients, and to date, it has received project descriptions for 7 of the 25 designated projects. The National Corridor Infrastructure Improvement Program provides \$1.948 billion for construction of designated highway projects in corridors of national significance to further promote economic growth and

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<sup>21</sup> [GAO-06-855T](#).

<sup>22</sup> Ibid.

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international or interregional trade. While these programs are not specifically targeted toward intermodal projects, some intermodal projects as well as single mode projects were designated to receive funds. Currently there is only one federal funding program—the Freight Intermodal Distribution Pilot Grant Program, which was created by SAFETEA-LU—specifically available for freight intermodal projects. The total amount of funds available through this program—\$30 million—have been congressionally designated to five states. These projects include intermodal freight infrastructure improvements at seaports and airports. As of May 2007, FHWA, which administers the program, has received one completed project description from one of the designated recipients of the grants.

Officials at all levels of government told us that it is very challenging to secure federal funding to improve intermodal freight connectors, even if such projects are eligible for funding. In earlier work, we found public planners are wary of providing public support for projects that directly benefit the private sector.<sup>23</sup> A number of the DOT officials whom we met with for this report noted that freight interests struggle to inform local communities of the importance of these freight projects. Furthermore, as we have previously reported, the planning process often does not consider the global and national nature of freight mobility. Although the demands on these intermodal connectors are predominately international and national in nature, state DOTs and MPOs conduct the planning and project identification process for these improvements, while the benefits of such improvements may be distributed nationally. Since these local communities have limited funds for transportation projects, other projects that provide benefits that are more readily discernable to immediate localities—such as highway projects that address passenger transportation—are often given priority for funding. Also, in 2000, a FHWA report concluded that the roads that connect intermodal terminals, such as ports, airports, and rail yards, to the NHS were in disrepair when compared with the rest of the NHS, reducing the capability of the nation’s transportation system to effectively handle freight transport.<sup>24</sup> While state and local transportation agencies are not prevented from using highway trust fund moneys to repair and upgrade these connectors, they have remained in disrepair.

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<sup>23</sup>GAO, *Freight Transportation: Strategies Needed to Address Planning and Financing Limitations*, [GAO-04-165](#) (Washington, D.C.: Dec. 19, 2003).

<sup>24</sup>U.S. Department of Transportation, Federal Highway Administration, *NHS Intermodal Freight Connectors: A Report to Congress* (Washington, D.C.: December 2000).

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## Limited Collaboration among Stakeholders

Reflecting the separate federal transportation funding programs, DOT is organized into several operating administrations with responsibilities for particular modes; and according to those whom we spoke with and published studies, this organizational structure can impede coordination. Because different operating administrations oversee and manage separate funding programs, these programs often have differing timelines, criteria, and matching fund requirements, which can make it difficult for state and local agencies to plan and implement intermodal projects. For example, an official from an MPO with whom we met said the MPO is working to connect passenger rail to the regional airport, but carrying out the project was complicated because of FAA and FTA involvement on different aspects of the project. The official also noted that there was no single point of contact for the entire project because the lead agency changes with the location of the portion of right-of-way that is being built. DOT officials told us that the organizational structure of DOT by mode is a reflection of separate funding streams and of the separate congressional committees and subcommittees that oversee particular modes, and they noted DOT's 1995 attempt to reorganize the agency's operating administrations to improve the administrations' ability to collaborate. Further, DOT officials acknowledge that as long as programmatic responsibility and funding sources remain within discrete operating administrations, local transportation officials seeking to develop intermodal projects will be required to work with more than one operating administration to advance the project.

Our reviews and discussions indicated that collaboration and recognition of intermodal projects or intermodal qualities of single mode projects is limited between and among transportation stakeholders at the state and local level and the private sector. State and local transportation agencies are also generally organized by mode, which reflects DOT's organizational structure and separate funding sources. In prior work, we found that transportation corridors that extend across multiple state and local boundaries pose challenges for intermodal transportation decision making, due to coordination and cross-jurisdictional issues. Obtaining cooperation among these different officials can make the planning and implementation of multistate and multiregion projects difficult.<sup>25</sup> We heard similar concerns in the interviews we conducted for this current report.

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<sup>25</sup> [GAO-04-744](#) and [GAO-05-727](#).

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For example:

- Some transportation officials told us that private-sector interests in airport, rail, and freight have historically not participated in the regional planning process in MPOs, even though many state DOTs and MPOs have been working on outreach efforts with the private sector. This issue has been attributed to several reasons, including the lengthy timeline for the public planning process—which places too great of a time burden on private-sector participant—and the lack of knowledge on the part of public agencies and the private sector, which contributes to poor communication and interaction.
- According to officials from one state DOT, highway engineers planned to add high occupancy vehicle (HOV) lanes to a portion of the highway to reduce congestion, but it did not consider connecting these HOV lanes to park-and-ride facilities to encourage the use of these lanes and also limited bus access to the lanes.
- Officials from one state DOT with whom we met noted that within the transit mode, including buses, light rail, and intercity rail, schedules are not always consistent; and that passengers often must purchase multiple tickets to complete a journey, which compromises the efficient movement between regions.

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## Limited Resources to Evaluate Intermodal Projects

Another barrier, according to many officials whom we spoke with and studies we reviewed, is the lack of data on intermodal transportation and its associated benefits, which can hamper state and local transportation agencies' ability to effectively incorporate intermodal transportation into their regional transportation systems. In addition, it can be difficult for state DOTs and MPOs to quantify benefits that are national, as opposed to local or regional, and include these national benefits in the local planning process. As TRB has reported,<sup>26</sup> local and state government transportation agencies sometimes do not have the methods for evaluating trade-offs between investments yielding benefits to freight traffic and those yielding predominantly passenger benefits. Developing improved methods for this has been a focus of the National Cooperative Highway Research Program (NCHRP) and DOT. Also, officials from an MPO whom we met with, noted difficulties in obtaining data from private sources to assist in the planning process, such as future location of intermodal facilities and capital

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<sup>26</sup>TRB, *Special Report 271: Freight Capacity for the 21st Century*.

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acquisition plans from the freight sector, due to the proprietary nature of much of that data. In our prior work,<sup>27</sup> we identified data quality as a pivotal concern in measuring and forecasting traffic flow, such as the number of passengers using public transportation to get to the airport, compared with the number of passengers using private vehicles, because reliable and complete data are not always available. This information is generally collected through surveys of passengers at airports. However, since these surveys can be very expensive to conduct, only airports with significant financial resources conduct these surveys, and then only every few years. Moreover, such surveys tend to result in low response rates, which are often associated with biased estimates due to differences between passengers who agree to participate and those who do not participate in the survey.

Even if data are available, analyzing the data can be complex, and some state and local transportation agencies may not have sufficient human capital to do so. Our work indicated that opportunities for increased efficiencies through intermodal transportation are compromised because of the limited ability of MPOs to apply analytical techniques that incorporate the benefits of intermodal transportation. For example, as we have previously reported,<sup>28</sup> the deployment of Intelligent Transportation Systems technology has been limited by the lack of technical training and limited focus on operational tools at state DOTs and MPOs. Transportation officials with whom we met said a lack of human capital capacity at some MPOs limits their ability to conduct appropriate analyses that would incorporate the benefits of intermodal transportation.

