



## Integrating Freight into Transportation Planning and Project-Selection Processes

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# 1.0 Introduction

Over the last decade, the incorporation of freight issues into the transportation planning activities of state departments of transportation (DOT) and metropolitan planning organizations (MPO) has received significant focus from Federal transportation agencies and entities, business and industry leaders, and other key stakeholders. This enhanced focus on integrating freight issues within existing statewide and metropolitan transportation planning processes has been driven by several factors, including:

- Federal surface transportation legislation, beginning with the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, which first emphasized freight as a factor to consider in the transportation planning process. The importance of incorporating freight issues within metropolitan and statewide planning efforts was further emphasized in the Transportation Equity Act of the 21<sup>st</sup> Century (TEA-21) and again most recently with the passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).
- Recognition by business and community leaders that efficient freight transportation is a key factor in statewide and metropolitan economic competitiveness and vitality and an important consideration in business attraction and retention decisions.
- Continued globalization and an increasing reliance on international trade, which has heightened the importance of a safe, reliable, and secure transportation system and placed increased pressure on already strained infrastructure.
- Acknowledgment from private industry that public investments will be considered – and in many cases required – to meet increasing freight demands.

In response to these and other influences, Federal, state, and local transportation planning agencies have begun to focus attention and resources on developing and refining freight planning programs and on more effectively incorporating freight into existing transportation planning activities. Federal agencies and other entities, including the Federal Highway Administration (FHWA), the Transportation Research Board (TRB), the National Cooperative Highway Research Program (NCHRP), and the American Association of State Highway and Transportation Officials (AASHTO) have designed, developed, and delivered a range of resources designed to help freight planning practitioners and transportation decision-makers better understand the issues and trends affecting freight movements; how those trends affect statewide and local transportation systems and economic development efforts; and how freight interests can be better integrated into existing transportation planning programs. Programs such as the “Talking Freight” Seminar Series, National Highway Institute (NHI) training courses, the FHWA Freight Professional Development Program, and other efforts have helped advance the level of freight knowledge among state

DOT and MPO technical staff and provide them with the resources to better incorporate freight issues within the planning process.

Many states and MPOs have taken advantage of these resources and have begun to conduct successful planning activities and incorporate freight into traditional transportation planning programs and processes, particularly long-range plans. In fact, 84 percent of MPO respondents to a recent FHWA survey reported including freight issues in their most recent long-range transportation plans.<sup>1</sup> There are many examples of MPOs that have embraced freight planning by looking at local freight flow patterns and trends and reaching out to the freight community for advice and guidance on developing freight transportation improvements. Incorporation of freight issues into statewide long-range plans also is common. An analysis of 48 long-range statewide transportation plans revealed that each had addressed freight transportation at some level<sup>2</sup> and many states have begun to build statewide pictures of freight movement and link freight policy and transportation investments more closely to state economic development goals.

But while the inclusion of freight in long-range planning activities has helped raise the profile of freight and emphasize the importance of incorporating freight into statewide and metropolitan transportation planning programs, many state DOTs and MPOs still find it difficult to program, develop, and implement projects that benefit freight movements. Even in states and MPOs where freight is addressed within long-range planning documents, freight issues are not often translated into actual freight improvement projects that appear in Transportation Improvement Programs (TIP) and Statewide Transportation Improvement Programs (STIPs), making it difficult for freight issues to receive equal consideration in the establishment of priorities and the programming of funds. And while there are several resources available to states and MPOs to help them generally incorporate freight issues into their planning activities, there is little specific guidance to assist states and MPOs in effectively translating the general discussions of freight in long-range plans or stand-alone freight studies into actual freight programs and projects that can be programmed, developed, and implemented. Providing guidance on programming, developing, and implementing freight improvement projects within the traditional transportation planning process will allow freight issues to become mainstreamed within that process, allowing states and MPOs to address transportation needs more comprehensively.

This project was designed to provide states and MPOs with techniques to more fully incorporate freight throughout the entire transportation planning and programming process and more effectively plan, develop, program, and implement freight improvement projects. This Final Project Report documents the approach and findings resulting from this project. A separate *Freight Planning and Programming Guidebook* has been produced which organizes the findings and recommendations of the project into a user-oriented

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<sup>1</sup> *Freight Planning at States and MPOs: An Analysis of FHWA Freight Activity Surveys*, FHWA, 2001.

<sup>2</sup> *Evaluation of Statewide Long-Range Transportation Plans*, FHWA and Volpe National Transportation Systems Center, 2002.

guidebook format. The Guidebook also includes the full set of case studies developed as part of the project. The final Freight Planning and Programming Guidebook will be a key resource to freight planning practitioners and other stakeholders, allowing states and MPOs to successfully incorporate freight into existing transportation planning processes and then program and deliver freight projects.

## ■ 1.1 Purpose of This Project

The goal of this project was to develop a guidebook that will assist state DOTs and MPOs integrate freight into their transportation planning and programming processes. The Guidebook focuses specifically on project development and implementation issues that have not been fully explored by other freight planning initiatives conducted to date. These include identification and dissemination of best practices, and development of specific guidance to improve the programming, development, and implementation of freight improvement projects at state DOTs and MPOs. The project had three key objectives:

1. **Identify practices, procedures, and processes** that can be used by state DOTs, MPOs, and other transportation planning agencies to more effectively incorporate freight needs across all modes into the transportation planning and programming process, focusing specifically on programming and delivery of freight improvement projects. These practices, procedures, and processes are practical in nature and were derived from (but not limited to) methods being used today by freight planning practitioners in the field.
2. **Develop a guidebook** based on the identified best practices, procedures, and processes for use by state DOTs, MPOs, and other transportation planning agencies to effectively integrate freight into existing planning, programming, and implementation processes. The best practices cover a wide range of DOT and MPO functions, including funding and financing of freight improvement projects; development of data and tools to identify potential projects and evaluate them for inclusion in a TIP or STIP; and creation of public-private partnerships to facilitate the development, funding, and delivery of freight improvement projects. The best practices presented in the Guidebook are illustrated with case studies wherever possible. The Freight Planning and Programming Guidebook was designed to be used in conjunction with existing freight planning resources previously developed by FHWA and NCHRP. This Guidebook, when used in conjunction with these other resources, will help states and MPOs mainstream freight issues within all elements of a transportation planning program.
3. **Develop an outreach program** to promote the methods and processes for freight planning and programming that were developed and documented in the Guidebook. The marketing plan for the materials made maximum use of conventional means of dissemination (direct mail flyers, presentations at major transportation planning



conferences) as well as more cutting-edge methods (web-based distribution, on-line links to information sources).

## ■ 1.2 Approach

To effectively meet the goals and objectives of this project, a detailed approach was prepared. This approach consists of seven distinct tasks and is the result of extensive coordination with the NCHRP 8-53 Project Panel. This section presents a high-level description of the major activities undertaken as part of this project. A detailed description of the work plan is included as Appendix A

**Task 1 – Review Existing Freight Planning and Programming Activities.** The objective of this task was to review all available literature relating to the freight planning and programming methods of states and MPOs. This literature review specifically focused on the freight programming methods of states and MPOs, including the development of public-private partnerships to identify, fund, and implement freight-specific improvement projects and the development and use of criteria and other tools to evaluate potential freight improvement projects for inclusion in TIPs and STIPs.

