

Commission Briefing Paper 3J-01

Current Financing and Future Needs of Other Components of the Surface Transportation System

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Introduction

This paper is part of a series of briefing papers to be prepared for the National Surface Transportation Policy and Revenue Study Commission authorized in Section 1909 of SAFETEA-LU. The papers are intended to synthesize the state-of-the-practice consensus on the issues that are relevant to the Commission's charge outlined in Section 1909, and will serve as background material in developing the analyses to be presented in the final report of the Commission.

This paper presents information on financing modes for infrastructure and intermodal projects that require multi-jurisdiction participation and some examples of successful investment models that could be applied to connectors, inland waterway infrastructure and inter-city bus transportation. Specific attention will be given to investments that facilitate modal interchange and promote development of new modal alternatives.

Background and Key Findings

The primary issue of this briefing paper is that of leveraging or optimizing federal funds to build intermodal infrastructure projects that benefit both private and public entities. This leveraging often involves creative partnerships between the private sector and the public agencies. For complex project, there are often multiple funding agencies including state participants, local sales tax levies, port authorities, and private investors.

- Successful financing mechanisms for significant intermodal freight transportation projects will include the participation of both public and private entities. This combination will reduce reliance on public debt while ensuring a sustainable commercial operation.
- The private operating entities have a strong financial incentive to minimize their capital investment in long term infrastructure; meanwhile, public entities have land and other assets that can be contributed to a joint development of the site.
- There are innovative ways to finance project development without increasing public debt through the use of Private Activity Bonds and Certificates of Participation that give private-public partnerships access to debt at low government rates.
- In many cases, the public sector has only begun to make full use of the financing alternatives that are possible as a result of partnering with private sector developers and operators.

Objective

Public investments in freight transportation infrastructure and intermodal connectors are commonly given a lower funding priority than are investments in facilities used primarily for passenger travel, due at least in part to the perception that the beneficiaries are commercial interests rather than public constituencies. Additionally, because they are often common user facilities that benefit a group of competing interests, it can be difficult to generate the constant revenue stream necessary for private financing. Therefore, such projects are not attractive to individual private sector developers.

The objective of this paper is to document financing modes for these projects and some examples of successful investment models that could be applied to connectors, inland waterway infrastructure and inter-city bus transportation. Specific attention is given to investments that facilitate modal interchange and promote development of new modal alternatives.

Current Transportation Funding Alternatives

The initial sections of this paper will be a review of those funding sources and their application to freight transportation infrastructure and modal connectors not directly associated with the freight and passenger rail system (as addressed in other papers). The paper will conclude with selected examples of projects using such funds and briefly address the issues surrounding development of intra-city bus services

Federal-aid Highway Program Funding Sources¹

There are six funding sources within the Federal-aid highway program that are most often used to finance combined public-private freight transportation infrastructure projects.

Transportation Infrastructure Finance and Innovation Act (TIFIA) – This measure provides credit assistance rather than direct grants to transportation projects of national or regional significance. The project cost must exceed \$50 million (\$15 million for ITS projects) and the TIFIA contribution is limited to 33 percent of project costs. Private as well as public transportation projects are eligible to apply for TIFIA assistance.

National Highway System (NHS) - The NHS consists of 162,000 miles of designated US highways, which connect cities, ports and border crossings. Nationally some \$6.1 b/yr of Fed-aid funds are allocated for the NHS program. NHS funds can also be dedicated to the 1220 miles of “inter-connector” roadways that tie US highways to rail yards, ports and intermodal facilities.

Congestion Mitigation & Air Quality (CMAQ) - First established in 1991 CMAQ is meant to fund projects and programs which bring air quality in non-attainment areas up to national ambient standards. Port and intermodal connectors that have potential for reducing emissions (e.g., decreasing engine idle time or replacing truck trips with more efficient modes) are potentially eligible for these monies.