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<sup>27</sup>[GAO-05-727](#).

<sup>28</sup>GAO, *Highway Congestion: Intelligent Transportation Systems' Promise for Managing Congestion Falls Short, and DOT Could Better Facilitate Their Strategic Use*, [GAO-05-943](#) (Washington, D.C.: Sept. 14, 2005).

## DOT Is Taking Action to Address Barriers and Implement Congress' Goal, but Efforts Are Not Coordinated by One Office

DOT, including its Office of Intermodalism, is taking a number of actions to address each of the three key barriers to intermodal transportation. For example, DOT provided guidance to simplify access to existing funding and recommended ideas for congressional consideration to make more funding available, created working groups to increase collaboration, and made data and analysis tools available. In addition, DOT took some steps, particularly with regard to freight, toward implementing Congress' intermodal goal. While all of these actions are aimed at addressing the barriers and supporting Congress' intermodal goal, collectively they fall short of creating a coordinated approach to intermodal transportation. DOT's actions to address barriers are not coordinated by any single office or operating administration and are therefore fragmented across the department. The Office of Intermodalism, which has responsibility for, among other things, coordinating and initiating federal intermodal policy, is primarily focused on research and analysis. No other office or operating administration within DOT has taken the lead in coordinating DOT's efforts in its place.

## Actions Have Been Taken to Address Each Barrier

DOT—through several operating administrations and the Office of Intermodalism—is taking actions to address all three intermodal barriers. Table 1 provides an overview of some of these actions, and the sections that follow discuss actions on each barrier in more detail.

**Table 1: Overview of Selected DOT Ongoing Actions to Address Intermodal Barriers**

Barrier	DOT actions	Operating administration
Limited specific funding for intermodal projects	<ul style="list-style-type: none"> <li>Created the <i>Finance Guidebook for Freight</i>, which summarizes the potential funding available for freight projects. This guidebook will be distributed through FHWA's division offices and Web site; and a workshop is planned for 2007.</li> </ul>	<ul style="list-style-type: none"> <li>FHWA</li> </ul>
	<ul style="list-style-type: none"> <li>Developed guidance called <i>Best Practices—Surface Access to Airports</i>, which describes the use of Airport Improvement Program funds for transit connections to airports.</li> </ul>	<ul style="list-style-type: none"> <li>FAA, FHWA, and FTA</li> </ul>
Limited collaboration among stakeholders	<ul style="list-style-type: none"> <li>Established an Intermodal Council to increase discussion between operating administrations within DOT.<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>FHWA, FAA, MARAD, FRA, FTA, the Federal Motor Carrier Safety Administration (FMCSA), RITA, NHTSA, Saint Lawrence Seaway Development Corporation, and OST</li> </ul>
	<ul style="list-style-type: none"> <li>Created the Freight Industry Roundtable outreach effort, which led to creation of the Draft Framework for a National Freight Policy.</li> </ul>	<ul style="list-style-type: none"> <li>OST-Office of Freight and Logistics, FRA, FHWA, MARAD, and FAA</li> </ul>

Barrier	DOT actions	Operating administration
Limited Resources to Evaluate Intermodal Projects	<ul style="list-style-type: none"> <li>Participates in the Intermodal Freight Technology Working Group, which works to identify technology solutions to freight transportation issues.</li> </ul>	<ul style="list-style-type: none"> <li>FHWA, Intelligent Transportation Systems Joint Program Office, and industry groups</li> </ul>
	<ul style="list-style-type: none"> <li>Implemented the <i>Transportation Planning Capacity Building</i> (TPCB) program, which is a Web-based program for state DOTs and MPOs to share information. Information on how to include freight interests in the planning process has been posted.</li> </ul>	<ul style="list-style-type: none"> <li>FTA and FHWA</li> </ul>
	<ul style="list-style-type: none"> <li>Manages the Freight Professional Development Program, which offers training, education, technical assistance, and a resource library to assist state and local officials as well as private stakeholders in freight transportation planning and systems. Examples of training offered include the Web-based <i>Talking Freight Seminars</i> series, the Workshop on <i>Engaging the Private Sector in Transportation Planning for States</i>, and the <i>Freight Planning LISTSERV</i>, which provides a forum for information exchange.<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>FHWA</li> </ul>
	<ul style="list-style-type: none"> <li>Utilized the Intermodal Transportation and Inventory Costing Model State Tool to assist in determining the most efficient modal choice for moving freight.</li> </ul>	<ul style="list-style-type: none"> <li>FHWA, FRA and OST-Policy</li> </ul>
	<ul style="list-style-type: none"> <li>Initiated the Passenger Intermodal Connectivity Project to develop a database on intermodal facilities and their geographic coordinates.</li> </ul>	<ul style="list-style-type: none"> <li>RITA-Bureau of Transportation Statistics (BTS) and the Passenger Intermodal Connectivity Study Working Group, which also includes FRA, FHWA, FTA, FAA, and MARAD.</li> </ul>

Source: GAO analysis of DOT information.

<sup>a</sup>The Intermodal Council and the Freight Professional Development Program are congressional requirements. The Intermodal Council is the fulfillment of the Intermodal Transportation Advisory Board, required by law under 49 U.S.C. 5502. FHWA manages the Freight Professional Development Program, in accordance with the inclusion of freight professional capacity building in SAFETEA-LU.

### Actions to Improve Access to Funding for Intermodal Projects

Congress has created some funding and credit assistance programs that are not limited to specific transportation modes (see table 2); and for some of these programs, DOT has issued guidance for managing the process of providing funding to projects that qualify. In addition, for transportation programs that are limited to specific transportation modes, DOT has also developed some guidance to clarify how state DOTs and MPOs can obtain this type of funding for intermodal projects. For example, FHWA partnered with the American Association of State Highway and Transportation Officials to create a Web-based clearinghouse of information on innovative finance programs for transportation projects. The Web site, established through a National Cooperative Highway Research Program project, provides information on technical topics, projects, legislation, publications, application guidance, and institutional issues relevant to all modes of surface transportation. In addition, in

September 2006, FAA distributed guidance called Best Practices-Surface Access to Airports to airport planners, which outlines the steps that airport sponsors can take to access surface transportation funding. In January 2007, this document was made available on FAA's Web site.