**Task 2 – Document Successful Freight Planning and Programming Practices.** The objective of this task was to document successful freight planning and programming practices of states and MPOs by developing detailed case studies based on the findings of Task 1. Interviews with public and private sector stakeholders involved in developing, programming, and implementing freight improvement projects allowed the expansion on information collected as part of the literature review. These interviews provided a better understanding of the challenges faced by states and MPOs in programming freight improvement projects and allowed the project team to identify the critical success factors that could be useful to other states and MPOs in conducting freight planning and programming activities. A list of interviewees is provided in Appendix B and the interview guide is provided in Appendix C.

**Task 3 – Develop Recommended Practices, Processes, and Procedures.** The objective of this task was to develop recommended practices, processes, and procedures to guide freight planning and programming at states and MPOs, focusing on translating the general discussions of freight in long-range plans and other planning documents into actual freight improvement projects that can be developed, programmed, and implemented. The recommendations have been presented in such a way as to allow states and MPOs to mainstream freight issues throughout their transportation planning processes. This task included development of a proposed guidebook framework to incorporate freight issues and projects into traditional transportation planning and programming processes.

**Task 4 – Develop Interim Report.** The objective of this task was to compile the results of the first three tasks into an interim report that documents the best freight planning and programming practices of states and MPOs. This included documentation of existing data

and information, identification of best practices for statewide and metropolitan freight planning and programming, and the development of recommended practices, processes, and procedures.

**Task 5 – Prepare Outreach Plan.** The objective of the outreach effort was to obtain input and feedback from the freight planning community regarding the content, organization, and presentation format of the guidebook. Specifically, the project team sought input on the following topics: the general organizational structure of the guidebook; the validity of the best practices and their applicability to other states and MPOs; and how effectively the information in the Guidebook is presented. The Outreach Plan for the project is provided in Appendix D.

**Task 6 – Conduct Outreach Sessions.** The objective of this task was to conduct outreach activities and obtain input on the format and content of the Guidebook. This input was synthesized and used to finalize the Guidebook as part of Task 7.

**Task 7 – Prepare Final Guidebook.** The objective of this task was to prepare the final Freight Planning and Programming Guidebook in a suitable format for ongoing use by statewide and metropolitan freight planners. The Guidebook provides a “how-to” approach for effective freight planning and programming supplemented with case study examples to demonstrate different approaches that states and MPOs can take to more effectively incorporate freight into transportation planning and programming activities.

## ■ 1.3 Organization of This Report

This Final Project Report provides a summary of the approach and key findings of the research effort. The remaining sections of this report are organized as follows:

- **Section 2.0, Transportation Planning and Programming at States and MPOs** – This section presents an overview of the transportation planning and programming process and identifies the key challenges faced by states and MPOs as they integrate freight within that process.
- **Section 3.0, Summary of Current Practices** – This section describes the approach used to conduct case studies and presents a summary of current freight planning and programming practices of states and MPOs. These practices were used to develop the recommended practices, processes, and procedures described in Section 4.0.
- **Section 4.0, Recommended Practices, Processes, and Procedures** – This section presents recommendations for successful practices, processes, and procedures based on interview results, identified best practices, and team expertise. Recommendations to guide freight planning and programming at states and MPOs are organized around the individual phases of the transportation planning process (i.e., needs identification, plan development, project programming, and project development and

implementation). These practices, processes, and procedures were used to develop the Freight Planning and Programming Guidebook.

- **Section 5.0, Development of the Freight Planning and Programming Guidebook** – This section describes the approach for developing the Freight Planning and Programming Guidebook.
- **Section 6.0, Suggested Topics for Further Research** – This section describes future freight research areas that NCHRP may wish to consider.

## 2.0 Transportation Planning and Programming at States and MPOs

### ■ 2.1 Overview

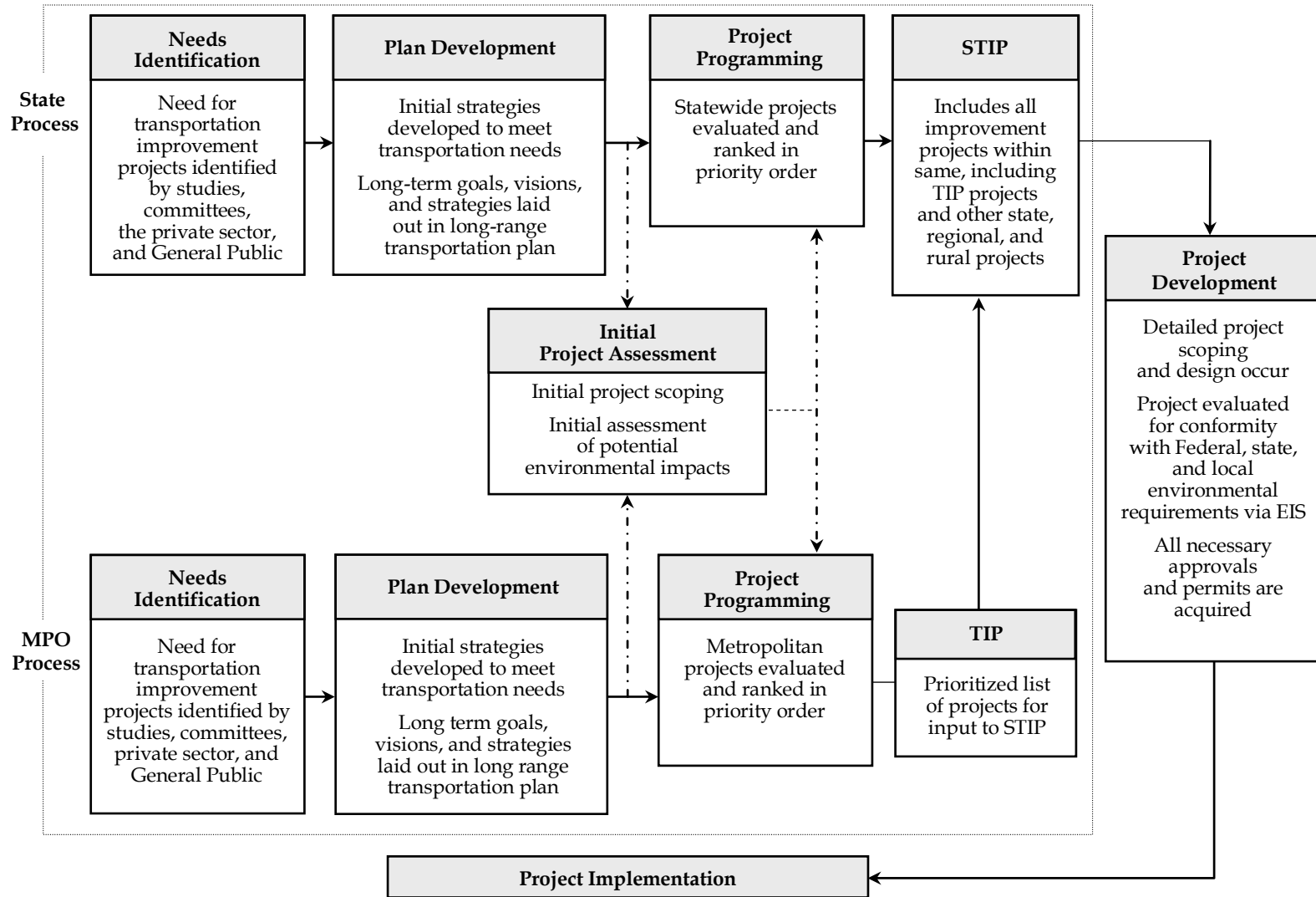
The requirements for statewide and metropolitan transportation planning are described in 23 CFR 450.<sup>1</sup> These regulations give states and MPOs broad responsibility for planning and programming transportation improvement projects, including those projects that benefit freight movements. Because many state and Federally funded transportation improvement projects occur in metropolitan areas, the state and MPO planning processes are highly coordinated.

