

Intermodal Freight Connectors: Strategies for Improvement

NCHRP Project 8-36, Task 30

final report

prepared for

National Cooperative Highway Research Program

prepared by

Cambridge Systematics, Inc.

final report

Intermodal Freight Connectors: Strategies for Improvement

NCHRP Project 8-36, Task 30

prepared for

National Cooperative Highway Research Program

prepared by

Cambridge Systematics, Inc.
100 CambridgePark Drive, Suite 400
Cambridge, Massachusetts 02140

August 2003

Table of Contents

Introduction	1
Background	1
Review of Literature	3
Case Study Review	8
Potential Improvement Strategies by Issue Area.....	11
Intake Sessions	13
Results	13
Conclusions and Recommendations	19
Appendix A	
Intermodal Freight Connectors PowerPoint Presentation.....	A-1
Appendix B	
Sample Intermodal Connector Survey	B-1
Appendix C	
Intermodal Connector Survey Rankings by Stakeholder	C-1
Appendix D	
Intermodal Connector Survey Selected Comments.....	D-1

List of Tables

1.	Cost to Eliminate Backlog Deficiencies for Freight Connectors.....	8
2.	Intermodal Connector Survey Cumulative Rankings	14

Intermodal Freight Connectors Strategies for Improvement

■ **Introduction**

The intermodal connectors of the National Highway System (NHS) are the first and last miles of roadway used by truckers to travel between the major highways of the NHS and the nation's ports, rail terminals, and air cargo hubs. They are usually local roads and often weave their way through older industrial and residential neighborhoods. Nationally, there are 1,222 miles of NHS intermodal connectors, less than one percent of total NHS mileage. The connectors serve 616 terminals: 253 ocean and river ports, 203 truck-rail terminals, 99 air cargo (and passenger) terminals, and 61 pipeline truck terminals. They are critical but increasingly weak links in the freight transportation network. Potholes, narrow roadways, and tight turns increase wear and tear on trucks while slowing traffic and aggravating congestion.

Although the Federal transportation reauthorization process is likely to call attention to the needs of freight and may result in more flexibility for intermodal connector funding, many institutional and other obstacles are likely to remain. The purpose of this NCHRP project is to scan the literature, survey existing project experience to identify potential actions and strategies, assess their viability during several intake sessions, and provide practical guidance to the American Association of State Highway and Transportation Officials (AASHTO) and others for advancing the state of practice in implementing freight intermodal connector improvements.

■ **Background**

The physical condition of many intermodal connectors is cause for concern. In its December 2000 report to Congress, "NHS Intermodal Freight Connectors," the United States Department of Transportation (U.S. DOT) warned that intermodal connectors were in relatively poor physical shape compared to the NHS as a whole. Looking at pavement condition and roadway configuration (e.g., turning radii, lane widths, overhead clearances, etc.), the U.S. DOT found that 12 percent of intermodal-connector mileage was in poor or very poor condition in 1999. By comparison, only eight percent of all NHS mileage was in poor or very poor condition. Port connectors fared the worst; 15 percent of intermodal-connector mileage to ports was rated poor or very poor. About 12 percent of intermodal-connector mileage to truck-rail terminals and seven percent of the mileage to pipeline truck terminals and airports were in poor or very poor condition. The report found that current investment levels in intermodal connectors in most states were not sufficient to correct the identified deficiencies.

The U.S. DOT report to Congress echoed the conclusions of an earlier report by Cambridge Systematics, “Challenges and Opportunities for an ITS/Intermodal Freight Program” (February 1999). Cambridge Systematics conducted six listening sessions on intermodal connectors – in Seattle, Norfolk, Chicago, Los Angeles, Houston, and New York – for the U.S. DOT Office of the Secretary. The sessions revealed increasing congestion, deteriorating reliability, uncoordinated work-zone management, and lack of coverage by traffic management and information systems. Carriers, shippers, terminal managers, state DOT engineers, and metropolitan planning organization (MPO) officials said repeatedly that capacity and congestion problems would not shut down the nation’s freight systems, but would have devastating and disproportionate operational impacts by degrading the predictability and reliability of freight service for shippers and receivers. A one- or two-hour delay in a drayage movement can mean a missed train and a 24-hour holdup in a domestic shipment. A missed connection on an international move can mean a delay of one week. For an intermodal freight system trying to serve just-in-time manufacturing and retailing businesses, reliability is critical. Poor reliability means lost business, lost jobs, and lost tax revenue.

Intermodal connectors are potential risks to economic security and military mobilization. The designated NHS connectors often are the only viable truck routes between military bases and ports. The routes are difficult to monitor and police, but relatively easy to disrupt or block. When connectors are blocked, considerable effort is needed to safely reroute trucks. Many trucking companies operate trucks with sophisticated geographic positioning systems (GPS) and communications equipment, which allows drivers and dispatchers to monitor traffic conditions and reroute trucks quickly. However, the majority of drayage trucks serving the nation’s ports and terminals are driven by owner-operators, who are paid on a piece-work basis and equipped with little more than a cell phone.

Intermodal connectors often are “orphans” in the transportation planning and programming processes. Connectors fall awkwardly between the jurisdictions and responsibilities of Federal and state DOTs, port authorities, MPOs, private sector terminal operators and carriers, and other agencies and organizations. Although critically important, they are usually lower volume industrial roads with less vocal constituents than major commuter routes and transit lines. The intermodal industry is by its nature fragmented, complex, and highly competitive. Public sector transportation is almost as complex. Also, the public and private sectors operate on different time scales. The private sector focuses on quarterly operations and one- to two-year capital investment cycles; the public sector, dealing with complex community and environmental issues, often needs three to 10 years to deliver major capital projects.

Economic growth will further strain intermodal connectors. Between 1998 and 2020, total freight tonnage is expected to grow by about 69 percent. Domestic freight tonnage will increase by 65 percent; and import-export tonnage is anticipated to nearly double.¹ Major hub ports such as the Ports of New York and New Jersey anticipate that the volume of

¹ From the Federal Highway Administration’s Freight Analysis Framework project.

containers may triple. Major air cargo hubs such as Los Angeles expect air cargo volumes to quadruple. Unless the problems of NHS intermodal connectors are addressed and corrected, these links will weaken and some will fail. The cost of these failed connectors in lost business and security could be high.

AASHTO has recognized the problem and taken a proactive position with a policy statement that “Existing and proposed innovative financing techniques should be tailored to make increasing investment in intermodal connectors possible in combination with increases in core TEA-21 programs.” The Freight Stakeholders Coalition, representing twelve major industry associations, has recommended that Congress “dedicate funds for NHS highway connectors to intermodal facilities.” Stakeholders participating in Federal Highway Administration (FHWA) outreach sessions leading up to reauthorization of the Transportation Equity Act for the 21st Century (TEA-21) called for increased and/or dedicated funding for the NHS connectors; intermodal freight funding within the Surface Transportation Program (STP); expansion of the Congestion Mitigation and Air Quality (CMAQ) Improvement Program to benefit freight; greater consideration of intermodal connectors in state and local transportation planning; development of performance standards for connectors; introduction of an international gateway program; and expansion of the Corridors and Borders programs.

The U.S. DOT considered this input and has made several recommendations to improve connector and other freight project implementation in its TEA-21 reauthorization proposal submitted to Congress in May 2003. Recommendations include:

- Set-aside at least two percent of NHS funds for intermodal freight connectors;
- Increase the Federal match to 90 percent for intermodal freight connectors;
- Expand intermodal freight eligibility in the STP program;
- Expand intermodal eligibility and reduce the project threshold in the Transportation Infrastructure Finance and Innovation Act (TIFIA); and
- Designate a freight transportation coordinator in each state.

■ Review of Literature

A literature review identified the following key documents: (a) the National Cooperative Highway Research Program (NCHRP) draft final report 8-39, *Financing and Improving Land Access to Cargo Hubs*; (b) the Federal Highway Administration report to Congress, *NHS Intermodal Freight Connectors*; (c) the U.S. Maritime Administration (MARAD) report, *Intermodal Access to U.S. Ports*; (d) the FHWA report, *The Role of the National Highway System Connectors: Industry Context and Issues*; and (e) the FHWA report, *2002 Status of the Nation’s Highways, Bridges, and Transit: Conditions & Performance*. These five documents are briefly summarized below:

NCHRP Draft Final Report 8-39, Financing and Improving Land Access to Cargo Hubs, February 2003

This draft final report provides a comprehensive review of cargo hub access issues, although its findings are subject to change. The key issues identified in the study as needing attention are:

- Lack of dedicated funds and competition with commuter needs for limited highway funds;
- Limited applicability and suitability of user funds and pure project finance approaches;
- Obstacles to obtaining public funding for railroad access to private facilities; and
- Inability by public sector agencies to promptly respond to expanding freight volumes and new private or port/airport needs.