**Table 2: Description of Some Federal Programs that Can Fund Intermodal Projects**

<b>Program</b>	<b>Description</b>
Projects of National and Regional Significance	This program provides \$1.8 billion to congressionally designated projects to fund transportation infrastructure projects that have relevance and produce benefits on a national or regional level. Benefits could include improving economic productivity, facilitating international trade, relieving congestion, and improving safety.
National Corridor Infrastructure Improvement Program	This program provides \$1.948 billion of congressionally designated funds for the construction of highway projects in corridors of national significance to promote economic growth and international or interregional trade.
Surface Transportation Program (STP)	STP provides flexible funding that may be used by states and localities for projects on any federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities. According to DOT officials, STP funds can benefit freight movement on highways as well as freight movement on rail lines, in that STP funds can be used to raise bridges and move roads to allow for rail expansion. In addition, rail grade crossing improvements are also eligible because of the safety benefits. Funding for this program was authorized at \$6.37 billion in 2007.
Freight Intermodal Distribution Pilot Grant Program	The only federal funding specifically for freight intermodal transportation projects, this program provides grants to states for projects that facilitate and support intermodal freight transportation initiatives to relieve congestion and improve safety. Congress has allocated \$30 million to five states.
TIFIA	Allowed DOT to provide credit assistance directly to public-private sponsors of major surface transportation projects to help them gain access to capital markets. To qualify for TIFIA credit assistance, projects must be supported in whole or in part from user charges or other non-Federal funding sources.
Railroad Rehabilitation and Improvement Financing (RRIF)	Provided \$35 billion in loan authority to DOT to finance improvements to rail infrastructure.
State Infrastructure Bank (SIB)	SIBs are capitalized with federal and state funds. Each SIB operates as a revolving fund and can finance a wide variety of surface transportation projects.
Tax-Exempt Facility Bonds	Tax-Exempt Facility Bonds includes any bonds issued where 95 percent or more of the net proceeds of which are to be used to provide qualified highway or surface freight transfer facilities. SAFETEA-LU broadened the qualifications for tax-exempt private activity bonds to include intermodal freight facilities, establishing a \$15 billion ceiling for such bonds.
CMAQ	CMAQ funds must be used for transportation projects that will reduce transportation-related emissions in areas with poor air quality. SAFETEA-LU required DOT, in consultation with the Environmental Protection Agency, to evaluate and assess a representative sample of CMAQ projects to determine the direct and indirect impacts of the projects on air quality and congestion to ensure that the CMAQ program is being effectively implemented. In fiscal year 2007, this program was funded at \$1.72 billion.

Source: GAO analysis of SAFETEA-LU and DOT information.

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DOT also proposed other funding avenues for congressional consideration as part of SAFETEA-LU. DOT's options with regard to making funding available for intermodal transportation projects are limited, in that the agency cannot create new funding sources or change the requirements for receiving federal funds. Doing so requires congressional action. DOT's reauthorization proposal included proposals to make more funds available for intermodal transportation projects; however, Congress did not include these proposals in SAFETEA-LU. For example:

- To improve the condition of intermodal connectors (roads that connect intermodal terminals to the NHS), which are typically in disrepair, DOT proposed requiring each state to set aside 2 percent of states' NHS apportionment. Exemptions to the set-aside would have been allowed if states could show that the connectors were in good condition and providing an adequate level of service.
- DOT also proposed dedicating \$100 million per year to fund construction, renovation, or improvement of intermodal passenger facilities. This proposal focused on connections with intercity buses at airports, public transportation facilities, train stations, and seaports.

#### Actions to Improve Intermodal Collaboration

As required by Congress, DOT has taken several actions that were designed to increase intermodal collaboration. For example, in February 2007, DOT established an Intermodal Council, which is the fulfillment of the Intermodal Transportation Advisory Board required by 49 U.S.C. 5502. According to DOT officials, this council is convened by OST, which brings the operating administrators or their deputies from FHWA, FAA, MARAD, FRA, FTA, FMCSA, RITA, NHTSA, and Saint Lawrence Seaway Development Corporation, together to discuss intermodal issues. To date, there have been two meetings and a schedule has been established for the next few months. The council has covered two topics—human factors and transportation safety, and transportation services in rural areas—not related to intermodal barriers. In addition, the Norman Y. Mineta Research and Special Programs Improvement Act moved the Office of Intermodalism and the Bureau of Transportation Statistics (BTS) to RITA in an effort to encourage more effective sharing of data and resources directed toward research, development, and technology, and remove inefficiencies and duplicative efforts.<sup>29</sup> Also, in the Coast Guard

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<sup>29</sup>GAO, *Transportation Research: Opportunities for Improving the Oversight of DOT's Research Programs and User Satisfaction with Transportation Statistics*, GAO-06-917 (Washington, D.C.: Aug. 15, 2006).

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Authorization Act of 1998, Congress directed DOT to convene a task force to assess the adequacy of the Marine Transportation System (MTS), which consists of waterways, ports, and their intermodal connections. The task force reported a set of recommendations to Congress in 1999, which led to the creation of two entities—an advisory council and an interagency committee. The advisory council is designed to provide an avenue for the maritime industry to have input into issues regarding the MTS, while the interagency committee is designed to improve coordination among the 18 federal agencies with responsibilities related to the MTS. The interagency committee also is designed to ensure the development and implementation of national MTS policies consistent with national needs and report its views and recommendations for improving the MTS to the President.

Separate from these congressional requirements, DOT has also taken several steps on its own, some examples include:

- As previously described, in 1995, DOT proposed to reorganize the department by merging the five surface transportation operating administrations (FHWA, FTA, FRA, NHTSA, and part of MARAD) into one, which would have been called the Intermodal Transportation Administration. As we reported in the past, merging these operating administrations could have helped to promote the intermodal planning and decision-making goals set forth in ISTEA.<sup>30</sup> Congress set aside DOT's reorganization proposal and maintained its organizational structure. According to DOT officials, this resulted in a more incremental approach to intermodalism.
- DOT has established several working groups, including the Freight Policy Working Group, the Intermodal Freight Technology Working Group, and the Passenger Intermodal Connectivity Study Working Group. The Freight Policy Working Group advised the Office of the Secretary for Policy (OST-P) on the development of the Draft Framework for a National Freight Policy and includes representatives from OST-P, MARAD, FHWA, FRA, FMCSA, and RITA. The Intermodal Freight Technology Working Group is composed of representatives from FHWA, the Intelligent Transportation Systems Joint Program Office, and private industry to collaborate on freight issues and identify technology based solutions. The Passenger Intermodal Connectivity Study Working Group was established to assist BTS in identifying intermodal passenger facilities and quantifying

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<sup>30</sup>GAO, *Surface Transportation: Reorganization, Program Restructuring, and Budget Issues*, GAO/T-RCED-95-103 (Washington, D.C.: Feb. 13, 1995).

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the degree of connectivity that those facilities offer to travelers and includes representatives from FRA, FTA, FAA, RITA, FHWA and MARAD.

- To increase intermodal collaboration at the state, regional, and local levels, FTA and FHWA jointly implemented the Transportation Planning Capacity Building Program. This program provides information, training, and technical assistance on federal planning regulations to help transportation professionals create plans and programs that respond to the needs of the many users of their local transportation systems. The program has a Web site to disseminate information to state and local transportation officials, and also convenes conferences and meetings. Information on how to include freight interests in the planning process has been posted to the Web site. In a similar initiative, FHWA published guidance to assist MPOs in creating public-private freight advisory committees for their regions. The document included examples of MPOs that had successfully incorporated the freight community into their planning process, challenges faced by MPOs when approaching freight stakeholders, and best practices for MPOs to consult when including private-sector stakeholders in their planning processes.