Every two years, the proposed improvement projects, plans, studies, and other activities expected to occur over the next three to five years are taken from the long-range plan and enter the programming process, which culminates in the development of a Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP). While states and MPOs often have separate procedures for identifying the need for transportation improvement projects and developing long-range strategies to meet those needs, the programming processes of the metropolitan and state projects are intertwined. Each MPO develops and approves a TIP which lists prioritized projects for consideration in the STIP which, in turn, is approved by the Federal Highway and Federal Transit Administrations (FHWA and FTA, respectively). TIPs and STIPs are fiscally constrained, so each project identified on these planning documents must include a cost estimate and an anticipated funding source. To aid in the development of these estimates, many potential projects undergo an initial assessment not only of their scope, but also of their anticipated environmental impacts. Once the STIP is approved by FHWA and FTA, improvement projects can move to the implementation stage, where detailed design and construction activities occur. Though this process may vary slightly among states and MPOs, it normally consists of five major elements described here and in Figure 2.1.

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<sup>1</sup> Code of Federal Regulations, Title 23, Chapter I, Part 450.

**Figure 2.1 The Transportation Planning Process**



- **Needs Identification** - In this phase, a region's transportation needs and deficiencies are identified and described. Once these needs are identified, initial strategies for dealing with those needs can be fleshed out and potential freight improvement projects enter the transportation planning process.
- **Plan Development** - The plan development phase occurs after the transportation needs of an area are identified. The plan development process lays the groundwork for how a state or MPO incorporates freight interests and issues into its planning program. At the conclusion of the plan development stage, the area's transportation vision and goals are described in a long-range transportation plan.
- **Project Programming** - The project programming phase occurs after long-range plan development and is the phase in which states and MPOs begin the process of actually implementing transportation improvement projects through the development of TIPs and STIPs.
- **Project Development** - The project development stage of the transportation planning process includes a more detailed scoping and design of the potential project along with a more formal assessment of the necessary permitting and approval activities.
- **Project Implementation** - After FHWA and state DOT approval of the proposed transportation improvement project is obtained, detailed construction plans are developed, and right-of-way (if necessary) and construction permits are acquired. Finally, a construction contract is let and awarded and work on the project begins.

In order to develop a successful, continuous freight planning program, it is important that freight issues be integrated and brought into the mainstream of the existing transportation planning and programming process used by states and MPOs. Mainstreaming freight into each of the elements of the transportation planning and programming process can help ensure that potential freight projects can be identified and receive equal consideration in the establishment of priorities and the allocation of funds. Understanding the transportation planning process and the challenges faced by states and MPOs as they navigate freight improvement projects through it will be helpful when developing recommended practices, procedures, and processes that will help states and MPOs to more fully identify and address freight issues. The following sections provide a more detailed description to the elements of the transportation planning process described above and the challenges that states and MPOs faced with incorporating freight into that process.

## ■ 2.2 Freight Planning and Programming Challenges

### Needs Identification Overview

The identification of freight needs and deficiencies is a planning activity that identifies gaps between existing freight system conditions and capabilities and the projected freight transportation needs for an area. This is a critical element of a statewide or metropolitan transportation planning program, as it feeds the identification, development, and implementation of improvement projects.

Like most other types of transportation projects, there are a number of different ways in which potential freight improvement projects are identified, formulated, and take shape. Often, the ideas for projects that improve freight movements are identified by statewide or metropolitan freight movement studies or freight profiles. In other cases, the process of identifying freight needs and deficiencies is driven by data collection and analysis and freight stakeholder input. In any case, potential freight improvement projects are typically identified and brought into the transportation planning process by one of three different entities:

1. **MPOs and State DOT Headquarters Planning Offices** – MPOs identify and initiate freight projects in a variety of ways. Some MPOs have dedicated freight planning staff who look for regionally significant freight issues and needs around which to formulate projects. Frequently, regional freight studies or freight profiles are the starting point for the identification of these projects. Some MPOs actively engage the private sector in freight advisory committees or other mechanisms designed to identify regional freight issues and potential projects. MPOs, particularly larger ones, are sometimes able to take a broad regional perspective when identifying potential freight improvement projects. Projects that they identify may involve multiple modes and may be large, regionally significant projects. State DOT headquarters planning offices may play a similar role to MPOs in terms of the identification of freight projects at the state level. As in the case of MPOs, some state DOT planning offices have dedicated freight planning staff who conduct special studies and identify needs. However, freight-planning staff at the headquarters level are often not directly involved in proposing projects for the STIP. Often these freight staff exist at the periphery of the STIP process so their ability to generate ideas that advance to the next stage in the process may be more limited. In addition, state DOTs often have other modal offices, such as rail and aviation offices, that conduct their own planning activities. These offices may have access to special funds (such as grade crossing improvement funds) which are planned and programmed through a process that is completely independent of the planning processes for other modes.
2. **Local Implementing Agencies** – Local agencies, such as the public works departments of cities or counties, actually own and maintain roadways that are not part of the state highway system. Thus, these agencies are often responsible for the implementation of transportation improvement projects. In some cases, local implementing agencies are often the only agencies that are eligible to submit project proposals for consideration

by an MPO. At the state level, state DOT district or regional offices often play an analogous role to local implementing agencies. District offices are generally the offices within state DOTs that are responsible for identifying potential projects and normally play a major role in the programming and implementation of STIP projects. Projects initiated by local implementing agencies tend to be single-mode (generally roadway) and relatively small, with a fairly local focus. With the exception of a few of the larger cities and counties, local implementing agencies tend to view freight projects as ways to mitigate negative impacts rather than promote freight transportation efficiency.

3. **Private Sector Freight Community** – Private businesses, including shippers and transportation providers, also identify and initiate freight improvement projects in some areas. In some cases there are formal mechanisms for doing this, such as state DOT or MPO-sponsored freight advisory committees, and the impetus for creating these mechanisms can come from either the public or the private sector. Individual businesses also generate project ideas that may enter the process via political contacts. There are also cases where private businesses initiate, fund, and construct their own projects and simply deal with public permitting processes.

## Needs Identification Challenges

There are several challenges that states and MPOs face when attempting to incorporate freight issues into the needs identification stage of the transportation planning process.

