U.S. Department
of Transportation
**Federal Highway
Administration**

# FUNDING AND INSTITUTIONAL OPTIONS FOR FREIGHT INFRASTRUCTURE IMPROVEMENTS

FINAL REPORT

*PREPARED FOR:*

**FEDERAL HIGHWAY ADMINISTRATION,
US DEPARTMENT OF TRANSPORTATION**

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# Table of Contents

## *Funding and Institutional Options For Freight Infrastructure Improvements*

# *Executive Summary*

## Purpose and Scope

This study was prepared under contract to the Federal Highway Administration Office of Freight Management and Operations for the purpose of helping to frame discussions for future federal program initiatives designed to promote freight productivity and safety.

Current and past mechanisms are identified for funding and financing freight infrastructure development. Freight infrastructure is defined as port facilities, highways, bridges, highway access to ports/airports, cargo-handling facilities/equipment, warehouse construction, rail lines and rail spurs, and channel and berth dredging. A subset of freight infrastructure, intermodal infrastructure, is defined as the points of connection where freight is transferred between different modes, such as trucks, ships, rail, and airplanes.

## Background and Approach

As part of a larger initiative to address freight transport efficiency, this study addresses three main focus areas:

1) Synthesize information on Federal sources and selected State programs for fundingmultimodal freight improvements;

2) Review the funding/financing arrangements for over 40 case studies of projects that directly or indirectly promote freight productivity; and

3) Recommend options and approaches for improving existing funding sources.

The study approach incorporates four research strategies: 1) federal and state grant/loan program research with the assistance of modal associations; 2) state and MPO surveys investigating the uses of grant programs; 3) specific freight infrastructure project case studies; and 4) freight stakeholder workshops to discuss current finance issues.

Please note that in the body of this report there are references to TIFIA, RRIF, the Harbor Maintenance Tax, and a variety of other Federal programs that influence or could be used to enhance multimodal and intermodal freight productivity. Some of these programs are not administered by the FHWA and, in some cases, the administration is handled outside of U.S. DOT.

## Study Findings

Forty-nine State Highway Agencies were interviewed to collect information for this study. State Highway Agency findings were confirmed by meetings with six major modal national associations, e.g., American Trucking Associations; research of 40 project case studies; and a review of Federal and State programs.

Program research revealed that there are very few programs that specifically target freight infrastructure development. Every public dollar allocated for highway projects also supports

freight movement. The following Exhibits ES-1 and ES-2 list the Federal and State programs reviewed for this study.

## Exhibit ES-1
## Federal Summary Matrix by Mode Eligibility

| | Federal Program | Agency | Use | Port | Rail | Highway | Airport |
|---|---|---|---|---|---|---|---|
| 1 | Harbor Maintenance Trust Fund | Army Corps | Grant | X | | | |
| 2 | Public Works & Development Facilities | EDA | Grant | X | | | |
| 3 | Community Facility Programs | USDA | Grant/ Loan | E | E | X | X |
| 4 | Railroad Rehabilitation Improvement Financing | FRA | Loan | | X | | |
| 5 | Transportation Infrastructure Finance and Innovation Act | FHWA | Loan | | E | X | |
| 6 | Borders/Corridors | FHWA | | E | | X | |
| 7 | Congestion Mitigation and Air Quality Improvement Program | FHWA | | E | E | X | |
| 8 | Surface Transportation Program | FHWA | | | E | X | |
| 9 | State Infrastructure Banks | FHWA | Loan | | | X | |
| 10 | Transportation & Community & System Preservation | FHWA | | | | X | |
| 11 | National Highway System | FHWA | | | | X | |
| 12 | Demonstration/High Priority | FHWA | | | X | X | X |
| 13 | GARVEE bonds | FHWA | Bonds | | | X | |
| 14 | Hazardous Materials | RSPA | User fee | X | X | X | X |
| 15 | Section 130 - Grade Crossing | FHWA | | | X | X | |
| 16 | Local Rail Freight Assistance | FRA | Grant | | X | | |
| 17 | Airport & Airway Improvement | FAA | Grant | | | e | X |
| 18 | Ferry Discretionary Program | FHWA | | e | | e | |
| 19 | Appalachian | FHWA | | | | X | |
| 20 | State Planning (MPO included) | FHWA | | X | X | X | X |

"X" denotes eligibility, "e" denotes the precedent for exceptions to include this mode.
* also used for equipment lease and line of credit
Army Corps = Army Corps of Engineers, Department of Defense
EDA= Economic Development Administration, Department of Commerce
FHWA = Federal Highway Administration, Department of Transportation
FRA = Federal Administration, Department of Transportation Railroad
FAA= Federal Aviation Administration, Department of Transportation

Twenty sources of Federal funding were identified. Out of these 20, 13 sources are within FHWA, 2 for FRA, 1 for US Army corps of Engineers, 1 for EPA, 1 for USDA, 1 for FAA, 1 for RSPA.

## Exhibit ES-2
## State Summary Matrix by Mode Eligibility

| | | Funding Source | Use | Port | Rail | Highway | Airport |
|---|---|---|---|---|---|---|---|
| 1 | CA Maritime Infrastructure Bank | Not funded | Bonds | X | | | |
| 2 | CA Infrastructure & Economic Development Bank | General fund | Loan | X | | X | |
| 3 | FL Seaport Transportation & Economic Development | General fund | 50/50 Grant | X | X | X | |
| 4 | FL Freight Task Force | General fund | Grant | X | X | X | X |
| 5 | MN Port Development Assistance | General fund | Loan/Grant | X | | | |
| 6 | OR Port Revolving Fund | Lottery/ General fund | Loan | X | | | |
| 7 | WI Harbor Assistance | Transportation Fund | Grant | X | | | |
| 8 | PA PennPlus | General fund | Loan | X | X | X | X |
| 9 | PA Rail Freight Assistance | General fund | 50/50 grant | | X | | |
| 10 | WA Freight Mobility Strategic Investment Board | General fund | Grant | X | X | X | |
| 11 | IN Rail Service Fund | General fund | Loan/grant | | X | | |
| 12 | OH Rail Development Commission | General fund | Loan/grant | | X | | |
| 13 | IL Rail Freight Assistance | General fund | Loan/grant | | X | | |
| 14 | MI Rail Loan Assistance | General | 90/10 Loan | | X | | |
| 15 | MN Rail Freight Program | General fund | | | | | |
| 16 | MO Transportation Corporation | Private market | Tax-exempt bonds | X | X | X | X |
| 17 | VA Rail Industrial Access Program | General fund | 50/50Grant** | | X | | |
| 18 | VA Rail Preservation | General fund | Grant/loan | | X | | |
| 19 | WI Freight Rail Infrastructure/Preservation | General fund | Loans at 0% | | X | | |
| 20 | PA Airport Assistance | General fund | Grants | | | | X |
| 21 | TN Airport Program | Fuel tax | Grants | | | | X |

** Match required after first $100k.

The majority of public transportation funding has supported freight mobility through highway infrastructure investment. New Federal-Aid and financing programs, introduced under ISTEA and then TEA-21, are mainly directed to highway investments with a few exceptions, namely RRIF (an FRA program) and CMAQ. The following Exhibit ES-3 lists the case studies and the funding mechanisms reviewed for this study, in order of the decreasing Federal funding contributions.

## Exhibit ES-3
## Federal Funding Case Study Summary

| | Name | Size of Project | Direct Funding Source | Federal Share | Modal Application | Mechanisms |
|---|---|---|---|---|---|---|
| 1 | Alameda Corridor | $2.4 b. | Direct Federal loan, STP | $608 m + | Port - Rail Access | Loan and public fund "Package" |
| 2 | The Central Artery | $10.8 b. | Federal Grants | $600 m. | Highway | Grants/ |
| 3 | New Mexico Corridor 44 | $295 m. | Federal Grants | $287 m. | Highway | GARVEE Bonds |
| 4 | San Joaquin Hills Corridor | $1.45 b. | Federal line of Credit | $120 (9.6) m. | Highway | Standby line of credit |
| 5 | Spring - Sandusky Interchange | $116 m. | Federal Grants | $70 m. | Highway | GARVEE Bonds |
| 6 | Laredo, Texas International Bridge | $66.5 m. | SIB, toll revenue | _$49 m. | Highway | SIB loan, STP,NHS, ISTEA Demo, tax-exempt, taxable bonds |
| 7 | Indiana Burns Harbor | $106 m. | COEA, EDA | $26 m. | Port | Grants |
| 8 | State Route 99 Airport Access | $36 m. | NHS, sales tax | $36 m. | Highway | Federal-Aid |
| 9 | Butler County Regional Highway | $150 m. | SIB, TID | $35 m. | Highway | SIB loan |
| 10 | Port of Hueneme Highway Access | $64 m. | ISTEA/ TEA-21 | $24 m. | Highway | Federal-Aid "package" |
| 11 | Philadelphia International Airport | $13 m. | TEA-21 Demo. | $13 m. | Highway | Federal-Aid |
| 12 | Port of Humboldt dredging | $14.3 m. | Army Crp. of Eng | $10.4 m. | Port | Revenue Bonds |
| 13 | Stark County Intermodal Facility | $8 m. | CMAQ | $8 m. | Intermodal Facility | Federal-Aid/Line of Credit |
| 14 | Red Hook Ferry Boat | $9.7 m. | CMAQ | $7.7 m. | Ferry boat | Federal-Aid |
| 15 | Port of Hueneme Port Access | $8.7 m. | STP | $7.7 m. | Rail | Federal-Aid |
| 16 | Port of Anchorage | $7.2 m. | STP | $6.55 m. | Rail | Federal-Aid |
| 17 | Immunex Project | $14.5 m. | US Dept. of Commerce, EDA | $4.5 m. | Port - Highway Access | Grants/ Property Taxes |
| 18 | Columbia Slough Expansion Bridge Port access | $6 m. | CMAQ, ISTEA | $3.1 m. | Rail | Federal-Aid/ Private Funding |
| 19 | Bensenville Rail Yard | $35 m. | CMAQ | $2.1 m. | Rail | Federal Aid/ Private Funding |
| 20 | Port of Battle Creek | $2.4 m. | US Dept. of Commerce, EDA | $1.4 m. | Intermodal Yard | Grants/ Revenue Bonds |
| 21 | Auburn Intermodal Facility | $3 m. | CMAQ | $2.3 m. | Intermodal Facility | Federal Aid |
| 22 | Stockton Airport access | $1.8 m. | AIP | $1.4 m. | Highway | Federal-Aid/ Private Funding |
| 23 | Blythe Intermodal Yard | $1.2 m. | CMAQ | $1.2 m. | Intermodal Yard | Federal-Aid |

| | Name | Size of Project | Direct Funding Source | Federal Share | Modal Application | Mechanisms |
|---|---|---|---|---|---|---|
| 24 | Port of Toledo | $1.7 m. | US Dept. of Commerce, EDA | $0.85 m. | Port | Grants |
| 25 | Kedzie Stoplight | $3.5 m. | CMAQ | $0.72 m. | Highway | Federal-Aid/ Private Funding |
| 26 | Gilford Intermodal Yard | $0.7 m. | CMAQ | $0.7 m. | Private Intermodal yard | Private terminal Equipment lease |

Research identified 21 Federal funding options, 14 of which come through FHWA, for freight transportation improvement. Each program carries eligibility requirements which must be conformed to. The Congestion Mitigation Air Quality Program, for example, requires that a project provide air quality improvements in a non-attainment area, and the Railroad Infrastructure Finance (RRIF) program applies to railroad improvements. Understanding the eligibility criteria for each program is necessary in determining how to use Federal funds to make improvements needed or how to combine programs to get a complex of improvements.

**Freight Financing is approached in several ways.** Information for understanding the options available and how to package them needs to be made available to States, MPOs and others. The case study examples of: variation in levels of support, mechanisms for leveraging funds, application cycles for funding, eligibility criteria, evaluation criteria, and development objectives need to be included in guidance to transportation decision makers.

**The local jurisdiction has become a common sponsoring entity.** Local support is provided not only through financial means but also as a liaison to federal and state mechanisms. The local level also acts as a filter to identify projects that are most easily adaptable to federal programs. Project support (i.e., funding) may encounter jurisdictional conflicts at the local level.

**Planners lack data and tools that they can employ to evaluate a freight project against a non-freight project**. Freight issues such as volume throughput or economic impacts are difficult to evaluate for freight-related projects to measure or quantify public benefits from investment. MPOs also may not have the means to compare freight against non-freight projects, except with regard to air quality impacts. Few of the public agency programs (reviewed in this study) considered separate freight evaluations. Notable exceptions include: Pennsylvania's PennPlus program; Washington's FMSIB evaluation criteria; Florida Freight Stakeholders Task Force; the DVRPC MPO criteria; Portland, Oregon MPO; CATS MPO criteria; and a few select states that apply FRA's Cost-Benefit methodology.

**Project partnership formation is essential in developing major freight infrastructure projects.** There is a time frame conflict between immediate market demands and carefully considered public agency project planning and implementation. Current public policy does not support an individual company's private gain, aiming instead for broad public benefits to justify cost/risk sharing with a public agency. It is important to note that many of the most successful, large-scale projects depended on high-level support, partnering Congressional representatives with State governors; State legislatures, State DOTs, and private sector interests.

**The cost of financing varies by sponsoring agency**. The cost of public financing is an equally compelling issue revealed by the case studies. More projects benefitted from tax-exempt revenue bonds than from federal lending programs. Municipal tax-exempt bonds are

offered at lower interest rates than Treasury bonds; lower interest costs result in lower overall project costs.

**Federal funding may not be pursued due to timing conflicts.** Although federal funding provides the greatest leverage to local funding, some local project sponsors choose to issue debt instead of waiting for a once-per-year cycle, or a longer STIP/TIP programming process.

**Ports and shortlines are operating at the margin**. Low profitability of some transportation companies and port authorities restricts their capacity to fulfill capital improvements, which includes the limited capability to participate in any program other than outright grants with favorable matching provisions.

**Shortline rail companies may not be able to generate sufficient capital to meet match requirements**. There is an inherent limit to available funding, stemming from the capitalization levels of grant programs and matching requirements. Grant matching requirements, particularly for up-front matches, may be beyond the financial capacity ofshortlines, thereby making the grant funding inaccessible.

Some case studies also revealed funding difficulties in developing freight and intermodal infrastructure, including weakly structured public-private partnerships, project eligibility constraints, and inadequate market analysis.

**Lessons Learned**

Several case studies revealed successful adaptations or approaches that supported freight projects. Information collected indicates substantial contributions in financing freight infrastructure from the private sector. By and large, public-sector support helped provide either initial seed money or gap financing to make a project financially viable, although, public funding prominence was evident mainly in highway projects. Lessons can be learned from how public resources were used successfully to support infrastructure investment. Other lessons learned illustrate difficulties that can be overcome. The examples for providing financial assistance to freight projects were drawn from programs and case studies reviewed in this study and include the following:

1. Assure program longevity through sustained state funding.
2. Tailor eligibility requirements to specific program objectives.
3. Leverage resources through bonding and use of local match.
4. Form public/private partnerships to support private investment in port and airport infrastructure.
5. Provide adequate funding to address long-term rehabilitation of aging track.
6. Structure hybrid rail loan/grant programs to offer flexible terms for rail projects.
7. Implement a continuous application cycle to better meet market requirements.
8. Use large-scale intermodal “packaging” and state-level review boards to help resolve jurisdiction and eligibility conflicts.
9. Develop tools for MPO’s, states, and multi-state coalitions to use for identifying and evaluating freight projects.
10. Capitalize on existing infrastructure at brownfields to reduce intermodal development costs.

11. Seek support from highest levels of state government to sustain private/public activities.

# 1 INTRODUCTION

The Federal Highway Administration's Office of Freight Management and Operations is conducting research on a variety of topics associated with freight transportation improvements. The purpose of these efforts is to develop a complete picture of freight transportation as it exists in the United States. Topics of interest include; 1) performance measures, 2) Planning aspects of freight, 3) environmental issues, 4) economic benefits, 5) looking at freight flows, trends, and issues, and 6) freight financing. This study was conducted to collect information on previous and existing funding mechanisms, both private and public, for freight transportation improvements. Information on all modes was collected (air, rail, water, highway).

Intermodal freight transportation improvements can vary in cost from billions to hundreds-of - thousands of dollars. With the exception of targeted spot improvements such as bridge replacements, grade separations, highway connections, and other similar projects, most are impossible to fund through a single source (private or public). Private and public partnerships are growing in necessity to accomplish goals such as; 1) maintaining economic growth and development, 2) relief of congestion on highways, 3) safety improvements, 4) air quality improvements, 5) keeping the US competitive in the global market place, and 6) providing for livable communities (environmental resource protection including natural and human resources).

Federal funding supporting transportation improvements for freight includes the US DOT [Federal Highway Administration (FHWA), Federal Aviation Administration (FAA), Maratime Administration (MARAD), and Federal Railroad Administration (FRA)], the U.S. Army Corps of Engineers, The Department of Agriculture, the Department of Commerce (Economic Development Administration). State money was also found to be a significant source of funding for these transportation improvements. This funding comes from State Departments of Transportation, both highway and rail programs, and specialty port and airport funding mechanisms. Local funding for improving freight transportation is also available through cities (New York, Los Angeles, Chicago etc.) and other municipalities. Private funding is attributed to railroads, ports, economic development corporations, and some industry.

The mechanisms for funding in various ways were identified through reviewing a variety of case studies and examined in depth. Categories include direct federal-aid, federal grants, federal loans, loan guarantees, bond issuance, tax exempt revenue bonds, infrastructure banks, special taxing, joint public private partnership and a variety of other innovative financing techniques.

Issues of project eligibility to qualify for public money (federal, state, and local) are presented as well as private public/partnerships. The case studies were selected as a means of presenting the financial information within the context of an actual project rather than a hypothetical situation. This study on financing provides a base from which to explore how financing should be viewed in the future.

## 1.1 Approach

The study approach incorporates three research strategies. First, existing Federal, State, and local programs were examined. This included collecting information from national and, where appropriate, modal associations, including the following:

- American Association of Port Authorities
- American Trucking Associations
- Intermodal Association of North America
- Association of American Railroads
- American Shortline and Regional Railroad Association
- Keystone Rail Association

Second, 49 State Highway Agencies (Hawaii was excluded) were contacted. Major metropolitan planning organizations (MPOs) with ports, at border crossings, and at major inland intermodal connections were also contacted, including the following by associated city:

| | | |
|---|---|---|
| Atlanta, GA | Chicago, IL | Laredo, TX |
| Birmingham, AL | Dallas-Ft. Worth, TX | Memphis, TN |
| Buffalo, NY | Denver, CO | New York, NY |
| Baltimore, MD | Detroit, MI | Philadelphia, PA |
| Boston, MA | El Paso, TX | St. Louis, MO |
| Columbus, OH | Kansas City, MO | San Diego, CA |

Both research instruments are used together with information provided by federal program managers and association policy and finance analysts.

Third, the research addressed development of major public-agency/private-sector freight projects. These projects are described in relation to specific funding mechanisms and provide examples of how these programs are used. These projects are also discussed in Section 3 - Case Studies. The case studies describe both funding and financing approaches to developing freight-related infrastructure.

## 1.2 Background

Typical freight infrastructure can be defined to include port facilities, highways, and highway access to ports/airports, and rail cargo-handling facilities/equipment, warehouse construction, rail spurs, mainline rail equipment, and channel and berth dredging. A subset of freight infrastructure, intermodal infrastructure, is defined as the points of connection where freight is transferred between transport vehicles representing different modes, such as trucks, ships, rail, and airplanes. An intermodal network expands the definition of freight infrastructure beyond a focus on specific modes, links, or facilities, to include multimodal transportation corridors and freight hubs.

Transportation deregulation has spurred the trend toward intermodal transportation infrastructure, which, in turn, has become increasingly critical for system connectivity and efficiency. Although deregulation has not been total and varies from one mode to another, its net result has been

positive for the growth of intermodal connection. Liberalization of regulations has enabled an increase in the interaction between modes and allowed reorganization within the modes. However, although the Federal government no longer has the economic regulatory role it once did, it is increasingly involved in regulatory measures pertaining to safety, noise pollution, air pollution, economic disruption, and other externalities of the transportation industry. Most of these regulatory responsibilities fall within the U.S. Department of Transportation.

Intermodal facilities, and freight-related infrastructure in general, have faced many impediments since deregulation and subsequent greater free-market exposure. There have been many financial limitations as well as operational inefficiencies, lack of institutional relationships, inadequate infrastructure, congestion problems, and a wide variety of other impediments that have placed heavy burdens on the transportation intermodal infrastructure.

Consequently, freight infrastructure projects, both network links and intermodal facility improvements, are developing on a case-by-case basis, funded through public-private partnerships or simply with private-sector resources intended to maximize private earnings. According to a recent Transportation Research Board study, the prevailing condition is for the mode to be privately owned but the connection points (ports and terminals) and supporting infrastructure (roads, bridges, and utilities) to be under public ownership. Thus, while intermodal project benefits may be shared, intermodal financing is patched together from the traditional sources of funds and funding techniques.

The financial resources and sources of funding used to develop freight-related infrastructure range from public agency funds to a variety of public-private and private financing approaches, and mainly include tax-exempt bonds, taxable revenue bonds, and short- and long-term loans. Where corporate reserves are sufficient, these capital projects are undertaken on a pay-as-you-go basis.

## 1.3 Report Organization

This report is divided into three sections:

*Introduction* B background, approach and report organization

*Public Sector Programs and Tools* an overview of existing practices and a description of current Federal, State, and local programs

*Case Studies* includes over 40 freight project case studies assembled for this study

The report is organized to present public sector support as manifested through specific Federal, State, and local programs with case study applications that illustrate the actual uses of programs and private funding tools. Each section is further divided by the same parameters separating Federal, State and local levels of support. This study is intended to give the reader an overview of how freight infrastructure is currently funded, and to help draw attention to state of the art in order to begin a dialogue for developing systematic approaches to funding freight infrastructure.

# *2 Public Sector Programs and Tools*

This section also describes existing public sector programs and finance tools that ostensibly support freight and intermodal infrastructure projects. The programs and tools are divided into the three sections: This section provides an overview of current funding and financing practices as identified in the course of this study federal funding, State funding, and local activities and tools.

## 2.1 Overview Of Freight Infrastructure Funding and Finance

The review of existing funding sources undertaken for this study indicates certain funding trends by mode. Port data and case studies, for example, indicate that ports are generally funded through private resources, port revenues, and the use of revenue bonds.

Similarly, railroads have traditionally depended on private capital to self-fund the majority of system rehabilitation and new construction projects. Federal and State support has been on a much smaller scale of investment, typically where safety issues are a concern e.g, at-grade highway-rail crossings or where shortline or regional infrastructure are at risk of abandonment.