#### Actions to Improve Availability of Resources to Evaluate Intermodal Transportation

DOT has made some data on intermodal transportation available on its Web site and has also provided guidance on how to analyze data. For example, within RITA, BTS is working on the Passenger Intermodal Connectivity Project, which is a database on all passenger intermodal facilities and includes the facilities' geographic coordinates. As of April 2007, BTS had completed the portion of the study that includes data on connections at intercity rail stations, which according to DOT officials, should have been completed for all airports by the end of April 2007. Following completion of the data collection for these two modes, BTS anticipates releasing information describing the study and the type of data, which will be available to interested parties. Subsequent phases of the study will include ferry facilities, commuter and transit rail stations, and intercity bus stations. Each phase will add that mode's terminals to the database and be accompanied by an analytical report. A final report quantifying the degree of connectivity in the passenger transportation system is anticipated to be issued in early 2009. BTS also conducts the Commodity Flow Survey, which collects freight movement information across all modes. Also, within RITA, the Office of Intermodalism is engaged with TRB in establishing a National Cooperative Freight Research Program (NCFRP), with planning and data resource objectives that are similar to those of the NCHRP.

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Other DOT operating administrations have also implemented a number of actions to make data and analysis tools more available to allow transportation stakeholders to evaluate intermodal transportation projects. For example:

- FHWA manages the Freight Professional Development Program, in accordance with the inclusion of freight professional capacity building in SAFETEA-LU.<sup>31</sup> The program offers training, education, technical assistance, and a resource library to assist state and local officials as well as private stakeholders in freight transportation planning and systems. Examples of training offered include the Web-based Talking Freight Seminars series, the workshop on Engaging the Private Sector in Transportation Planning for States, and the Freight Planning LISTSERV, which provides a forum for information exchange. The Talking Freight Seminars are net-conference seminars that are no-cost and include a presentation followed by audience question and answer. Some of the state and local transportation officials we met with expressed appreciation for the Talking Freight resource.
- FHWA developed a Freight Analysis Framework to forecast freight flows along national corridors and through nodes, and released Multi-Pollutant Emissions Benefits of Transportation Strategies in November 2006, which outlined how to evaluate the environmental benefits of alternative transportation strategies, including intermodal facilities.
- In 2006, the Office of Freight and Logistics in OST-P developed a framework called “Guide to Quantifying the Economic Impacts of Federal Investments in Large-Scale Freight Transportation Projects.” According to DOT officials, the guide incorporates analytical elements used in planning three complex and costly freight projects in Baltimore, Chicago, and Southern California. In developing the guide, the Office of Freight and Logistics sought input from transportation planners and economists from FHWA, FRA, and MARAD, and industry associations, including the Association of American Railroads. The guide is available on DOT’s freight Web site.
- BTS Geospatial Information Program released the Intermodal Freight Terminal dataset, which is part of the National Transportation Atlas Database. The dataset includes information on the location of intermodal

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<sup>31</sup>According to DOT officials, the Freight Professional Development Program was initiated prior to the passage of SAFETEA-LU and has been expanded with the requirements in SAFETEA-LU.

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terminals and specific characteristics for each, including the primary function of the facility, the modes which use the facility, type of freight moving through the facility, and the direction of freight transfer between modes (i.e., highway to rail).

- FAA and FHWA worked together on the Airport Ground Access Planning Guide, which included performance measures and outlined data collection methods.

To improve the professional capacity of state DOTs in regard to freight mobility, DOT proposed State Freight Transportation Coordinators in every state for congressional consideration in its SAFETEA-LU reauthorization proposal, but this proposal was not included in the final bill. The coordinator would have been responsible for fostering public and private sector collaboration needed to implement complex solutions to freight transportation and freight transportation gateway problems, including coordination of metropolitan and statewide transportation activities with trade and economic interests and coordination with other states, local Department of Defense officials, local Department of Homeland Security officials, agencies, and organizations to find regional solutions to freight transportation problems. The coordinator would also have been responsible for advancing freight professional capacity building programs for the state.

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### **Additional Actions DOT Has Taken Toward Implementing Congress' Intermodal Goal**

In addition to the actions taken to address the three intermodal barriers, DOT has taken actions toward implementing Congress' goal of the National Intermodal System Improvement Plan. For example, SAFETEA-LU requires RITA, through the Office of Intermodalism, to conduct a comprehensive assessment and forecast of the National Intermodal Transportation System's impact on mobility, safety, energy consumption, the environment, technology, international trade, economic activity, and quality of life in the United States. Also according to SAFETEA-LU, the plan is to include recommendations for improving intermodal policy, transportation decision making, and financing to maximize mobility and the return on investment of federal spending on transportation. An initial progress report is required to be submitted to Congress by August 2007, and the plan is required to be submitted to Congress by August 2009. According to officials from the Office of Intermodalism, they are currently developing a limited version of the plan, focusing exclusively on freight intermodal transportation. For example, the September 2007 initial progress report will have five major elements addressing freight information, including a systems overview, a baseline of DOT's freight-

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related activities, and issues, challenges and trends. Officials from the Office of Intermodalism told us they hope to focus on the strategic aspect of intermodalism and will include passengers, military, and security issues, if funding allows, in the final plan due in 2009, which may include some areas of consideration, but not recommendations. Officials also told us that they did not receive the funding required to develop the full plan as outlined in SAFETEA-LU, which was estimated to be a minimum of \$7 million.

In addition to the plan, some of DOT's operating administrations, including OST-P, took action that could also be considered as steps toward implementing Congress' intermodal goal. For example, in April 2006 DOT released the Draft Framework for a National Freight Policy, which grew out of freight community outreach initiated by the Office of Freight and Logistics in OST-P. The Draft Framework states that the federal government currently has limited jurisdiction over freight transportation, and consequently focuses on facilitating freight transportation through collaborative action between the public and private sectors. DOT officials told us that the Draft Framework was an important part of a new policy initiative to address freight transportation concerns, noting that freight infrastructure capacity is a critical issue due to its importance to the national economy. In addition, a DOT official also noted that the Draft Framework is expected to be a living document, meant to stimulate discussion and local responses. While the Draft Framework is an important first step to address these issues, officials from some of the state DOTs and MPOs with whom we met said the Draft Framework does not specify an appropriate role for the federal government nor does it identify any sources of funding to help achieve the changes called for in the framework.

In May 2006, DOT released the National Strategy to Reduce Congestion on America's Transportation Network. This document outlines a six-point plan to address congestion, including (1) creating Urban Partnership Agreements with "model cities" to implement demonstration projects such as congestion pricing, tolling, express bus services, telecommuting, and flex-scheduling; (2) removing barriers to private-sector investment in the construction, ownership and operation of transportation infrastructure; and (3) establishing a "Corridors of the Future" competition to select 3 to 5 major growth corridors in need of long-term investment, among others. This initiative is in the early stages of implementation, and it is unclear what the outcome will be, or how it will include strategies for addressing inefficient intermodal connections as a tool to reduce congestion.