The team concluded that special attention to the “cargo hub access problem” at the national level is needed. Given the large number of cargo hub projects being considered around the nation, the team recommended that national and regional initiatives to address cargo hub access should be formulated so as to:

- Formally recognize and measure progress to address the “cargo hub access problem”;
- Establish guidelines that assure consideration of cargo hub access needs in the state-wide and metropolitan transportation planning processes;
- Encourage multi-jurisdictional and public-private collaboration in evaluating and implementing solutions;
- Encourage states and MPOs with cargo hubs of national or regional significance to regularly prepare a plan and program to address cargo hub access needs, and to ensure that such needs, plans, and programs be incorporated in the long range and transportation improvement plans;
- Provide appropriate financing support, incentives, or other mechanisms to facilitate structuring of practical funding programs for such projects; and
- Develop additional funding sources and/or financing mechanisms such as 1) dedicated funds for cargo hubs, 2) discretionary programs that make funds available to the most important projects nationally, 3) legal authorization for additional optional sources that state or local agencies can tap, and 4) flexibility to make all types of cargo hub projects eligible.

Finally, the research team recommended consideration of several specific mechanisms and initiatives to address cargo hub needs:

- Require states and metropolitan areas with cargo hubs of national and/or regional significance to develop cargo hub access programs;
- Authorize an optional cargo access fee nationally, to be collected regionally directly from users;
- Clarify laws and regulations so that all types of cargo hub access projects be specifically defined as eligible for tax exempt financing; and
- Make private contributions by carriers and others private entities eligible for investment tax credits when part of a governmental cargo hub access project.

Federal Highway Administration, NHS Intermodal Freight Connectors: A Report to Congress, December 2000

Section 1106(d) of TEA-21 directed the Secretary of Transportation to conduct a review of NHS freight connectors that serve seaports, airports, and other major intermodal terminals. The objectives were to: 1) evaluate the condition of NHS connector highway infrastructure linking major intermodal freight terminals; 2) review improvements and investments made or programmed for these connectors; and 3) identify impediments and options to making improvements to the intermodal freight connectors.

The Federal Highway Administration undertook a field inventory of the connectors in the fall of 1998. Some 616 intermodal freight terminals (253 ocean and river ports, 99 airports, 203 truck/rail terminals, and 61 pipeline/truck terminals) were surveyed. In its report to Congress, FHWA concluded: 1) Intermodal connectors that primarily serve freight terminals have significant mileage with pavement deficiencies and generally exhibit inferior physical and operational performance than other similar NHS facilities. 2) Based on an analysis of investment practices, there is a general lack of awareness and coordination for freight improvements within the MPO planning and programming process. 3) Given the pressing needs for passenger-related projects, there is little incentive for investing in freight projects that appear to primarily benefit only a small freight constituency.

FHWA's report to Congress also identifies options for improving the connectors and freight flow efficiency in four areas:

- **Awareness and Coordination** - The report suggests that the biggest problem in implementing intermodal connector projects is the lack of priority accorded to freight movements in the planning and programming process. This is mainly because freight projects must compete for limited funding against "high-priority" passenger projects. Consequently, very little is invested in freight transportation improvements. Possible actions to consider in raising the visibility and priority of freight projects in state and MPO planning and programming processes are:

- *Provide incentives for intermodal connector planning and coordination* – Such incentives would improve the planning and implementation of freight projects and spur freight project development. Additional funding for planning and coordination could be used to financially support states and MPOs that are identifying, conceptualizing, and planning freight projects.
- *Identify an intermodal network* – Many public planning agencies are not fully aware of the importance of freight to the economy of their region and to the nation as a whole. Participants in outreach meetings highlighted the need to think of the intermodal connectors within the context of the full freight system. One means of raising the visibility of freight might be to identify an intermodal freight network. In the early 1980s, the National Truck Network (NTN) was designated. A National Truck and Intermodal Network could be an extension of NTN to major ports, airports, rail yards, and pipeline terminals that generate high volumes of intermodal freight by truck. For example, the State of Florida has recently identified a critical state intermodal network that includes connectors as important components.
- *Consider intermodal connectors in any federally funded port, aviation, or roadway study or project* – The efficient operation of the intermodal facility is contingent upon the efficient operation of the intermodal connectors. Accordingly, federally funded studies or capital projects on federally funded intermodal terminals should include an evaluation of the adequacy of the highway connectors to identify needed infrastructure and operations improvements. Such an assessment would encourage a closer linkage between transportation planning, land use planning, zoning, and site development.
- **Information Technologies** – As a complement to connector infrastructure improvements, build an intermodal “infostructure” to achieve intermodal system optimization. Information technologies that better connect the modes, such as port information systems, could relieve congestion on the connectors.
- **Funding** – The report presents a full range of possible funding mechanisms. These include: 1) creating a new Federal credit program, similar to TIFIA, targeting at smaller intermodal connector projects; 2) expanding the eligibility of the Railroad Rehabilitation and Improvement Financing (RRIF) credit program to include intermodal connector projects; 3) expanding or strengthening the State Infrastructure Banks (SIB) program, to allow for the capitalization of an intermodal freight connectors account with Federal-aid; 4) encouraging the creation of state-level credit programs or infrastructure funds for intermodal freight connector projects; 5) providing connector incentive grants to overcome some of the problems encountered by the states and local areas in funding freight improvements; 6) reducing the match required for Federal funds where connectors under local ownership do not have adequate resources; and 7) creating a set-aside of NHS funds for intermodal connector projects. Many of these actions would require legislative action during TEA-21 reauthorization.
- **Community and Environmental Responsiveness** – The report discusses possible actions to minimize the impact of freight operations and make improvements to the adjacent communities. These include: 1) exploring mechanisms for leveraging transportation investment into local economic development opportunities; 2) taking into

account the concerns of surrounding communities regarding such issues as truck traffic, air quality, and noise; 3) identifying creative strategies to meet local, state, and Federal environmental requirements; 4) ensuring appropriate planning and training to enable quick response to environmental incidents; and 5) identifying funding for host communities to explore avenues to reduce the localized impacts surrounding major regional freight terminals.

U.S. Maritime Administration, Intermodal Access to U.S. Ports: Report on Survey Findings, August 2002

The U.S. Maritime Administration (MARAD) is currently updating its annual survey of ports and has provided Cambridge Systematics with interim results from the 2003 survey. While the report finds current conditions generally acceptable (although not optimal), it questions whether ports will be able to meet the future challenges posed by cargo growth and international trade. Many ports reported unacceptable conditions related to access, including:

- Poor condition of local roads to access the ports;
- Unacceptable conditions at at-grade rail crossings;
- Rail access issues such as lack of connections and competition with passenger rail;
- Lack of truck only routes into port areas; and
- Need for improved communication systems, including connecting port and surface transportation traffic information system.

Federal Highway Administration, The Role of the National Highway System Connectors: Industry Context and Issues, February 1999

This report, prepared by A. Strauss-Wieder, Inc., is based on a workshop on intermodal connectors conducted in December 1998. The report identifies several opportunities and barriers in regard to intermodal connector improvements:

- **Infrastructure considerations** – The various modes and public and private sectors need to work together to optimally plan for multimodal access.
- **Operational considerations** – Expanded hours of operation and improved information systems are needed.
- **Regulatory considerations** – Environmental streamlining and other regulatory coordination across agencies is needed.
- **Financial considerations** – Public-private partnerships are needed, but these can be complex to develop.

- **Institutional considerations** – Better communication across public and private sectors is needed.
- **Meeting other public goals** – The benefits of improved connectors in serving public goals need to be highlighted.