¹ Mr. Prabhat A Dikshit FHWA, *Seattle Freight Finance Workshop Federal Highway Funding for Port Access Projects*, June 20 2006

Highway Safety Improvement Program (HSIP) – This is a new core program established by SAFETEA-LU that doubled the funding for highway safety projects to \$5.1 b nationally thru 2009 HSIP has specific set-asides for rail-grade improvements (\$880m) that may be applicable to port and intermodal connectors, particularly where on-dock intermodal rail is being developed that requires improvement of urban grade crossings.

Grant Anticipation Revenue Vehicle (GARVEE) – This program provides funding in the early phases of projects due to receive future federal grant distributions. Candidates for GARVEE financing are typically projects that require a financing mechanism to bridge funding gaps and accelerate construction of major corridor projects.

Private Activity Bonds (PAB) - Section 1143 of Title XI of the Act creates \$15 Billion of potential financing for highways and surface freight transfer facilities. This legislation creates a new category of exempt facilities for which private activity bonds may be issued. PABs give private-public partnerships access to low cost government bond rates through a governmental conduit bond issuer.

Other Public Sources²

Other public entities include states and state departments of transportation (DOT), municipalities and metropolitan planning organizations (MPO), and quasi-governmental organizations such as port authorities, transit authorities, and redevelopment agencies. In most cases, the available funds come from federal grants and disbursements, public debt, state general funds, special sales taxes, and direct revenues or user fees. Where the underlying funding source is federal or state public money (or debt), there are strict limitations as to how these funds can be used. The following financial instruments are often used to allow public-private partnering for intermodal freight infrastructure projects.

Revenue Bonds – Typically, public transit and other transportation services operate at a deficit and are not eligible for revenue bond financing. However, Port Authorities often generate sufficient positive cash flow to back issuance of revenue bonds. A port (including inland ports) can enter into a lease agreement with a private operator and then use the projected lease payments (and other cargo related incomes) to issue revenue bonds for construction.

Concessions – One way a public entity can stimulate private investment in transportation infrastructure is through granting exclusive concessions in return for a guaranteed level of service. Such concessions could include access to ferry terminals and public transit terminals.

Joint Development – This mechanism is a partnership or joint venture between a public agency and a private entity to develop certain public assets resulting in profit for the private partner and a developed asset for the public agency. Most often it is real estate or public rights of way that are the developable assets in question.

Certificates of Participation (COP) – COPs are a mechanism for governmental entities to finance capital projects without technically issuing long-term debt. Where a stream of payments

² Mary A. Collins, Orrick, Herrington & Sutcliffe LLP, *Report On Innovative Financing Techniques For Transit Agencies*, October 16, 2006

from an underlying obligation, typically a lease or an installment sale agreement can be substantiated, a COP security can be issued and sold to private investors. The proceeds from that sale can then be used to finance the project.

Cross-Border Leases – Cross-border leasing transactions are designed to enable a foreign entity to receive tax benefits associated with ownership of an item of equipment. These transactions result in the foreign entity, the “lessor,” paying the “lessee” (a public agency) between approximately 3% and 7% of the cost of certain equipment, such as buses or ferry boats. These leases do not “finance” the vehicles being leased; rather they generate unencumbered revenue from the foreign tax treatment associated with its ownership.

State Revolving Loan Funds – Through a State Infrastructure Bank (SIB), a state can use its initial capital provided by its Federal-aid highway apportionment to provide financial assistance for construction of qualified projects. Upon repayment, the SIB loans can be re-loaned to support other projects. The amount that a State may transfer to a SIB is limited generally to 10 percent of its annual highway, transit and rail apportionments.

Private Financing Sources³

Most intermodal freight projects involve private sector interests that can provide private financing if they can be assured that the risks are manageable and that there will be a reasonable return on their investment. The role of private financing is important in leveraging public funds to achieve the mutual goals of economic development, improvement of environmental quality, and financial sustainability.

Private Equity Banks – Increasingly, the international private equity banks are taking serious interest in financing U.S. intermodal and marine terminal projects. While the source of US equity investment to date is primarily European and Australian, that situation is changing. Goldman Sachs, Citigroup, Morgan Stanley and the Carlyle Group each have announced their intention to form equity investment funds focusing on the U.S. transportation sector.