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## No Office Is Taking the Lead to Coordinate DOT's Actions

While DOT has undertaken a range of actions to address barriers to freight and passenger intermodal transportation, these actions are not coordinated by any single office or operating administration, resulting in fragmented efforts across the department. The current Office of Intermodalism does not fulfill this role, and no other office has been given the responsibility. ISTEA created the Office of Intermodalism in 1991 and placed the following responsibilities within the office:<sup>32</sup>

- coordinate federal policy on intermodal transportation and initiate policies to promote efficient intermodal transportation in the United States;
- coordinate federal intermodal transportation research and conduct additional research as needed; and
- provide technical assistance to states and MPOs (in urban areas with population of at least 1 million) in collecting intermodal-transportation related data, among other responsibilities.

Immediately following the passage of ISTEA, the Office of Intermodalism's activities primarily focused on policy formulation, program implementation, and project development. For example, according to DOT officials, the Office of Intermodalism's staff frequently worked directly with state DOTs and MPOs—and DOT's field offices—to provide data and planning assistance by championing intermodal infrastructure projects and promoting regional cooperation between and among the private sector, state, local and federal governments. The office has also played an important role in advising the Secretary of Transportation and coordinating intermodal policies throughout DOT. According to DOT officials, one way the office did this was by working with FHWA and FTA to help these administrations develop a policy to consider multimodal and integrated transportation needs in statewide and metropolitan planning processes, as required in ISTEA. In an effort to reflect the full spectrum of intermodal elements and the organization of DOT itself, staff with expertise in passenger and freight operations were detailed or transferred to the Office of Intermodalism from FHWA, FTA, FRA, MARAD, and FAA.

The office's initial broad focus has since narrowed considerably. DOT's Under Secretary of Transportation for Policy testified in June 2006 that

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<sup>32</sup>49 U.S.C. 5503.

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much of the narrowing of focus stemmed from congressional actions.<sup>33</sup> For example, the National Highway System Designation Act of 1995 made it optional for state DOTs to develop intermodal management systems, a requirement established in ISTEA. These systems were to provide a process for identifying linkages between modes of transportation, defining strategies for improving the effectiveness of modal interactions, and evaluating and implementing these strategies. According to the Under Secretary's testimony, this change made transportation planning less consistent and implied that a systemic, intermodal vision for transportation might not be so important after all. Besides the congressional changes, DOT's own view of the need for the Office of Intermodalism has changed over time, according to DOT officials. Specifically, the need for the Office to provide technical assistance to states and MPOs in urban areas in collecting data related to intermodal transportation has diminished because state DOTs and MPOs became more familiar with intermodal data and concepts and because BTS makes much of this data available through publications and responses to specific requests. Furthermore, the Under Secretary for Policy testified that financial cutbacks and reduced staffing were also reasons why the Office of Intermodalism moved away from its original operational focus. Collectively, these changes shifted the office's attention to other areas—primarily research and analysis in order to document the benefits of intermodal operations and planning activities to transportation and the economy.

Other more recent changes have also had an effect on the Office of Intermodalism. In 2005, the Office of Intermodalism was moved to RITA as a result of the Norman Y. Mineta Research and Special Programs Improvement Act, although the statutory responsibilities of the office did not change under this move. According to a DOT official, when the office was moved, the Undersecretary for Policy decided to split the office's functions, with the policy-making functions remaining in the OST-P. Specifically, the Office of Freight and Logistics in OST-P was created to continue these policy functions—but only for freight. With the exception of some statutorily required activities, the functions to coordinate and conduct intermodal research remained within the Office of Intermodalism. However, the policy-related responsibility for passenger intermodal

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<sup>33</sup>Jeffrey N. Shane, *Statement of The Honorable Jeffrey N. Shane Under Secretary of Transportation for Policy, U.S. Department of Transportation* (Testimony presented at the Subcommittee on Highways, Transit, and Pipelines; Committee on Transportation and Infrastructure, U.S. House of Representatives (Washington, D.C.: June 15, 2006)).

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transportation was not delegated to any office, though the law places those responsibilities with the Office of Intermodalism. Consequently, no DOT office ensures the coordination of the department's actions to address intermodal barriers for both freight and passengers.

According to DOT officials, passenger intermodal issues have been institutionalized throughout the department and are now ingrained in the policies of various operating administrations; as a result, attention to passenger intermodal transportation at the policy-level within the department is not needed. However, officials from two state DOTs, an MPO, two industry associations, and a transportation expert with whom we met told us that DOT leadership on passenger intermodal transportation is needed to support the planning and implementation of intermodal projects. Specifically, one official from a state DOT told us that the state DOT is very focused on highway issues and any way to support alternative modes of transportation, such as transit, from the federal level would be beneficial. Furthermore, the official told us that FTA and FHWA efforts to promote passenger intermodal transportation does not mean that it has been ingrained throughout the department. This is because FTA and FHWA are still separate administrations with separate pots of money, separate guidelines for eligibility, and different criteria; and these separations do not support the idea of an institutionalized process for passenger intermodal transportation. In addition, an official from an MPO with whom we met noted that passenger intermodal transportation tends to be viewed as a local or regional issue, not a national issue and that DOT should do more to connect local planning decisions to the national level. An official from an MPO told us the organization was not aware of a national policy on passenger intermodal transportation, but stated that it is critically important that one is created. Also, we met with a representative from an industry association who noted that DOT's approach to passengers is incremental and far from comprehensive.

Although the Office of Intermodalism's statutory responsibilities did not change with the move to RITA, the office's primary role is currently focused on conducting and coordinating research and analysis to support DOT in the development and implementation of intermodal transportation policies. In addition, the office has a limited role in developing and coordinating federal policy on intermodal transportation. For example, the Office of Intermodalism is also currently developing a National Intermodal Transportation Systems Improvement Plan, as required by SAFETEA-LU. Through this plan, the office is required to, among other things, make recommendations for intermodal policy improvement—a policy-level function—but this plan, as previously discussed, will be limited and will

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not include recommendations due to the lack of resources available to fulfill this mandate. The Office of Intermodalism helps coordinate federal intermodal policy by participating in various working groups within DOT and with other federal agencies with intermodal purposes. According to officials from the Office of Intermodalism, the office would need additional resources to further fulfill its policy responsibilities that are required by law.<sup>34</sup>

The result of these developments is a blurred responsibility for coordinating DOT's actions to address barriers and advancing intermodal policies. While certain key intermodal transportation functions—such as developing freight intermodal efforts—have been delegated throughout DOT, no office or operating administration within the department is taking the lead in coordinating DOT actions to address intermodal barriers for both freight and passengers. It is not clear which office should take the lead in coordinating DOT's activities related to freight and passenger intermodal transportation. One option would be the Office of Intermodalism because of its statutory responsibilities, although the office does not currently have resources to fully carry out these responsibilities. Another option would be the Office of the Secretary, which is responsible for overseeing the formulation of national transportation policy and promoting intermodal transportation. According to DOT officials, OST's intermodal responsibilities are factored into nearly all of its actions and activities. However, while OST has the appropriate DOT-wide authority, it has been focusing its efforts on freight intermodal transportation.