Unlike ports and rail, highway funding is derived primarily from Federal and State highway programs. Under 80/20 Federal program matching arrangements, Federal program eligibility, to a large degree, dictates the types of projects that receive funding. In addition to unprecedented levels of Federal appropriations, new loan programs under TEA-21 are helping to package large-scale projects that cross multi-jurisdictional boundaries and benefit freight movement through major metropolitan areas.

Airport infrastructure mainly is supported by passenger fees and by jet-fuel taxes, allowing for a partial cross-subsidy of airfreight shipment infrastructure. The 1986 Tax Reform Act has spurred the trend for public-private partnerships between airport authorities and airfreight integrators to issue revenue bonds for the purpose of developing cargo facilities.

The following sections provide an overview of the current funding practices within the respective modes: ports, highways, rail, and airport.

### Public Port Funding

This section provides an overview of public port funding, based on a review of the financing approaches used to fund port capital expenditures throughout the United States from 1992 through 1996. Findings and reported expenditures are based on the report *United States Port Development Expenditures*, published by the U.S. Maritime Administration (MARAD). MARAD's findings are based on the 1996 expenditures survey conducted by the American Association of Port Authorities (AAPA).

Capital financing methods used by the U.S. public ports are classified in six categories:

- Port Revenues
- Loans
- General Obligation Bonds (GO bonds)
- Grants
- Revenue Bonds

- Other

Exhibit 2.1 illustrates U.S. public port capital expenditures by type of financing method for the years 1992 through 1996. Capital expenditures totaled $1.2 billion for the port industry in 1996. Whereas this represents a 9 percent decrease from 1995, total expenditures for 1996 represent a 115 percent increase from 1992 and are part of a larger trend of increased capital expenditures over the 5-year period. It is this trend of increased capital investment that has established facility development and capital financing as the number-one issue facing the port industry.

**Exhibit 2.1**
**U.S. Port Capital Expenditures by Type of Financing Method: 1992-1996 (Thousands of Dollars)**

| | 1996 | | 1995 | | 1994 | | 1993 | | 1992 | |
|---|---|---|---|---|---|---|---|---|---|---|
| METHOD | Amount | % | Amount | % | Amount | % | Amount | % | Amount | % |
| Port Revenue | $392,408 | 31.7% | $ 621,703 | 45.6% | $ 309,703 | 35.3% | $ 297,925 | 50.6% | $ 196,956 | 34.0% |
| GO Bonds | 116,598 | 9.4% | 115,859 | 8.5% | 90,059 | 10.3% | 67,720 | 11.5% | 73,492 | 12.7% |
| Revenue Bonds | 529,015 | 42.6% | 366,701 | 26.9% | 130,860 | 14.9% | 134,271 | 22.8% | 156,100 | 26.9% |
| Loans | 13,734 | 1.1% | 12,077 | 0.9% | 140,496 | 16.0% | 4,534 | 0.8% | 21,795 | 3.8% |
| Grants | 31,383 | 2.5% | 41,078 | 3.0% | 24,142 | 2.8% | 24,781 | 4.1% | 28,957 | 5.0% |
| Other | 157,485 | 12.7% | 205,369 | 15.1% | 181,175 | 20.7% | 59,978 | 10.2% | 102,283 | 17.6% |
| TOTAL | $1,240,533 | 100% | $1,362,787 | 100% | $876,435 | 100% | $589,209 | 100% | $ 579,583 | 100% |

As shown in Exhibit 2.1, the two largest sources of financing for port capital expenditures between 1992 and 1996 were port revenues and revenue bonds. Together, these two financing methods have been the source of 50 percent to 75 percent of total capital expenditures over the 5-year period. Financing through revenue bonds has become increasingly popular; $529 million or 42.6 percent of total capital expenditures in 1996 was financed through revenue bonds. In terms of the proportionate share of revenue, this represents an increase of 15 percent over any of the previous 4-years. Conversely, port revenues saw a proportionate decrease in 1996 and served to finance a 5-years low of 31.7 percent of total capital expenditures in the port industry. Together, port revenues and revenue bonds were the combined funding source for 74.3 percent of total capital expenditures in 1996.

"Other" funding is defined as State transportation trust funds, State and local appropriations, taxes (property, sales), and lease revenues was the third most common financing method and served to finance 12.7 percent of total capital expenditures in 1996. Funding capital projects from other capital sources is desirable to ports because it entails less of a draw on their own limited capital resources. While desirable, these sources have historically been limited in amount and availability.

## Highway Funding

This section provides an overview of funding mechanisms that support highway infrastructure development tied to freight shipment. Most federal-funding mechanisms support freight infrastructure development with respect to trucks. The majority of Federal highway funding is provided through various programs. Of the total $155 billion the Intermodal Surface and Transportation Efficiency Act (ISTEA) multi-year authorization, $103.7 billion was apportioned and of that, 0.3 percent ($293 million) was designated to capitalize a Federal highway loan program, the State Infrastructure Bank pilot program. Additionally, in 1997 Congress

appropriated $150 million from the General Fund to add to this program. Under the most recent 6-year authorization, the Transportation Equity Act for the 21st Century (TEA-21) significantly increased the level of funding for core highway infrastructure programs 37 percent above ISTEA authorization. In addition, TEA-21 established a floor to guarantee a minimum appropriation level. This floor assures that TEA-21 will provide more appropriated funding than ISTEA, proportionate to authorization levels, reducing the disparity between authorization levels and actual appropriations. TEA-21 also restricted the use of Federal funds for SIB's to four States. Current highway obligations from ISTEA and TEA-21 are $589,000.

The overall Federal Aid Highway Program (FAHP) is divided into various funding categories and/or programs with eligibility requirements. Programs that could be used to fund freight transportation projects include:

Interstate Maintenance (IM)

National Highway System (NHS)

Surface Transportation Program (STP)

Congestion Mitigation Air Quality (CMAQ)

Appalachian Development Highway System (ADHS)

National Corridor Planning and Development and Coordinated Border Infrastructure (Corridors/Border – 1118/1119)

Transportation Infrastructure Finance and Innovation (TIFIA)

Transportation and Community and System Preservation Pilot Program (TCSP)

High Priority Projects (HPP) are designated by Congress. These funds are not available on a competitive basis (competitive with other projects). The corridors and borders programs were partially designated by Congress for FY2000 with remaining funds available for a competitive process. The same is true for TCSP. All Federal-aid funds are distributed through the applicable State Department of Transportation. State Planning is funded with 1.5 percent of the IM, NHS, STP, CMAQ, and HBRRP programs. State planning funds have benefited freight transportation needs in a number of States and Metropolitan Planning Organizations. Money has been used to incorporate freight transportation into Long-range Plans (LRP), conduct studies for freight transportation improvements, identify critical issues, and support public/private partnerships.

These Federal programs typically require State and/or local participants to match at least 20 percent of the total project cost. State or local sponsors are able to leverage their funding resources with Federal funds and develop larger-scale projects than would be viable with State resources only, or that otherwise might not get built. The use of Federal funding is further restricted by Federal project eligibility requirements, as specified in Title 23 and Title 49, Chapter 53, U.S. Code eligibility, see Appendix A – Title 23 eligibility. Title 23 supports highway improvements, which include rail grade crossings, whereas Title 49 supports transit projects. Federal highway funding is therefore restricted to specific program objectives as well as certain types of projects.

Each State and MPO is responsible for long-range planning. For the MPO this is referred to

as a Long - Range Plan (LRP). The State refers to their product as the State Transportation Plan. Both share a 20-year horizon. The MPO's are responsible for updating their LRP every 3 to 5 years. In addition, the State is responsible for developing a State Transportation Implementation Plan (STIP) which lists all capital projects. Each MPO prepares a Transportation Implementation Program (TIP) listing their capital projects which is incorporated into the appropriate STIP. The STIP and TIP are updated every 2- to 3-years. No Federal-aid funds can be spent on a project that is not listed on the STIP and/or TIP.

The remaining programs are discussed in more detail in subsequent sections of this report. The long-range planning timeframes can be a significant hurdle in coordinating freight infrastructure development, which attempt to meet emerging market demands within a year or less. STIP and TIP planning, though on shorter timeframes, still require more time than the private sector would like. As a result of the match provision and the Federal eligibility and planning requirements, Federal programs drive the focus as well as the process and timeframe of State and MPO levels of planning and programming funding.

Interviews confirmed that local and State freight project planning is affected by a lack of analytical tools for comparing a freight-related highway improvement project to a project that predominantly benefits commuter or neighborhood traffic. Following Federal and State program descriptions, the local activities section includes a discussion of local tools and innovative approaches to planning/programming for freight-related highway infrastructure.

In addition to unprecedented funding authorization levels, TEA-21 initiated significant loan programs that support highway infrastructure improvements and rail improvements. These innovative finance programs in TEA-21 include the Transportation Infrastructure Finance and Innovation Act (TIFIA), authorized to loan up to $10.6 billion (for highway project credit enhancement); Railroad Rehabilitation and Improvement Financing Program (RRIF), authorized to loan up to $3.5 billion. Grant Anticipation Revenue Vehicle (GARVEE) was enabled with advance construction in the NHS Act of 1995, and TEA-21 improved the marketability of GARVEE bonds by increasing authorizations. GARVEE bonds are not specifically funded through the appropriations process; instead this is a finance mechanism that allows States to bond against future Federal appropriations beyond the 6-year cycle.

This study primarily focuses on the innovative uses of Federal funding and loan programs to support freight-related highway and other modal improvements. The Case Studies section describes the innovative uses of SIB loans, TIFIA loans, CMAQ funds, and GARVEE bonds to fund freight-related projects. It is important to note that these programs only benefit freight infrastructure insofar as trucks are permitted to use the facilities – with the exception of CMAQ. Of the four, CMAQ and SIB have been in use since ISTEA and have longer track records on which to evaluate utility. Specific case studies demonstrate that SIB loans have been effective for building port/airport-highway access projects based on anticipated revenues from transportation improvement districts (TID) assessments and toll revenue schemes. The Bensenville, Auburn, Stark, and Waterville project case studies, contained in the Case Studies section, show innovative uses of CMAQ funding for building rail-truck intermodal yards, under the auspices of improving air quality by shifting cargo from truck to rail.

RRIF is dedicated to rail and is discussed under rail funding. The remaining two, TIFIA and GARVEE have only been in use since the authorization of TEA-21, in 1998. In this short timeframe, only a few projects have used these financing tools. The first TIFIA loans were let this year. However, the most prominent Federal loan to date was processed under special Federal legislation, prior to the development of TIFIA, for funding the Alameda Corridor

project. The Alameda Corridor in Los Angeles, California, demonstrates both the process of using Federal funding for borrowing for large-scale projects and the use of packaging to assemble a combination of Federal, State, local, and private-sector funding. A GARVEE project, the Central Artery Project in Boston, Massachusetts, also demonstrates the complexity of packaging sources, in addition to the process of leveraging future Federal dollars and the requirements for backstop financing to protect Federal resources in the event of default. The Case Studies section further describes both projects.

## Rail Freight Funding

This section describes both public and private funding/financing mechanisms for Class I, regional, and shortline rail projects. Public funding sources were reviewed, including Federal Rail Administration, Federal Highway Administration, and State-level programs that support rail infrastructure development. To identify financing tools, several individual corporate annual reports were reviewed to contrast Class I RR's with regional and shortline financing.

Federal and State rail programs have evolved to address periodic funding shortages, particularly for shortlines. Regulations have been relaxed, and both emergency stopgap measures and long-term funding mechanisms were developed to support rail infrastructure needs. Funding has been available through a variety of mechanisms, including grants, subsidies, loans, loan guarantees, in-kind benefits, redeemable preference shares, and various combinations of obligation underwriting. Public funding programs generally have required the applicant to match funds or provide in-kind benefits from other sources.

Business trends are driving rail infrastructure demands, including track improvements to accommodate heavier rolling stock, larger engines, truck drayage elimination projects, and intermodal yard development. Financing is further complicated by other business trends including rail car charges and rebates, Class I mergers and acquisitions, and shortline rail company spin-offs.

By and large, Class I railroads are mainly financing projects themselves, generating sufficient revenues to meet their own specific requirements for capital improvements. The following was documented by TRB's *Policy Options for Intermodal Freight Transportation* study, Special Report 252:[1]

- Union Pacific has promised to spend more than $200 million to double-track 1,370 km of former Southern Pacific line between Los Angeles, California and El Paso, Texas.
- The Atlanta/Dallas rail corridor paralleling Interstate 20 from Meridian, Mississippi, to Dallas, Texas, is getting $200 million in improvements from Kansas City Southern.
- Burlington Northern Santa Fe (BNSF) and J.B Hunt built a new underpass in Chicago In less than one year, with actual construction taking less than one month. The new underpass is adjacent to the 47th Street underpass, which required 5-years for public financing.

Class I railroads generate capital through debt financing from cash generated from operations. According to a sampling of railroad corporation financial statements obtained through *Moody's Transportation Manual*, finance instruments include commercial paper, capital leases, and in one case, tax-exempt financing. Exhibit 2.2 shows the financial status of three Class I railroads.

## Exhibit 2.2
## Class I Financing Instruments

| Instrument | Conrail | | CSX | | Union Pacific | |
|---|---|---|---|---|---|---|
| | 1996 | 1995 | 1997 | 1996 | 1997 | 1996 |
| **Revenue** | $ 3,714 | $ 3,686 | $ 10,621 | $ 10,536 | $ 11,079 | $ 8,786 |
| **Operating Income** | n/a | n/a | 1,583 | 1,522 | 1,253 | 1,533 |
| **Total Assets** | 8,402 | 8,424 | 19,957 | 16,965 | 28,764 | 27,927 |
| **Current Liabilities** | 1,092 | 1,170 | 2,707 | 2,757 | 3,247 | 3,056 |
| **Long Term Debt** | 2,006 | 2,092 | 6,645 | 4,432 | 8,518 | 8,027 |
| - Commercial Paper | 100 | | 2,000 | | 1,743 | |
| - Notes Payable | 359 | | 479 | | | |
| - Debentures | 794 | 794 | 3,145 | 650 | 3,929* | |
| - Equipment Obligations | 262 | 251 | 784 | 739 | 910 | 1,048 |
| - Mortgage Bonds | | | 75 | 76 | 176 | 176 |
| - Term Floating Rate | | | | | 392 | |
| - Tax Exempt Financing | | | | | 168 | |
| - Capital Leases | 492 | 489 | | | | 1,137 |
| - Other | | 558 | 162 | 2,967 | (51) | 5,666 |
| - Common Stock | 88 | 85 | 218 | 217 | 686 | 581 |
| **Capital Stock** | | | | | | |
| - Authorized | 260 mill | n/a | 300 mill | n/a | 500 mill | n/a |
| - Outstanding | 89,548,893 | n/a | 218,310 | n/a | 247,001,648 | n/a |

* includes both notes payable and debentures

The most urgent finance needs historically and currently involve Classes II and III, regional and shortlines, which have fairly substantial needs for capital but are at a disadvantage for accessing capital. Regional and shortline railroads experience certain types of problems in securing capital. According to a 1993 Report to Congress, small railroads appear to face some unique problems and difficulties securing financing. According to the report findings, the problems include banking industry claims that it takes an inordinate amount of work to prepare a small-railroad loan package, compared to a similar-sized loan for other capital investments (such as a warehouse or an office building). In addition, unlike many similar-sized businesses that need short-term loans for inventory or working capital, small railroads need long-term financing for long-lived assets, such as track materials and equipment.[2] Last, as evidenced by the State programs identified in this study, shortlines often cannot repay loans due to marginal financial strength, indicating the need for grants in order to keep a strategic system link viable.

According to the survey efforts undertaken for the 1993 Report to Congress, even when

private financing could be obtained, these railroads felt that the terms offered were unsatisfactory. In particular, loans were usually offered for not more than 8-years, which is too short a term for railroad investments that have much longer productive life spans. The few banks that specialize in railroad financing generally restrict their loans to fairly large loans—$5 million or more. However, local banks, which might be expected to offer smaller loans, have little or no railroad lending experience, and many of these railroads need small loans. There also are certain legal restrictions that may make it more difficult to recover the proceeds of a railroad loan after bankruptcy or default than a debt owed by a non-railroad borrower; these restrictions also tend to heighten a bank's reluctance to deal with the industry.[3]

### Airport Funding

This section provides an overview of common mechanisms for funding airport infrastructure. Air freight shipment represents the fastest growing freight shipment mode. According to DRI/McGraw Hill data and forecasts, air freight revenues grew an average of 8.8 percent from 1994 to 1999, and from 1999 to 2004 are projected to grow an average of 6.7 percent per year.[4] In contrast, the next fastest mode, intermodal, is only projected to grow as much as 4.3 percent per year. In accommodating this growth, airports must expand facilities used for handling and moving cargo. At a minimum, this can include building cargo handling complexes, improving safety, and improving or expanding highway access to airport cargo areas.

The Federal Aviation Administration manages a large-scale grant program supported by passenger revenues and jet-fuel taxes. The Airport Improvement Program (AIP) disburses grant funding on a formula basis to the largest passenger and cargo airports. This enables passenger activity to cross-subsidize air freight operations, mainly for safety and runway expansion projects.

Airport-highway access projects are more difficult to address due to the institutional parameters currently in place that affect how local planners program freight projects versus commuter or transit projects. The Federal Highway Administration (FHWA) funds airport access roads only when an MPO identifies sufficient need, over other neighborhood or commuter projects, or when an earmark is approved under ISTEA demonstrations or TEA-21 high-priority designations. For cases of single users, air freight integrators are required to build private roads for direct access to cargo areas.

The funding that drives air cargo handling, equipment, and warehousing typically is split between private investment by air freight integrator companies, such as Federal Express or United Parcel Service, and airport resources through tax-exempt or taxable-debt issuance. If financed as a public-private partnership, the cost of development is reduced with the use of tax-exempt bond rates, as permitted under the 1986 Federal Tax Reform Act. For large-scale infrastructure projects, the cost savings can be substantial. The Denver International Airport case study, discussed in Section 3—Case Studies, demonstrates this type of large-scale, public-private partnership.

## 2.2 Federal Funding Programs For Freight Infrastructure

Federal programs provide considerable and significant levels of funding for transportation infrastructure. Funding mechanisms supported by the U.S. Department of Defense (DOD), U.S. Department of Commerce and U.S. Department of Transportation (U.S. DOT) were identified.

### Maritime

There are few financial resources at the Federal level available to ports. The Economic Development Administration (EDA), U.S. Department of Commerce, has provided grant assistance for port capital improvements, but contribution levels are limited. Under its Title XI program, the Maritime Administration, U.S. DOT, offers funding for ship building enterprises that is only applicable for port infrastructure improvements under special circumstances involving the financing of ship equipment. For example, the FastShip project is likely to use Title XI funding for financing the equipment and installation of its special loading equipment.

The U.S. Army Corps of Engineers DOD is charged with supporting the dredging of the nation's marine channels on behalf of commercial users of U.S. channels and harbors, and the nation's defense mobility. The Harbor Maintenance Trust Fund was established so that costs incurred by the U.S. Army Corps of Engineers could be reimbursed.

Since 1986 there has been a decline in the level of Federal participation for port-related infrastructure financing. While the Federal government had historically funded 100 percent of navigation channel improvements as well as maintenance, since 1986 the Federal role of the partnership has been limited to cost-sharing capital improvements to Federal navigation channels. In the Water Resources Development Act of 1986 (WRDA '86), Congress created a cost-sharing formula for navigation improvement projects. Specifically, a cost-sharing transition was set at 45 feet, above which (i.e., shallower) local sponsors (i.e., ports) would pay a 35 percent (25 percent plus 10 percent over 30 years) cost-share and below which (i.e., deeper) would be cost shared at 60 percent (50 percent plus 10 percent over 30 years) local.

In WRDA '86, Congress also created the harbor maintenance tax (HMT), an ad valorem fee on cargo, to fund maintenance dredging. Because of concerns about the impact of a fee on the competitiveness of U.S. ports and U.S. exports, the HMT was originally set at a level to recover only 40 percent of the cost of maintenance dredging in Federal deep-draft navigation channels.

In 1998, the collection of the tax on exports was found by the Supreme Court to be unconstitutional. In addition, the continued collection on imports has been challenged before the World Trade Organization. As a result, the Clinton Administration has proposed legislation would replace the HMT with a new fee on tonnage of vessels and use the funds to pay for both maintenance dredging as well as the Federal share of channel improvements. Under the proposal, the government would no longer have any financial responsibility for financing dredging of Federal navigation channels.

### Department of Defense

Except for marine channel dredging, DOD has no other dedicated funding mechanism or program for providing for freight shipment. However, DOD works with U.S. DOT to focus transportation spending on projects of strategic importance to military mobilization. DOD's Strategic Highway Network (STRAHNET) and Strategic Rail Corridor Network (STRACNET) were established to coordinate DOT-sponsored infrastructure development with defense needs. STRAHNET coordinates with two Title 23 programs: *Section 210, Defense access roads* and *Section 311, Highway improvements strategically important to the national defense*. Depending on ownership, STRACNET coordinates with private rail companies or State Highway Agencies to keep strategic rail lines viable for mobilization.

### Highway

Current Federal highway programs provide funding under 80/20 matching (with some exceptions) arrangements with State and local government in addition to several new financing programs including loans, credit guarantee/credit enhancements, and bond issuance.

### Rail

Federal funding for rail to date has primarily targeted two types of applications: 1) stop-gap funding and loan guarantees to provide infrastructure capital in order to keep critical rail infrastructure from abandonment; and 2) and funding for safety-related improvements. The most recent TEA-21 program, RRIF, has authorized a new loan program to address the near-term crisis for urgently needed capital to renovate dilapidated infrastructure resulting from long-term deficiencies in capital for rehabilitation.

### Limitations

ISTEA and TEA-21 limit the types of projects that are eligible to receive Federal-aid funding. In general, a non-highway project serving intermodal freight (for example, a rail line to a port) is ineligible unless the project could be shown to reduce pollutant emissions in a region that is not in compliance with air quality standards. In this case, the project might be eligible for *Congestion Mitigation and Air Quality Improvement Program* (CMAQ) funds. Exhibit 2.4 summarizes Federal programs by mode eligibility. Brief descriptions of the programs, including funding levels and program utilization, follow the exhibit.