Private Investment Funds – Pension fund managers, insurance pools and other private investment funds have started to take an equity position in the larger transportation infrastructure projects. This trend is primarily due to the projected future growth of intermodal freight transportation and the potentially stable revenue stream from such long term investments.

Commercial Equity Sources – Often, intermodal project financing has its source in the commercial user of the property. Although most private rail and marine terminal operators would prefer not to tie up their resources in long term projects, they are willing to “buy-in” to a project to secure a concession on its use.

Private Lenders – With public sector participation in an infrastructure project, much of the risk can be mitigated by various insurance vehicles or assigned to the public entity. This public

³ Fredric W. Kessler and Geoffrey S. Yarema, Nossaman Guthner Knox & Elliott, LLP, *Public private partnerships: A sea change in the US transportation sector*, July 12, 2006

participation makes the debt portion of the financing much more attractive to private lenders and reduces the interest rate for project financing.

Current Issues and Selected Examples

This section addresses the current issues and needs of the various transportation connectors and modes including intermodal terminals and ports, inland waterways, and the inter-city bus and ferry system. Additionally, it discusses the financing models in use or under consideration for meeting those needs.

Intermodal Connectors

Intermodal connectors are the freight linkages between the private intermodal transfer points or terminals and the public carriers or transportation routes. Therefore, these connectors are the interface between private and private, or private and public infrastructure elements. Connectors within the U.S. intermodal industry fall into three general categories:

1. Road connectors to the U.S. interstate highway system.
2. Rail connectors to Class 1, mainline railroads
3. Rail and road connections directly between the marine terminal, the intermodal rail terminals or the intermodal cargo distribution centers.

Although road connectors to the interstate highway system have been overlooked in the past, new provisions in TEA-21 and SAFETEA-LU have provided funding for improving these “last mile” connectors. However, many impediments remain to adequately connecting the intermodal terminal “nodes” to the other elements of the intermodal system.

Rail connectors to the various Class 1 railroads are often hampered by competing right-of-ways and at-grade roadway crossings. In a few heavy rail traffic areas, notably Bayonne and Newark in the north east, Chicago in the mid west, and San Bernardino on the west coast, yard and mainline rail traffic is near saturation and little capacity exists for new intermodal connectors. Additionally, certain lines that handle heavy passenger rail traffic have narrow headway windows (time allowed between trains) available for intermodal freight. These include areas of the northeast near Providence, Rhode Island, and in Florida between Miami and Palm Beach.

Rail and road connections directly between nodes in the system (such as marine terminals and intermodal rail yards) are a more recent evolution in the intermodal industry and as such, are receiving considerable attention. These linkages, such as the Alameda Corridor in Southern California and the Port-Inland Distribution Network (PIDN) in New York and New Jersey, serve to integrate marine cargo terminal operations with intermodal rail lift along with warehousing and distribution centers. Such intermodal linkages are continuing to evolve to include the integration of port logistics with the inland distribution terminals through information technology. These integrations include the SmartPort in Kansas City and the Agile Port currently under development in Tacoma, Washington.

The financing of intermodal connectors has been accomplished through the use of TIFIA grants, PABs and SIB revolving funds plus innovative combinations including almost all of the public and private models described in the previous section. However, the primary impetus behind this

development has originated at the port authorities and metropolitan planning organizations in an effort to promote growth while controlling congestion and pollution.

Seaports and Inland Waterways

Navigation infrastructure on the water transportation system will need major investments as the system is nearing capacity and commerce is expected to increase 70 percent by 2020. It is estimated that the cost of these needed improvements will total nearly \$15 billion.⁴

Two funding sources exist, but the usage policies for these sources are complicated and therefore funding is actually quite constrained. The Harbor Maintenance Trust Fund (HMTF), established in 1986, has been the main source of funding for waterway infrastructure improvements. The Trust fund depends on an ad valorem tax of 0.125% on all import cargo and reimburses the Treasury for 100% of harbor operations and maintenance. The Inland Waterways Trust Fund (IWTF) is another potential financing option for marine transportation improvements. This trust fund was created out of the Inland Waterways Revenue Act of 1978 and depends on fuel taxes for revenue.