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## DOT Could Take Actions in the Near Term to Further Address Intermodal Barriers

Based on our analysis and our discussions with transportation officials, there are some actions DOT could take to further address intermodal barriers in the near term, including increasing collaboration between operating administrations and improving the availability of intermodal guidance and resources. Additionally, one office or operating administration within DOT could coordinate these actions, which would unify DOT's efforts to address intermodal barriers. These actions, however, should be considered in the context of the current challenges facing DOT and Congress. The uncertain financial condition of the Highway Trust Fund, the lack of assurance that projects that best meet mobility needs are being selected and funded, and the increasing congestion that is compromising mobility and economic vitality, as

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<sup>34</sup>49 U.S.C. 5503(c).

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described in our 21st Century Challenges report and High-Risk Update,<sup>35</sup> have led us to suggest that DOT and Congress reassess all transportation modes to determine the appropriate federal role, assess funding alternatives, and develop ways to monitor investments to ensure performance. Any actions that DOT takes to better address barriers to intermodal transportation should be consistent with this effort. Furthermore, until these challenges are addressed it is unclear how Congress' goal of a National Intermodal Transportation System will be achieved.

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## Increasing Collaboration between Operating Administrations

Increasing collaboration between operating administrations could help streamline DOT's actions to address intermodal barriers. Since intermodal transportation by its nature involves more than one mode of transportation, often DOT's operating administrations, which oversee particular modes, must work together to coordinate activities. When these administrations do not collaborate and coordinate activities, it can limit the overall effectiveness of the federal effort.<sup>36</sup> Collaboration among DOT's operating administrations has improved over time. For example, officials from FRA told us they collaborate with the Office of Freight and Logistics in OST-P on freight issues and also with FTA and Amtrak due to the shared use of rail for freight and passengers. In another example, officials from FHWA told us their collaboration with FTA is strong due to joint planning regulations and similar field presence, and they said they have more recently strengthened ties with the FRA and MARAD.

Nonetheless, DOT's Strategic Plan for fiscal years 2006 to 2011 notes that the stovepiped organizational structure of public transportation agencies is an obstacle to intermodal transportation.<sup>37</sup> In addition, DOT's Office of Inspector General identified overcoming stovepiped programs and organizational structures that inhibit intermodal trade-offs among transportation solutions, as one of the 10 top management challenges for DOT for fiscal year 2007.<sup>38</sup> Specifically, the report states that the different transportation modes have rarely worked together to determine the best

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<sup>35</sup>GAO-05-325SP and GAO-07-310.

<sup>36</sup>GAO, *Results-Oriented Government: Practices that Can Help Enhance and Sustain Collaboration Among Federal Agencies*, GAO-06-15 (Washington, D.C.: Oct. 21, 2005).

<sup>37</sup>DOT's Strategic Plan 2006-2011.

<sup>38</sup>DOT's Performance and Accountability Report for fiscal year 2006.

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solution to congestion in any particular bottleneck, when the solution may be to develop alternatives to building new highways, such as freight rail, transit, intercity passenger rail, barge, or developing an intermodal solution. The report also found that because the department is organized by transportation mode and transportation funding typically is used to support a single modal solution, the department needs to convince stakeholders, including its own employees, that congestion, and the intermodal trade-offs required to solve congestion, will be a long-term priority. Also, in 2000 TRB surveyed conference participants asking them to rate DOT on how well it had implemented the National Commission on Intermodal Transportation's recommendations from 1994, which included a recommendation to restructure DOT to better support intermodal transportation.<sup>39</sup> According to survey respondents, there had been little progress on restructuring DOT. Respondents believed that more action was needed at the federal level to achieve such a restructuring, with some suggesting additional legislation. As reflected in the comments, respondents, which included representatives from both the public and private sector, want to see more DOT leadership initiatives that enable and encourage responsive intermodal developments.

One potential venue for establishing greater coordination is the recently established Intermodal Council, though more work is needed to ensure the council can deal with barrier-related issues and fully meet the intended purpose of the Intermodal Transportation Advisory Board in making recommendations on how best to coordinate federal policy on intermodal transportation and initiate policies to promote efficient intermodal transportation in the United States. Increasing coordination between operating administrations, through such mechanisms as the Intermodal Council, could bring coherence and awareness to the various actions DOT has taken to address barriers and determine additional actions to make it easier for state and local transportation decision makers to plan and finance intermodal projects. However, it is unclear how this council will address the intermodal barriers we have identified. To date, the council has met twice, and the initiatives that were discussed focused on human factors and transportation safety, and transportation services in rural areas. We have reported on eight practices to enhance and sustain agencies' collaborative efforts, which could help DOT enhance the

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<sup>39</sup>TRB, Committee on the Intermodal Challenge: Freight Transportation Issues for the 21st Century. *Global Intermodal Freight: State of Readiness for the 21st Century*. Report of a Conference (Washington, D.C.: 2001).

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Council’s collaborative efforts. These practices include defining and articulating an outcome, agreeing on role and responsibilities, and developing mechanisms to monitor, evaluate, and report on the results of the collaborative effort.<sup>40</sup>

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## Improving Availability of Intermodal Guidance and Resources

As previously described, several of DOT’s operating administrations—including FHWA, FAA, RITA and FRA, have developed guidance, bulletins, training, conferences, data sets, and other capacity building resources to assist state and local organizations in planning and implementing intermodal transportation. However, officials from some of the state DOTs and MPOs said that they needed particular resources. DOT officials told us that some of these resources are available. For example, an official from an MPO whom we spoke with told us that it has been challenging to assess both roadway and intermodal projects because of the limited ability to measure and compare economic benefit. In addition, the official told us that technical assistance or training on the business of logistics and its relation to transportation planning would assist them in modeling and identifying congestion and system gaps that need to be addressed. According to DOT officials, a training course called “Integrating Freight into the Transportation Planning Process, Phase 1” is available through the National Highway Institute, and recently FHWA and OST organized a forum on logistics education, which examined the training needs required for professionals in regards to logistical aspects of public sector transportation planning.

Some of the officials with whom we met said the information DOT provides is helpful, although not easily accessible, in that the information is on the different operating administrations’ Web sites. Creating a centralized Web-based location for this information would appear to be a useful way to address current barriers and to make state and local officials aware of all the resources available. These state and local officials told us it would be helpful to have a central location on DOT’s Web site to access intermodal information and link the different modal efforts. The Office of Intermodalism does not have a Web presence, which limits the ability of states and MPOs to access the Office of Intermodalism and its activities. Further, many officials from the state DOTs and MPOs with whom we met said they were not aware of the Office of Intermodalism or its activities. The Office of Freight and Logistics Web site has not been updated since

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<sup>40</sup>[GAO-06-15](#).

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2003 and does not have information on the Office of Freight and Logistics current mission or activities, such as the Draft Framework for a National Freight Policy. DOT does have a Web site dedicated to freight transportation, on which the Draft Framework for a National Freight Policy can be found; however, none of the officials from the state DOTs or MPOs we met with were aware of this Web site. Improving the availability and awareness of intermodal resources and guidance could assist state DOTs and MPOs in comparing intermodal transportation projects with more traditional transportation projects and also in measuring benefits derived from intermodal projects, which could improve the efficiency of freight and passenger movement.