FHWA 2002 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance Report to Congress, 2002

In Chapter 25 of the most recent *Conditions and Performance Report to Congress*, the FHWA estimates the backlog deficiencies for freight intermodal connectors. The cost for spot improvements to solve localized deficiencies was assumed to be the same for both the backlog needs and the costs for the enhanced connectors. Including the costs for spot deficiencies added \$87.1 million to the total of both estimates. Linear improvements along the length of the connectors were estimated using two different assumptions. As shown in Table 1 below, this resulted in a total cost for the backlog improvement estimate of \$2.597 billion (using improvement costs for existing connector functional class), while the cost for improving service to the next highest functional class to meet expected increases in freight volumes would be \$4.291 billion.

Table 1. Cost to Eliminate Backlog Deficiencies for Freight Connectors
Millions of Dollars

Improvement Type	Using Design Standards For	
	Existing Functional Class	Higher Functional Class
Spot	\$87	\$87
Linear	\$2,510	\$4,204
Total Costs	\$2,597	\$4,291

Source: Office of Freight Management and Operations, FHWA.

■ Case Study Review

The following intermodal freight connector case studies from the NCHRP 8-39 study, *Financing and Improving Land Access to Cargo Hubs*, were reviewed for this project to glean innovative institutional or financing strategies:

- Joe Fulton International Trade Corridor, Port of Corpus Christi, Texas;
- Tchoupitoulas Corridor, Port of New Orleans, Louisiana;

- Port of Tacoma Overpass Project, Freight Action Strategy (FAST) Corridor, Washington State;
- Kedzie Avenue Access Road, Chicago, Illinois;
- Skypass Bridge Project, Port of Palm Beach, Florida;
- Lombard Road Overpass, Port of Portland, Oregon;
- Portway Project, Port of New York and New Jersey; and
- The Alameda Corridor.²

In addition, the consulting team made selected calls to other state and local officials who have been involved in efforts to advance intermodal connector projects. Significant findings from the case studies are as follows:

- The Alameda corridor rail project is larger and more complex than the other connector projects reviewed. It was innovative in both its institutional structure and its financing package. A separate multi-jurisdictional authority was set up under California legislative enabling authority to design, build, and operate the corridor. The financing of the \$2.4 billion project included a \$400 million Federal loan underpinned by a container user fee that became a model for the later-enacted TIFIA program in TEA-21.
- The Washington FAST Corridor is another innovative example of port access which focused on highway rail grade crossing elimination. No separate authority was set up; rather, a memorandum of agreement was signed among the various parties concerned (the State of Washington, MPOs, ports, and railroads). The program benefited from multiple funding sources: NHS funding, TEA-21 Borders and Corridors funding, TEA-21 High-Priority Funding, port funds, and some rail funds.
- The New Jersey Portway and related Kapkowski Road is a collection of projects providing improved access to the Port of New York/New Jersey. The first phase totals more than \$800 million and includes a mix of Federal NHS funds, New Jersey State Trust Fund monies, and New Jersey Bridge Bonds. The project has been selected for the FHWA Environmental Streamlining Initiative.
- The Tchoupitoulas port connector in New Orleans is the only exclusive truck connector project reviewed. It is a 3.5-mile link from the port to the Interstate. The project was funded from a special State Economic Development Program.

² Although a rail connector project, the Alameda Corridor was also reviewed for this study because of its financing and institutional innovations.

- Finally, the Kedzie Avenue connector to the BNSF rail intermodal yard in Chicago is an example of a smaller project designed to improve operations. One and one-half miles long, it was built at a cost of \$4.7 million, funded from local CMAQ allocations.

A search was also made for examples of how states and MPOs have addressed freight intermodal connectors in the planning process. One state and two MPO examples are highlighted below:

- The Oregon Department of Transportation (ODOT) developed a procedure for estimating the dollar value of intermodal connector needs over a 20-year period. This procedure, summarized in a 1997 report titled “Intermodal Connector Needs on the National Highway System: Procedure for Estimating Needs,” was prepared as background information for the 1998 *Oregon Highway Plan* update. ODOT staff began by reviewing various transportation system plans, port plans, environmental impact statements, and transportation improvement programs. They supplemented the information obtained from these documents by conducting a windshield survey and visiting (or conducting telephone interviews with) agency staff and other persons in six communities: Astoria, Boardman, Coos Bay/North Bend, Eugene, Medford, and Portland. ODOT assumed that over a 20-year period, connectors would need to be repaved at least once. The total value of intermodal connector needs in these six communities, in 1997 dollars, was estimated at \$163 million.
- The Delaware Valley Regional Planning Commission (DVRPC) conducted a study of important roadway connections between the NHS and key intermodal freight terminals. The study, published in 2001 as “National Highway System Connectors to Freight Facilities in the Delaware Valley Region,” was intended to assist the planning needs of the Delaware Valley Goods Movement Task Force. It includes an inventory and assessment of physical and traffic operating conditions along NHS corridor highways in the Delaware Valley. These corridors serve 12 intermodal freight facilities or clusters of facilities in the region. Sixty-seven individual improvement projects are recommended, at an estimated cost of \$163.1 million. The DVRPC based its methodology for evaluating connector needs on the FHWA study of intermodal connectors, published in the NHS Intermodal Freight Connectors Report to Congress.
- The Chicago Area Transportation Study (CATS) Intermodal Advisory Task force maintains a current inventory of roadway facilities providing access to the major intermodal freight terminals in and around the City of Chicago. CATS transmits this inventory to the Illinois DOT and the FHWA for incorporation into the required update to the Federal inventory of NHS connectors. The most recent inventory is based on 1998 operations data and was published in June 1999 as *Proposed Intermodal Connectors to the National Highway System for Northeastern Illinois*, version 3. It proposes a network of 55.3 miles of freight connectors in the Chicago area. The City of Chicago has also conducted a more detailed engineering analysis of selected connectors to estimate costs of improvements.

■ Potential Improvement Strategies by Issue Area

Based on discussion with the AASHTO study panel for this project, review of the literature, review of case studies from NCHRP 8-39, and selected interviews with state and local officials who are facing major gateway or cargo hub challenges, a preliminary list of four key issue areas and accompanying improvement strategies was drafted for consideration by AASHTO and other stakeholders. The issue areas are: Mandates, Institutional Change, Resource and Funding Innovations, and Benefits and Public Education. A short description of each follows.

Mandates

Mandates refer to a statement in legislation, regulation, or policy spelling out the objectives of a national/state program emphasis area.

- States with cargo hubs of national or regional significance could require attention to intermodal connectors in MPO plans and transportation improvement plans (TIPs), including participation of major port and intermodal terminal operators in the planning process.³
- Federal-, state-, or MPO-funded intermodal terminal/cargo hub planning could be required to consider access needs as part of the process. Too often these processes are carried out independently of one another.
- States could require freight as a specific category for consideration for CMAQ funds. Many states and MPOs have set aside project categories in their CMAQ programs (transit, pedestrian and bicycle, etc.) for which they specifically solicit and prioritize projects; very few planning agencies have identified freight as a specific category for attention. Freight projects have difficulty competing with these categories for CMAQ monies.
- States could define critical state intermodal networks, as Florida has done, to focus the attention of all state and local entities on critical freight intermodal facilities important to the state economy and to other state goals.

Institutional Change

This area concerns roles, responsibilities, and authority for action.

³ The vast majority of hubs and connectors are located in or around metropolitan areas, and are therefore within the jurisdiction of MPOs.

- States could authorize special multi-jurisdictional institutional arrangements for development, financing, and implementation of intermodal projects connecting cargo hubs of regional significance, as California has done with the state authorized Joint Powers Authorities used for the Alameda Corridor and the Intermodal Container Transfer Facility serving the Ports of Los Angeles and Long Beach.
- Freight advisory committees could be established, particularly in states and metropolitan areas with cargo hubs of regional and national significance. Several states and MPOs have experienced success with these public/private mechanisms.
- States could identify a leader/champion for each major freight hub access project to ensure that state economic and trade interests are being addressed, and to encourage the multi-jurisdictional coordination that is inevitably needed to advance these projects.
- Criteria used to select and set priorities among competing transportation projects could be modified so that freight projects, such as connectors to major gateways or hubs, receive higher priority for their regional and national economic significance.

Resource and Funding Innovations

This area concerns the authority, availability, and eligibility of resources for intermodal connectors.