- **Limited understanding of statewide or regional freight issues.** Development of freight profiles or studies can help states and MPOs better understand freight-related issues and concerns and also be an important cultivator of potential freight improvement projects. However, while many states and MPOs have developed or are developing statewide or regional pictures of freight movements, many are not. In addition, development of freight profiles or studies in some states and MPOs is often ad hoc in nature. As such, these studies are not routinely updated to reflect how logistics patterns or industry growth patterns have evolved in a region and how those changes may have affected (or created) freight needs and deficiencies. Furthermore, many of these ad hoc efforts are not effectively tied into the traditional transportation planning process, making it difficult for any freight needs and deficiencies identified to enter the “traditional” planning and programming pipeline.
- **Restrictive project identification process.** Many states and MPOs have a restrictive process for identifying potential improvement projects for consideration. Many MPOs require that potential TIP or STIP projects come to them from MPO member agencies. The same is true at some state DOTs, which receive many of their project ideas from DOT district offices. In some cases, states and MPOs do not generate many freight-related projects of any kind, acting more as a selector/evaluator of projects submitted by member agencies or DOT districts. As discussed earlier, many MPOs have a difficult time trying to figure out what projects to consider because they do not fully understand how transportation problems impact freight operations. Similarly, while freight movements are addressed in many statewide long-range plans, they are



normally discussions only and have not yet manifested themselves in the form of a systematic approach by which to address freight needs at the state level. As a result, freight issues and projects are often not brought to the table, preventing projects that specifically improve freight movements from being mainstreamed in the planning process. Exacerbating the issue is the fact that the devolution of transportation planning responsibilities to states and MPOs has resulted in a planning process that favors projects that come up from the bottom. MPO boards are normally made up of local elected officials from the implementing agencies and these officials often respond to local political concerns. Many MPOs even provide for a rough allocation of some portion of their Federal highway or transit funds among member jurisdictions. In some states, localities have access to their own funding sources through sales tax revenues. The transportation funds that are awarded to local implementing agencies in response to their local priorities can be a substantial fraction of the total available funding. In addition, while some freight projects are large, multimodal, and multijurisdictional, many are small, local roadway projects that can be implemented relatively quickly. If these types of projects do not come up through the normal needs identification process, then state and regional mobility goals may not be met.

- **Lack of meaningful private sector involvement.** The private sector freight community, as the primary users of the freight transportation system, can be an important resource for identifying freight needs and deficiencies and offering potential freight improvement projects. These stakeholders can also help states and MPOs better understand the regional, statewide, and national significance of local chokepoints (and vice versa). Many states and MPOs have begun to engage the private sector freight community through freight advisory committees or other such groups and these groups have helped these states and MPOs better understand statewide or regional freight issues. In many cases, however, these groups are merely a forum for discussing freight issues and have little formal connection to the needs identification process. As a result, these groups have little influence over the establishment of statewide or regional transportation priorities or the allocation of funds.
- **No clear mandate for freight planning.** SAFETEA-LU emphasizes the consideration by states and MPOs of projects and strategies that “increase the accessibility and mobility options available to people and freight and enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.” However neither this legislation, nor its predecessors, ISTEA and TEA-21, provides specific guidance as to how or to what extent states and MPOs should consider freight interests during the transportation planning process. In addition, while FHWA and others have been providing the tools and resources with which DOTs and MPOs can improve their ability to address freight within their transportation planning programs, there are few clear repercussions for those agencies that have not yet taken an active role in addressing freight issues. As a result, some states and MPOs are uncertain about their role in generating and championing improvement projects that specifically benefit freight movements. This is particularly true for those areas that do not have a firm grasp on how freight movements fit into the national, regional, and local framework of transportation or understand the link

between freight efficiency and economic vitality. In these cases, MPOs often look to states to generate ideas for freight projects, arguing that state DOTs have the proper scope and scale of perspective to understand freight movement. Conversely, state DOTs sometimes look to MPOs to generate freight improvement initiatives, arguing that MPOs are more closely in touch with the freight movement needs of specific industries and that the impacts of national and international freight flow patterns are felt most intensely on local systems. As a result, regional and statewide freight needs sometimes remain unknown and few freight-specific projects are identified.

## **Plan Development Overview**

The plan development phase occurs after the transportation needs of an area are identified. The identification of strategies to address these needs results in a long-term vision for the future of transportation in an area, whether a metropolitan region or the state as a whole. At the conclusion of the plan development stage, the area's transportation vision and goals are described in a long-range transportation plan. This plan covers a 20-year horizon and is normally updated every three to five years.

The long-range planning process lays the groundwork for how states and MPOs incorporate freight interests and issues into their planning programs. There are many different ways that states and MPOs incorporate freight into their long-range transportation planning programs. Some incorporate freight issues into existing long-range transportation plans by adding freight-specific chapters or discussions; others complete stand-alone, integrated multimodal freight plans in order to develop a better understanding of statewide or metropolitan freight movements. Other long-range freight planning techniques include the completion of studies to develop specific policy guidelines for planning analysis, project development, and programming; completion of corridor and gateway studies designed to identify issues along key trade corridors; and the development of economic impact and development studies to determine how freight transportation system performance can affect a state or region's economic competitiveness.

## **Plan Development Challenges**

The development of state and MPO long-range plans is guided by the planning factors described in SAFETEA-LU and its predecessors, ISTEA and TEA-21. While consideration of freight transportation needs is called out in several of these planning factors, states and MPOs have considerable latitude with respect to how freight issues are addressed in their respective long-range plans. While some state and MPO plans include clearly defined freight elements, some do not; and the format of these freight elements is often inconsistent among different states and MPOs. While the incorporation of freight issues within this stage varies from state to state and from MPO to MPO, there are two common challenges that states and MPOs face when attempting to incorporate freight issues into the long-range planning activities:

- **No link to the existing transportation planning process.** One key to an ongoing and successful freight program is to integrate freight issues within an existing and accepted transportation planning program. While many states and MPOs have undertaken freight-specific studies – and many have even identified and deployed freight-specific projects – few have done so within the traditional transportation planning and programming process. Instead, freight planning efforts often are undertaken in parallel with the existing transportation planning process or on an ad hoc basis. That is, the identification, prioritization, development, and implementation of freight improvement projects in many areas is separate from the process used to plan, develop, and implement more “traditional” highway, transit, pedestrian, and bicycle projects. As a result, freight often is not viewed as a normal component of a state or MPO transportation planning program, making it more difficult for potential freight improvement projects to be included in discussions of statewide or regional transportation priorities or to compete for funds and planning resources.
- **Lack of advocates for freight planning.** High-level freight advocates within a state DOT or MPO can help ensure that freight issues are appropriately reflected in the planning and policy guidance provided by a long-range transportation plan and can also help provide resources to accomplish freight planning activities. States and MPOs that have successfully mainstreamed freight issues within their transportation planning process are often those that have developed high-level advocates for freight planning activities. This is often done by clearly articulating the impact that freight has on statewide or regional mobility, quality of life, and economic vitality and competitiveness. However, despite links to economic development and jobs, some state and MPO executives (potential freight advocates) find it difficult to justify spending planning resources on nonhighway planning activities or on activities that are perceived to inordinately benefit the private sector freight community.

## Programming Overview

Despite challenges discussed above, many states and MPOs have incorporated freight into long-range transportation plans. However, even in states and MPOs where freight is addressed within long-range planning documents, freight issues are not often translated into actual freight improvement projects that enter the project programming phase. The project programming phase occurs after long-range plan development and is the phase in which states and MPOs begin the process of actually implementing transportation improvement projects. First, however, proposed projects must appear on a TIP or STIP.

The TIP is a planning document developed by an MPO, which lists all metropolitan projects for which Federal funds are anticipated, along with non-Federally funded projects that increase capacity or are otherwise regionally significant. This latter category allows MPOs to include in their planning documents a variety of different types of freight projects that might not otherwise be addressed formally in the MPO planning process. Once the TIP is developed and approved by the MPO, it is sent to the state DOT. The state DOT is responsible for collecting all the MPO TIPs in the state as well as those transportation improvement projects proposed via other planning vehicles, such as the

statewide long-range transportation plan, and other rural and regional planning documents. The state DOT then assembles all approved projects into the STIP for approval by FHWA and FTA. Like the TIP, the STIP must include all projects within the state for which Federal funds are anticipated, along with non-Federally funded projects that increase capacity or are otherwise regionally significant.