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### Efforts Need to Be Considered in the Context of Overall Challenges Facing DOT and Congress

Our prior work, including the 21st Century Challenges Report<sup>41</sup> and High-Risk Update,<sup>42</sup> has questioned the ability of current federal programs, such as programs funded through the Highway Trust Fund,<sup>43</sup> to provide the robust growth that many transportation advocates believe is required to meet the nation's mobility needs, particularly as congestion increases on all modes from growing freight and passenger travel. Thus, the efficient use of federal funds is extremely important, yet the current system for planning and financing transportation is not well-suited to advancing intermodal transportation projects—including both passenger and freight transportation—indicating that fundamental changes that use a broader, systemwide approach to transportation investment decisions are needed.<sup>44</sup> Given these challenges and the complexity of the nation's transportation system, which encompasses many modes on systems that are owned, funded, and operated by both the public and private sectors, reexamining existing government transportation programs and commitments may be necessary. In the past, we have stated that Congress—and for some issues, DOT—should reassess the following issues:<sup>45</sup>

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<sup>41</sup>[GAO-05-325SP](#).

<sup>42</sup>[GAO-07-310](#).

<sup>43</sup>In January 2007, we identified the financing of the nation's transportation system as one of the new high-risk areas.

<sup>44</sup>[GAO-06-855T](#).

<sup>45</sup>[GAO-07-310](#).

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- the appropriate federal role and strategy in funding, selecting, and evaluating transportation investments;
  - mechanisms to seek alternative sources of revenues; and
  - funding allocation and monitoring methods to ensure the equity, efficiency, accountability, and performance of transportation investments.

Conducting this type of reassessment for all transportation modes could better position the federal government to address these challenges and lead to an efficient intermodal transportation system. Furthermore, until these challenges are addressed it is unclear how Congress' goal of a National Intermodal Transportation System will be achieved.

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## Conclusions

The National Intermodal Transportation System that Congress envisioned in 1991 has not come to fruition because of barriers that impede the formulation and coordination of intermodal policy at the federal level, which makes it difficult for intermodal projects to be considered on equal footing with other projects at the state and local level. DOT's actions to address barriers—particularly for freight transportation—represent progress in promoting intermodal transportation. However, DOT's actions to address barriers and, ultimately, to achieve Congress' goal have fallen short, in part, due to the difficulty in implementing a broad goal without specific congressional direction or resources and the absence of an operating administration or office that leads and coordinates DOT's efforts. As a result, these activities are fragmented throughout DOT's Office of the Secretary and various operating administrations, including the Office of Intermodalism within RITA. Furthermore, DOT is limited in its ability to fully implement Congress' 1991 National Intermodal Transportation System goal because of the federal funding structure of transportation programs and because of the stovepiped structure of transportation programs and funding mechanisms by mode, which impedes the development of intermodal transportation projects. DOT proposed a reorganization, but Congress did not agree to it, leaving DOT in the position of having to take a more incremental approach to intermodal transportation. Nonetheless, there are further actions that DOT could take in the near term to lessen the impact of the barriers to intermodal transportation, including increasing collaboration between operating administrations and improving availability of intermodal guidance and resources. The Office of Intermodalism, while statutorily responsible for coordinating and initiating federal policy on intermodal transportation, does not have the resources to fully carry out these important

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responsibilities. The Office of the Secretary's broad responsibility for overseeing national transportation policy and promoting intermodal transportation seems to suggest that OST would be a logical choice to lead and coordinate DOT's intermodal efforts and these near-term actions.

Beyond these near-term actions, the nation is at a crossroads regarding the future of intermodal transportation policy. As we have said in the past, the uncertain financial condition of the Highway Trust Fund, the lack of assurance that projects that best meet mobility needs are being selected and funded, and the increase in congestion on all modes have necessitated a fundamental reassessment of existing federal transportation programs, including the appropriate federal role and funding strategy. As Congress and DOT conduct this reassessment, it will be important to consider intermodal transportation in this larger context in order to move closer to the goal of a National Intermodal Transportation System.

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## Recommendation for Executive Action

To address barriers to intermodal transportation and make it less difficult for state and local transportation agencies to plan and construct intermodal projects, we recommend that the Secretary of Transportation direct one office or operating administration to lead and coordinate the following near-term actions:

- Increase collaboration between operating administrations and
- Improve availability of intermodal guidance and resources by publicizing the availability of existing federal resources on intermodal transportation and develop a mechanism to make these resources easily accessible.

We recognize that the Office of Intermodalism is statutorily responsible for coordinating and initiating federal policy on intermodal transportation; however, the office does not have the resources to fully carry out these important responsibilities and is currently focused on conducting and coordinating research and analysis. As a result, DOT may want to seek legislative authority to respond to our recommendation.

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## Agency Comments

We provided a draft of this report to DOT for review and comment. We received written comments, in which the department agreed to consider the report's recommendation and stated that the report provides a starting point for constructive discussions between the Executive Branch and Congress on innovative solutions to intermodal challenges. (See app. II for DOT's written comments.) The comments also highlighted specific

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intermodal efforts that the department has undertaken. The department also acknowledged obstacles to intermodal transportation—such as the existing funding and oversight structure and the increasing use of project designated funding in each reauthorization since ISTEA—and suggested that further congressional action is needed to overcome these obstacles. In addition, the department offered technical comments, which we incorporated where appropriate.

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As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to the appropriate congressional committees and to the Secretary of Transportation. We will also make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-2834 or [siggerudk@gao.gov](mailto:siggerudk@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix III.

Sincerely yours,

A handwritten signature in black ink that reads "Katherine Siggerud". The signature is written in a cursive, flowing style.

Katherine Siggerud  
Director, Physical Infrastructure Issues

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# Appendix I: Scope and Methodology

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To identify the barriers that inhibit intermodal transportation, we reviewed reports from the National Commission on Intermodal Transportation, GAO, the Transportation Research Board (TRB), the Intermodal Transportation Institute, the Congressional Budget Office, the Texas Transportation Institute, and the Federal Transportation Advisory Group, among others. We also conducted semistructured interviews with several industry associations to identify intermodal barriers. In addition, we conducted semistructured interviews with officials from DOT's Office of the Secretary for Policy (OST-P) and seven operating administrations, four state-level DOTs, four metropolitan planning organizations (MPO), and several university transportation centers to understand whether and how the intermodal barriers we identified from reports and interviews impeded the planning and implementation of intermodal transportation projects for freight and passengers. Many officials, who have been involved with intermodal transportation projects for freight and passengers, provided feedback on the list, and contributed corrections and additions to the list.