## Federal Summary Matrix by Mode Eligibility

| | Federal Program | Agency | Use | Port | Rail | Highway | Airport |
|---|---|---|---|---|---|---|---|
| 1 | Harbor Maintenance Trust Fund | Army Corps | Grant | X | | | |
| 2 | Public Works & Development Facilities | EDA | Grant | X | | | |
| 3 | Community Facility Programs | USDA | Grant/ Loan | E | e | X | X |
| 4 | Railroad Rehabilitation Improvement Financing | FRA | Loan | | X | | |
| 5 | Transportation Infrastructure Finance and Innovation Act | FHWA | Loan | | e | X | |
| 6 | Borders/Corridors | FHWA | Funded | | | X | |
| 7 | Congestion Mitigation and Air Quality Improvement Program | FHWA | Funded | E | e | X | |
| 8 | Surface Transportation Program | FHWA | Funded | | e | X | |
| 9 | State Infrastructure Banks | FHWA | Loan | | | X | |
| 10 | Transportation & Community & System Preservation | FHWA | Funded | | | X | |
| 11 | National Highway System | FHWA | Funded | | | X | |
| 12 | Demonstration/High Priority | USDOT | Funded | | X | X | X |
| 13 | GARVEE bonds | FHWA | Bonds | | | X | |
| 14 | Hazardous Materials | | User fee | X | X | X | X |
| 15 | Section 130 - Grade Crossing | FHWA | Funded | | X | X | |
| 16 | Local Rail Freight Assistance | FRA | Grant | | X | | |
| 17 | Airport & Airway Improvement | FAA | Grant | | | e | X |
| 18 | Ferry Discretionary Program | FHWA | Grant | E | | e | |
| 19 | Appalachian | FHWA | Funded | | | X | |
| 20 | State Planning | FHWA | Funded | X | X | X | X |
| 21 | MPO Planning | FHWA | Funded | X | X | X | X |

X - denotes eligibility, e - denotes the precedent for exceptions to include this mode.
* also used for equipment lease and line of credit
Army Corps = Army Corps of Engineers, Department of Defense

EDA= Economic Development Administration, Department of Commerce
FHWA = Federal Highway Administration, Department of Transportation
FRA = Federal Rail Administration, Department of Transportation
FAA= Federal Aviation Administration, Department of Transportation

### *1. (ACOE) The Harbor Maintenance Trust Fund (HMTF)*

**Type of Funding/Financing:** Federal matching grant program, Army Corps of Engineers (ACOE)

**Eligibility:** ports located along Federal navigation channels.

**Application:** Ports

**Funding:** $1.1 billion in 1997

HMTF was created by the Water Resources Development Act of 1986. Through this act, Congress established the Harbor Maintenance Tax (HMT), the funding mechanism of the HMTF, which was set at the rate of 0.04 percent of the value of commercial cargo imported and exported through U.S. ports. In 1991, the HMT was increased to 0.125 percent of the cargo value. Fees from the HMT were collected by the U.S. Customs Service and passed through the U.S. Treasury Department to the HMTF. Funds in the HMTF pay for the maintenance and operations (i.e. dredging costs) of U.S. harbors and channels by the U.S. Army Corps of Engineers. The Fund balance at the end of fiscal year 1997 was $1.1 billion.

After ongoing litigation, the Supreme Court in United States, Petitioner v. United States Shoe Corporation, No. 97-372 declared the harbor maintenance tax unconstitutional as applied to exports. Consequently, as of April 1998, the U.S. Customs Service announced that they would no longer be collecting the Harbor Maintenance Fees for cargo loaded on board a vessel for export at a port subject to the HMT.

### *2. (Dept. of Commerce) Economic Development Administration (EDA) Funds*

**Type of Funding/Financing:** Federal 50/50 matching grant program, U.S. Department of Commerce

**Eligibility:** economically distressed industrial sites, per specific income and job generation requirements

**Application:** Ports, as industrial development projects in depressed areas to spur economic development

**Funding:** $178 million for FY1998

The U.S. Department of Commerce, Economic Development Administration offers grant funds for public works projects that promote or retain employment. UnderEDA's Public Works and Development Facilities Program, grants are provided to help distressed communities attract new industry, encourage business expansion, diversify local economies, and generate long-term, private sector jobs.

Proposed projects must be located within an EDA-designated Redevelopment Area or Economic Development Center. An applicant may be a State, political subdivision of a State, special purpose unit of State and local government, or a public or private nonprofit organization or association representing the Redevelopment Area. Port improvement projects are eligible for funding under this program.

Priority consideration is given to those projects that:

- Improve opportunities for the successful establishment or expansion of industrial or commercial facilities
- Assist in creating or retaining private sector jobs in the near term, as well as providing additional long-term employment opportunities, provided the jobs are not transferred from other labor market areas
- Alleviate the long-term unemployment within low-income families residing in the area served by the project
- Fulfill a pressing need of the area and can be started and completed in a timely manner
- Demonstrate adequate local funding, with evidence that such support is committed

According to EDA, distress may exist in a variety of forms, including:

- high levels of unemployment, low income levels,
- large concentrations of low income families,
- significant declines in per capita income,
- substantial loss of population because of the lack of employment opportunities,
- large numbers (or high rates) of business failures,
- sudden major layoffs or plant closures, and/or reduced tax bases.

Potential applicants are responsible for demonstrating to EDA, through statistics and other appropriate information, the nature and level of the economic distress their project effortsare intended to alleviate. In the absence of evidence of high levels of distress, EDA funding is

unlikely. Typically, funding from this source is difficult for ports to obtain due to the employment requirements. Most port projects do not generate high levels of direct employment; instead, these projects are likely to have measurable impacts on indirect or induced employment levels, neither of which meets EDA eligibility requirements.

The following statistics are published by EDA and provide some benchmark for determining the level of economic distress for a given area. EDA investments have targeted distressed communities with the following characteristics:

- Unemployment of 9.6 percent (median 24-month average) or more
- Per capita income of $7,666 (median) or less
- Residents 18 percent below poverty level (median) or more
- Residents 11 percent minority or more

Funds in the amount of $178,000,000 have been appropriated for this program for FY 1998. The average funding level for a grant is $886,000, which demonstrates that this is not a large source of funding for ports. For detailed descriptions of EDA uses, see the Case Study section, Port of Toledo, Ohio and the Port of Seattle, Washington, projects.

### *3. USDA Community Facility Programs*

**Type of Funding/ Financing**: Grants, loans, and loan guarantees.

**Eligibility:** Communities with populations of 20,000 or less.

**Application:** Construction of community facilities such as buildings, airports, and roads.

**Funding:** $6 million, $163 million and $210 million, respectively, in 1999

The U.S. Department of Agriculture (USDA) provides three funding mechanisms under its Community Facilities Programs, Rural Housing Service Program. The Community Facilities Program funds construction, enlargement, extension or improvement of community facilities, providing essential services in rural areas and towns with a population of 20,000 or less. The three programs are 1) Direct Community Facilities loans; 2) Community facility Loan Guarantees; and 3) Community Facility Grant Program. Eligible community facilities include roads and airports. The funding sources are relatively small. Grants are not to exceed $100,000, with an average grant size of $15,000. The Loan guarantee and loan programs have larger federal budgets; in 1999, the average loan size was $400,000 and the average loan guarantee was $800,000.

### *4. FRA Railroad Rehabilitation and Improvement Financing Program (RRIF)*

**Type of Funding/ Financing**: Direct loans and loan guarantees

**Eligibility:** Railroads, trustees of bankrupt carriers, government and other entities.

**Application:** Rail projects include acquisition or maintenance of facilities or equipment, rehabilitation or improvement of facilities or equipment, and new construction of facilities.

**Funding:** $3.5 billion, w/ $1 B directed to Regional & Shortline RR's

The Railroad Rehabilitation and The Railroad Rehabilitation and Improvement Program was established by the Railroad Revitalization and Regulatory Reform Act of 1976. The

authorization for the purchase of preference shares (Section 505) terminated on September 30, 1988. Section 511, under which loan guarantees were available, was amended by Section 7203 of TEA-21. Section 7203 establishes a new program entitled Railroad Rehabilitation and Improvement Financing (RRIF). Under the RRIF Program, direct loans and loan guarantees are available for terms up to 25 years. Eligible applicants include State and local governments; government sponsored authorities and corporations; railroad, and joint ventures that include at least one railroad. RRIF funding may be used:

- To acquire, improve, or rehabilitate intermodal or rail equipment or facilities, including track, components of track, bridges, yards, buildings, and shops;
- To refinance existing debt incurred for the above purposes; and
- To develop and establish new intermodal or railroad facilities.

The unique feature of the RRIF Program is the payment of a Credit Risk Premium in lieu of an appropriation of funds. The Credit Risk Premium is a cash payment provided by a non-Federal entity. It must cover the estimated long-term cost to the Federal Government of a loan or loan guarantee.

### *5. FHWA Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA)*

**Type of Funding/Financing**: Federal secured (direct) and guaranteed loans and lines of credit for projects generally at least $100 million

**Eligibility:** Highway, transit, passenger-rail, and intermodal projects may receive credit assistance under TIFIA. Highway projects include Interstates, State highways, bridges, toll roads, and any other type of project that is eligible for Federal aid highway assistance under title 23 (Highways) of the U.S. Code (23 U.S.C.). Transit projects encompass the design and construction of facilities, purchase of transit vehicles, and any other type of project that is eligible for grant assistance under chapter 53 of 49 U.S.C. Additionally, inter-city bus vehicles and facilities are eligible to receive TIFIA assistance. As for rail projects, the design and construction of inter-city passenger-rail facilities and procurement of inter-city passenger-rail vehicles are both eligible for TIFIA assistance. Publicly-owned intermodal facilities on or adjacent to the National Highway System are also eligible for TIFIA assistance, as are projects that provide ground access to airports or seaports, though airport and seaport projects are ineligible.

**Application:** Freight applications of Title 23 include highway construction or reconstruction projects, including bond costs, and grade crossing improvements.

**Funding:** $10.6 billion over 6 years

Title I, subtitle E (Finance), chapter 1 (section 1501) of TEA-21 introduces Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA)." TIFIA establishes a $10.6 billion Federal credit program for projects of national significance such as intermodal facilities, border crossings and multi-state trade corridors that are of a scale that exceeds the capacity of existing Federal and State assistance programs. TIFIA is intended to complement existing funding resources by filling market gaps and leveraging substantial private co-investment. The TIFIA credit program provides for the following three types of financial assistance:

- Secured loans
- Loan guarantees
- Lines of credit.

Eligible projects include highway and capital transit projects, as defined by Title 23 and Title 49, Chapter 53, U.S.C. This includes all highway projects, rail capital projects, international bridges and tunnels, publicly-owned freight transfer facilities on or adjacent to the National Highway System (NHS), and grade crossing improvements. Additionally, the following criteria are listed under TIFIA in TEA-21. A project must:

- Be included in the State transportation plan
- Be included in approved State Transportation Improvement Program (STIP)/Transportation Improvement Program (TIP) at time of agreement
- Project costs must be equal to or exceed the lesser of:
  (a) $100,000,000 ***or*** 50 percent of the amount of Federal highway assistance apportionment funds to the State for the most recent fiscal year (except ITS projects); or
  (b) $30,000,000 for Intelligent transportation system projects – In the case of a project principally involving the installation of an intelligent transportation system, eligible project costs shall be reasonably anticipated to equal or exceed $30,000,000.
- Project financing must be repayable, in whole or in part, from tolls, user fees, or other dedicated revenue sources.

Under the TIFIA credit program, publicly owned intermodal freight facilities on the NHS are considered eligible projects. However, the enabling legislation does specify that seaports and airports do not qualify as intermodal freight facilities. The Secretary of the U.S. DOT evaluates and selects projects based on a variety of factors including national significance, credit-worthiness, and private participation.

TIFIA is certainly a viable tool for funding major highway projects, and access to intermodal rail yards, ports, and airports; however, there is no particular emphasis given to projects that improve freight shipment systems. In addition, any given highway project application must be for a project scale of $100 million or more.

To date, there are no specific examples of TIFIA projects that directly benefit freight. However, there are other Federal credit projects financed in recent years (before TIFIA was enacted) that support freight. These include the Alameda Corridor and San Joaquin toll road projects. See the Section 3, Case Studies.

### *6. Borders/Corridors*

| |
|---|
| **Type of Funding/Financing:** Federal 80/20 matching program |
| **Eligibility:** Title 23 highway projects at designated borders and corridors, U.S. Custom's equipment |
| **Application:** highway improvements, U.S. Custom's equipment, planning studies |
| **Funding:** $700 million over 5-years (the program was not funded in 1998) |

The Borders/Corridors program established funding packages to support planning studies and infrastructure development at the national border crossings and along major freight corridors. Funds are eligible for Title 23 purposes (highway improvements) including feasibility studies, corridor planning and design activities, location and routing studies, multi-state and intrastate coordination of corridors, and any management plan for the corridor that includes environmental review or construction. All projects applying for Section 1118 or 1119 funding must be included in their respective State Transportation Plan and the State Transportation Improvement

Program and where sponsored by an MPO, be included in the TIP and MPO long range plan. Many of the high priority corridors that are eligible for funding were previously identified through ISTEA and have been included in State transportation plans.

There are geographic limitations on Borders funding within a 100-mile radius of the U.S. borders. This constrains freight project development for goods processed outside the border areas. The Mid-America Regional Council just completed a feasibility study of building an International Trade Processing Center (IPTC) in Kansas City, to relieve congestion in Laredo and at the Kansas City International Airport Customs operations. However, due to the 100-mile clause, the IPTC would not be eligible for Borders funding for construction and equipment.

### 7. *FHWA Congestion Mitigation and Air Quality (CMAQ) Improvement Program*

**Type of Funding/Financing:** Federal 80/20 matching program, (90/10 if used on the Interstate system). CMAQ has been used for State loans, equipment leases, and construction at and of intermodal facilities.

**Eligibility:** Title 23 highway projects, other infrastructure improvements to benefit air quality, public-private initiatives, or private initiatives demonstrating significant public benefit.

**Application:** Rail-truck yards, rail spurs, highway improvements, equipment leases, port improvements if overall impact is to reduce truck trips.

**Funding:** $8.1 billion for the 6-year period

Projects eligible for CMAQ funding must reduce carbon monoxide, volatile organic compounds, oxides of nitrogen (NOx) and particulate matter in a Clean Air Act non-attainment and maintenance areas. Intermodal freight projects are eligible for CMAQ grant funding if they demonstrate reduced traffic emissions.

CMAQ has been used in more innovative freight projects than most other Federal funding programs. A key feature to note includes the eligibility of rail track rehabilitation and corresponding infrastructure that lead to a reduction of truck traffic. CMAQ funds have been used for rail-intermodal projects whenever emission reductions can reasonably be expected.[5] Freight projects compete against highway and transit projects that also alleviate air pollution.

Congress apportions obligation authority to each State based on population and the severity of the area's air quality problems. The State is then responsible for programming the money for various projects throughout the year. States work with Metropolitan Planning Organizations (MPO) to decide which transportation activities in the approved State Implementation Plan get funding from CMAQ. Programs may vary from congestion relief strategies to transit projects to alternative fuel projects to public education and outreach activities.

CMAQ case studies indicate project approvals have included rail and barge freight facilities as a substitute for truck movements. CMAQ funds have also been used to support a private intermodal terminal under a lease agreement, typically a hurdle for public funding expenditures. Funds were also used under a State loan agreement to create a revolving CMAQ account in Ohio. Other CMAQ funds either fully funded a project or provided gap funding (seed money to match private funding). Of the five CMAQ intermodal case studies reviewed for this report, CATS' Kedzie Stoplight, Stark County Intermodal facility, Maine DOT's two rail intermodal yards, and Blythe, California's rail-truck transfer facility, four were successful and one has under-performed. According to the TRB Policy Options for Intermodal Freight Report, the Kedzie project is the "ISTEA Poster Child, and demonstrates that it is very difficult to undertake small projects in isolation, however simple or cost-beneficial, because they become part of a more complex traffic and transportation system.[6]

The Stark County Intermodal facility – connecting the Wheeling and Lake Erie Regional rail system to several Class I railroads – was developed under special circumstances, including a State loan based on CMAQ funding. Not only did the project meet Ohio DOT's objective for building an intermodal facility in North Eastern Ohio, but also the project was funded to take advantage of land opportunities and private sector support from a major grocery company.The project's viability was assured by NS and CSX marketing the project as their own.[7] However, just after the project was committed, Conrail divested its assets to NS and CSX. The resulting change in rail traffic patterns reduced the viability of the Stark County Intermodal facility. Lengthy NS delays, brought on by the changes in rail traffic, were exacerbated to unmanageable levels by additional wait time needed to connect with Stark County Intermodal facility. To date, this facility is underutilized. Additional CMAQ uses are described in Section 3—Case Studies, including the Stark County Project, Gilford Intermodal and Auburn Intermodal projects.

### *8. FHWA Surface Transportation Program (STP)*

| |
|---|
| **Type of Funding/Financing:** Federal 80/20 matching program |
| **Eligibility:** Highway construction, rehabilitation, safety improvements (grade crossing), and preservation of rail corridors |
| **Application:** Road improvements to accommodate intermodal yard/port access |
| **Funding:** $33.3 billion |

STP is available for almost any roadway improvements on any Federal-aid highway, including NHS. Improvements to accommodate other modes, including rail freight, are also eligible. STP was introduced in 1991 under the Intermodal Surface Transportation Efficiency Act (ISTEA). The program was set up to fund roadway projects other than those classified as local or rural minor collectors, bridge projects, or transit capital projects. Roadway projects could involve construction, reconstruction, rehabilitation, resurfacing, restoration, or operational improvements of the road.

Improvements to rail that are allowable include accommodating double stack freight trains. The provision for accommodating double stack trains was added under ISTEA [23 U.S.C. 133 (b)(1)] allowing STP funds to be used for "… construction or reconstruction [highway and bridges] necessary to accommodate other transportation modes…". This is also extended to NHS, CMAQ and IM funding through 23 U.S.C. 142(c). Work allowed includes: "…lengthening or increasing vertical clearances of bridges, adjusting drainage facilities, lighting, signage, utilities, or making minor adjustments to highway alignment …" . In addition "… where an existing highway facility directly constrains operations of an existing rail line …adjustments to the rail line including relocation of the rail line and purchase of right-of-way would be an allowable use of federal funds where it can be shown to be more cost effective then eligible adjustments to the existing highway…" . The references made are found in the Information Memo entitled Use of Federal-Aid Highway Funds for Improvements to Rail Facilities, dated February 9, 1993 and signed by Anthony R. Kane (Appendix B).

The Transportation Enhancement Program (TEA) has 10-percent set-aside under STP and has a specified list of eligible project types (including historic facility) that must relate to surface transportation. Among the specified categories, key opportunities for freight project include the preservation of abandoned rail corridors

Another 10 percent of STP obligation authority is set aside for safety-related projects in accordance with two programs: Hazard Elimination (Section 152) and Railway/Highway Crossings Program (Section 130), discussed below).

A good example of coordinated use of STP for rail includes the Port of Anchorage grade crossing project. Alaska DOT applied for a discretionary grant to conduct a statewide study of intermodal access. The outcome of the study was to develop a list of candidate projects to support freight movement, including the Port of Anchorage port access-grade crossing project.[8] See the Case Study for a more detailed description of the Port of Anchorage access road project.

### *9. FHWA Section 130 (Highway-Railroad Grade Crossings Program)*

**Type of Funding/Finance:** Federal 80/20 matching program

**Eligibility:** grade crossing projects identified by State DOT and/or local communities

**Application:** Rail-highway grade crossing improvements

**Funding:** 10 percent set-aside from STP, approximately $134 million in 1999

The Rail-Highway Crossings Program was established in 1913 through the Highway Safety Act, later codified as Section 130 in Title 23 of the United States Code. This program provides Federal money to States in order to fund projects aimed at reducing the incidence of accidents, injuries, and fatalities at railroad crossings. To accomplish these safety objectives, the funds can be used to install or improve signs and pavement markings, flashing light signals, automatic gates, crossing surfaces, and crossing illumination.

This program is administered by FHWA. In Fiscal Year 1999, $134 million was reserved for Section 130 highway-railroad grade crossing improvements, out of the total $554 million 10 percent-set-aside for Rail Crossing and Hazard Elimination.[9]

The Ohio Rail Development Commission (ORDC) provided an overmatch to its STP, Section 130 allocation of $6.2 million, for a combined total 1999 rail-grade crossing budget of $15 million. Even with the STP overmatch, project applicants significantly exceed program resources.[10]

### *10. FHWA Transportation and Community and System Preservation Pilot (TCSP)*

**Type of Funding/Financing:** Federal 80/20 matching program

**Eligibility:** Highway and transit systems planning

**Application:** Highway and transit

**Funding:** $120 million to the end of the authorization, 2003

The TCSP program is a comprehensive initiative of research and grants to investigate the relationships between transportation and community and system preservation and private sector-based initiatives. States, local governments, and metropolitan planning organizations are eligible for discretionary funds to plan and implement strategies that:

- improve the efficiency of the transportation system;
- reduce environmental impacts of transportation;
- reduce the need for costly future public infrastructure investments;
- ensure efficient access to jobs, services, and centers of trade; and

- examine private sector development patterns and investments that support these goals.

A total of $120 million is authorized for this program for FY 1999-2003.

The North Jersey Transportation Authority won a TCSP grant to identify infrastructure needs for the trucking community using the Port of Elizabeth facilities

### *11. FHWA National Highway System (NHS)*

**Type of Funding/Finance:** Federal 80/20 matching program, 90/10 for Interstate projects.

**Eligibility:** Federal highway system improvements

**Application:** Highway construction, rehabilitation, safety improvements (grade crossing) for segments of the NHS, operational improvements, transportation planning, highway research, wetlands mitigation, ITS, as well as transit projects.

**Funding:** $28.5 billion over 6 years

The National Highway System (NHS) is composed of 163,000 miles of rural and urban interstate system roads, international border crossings, major intermodal transportation facilities, the defense strategic highway network, and strategic highway network connectors. The purpose of the NHS is provide an interconnected system of principal arterial routes which serve major population centers, international border crossings, ports, airports, public transportation facilities, and other intermodal transportation facilities and other major travel destinations; meet national defense requirements; and serve interstate and interregional travel. NHS funding supports highway construction, safety and operational improvements, transportation planning, technology transfer activities and ITS, traffic control, and bicycle and vanpool projects on the NHS facilities. See the Case Study section, Loredo, Texas International Bridge project for an example of the NHS use.

Under ISTEA and furthered in TEA-21, NHS connections to intermodal freight facilities which fall within designated patterns of truck volumes are eligible for NHS funds. Many of these connections are on local roads and city streets that might otherwise not be eligible for funding.

### *12. FHWA State Infrastructure Banks (SIB)*

**Type of Funding/Financing:** Federal 80/20 matching loans and credit enhancement

**Eligibility:** Public agencies, private sponsors, TIP/STIP requirement, and Titles 23 and 49 uses

**Applications:** Transportation Improvement District (TID)-based highway improvements, toll roads

**Funding:** TEA-21 authorized SIBs for four States (CA, FL, MO, RI) to flex Federal-aid funding to capitalize the SIB.

The SIB pilot program was established under the 1995 NHS Designation Act (Section 350) and appropriated $150 million to participating States. Federal pilot program disbursements to individual State SIBs varied from $1.5 million to $12 million; the most common State allocation was $1.5 million. Approximately 40 States participated in the ISTEA pilot program with varying levels of success. TEA-21 authorized four States to capitalize their SIB programs with Federal-aid funding, and removed the 10 percent cap required under ISTEA

Program eligibility is limited to Title 23 and Title 49, Chapter 53, U.S.C.; however, some States (Ohio and Missouri) took the initiative to establish state-funded infrastructure bank accounts to address other modes. Missouri, though, is constrained from capitalizing its non-highway SIB accounts by its State Highway Trust Fund restrictions against non-highway uses. Consequently, Missouri used General Fund appropriations to fund the transit account, which was then used to support a transit project in St. Louis.