Projects identified in TIPs and STIPs must be consistent with an approved metropolitan or statewide long-range transportation plan. These projects also must have an identified funding source, as TIPs and STIPs are required to be fiscally constrained. Thus, ideas that make it to this stage in the planning process are on their way to actual implementation. Some long-range transportation plans include projects that are considered “lower tier” because their funding sources are less certain; these are often longer-range projects. Because TIPs cover a three to five-year timeframe, they include activities that are nearer term than those in a long-range plan.

## Programming Challenges

While the inclusion of freight in long-range plans has helped raise the profile of freight and emphasize the importance of incorporating freight into statewide and metropolitan transportation planning programs, many state DOTs and MPOs still find it difficult to program, develop, and implement projects that benefit freight movements. There are several reasons why states and MPOs have a difficult time programming freight improvement projects.

- **Limited criteria with which to evaluate freight improvement projects.** Most freight improvement projects are evaluated for inclusion in TIPs and STIPs using the same set of criteria that are used for evaluating nonfreight improvement projects. These criteria typically consider how a proposed project will improve highway volume-to-capacity ratios, highway level-of-service ratings, and safety. Some freight improvement projects receive decent scores for these criteria, but most fail because, for example, a freight connector improvement project typically serves fewer total vehicles than a competing suburban intersection improvement. Often missing are evaluation criteria that reflect the economic and business development benefits of freight improvement projects, such as how they may improve shipping time reliability or the extent to which they may attract or retain businesses and jobs in an area. Some states and MPOs are beginning to consider such criteria during their project evaluation processes, but most do not do so today. The result is that many freight improvement projects never appear on a TIP or are ranked very low.
- **Limited resources for funding freight-specific improvement projects.** States and metropolitan areas commit a large portion of their budgets to the maintenance and preservation of their existing highway systems. In addition, transit, bike, and pedestrian improvement projects often compete for limited transportation funds. This competitive funding environment leaves few resources available to fund freight-specific improvement projects. While highway-related freight improvement projects are usually eligible for funding under Federal and state highway programs,

multimodal and intermodal projects must often be shoehorned into air quality mitigation (e.g., Congestion Mitigation and Air Quality [CMAQ]) or safety programs (e.g., highway-rail grade-crossing separation programs). Rail improvements to private rail terminals and lines are usually not eligible for public support except indirectly through loan credit-support programs. Despite the link to economic development and jobs, states and MPOs often find it difficult to justify spending money on nonhighway projects or projects that are perceived to inordinately benefit the private sector freight community.

- **Difficulty in allocating the costs and benefits of multijurisdictional freight improvement projects.** Freight movements are increasingly national and even global in scope, affecting the transportation systems of multiple MPOs, states, and countries. As such, improvements to one element of the system can have benefits that ripple throughout the supply and distribution chain. When investments in one state or MPO result in benefits to several other states or MPOs, it is often difficult to determine how costs, risks, and benefits should be shared. States and MPOs find it difficult to justify spending money on projects whose costs are local, but whose benefits accrue regionally or nationally. Multijurisdictional coalitions like the I-95 Corridor Coalition have been instrumental in identifying regionally significant transportation improvement projects. However, these organizations find it difficult to actually implement improvement projects, as they often have little controlling authority to address the issues and concerns raised by coalition members or provide funding to projects that may address those concerns. This often prevents such regional improvement projects from moving beyond the planning stage.
- **Some freight improvement projects bypass the TIP or STIP development process altogether.** The long public planning and approval process required to list projects in a TIP or STIP sometimes encourages private sector and other project proponents to look for other ways of acquiring funding or, in some cases, to abandon the project altogether. Freight improvement projects that are funded entirely by the private sector, for instance, are not required to be included in the long-range plan, TIP, or STIP, though they might be regionally significant or have major impacts on the publicly managed system. While some states and MPOs include such freight projects in these planning documents as a way to coordinate the planning and programming of public sector projects that may complement these private sector improvements, many do not. In other cases, political or management priorities allow freight improvement projects to be programmed outside the normal planning and programming process. Sometimes these projects appear on TIPs or STIPs at the expense of other transportation priorities.

## Project Development and Implementation Overview

The project development stage of the transportation planning process includes a more detailed scoping and design of the potential project along with a more formal assessment of the necessary permitting and approval activities. This includes activities such as project studies (e.g., environmental studies), preliminary engineering, design, National

Environmental Policy Act (NEPA) reviews, and any local zoning and land use approvals. If this part of the process is not conducted properly, the result can be significant delays as alternatives are re-reviewed and new stakeholders are brought into the process for the first time. Because large, regionally significant freight projects tend to be jurisdictionally complex and often occur in environmentally sensitive areas, the complexity of coordinating the activities at this stage in the process is heightened.

The final step in the process framework is project implementation. After FHWA and state DOT approval of the proposed transportation improvement project is obtained, detailed construction plans are developed, and right-of-way (if necessary) and construction permits are acquired. Finally, a construction contract is let and awarded and work on the project begins.

## Project Development and Implementation Challenges

There are several challenges that states and MPOs face when developing and implementing freight improvement projects:

- **Some freight projects are located in environmentally sensitive areas.** Many freight improvement projects, particularly those in and around marine ports, are more likely to encounter significant delays and cost increases due to environmental concerns, as ports are often located in environmentally sensitive and air quality nonattainment areas (along waterfronts, in metropolitan areas, etc.). In addition, projects that primarily benefit truck movements also raise noise pollution and hazardous material transport concerns in the affected communities. The potential environmental impacts of these freight improvement projects often lead to more complex, time-consuming, and expensive permitting and environmental impact mitigation requirements.
- **Many freight improvements require elaborate interagency coordination.** Intermodal freight improvement projects are often complex and involve several agencies. Interlocking requirements for coordination, permit approvals, hearings, etc., can significantly expand the time required to plan and implement projects, often driving up the cost of a project significantly. Port projects, in particular, are complex and costly for public agencies. They usually are located in environmentally sensitive waterfront areas; are adjacent to older, often low-income communities; and may generate additional truck or rail trips in air quality nonattainment regions. The problems of managing freight improvement projects in these areas are further complicated by pressures to “reclaim waterfronts” by replacing low-revenue generating developments, such as warehouses and distribution centers, with higher-revenue generating development patterns, such as housing and high-value commercial/industrial land uses. Without effective interagency coordination, freight improvements in such complex areas often stumble and die.
- **Some freight improvement projects bypass the public sector planning and programming process.** As discussed earlier, some freight improvement projects, particularly those identified and initiated by the private sector, may bypass the

identification of needs and development of strategies phase and move directly into the plan development step in the process. When this is the case, it sometimes happens that mitigation activities are identified as conditions to be met prior to the granting of the necessary project approvals and permits; these mitigations may generate new transportation projects or are themselves transportation projects that come back into the transportation planning process for funding and programming.