We selected seven operating administrations based on the specific role the administration has in passenger and/or freight intermodal transportation or intermodal policy. We did not interview officials from the remaining DOT operating administrations, such as the National Highway Traffic Safety Administration, because we determined that their roles in passenger and/or freight intermodal transportation are limited. We selected the four state DOTs and the four MPOs—based on recommendations from the DOT officials and a transportation expert we interviewed—as state DOTs and MPOs that were involved in intermodal transportation projects for freight and passengers, the size of the population of the state and MPO area, and geographic dispersion. In addition, we interviewed several industry associations, university transportation centers, and a transportation expert recommended to us by DOT officials to better understand the benefits and challenges of intermodal transportation. We also met with representatives from private companies, including APL Limited, APM Terminal North America/Maersk Shipping (logistics companies), Burlington Northern Santa Fe Railway (freight rail company), the Ports of Los Angeles and Long Beach, and the Alameda Corridor East Construction Authority. See table 3 for a list of all of the transportation agencies and organizations we contacted.

To determine what actions DOT and the Office of Intermodalism is taking—and could take—to address intermodal barriers and support the intermodal goal, we analyzed information gathered from our interviews with officials from several of DOT's operating administrations, the Office

of Intermodalism, state DOTs, MPOs, industry associations, and university transportation centers. The interviews were designed to gain federal, state and local officials' perspectives on a number of topics, including the role of DOT in intermodal transportation; the barriers to intermodal transportation; and DOT's actions to address the barriers. We also analyzed legislative histories, agency documentation on the actions DOT has been taking to address intermodal barriers and reviewed published reports from GAO, TRB, and others about intermodal transportation issues for freight and passengers and the future of transportation policy in the United States.

**Table 3: List of Transportation Agencies and Organizations Contacted**

<b>DOT's operating administrations</b>
FAA
FHWA
FMCSA
FRA
FTA
MARAD
OST
RITA
<b>State DOTs</b>
California (Caltrans)
Florida
Illinois
New Jersey
<b>MPOs</b>
Delaware Valley Regional Planning Commission (Philadelphia, PA)
Metro (Portland, OR)
North Central Texas Council of Governments (Dallas/Fort Worth, TX)
Southern California Association of Governments
<b>University transportation centers</b>
Intermodal Transportation Institute at Denver University
METRANS Transportation Center at the University of Southern California and California State University, Long Beach
Mountain-Plains Consortium: Center of Excellence for Rural and Intermodal Transportation at North Dakota State University
National Center for Transit Research at the University of South Florida

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**Industry associations**

Air Transport Association

American Association of Port Authorities

American Association of State Highway and Transportation Officials

American Public Transportation Association

American Trucking Association

Association of American Railroads

Association of Metropolitan Planning Organizations

Intermodal Association of North America

Surface Transportation Policy Project

**Transportation expert**

Dr. Robert Martinez, Vice President, Marketing Services and International, Norfolk Southern Corporation. (Former Associate Deputy Secretary of the U.S. DOT, former Secretary of Transportation for Virginia, and member of the Comptroller General's Advisory Committee)

**Private industry**

Alameda Corridor East Construction Authority

APL Limited

Burlington Northern Santa Fe Railway

APM Terminals North America/Maersk Shipping

Ports of Los Angeles and Long Beach

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Source: GAO.

We assessed the reliability of the information contained in this report through interviews with knowledgeable officials and reviews of documentation and corroborating information, and we determined it was sufficiently reliable for our purposes. We conducted our work from August 2006 through May 2007, in accordance with generally accepted government auditing standards.

# Appendix II: Comments from Department of Transportation



U.S. Department of  
Transportation

Assistant Secretary  
for Administration

400 Seventh St., S.W.  
Washington, D.C. 20590

**JUN 12 2007**

Ms. Katherine Siggerud  
Director, Physical Infrastructure Issues  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20458

Dear Ms. Siggerud,

The Department of Transportation has made significant progress in coordinating the efforts of its modal operating administrations to develop intermodal transportation system improvements. Intermodal projects can offer improved links between highways, rail, transit, aviation, and maritime modes. These efforts, which are based on congressional direction beginning with the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and continuing through departmental initiatives such as One DOT and the Southern California National Freight Gateway Team, have enabled the Department to integrate intermodal objectives in its planning, program implementation and research activities. The evolution of a unified departmental approach has led to intermodal successes including projects in Chicago, Denver, Miami, New Haven, and the Port of Long Beach. Each of these projects required effective communication and coordination among multiple operating administrations.

Within the Department, the Office of the Secretary (OST) provides a focal point for intermodal activities and offers the perspective and leadership necessary to address and coordinate efforts on intermodal transportation issues. OST's intermodal focus starts with the Secretary and her Executive Management Team meetings, which are intended to coordinate actions among the Department's leadership, and continues through each of the organizations within OST. OST's intermodal leadership is particularly evident in examples ranging from its coordination of the transportation response to Hurricane Katrina, to its leadership on the Department's Credit Council, an intermodal team intended to provide fully coordinated and integrated review and oversight of the Department's transportation loan and loan guarantee portfolio. The Department's ongoing Congestion Initiative also promotes systemic intermodal objectives, as evidenced by its Urban Partnership Agreements component, which has received a wide range of proposals from every major city in the United States. These proposals

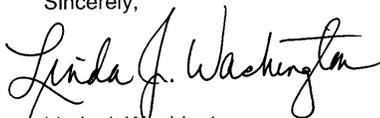
are being reviewed by an intermodal team of representatives from all of the modal operating administrations. OST's efforts have also been enhanced through the Department's Intermodal Council, which is intended to further strengthen our intermodal focus.

Despite the progress that has been achieved, obstacles remain in advancing intermodal programs and projects. One key obstacle is the funding and oversight structure that remains keyed to individual transportation modes, and the increasing use of project designated funding in each reauthorization since ISTEA. A dedicated, discretionary funding stream for intermodal projects could greatly facilitate additional focused intermodal activities. The Department requires sufficient resources to provide vigorous and meaningful intermodal leadership. It also requires the flexibility to use these resources to create, implement and manage programs which focus on the most worthy intermodal transportation projects. As resources become increasingly constrained, the Department must be empowered to focus significant project investments to address national and regional needs and leverage those investments to achieve maximum benefits. The Department has demonstrated the capability to take such actions. For example, programs such as the Federal Transit Administration's New Starts Program have highlighted the Department's ability to focus discretionary funding on those projects with demonstrated benefits, local commitment, and the management skills necessary to bring them to fruition.

The Government Accountability Office analysis provides a starting point for constructive discussions between the Executive Branch and Congress on innovative solutions to intermodal challenges. The Department will consider the draft report's recommendation to designate a specific office to lead intermodal actions; however, creating a dedicated funding stream for intermodal projects based upon intermodal performance criteria and refocusing the appropriation and oversight processes from a modal to an intermodal structure may offer greater potential for strengthening the Department's intermodal efforts.

We appreciate the opportunity to offer comments on the draft report. Please contact Martin Gertel, Director of Audit Relations, on 202-366-5145 with any questions.

Sincerely,



Linda J. Washington

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# Appendix III: GAO Contact and Staff Acknowledgments

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## GAO Contact

Katherine Siggerud (202) 512-2834 or [siggerudk@gao.gov](mailto:siggerudk@gao.gov)

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## Staff Acknowledgments

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