As established under the NHS Designation Act, State Infrastructure Banks had two main implementation hurdles: 1) low capitalization funding and 2) developing a loan program within a framework traditionally oriented to grant disbursement. TEA-21 only re-authorized four States to capitalize the bank from TEA-21 Federal appropriations, which compounded the capitalization hurdle. To date, the remaining 36 States still maintain active SIBs, although the majority are significantly undercapitalized with $1 million or less in these accounts. Of the non-authorized states, some have been able to fund projects.

Despite these hurdles, there are some noteworthy case studies of SIB lending for freight-related highway development. Pennsylvania, for example, used its SIB to fund a highway connector project to connect a State highway to the Pittsburgh International Airport freight warehouse area, repaying the loan from a Transportation Improvement District (TID). However, it is important to note that Pennsylvania was not re-authorized to draw down funding under TEA-21 to re-capitalize its SIB. Therefore, Pennsylvania SIB can only be re-capitalized by loan repayments and State appropriations. Laredo, Texas, was also successful at using its SIB to finance the construction of a freight-related highway toll bridge project. Similar to Pennsylvania's airport road, Ohio used its SIB to fund a highway project, repaid by a TID assessment. See the Case Study Section, the Butler County highway and Pittsburgh Airport Access road projects for a more detailed description of the funding process.

### *13. Demonstration Projects/High Priority Projects*

**Type of Funding/Financing:** Federal 80/20 matching appropriations from congressional earmarks

**Eligibility:** Subject to congressional earmarking

**Application:** Highway, rail, intermodal projects

**Funding:** $9.4 billion over 6 years

TEA-21 authorized $9.4 billion in funding to target 1,850 High Priority projects. The Federal Highway Administration and the Office of Intermodalism compiled surveys into the *Compendium of Intermodal Freight Projects*. The *Compendium* survey results indicated that 20 percent of the projects identified in the survey were funded under ISTEA demonstration and priority intermodal project earmarks. Review of State and MPO data for this study were similar to the findings from the *Compendium*. In effect, demonstration funding and/or TEA-21 High Priority projects substitute for dedicated State intermodal programs. These types of projects come from a process that bypasses any coordinated short or long range planning efforts. High Priority funding designations are included in the two Port Hueneme case studies in the Case Study section.

### *14. FHWA GARVEE Bonds*

**Type of Funding/Financing:** Bond issuance (80/20) based on future Federal appropriations

**Eligibility:** Title 23 **Application:** Title 23 highway uses restricted to Treasury bill rates

**Funding:** Funding is tied to future Federal appropriations, however default protections are budgeted into TEA-21

The Grant Anticipation Revenue Vehicle (GARVEE) bond is a financing instrument with principal and/or interest repaid with future Federal-aid highway funds. GARVEE bonds can be used one of two ways: 1) direct GARVEE bonds in which Federal assistance directly reimburses debt service paid to investors; and 2) an indirect reimbursement in which Federal funds reimburse expenditures on other Federal-aid projects and the State department of transportation subsequently uses a

portion of those funds to pay debt service on the debt-financed project. In second type, the debt-financed project does not need to be a Federal-aid project. Two projects have used GARVEE bond financing under this new program: Ohio's Spring-Sandusky Interchange, and New Mexico's Corridor 44. Two other projects, California and Mississippi, originally described as GARVEE-type mechanisms for funding, are no longer defined that way. See the Case Study section for more detailed explanation of GARVEE financing.

### *15. Hazardous Materials (HazMat)*

| |
|---|
| **Type of Funding/Finance:** Federal funding based on permitting revenues |
| **Eligibility:** All public-facility modes of shipping |
| **Application:** Enforcement costs |
| **Funding:** Fee-based |

HazMat regulations apply to interstate, intrastate and foreign commerce; and to transportation in commerce by aircraft, railcars, vessels, and by motor vehicles operated by interstate carriers. HazMat regulations are maintained by the Research and Special Programs Administration (RSPA), which issues rules and regulations governing the safe transportation of hazardous materials.

Under the Federal HazMat law, RSPA shares enforcement authority with four modal administrations:

- Federal Motor Carrier Safety Administration
- USCG (United States Coast Guard)
- FRA (Federal Railroad Administration)
- FAA (Federal Aviation Administration)

RSPA has primary enforcement jurisdiction over container manufacturers, re-conditioners, and re-testers, and a shared authority over shippers of hazardous materials. Compliance testing is done on-site, with inspectors visiting shippers and manufacturers who fall within their jurisdiction. All RPSA costs are covered through the processing and licensing fees associated with HazMat registration.[11] FHWA regulatory functions for hazardous materials include highway routing of hazardous materials and issuing highway safety permits. Compliance is carried out using road-side inspections at current breaks in truck routes (such as weigh stations), coupled with strike force abilities (teams of inspectors capable of carrying out surprise inspections). Since inspections take place on the shipper sites, or on road networks, FHWA maintains no infrastructure of its own. Safe Havens are maintained for vehicles carrying explosive goods, but these designated areas are maintained at the expense of shipping companies.

FHWA incurs cost for ongoing training and activities of emergency response personnel and inspectors, as well as administration costs, recovering the costs from HazMat registration. USCG costs are primarily restricted to inspections and training and inspections are carried out at loading and unloading facilities. According to a Funds Transfer Query, Coast Guard stations carry out inspections, which are funded by the District's Operations Division.[12] Funding comes primarily from registration fees paid by the individual HazMat carriers. The FRA acts as a quality control on the quality control.[13] Only 0.5 percent of railroad activity is monitored, and it is usually the railroads that monitor activity. In either case, no HazMat-specific facilities are maintained, and instead HazMat inspections depend on using modal and HazMat transport company facilities so that loading and unloading may be monitored (which is where the highest risk of

hazard exists). FAA follows similar procedures and primarily enforces non-compliance.[14] Both air carriers and cargo carriers are inspected, as well as indirect air carriers and shippers. FAA inspectors go to facilities and carry out checks on site. The main costs for the FAA are the salaries of the inspectors, which comes out of the FAA budget.

Most of the money from Federal appropriations covers planning and training programs carried out by the USDOT (which are maintained by RSPA, FHWA, USCG, FRA and FAA). Additionally, the DOE, EPA, and FEMA all receive grants in order to cover monitoring and technical assistance.

State DOTs, although responsible for the routing of HazMat vehicles and the accompanying signage, maintain no dedicated HazMat infrastructure, and have not constructed any dedicated HazMat routes.[15] Shippers have built the majority of all facilities used for HazMat purposes.

A grants program is maintained by RSPA to enhance existing state and local hazardous materials emergency response programs. This program is funded through registration fees collected from certain transporters and shippers of hazardous materials in commerce. The registration fee is set by the Secretary of Transportation, and ranges from $250 to $5,000 for each filing. This fee is based on at least one of the following:[16]

- Gross revenue from transporting hazardous material
- Type of hazardous material transported or caused to be transported
- Amount of hazardous material transported or caused to be transported
- Number of activities that the shipper carries out for which filing a registration statement is required under this section
- Threat to property, individuals, and the environment from an accident or incident involving the hazardous material transported or caused to be transported
- Percentage of gross revenue derived from transporting hazardous material
- Amount to be made available to carry out registration and training programs contained within the Hazardous Materials Transportation Law
- Other factors that the Secretary considers appropriate.

### *16. FRA Local Rail Freight Assistance Program*

**Type of Funding/Financing**: Federal grants to states. For track rehabilitation projects, States had the option of providing the funding to the railroads that did the work on a grant or loan basis. During the course of the program, 10 States loaned LRFA funding.

**Eligibility:** A State agency designated by the Governor. For most states, the designated agency was the State Department of Transportation. Each State was entitled to a set amount that could be used for rail planning or project purposes. The amount varied from $100,000 to $36,000 depending on the year. Most States used their entitlement funding for rail freight planning.

**Application:** Projects included track rehabilitation and rail facility construction with respect to rail lines that carried less than 5 million gross ton miles during the prior year. A line was eligible to be acquired if it had been authorized to be abandoned by the Interstate Commerce Commission. Each project had to have a benefit-cost ratio greater than 1.

**Funding:** $0 in 1999

The Local Rail Freight Assistance Program was established by the Regional Rail Reorganization Act of 1973 as a temporary program of financial assistance designed to ease the disruption of the loss of rail service due to the bankruptcy of the Penn Central and five other smaller carriers. The Program was limited to the 18 States in the Northwest and Midwest Region. With the bankruptcies of the Milwaukee and the Rock Island Railroads, the LRFA Program was expanded by the Railroad Revitalization and Regulatory Reform Act of 1976 to include all of the States, except Hawaii. Each of the eligible States received some LRFA funding.

The authorization for the LRFA Program expired on September 30, 1994. Funding was appropriated through September 30, 1995.

### *17. FAA AIP Program*

**Type of Funding/Financing**: Federal grants to airports and State airport programs from passenger revenues

**Eligibility:** Construction for airports included in the National Plan of Integrated Airport Systems with that receive more than 100 million pounds of cargo or enplane 10,000 passengers annually and for other discretionary projects

**Application:** Planning and development

**Funding:** $2.4 billion authorized in 1999, $1.95 billion was obligated in 1999 for entitlements and discretionary spending

The US Airport and Airway Improvement Act of 1982 (amended in 1983 and 1987) authorized the Airport Improvement Program (AIP) to assist in the development of a nationwide system of public-use airports adequate to meet the projected growth of aviation. The Act provides funding (in the form of Federal- and state-administered grants) for airport planning and development projects at airports included in the *National Plan of Integrated Airport Systems*.[17] AIP funding is available for construction (maintenance is generally prohibited) and is limited to airports included in the National Plan of Integrated Airport Systems, within the following classifications:

- Cargo service airports receiving cargo in excess of 100 million pounds annually.
- Primary commercial airports that enplane more than 10,000 passengers annually

Specific advantages of the FAA AIP Grant program include:

- A large budget ($555 million): $300,000 to $16,000,000 per year for Primary Airports

based upon the number of passengers enplaning annually

- Eight percent (maximum) of the annual cargo service apportionment: A favorable funding ratio (in most cases) for State and local governments (90 percent Federal, 5 percent state, 5 percent local)

AIP also provides State block grants to nine participating states, including Illinois, Michigan, Missouri, New Jersey, North Carolina, Pennsylvania, Tennessee, Texas, and Wisconsin. The matching provisions are the same for both the AIP airport grant and the FAA State Block grant programs: Federal share is 90 percent; the remaining 10 percent is divided between State and local government or authority, on a discretionary basis. A recent Federal provision, first tested under a pilot program and now proposed for codification in the 1982 Act, would allow for a flexible non Federal match. This would permit the project sponsor to offer an overmatch to better compete for Federal resources.

### *18. FHWA Ferry Boat Discretionary Program*

**Type of Funding/Finance:** Federal 80/20 matching program

**Eligibility:** marine highway systems, i.e., for a ferry facility that provides a direct link on the NHS or an approved NHS connector. Set asides for Alaska, New Jersey, and Washington

**Application:** construction of ferryboats or ferry boat terminals

**Funding:** approximately $14 million/year for openly competitive, candidate projects. Total program authorization, including NHS set-aside for Washington, New Jersey and Alaska, is $220 million over 6 years

The Ferry Boat Discretionary Program (FBD) was created by Section 1064 of the ISTEA to support the construction of ferryboat systems connecting to the National Highway System. This marine highway program supports the construction of boats and ferry terminals.

The set asides for Alaska, New Jersey and Washington are for the construction or refurbishing of ferry boats and ferry terminals and their approaches that are part of the NHS. Due to the large number of requests, $2 million or less are typically awarded, in order to disburse funding to as many States as possible.

### *19. FHWA Appalachian Development Highway Program*

**Type of Funding/Finance:** Federal 80/20 matching program

**Eligibility:** 3,025-mile Appalachian Development Highway System

**Application:** construction, reconstruction, or improvement of highways.

**Funding:** $450 million for 1999-2003

The Appalachian Development Highway System (ADHS) was created to provide a system of highways and access roads to foster economic development in the Appalachian regions of 13 States: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia. Funding from this program may be used for the construction, reconstruction, or improvement of highways on the 3,025-mile ADHS.

### *20. FHWA Metropolitan Planning Funds (PL)*

**Type of Funding/Finance:** Federal 80/20 matching program

**Eligibility:** Metropolitan Planning Organizations

**Application:** transportation planning activities, including freight infrastructure planning

**Funding:** 1% of Title 23 program funding, based on a ratio of a state's urban population to nationwide urban population

States must make all Metropolitan Planning (PL) funds authorized by 23.U.S.C. 104 (f) available to the MPOs in accordance with a formula developed by each State, in consultation with the MPOs, and approved by FHWA. Under 23.U.S.C. 134, MPOs are responsible for developing, in cooperation with the State and affected transit operators, a long-range transportation plan and transportation improvement program (TIP).

### *21. FHWA State Planning and Research (SPR)*

**Type of Funding/Finance:** Federal 80/20 matching program

**Eligibility:** State Highway Agencies

**Application:** transportation planning, development, research, and implementation of management systems.

**Funding:** 2 percent set-aside from certain Federal-aid funds (NHS, STP, CMAQ, etc.) apportioned to a state. 25 percent of the amount is designated for research

SPR funds may be used for engineering and economic surveys, planning, development and implementation of management systems, research, and development and technology transfer activities necessary in connection with the planning, design, construction, and maintenance of highways, public transportation, and intermodal transportation systems.

## 2.3 State Funding Sources

Aside from traditional grant subsidies, a few States have developed innovative programs for financing port and rail development. The examples cited in this section - maritime infrastructure bank, a port revolving fund, an economic development grant program, and short line loan/grant programs - are institutional financial solutions to a region's infrastructure needs, intended to be an ongoing capital resource to capital financing rather than a one-time subsidy for a specific project. These institutional solutions vary in that some provide matching grants while others provide low-interest loans or serve as a credit enhancement tool.

These institutional approaches provide specific advantages to infrastructure financing. First, they supply a greatly needed source of capital funds that ports and railroads, particularly shortlines, can turn to and incorporate into their long-term planning process. Also, there are generally fewer restrictions attached to funds obtained through an infrastructure bank or a revolving fund. For instance, businesses usually cannot qualify for a loan in the private market to build facilities on leased land. An infrastructure bank or a revolving fund could allow a port or rail company to receive money for building this type of project. Additionally, an infrastructure bank, as a legal joint powers authority, can provide for conduit financing and allow a port, or rail corporation, to issue bonds more easily (e.g., without voter approval) than if the port were to undertake this endeavor on its own.

The major drawback of these types of institutional solutions is in obtaining the monies, either from Congress or the state, to capitalize the bank or seed the fund. Additionally, even when the bank or fund has been capitalized, the grant is often a one-time appropriation and is inadequate to provide sufficient capital resources to fund larger capital projects and related expenditures faced by ports today. Exhibit 2.5 list examples of these types of institutional financing mechanisms in a matrix of State programs. Brief summaries of the programs, including funding levels and program utilization, follow the matrix.

**Exhibit 2.5**
**State Summary Matrix by Mode Eligibility**

| | | Funding Source | Use | Port | Rail | Highway | Airport |
|---|---|---|---|---|---|---|---|
| 1 | CA Maritime Infrastructure Bank | | Bonds | X | | | |
| 2 | CA Infrastructure & Economic Development Bank | General fund | Loan | X | | X | |
| 3 | FL Seaport Transportation & Economic Development | General fund | 50/50 Grant | X | X | X | |
| 4 | FL Freight Task Force | General fund | Grant | X | X | X | X |
| 5 | MN Port Development Assistance | General fund | Loan/Grant | X | | | |
| 6 | OR Port Revolving Fund | Lottery/ General fund | Loan | X | | | |
| 7 | WI Harbor Assistance | Transportation Fund | Grant | X | | | |
| 8 | PA PennPlus | General fund | Loan | X | X | X | X |
| 9 | PA Rail Freight Assistance | General fund | 50/50 Grant | | X | | |
| 10 | WA Freight Mobility Strategic Investment Board | General fund | Grant | X | X | X | |
| 11 | IN Rail Service Fund | General fund | Loan/grant | | X | | |
| 12 | OH Rail Development Commission | General fund | Loan/grant | | X | | |
| 13 | IL Rail Freight Assistance | General fund | Loan/grant | | X | | |
| 14 | MI Rail Loan Assistance | General | 90/10 Loan | | X | | |
| 15 | MN Rail Freight Program | General fund | | | | | |
| 16 | MO Transportation Corporation | Private market | Tax-exempt bonds | X | X | X | X |
| 17 | VA Rail Industrial Access Program | General fund | 50/50Grant** | | X | | |
| 18 | VA Rail Preservation | General fund | Grant/loan | | X | | |
| 19 | WI Freight Rail Infrastructure/Preservation | General fund | Loans at 0% | | X | | |
| 20 | PA Airport Assistance | General fund | Grants | | | | X |
| 21 | TN Airport Program | Fuel tax | Grants | | | | X |

** Match required after first $100k.

### *1. California Maritime Infrastructure Bank (CMIB)*

**Type of Funding/Financing:** Credit Enhancement, Joint Powers Authority (JPA) used as conduit for bond issuance

**Eligibility:** California ports, port infrastructure projects including dredging and land acquisition

Application: Ports

**Funding:** $0 for loans. As a JPA, CMIB can issue bonds

In 1994, California State legislation established the CMIB as the first statewide, maritime-specific public investment bank in the United States. The CMIB was developed to service the financing needs of projects not funded by the State of California or the private sector. The idea behind the CMIB is that the bank would request a one-time grant from Federal or State sources for initial capitalization. Once capitalized, the CMIB's potential tools for financing would include long-term, low-interest loans, and taxable and tax-exempt bonds. Funds provided through the CMIB would be less restrictive than other State funding sources such as the State Harbors and Watercraft Revolving Fund (HWRF). For instance, while HWRF funds cannot be used on a project for a private tenant on public land, funds coming from the CMIB could be used for that purpose.

While the CMIB has been heralded as an innovative financing mechanism in the maritime industry, it has yet to gain the financial support needed to capitalize the bank and begin loaning to projects. A one-time grant request from the U.S. Congress was rejected as was a bill in California seeking funding from the State diesel fuel tax. As of August 1999, the CMIB was still not capitalized. While lacking in funding capacity, the CMIB has been able to provide conduit financing using its status as a public agency with Joint Powers Authority. As a JPA, CMIB has been able to issue bonds to finance several port projects. Thus far, three projects have been financed under the JPA bond issuance process. See the Case Study section, Port of Humboldt and Port of San Diego projects for more detail regarding CMIB use.

### *2. California Infrastructure and Economic Development Bank*

**Type of Funding/Financing:** Loan program, credit enhancement

**Eligibility:** Local roads and port facilities for public agencies and non-profit corporations to support community economic development

**Application:** Local roads, port facilities

**Funding:** $475 million in 1999

The California Infrastructure and Economic Development Bank was created in 1994 to assist in developing the infrastructure and public improvements necessary to implement economic development throughout the State. A 1998/99 State budget allocation capitalized the Bank with a $50 million appropriation in order to develop the loan program.

This program is designed to support projects that enhance economic development in California and meet the needs of as many jurisdictions as possible. Emphasis is given to projects that result in job creation/retention, improve communities in distress, leverage funding, and are ready to be implemented. Eligible applicants are limited to public agencies and non-profit corporations. Eligible projects include:

City streets

Communications facilities

| | |
|---|---|
| County highways | Defense conversion |
| Drainage and flood control | Educational facilities |
| Environmental mitigation facilities | Parks and recreational facilities |
| Port facilities | Public safety facilities |
| Public transit | Sewage collection and treatment |
| Solid waste collection and disposal | State highways |
| Water treatment and distribution | |

Eligible costs include construction, renovation, acquisition, of all lands, structures, real or personal property rights; rights-of-way; franchises; licenses; easements; cost of demolishing or removing buildings; equipment; financing charges; and architectural, engineering, financial, or legal services.

The Bank plans to issue direct loans to communities in amounts between $250,000 and $5,000,000. The loans will be made at the fixed rate basis of 70 percent of current market rates. The loan term will not exceed the project's useful life or a 30 year period (whichever is less). The Bank will target a 3:1 leveraging ratio for the program.

There are two parts to the Bank: 1) a revolving loan fund for infrastructure improvements; and 2) conduit revenue bonds for industrial development. The Bank has the broad authority to issue bonds, make loans, provide guarantees, and leverage State, Federal, local, and private funds to target public investment for the economic improvement of California communities. Over a 20-year period, the program will be able to fund approximately five times its initial capitalization, or $252 million in projects (assuming an original bond issue of $150 million at 5 percent interest rate with a 30-year maturity).

The Bank will use a two-step application process to select projects for financing. A relatively short pre-application is submitted first, followed by a longer application if the project qualifies as a possible candidate for Bank funding. The criteria established by the Bank include:

- Project promotes economic development
- Project is consistent with applicant's General Plan and Economic Development Plan
- Applicant has a demonstrated need for the Bank's financing
- Project financing includes a minimum of 10 percent of funding from sources other than the Bank
- Borrower can begin construction within 18 months following the date of the Bank's approval
- Applicant demonstrates ability to repay loan

Applications that are complete and meet all eligibility criteria will then be ranked based on the following prioritization criteria:

- Project impact, including job creation and retention, types of jobs created or retained, and other economic impacts.
- Community economic need, including unemployment rate, poverty rate, and other indicators of need.
- The extent to which the Bank's financing leverages funds from other sources.

- Ability of the applicant to initiate project construction in a timely manner.

Recently, the State of California capitalized the Bank with an additional $425 million from a surplus in the State's budget to use for infrastructure improvements. This additional money changed the amount of funding the Bank can issue to each project and the criteria for eligible projects may expand. The bank is still finalizing its eligibility criteria and administrative procedures.

### *3. Florida Seaport Transportation and Economic Development Funding (FSTED)*

**Type of Funding/Financing**: State 50/50 matching grant program

**Eligibility:** All public ports for transportation, dredging, construction, equipment, and land acquisition

**Application:** Ports

**Funding:** $363 million, from bond issuance

In 1990 the State of Florida created the FSTED Program. The program's goal is to finance port transportation or port facilities projects that will improve the movement and intermodal transportation of cargo or passengers in commerce and trade within Florida.