- In conjunction with state authorization of special multi-jurisdictional authorities, financial authority could be provided to these entities, including the ability to issue tax exempt debt.
- A portion of any State Infrastructure Bank programs or State Economic Development programs could be focused on intermodal access to cargo hubs of national or regional significance. Several of the case study successes used money targeted through special economic development funding or a portion of State Infrastructure Bank programs targeted toward freight/economic development.
- Federal and state agencies could give priority to environmental streamlining for freight projects serving gateways or hubs of regional or national significance.
- Provide an NHS program set aside for intermodal freight connectors
- Intermodal terminal ITS applications that improve operation of intermodal connectors (e.g., the Port Authority NY/NJ FIRST port information system) could be made eligible for Federal-aid highway funding.

Benefits/Public Education

This area focuses on improving the understanding of public benefits of freight and inter-modal connector programs and projects.

- Benefit/cost methodology for freight could be improved by updating the AASHTO *Redbook* to include a separate section on freight benefit/cost. Freight has unique benefits beyond the traditional direct user benefits normally included in benefit/cost tools for passenger-oriented projects. These benefits are not well understood by the public and by decision-makers.
- An AASHTO-led effort with the Freight Stakeholder Coalition could be initiated to develop a national media outreach campaign highlighting the importance of freight transportation, particularly intermodal connectors, to the nation's economic well being. This was a recommended initiative from the Transportation Research Board/U.S. DOT sponsored National Freight Forum held in March 2002.

■ Intake Sessions

Several intake sessions were held in 2003 to solicit input and reaction from AASHTO and other freight stakeholders regarding potential strategies to improve intermodal connectors: the AASHTO Standing Committee on Planning meeting held on May 21; the AASHTO Special Committee on Intermodal Transportation and Economic Expansion meeting in conjunction with the AASHTO Board of Directors meeting in Louisville, May 29-31; the AASHTO Committee on Water Transportation meeting, July 16; and the Transportation Research Board summer meetings, held in Portland, Oregon, July 13-18. A copy of the presentation material was also sent to the Freight Stakeholders Coalition in Washington, D.C., to solicit comments. A PowerPoint briefing was presented at these intake sessions to stimulate discussion (see Appendix A). A survey, or "matrix," of candidate strategies was handed out to be completed by participants following the meetings (see Appendix B).

■ Results

As of this writing, a total of 21 surveys have been returned, 16 from state DOTs and five from other stakeholders. Based on the rankings assigned by the respondents, the proposed strategies were listed in order of priority, with the strategy receiving the fewest total points being the highest and the strategy receiving the most total points being the lowest on the list. Thus, the mandate, "States define critical intermodal networks and nodes," emerged as the top priority, with a total of 40 points. This was followed closely by the proposals, "Update the AASHTO *Redbook* to include new methodologies for freight project benefit/cost analysis" (43 points), "Establish state/MPO freight advisory committees" (46 points), and "Authorize toll or other user financing for connectors" (47 points). The least desirable proposal was "States provide financial authority to special

districts/authorities for connectors,” which received 69 points. Table 2 shows the 16 proposed strategies ranked in order of preference. Appendix C shows the rankings assigned to each strategy by the 21 respondents. Appendix D shows the rankings assigned to each strategy and summarizes the written comments by the 21 respondents.

Table 2. Intermodal Connector Survey Cumulative Rankings

Candidate Intermodal Connector Strategies	Total Points¹	Priority Ranking
States define critical intermodal networks and nodes	40	1
Update AASHTO Redbook to include new methodologies for freight project benefit/cost analysis	43	2
Establish State/MPO freight advisory committees	46	3
Authorize toll or other user financing for connectors	47	4
Add intermodal freight connector criteria for project selection process	48	5
Fund intermodal freight ITS projects (e.g., port information systems that benefit connector operation)	49	6
Require MPO planning attention to connectors of regional or national significance	53	7
Initiate national outreach effort with Freight Stakeholder Coalition to publicize benefits to the economy of freight and intermodal connector investment	55	8
States require consideration of CMAQ funds for freight connectors as often done with bike/ped, transit, etc.	57	9
Require coordination of terminal planning with land access planning	59	10
Identify lead/champion for key intermodal connector projects	59	10
States authorize/enable special multi-jurisdictional authorities for connectors of regional or national significance	61	12
Give priority to environmental streamlining for connectors to major gateways and hubs	62	13
Provide NHS set aside for connectors	62	13
Target a portion of SIB or state economic development funds to connectors	64	15
States provide financial authority to special districts/authorities for connectors	69	16

1 = highest priority.

5 = lowest priority.

¹ Cumulative points from 21 respondents to date.

A few additional strategies were suggested by participants on their response forms or during intake session discussions:

- Expand the Railroad Rehabilitation and Improvement Financing credit program to include intermodal connector projects;
- Encourage private contributions by carriers and other private entities to be made eligible for investment tax credits when part of a government cargo hub access project; and
- Give states the flexibility to make all types of cargo hub projects eligible for Federal-aid funds.

Summary of Comments Provided by the Stakeholders

Approximately three-quarters of the respondents chose to provide written comments on some or all of the proposed strategies. This subsection summarizes the comments, emphasizing the range of viewpoints expressed by the stakeholders regarding each strategy. The strategies are listed in order of priority, although it should be noted that while a strategy at or near the top of the ranking is clearly preferred to one at or near the bottom, there is little distinction between any two consecutively ranked strategies.

1. **States define critical intermodal networks and nodes** – Support for this proposal was broad, with 16 of the 21 respondents ranking it 1 or 2. “This would be very helpful to establish a strong state focus,” remarked one proponent. “It is the state’s role to define critical networks and nodes, so intermodal connectors should be part of a priority state system,” said another. Several respondents observed that states have already defined critical networks and nodes, but that their efforts have not resulted in any additional funding. “Identification is not enough,” remarked one stakeholder. Another respondent suggested that this mandate should be combined with the mandate requiring MPO plans to address connectors of regional or national significance, so as to encourage a joint effort.
2. **Update the AASHTO Redbook to include new methodologies for freight project benefit/cost analysis** – Support for this proposal was broad, with 15 of the 21 respondents ranking it 1 or 2. “The *Redbook* is very old and outdated. It needs to be updated and to use more realistic costs to show greater benefits,” declared one proponent of this measure. Updating the *Redbook* “would go a long way toward encouraging the engineering, planning, and even the policymaking communities to better address freight movement!” wrote another. Only one respondent questioned whether a special section was needed, believing that new methodologies for freight project benefit/cost analysis should be incorporated into the *Redbook* under all sections.
3. **Establish state/MPO freight advisory committees** – Support for this proposal was broad, with 14 of the 21 respondents ranking it 1 or 2. “This is essential if we expect to achieve results!” declared one state DOT. “It is potentially a very effective means of public-private collaboration in evaluating needs and implementing solutions,” said another. One DOT was more circumspect, declaring: “While it’s probably a good idea

for states/MPOs to do this, it's unclear how doing so would influence intermodal connector strategies, especially in the absence of other initiatives, guidance, or funding to move connector strategies forward." Another cautioned, "States and MPOs have the option of creating freight advisory committees. Freight advisory committees should not be mandated."