## 3.0 Summary of Current Practices

### ■ 3.1 Overview

Because freight-related issues, needs, and deficiencies vary considerably from state to state and from region to region, so too do the ways in which states and MPOs plan for, develop, and implement freight improvement projects. In some areas, freight issues arise “from the bottom up” through the normal transportation project identification, programming, and implementation pipeline. This is often the case in states and MPOs that have readily observable freight deficiencies or in areas where freight is a recognized component of the statewide or regional transportation and industry mix. Many of the states and MPOs that fall into this category are those located in close proximity to major freight gateways or along key highway or rail corridors; or those affected by the local air quality and congestion impacts of national and international freight movements. Freight improvement projects in these areas are more easily identified and often have a better chance to compete effectively with other transportation improvements for funding.

Other areas, particularly those not located near major freight facilities or with limited resources to devote to freight planning and programming activities, have a harder time identifying and programming freight improvement projects. In these areas, freight projects often do not develop “from the bottom up” within the traditional planning pipeline. As a result, freight projects are not often identified for consideration and those that are often encounter difficulties competing with other transportation priorities for resources. To combat these issues and to ensure that the transportation planning process addresses the transportation needs of region more comprehensively, some states and MPOs have developed specific, targeted strategies to solicit and identify freight improvement projects and have instated formal methods to evaluate them against other potential improvements. Specific strategies include engaging the private sector freight community to generate freight improvement ideas and developing freight-friendly criteria to evaluate projects for inclusion in a TIP or STIP. In many cases, these strategies have helped states and MPOs identify freight improvement projects for consideration in the planning and programming process and, in some instances, have led to the development and implementation of freight-specific improvements.

There are a range of strategies and approaches employed by states and MPOs to identify, evaluate, program, and implement freight improvement projects. Understanding the particular strengths, weaknesses, and limitations of current freight planning and programming practices can be helpful to other areas interested in implementing and refining their own freight planning initiatives and activities. Interviews with freight planning and programming stakeholders from across the country provided an overview of the freight planning and programming practices already in place today by MPOs and

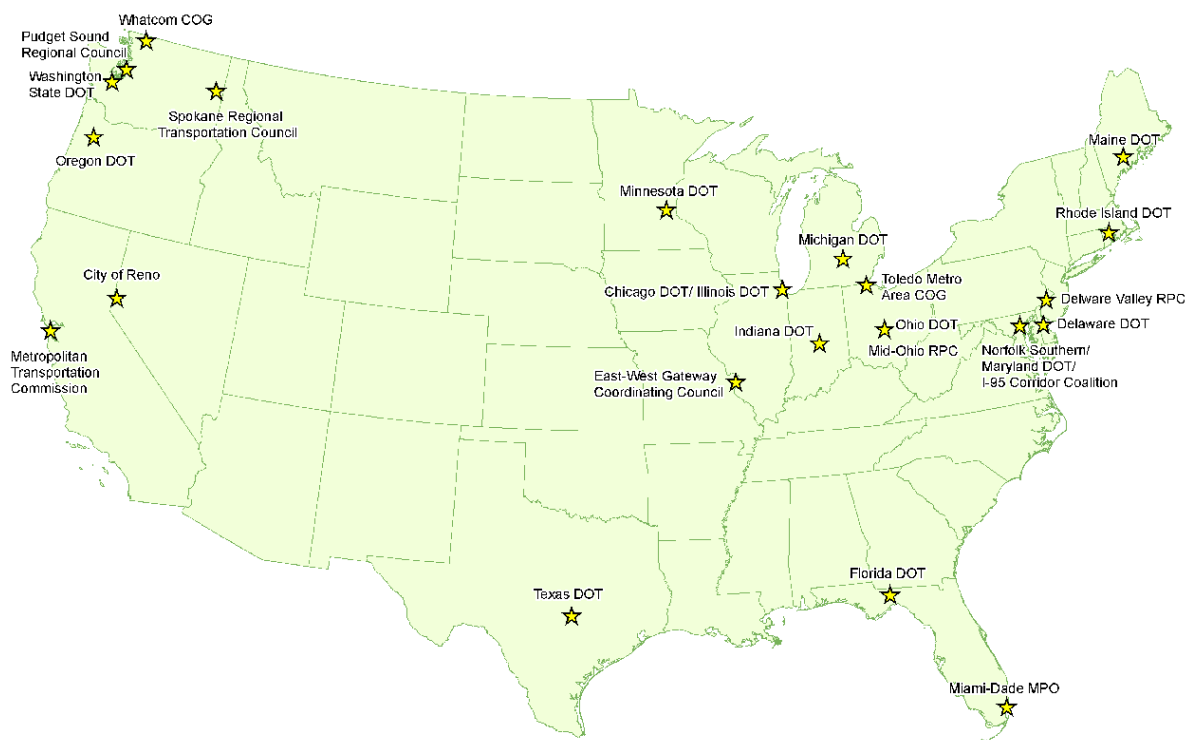


state DOTs and allowed the project team to draw out examples of best practices, which were organized by five key freight planning and programming themes.

## ■ 3.2 Case Study Approach

A detailed literature review was conducted to grasp the range of freight planning activities being conducted by states and MPOs. The literature review helped to identify some of the practices that could be further developed into detailed case studies. The case studies described the methods, processes, and procedures already in use that could benefit other states and MPOs in their freight planning and programming efforts. The literature search specifically focused on the freight programming methods of states and MPOs, including the development of public-private partnerships to identify, fund, and implement freight-specific improvement projects and the development and use of criteria and other tools to evaluate potential freight improvement projects for inclusion in TIPs and STIPs. By combining the results of the literature search, team expertise, and Panel recommendations, 23 state DOTs and MPOs were selected for case studies. The geographic distribution of these case studies is shown in Figure 3.1. The selection of MPOs and state DOTs were based on the following criteria.

- **Success of the Freight Planning Activity** – The focus of this effort was to improve the ability of states and MPOs to identify, program, and implement freight improvement projects. Therefore, the case study examples emphasized freight projects that emerged from the planning and programming process and were successfully on their way to implementation. The project identification, planning, programming, and delivery processes used in these projects was then deconstructed to identify and better describe the key success factors that other states and MPOs may find useful.
- **Potential Applicability to Other States and MPOs** – The freight planning and programming techniques and activities included elements that could be replicated by other states and MPOs. The potential applicability of the lessons learned to a wide range of other states and MPOs was an important criterion considered in the selection of potential case studies.
- **Level of Effort** – Tangible improvements in freight movement result from both small and large initiatives. For this reason, it was important to describe best practices that involved both a low level of effort/cost and a higher level of effort/cost in order to meet the various freight planning and programming needs of and to reflect the resources available to states and MPOs.
- **Geographic Balance** – Freight issues and freight planning and programming activities can vary significantly by place and by region. It was critical for the case studies to be geographically balanced to capture the range of issues confronted by different parts of the country as well as the varied approaches used to implement freight improvements.

**Figure 3.1 Locations of Freight Planning and Programming Case Studies**

The case studies were developed using in-depth information collected during in-person interviews with state DOT and MPO technical staff that detailed their freight planning and programming activities. Discussions focused around five key freight themes, described below.