Originally, the FSTED program received $8 million per year from the State's transportation trust fund. This money came primarily from motor vehicle registration fees and fuel tax revenues. During the 1996 legislative session, an additional $15 million per year was allocated to ports for capital improvements. The 1996 legislative session also allowed the FSTED program to finance costly capital projects by allowing the annual allocation to be used for debt service on bonds. Consequently, FSTED and the Florida Ports Financing Commission (FPFC), the entity created to administer the bond program, leveraged the State's $15 million annual investment into more than $220 million of bond proceeds. With a 50 percent federal match, total project investment will reach $450 million. The 1999 Legislative session moved the bond issuance forward by 2 years, permitting bond issuance in 1999 instead of 2001. An additional $10 million was allocated for intermodal projects, to leverage another $153 million of bonds.

The FSTED program is located within the Florida Department of Transportation (FDOT). To implement the FSTED program, a 17-member FSTED Council has been created comprising the port directors of the 14 publicly owned deepwater ports as voting members. The secretary of FDOT, the secretary of the Florida Department of Community Affairs, and the director of the Governor's office of Tourism, Trade and Economic Development also serve on the council as nonvoting members.

All public ports are eligible for FSTED program funding. Detailed funding applications are submitted annually and the FSTED council reviews and approves/disapproves each project eligible to be funded pursuant to the program's guidelines. Port projects are funded through grants from FSTED funds on a matching basis, 50 percent state/50 percent local port authority. Intermodal, off port (rail and highway access,) and dredging projects are funded on a 75 percent state/25 percent local port authority matching basis.

There are many unique and beneficial aspects to Florida's FSTED program. First, the program is part of the state's larger mandate requiring all cities and counties to prepare comprehensive development plans which must be consistent with the state's own

comprehensive plan. In this respect, the FSTED Council and funding process provides a coordinated effort towards meeting common goals that are in line with State objectives. Second, it is one of the few State programs that provides a dedicated funding source for port development in the U.S.. Additionally, unlike Oregon (discussed below) and California, the FSTED program provides grants and not loans. This strong financial commitment to port development in Florida signifies, as in Oregon, a view that asserts the importance of ports to the state's overall economy. An example of one of FSTED's larger-scale projects, the Palm Beach Skyway, is profiled in Section 3, Case Studies.

### *4. Florida Freight Task Force*

**Type of Funding/Finance:** Grants

**Eligibility:** Florida freight transportation projects located on the Strategic Freight Network, b/c ratio greater than 1

**Application:** primarily construction

**Funding:** $10 million (possibly one-time appropriation)

The Florida Freight Stakeholders Task Force was formed as a result of the Governor's Intermodal Transportation Summit held on June 8, 1998. The Task Force was designed to be a private/public partnership that would address the needs of Florida's intermodal freight transportation. Task Force objectives include the following:

- Identify, prioritize and recommend freight transportation projects for fast-tracking funding.
- Develop recommendations for the 2020 Florida Statewide Intermodal Systems Plan that will address Florida's freight transportation interests.

Using the assistance of the Center for Urban Transportation, CUTR, the Task Force was able to identify projects for fast-track funding. In conjunction with the Freight Task Force project identification analysis, the Florida Legislature made a one-time, $10 million Legislative appropriation to fund projects recommended by the Task Force. This appropriation enabled the Task Force to establish a pilot fast-track program, with the $10 million funding capability as an integral part of this objective. The initial Task Force solicitation (sent out to Task Force members, MPO's, ports and airports) was for projects.

Project selection criteria is based on several factors: location on Florida's Strategic Freight Network; reducing barriers to freight shipment; benefit/cost ratio greater than 1 (developed from a Center for Urban Transportation Research [CUTR] model); stage of development; time to complete project; capacity; safety; and neighborhood impact.

### *5. Minnesota Port Development Assistance Program (PDAP)*

**Type of Funding/Finance:** Grants and loans, or combination

**Eligibility:** Ports for construction, dredging, equipment, and disposal facilities

**Application:** Commercial port improvements

**Funding:** $3 million over 2 years

In 1991, the Minnesota Legislature established the Minnesota Port Development Assistance Program (PDAP) to expedite, retain or generally improve the movement of commodities and passengers on the commercial navigation system and enhance the commercial vessel

construction and repair industry in Minnesota. The State legislature provides funds in a revolving account that may be used by eligible applicants for port development assistance. The program is under the administration of the Minnesota DOT Office of Freight, Railroads and Waterways. Eligible projects are those that benefit shippers and receivers by improving or developing a commercial navigation facility or its components. Specifically, these projects include dock and terminal repair, capital improvement to a commercial navigation facility, vessel loading and off-loading support equipment, disposal facility construction, disposal facility repair, and dredging to open a new commercial navigation facility. The program has a $3 million budget for fiscal years 1997 – 99.[18]

### *6. Oregon Port Revolving Fund (OPRF)*

| |
|---|
| **Type of Funding/Finance:** Revolving loan fund |
| **Eligibility:** Projects for economic development and maintenance of port infrastructure; only refinancing projects are ineligible |
| **Application:** Small and medium-sized loans for port infrastructure and industrial development |
| **Funding:** $12 million in 1999 |

The OPRF was established in 1977 and is designed to provide long term loans at below-market interest rates to the state's 23 ports for purposes of economic development and maintenance of port infrastructure. It is primarily focused towards small- or medium-sized projects that are difficult to finance through a large bond program.

The OPRF was originally financed with $4 million from the state's general fund, but subsequently has received funds at regular intervals from the state's Lottery Fund, which is partially dedicated to the state's economic development. Since the fund's establishment in 1977, the program has taken in approximately $9 million dollars from the state, while disbursing more than $20 million in loans for nearly 150 projects. The revolving nature of the fund allows interest earned from previous loans to provide a constant inflow of capital back into the OPRF fund. In 1999, the OPRF fund had approximately $12 million in assets. Approximately $5 million is currently available for lending. OPRF may lend up to 20 years. Statutes tie loan interest rates to Treasury bill rates. OPRF loans are capped up to $0.7 million to any one project or $2 million to any one port. OPRF eligibility is relatively broad with only refinancing being considered ineligible.

The loan fund makes projects possible that otherwise would not be undertaken due to lack of funding. For instance, many ports are developing commercial waterfront property and would prefer to lease the land rather than sell it. Because businesses usually cannot qualify for a loan to build facilities on leased land, the OPRF allows a port to receive money for building in the form of a loan from the state. The port can then build and lease the facility to an interested tenant, while maintaining ownership of the land and retaining the new facility as an asset.

The Port's Division of the Oregon Economic Development Department administers the OPRF loan program. This administrative feature highlights the fact that Oregon sees its ports as being an integral feature of the state's economic growth. Indeed, State officials justify the appropriation of State monies to the OPRF fund on these larger State economic development grounds.

### *7. Wisconsin Harbor Assistance Program (HAP)*

**Type of Funding/Financing:** State grant program

**Eligibility:** Harbor communities for port construction, repair, and rehabilitation

**Application:** Ports

**Funding:** Approximately $4 million over 2 years

HAP was created in 1979 to provide financial assistance to communities on both the Great Lakes and the Mississippi River for projects that improve or maintain the state's waterborne commerce. The program is administered by the Harbors and Waterways Section of the Bureau of Railroads and Harbors of the Wisconsin DOT. Projects eligible for the program include dock wall construction and repair, and improvements related to the physical needs of the port, provided they maintain or increase commodity movement capability. HAP provides up to 80 percent of the funding for projects, with the remaining 20 percent to be supplied by the local governmental entity. If the U.S. Army Corps of Engineers is funding part of the project, the maximum HAP contribution is 50 percent. The program's operating budget for FY 1998 is $30,800, and for FY 1999 is $153,900. Three million dollars in new general-purpose revenue bonding authorization was approved for the FY 1998-99 biennium, with an additional award of $1 million from the Transportation Fund. These funding levels have been consistent for the last several years.[19]

### *8. Missouri Transportation Corporation Statute*

**Type of Funding/Financing:** State incorporation program

**Eligibility:** Missouri Highway Commission review for highway or rail transportation and public project benefits, as well as applicant's ability to repay bond issuance

**Application:** Rail, highway, port, airport

**Funding:** $0

Missouri statute permits the formation of transportation corporations for the purposes for issuing tax-exempt debt. This program was critical in supporting the development of the Kansas City Fly-over project, a major project sponsored by several Class I railroads which incorporated for the purpose of issuing debt. The corporation funded the construction of a rail grade crossing project that separated east-west traffic from north south.

There were some obstacles. Initially, the project attempted to use Federal funding as collateral for reducing debt issuance costs. The Federal funding was deemed ineligible for rail construction projects, despite the fact that the project helped alleviate highway congestion associated with grade crossing conflicts. The fly-over project was deemed ineligible to receive grant funding from U.S. DOT and from the Missouri Trust Fund, which prohibits the use of gas taxes for non-highway uses.

The Kansas City fly-over project, described in Section 3—Case Studies, is innovative in the manner that bonds are repaid. This is essentially a toll road project in that revenue from the project is remitted every 6 months to repay principal, interest, and operations costs. However, the fee is charged every time a railroad either uses the fly-over or passes beneath. Usage is tracked over the course of the month, and the participating railroads are charged accordingly, but not in excess of the set bond payment schedule.

### *9. Pennsylvania Intermodal Funding (PennPlus and General Funds)*

**Type of Funding/Financing:** PennPlus multi-modal infrastructure loan/grant program

**Eligibility:** To be determined

**Application:** Airport, rail, highway, and port projects that support freight

**Funding:** $4 million

Pennsylvania has taken some active measures to fund non-highway infrastructure, including establishing a Rail Freight Assistance grant program (RFAP), an airport grant program, the Pennsylvania State Infrastructure Bank (which funded the highway-airport connector project), and applying large general fund appropriations over the years to fund port infrastructure.

Depending on need, Pennsylvania also makes funds available to rail freight projects through the Capital Budget. To receive funds, applicants must work through their legislator to make a request to the General Assembly. Total capital expenditures for the 14-year period from FY 1981-82 to FY 1994-95 were $79,443,867, or an average of $5.7 million per year. When compared to average annual RFAP expenditures of $3.6 million during that same time-frame, capital budget grant expenditures averaged about 50 percent higher.[20] Recently, general funds supported Pennsylvania doublestack clearance project through a public-private partnership with Conrail. This project is described in Section 3, Case Studies.

Until last year, all of Pennsylvania's funding mechanisms functioned within modal constraints (e.g., airport projects were funded under the airport program and rail projects were funded under the State railroad program). In 1999, the Pennsylvania legislature appropriated $4 million to capitalize PennPlus, a new multimodal loan program. The program sponsors approached US DOT to match capital funding, but the PennPlus project eligibility was too broad to match US DOT program eligibility, prohibiting Federal capitalization. PennPlus is still in the final phase of development, and is finalizing guidelines and operating procedures.

### *10. Pennsylvania Rail Freight Assistance Program (RFAP)*

**Type of Funding/Financing**: State 50/50 matching grant program

**Eligibility:** Rail and shipping corporations for new rail construction, rehabilitation

**Application:** New construction and rehabilitation of rail and intermodal facilities (maximum grant size is $300,000 for rehabilitation)

**Funding:** $8 million in 1998

The 1984 Rail Freight Preservation and Improvement Act was enacted to preserve and improve rail freight service in Pennsylvania by making grants, loans, or other assistance available to qualified applicants. The catalyst for this act was Pennsylvania's deteriorating and abandoned tracks left from the reorganization of rail carriers. In the past, funding had also been available through the Federal Local Rail Freight Assistance program, but Federal Local Rail Freight Assistance (LRFA) funds have been dropped from of the Federal budget. Today RFAP is one of the largest State rail grant programs in the U.S.

RFAP was established to provide financial assistance for investment in rail freight infrastructure. The purpose of the program is to preserve essential rail freight service where economically feasible, and to preserve or stimulate economic growth through the generation

of new or expanded rail freight service.[21] To participate in this program, applicants must submit their application in one of two application cycles, ending April 15 and September 30 of each year. RFAP applicants' projects must fall into at least one of these three categories:

- Maintenance/Rehabilitation - Projects to replace ties, rails, plates, turnouts and other track materials, structural materials and additional ballast to restore, improve, or maintain an existing railroad line to the level necessary for safe operation and use; and have an estimated useful life of at least 5 years, but do not include land, buildings, or building materials to construct a new building.
- Construction -The acquisition cost of ties, rails, ballast, other track material, and structural materials in sufficient quantity to construct a railroad line where none exists or improve a facility to a level necessary for the operation or use with an estimated useful life in excess of 5 years, but not including land acquisition, buildings, or building materials to construct a new building.
- Combination - All of the categories defined for construction and maintenance/rehabilitation.

Of the two RFAP categories, an emphasis is generally placed on maintenance. Maintenance projects account for approximately 80 percent of all grants, whereas construction projects comprise 20 percent. In 1997-1998, 70 percent of applicants requested funding for maintenance, 24 percent for construction, and 4 percent for both.

The principles guiding the RFAP, as outlined in Pennsylvania's "1996 Comprehensive Rail Freight Study, provide for the RFAP to:

- Assist in upgrading and maintaining railroad infrastructure in cases where the railroad company lacked the financial resources or where such a company became the operator after the rail lines were proposed for abandonment by larger companies or service was discontinued for lack of financial viability
- Renovate, upgrade, and provide operating assistance to state-owned lines
- Supplement the economic development packages needed to attract new industrial installations or needed to retain existing jobs at a specific location.

Railroads that are eligible for RFAP money must own or use rail freight infrastructure. Eligible shippers must have a spur. RFAP grants are capped at $300,000 for maintenance/rehabilitation, requiring a 25 percent up-front match, and $100,000 for construction, requiring a 50 percent up-front match.

RFAP is funded through General Fund appropriations. PennDOT has expanded the scope of this program by accepting applications not only from railroads, but also from shippers and local development agencies. Between 1983 and 1997, annual appropriations for RFAP have ranged from $2.5 to $4.5 million; however the last two RFAP appropriations averaged

$8 million.

### *11. Indiana Rail Service Fund (IRSF) and Grade Crossing Improvement Fund (GCIF)*

**Type of Funding/Financing:** State low interest loan program, grants

**Eligibility:** Class III rail and local governments for rehabilitation, acquisition, and grade crossing

**Application:** Class III rail acquisition and rehabilitation

**Funding:** $2 million in 1998 for IRSF, $0.5 million for grade crossing

Indiana administers two railroad subsidization programs. The first, entitled the Industrial Rail Service Fund (IRSF), was enacted in 1982, and is designed to provide access to capital funds for qualified Class III railroads. The program issues low interest loans (approximately 5.0 percent) to rail carriers for the acquisition of railroad right-of-way or track rehabilitation. Loans are capped at $800,000 for rehabilitation projects and at $1 million for rail acquisition. Since the program's inception, a total of 20 loans have been issued to a variety of rail carriers, local governments, and municipal port authorities. Beginning in 1997, grants were provided for railroad relocation projects, high-speed rail planning, and municipal port authorities operating as railroads. Typical port authority railroad projects include track rehabilitation, bridge maintenance and repair, and purchasing of buildings and track. There is a $250,000 cap on individual grants. In 1998, $2 million in grants were issued for approved projects. Projects eligible for funding are evaluated by certain criteria, including economic impact, employment stimulation, and the overall viability of the project. The IRSF loan and grant program is funded by a designated portion of the State sales tax (0.04 percent of 1.0 percent); in 1998, the IRSF accrued $1.3 million in revenue from sales tax.

Indiana's second program, the State Grade Crossing Improvement Fund (GCIF), started in 1998 generated and provides $500,000 per year in grants. Eligible recipients, including rail carriers and local governments, can only use the funds for passive rail crossing improvements such as signage, vegetation removal, pavement markings, and illumination. This program is independent of the Federal Section 130 grade crossing funds. Funding for this has been appropriated by the State legislature from the State's general fund.

### *12. Ohio Rail Development Commission (ORDC)*

**Type of Funding/Financing**: State low interest loans and grants

**Eligibility:** Rail carriers, local governments, and port authorities for acquisition, construction, rehabilitation, and grade crossing

**Application:** Rail grade crossing and rail rehabilitation and development

**Funding:** $15 million (including Federal STP), $11 million is earmarked for safety

ORDC was created in 1994 to plan, promote and implement the improved movement of goods and people faster and safer on a rail transportation network connecting Ohio to the nation and the world. The ORDC pursues this objective by issuing grants and loans to rail carriers, local governments, and port authorities. The funds are primarily designated for rail grade crossing safety improvements, as well as rail rehabilitation, development, and acquisition. For fiscal year 1999, the ORDC had a budget of $15 million, of which a minimum of $6.2 million Federal Section 130 funding was combined with flexed STP funding for rail safety projects. A State general fund appropriation for 1999 allocated $4 million for the three other ORDC programs: 1) economic development; 2) branch line development; 3) and passenger rail program. There is no minimum or maximum value for the issued grants or

loans. The economic development program supports rail spur projects. The Branch Line program preserves corridors in small communities, by helping shortlines, community corporations, or port authorities acquire track. An ORDC project, Riemier Lumber is discussed in Section 3—Case Studies

### *13. Illinois Rail Freight Program (IRFP)*

**Type of Funding/Financing**: State loan and grant program

**Eligibility:** Municipalities, port authorities, and rail corporations for light density rail rehabilitation and rail spur construction

**Application:** Light density rail rehabilitation, and rail spur construction

**Funding:** $5 million

The Illinois DOT began offering loans and grants to small railroads in 1976 under LRFA. The Illinois Rail Freight Program (IRFP) was initiated in 1983 to provide grants and low interest loans to finance rail improvements that will preserve freight service critical to keeping and expanding industry and employment. This program was designed to support two types of projects: 1) rehabilitation projects for light density railroads (carrying less than 5 million gross-tons per year) and 2) rail spur construction for new companies locating to an area.

Loans issued to municipalities, port authorities, and rail corporations carry an interest rate of 3 to 4 percent and have a 15-year maturity. Funds are used primarily for facility construction and rehabilitation; land acquisition is not a permitted use. Potential projects are evaluated by criteria including job growth potential, transportation cost savings, and general cost benefit analysis. Unlike the other State programs, the IRFP does not fund improvements in railroad grade crossing facilities. Grade-crossing protection funds are administered by the Illinois Commerce Commission. Annual appropriations for IRFP are approximately $5 million and come from the State general fund.

IRFP was intended to support rehabilitation of light density lines (shortlines) and new commercial activities. However, Illinois is a major rail state because of Chicago, a major intermodal freight transportation hub for the U.S. Some 18-20 rail facilities load, unload, and transfer intermodal trailers and containers, and require a steady stream of steel-wheeled and rubber-tired interchange movements to create a transcontinental and interregional service.[22] Chicago does not typically have projects that qualify for IRFP objectives, and only 14 of the last 120 IRFP projects were located in Chicago. Section 3—Case Studies includes a typical IRFP project in the Chicago area.

### *14. Michigan Rail Loan Assistance Program (MiRLAP)*

**Type of Funding/Financing**: State 90/10 matching loan program

**Eligibility:** railroad corporations in good standing for railroad lines generating more than 50 carloads per mile of track

**Application:** Rail track rehabilitation and new construction

**Funding:** $3.3 million in 1999

MiRLAP began in 1997 to help finance capital improvements on Michigan's rail infrastructure. The program is designed to help preserve and improve rail freight service by loaning funds to local governments, railroad, and current or potential users of freight railroads services. Eligible applicants must be on a line that generates more than 50

carloads per mile of track, be in good financial standing, and demonstrate the ability to repay the loan.

Eligible projects include track rehabilitation, bridge and culvert repair, new construction, transload facilities, and rail consolidation. Right-of-way acquisition is not an eligible expense. For FY1999, $3.3 million was allocated to this program. In FY 2000, the program fund will be $7 million. Loans are limited to $1 million per project. The loans provided by the program can fund up to 90 percent of the project's cost. Loan recipients are required to provide a funding match of 10 percent. Loans are interest free and the loan repayment period cannot exceed 10 years. The State Transportation Commission must approve all loans.

### *15. Virginia Rail Preservation Program (RPP) and Rail Industrial Access Program (RIAP)*

**Type of Funding/Financing**: State 70/30 matching grant and loan programs

**Eligibility:** Class I loans, Class II and III grants, to upgrade and preserve track and for rail spur construction

**Application:** Rail improvement projects, rail spur construction

**Funding:** $3 million for RRP, $3.5 million RIAP

Virginia has two rail freight programs in place. RPP was set up in 1991 to provide funding assistance to all rail carriers. The funds can be used to upgrade current facilities. Class I railroads are issued loans while Class II and III railroad companies are issued grants. The project applicant must demonstrate a benefit-cost ratio greater than 1 and provide a 30 percent match. The Rail Preservation Program has total funding of $3 million per year. In FY 1998-99, all the funds were disbursed through eight loans and grants to rail carriers.

Virginia's other program, RIAP began in 1987. This program provides funds for new or improved access to a business for freight delivery. Businesses wishing to acquire funds from this program are required to complete an application, which is reviewed by the Economic Development Group of Virginia. The first $100,000 granted to any one project requires no match from the business. Any funds above $100,000 require a one-to-one match. In FY 1998-99, the program had funds totaling $3.5 million. Fifteen grants were issued in FY 1998-99 totaling $3 million. The funds that are not used do not carry over into the next year; instead, they are used for highway industrial access projects.

### *16. Wisconsin Rail Freight Programs*

**Type of Funding/Financing**: State rail loan program at 0 percent interest

**Eligibility:** Rail rehabilitation, improvement projects, and abandoned line preservation.

**Application:** Rail track rehabilitation, intermodal facilities, and rail spurs

**Funding:** $1.7 million in 1999

The Wisconsin Department of Transportation (WisDOT) has been providing freight rail assistance since 1979. Early efforts focused on preserving freight rail service to communities that would otherwise suffer if service was abandoned. In 1992, Wisconsin voters approved an amendment to the State constitution allowing the State to become directly involved in rail acquisition, rehabilitation, and development projects. WisDOT now provides up to 100 percent loans at zero to low interest for projects that will enhance the state's rail system. Currently, two programs operate under this authority: the Freight Rail Infrastructure Improvement Program and the Freight Rail Preservation Program.

Eligible projects for the Freight Rail infrastructure Improvement Program include track rehabilitation, track consolidation, intermodal facilities, and industrial spurs. Eligible projects for the Freight Rail Preservation Program include preserving freight service on abandoned and publicly owned lines and preserving abandoned rail corridors when service is not immediately continued. Over the course of the two programs, Wisconsin has spent $70.6 million on 134 projects involving more than 900 track-miles. The program's budget for FY 1998 is $1.0 million and for FY 1999 it is $1.7 million.[23]

### *17. Pennsylvania Airport Assistance Program*

**Type Funding/Financing:** State 75/25 matching grants

**Eligibility:** Airport cargo and/or passenger volume and reasonable project cash flow statement

**Application:** Development projects for smaller airports

**Funding:** $6.5 million

Commercial airports in Pennsylvania are funded through Federal and State programs. With the FAA's direct AIP grants and state-administered block-grant program, the Federal government provides approximately $29 million to Pennsylvania for airport development needs. Similarly, Pennsylvania contributes about $12 million through its State/Local Airport Development, Real Estate Reimbursement, and Capital Budget grants. However, none of these aviation grant programs are available to freight-shipping companies to make capital improvements to an airport facility.