4. **Authorize toll or other user financing for connectors** – Support for this proposal was broad, with 15 of the 21 respondents ranking it 1 or 2. "This could be a useful tool in promoting freight projects," commented one state DOT. "Probably we can do this already, but if Federal legislation needs to be drafted, then do so," said another. Some respondents expressed reservations: "This will work in some areas where cargo volumes are high, but not in others." "Tolls may not be popular with the trucking industry." "Users would pay, but increased costs would be passed along to customers."
5. **Add intermodal freight connector criteria for project selection process** – Support for this proposal was moderate, with 12 of the 21 respondents ranking it 1 or 2. One respondent considered it "an absolute requirement at the MPO level," while another called it "a suggestion that makes a lot of sense and should be done." Florida's Strategic Intermodal System (SIS), one DOT noted, is making intermodal freight connector criteria part of the project selection process. Two DOTs sounded a cautionary tone, however. One observed: "The movement of freight is already a required consideration in transportation planning. Each state has a planning process that considers all elements and options. Freight projects should not be given special consideration, but should receive the same consideration given to other transportation projects." Another stated: "While it's probably a good idea to do this, it's unclear how it will contribute to the selection of intermodal connector projects, especially in the absence of other initiatives, guidance, and funding."
6. **Fund intermodal freight ITS projects (e.g., port systems that benefit connector operation)** – Support for this proposal was moderate, with 12 of the 21 respondents ranking it 1 or 2. "Any activities that would improve ability to access cargo origin-destination data would improve freight planning capabilities," noted one proponent, while another observed simply: "We strongly support increased flexibility." Florida's SIS, one DOT noted, will fund intermodal freight ITS projects. One stakeholder sounded a cautionary note, however: "ITS projects tend to have a high rate of return, but don't rehabilitate infrastructure."
7. **Require MPO planning attention to connectors of regional or national significance** – Support for this proposal was moderate, with 11 of the 21 respondents ranking it 1 or 2. A proponent of this mandate noted that "this is being done in most MPOs. The connectors are a key part of the transportation network and must be a part of the planning work program." Another commented that "MPOs should always consider the entire transportation facility – including all modes." Many stakeholders, however, felt that MPOs should be encouraged, but not required, to focus their planning efforts on intermodal connectors. "I would score this higher if the wording were something like, 'Provide incentives for MPOs to direct planning attention to connectors of regional or national significance,'" commented one state DOT. Some respondents

worried about the effectiveness of the strategy in general, given the lack of MPO experience with freight issues. Another pointed out that “planning without funding won’t achieve much. Cargo needs have a hard time competing with commuter delays when it comes to funding.”

8. **Initiate national outreach effort with Freight Stakeholder Coalition to publicize benefits to the economy of freight and intermodal connector investment** – Support for this proposal was moderate, with 11 of the 21 respondents ranking it 1 or 2. Proponents deemed it an “excellent idea,” and “the kind of undertaking that will go a long way toward helping this cause.” However, one state DOT worried that “this may be perceived as a self-serving effort by the industry” – a problem that could, he suggested, be avoided “if the freight industry and trucking associations were willing to endorse some ‘revenue enhancements’ such as higher diesel fuel taxes or other user fees on trucks.” Echoing these statements, another stakeholder remarked: “Freight is under-appreciated by the public, but [this initiative] could be interpreted as begging for a handout.”
9. **States require consideration of CMAQ funds for freight connectors as is often done with bicycle/pedestrian, transit, etc.** – Support for this proposal was moderate, although just seven of the 21 respondents ranked it 1 or 2. The most enthusiastic proponent of using CMAQ monies for freight connectors argued that “CMAQ funds should be almost totally allocated to intermodal projects, not to bike paths and pedestrian facilities.” Most respondents were more circumspect, however. One state DOT observed: “CMAQ projects must show a quantifiable air quality benefit. Freight projects must demonstrate this benefit if they are to compete with other CMAQ projects.” Another DOT commented: “Freight-related projects should be made eligible for CMAQ funds but they should not be given special consideration.” Some stakeholders opposed the use of CMAQ funds for freight connectors. “CMAQ funds are generally best suited for larger scale capacity projects and systemwide operational applications,” noted one. “The flexibility of CMAQ makes it more valuable in addressing other needs,” said another.
10. **(tie) Require coordination of terminal planning with land access planning** – Support for this proposal was moderate, with 10 of the 21 respondents ranking it 1 or 2. Proponents considered such a mandate “useful to identify potential impediments to the efficient movement of freight,” and “especially critical at seaport locations, near airports, and train stations.” However, as was the case with MPO planning attention to connectors of regional and national significance, many respondents felt that coordination of terminal planning with land access planning should be encouraged, not required. “I would score this higher if the wording were something like, ‘Provide incentives for coordination of terminal planning with land access planning,’” explained one DOT. Another respondent questioned whether coordination would even be possible. “They’re hard to mix, like apples and oranges. Projects are planned on different timetables by different levels of government in some cases.”
10. **(tie) Identify a leader or “champion” for key intermodal connector projects** – Support for this proposal was moderate, with 11 of the 21 respondents ranking it 1 or 2.

Most respondents, however, including those who favored the proposal, expressed reservations. “In principle, this should help,” one wrote. “My concern is that a very few active ‘champions’ may cause significant ‘shifting’ of funds to only a few areas, instead of statewide.” Another stakeholder commented: “States may not be the best to choose a leader. MPOs may be more familiar [with the process].” Several respondents questioned the usefulness of identifying a champion. One observed that “The movement of freight is already a required consideration in developing TIPs, STIPs, and Long-Range Plans. Each state has the option of designating a freight coordinator.” Another wrote: “This may be necessary for larger scale projects that cross institutional boundaries, but on a regular basis should not be necessary.”

- 12. States authorize/enable special multi-jurisdictional authorities for connectors of regional or national significance** – Support for this proposal was moderate, with nine of the 21 respondents ranking it 1 or 2. The proposal generated little excitement, however. “This has been shown to work,” conceded one stakeholder. “This strategy might ensure consistency between local plans and programs and statewide goals, needs, and priorities,” said another. A number of concerns were expressed. One respondent warned that “intermodal connectors have statewide impact that can only be managed by a statewide agency. Regional agencies are more parochial in their perspective and don’t recognize the broader implications of intermodal connectors.” Another suggested that states should enable multi-jurisdictional authorities for connectors only “where the intent is to focus responsibility for revenue raising, operation, maintenance, and capital improvement. Otherwise, accountability becomes unnecessarily diffuse.” One respondent was more succinct: “More agencies, players, and bureaucracies don’t always help.”
- 13. (tie) Give priority to environmental streamlining for connectors to major gateways and hubs** – Support for this proposal was moderate, with 10 of the 21 respondents ranking it 1 or 2. While a few respondents strongly supported this proposal, arguing that “environmental streamlining is important to the state as a whole, including connectors and gateway projects,” others questioned the effectiveness of such a policy. “Environmental delays are less significant than funding constraints,” noted one stakeholder. Another echoed this sentiment, warning that environmental streamlining for connectors “would help, but not standing alone. We still need funding first.” Another suggested that streamlining “would not be possible because the local communities would not allow it to happen.” Others opposed special treatment for freight projects, arguing “that environmental streamlining should be applicable to all transportation projects.” One respondent warned that environmental streamlining for connectors “may establish an undesirable precedent.”
- 13. (tie) Provide NHS set-aside for connectors** – Support for this proposal was moderate, with 11 of the 21 respondents ranking it 1 or 2. “This could be the most important funding source for access improvements to rural freight hubs,” exclaimed one respondent. Providing an NHS set-aside for connectors “should be top priority,” declared another. Other stakeholders urged caution, pointing out that a set-aside “would remove flexibility in programming from states.” Some were against the proposal: “A further division of funds should not be made! There are too many categories now!”

said one. “We strongly oppose any set-aside for freight projects,” wrote another. “Freight projects should not receive preferential treatment in funding.” During the SCOP intake session, Mississippi reported that they instituted a voluntary state set-aside of four percent of their NHS funds for freight connectors and have had good success in improving port connections as a result.

15. **Target a portion of SIB or state economic development funds to connectors** – Support for this proposal was weak, with just five of the 21 respondents ranking it 1 or 2. “This would be helpful, but difficult to achieve at the state level,” noted one respondent. “It would be better to target NHS funds,” suggested another. Said a third, “We do not favor a suballocation of funds, but there may be occasions where this is appropriate.” One DOT felt that freight projects should receive the same consideration as other projects selected for SIB financing, declaring: “We would oppose any special suballocation of SIB funds for freight projects.”
16. **States provide financial authority to special districts or authorities for connectors** – Support for this proposal was weak, with just six of the 21 respondents ranking it 1 or 2. Although one DOT noted that its state already had legislation similar to this proposal that had helped encourage the development of regional intermodal freight centers, most respondents were skeptical. “Many states cannot use debt financing to finance transportation projects. It is useful for port authorities if there are constitutional prohibitions on other funding sources,” one explained. One DOT declared, “We are concerned that this would add another layer of government and [inhibit] effective integration/correlation with the transportation planning process.” Another stakeholder warned that “Funding through special districts has limited value. We get a better result for the investment with a statewide perspective.” Concluded one: “This does not address the defined problems of public priority and planning agency awareness.”