Several issues constrain funding through the HMTF and the IWTF. However, the fundamental constraint is that trust funds so collected become part of the U.S. general fund and essentially exist only on paper. Congress has shown increasing reluctance to allocate this money and so increase the federal budget deficit. Therefore, the HMTF and the IWTF have an increasing paper balance, but the funds have not been made available for their intended purpose.

The HMTF ad valorem tax generates additional problems for coast-wise trade, in that goods arriving in the U.S. and then re-distributed by feeder vessels or barge services must pay the tax twice, once at the initial port of entry and again when they arrive at the feeder port.

Seaport financing has primarily come through the bonding capacity of the local port authority or other governing entity. This is generally been made possible because freight revenues from shipping lines or terminal operators usually are sufficient to justify the investment. However, recent port security requirements have resulted in significant impacts on port operating budgets and have hampered their ability to finance future expansion. Additionally, some ports do not have their own funding authority and must rely on state or county general funds for capital improvements. These ports could benefit from COPs and SIB loans.

Inter-city Bus Service

In some large metropolitan areas, regional transit districts offer limited inter-city or even inter-state bus service. However, for most of the country, inter-city bus services are exclusively operated as a for-profit businesses, and therefore, limit their coverage to destinations and routes that offer economic incentives. In addition to passenger revenues, many of the inter-city services receive a significant portion of their operating revenues from carrying freight in the baggage compartment of the bus.

⁴ David Grier, of the U.S. Army Corps of Engineers; *Financing Freight Transportation Improvements Workshop*, April 29 to May 1, 2001

There are presently four business models for inter-city bus service in practice in the United States. The first model, similar to the commercial airlines, is the full service transcontinental carrier. Currently, *Greyhound Bus Lines* is the only major transcontinental carrier operating in the U.S. It offers 2,400 service locations plus other minor stops throughout the lower 48 states and Canada. The second model includes smaller regional and inter-state services, such as *Peter Pan Lines* operating in the Northeast. These regional services concentrate in markets where they can operate profitably but do not offer service outside of their market region or to the smaller rural cities.

The third model is that of affiliated carriers that are marketed under a single franchise. *Trailways* is such a franchise organization, comprised of 79 independently-owned transportation member companies. Finally, there are many independent owner-operators that generally serve a “point to point” market and provide only the most basic services at a very low cost. These independent operations may consist of one bus, one driver and two stops; for example, Washington DC and New York City. A variation of this is the tour bus operation such as *Green Tortoise Adventure Travel* that may provide inter-city service, but only as part of a round-trip tour and not as a transportation service per se.

In almost all cases, inter-city bus carriers are financed through the private sector. Many of the inter-city bus routes have seen a reduction or cessation of service due to low ridership and increased operating costs. This pattern can be expected to continue unless government agencies provide some incentive for operating unprofitable routes. Such incentives could include joint development agreements for favorable bus terminal locations (such as high traffic areas with retail potential), low cost financing for equipment (especially if it used alternative fuels such as bio-diesel or liquefied petroleum gas), and ridership guarantees.

Ferry Services

Ferry services can generally be broken into three categories that are characterized by function and by the type of vessel that is used. Local commuter ferries employ modern fast vessels with walk-on passenger service only. These operations are most often seen in urbanized seaport areas such as New York Harbor, San Francisco Bay or the Seattle Area and are more the topic of a paper on transit than one dealing with intermodal freight.

The two remaining categories consist of combined vehicle-passenger services and “blue water” services. Both of these services can carry intermodal freight, and in the case of many Southeast Alaskan communities represent the only regular freight service available. Combined vehicle-passenger ferries use a more conventional displacement hull to emulate highway bridge connectors. These ferries operate in places where a vehicle bridge is impractical such as the Outer Banks of North Carolina, Cape May in New Jersey, and numerous small river crossings nation-wide. The third ferry type includes the “blue water” ferries that are small ships serving passenger and vehicle traffic in along coastwise routes. These ferries are found in the Northeast between Maine and Nova Scotia, on the west coast in Puget Sound, and serving the coastal communities of Alaska. They have also been tried on the Great Lakes, with some success. Although these types of ferries are found in commercial service throughout Europe and Asia, they may not operate profitably in the United States without government assistance.