1. **Effective Use of the Transportation Planning Process** – This theme described how states and MPOs incorporate freight into the transportation planning process, focusing specifically on how these agencies take the general language contained in long-range plans and translate it into actual improvement projects. This theme also focused on how states and MPOs effectively identify freight needs and deficiencies and potential solutions. The following freight planning and programming activities were addressed by the interviews within this theme:
  - How states and MPOs identify freight-specific needs and deficiencies;
  - How states and MPOs identify and develop freight-specific improvement projects; and
  - How institutional strategies and policy guidance can help states and MPOs improve and target freight mobility investment.
2. **Project Selection Processes** – This theme described how states and MPOs evaluate potential freight improvement projects for inclusion within a TIP or STIP, focusing on

the use of freight-specific (or “freight-friendly”) evaluation criteria. The following activities were addressed by the interviews within this theme:

- How freight-specific evaluation criteria or models have been developed and used as part of a TIP/STIP prioritization process; and
- If states and MPOs are using freight-specific improvement programs (e.g., “freight TIPs”).

3. **Use of Analytical Tools and Performance Measures** – This theme described how states and MPOs use analytical tools and methodologies to assess the impacts and benefits of potential freight improvement projects. This theme also discussed how states and MPOs develop and use performance measurement techniques to evaluate the performance and expected performance of projects. The following activities were addressed by the interviews within this theme:

- How states and MPOs use of analytical tools (such as travel demand models and forecasts, quick response/sketch planning tools, etc.) to identify potential needs, deficiencies, or projects;
- How states and MPOs use of data, analytical tools, and methodologies to assess public and private benefits of freight improvement projects and/or estimate the impacts of potential improvements; and
- The types of performance measurement techniques used by states and MPOs and how freight factors into these performance measures.

4. **Innovative Funding and Financing Techniques** – This theme described how states and MPOs use innovative funding and financing techniques for freight improvement projects. The following activities were addressed by the interviews within this theme:

- How states and MPOs use of traditional funding programs and sources to fund freight planning activities and freight improvements;
- How states and MPOs use of innovative funding programs and sources to fund freight planning activities and freight improvements;
- How public-private funding partnerships and agreements are developed; and
- If tolls, truck only lanes, or other innovative freight financing/improvement strategies are being used by states and MPOs to finance freight improvements.

5. **Partnerships** – This theme described how states and MPOs develop partnerships with other DOTs and MPOs, with other public agencies, and with the private sector freight community to identify, plan, develop, fund, and implement freight improvement projects. The following activities were addressed by the interviews within this theme:

- The level of involvement of the private sector freight community in the planning and project selection process of states and MPOs;

- The level of involvement of economic development agencies or chambers of commerce in planning and project selection; and
- How states and MPOs develop partnerships with their counterparts in other agencies to identify regional freight issues and develop potential solutions.

Selected case study examples of successful freight planning and programming activities within each of these themes were used to identify the recommended processes, practices, and procedures described in Section 4.0 and, by extension, the guidance provided within the Freight Planning and Programming Guidebook. A complete list of the agencies and personnel interviewed is provided in Appendix B and a copy of the interview guide used to conduct the interviews is provided as Appendix C. A summary of all the case study examples is provided in Table 3.1 and the fully developed case study summaries are provided as a resource within Section 5.0 of the Freight Planning and Programming Guidebook.

**Table 3.1 Summary of Best Practice Case Studies**

<b>Theme</b>	<b>Agency</b>	<b>Project/Process</b>	<b>Key Points</b>
Effective Use of the Planning Process	Delaware Valley Regional Planning Commission	Identifying freight needs	<ul style="list-style-type: none"> <li>• Freight point of contact can be helpful when identifying freight needs and to the success of an entire freight planning program</li> <li>• Important to link freight planning activities to existing planning process</li> </ul>
	Toledo Metropolitan Area Council of Governments	Identifying freight needs	<ul style="list-style-type: none"> <li>• Proactively and consistently reaching out to private sector is critical in identifying freight needs</li> <li>• Letting stakeholders view freight issues first hand can help build advocacy for freight improvements</li> </ul>
	Florida DOT	Strategic Intermodal System	<ul style="list-style-type: none"> <li>• Transportation policies can help dictate how freight needs are identified, prioritized, and funded</li> </ul>
Project Selection Processes	Rhode Island DOT	TIP evaluation and selection process	<ul style="list-style-type: none"> <li>• Allowing an “open” call for projects during TIP development can help encourage submission of freight projects</li> <li>• Providing freight representation on TIP evaluation committee can improve ability to assess benefits and impacts of freight projects</li> <li>• Important to develop freight-friendly criteria and guidance for project evaluators</li> </ul>
	Freight Mobility Strategic Investment Board	Project evaluation and selection process	<ul style="list-style-type: none"> <li>• Providing dedicated funding source can be useful in implementing freight projects while ensuring consistency with statewide and regional goals</li> </ul>
Use of Analytical Tools and Performance Measures	East-West Gateway Coordinating Council	Development of freight performance measures	<ul style="list-style-type: none"> <li>• Important to consider data collection and analysis requirements when selecting freight performance measures</li> </ul>
	Minnesota DOT	Development of freight performance measures	<ul style="list-style-type: none"> <li>• Important to link freight performance measurement activities with existing transportation strategies, policies, and goals</li> </ul>

**Table 3.1 Summary of Best Practice Case Studies (continued)**

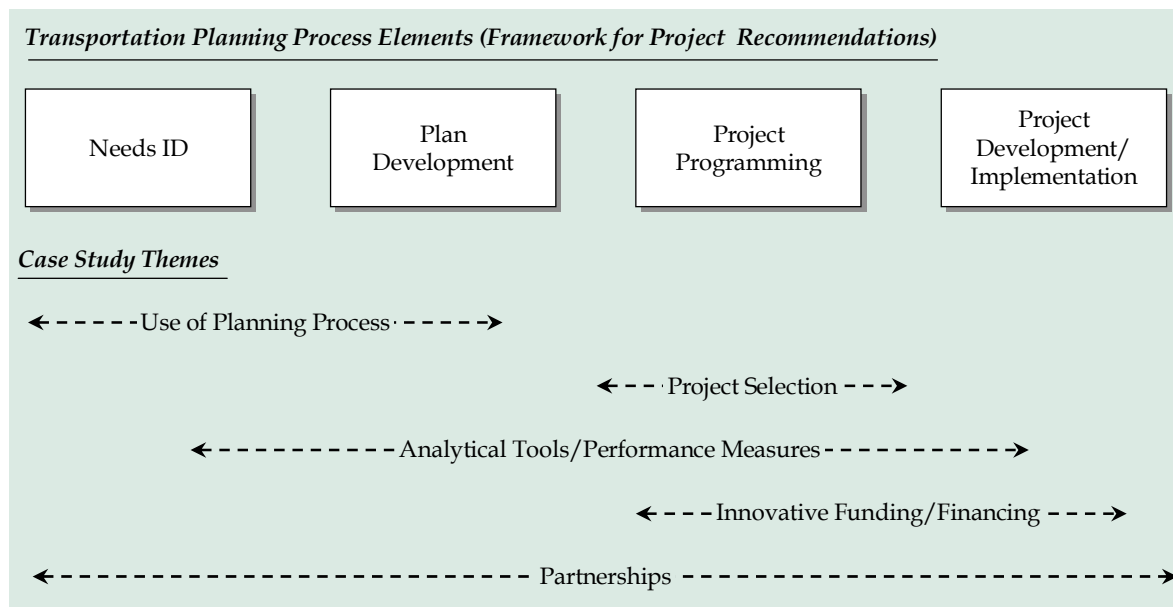
<b>Theme</b>	<b>Agency</b>	<b>Project/Process</b>	<b>Key Points</b>
Innovative Funding and Financing Techniques	City of Reno	Reno Transportation Rail Access Corridor	<ul style="list-style-type: none"> <li>• Important to understand regional stakeholders (and their perspectives) to build advocacy for projects</li> <li>• Focusing on identifying and highlighting public benefits can help build advocacy</li> <li>• Innovative public-private partnerships can facilitate and accelerate project implementation</li> </ul>
	Michigan DOT	Detroit Intermodal Freight Terminal	<ul style="list-style-type: none"> <li>• Engage the private sector community from the very beginning stages of planning and project development</li> <li>• Use MOUs to balance assurances while maintaining flexibility</li> </ul>
	Delaware DOT	Shellpot Bridge Rehabilitation	<ul style="list-style-type: none"> <li>• Important to identify willing private sector partners</li> <li>• Investigate ways to leverage state investments</li> </ul>
	Delaware Valley Regional Planning Commission	Competitive CMAQ program Freight Forward program	<ul style="list-style-type: none"> <li>• Important to develop and utilize alternative funding approaches for freight</li> </ul>
Partnerships	I-95 Corridor Coalition	Mid-Atlantic Rail Operations (MAROps) Study	<ul style="list-style-type: none"> <li>• Important to identify and understand both public and private benefits of freight projects</li> <li>• Neutral forums can help facilitate discussions between public and private sector stakeholders</li> </ul>
	Maine and New Brunswick DOTs	Calais-St. Stephen Area Border Crossing	<ul style="list-style-type: none"> <li>• Important to identify and engage key stakeholders early in the process</li> <li>• Important to understand and define roles of key stakeholders</li> </ul>