■ Conclusions and Recommendations

This study presented an opportunity to foster broad discussion among AASHTO committees and other freight stakeholders on issues and impediments associated with NHS intermodal freight connectors. The top six strategies for improving intermodal connectors identified by respondents are:

1. States define critical intermodal networks and nodes;
2. Update the AASHTO *Redbook* to include new methodologies for freight project benefit/cost analysis;⁴
3. Establish state/MPO freight advisory committees;

⁴ This would go beyond changes made in the recently completed NCHRP *Redbook* update.

4. Authorize toll or other user financing for connectors;
5. Add intermodal freight connector criteria for project selection process; and
6. Fund intermodal freight ITS projects (e.g., port information systems).

While the study was underway, the U.S. DOT's TEA-21 reauthorization proposal was submitted to Congress. Three significant recommendations affecting intermodal connectors were in the Administration's proposal. They are as follows:

- Set-aside a minimum two percent of state NHS apportionments for intermodal freight connectors;
- Increase the Federal match to 90 percent for intermodal freight connectors; and
- Expand TIFIA program intermodal eligibility and reduce the project threshold.

Not surprisingly, state respondents did not rate a set-aside for connectors among their highest rated strategies for connectors in the survey, although one state reported use of this technique. AASHTO policy generally does not favor Federal program set-asides. Regardless of the outcome of reauthorization, a vast majority of respondents agreed that intermodal connectors should receive higher priority in the planning and priority setting processes of states and MPOs.

The study team recommends that the appropriate AASHTO committees consider further action steps regarding the highest rated connector strategies identified in this study.

Appendix A

Intermodal Freight Connectors PowerPoint Presentation

Intermodal Freight Connectors

Strategies for Improvement

NCHRP 8-36(30)

Gary Maring
Cambridge Systematics, Inc.

TRB Summer Meetings
July 13-18, 2003



**CAMBRIDGE
SYSTEMATICS
INC.**

Objectives of Presentation

- **Conduct intake session on promising strategies to improve intermodal freight connector implementation**
- **Presentation content**
 - **Review of literature and case studies**
 - **Presentation of candidate strategies**
 - **Feedback and discussion of most effective strategies**
 - **Next steps**

**CAMBRIDGE
SYSTEMATICS
INC.**

Review of Literature and Case Studies

■ NCHRP 8-39, *Financing/Improving Access to Cargo Hubs*

• Draft Findings

- Lack of dedicated funds and competition with passenger needs
- Limited applicability of user fees and pure project finance
- Obstacles to public funding for intermodal projects
- Slow response by public agencies to expanding cargo volumes at critical hubs



Review of Literature and Case Studies (continued)

■ NCHRP 8-39, *Financing/Improving Access to Cargo Hubs*

• Recommendations

- Require attention to cargo hubs of regional/national significance
- Authorize optional national cargo fee; to be implemented and collected locally at state/local option
- Clarify tax exempt financing and provide for private contributors to receive tax credits for nationally significant projects



FHWA Connector Report to Congress, Dec. 2000

■ Findings

- Connectors in poorer condition than other NHS roads
- 'Orphan' status of connectors
- Freight doesn't compete well with passenger project needs



CAMBRIDGE
SYSTEMATICS
INC.

FHWA Connector Report to Congress, Dec. 2000 (continued)

■ Improvement Options

- Create incentives for intermodal connector planning
- Identify strategic intermodal network, including key intermodal terminals and connectors
- Consider intermodal connector access needs in any publicly funded intermodal terminal expansion projects
- Spur adoption of freight ITS/information technologies
- Consider enhanced funding options such as TIFIA, NHS set-aside, and increased match

CAMBRIDGE
SYSTEMATICS
INC.

Other Reports

- MARAD report, *Intermodal Access to U.S. Ports*
 - Poor condition of local roads to access the ports
 - Rail grade crossing issues
 - Need for truck-only access to ports
 - Need for improved communication systems between port and land side
- KPMG/Ann Strauss-Weider report to FHWA, *Role of NHS Connectors: Industry Context and Issues*, Feb. 1999
 - Partnerships for action across modes and public/private
 - Operational and regulatory changes
 - Communicating benefits of freight connectors

Case Study Examples

- Alameda rail corridor/I-710, Ports of LA/Long Beach
- Washington FAST corridor serving ports of Tacoma and Seattle
- Portway, Port of NY/NJ
- Kedzie Ave., Chicago (rail intermodal)
- Tchoupitoulas Corridor, Port of New Orleans



Candidate Improvement Strategies

- **Mandates** – a statement in legislation, regulation, or policy spelling out objectives of a national/state program emphasis
- **Institutional Innovations** – concerns roles, responsibilities, and authority for action
- **Resources/Funding** – concerns the authority, availability, and eligibility of resources for freight intermodal connectors
- **Benefits/Public Education** – improving the understanding of public benefits of freight and intermodal connector projects

Candidate 'Mandate' Strategies

- **Require MPO planning attention to connectors of regional and national significance**
- **Require consideration of intermodal connector needs in any publicly funded intermodal terminal expansion projects**
- **States require local consideration of CMAQ funds for freight connectors**
- **States define critical intermodal networks and nodes**

Candidate 'Institutional' Strategies



- States enable special multi-jurisdictional authorities for connectors of regional/national significance (e.g., Alameda)
- Establish state/MPO freight advisory committees
- Identify lead/champion for key connector projects
- Add intermodal connector criteria for project selection process

Candidate 'Resources/Funding' Strategies

- States also provide financial authority to special districts/authorities for connectors (e.g., Alameda corridor)
- Target a portion of state SIB, state economic development, or other funds to regionally significant freight connectors
- Give priority to environmental streamlining for connectors to major gateways and hubs
- Provide NHS connector set-aside (Administration proposal)
- Authorize toll or other user financing for connectors
- Fund intermodal connector ITS projects
- Other intake suggestions: Encourage private contributions, expand RRIF to include connectors, provide more flexible intermodal eligibility

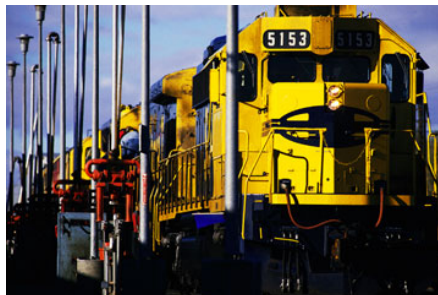
Candidate 'Benefit/Public Education' Strategies

- Update AASHTO Redbook to include new methodologies for freight benefit cost analysis
- Initiate national outreach effort with Freight Stakeholder Coalition to publicize benefits of freight and intermodal connector improvements



Comments and Discussion

- Which candidate strategies would be most effective?
- Which would be least effective?
- Should other candidate strategies be considered?



Next Steps

- Summarize results from intake sessions
- Final reporting
 - Submit draft final report in August; final NCHRP report by end of September
 - Present final report results, if desired, at AASHTO annual meeting in Sept.

Input to Date ***Most Effective Strategies***

- Mandates
 - Require MPO attention to connectors
 - States define critical intermodal networks and nodes
- Institutional
 - Establish freight advisory committees
- Funding
 - Authorize toll or other user fee financing
- Benefits –
 - Initiate national outreach to publicize economic benefits of freight/intermodal connectors

Send comments to Gary Maring at:

gmaring@camsys.com

Phone: 301-347-0124

FAX: 301-347-0101

Appendix B

Sample Intermodal Connector Survey

Sample Intermodal Connector Survey

Matrix for NCHRP Project 8-36(30) – Intermodal Freight Connectors		
<p>Please rank the potential effectiveness of each proposed connector strategy on a scale of 1 to 5 with 1 being highly effective. Provide additional comments on the proposed strategies in the space provided and feel free to suggest additional strategies that you believe would be effective in spurring greater attention to and implementation of connector improvements.</p>		
Candidate Intermodal Connector Strategies (See interim report narrative for more detail on strategies)	Potential Effectiveness of Strategy (1 to 5) 1-high, 5-low	Comments
Mandates		
1. Require MPO planning attention to connectors of regional or national significance		
2. Require coordination of terminal planning with land access planning		
3. States require consideration of CMAQ funds for freight connectors as often done with bike/ped, transit, etc.		
4. States define critical intermodal networks and nodes		
Institutional Change		
1. States authorize/enable special multi-jurisdictional authorities for connectors of regional or national significance		
2. Establish State/MPO freight advisory committees		
3. Identify lead/champion for key intermodal connector projects		
4. Add intermodal freight connector criteria for project selection process		