Three major programs are administered under PennDOT's Bureau of Aviation: 1) Airport Development grants (including the FAA Block grants), 2) Real Estate Tax Reimbursement grants, and 3) Capital Budget grants. While the FAA has traditionally provided AIP funds directly to airports, it is now offering States block grants for non-primary airports. Act 1964 of 1984 authorized the Bureau of Aviation to provide assistance to all public airports, including those privately owned.[24] It also provided for expanded airport development and real estate tax relief to public airports. As a result of Act 164, Pennsylvania's Airport Development grant program has grown from a $1 million appropriation in the early 1980s to the current $6.5 million level. These funds, in combination with the FAA block grants and the state's capital budget allocations, provide Pennsylvania with approximately $20 million for airport development, not including FAA AIP grants directly given to airports that enplane more than 10,000 passengers or land cargo in excess of 100,000,000 pounds annually.

Pennsylvania's Airport Development grant program is comprised of two parts: 1) Federal sponsorship in the form of a FAA Block Grant and 2) State sponsorship in the form of State and local grants. To participate in either of these programs, participants must submit a pre-application by June 30 of each year that provides information on their project's cash flow and schedule. If selected, these applicants will then be eligible for either:

- FAA Block Grant. The FAA Block Grant, which is administered by the state, is issued to a sponsor for 90 percent of the Federally eligible amount. A grant for State matching funds can be issued for 50 percent of the remaining unfunded amount. Therefore, a single grant will be issued to the sponsor for 90 percent Block Grant funds and 5 percent State and local matching funds.
- State/Local Grant. The State grant issued to a sponsor provides for 75 percent of the eligible amount of the project, with local sponsors being responsible for the remaining 25 percent.

Airports eligible for FAA Block Grants must:

- Enplane less than 10,000 passengers annually (for publicly owned or designated reliever airports)
- Be included in the National Plan of Integrated Airports Systems.

Pennsylvania's Real Estate Tax Reimbursement grant provides real estate tax relief to owners of public-use airports. To participate in this program, owners who have paid local real estate taxes must submit an application to the Bureau of Aviation before February 1 of each year.

Pennsylvania also makes funds available to publicly owned, public airports from its Capital Budget. (Privately owned airports are not eligible for funds from the Capital Budget). To receive these funds, airports must work with their legislator to make a request to the General Assembly. In FY 1997-98, Pennsylvania allocated approximately $5 million towards these various requests. However, there is no designated annual fund/appropriation for these projects or formalized criteria for approval.

### *18. Tennessee Aeronautics Transportation Equity Fund*

**Type Funding/Financing:** State 90/10 matching grant program

**Eligibility:** Airport safety, landside, airside, and improvements consistent with State and local plans

**Application:** Development projects for airports

**Funding:** $11.4 million

The State of Tennessee has been providing financial aid to its airports since 1930. In 1986, the Tennessee General Assembly adopted legislation that created the State Transportation Equity Fund. This fund allocates receipts from taxes collected from transportation fuels for distribution to airports, rail, and waterways based upon their contribution to the fund. Aviation funding is managed by TN DOT with the advice and assistance of the Tennessee Aeronautics Commission. These funds are used for statewide grants to Tennessee air carrier and general aviation airports, and can cover up to 90 percent of the total cost of airport projects depending on the type of project. The types of projects that are eligible for State funding are safety projects, and airside and improvements and enhancements. Examples include security fencing, runway repair, drainage, fuel facilities, and access roads. Each request for funding is evaluated on the basis of demonstrated need, consistency with State and local plans, compliance with State standards, availability of funds, and any unique circumstances. For FY 99-00, the Aeronautics Transportation Equity Fund amounts to $11.4 million.

## 2.4 State and Local Finance Tools

The various State and local approaches to capital financing and grant programming are described below.[25] Examples of the use of some financing tools are provided after the descriptions. The financing tools may be categorized as funding sources, financing mechanisms, and public/private partnerships. Funding sources provide a stream of revenue. Financing mechanisms are structured to provide access to capital, and must have funding sources as an underpinning. Public/private partnerships consist of institutional arrangements that are created to share costs and revenues, and provide a stronger structure for accessing capital markets. These financing tools may be used in combination (e.g., tax-exempt

revenue bonds issued with credit enhancement features). For freight related investments, these tools are typically employed in conjunction with user fees.

## General and Selective Taxes

The traditional source of funds for the public sector is the general tax levy. At the local level, this has manifested into a reliance on the property tax, and to a lesser extent, the local sales (or gross receipts) tax.[26] At the State level, the most common taxes are the sales tax and the income tax. Notable selective taxes include Oregon's lottery funds and Ohio's tourism taxes (levied on hotel bills and mixed drinks). As described under the Oregon Port Revolving Fund, Oregon uses lottery funds to fund highway as well as port infrastructure.

## Special Taxing and Assessment Districts

The concept of special taxing or assessment district is to capture the benefits of particular improvements and make the district self-supporting. More commonly used for supporting transit systems, special districts have also been used for general highway or port improvements. A transportation improvement district (TID) is typically a special district assessment on property taxes. Two of the three SIB loans profiled in the case study, Pittsburgh, Pennsylvania and Butler County, Ohio, used TID funding to repay SIB loans. Union County, New Jersey is considering the use of a TID to support a package of improvements to highways and rail lines connecting to the Port Elizabeth area. A variation bases levies on traffic generated by specific land uses. In the Northwest, the port districts have the power to levy property taxes. Even if this power is not used, it can work to secure debt. The device of having a standby taxing source is common for many types of self-supporting debt. The idea is that the first security (source of debt service payment) is the project revenues. However, if the revenues are not sufficient, the investor can depend on the tax levy as a secondary source of income. Where the facility proves to be self-supporting, the contingency debt is not counted against debt limits.

## Types of Debt

Fundamental to the concept of credit is the source of funds used to repay the debt. In the case of bonds issued by public entities there are two broad classifications of debt: 1) tax-supported bonds and 2) revenue bonds. General obligation bonds are backed by the full faith and credit of a State or local government and are usually the highest-rated debt of a State or locality. Revenue bonds are backed by a specific revenue source, such as a dedicated tax. Lease revenue bonds or certificates of participation (COP) are backed by a State or locality's general credit but with no specific tax pledge, and debt service payments are subject to annual appropriation (they carry a lower rating than general obligation debt). They are often used to avoid debt limits and voter approval requirements. Use of COPS by the Port of San Diego and some of the railroads is described in Section 3 – Case Studies.

Special tax district bonds are paid from special charges added to property tax bills, and only beneficiaries pay the special assessment. An important sub-class is tax increment bonds, which are paid from *increases* in property tax revenues in specified areas. Tax increment financing is most valuable for projects in redevelopment areas and requires long-term development perspective to realize significant funding levels.

Sales tax bonds (also called excise tax bonds) are paid from sales tax receipts.

## Tax-exempt Revenue Bonds/Exempt Facility Bonds

The primary means for financing port and airport capital projects is through the issuance of exempt facility bonds. Exempt facility bonds, otherwise known as private activity bonds, are qualified and thus their interest is excluded for Federal income tax purposes in the gross income of recipients. However, interest on such bonds is taken into consideration for certain Federal tax purposes, such as the alternative minimum tax (AMT) for individuals and corporations. With this qualified status and the accompanied tax benefit to investors, exempt facility bonds can be offered at a lower interest rate, thus providing the issuer with considerable financing cost savings.

When included as part of a port project, wharves, docks and related storage and training facilities qualify as exempt facilities. Included in the definition of dock or wharf is property that is functionally related or subordinated to exempt docks and wharves such as the structure alongside which a vessel docks, on-loading and off-loading equipment for cargo and passengers (cranes and conveyors) and related storage, handling, office and passenger areas. If issued by an airport or port authority, airport projects such as cargo handling facilities, equipment, and access roads qualify as tax-exempt facilities. All of these facilities are eligible to be financed through exempt facility bonds.

Tax-exempt bond financing regulations are subject to both Federal and individual State provisions. There are specific State requirements outlined in a municipality's codes regarding the nature, term, purpose and structure of a bond, which, if adhered to, qualifies it under that state's classification of tax-exempt debt.[27]

Tax-exempt bond finance has become a key Federal issue. According to a recent TRB study, proposals have been made for altering IRS rules for tax-exempt bond finance to make it easier for public-private transportation projects to qualify.

The American Association of Port Authorities recommended four changes to "...materially enhance the ability of public port authorities to finance additional facilities..."[28] These four recommendations include the following:

- Establish a list of public activities (to include port financing) that could be financed with public activity bonds, a new category of bonds treated as governmental, not private activity bonds
- Expand the definition of functionally related facilities to include rail and other transportation-related facilities necessary for the movement of cargo and/or passengers (cruise/ferry operations)
- Increase the annual issuance limit for arbitrage rebate exemption from $5 million to $10 million and increase the annual issuance limit for bank qualified tax exempt bonds from $10 million to $25 million
- Restore the 90 percent rule regarding the use of net proceeds

Relaxing restrictions would encourage development of new funding sources for freight infrastructure by attracting private-sector participation in projects that serve both public and private ends.[29] According to the same TRB study, the drawbacks from eliminating these rules are perhaps as compelling, and include the following:

- Tax-exempt bonds have the same effect as a subsidy from all Federal taxpayers to the beneficiaries of the project. If the public benefits are primarily local or regional, the subsidy might be considered inequitable.

- Tax-exempt bonds bias the capital market in favor of government-selected investments, although there are precedents in homeownership, enterprise zoning, and the US DOT grant programs for highway infrastructure
- Expanded use might increase the frequency of default and might possibly raise the cost of borrowing for all users of tax-exempt financing
- If tax-exempt finance is liberally available for a class of projects, the tendency will be for it to be used routinely.

A final consideration is the fit for Federal credit enhancement programs. ISTEA and TEA-21 both introduced credit enhancement programs state infrastructure banks (SIB), TIFA and RIFF. However, the 1986 Tax Reform Act stipulates that Federal funds cannot guarantee tax-exempt financing.

## Short-term Borrowing and Standby Credit

Short-term borrowing is helpful for accelerating construction projects. Grant funding, including Federal-aid highway, may be received as reimbursement for costs incurred on eligible projects. By issuing notes, funds are available sooner to begin construction with aid used for reimbursement on a delayed basis. The U.S. DOT *Advance Construction* provision is designed to address this process by permitting State DOTs to spend their own funds in anticipation of Federal aid highway-grant reimbursement. Alternatively, short-term notes may be refinanced by the sale of bonds. As referenced above, borrowings where there is an explicit pledge of future Federal aid payments are prohibited to be issued on a tax-exempt basis by the Federal Tax Reform Act of 1986. Federally backed notes may be issued on a taxable basis, typically at Treasury bill rates, but few public entities have chosen this finance mechanism due to the higher interest rates.[30]

Federal standby credit or loans pledge future support only if the need arises, thus avoiding an actual outlay of funds, except in the event project-related revenues drop below a certain level. With the Orange County toll roads, financing was structured so that the back-up Federal line of credit was not considered a Federal guarantee, in order to benefit from tax-exempt rates. The line of credit, if used, must be paid back at a non-subsidized rate.

## Patient Money and Junior Liens

Governments can help infrastructure projects by providing patient subordinated capital. The interest cost of this capital typically is less important than the repayment schedule. The junior lien is helpful for ensuring that the operating costs and other (senior lien) debt are paid off before the subordinated debt. By providing a junior lien, the public-sector sponsor facilitates a higher rating for the senior lien, which helps lower the overall project finance costs. The TIFIA program provides a good example of how Federal loans can be structured as junior liens. In the case of the Alameda Corridor, the Federal credit enhancement was instrumental in assuring the project's overall financial viability.

## Variable Rate Commercial Paper

Commercial paper is a short-term financing instrument that is currently used by some ports, airports and railroads to meet their short-term financing needs. Commercial paper can provide the issuer with a method of meeting their financing needs in the short term while their revenues may be tightly constrained (i.e., during initial capital construction). Additionally, variable rate commercial paper usually offers lower interest rates than fixed rate

revenue bonds, thereby reducing a project's financing cost.

## Joint Public/Private Partnerships

The concept of joint development takes on many meanings in the area of public capital development. In the freight arena, these partnerships have seen the greatest application and success at port facilities. For the purposes of this report, joint development is defined as: any formal arrangement between a public port authority and a private organization that involves either private sector payments to the public port authority, or the private sector sharing port project capital costs. This definition essentially describes two classes of joint development strategies: 1) revenue sharing arrangements and 2) cost-sharing arrangements:

1) Revenue Sharing Arrangements:

Leases: For public ports in the U.S., leases are the most common form of joint development. When a public port enters into a contractual lease arrangement, it is transferring the future services rendered by a fixed asset (e.g. a container crane or other terminal facility) to a private organization, while retaining the title to that fixed asset. In the case of container terminal leasing, for example, there are three major types of lease arrangements: the flat rate lease, a defined minimum/maximum compensation lease, and a shared revenue lease. While these three lease types vary in terms of the amount of risk that is assumed by the port and the incentives it creates for the lessee, all three lease types provide two important features for ports. First, long-term lease relationships provide a secure cash flow base upon which to issue bonds to finance new facilities. Second, a long-term lease relationship allows the port, to varying degrees, to share some of the risk inherent in major capital investments with the lessee and insure some steady level of cash flow into the ports revenue base.

2) Cost Sharing:

Voluntary Agreements: These are agreements between public ports and private organizations whereby the private party recognizes a specific port capital investment as sufficiently beneficial or even necessary to enhancing its own operations that it will share the initial capital costs with the port. These voluntary joint development agreements are both highly desirable by ports and very uncommon. The benefits to ports are obvious: capital costs funded from the port's revenues are decreased, and any risk associated with the capital investment is shared with the private organization. Additionally, a long-term lease for other terminal facilities usually accompanies the joint venture, and therefore a secure revenue source is often concomitant with the joint venture. While these cost sharing joint development projects are uncommon, a specific case of the Hyundai Terminal currently being built at the Port of Tacoma is presented in the case studies section.

[1] Transportation Research Board, Special Report 252, *Policy Options for Intermodal Freight Transportation*. 1998. National Academy Press. Washington, D.C. Page 207.
[2] 1993 Report to Congress – *Small Railroad Investment Goals and Financial Options*. Federal Railroad Administration, U.S. Department of Transportation. Page iv.
[3] Ibid. page v.
[4] DRI/McGraw Hill, 1996, as reported by the American Trucking Association, *Freight Stakeholders Resource Guide*. Page 5.
[5] FHWA, 1995, as cited by TRB Special Report 252, page 157.
[6] TRB Special Report 252, page 207.
[7] Paul Yager, Stark County Planner. Stark County, Ohio. personal conversation.
[8] John Lohrey, Federal Highway Administration, October 4, 1999. personal conversation (907) 586-7422.
[9] FHWA, Office of Highway Safety, Fred Small, Tel: 202-366-9212.
[10] Susan Kirkland, Manager, Safety Programs, ORDC. October 1999. Personal conversation.
[11] Bob MacGuire. Department of Hazardous Materials Program, RSPA, Tel: 202-366 4377
[12] Obtained from Coast Guard web site
[13] personal phone conversation. Roskind, Frank. Federal Railroad Administration, Tel: 202-493 6284
[14] personal phone conversation. Janet McLaughlin. Federal Aviation Administration, Tel: 202-267 8434
[15] DOT sources: MD-DOT: 410-545 0302, NY-DOT: 518-457 3406, IL-DOT: 217-782-7074, CA-DOT: 916-654 5266
[16] Extracted from section 5108 of the Hazardous Materials Transportation Law.
[17] FAA AIP Handbook.
[18] *Multimodal /Intermodal Transportation in the United States, Western Europe, and Latin America*. Managed by Leigh Boske. Policy Research Project Report No. 130. Lyndon B. Johnson School of Public Affairs, the University of Texas at Austin. Page. 113.
[19] *Multimodal /Intermodal Transportation in the United States*. Page. 259-260
[20] Pennsylvania "1996 Comprehensive Rail Freight Study." Prepared by Cambridge Systematics. Prepared for the Pennsylvania Department of Transportation, Harrisburg, PA.
[21] Pennsylvania Rail Freight Assistance Program Application. Available from the Aviation and Rail Freight Division, Pennsylvania Department of Transportation, Harrisburg, PA.
[22] TRB Special Report 252, Page 201.
[23] Ibid. Page. 260
[24] Bureau of Aviation website.
[25] Most of the financial tool description is based on a review of John Petersen's contribution to *Policy Options for Intermodal Freight Transportation* - TRB Special Report 252, pages 258-312.
[26] TRB, Special Report 252. Page 284.
[27] Introduction to Public Finance and Public Transit. Page 55.
[28] *Public Port Financing in the United States.* July, 1994. Maritime Administration. U.S. Department of Transportation. Page 84.

[29] TRB, Special Report 252. Page 106.
[30] TRB, Special Report 252. Page 292.

# 3 Case Studies

Forty-nine state departments of highways/transportation (Hawaii was excluded) were contacted to collect information. As a result of survey research and other research sources, over 40 case studies were compiled of infrastructure development projects that, to some degree, help facilitate freight shipment. For purposes of analysis, the projects are divided to separate federally supported projects from those with significant local support or initiative.

## 3.1 Federal Level of Involvement

Case studies indicate a tendency for two types of federal support: large-scale package projects and gap funding for small-scale projects. Case studies are listed in Exhibit 3.1 in order of greatest federal funding involvement. Key features of these studies are summarized in the exhibit. A description of each case study follows the exhibit.

Exhibit 3.1
Federal Funding Case Study Summary Table

| | Name | Size of Project | Direct Funding Source | Federal Share | Modal Application | Mechanisms |
|---|---|---|---|---|---|---|
| 1 | Alameda Corridor | $2.4 b. | Direct Federal loan, STP | $608 m + | Port - Rail Access | Loan and Federal - Aid "Package" |
| 2 | The Central Artery | $10.8 b. | Federal-Aid | $600 m. | Highway | GARVEE Bonds |
| 3 | New Mexico Corridor 44 | $295 m. | Federal-Aid | $287 m. | Highway | GARVEE Bonds |
| 4 | San Joaquin Hills Corridor | $1.45 b. | Direct Federal loan | $120 (9.6) m. | Highway | Standby line of credit |
| 5 | Spring - Sandusky Interchange | $116 m. | Federal-Aid | $70 m. | Highway | GARVEE Bonds |
| 6 | Laredo, Texas International Bridge | $66.5 m. | SIB, toll revenue | $49 m. | Highway | SIB loan, STP,NHS, ISTEA Demo, tax-exempt, taxable bonds |
| 7 | Indiana Burns Harbor | $77 m. | US Dept. of Commerce, EDA | $40 m. | Port | Grants |
| 8 | State Route 99 Airport Access | $36 m. | NHS, sales tax | $36 m. | Highway | Federal-Aid |
| 9 | Butler County Regional Highway | $150 m. | SIB, TID | $35 m. | Highway | SIB loan |
| 10 | Port of Hueneme Highway Access | $64 m. | ISTEA/ TEA-21 | $24 m. | Highway | Demo/HPP "Package" |
| 11 | Philadelphia International Airport | $13 m. | TEA-21 Demo. | $13 m. | Highway | Federal-Aid |
| 12 | Port of Humboldt dredging | $14.3 m. | Army Crp. of Eng | $10.4 m. | Port | Revenue Bonds |
| 13 | Stark County Intermodal Facility | $8 m. | CMAQ | $8 m. | Intermodal Facility | Grants/ Line of Credit |
| 14 | Red Hook Ferry | $9.7 m. | CMAQ | $7.7 m. | Ferry boat | Federal-Aid |
| 15 | Port of Hueneme Port Access | $8.7 m. | STP | $7.7 m. | Rail | Federal-Aid |

| | Name | Size of Project | Direct Funding Source | Federal Share | Modal Application | Mechanisms |
|---|---|---|---|---|---|---|
| 16 | Port of Anchorage | $7.2 m. | STP | $6.55 m. | Rail | Fe der al- |
| 17 | Immunex Project | $14.5 m. | US Dept. of Commerce, EDA | $4.5 m. | Port - Highway Access | Federal-Aid/ Property Taxes |
| 18 | Columbia Slough Expansion Bridge Port access | $6 m. | CMAQ, ISTEA | $3.1 m. | Rail | Federal-Aid/ Private Funding |
| 19 | Bensenville Rail Yard | $35 m. | CMAQ | $2.1 m. | Rail | Federal-Aid/ Private Funding |
| 20 | Port of Battle Creek | $2.4 m. | US Dept. of Commerce, EDA | $1.4 m. | Intermodal Yard | Federal-Aid/ Revenue Bonds |
| 21 | Auburn Intermodal Facility | $2.3 m. | CMAQ | $3 m. | Intermodal Facility | Federal-Aid |
| 22 | Stockton Airport access | $1.8 m. | AIP | $1.4 m. | Highway | Grants/ Private Funding |
| 23 | Blythe Intermodal Yard | $1.2 m. | CMAQ | $1.2 m. | Intermodal Yard | Federal-Aid |
| 24 | Port of Toledo | $1.7 m. | US Dept. of Commerce, EDA | $0.85 m. | Port | Federal-Aid |
| 25 | Kedzie Stoplight | $3.5 m. | CMAQ | $0.72 m. | Highway | Federal-Aid/ Private Funding |
| 26 | Gilford Intermodal Yard | $0.7 m. | CMAQ | $0.7 m. | Private Intermodal yard | Private terminal Equipment lease/ Federal-Aid |

### *1. The Alameda Corridor*

### *Project Type: Port - Rail Access*

**Description:** The Alameda Corridor will consolidate the operations of the freight railroads that serve the Ports of Los Angeles and Long Beach. Upon completion, rail movements by the major western Class I railroads will shift to a single 20-mile, high-capacity rail corridor. With on-dock intermodal rail yards to be built as part of an overall port expansion, the corridor will remove the inefficient and time-consuming need for trucks to haul containers several miles between the port and existing rail yards. Ten miles of the new corridor will be built below grade in an open trench, and all at-grade rail crossings along Alameda Street will be eliminated.