The difficulty in establishing and operating a profitable commercial ferry service is due largely to the success of the North American highway and rail system. However, other factors including cabotage laws, geography, and operating costs also come into play. Financing of ferry operations could include a broad spectrum of federal initiatives such as NHS and CMAQ funding as well as creative state and local funding to include Joint Development agreements and Concessions on ferry terminal sites, Cross-Border Leases for ferry boat construction, and COP securities issued against future revenues (for example: future returns from special sales tax measures, projected fare box revenues, and development district taxes).

Applicability Matrix

Exhibit 1 matches financing sources with project types. Each available financing source has been evaluated relative to the type of project in question and rated as follows:

- *Applicable* – Is often used as a stand alone financing mechanism or as the key part of a complex program of project financing.
- *Incentive* – Can be used as an incentive or risk mitigation measure to encourage public-private partnerships.
- *Ancillary* – Can provide enhancement to a larger program of financing for this type of project
- *Infrequent* – Is occasionally used to finance this type of project but is not often the case.
- *N/A* – Is not readily applicable to this type of project.

Exhibit 1

Project Financing Source	Intermodal Connectors	Seaports and Inland Waterways	Inter-city Bus Service	Ferry Services
Federal Sources				
<i>Transportation Infrastructure Finance and Innovation Act (TIFIA)</i>	<i>Applicable</i>	<i>Applicable</i>	<i>N/A</i>	<i>Applicable</i>
<i>National Highway System (NHS)</i>	<i>Applicable</i>	<i>Ancillary</i>	<i>N/A</i>	<i>Ancillary</i>
<i>Congestion Mitigation & Air Quality (CMAQ)</i>	<i>Ancillary</i>	<i>Ancillary</i>	<i>N/A</i>	<i>Ancillary</i>
<i>Highway Safety Improvement Program (HSIP)</i>	<i>Applicable</i>	<i>Ancillary</i>	<i>Infrequent</i>	<i>N/A</i>
<i>Grant Anticipation Revenue Vehicle (GARVEE)</i>	<i>Applicable</i>	<i>Applicable</i>	<i>N/A</i>	<i>Infrequent</i>
<i>Private Activity Bonds (PAB)</i>	<i>Applicable</i>	<i>Applicable</i>	<i>Infrequent</i>	<i>Applicable</i>
State and Local Sources				
<i>Revenue Bonds</i>	<i>Applicable</i>	<i>Applicable</i>	<i>Infrequent</i>	<i>N/A</i>
<i>Concessions</i>	<i>Applicable</i>	<i>Infrequent</i>	<i>Applicable</i>	<i>Ancillary</i>
<i>Joint Development</i>	<i>Infrequent</i>	<i>Infrequent</i>	<i>Applicable</i>	<i>Ancillary</i>
<i>Certificates of Participation (COP)</i>	<i>Ancillary</i>	<i>Infrequent</i>	<i>N/A</i>	<i>Ancillary</i>
<i>Cross-Border Leases</i>	<i>N/A</i>	<i>N/A</i>	<i>Applicable</i>	<i>Ancillary</i>
<i>State Revolving Loan Funds</i>	<i>Applicable</i>	<i>Infrequent</i>	<i>N/A</i>	<i>Ancillary</i>
Private Sources				
<i>Private Equity Banks</i>	<i>Ancillary</i>	<i>Applicable</i>	<i>N/A</i>	<i>Infrequent</i>
<i>Private Investment Funds</i>	<i>Ancillary</i>	<i>Applicable</i>	<i>N/A</i>	<i>N/A</i>
<i>Commercial Equity Sources</i>	<i>Applicable</i>	<i>Applicable</i>	<i>Applicable</i>	<i>Applicable</i>
<i>Private Lenders</i>	<i>Infrequent</i>	<i>Infrequent</i>	<i>Applicable</i>	<i>Applicable</i>