Candidate Intermodal Connector Strategies (See interim report narrative for more detail on strategies)	Potential Effectiveness of Strategy (1 to 5) 1-high, 5-low	Comments
Resources/Funding		
1. States also provide financial authority to special districts/ authorities for connectors		
2. Target a portion of SIB or state economic development funds to connectors		
3. Give priority to environmental streamlining for connectors to major gateways and hubs		
4. Provide NHS set aside for connectors		
5. Authorize toll or other user financing for connectors		
6. Fund intermodal freight ITS projects (e.g., port information systems that benefit connector operation)		
Benefits/Public Education		
1. Update AASHTO Redbook to include new methodologies for freight project benefit cost analysis		
2. Initiate national outreach effort with Freight Stakeholder Coalition to publicize benefits to the economy of freight and intermodal connector investment		

Appendix C

Intermodal Connector Survey Rankings by Stakeholder

Appendix C. Intermodal Connector Survey Rankings by Stakeholder

Candidate Intermodal Connector Strategies	Total Points	Priority Ranking	State 1	State 2	State 3	State 4	State 5	State 6	State 7	State 8	State 9	State 10	State 11	State 12	State 13	State 14	State 15	State 16	Other 1	Other 2	Other 3	Other 4	Other 5
States define critical intermodal networks and nodes	40	1	1	3	1	1	1	1	2	2	2	1	3	2	1	1	2	1	4	5	1	2	3
Update AASHTO Redbook to include new methodologies for freight project benefit cost analysis	43	2	1	3	2	1	2	2	2	2	3	1	4	3	1	2	3	2	3	3	1	1	1
Establish State/MPO freight advisory committees	46	3	2	2	1	1	2	5	3	2	1	1	3	3	1	1	2	2	4	5	1	3	1
Authorize toll or other user financing for connectors	47	4	2	2	2	2	2	5	1	2	1	2	2	3	1	1	3	4	1	5	1	2	3
Add intermodal freight connector criteria for project selection process	48	5	1	2	3	1	1	5	2	2	3	2	2	3	1	3	2	3	5	4	1	2	2
Fund intermodal freight ITS projects (e.g. port information systems that benefit connector operation)	49	6	1	3	2	1	1	3	2	3	2	3	2	3	1	2	3	3	5	4	1	2	2
Require MPO planning attention to connectors of regional or national significance	53	7	1	2	1	2	1	1	5	1	4	4	4	3	3	1	3	3	5	5	1	2	1
Initiate national outreach effort with Freight Stakeholder Coalition to publicize benefits to the economy of freight and intermodal connector investment	55	8	2	2	1	1	3	1	5	1	4	4	2	3	1	1	3	4	5	5	2	3	2

Appendix C. Intermodal Connector Survey Rankings by Stakeholder (continued)

Candidate Intermodal Connector Strategies	Total Points	Priority Ranking	State 1	State 2	State 3	State 4	State 5	State 6	State 7	State 8	State 9	State 10	State 11	State 12	State 13	State 14	State 15	State 16	Other 1	Other 2	Other 3	Other 4	Other 5
States require consideration of CMAQ funds for freight connectors as often done with bike/ped, transit, etc.	57	9	5	3	3	4	1	5	3	3	4	3	3	1	1	3	2	4	5	3	1	2	1
Require coordination of terminal planning with land access planning	59	10	1	4	4	3	2	3	5	1	2	3	2	2	1	1	3	2	5	5	1	4	5
Identify lead/champion for key intermodal connector projects	59	10	2	5	1	2	2	2	4	4	2	3	2	4	1	3	2	2	5	5	3	3	2
States authorize/enable special multi-jurisdictional authorities for connectors of regional or national significance	61	12	3	5	5	2	4	5	1	4	3	4	2	1	1	4	3	1	4	5	1	2	1
Give priority to environmental streamlining for connectors to major gateways and hubs	62	13	2	3	2	2	2	2	5	2	3	2	5	5	3	3	3	4	5	5	1	1	2
Provide NHS set aside for connectors	62	13	5	2	2	2	5	4	5	2	1	4	3	5	2	5	2	3	4	1	2	2	1
Target a portion of SIB or state economic development funds to connectors	64	15	5	3	2	3	4	3	2	3	3	5	2	5	1	3	3	3	5	1		3	5
States provide financial authority to special districts/ authorities for connectors	69	16	3	4	3	4	4	3	5	5	3	2	2	5	1	5	3	1	5	5	1	3	2

Appendix D

Intermodal Connector Survey Selected Comments

Intermodal Connector Survey

Selected Comments

Comments in **green** support the proposed strategy. Comments in **red** express reservations. Comments in black are neutral.

Candidate Intermodal Connector Strategies	Rank	Selected Comments
Mandates		Our DOT strongly opposes any mandates including those directed toward freight planning and projects.
1. Require MPO planning attention to connectors of regional or national significance	7	I would score higher if wording were something like: "Provide incentives for MPOs to direct planning attention to connectors of regional or national significance."
		The lack of MPO experience with freight issues could be an obstacle.
		OK in general. However, this may place some MPOs in a difficult position with many other competing issues, priorities and needs. Limited funding with many needs!
		MPOs should always consider the entire port a transportation facility – including all modes.
		The movement of freight is already a required consideration in developing the TIP and the Long-Range Plan.
		This is important and is being done in most MPOs. The connectors are a key part of the transportation network and must be a part of the planning work program.
		Planning attention without funding won't achieve much. Cargo needs have a hard time competing with commuter delays when it comes to funding.
		Requiring MPO attention will not guarantee locals will submit projects on connectors.
		This should be encouraged, not required.
		The Federal government needs to provide more specific guidance rather than just words of encouragement.

Candidate Intermodal Connector Strategies	Rank	Selected Comments
2. Require coordination of terminal planning with land access planning	10	I would score higher if wording were something like “Provide incentives for coordination of terminal planning with land access planning.”
		This could be useful to identify potential impediments to the efficient movement of freight.
		OK at a specific roadway level. However, on an areawide basis land access planning is usually governed by local policy/laws.
		In many states, land use and access is controlled by local governments not by the state. It is helpful to have coordination reflected in planning considerations.
		Especially critical at seaport locations, near airports and train stations. Terminals typically require a lot of maneuvering room for intermodal connections – land use plans should reflect this need.
		Cargo operators too often assume that access is someone else’s problem.
		Should be encouraged, not required. We strongly support coordination, but not that it be a requirement.
		Hard to mix, like apples and oranges. Projects are planned on different timetables by different levels of government in some cases.
3. States require consideration of CMAQ funds for freight connectors as often done with bike/ped, transit, etc.	9	I would score higher if wording were something like “Establish a CMAQ funding category for consideration of improvements to freight connectors.”
		CMAQ funds are generally best suited for larger scale capacity projects and system wide operational applications.
		Funds spent this way should be for congestion management only.
		Freight-related projects should be made eligible for CMAQ funds but they should not be given special consideration.
		CMAQ projects must show a quantifiable air quality benefit – freight projects must demonstrate a benefit, if it is to compete with other CMAQ projects.
		This would ensure that connectors would receive attention and funds would be spent on them.
		Should be encouraged, not required.
		CMAQ funds should be almost totally allocated to

Candidate Intermodal Connector Strategies	Rank	Selected Comments
		<p>intermodal projects, not to bike paths and pedestrian facilities.</p> <p>Freight should get at least as high a priority as the other programs mentioned.</p> <p>The flexibility of CMAQ makes it more valuable in addressing other needs.</p>
4. States define critical intermodal networks and nodes	1	<p>I would score higher if wording were “Provide incentives for states to engage in planning activities to define critical intermodal networks and nodes.”</p> <p>This could be helpful for identifying the key modal links to the major freight corridors.</p> <p>Florida is doing this through development of a Strategic Intermodal System.</p> <p>Through their planning process, all states identify critical needs and networks, including freight.</p> <p>It is the state’s role to define critical networks and nodes, so intermodal connectors should be a part of a priority state system.</p> <p>Limited availability of reliable O-D data limits freight planning capability.</p> <p>This has been done to some extent with the NHS intermodal connectors.</p> <p>Should be done in context with intermodal freight network plan and, where appropriate, in collaboration with planning jurisdictions of other states and provinces. Participants should be multi-jurisdictional and represent the public and private sectors.</p> <p>This would be very helpful to establish a strong state focus.</p> <p>Already done for intermodal connectors but did not result in additional funding. Identification is not enough.</p> <p>Could combine this mandate with the first (require MPO planning attention to connectors of regional or national significance) and make it a joint effort.</p>
Institutional Change		
1. States authorize/enable special multi-jurisdictional authorities for connectors of regional or national significance	12	<p>May need to address at a broader regional level, rather than a local level. Florida is creating regional transportation authorities, as well as using economic regions as a basis for analyses.</p>