**Cost:** $2.4 billion

**Financing/Funding**:

- $400 million U.S. DOT loan from FRA
- $394 million: Ports of Los Angeles and Long Beach
- $347 million (appropriated by the LA Metropolitan Transportation Authority from:
  - $84m. ISTEA - State Proposition C-25 (dedicated sales tax for freight)
  - $40 m. ISTEA - flexible congestion relief

- $1.4 m. State TSM matching funds
- $72 m. State Regional Surface Transportation Plan
- $150 m. ISTEA - MTA Long Range Plan

♦ $104 million
- $2 m. EDA
- $7m. State rail program
- 69 m. interest on bond proceeds
- $8.1 m. port reimbursable
- $17.5 m. private rail corporation (track reimbursement)

♦ $1.16 billion: revenue bonds have been issued through four series:

A Series – tax exempt senior
B Series – tax-exempt junior
C Series – (smaller) taxable senior
D Series – taxable subordinate

The Direct Federal U.S. DOT Loan was guaranteed through the Direct Loan Financing Program under the Omnibus Consolidated Appropriations for Fiscal Year 1997, an amendment of Section 505 of the Railroad Revitalization and Regulatory Reform Act of 1976. Minor adjustments were made to fulfill all requirements of Section 505. The loan is subordinate to the senior debt, a structure that was only permitted through the appropriations act. Through this agreement, the federal government assumes only $59 million of budgetary costs. This is a taxable loan with a 6.52 percent interest rate for years 1 through 5 and a 6.8 percent interest rate for the remainder of the 30 years. The source of payment for the loans is the revenue generated by port surcharges and a rail corridor use fee. The ports acquired the right-of-way with cash payment. The repayment schedule is tied to volume, and is subordinated to the senior debt service. The US DOT loan took a junior lien on repayment to all operating costs, any other indebtedness, and contributions to the renewal and replacement fund.

The repayment schedule is based on the revenues from corridor use. Rail cars are charged $30 for every loaded 40-foot container. The distribution of expenditures for the Alameda Corridor project is as follows: 72 percent for construction, design, and engineering; 22 percent for right-of-way acquisition; and 6 percent for administrative and legal costs.

### *2. The Central Artery – Boston's "Big Dig"*

**Project Type:** Highway (tunnels)

**Description:** The Central Artery project, also known as the "Big Dig" includes two large-scale tunnel projects in downtown Boston. An elevated portion of Interstate 93, the Central Artery, is reconstructed as a tunnel. Interstate 90 is extended to Boston's Logan Airport via a second tunnel under the Boston Harbor.

**Cost:** $10.8 billion

**Financing/Funding:** The Commonwealth of Massachusetts issued $600 million of grant anticipation notes in June 1998 with authority from the legislature to issue up to a total of $1.5 billion. The $600 million issue matures in 8 to 17 years and has received ratings of Aa3, AA, and

AAA by Moody's, Fitch IBCA, and Duff & Phelps, respectively. The Commonwealth intends to pay interest from state highway funds but retire the principal with federal-aid reimbursements.

Debt service payments will address interest only until calendar year 2005, at which point the Commonwealth will start repaying principal. From 2005 forward, average annual debt service on the first $600 million issued will be approximately $60 million. By comparison, Massachusetts average annual federal-aid apportionment's, throughout the life of TEA-21 are expected to be approximately $524 million.

**Credit Enhancement:** Massachusetts will direct 10 cents of its 21-cent fuel tax to the GAN Trust Fund for the purpose of paying debt service on the Central Artery instruments. This limited backstop is triggered only if: 1) annual federal-aid highway funding falls to less than $17.1 billion nationwide; *and* 2) Massachusetts' share of such funding is projected to provide less than 120 percent coverage of aggregate debt service on the GANs in the following year.

### *3. New Mexico Corridor 44*

**Project Type**: Highway

**Description:** New Mexico's Corridor 44 is a 140-mile, two-lane principal arterial extending between Bernalillo and Bloomfield in the northwest corner of the state. The New Mexico State Highway and Transportation Department will acquire necessary right-of-way and contract with a private developer to design and manage construction associated with expanding the highway from two to four lanes, and provide a long-term warranty for preventative maintenance activities.

**Cost:** $295 million

**Financing/Funding:** The New Mexico Finance Authority expects to issue approximately $287 million of GARVEE bonds in four series beginning July 1998. The bonds will amortize over 15 years, with final maturity in 2015. The debt will be insured. Average annual debt service will be approximately $28 million. By comparison, New Mexico's average annual highway apportionments throughout TEA-21 are expected to be about $256 million. These GARVEE bonds will be issued without backstop financing from the state.

**Credit Enhancement:** New Mexico is purchasing municipal bond insurance.

### *4. San Joaquin Hills Transportation Corridor (SJHTC)*

**Project Type**: Highway

**Description:** The new six-lane toll road is designed to relieve congestion on the heavily traveled I-405, I-5, and Pacific Coast Highway, as well as other major arterial roads in the county. It should be noted that trucks couldn't use the toll-road, due to the 6.5 percent grade.

**Cost:** $1.45 billion

**Participants**:

- $1 billion: Senior-lien Revenue Bonds
- $91 million: Junior-lien Revenue Bonds
- $38 million: Project Revenue Certificates
- $31 million: Advance Funding Impact Fees
- $40 million: California Transportation Commission Grant

- $71 million: State and Local Transportation Partnership Program
- $106 million: Interest Earnings

**Financing/ Funding:** The Transportation Corridor Agencies (TCA) are multi-jurisdictional authorities charged with the construction of new toll road facilities in Orange County, California. To finance construction, the TCA sold two separate bond issues, one of which paid for the construction of SJHTC. Project financing was supported with Federal credit enhancement in the form of a standby line of credit. State and local funding support for the project was provided through the 1992 State Transportation Improvement Program (STIP) and the California State and Local Transportation Partnership Program (SLTPP). Approximately $40 million was allocated under the STIP for the purpose of funding a portion of the construction costs of connecting the San Joaquin Hills Transportation Corporation to I-5. THE SLTPP contributed approximately $71 million.

In Fiscal Year 1993, Congress appropriated $9.6 million to fund the subsidy costs of a $120 million Federal line of credit available to TCA to help cover debt service, if necessary. The Federal line of credit is available in the event toll revenues and standard reserves are not sufficient to cover debt service, cost of extraordinary repair and replacement, cost of complying with unexpected federal or state environmental restrictions, and operation and maintenance expenses. The federal government provided a $120 million line of credit, at a budgetary cost of $9.6 million, to help advance a $1.4 billion transportation facility.

### *5. Spring – Sandusky Interchange*

**Project Type**: Highway

**Description:** Ohio's Spring-Sandusky Interchange project will improve connections and traffic flow in downtown Columbus through relocation of U.S Route 33; new construction of Interstate 670 and State Route 315; and related paving, grading, and drainage work.

**Cost:** $116 million

**Financing/Funding:** The state of Ohio issued $70 million in GARVEE bonds in May 1998. The bonds will mature in 10 years. The bonds received ratings from Moody's and AA- from both Standard and Poors and Fitch IBCA. Average annual debt service will be slightly less than $9 million. By comparison, Ohio's average annual highway apportionment's, throughout TEA-21 are expected to be about $887 million.

**Credit Enhancement:** the SIB's bond service fund and a moral obligation secure Debt for the Ohio DOT to seek appropriations from the state assembly. This provides the backstop financing to mitigate appropriation risk.

### *6. Laredo, Texas International Bridge*

**Project Type:** Highway bridge, border crossing inspection facilities

**Description:** Laredo, Texas, International Bridge, Bridge #4 toll bridge connects Laredo, Texas, with Nuevo Laredo, Mexico, and will be an 8-lane vehicular and pedestrian bridge. The bridge will be owned and operated by the City of Laredo and consists of a toll plaza, import-export lot, customs station, and related roadways. The project will alleviate congestion on the existing toll bridge system and within the city of Laredo.

**Cost:** $66.5 million

**Financing/Funding:** Financing consists of a package of loans. Repayments are scheduled to begin in October 2005. The total payback on the loans is over $43 million structured with two maturity periods. The short-term $4.2 million SIB loan has a 5 year term and the other $25.2 million SIB loan has a 23-year term. In addition, the City of Laredo issued $8.9 million in taxable bonds and $21.3 million in tax-exempt bonds to match SIB funding.

The total project cost for all three pieces— the bridge, a 2-mile connector, and an interchange at I-35 — is close to $150 million and is supported by a combination of federal, state, and local funding. Sources of federal grant funds include ISTEA demonstration funding, NHS, and STP.

### *7. Indiana Burns Harbor*

**Project Type**: Port

**Description:** Indiana state enabling legislation fostered the development of Indiana's three largest ports, created the Indiana Port Commission, and allocated significant general funds to the development of these ports. Port projects included building an overpass, crossing over several rail lines and a state highway, and dredging and breakwater construction. The Burns Harbor International Port, one of the initial three state ports is located at Portage, Indiana, on the south shore of Lake Michigan. Just 30 lane miles and 18 nautical miles from Chicago, the Port offers access to world trade routes from the Great Lakes via the St. Lawrence Seaway. Twelve modern ship berths are available.

**Cost:** approximately $106 million

**Financing/Funding:** The port opened in 1970 and was financed through a combination of state appropriations, port revenues, and federal grants, including the following federal contributions:

- EDA - $ 3 million
- Army of Corps of Engineers - $23 million

### *8. State Route 99 Airport Access Road*

**Project Type:** Airport access highway

**Description:** Still in the planning stages, this project provides better access to Chandler Executive and Fresno Yosemite International Airports in Fresno, California, and improves urban mobility in the Fresno metropolitan area. There are five alternatives under consideration for the construction of an auxiliary lane on State Route 99 to increase the facility from 6 lanes to 8 lanes in the Fresno area.

**Cost:** Between $36 and $71 million

**Financing/Funding:** The project cost varies to such a great extent due to the alternative design features. Ultimately the project cost will be determined by the amount of NHS funding allocated by the California Transportation Commission, a state-governing body that decides federal grant funding allocations between projects and areas. The City of Fresno is currently considering a 7.5 percent Fresno sales tax to support this project, in the event that the project is delayed or does not receive sufficient NHS funding. The Auxiliary Lane project has already been folded into the 20-year LRP by the Fresno MPO. The next step is to gain California Transportation Commission's (CTC) funding approval. Upon approval from the CTC, the project will be programmed into the

STIP. This project qualified for consideration due to its overall impact on the transportation system.

### *9. Butler County Regional Highway*

**Project Type**: Highway

**Description:** Butler County Regional Highway involves new construction of a 10.7 mile, four-lane, limited access toll road. The project connects an intersection in Hamilton Ohio to Interstate 75 in Liberty Township, Ohio.

**Cost:** $150 million

**Financing/Funding:** The Butler County Transportation Improvement District (TID) is financing and building the project, and will own the project until 2017. Butler TID borrowed $35 million in three separate loans from the SIB. Each loan carries a 6 percent interest rate. The term for each loan was three months following issuance of bonds, or 2-years in the event that no bonds were issued. Upon issuance of $158.5 million in revenue bonds, the TID used a portion of the bond proceeds to repay the Ohio SIB $35 million in principal, plus $1.5 million in interest.

### *10. Port of Hueneme Highway Access*

**Project Type**: Highway

**Description:** Port of Hueneme highway access project includes constructing a highway facility to connect the port with State Route 101, the primary highway arterial in Ventura County connecting the Los Angeles basin to the south and Santa Barbara County and northern California to the north. Currently port access is hindered and congested by use of local streets. This project is intended to specifically move truck traffic off of neighborhood streets.

**Cost:** approximately $64 million

**Financing/Funding:** $24 million ISTEA Demonstration funding and TEA-21 High Priority funding. The California Transportation Commission has approved this project for the budget, programming $40 million in STIP. However, the actual Federal program funds and levels of state resources have not been specifically identified.

### *11. Philadelphia International Airport*

**Project Type**: Highway

**Description:** Philadelphia International Airport (PIA) access improvements

**Cost:** $13 million

**Financing/Funding:** PIA received TEA-21 Demonstration Funding under three separate airport access projects. Combined Demonstration grant funds amount to $13 million and include the following earmarks:[1]

- Improve access and interchange from I-95 to International Airport – $5 million
- Construct I-95 access ramps at and around PIA – $5 million

- Improve access and interchange from I-95 to the international terminal at PIA – $3 million.

### *12. Port of Humbolt*

**Project Type**: Port

**Description:** Channel dredging at the Port of Humboldt, Humboldt California.

**Cost:** $14.3 million

**Participants**:

- $10.4 million: Army of Engineers, Harbor Maintenance Fund
- $2.9 million: CMIB tax-exempt private placement bonds
- $1 million: City of Eureka

**Financing/Funding:** The Port of Humboldt had never issued bonds before. They used CMIB as the "bank of last resort" to generate the local match for the federal share for dredging. The U.S. Army Corps required $4 million to match the federal grant of $10.4 million. The City of Eureka funded $1million in combination with the CMIB bond issuance. The Port of Humboldt used CMIB to issue the remaining share for the local match, $2.9 million in tax-exempt revenue bonds for private placement. CMIB worked with a local bank to buy the bonds.

### *13. Stark County Intermodal Facility*

**Project Type:** Intermodal Facility

**Description:** Stark County Intermodal facility construction included building three rail spurs and connecting rail track to Wheeling and Lake Rail Company's main line. In addition, the project cost also included acquisition of cranes and an entry gate system for automated electronic entry clearance.

**Cost:** $8 million

**Financing/Funding:** A line of credit from CMAQ was used to fund the project. The County donated the land. The $8 million CMAQ loan was to be paid by operating profits; however, there was a provision in the agreement between the Ohio DOT and the Stark Development Board (SDB) releasing SDB from financial payment responsibility in the event of operating deficits. Loan repayments were to be remitted to three parties: 1/3 – Ohio DOT CMAQ revolving fund; 1/3 – Ohio's Erie Canal Heritage Account (established under the National Heritage Corridor program); and 1/3 – Stark County Area Transportation Study (the MPO). Instead of a 20 percent direct local match, OH DOT used toll revenue credits from tolls generated by the Ohio Turnpike Authority under provisions of Section 1044 of ISTEA.

Operating deficits are due in part to the market changes brought about by the rerouting of Class I Rail shipments. Original facility revenue projections were tied to market forecasts and based on Conrail routes. Once NS and CSX acquired Conrail assets, Wheeling and Lake Erie, the primary regional rail system using the Stark County facility, was not able to connect to the new shipping routes and schedules or use the facility to the extent originally anticipated.

The challenges of this project raise two key issues for future federal and state participation in intermodal facility development: To what extent should the private sector commit to a facility to

gain public sector support? Without private sector commitment and private sector participation, public sector planning and funding is not likely to be directed to the most critical projects.

### *14. Red Hook Ferry Barge*

**Project Type**: Ferry Boat system

**Description:** Design and implementation of a ferry barge system connecting New Jersey to the Red Hook Port Terminal in Brooklyn. This new ferry boat system is intended to carry containers across the Hudson River between New Jersey and New York, reducing truck traffic on the George Washington and Verazzano Narrows Bridges. Due to the projected reduction in air emissions, this project qualified for CMAQ funding.

**Cost:** approximately $9.7 million

**Participants**:

- $7.7 million CMAQ
- $2.2 million New York local match, New Jersey is expected to provide a local share as well

### *15. Port of Hueneme Rail Access*

Project Type: Rail

**Description:** Port of Hueneme railroad connection in Ventura County, California. The Ventura County Transportation Commission purchased two partially abandoned rail corridors with plans for expanding one for freight use to connect to the Port of Hueneme.

**Cost:** $8.7 million

**Financing/Funding**:

- $4.2 million: STP funds
- $3.5 million: STP Enhancement funds
- $1 million: local funds

Rail abandonment projects, particularly for conversion to passenger use, are eligible for STP enhancement funds. In this case, the passenger and bike trail project components cross-subsidized the rail freight project component.

### *16. Port of Anchorage*

**Project Type**: Rail

**Description:** Port of Anchorage Grade Crossing project eliminated five rail crossings along a single corridor that connects the Town of Anchorage to the port. The project was identified in a prior intermodal study, an initiative supported under an ISTEA intermodal-planning program. The project cost includes design, ROW, and construction for moving railroad track.

**Cost:** $7.2 million

**Financing/Funding:** The project was funded with STP funding (91 percent federal, 9 percent state DOT, per federal land provisions). Unlike most states, Alaska DOT matching funding is provided by state legislative general fund appropriations.

### *17. Immunex Project*

**Project Type:** Port – Highway Access

**Description:** A grade-separated vehicle access road is to be built to lead to various Port terminals and Elliott Bay (public) access points. This project is designed to allow major land development to occur in the area with future plans to build a new plant for Immunex Corporation.

**Cost:** $14.5 million.

**Participants:**

- $1 million: ISTEA
- $3.5 million: Economic Development Authority grant
- $10 million: Alliance between King County, the City of Seattle, and the Port of Seattle. The funds will be generated through property tax revenues.

### *18. Columbia Slough Intermodal Expansion Bridge*

**Project Type**: Rail

**Description:** The Columbia Slough Intermodal Expansion Bridge. This rail bridge project connects to the Port in Portland, Oregon to inland rail yards and eliminates the need for truck drayage from the port.

**Cost:** $6 million

**Participants**:

- $2.1 million: ISTEA Demonstration funding
- $1 million: CMAQ
- $1.5 million: Port of Portland
- $1.5 million: Private railroad

### *19. Bensenville Rail Yard*

**Project Type**: Rail

**Description:** The Bensenville rail yard project improved rail access and egress in the yard and rerouted trains from an east route to a west route. The construction cost included new track, interlockings, and signals to raise train speeds and reduce rail/traffic conflicts at grade crossings.

**Cost:** $35 million

**Financing/Funding:** $2.1 million from CMAQ, at CATS recommendation. The remainder was provided by Canadian Pacific. Technical analysis provided by CATS concluded that the project

would generate $2.6 million in public sector benefits. This project provides an example of best practices for developing and applying a freight project analysis framework and cost-benefit evaluation process.

### *20. Port of Battle Creek*

**Project Type:** Intermodal Yard

**Description:** The Port of Battle Creek is an rail/truck intermodal yard funded under the Economic Development Council of the City of Battle Creek, and has been operational for the past 20 years.

**Cost:** $2.4 million

**Participants**:

- $1.4 million: EDA Public Works Grant
- $1 million: EDC Revenue Bonds

**Financing/Funding:** Battle Creek Unlimited was created in 1972 as an IRS 501©(3) tax exempt, nonprofit corporation to market and manage the industrial park under contract with the City of Battle Creek. The Battle Creek County/Kalamazoo County/Calhoun County Inland Port Develop Corporation (BC/KAL/Cal Inland Port), also a nonprofit corporation, was created in 1978 to market the port of entry and to administer foreign trade zone #43. The City of Battle Creek Economic Development Corporation issued tax-exempt revenue bonds. Since the opening of the port in 1978, BC/Kal/Cal Inland Port has financed its day-to-day operations and capital needs through office space leases and contractual work at the facility. All profits cover the expenses incurred by the facility, and additional profits beyond yearly operating expenses are given to the City of Battle Creek. If the Inland Port runs at a loss for any given year, the losses are subsidized through Battle Creek Unlimited.

### *21. Auburn Intermodal Facility*

**Project Type:** Truck-rail intermodal yard

**Description:** The Auburn Intermodal Facility was built in 1993 in Auburn, Maine. A private company leases the facility and 37 acres of land from the City of Auburn. The transfer facility is expected to attract substantial truck traffic from highway to rail, by facilitating 36-hour service between Auburn and Chicago with intermodal cargo trains. The project will result in reduced emissions and congestion along the route, as well as reduced need for highway maintenance.

**Cost:** $3 million

**Participants**:

- $2.3 million: CMAQ
- $0.5 million: City of Auburn
- $0.2 million: St. Lawrence and Atlantic Railroad Company

### *22. Stockton Airport*

**Project Type:** Airport freight terminal and highway access improvements

**Description:** Development of an air freight terminal at Stockton Airport, Stockton, California. This includes airport apron improvements, the relocation of Webber's Slew (a small stream running through the airport), and access road (shoulder) improvements.

**Cost:** $1.8 million.

**Participants**:

- $1.4 million: FAA/AIP Grant
- $200,00: Local match
- $73,000: State match
- $70,000: Farmington Fresh, a local consortium of produce growers that ship product overseas.

**Financing/Funding:** With the County's support, Farmington Fresh built a $6.5 million airfreight terminal and cargo handling facility improvements on a County-owned airport. These facilities were built to meet the shipping needs for Farmington Fresh. No public funds aided in the construction of the terminal. Public funding was directed at the airport apron and road improvements. At the end of the 49-year lease on the airport land, the county will own the Farmington Fresh terminal. The County can then lease terminal at market prices.

The project gained approval and funding through the MPO TIP programming process and gained approval from the California Transportation Commission, the state-transportation governing body responsible for approving projects for the California STIP.

### *23. Blythe Intermodal Yard*

**Project Type:** Intermodal yard

**Description:** A rail-truck transfer facility was built in Blythe, California, for loading containers from trucks onto rail cars. Some of the freight passes through Southern California seaports. The project reduces truck traffic into the urban Los Angeles and San Diego areas.

**Cost:** $1.2 million

**Financing/Funding**:

- $0.96 million: CMAQ
- $0.24 million: Local air district funds

### *24. Port of Toledo*

**Project Type**: Port

**Description:** Port of Toledo, Ohio, refurbished a shipyard, including building a small tugboat harbor for winter months. In addition to the building, the project included dredging, pilings, and constructing the dock and wall.

**Cost:** $1.7 million

**Financing/Funding**:

- $0.85 million grant from EDA

- $0.85 million 50 percent match from the Port

### *25. Kedzie Stoplight*

**Project Type:** Highway intersection (at BNSF rail yard entrance)

**Description:** The Kedzie Stoplight includes redesigning and building signalization systems to address the 1,800 heavy truck movements associated with the BNSF Corwith Intermodal Terminal in Chicago, Illinois. What began as a simple traffic signal installation project graduated to a full reconstruction and re-pavement of Kedzie Avenue between the Corwith entrance and the expressway, and included traffic signal installation.

**Cost:** $3.5 million

**Financing/Funding:** $0.72 million CMAQ, Chicago DOT provided local match to other state DOT funding. An additional $4 million was provided by the state DOT for ancillary work including drainage improvements. Private funding contributed to improvements "inside the fence."

According to the TRB Policy Options for Intermodal Freight Report, the Kedzie project is the "ISTEA Poster Child," demonstrating that it is very difficult to undertake small projects in isolation, however simple or cost-beneficial, because they become part of a more complex traffic and transportation system.[2]

### *26. Gilford Intermodal Yard*

**Project type:** Intermodal yard equipment acquisition

**Description:** Gilford Transportation used public funding to improve a truck-rail intermodal yard, including equipment purchase.

**Cost:** $0.7 million

**Funding/Financing:** Maine DOT used CMAQ funding to lease port packer lift equipment to support the operations of a private intermodal yard in Waterville, Maine. This project was sponsored by Gilford Transportation, a regional rail company supporting CSX and NS shipments. Since this project was built on private land, CMAQ funding could only be applied under a leaseback arrangement with the intermodal operator. A total of $0.7 million of CMAQ funding was used to buy the equipment, which the operator leases through the useful life of the equipment with the option to purchase at the end of the lease.