Candidate Intermodal Connector Strategies	Rank	Selected Comments
		This strategy might ensure consistency between local plans and programs and statewide goals, needs, and priorities.
		Depends on individual state's organization. Does this mean diverting highway funds to an authority?
		Not sure you need "authorities." Working together would be better without creating another legal entity.
		Multi-jurisdictional solutions are important tools in transportation, not just freight transportation issues, if continuity of transportation functions is critical.
		Intermodal connectors have statewide impact that can only be managed by a statewide agency. Regional agencies are more parochial in their perspective and don't recognize the broader implications of intermodal connectors.
		More agencies/players/bureaucracy doesn't always help.
		Where appropriate, and where the intent is to focus responsibility for revenue raising, operation, maintenance and capital improvement. Otherwise accountability becomes unnecessarily diffuse.
		Has been shown to work.
2. Establish State/MPO freight advisory committees	3	While it's probably a good idea for states/MPOs to do this, it's unclear how doing so would influence intermodal connector strategies, especially in the absence of other initiatives/guidance/funding to move connector strategies forward.
		This is a good approach to encourage public and private partnerships to enhance freight projects.
		This is essential if we expect to achieve results!!
		Recommend or mandate a freight representative or policy committee and let the policy committee set up other committees as it sees fit.
		States and MPOs have the option of creating freight advisory committees. Freight Advisory Committees should not be mandated.
		This is very much needed and will go a long ways to sensitizing the planning process to freight issues.
		Need to improve communications and relationships among DOTs, trucking associations, railroads, ports, other freight interests.

Candidate Intermodal Connector Strategies	Rank	Selected Comments
		Potentially a very effective means of public-private collaboration in evaluating needs and implementing solutions.
		Has been shown to work, but advisory committees are not enough; voting MPO members must be willing to listen. Why not require the inclusion of public agencies, such as ports, on MPOS?
		Most states have freight advisory committees.
3. Identify lead/champion for key intermodal connector projects	10	While it's probably a good idea to do this, it's unclear how doing so would influence intermodal connector strategies, especially in the absence of other initiatives/guidance/funding to move connector strategies forward.
		In principle should help. My concern is that a few very active "champions" may cause significant "shifting" of funds to only a few areas, instead of statewide.
		The movement of freight is already a required consideration in developing TIPs, STIPs, and Long-Range Plans. Each state has the option of designating a freight coordinator. Freight coordinators should not be a mandatory requirement.
		This may be necessary for larger scale projects that cross institutional boundaries, but on a regular basis should not be necessary.
		States may not be the best to choose a leader. MPOs may be more familiar.
4. Add intermodal freight connector criteria for project selection process	5	While it's probably a good idea to do this, it's unclear how doing so would contribute to the selection of intermodal connector projects, especially in the absence of a lot of other initiatives/guidance/funding.
		Florida will be doing this through the new Strategic Intermodal System, as well as through statewide intermodal plan, which will include SIS and all other important intermodal facilities.
		The movement of freight is already a required consideration in transportation planning. Each state has a planning process that considers all elements and options. Freight projects should not be given special consideration, but should receive the same consideration given to other transportation projects.
		This suggestion makes a lot of sense and should be done.

Candidate Intermodal Connector Strategies	Rank	Selected Comments
		Project selection criteria should be identified and weighted in accordance with defined public policy and objectives.
		This should be an absolute requirement at the MPO level.
Resources/Funding		It would be nice to have some Federal funding focus that doesn't count against the states. Everything in this section points to a state problem when indeed this is a national problem.
1. States also provide financial authority to special districts/ authorities for connectors	16	I am concerned that this would add another layer of government and effective integration/correlation with the transportation planning process.
		We have existing legislation similar to this proposal. It has been beneficial in encouraging the development of regional intermodal freight centers.
		Many states cannot use debt financing to finance transportation projects. Useful for port authorities if there are constitutional prohibitions on other funding sources.
		Funding through special districts has limited value; we get a better result for the investment with a statewide perspective.
		This does not address the defined problems of public priority and planning agency awareness.
2. Target a portion of SIB or state economic development funds to connectors	15	This would help.
		Freight projects should receive the same consideration as other projects selected for SIB financing. We would oppose any special suballocation of SIB funds for freight projects.
		Could be a valuable funding method for much needed landside access improvements.
		We do not favor suballocation of funds, but there may be occasions where this is appropriate.
		I support eligibility to compete on merit with other applications for SIB and economic development funds.
		This would be helpful, but difficult to achieve at the state level.
		Better to target NHS funds.

Candidate Intermodal Connector Strategies	Rank	Selected Comments
3. Give priority to environmental streamlining for connectors to major gateways and hubs	13	One must be careful that “streamlining” doesn’t mean ignoring impacts.
		Environmental streamlining should be applicable to all transportation projects. Freight projects should not be given special environmental treatment.
		Environmental streamlining is important to the state as a whole, including connectors and gateway projects.
		Environmental delays are less significant than funding constraints.
		May establish an undesirable precedent.
		Support methods of improving efficacy of environmental permitting processes for all Federal aid capital projects.
		This would not be possible because the local communities would not allow it to happen.
4. Provide NHS set aside for connectors	13	States need more flexibility within more fund categories, not just set-asides.
		Could be the most important funding source for access improvements to rural freight hubs.
		A further diversion of funds should not be made! Too many categories now!
		We strongly oppose any set aside for freight projects. Freight projects should not receive preferential treatment in funding.
		Additional funding should be provided from higher user fees for trucks if a new set aside is created.
		Would remove flexibility in programming from states.
		YES – should be top priority.
5. Authorize toll or other user financing for connectors	4	I agree in principle. However, tolls may not be popular with the trucking industry. Certainly there is a need to encourage public-private partnerships.
		Probably we can do this already, but if Federal legislation needs to be drafted then do so.
		This could be a useful tool in promoting freight projects.
		This is an appropriate option for special projects.
		Users would pay, but increased costs would be passed along to customers.

Candidate Intermodal Connector Strategies	Rank	Selected Comments
		This will work in some areas where cargo volumes are high, but not others.
6. Fund intermodal freight ITS projects (e.g., port information systems that benefit connector operation)	6	In Florida, this will be included in the Strategic Intermodal System and metropolitan planning organization long-range transportation plans.
		We strongly support increased flexibility.
		The ports program gets its funds directly from the state legislature. The funds are from general obligation sources.
		Any activities that would improve ability to access cargo origin-destination data would improve freight planning capabilities.
		ITS projects tend to have a high rate of return, but don't rehabilitate infrastructure.
Benefits/Public Education		
1. Update AASHTO Redbook to include new methodologies for freight project benefit/cost analysis	2	This would go a long way toward encouraging the engineering, planning and even the policy-making communities to better address freight movement!
		This would be useful in evaluating the potential benefits of freight projects.
		Not sure it needs a special section. It should be incorporated into the Redbook under all sections.
		This would be very valuable.
		The Redbook is very old and outdated. It needs to be updated and to use more realistic costs to show greater benefits.
		We need to give the states the planning tools they need.
2. Initiate national outreach effort with Freight Stakeholder Coalition to publicize benefits to the economy of freight and intermodal connector investment	8	This is the kind of undertaking that will go a long way toward helping this cause.
		AASHTO members already know the importance of freight transportation.
		Excellent idea.
		This may be perceived as a self-serving effort by the industry. This problem might be mitigated if the freight industry/trucking associations were willing to endorse some "revenue enhancements" – higher diesel fuel taxes or other user fees on trucks.

Candidate Intermodal Connector Strategies	Rank	Selected Comments
		Freight is underappreciated by the public, but could be interpreted as begging for a handout.
		Freight has never done a good job of showing its importance to the nation.
		Should be part of the plan but will not be enough standing alone.