## 3.2 State Level of Involvement

These projects demonstrate institutional solutions to addressing freight infrastructure development within the confines of state resources and state-level economic development goals. The following project descriptions were developed through state institutional and/or funding mechanisms and are listed in the summary table in Exhibit 3.2.

**State Level of Support Summary Table**

| | Name | Size of Project | Funding Source(s) | State Share | Modal Application | Mechanism |
|---|---|---|---|---|---|---|
| 1 | Port of San Diego land acquisition | $115 m. | CMIB | $115 m. | Port | Taxable Bonds |
| 2 | Conrail double stack improvement project | $100 m. | General Fund Appropriations | $38 m. | Rail | Public/ Private grants |
| 3 | West Terminal Airport Expansion | $90 m. | CMIB | $90 m. | Airport | Tax-exempt COPS |
| 4 | Kansas City Fly-over | $70 m. | Revenue bonds | $0 | Rail | State Incorporation |
| 5 | Clark Maritime Intermodal Center | $35m. | General Fund Appropriations | $25m. | Intermodal Center | State General Fund |
| 6 | Palm Beach Skyway | $43.5 m. | Revenue bonds | $19.6 m. | Port | State Port Bonds, port revenues |
| 7 | Belt Railway Rail Yard | $3 m. | IRFP | $3 m. | Rail | Loan |
| 8 | Riemier Lumber Company Rail Spur | $423,000 | ORDC, City of Cincinnati, OH, BNSF | $359,000 | Rail | Loan/Grants, tax credits |
| 9 | Port of Astoria breakwater repair | $125,000 | OPRF | $62,500 | Port | Loan |
| 10 | Port of Astoria tugboat repair | $110,000 | OPRF | $110,000 | Port | Loan |

### *1. Port of San Diego Land Acquisition*

**Project Type**: Port

**Description:** The Port of San Diego used California Maritime Infrastructure Bank (CMIB) financing to purchase land. CMIB issued taxable bonds to be repaid under a leaseback arrangement between the Port of San Diego and Duke Power. Duke Power contracts with the Port to operate and sell power for a 10-year contract, after which the power plant will be dismantled and used by the Port for other purposes.

**Cost:** $115 million

**Financing/Funding:** CMIB issued taxable short-term bonds that still qualified for a lower rate of 6 percent than private capital sources available to Duke Power. Under the Industrial Development Act, the project did not qualify for tax-exempt status because of the extent of benefit to be derived by the private-sector, Duke Power. By using CMIB to issue debt instead of issuing debt itself, the Port was able to avoid a lengthy internal Board of Commission review process that is required for any major financing activity undertaken by the Port.

### *2. Conrail Double Stack Improvement Project*

**Project Type:** Rail

**Description:** The 3-year Conrail double stack improvement project included infrastructure improvements to make a number of different lines accessible to double-stacked container trains.

**Cost:** $100 million.

**Financing/Funding:** This was a large-scale package of doublestack improvement projects. The Commonwealth of Pennsylvania negotiated with Conrail to share the costs of doublestack improvements, and to a lesser extent with CSX and NS to complete the last few pieces. Where common use areas were identified, the State match was as high as 50 percent; for exclusive use segments, Conrail provided the majority of funding, up to as much 100 percent. Of this $100 million, the state provided $38 million and Conrail, the company that owned the rights-of-way that received the improvements, provided $60 million. The rest of the funding was provided by local sources and state-sponsored bonds. Numerous highway bridge improvements that coincided with the double-stack clearance needs were put on the STIP and TIP and then accelerated to support this project, demonstrating a high level of departmental coordination between PennDOT's rail and highway departments.[3]

### *3. West Terminal Airport Expansion*

**Project Type**: Airport

**Description:** The Port of San Diego undertook major expansion of the west terminal, mainly to accommodate increased passenger traffic along with proportionate increases in cargo shipment.

**Cost:** $90 million

**Financing/Funding:** The Port of San Diego used California Maritime Infrastructure Bank (CMIB) to expand the San Diego Airport, as with the land acquisition project, to avoid lengthy commission approval activities. CMIB issued Certificates of Participation (COPS) to finance long-term borrowing. Qualifying for tax-exempt status, the COPS were issued at 5.1 percent. COP debt was secured by net airport revenues, which protected general port revenue.

### *4. Kansas City Fly-over*

**Project Type**: Rail

**Description:** The Kansas City Fly-over is a rail grade-crossing project involving the construction of a rail bridge fly-over to separate east-west rail traffic from north-south traffic.

**Cost:** $70 million

**Financing/Funding:** Class I (e.g., BNSF, UP) railroads formed a transportation corporation, the Kansas City Intermodal Transportation Corporation (KCTR), for the purpose of issuing debt for construction and accessing tax exempt status from property tax. Bonds are repaid from fees collected from the railroads. Due to the exceptionally low interest rates in 1998, the Transportation Corporation was able to issue debt at nearly the same interest that would have been available with the federal line of credit.

**Credit Enhancement:** State highway trust fund revenues as well as federal funding were deemed ineligible for use as a line of credit to improve bond ratings. The railroads pledged their assets in the event that user charges were not sufficient.

**Institutional Arrangements:** The Fly-over project affects three cities, all within one county. No one city could afford to take responsibility for funding the entire project. The county did not have the ability to issue bonds for non-county owned property. These jurisdictional constraints forced the project sponsors to incorporate under Missouri statute to form a Transportation Corporation.

Once incorporated, the Kansas City Intermodal Transportation Corporation was permitted to issue bonds and gain tax exemption status from property taxes. KCTR entered into an agreement with Missouri DOT to issue bonds for the purpose of constructing the Fly-over to Missouri DOT standards. KCTR entered into a subsequent agreement, the Facilities Use Agreement, with the Kansas City Terminal Railway Company to assign the respective responsibilities for managing, maintaining and operating the Fly-over and for billing the users.

### *5. Clark Maritime Intermodal Center*

**Project Type:** Intermodal Center

**Description:** The Clark Maritime Intermodal Center was built on the Ohio River across from Louisville, Kentucky. This facility connects the river port to truck and rail.

**Cost:** $35 million

**Financing/Funding:** The state general fund provided the initial $25 million for construction. Though initially funded with state-appropriated general funds, the facility is now self-sufficient. This private intermodal terminal corporation issued an additional $10 million to fund additional infrastructure improvements, repaid by land leases and port revenues, which were also used as collateral.

### *6. Port of Palm Beach Skyway*

**Project type:** Highway and rail access to port, highway-rail grade crossing elimination

**Description:** Port of Palm Beach Skyway includes ROW acquisition and elevated highway construction to improve existing connections to highway and rail systems, including eliminating a grade crossing.

**Cost:** $43.5 million

**Finance:** Cities affected, as well as the MPO, could not identify sufficient grant funding for the project. With the support of FSTED, the Florida Ports Financing Commission issued $19.6 million in combination with $23.9 million issued by the Port of Palm Beach. FSTED requires a 50 percent matching grant to cover a project cost. The project sponsor, typically the port, provides the other 50 percent. Other federal and state funding sources supported ancillary state highway construction.

### *7. Belt Railway Rail Yard*

**Project Type:** Rail yard rehabilitation

**Description:** Belt Railway Company of Chicago applied for funding from the Illinois Rail Freight Program to rehabilitate two rail yards in Chicago. This project involves complete rebuilding of rail, ties, and ballast.

**Cost:** $3 million

**Financing/Funding:** IRFP provided a loan to cover total project costs at 3 percent for 20 years. Belt Railway offered track and other rental properties as collateral.

### *8. Riemier Lumber Company Rail Spur*

**Project Type:** Rail spur construction

**Description:** Riemier Lumber company applied to the Ohio Rail Development Commission (ORDC) for both a grant and a loan to help build a rail spur to a new lumber facility.

**Cost:** $423,000

**Partners**:

- ORDC ($100k grant, $259k loan at 2 percent for the last 3 years of total 5-year loan period)
- $54k Norfolk Southern to invest in switches
- City of Cincinnati 10-year tax abatement on property taxes (est. value of $480,000 over 10 years)
- Ohio Department of Development job creation tax credit, (est. value of $100,000 over 8 years)

**Financing/Funding:** ORDC and NS provided the initial capital. Only the ORDC loan of $259,000 is repaid. Other agencies are providing financial incentives for Riemier to develop at this specific location. NS handles a significant amount of Riemier products, and for this reason, is also rebating $75/car to Riemier.[4]

**Credit Enhancement:** Bonds are expected to be backed by a private commercial bank, either through purchasing a letter of credit or bond insurance.

### *9. Port of Astoria Breakwater Repair*

**Project Type**: Port

**Description:** Port of Astoria breakwater repair and additional improvements to the Quick Stop marine service center.

**Cost:** $125,000

**Financing/Funding:** The ORPF loan was used to provide the local match, under a 50/50 split with a state grant from the Oregon State Marine Board. Additional match was provided by the port with in-kind services. The loan terms are for 10 years at 5 percent interest, to be paid in quarterly payments.

### *10. Port of Astoria Tugboat Repair*

**Project Type**: Port

**Description:** Port of Astoria tugboat repair and marine service center repairs. Funds were used to transport the tugboat (purchased under a Federal surplus equipment program) and repair the engine. The tugboat is planned to be used in conjunction with the development of Quick Stop Marine Service Center – facility for refueling and service repairs for outgoing ships.

**Cost:** $110,000

**Financing/Funding:** 10-year loan from the OPRF at 5 percent (statutes tie interest rates to the U.S. Treasury bill rates).

**Credit Enhancement:** The loan was secured by a first mortgage on real property.

## 3.3 Other Levels of Involvement

This section describes activities and projects that were initiated with significant levels of support outside of Federal programs, including a bi-national freight corridor project and local MPO activities. These programs and projects depict innovative approaches to supporting freight transportation. Exhibit 3.3 summarizes local funding and finance mechanisms to support freight infrastructure projects.

Exhibit 3.3
Local Levels of Involvement Summary Table

| | Name | Size of Project | Funding Source(s) | Modal Application | Mechanism |
|---|---|---|---|---|---|
| 1 | Hyundai Terminal | $241 m. | Port of Tacoma, Hyundai | Port | Revenue bonds, lease |
| 2 | Denver International Airport Cargo Facility | $75 m. | City of Denver, Private developer | Airport | Revenue bonds, lease |
| 3 | Cascadia Corridor | T.B.D. | T.B.D. | Highway/ITS | Bi-national funding |
| 4 | Freight Task Force | Ongoing | FHWA Planning Local/State funds Private funds | Highway | Public/Private survey |
| 5 | Delaware Valley Regional Planning Commission | Ongoing | FHWA Planning Local/State funds Private funds | Highway/rail | Freight Ranking Criteria |

### *1. Hyundai Terminal*

**Project Type**: Port

**Description:** Port of Tacoma Hyundai terminal construction and equipment purchase.

**Cost:** $241 million

**Financing/Funding:** The Port of Tacoma partnered with the Hyundai Corporation to build the Hyundai Terminal, a $241 million facility under a 5-year capital improvement program. The project is mainly financed with tax-exempt private activity bonds. The Port is paying for new terminal construction and a new pier; the Hyundai Corporation is providing four new cranes and other lifting equipment. The Hyundai Corporation will contribute a total of $45 million in return for a leasehold interest in the new terminal.

### *2. Denver Airport Cargo Facility*

**Project Type**: Airport

**Description:** 77-acre ground leases to a third-party developer, who will design, construct, and operate a cargo handling facility on DIA property.

**Cost:** $75 million

**Financing/Funding:** The City of Denver, which owns the airport, will issue special facility bonds to finance construction. Special facility revenue bonds are repaid solely from revenues generated by the facility, in this case, leases. This protects general airport authority revenues. Bond repayment will be collected from the third-party developer who will collect rents from sub-leases with cargo airlines, freight forwarders, and the U.S. Departments of Agriculture and Treasury (Customs operations).

### *3. Cascadia*

The Cascadia project is developing into a corridor program that crosses multiple jurisdictions, most notably, the national border between the U.S. and Canada. Initial planning study efforts are supported by a private foundation. However, as specific project level funding requirements emerge, the Cascadia program will have to pull together several national, state, and local funding sources to support the corridor's development.

One key element to the program is to develop a clearinghouse for trucking companies to manage dispatch communication and maximize revenue miles. The clearinghouse would be responsible for reducing backhaul by alerting backhaul drivers to potential pick-ups, regardless of trucking company affiliation. Once developed, this system would operate similarly to air traffic control systems or multi-owner cab company dispatch systems.

### *4. Use of Freight Task Force*

Several metropolitan planning organizations have formed freight task forces to focus on freight planning and development issues. These task forces are employed in several major metropolitan areas where urban goods movement is significant parts of traffic congestion. A few examples of typical task force activities are listed below:

- The Intermodal Advisory Task Force has helped CATS identify bottlenecks, write the intermodal freight element of the TIP, and complete an inventory of the region's intermodal facilities.[5]
- The Baltimore Metropolitan Council has targeted freight as top priority.[6] They established a Freight Movement Task Force to meet on a regular basis to accomplish three objectives: 1) educate planners and freight community members about their respective concerns and perspectives, 2) identify freight movement strategies and approaches to evaluating freight projects, and 3) coordinate special studies. Their most recent study investigated the extent of truck parking shortages along major shipping routes such as Interstate-95. By partnering with local truck stop companies, the BMC was able to collect parking data. Data revealed that while there was not an actual shortage, parking could be better distributed if truckers were given more accessible information regarding the availability of parking in the area of private truck stops.

### *5. Delaware Valley Regional Planning Commission (DVRPC) Rating Criteria*

Ranking projects is a critical process for systematically appropriating public funding. The DVRPC has developed several criteria to rank freight projects. This system helps freight projects compete against neighborhood and commuter projects for limited public funding resources.

[1] *Pennsylvania Highway Projects (As passed by the U.S. House and Senate – 5/22/98)*. DVRPC internal memo.
[2] TRB 252, page 207.
[3] ibid, pg. 169. *Intermodal Freight Transportation*. Volume II page 2-9.
[4] Mike McClasky, 614-644-0291
[5] TRB, page 167.
[6] TRB page 167.

# APPENDIX A

# GLOSSARY

## Glossary

**AIP** – Airport Improvement Program

**AMT** – Alternative Minimum Tax

**B/C** – Benefit-Cost ratio, where benefits may be monetized from physical terms, e.g., hours saved, and compared to the costs of the investment; a value above 1.0 indicates a feasible result.

**BMC** – Baltimore Metropolitan Council

**Bond credit ratings** – Bond ratings are independent appraisals of the credit quality of a particular issue. A higher rating (AAA) provides for a lower cost of borrowing.

**Borders/Corridors** – National Corridor Planning and Development Program and Coordinated Border Infrastructure Program

**Brownfields** – Abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination

**CATS** – Chicago Area Transportation Study, the metropolitan planning organization for the Chicago area

**CMAQ** – Congestion Mitigation and Air Quality Improvement Program

**CMIB** – California Maritime Infrastructure Bank

**COP** – Certificates of Participation – Capital improvement/equipment leases structured as revenue bonds with annual rent payments. In some instances the rental payments may only come from earmarked tax revenues or tolls and do not obligate the issuer to multi-year obligations.

**CTC** – California Transportation Commission

**DIA** – Denver International Airport

**DVRPC** – Delaware Valley Regional Planning Commission

**EDA** – Economic Development Administration

**EDC** – City of Battle Creek Economic Development Corporation

**FAST** – Freight Action Strategy for the Everett-Seattle-Tacoma Corridor project

**Federal Guarantees** – The 1986 Tax Reform Act continues the prior rule preventing tax exempt indebtedness from being guaranteed by the U.S. or any Federal agency or instrumentality. This rule applies identically to governmental and private activity bonds.

**FMSIB** – Freight Mobility Strategic Investment Board, a new governmental review board for Washington to evaluate freight projects in the state.

**FSTED** – Florida Seaport Transportation and Economic Development Funding

**GAN** – Grant Anticipation Note

**GARVEE** – Grant Anticipation Revenue Vehicle

**HAP** – Wisconsin Harbor Assistance Program

**HMT** – Harbor Maintenance Tax

**HMTF** – Harbor Maintenance Trust Fund

**Insured Bonds –** These are bonds that, in addition to being secured by the issuer's revenues, are also backed by insurance policies written by commercial casualty insurance companies. The insurance, usually structured as a surety insurance policy, provides prompt payment to the bondholders if a default should occur.

**ITPC** – International Trade Processing Center

**IRFP** – Illinois Rail Freight Program

**IRR** – Internal Rate of Return - The discount rate that sets the net present value of the stream of net benefits equal to zero.

**ISTEA** – Intermodal Surface Transportation Efficiency Act of 1991

**JPA** – Joint Powers Authority

**KCTR** – Kansas City Intermodal Transportation Corporation

**LRFA** – Local Rail Freight Assistance Program

**LTL** – Less-Than-Truckload

**MiRLAP** – Michigan Rail Loan Assistance Program

**MIRTS** – Minneapolis Intermodal Railroad Terminal Study

**MPO** – Metropolitan Planning Organization

**MTA** – Los Angeles Metropolitan Transportation Authority

**NHS** – National Highway System

**OPRF** – Oregon Port Revolving Fund

**ORDC** – Ohio Rail Development Commission

**PDAP** – Minnesota Port Development Assistance Program

**PennPlus** – Pennsylvania freight infrastructure revolving loan program

**PIA** – Philadelphia International Airport

**RFAP** – Pennsylvania Rail Freight Assistance Program

**RIAP** – Virginia Rail Industrial Access Program

**RRIF** – Railroad Rehabilitation Improvement Financing

**RPP** – Virginia Rail Preservation Program

**SEA-TAC** – Seattle-Tacoma port

**SIB** – State Infrastructure Bank pilot program

**SLTPP** – California State and Local Transportation Partnership Program

**STIP** – State Transportation Improvement Program

**STP** – Surface Transportation Program

**Tax-exempt bond** – A bond issued by a town or city or public authority. Interest on such bonds is generally exempt from federal income taxes and from some state income taxes.

**TCA** – Transportation Corridor Authority

**TCSP** – Transportation and Community and System Preservation Pilot program

**TEA-21** – Transportation Equity Act for the 21st Century

**TID** – Transportation Improvement District – A special district assessment on property taxes.

**TIFIA** – Transportation Infrastructure Finance and Innovation Act

**TIP** – Transportation Improvement Program

**Treasury Rates** – Rates of interest on marketable Treasury bills. Such debt is issued in maturties ranging from 91 days to 30 years.

**TRB** – Transportation Research Board

## APPENDIX B

# FEBRUARY 9, 1993 FHWA MEMORNADUM

U.S. Department of Transportation
Federal Highway Administration

# Memorandum

Subject: INFORMATION: Use of Federal-Aid Highway Funds for Improvements to Rail Facilities

Date: FEB 9 1993

From: Associate Administrator for Program Development

Reply to Attn of: HNG-12

To: Regional Federal Highway Administrators
Federal Lands Highway Program Administrator

The purpose of this memorandum is to provide guidance on the extent the ISTEA has impacted eligibility of Federal-aid highway funding for improvements to rail facilities.

Section 2 of the ISTEA discusses the importance of developing a unified, interconnected intermodal transportation system. It presents broad policy statements in support of this goal. However, Section 2 in itself does not provide the authority or establish eligibility criteria for using Federal-aid highway funds for specific activities. Rather, it is necessary to turn to Title 23 and the accompanying highway laws to determine the manner in which Federal-aid highway funds can support intermodal activities such as rail transportation.

Under Title 23, Federal highway funds have long been able to participate in safety improvements at railroad-highway crossings. Under 23 U.S.C. 130(a), crossing safety work has even included relocation of portion of a rail line where this is less costly than eliminating existing crossings by grade separations or relocation of the highway. These types of crossing safety improvements continue to be eligible for Federal funding.

Certain types of Federal funding have also been eligible to support capital improvements to rail transit systems. Prior to the ISTEA, urban funds could be used for this purpose. After ISTEA, Surface Transportation Program (STP) funds, including other Federal funding sources transferred to the STP category, can be used for capital improvements for rail transit projects eligible for funding under the Federal Transit Act. Even National Highway System (NHS) funds can be used for rail transit projects in some limited circumstances as described in 23 U.S.C. 103(i)(3).

In addition, Congestion Mitigation and Air Quality (CMAQ) Improvement Program funds can be used for a rail improvement where it meets the purposes of that program. For example, since 23 U.S.C. 149(b) uses the terms, "a transportation project or program," rail projects that are included in an approved State Implementation Plan (SIP) and have air quality benefits are

eligible. Other rail projects not included in an approved SIP could be eligible for CMAQ funds if it is demonstrated that they have air quality benefits for the pollutant(s) for which the area is in nonattainment. All transportation projects funded under the CMAQ program must be located in a nonattainment area and must have demonstrated air quality benefits for the pollutant(s) for which the area is classified as nonattainment.

A new provision to Title 23 added by the ISTEA (23 U.S.C. 133(b)(1)) allows STP funds to be used for ". . . construction or reconstruction [highway and bridges] necessary to accommodate other transportation modes . . . ." This same general provision is also incorporated into amended 23 U.S.C. 142(c) which extends the application of this "accommodation" feature to NHS, CMAQ and Interstate Maintenance funds. We view this new feature of Title 23 as allowing use of the designated Federal funding sources to pay for adjustments to highway elements to accommodate a rail line. This might include lengthening or increased vertical clearances of bridges, adjusting drainage facilities, lighting, signing or utilities, or making minor adjustments to highway alignments.

The "accommodation" feature <u>does not</u> allow use of funds to purchase right-of-way for a rail line, to purchase right-of-way to relocate a highway so that a rail line may occupy existing highway right-of-way, or to construct the rail line or any roadside features whose primary function is related to an adjacent rail line. However, where an existing highway facility directly constrains operations of an existing rail line (for example, a highway structure with limited vertical clearance over a rail line may not allow for double-stack rail operations), adjustments to the rail line including relocation of the line and purchase of right-of-way would be an allowable use of Federal funds where it can be shown to be more cost-effective than eligible adjustments to the existing highway facility.

Another new provision added to Title 23 (23 U.S.C. 133(b)(8) and a new definition in 23 U.S.C. 101(a)) allows STP funds set-aside for transportation enhancement activities to be used for the rehabilitation and operation of historic railroad facilities. A historic railroad facility should be so designated by the State Historic Preservation Officer or other governing entity with appropriate authority.

Questions regarding the overall policy presented in this memorandum may be directed to Mr. Jerry L. Poston, Chief, Federal-Aid Program Branch (202-366-4652). Questions concerning specific uses of CMAQ funds or STP transportation enhancement funds should be directed to Mr. James M. Shrouds, Chief, Noise and Air Quality Branch (202-366-4836) or Mr. Fred Skaer, Chief, Environmental Programs Branch (202-366-2065), respectively.

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