## 4.0 Recommended Practices, Processes, and Procedures

Although there is not a single set of guidelines that can meet the unique freight planning and programming needs of each state and MPO, the project team identified several practices, processes, and procedures that are hallmarks of those state DOTs and MPOs that have developed comprehensive and continuous freight planning programs. Understanding these practices, processes, and procedures can help other states and MPOs more effectively integrate freight into their transportation planning and programming processes and more successfully translate the general discussions of freight in long-range plans into actual freight improvement projects that can be programmed and delivered.

Recommendations to guide freight planning and programming at states and MPOs were organized around the individual phases of the transportation planning process described in Section 2.0. Organizing the recommended practices, processes, and procedures in this way helps to illustrate the ways in which freight transportation issues can be integrated and brought into the mainstream of transportation planning so that they receive equal consideration in the establishment of priorities and the programming of funds. Additionally, this structure allows other states and MPOs to more effectively plan, develop, program, and implement freight improvement projects by allowing them to use different mixes of the practices, procedures, and processes to meet their individual needs.

Recommendations were developed based on the interview results, identified best practices, and team expertise. Figure 4.1 describes how the case study themes described in Section 3.0 fit within the elements of the transportation planning process around which the recommendations are organized. In many cases, the recommendations presented here represent steps which were eventually presented in the Freight Planning and Programming Guidebook.

**Figure 4.1 Relationship Between Case Study Themes and Recommendations**

## ■ 4.1 Needs Identification

- Designate a freight point-of-contact.** A freight technical lead should be designated within MPOs and DOTs. This point-of-contact can act as the liaison between various transportation initiatives and between the MPO/DOT and other agencies and stakeholders, ensuring that freight issues are addressed within multiple transportation planning activities. A freight point-of-contact is critically important when dealing with the private sector, as that person often can become the “face” of the organization. In addition, designation of a point of contact helps to demonstrate a commitment to freight planning within an organization and allow the DOT/MPO to build and sustain relationships with the private sector. These relationships are critically important during the needs identification phase of the transportation planning process, as significant private sector outreach is typically required to fully identify and understand freight needs. Finally, and perhaps most importantly, a designated freight point-of-contact understands the MPO or DOT transportation planning process and can facilitate moving potential freight projects forward within the planning and programming pipeline.
- Develop an “open” call for freight improvement projects.** In many areas, potential freight improvement projects are not developed “organically,” particularly in areas that do not have strong relationships with local freight stakeholders. As a result, few freight projects are even identified for consideration within the statewide or metropolitan planning process. Exacerbating this problem is the fact that in many



state DOTs and MPOs, freight improvement projects must be “sponsored” by an MPO member agency or developed in-house by technical staff. This often discourages private-sector freight stakeholders from proposing freight projects during the needs identification phase of the transportation planning process because it forces the private sector to lobby members of the state DOT or MPO in order to ensure that their project proposals are entered into the planning and programming pipeline. This adds an extra layer of work to a process that the private sector already perceives as overly bureaucratic. Some states and MPOs have a more “open” call for potential projects, allowing potential transportation improvement projects to be submitted by any agency, entity, or individual, including state and local governments, the private sector, industry, or the general public. An open call for potential projects often encourages the submission of project ideas by agencies and entities that have not traditionally had a large role in the transportation planning and programming process. Even when proposed projects do not end up on a TIP or STIP, implementing an open call for projects can have two important benefits. First, it can help DOT and MPO staff better understand the freight needs of a region, allowing them to gain a better appreciation of freight’s impacts on their transportation system and allowing them to target policies or programs on freight issues in the future. Second, it allows the private sector freight community and other stakeholders to better understand the public-sector transportation planning and programming process and better understand their role in that process. This can often encourage these stakeholders to stay involved in the process for the longer-haul. This approach works best when DOT or MPO staff are proactive in seeking freight-specific project ideas, as described below.

- **Program interviews with private sector freight stakeholders into annual work programs.** An effective way to better understand freight needs and deficiencies and to begin to build relationships with the private sector freight community is to conduct in-person interviews or listening sessions with key freight stakeholders. States and MPOs should set aside staff time and budget within their annual work programs to ensure that these sessions occur on a regular basis and can feed directly into other statewide and metropolitan transportation planning and programming activities. These sessions, which should focus on identifying specific issues that affect freight operations, are useful ways to identify freight-specific improvements that otherwise would not have been considered in the transportation planning pipeline. Even if projects identified within these sessions never make it to the programming or project development stages, these listening sessions are useful to states and MPOs as they allow technical staff to better understand the transportation needs of key industries in their region and are effective ways to begin to develop a rapport with the private sector freight community.
- **Let freight advocates (and potential advocates) view freight issues first-hand.** One of the keys to moving projects from planning toward implementation is to develop advocates or champions for freight projects. This is true at both the state and metropolitan levels, as freight projects must compete with other transportation priorities for limited funding. Having an advocate that can effectively link freight improvements to broader mobility and economic development goals can often drive freight projects forward. Developing advocates for freight projects is particularly

important at the MPO level, as these agencies often rely on their member governments to actually implement improvements. Site visits with advocates and potential advocates, such as DOT or MPO management, state or local elected officials, chamber of commerce personnel, and others are effective ways to let these potential freight champions witness key freight needs and deficiencies first-hand. As a result, these stakeholders can better understand how freight improvements can benefit overall safety, mobility, and economic competitiveness in the region and can more effectively advocate for freight improvement projects within the planning process or allocate resources to conduct additional freight planning or programming activities.

- **Develop a freight profile or conduct a freight study.** Freight profiles or freight studies are good ways to develop a better understanding the industry, transportation, and socioeconomic characteristics of a state or region and are often effective first steps in assessing the freight transportation needs and deficiencies in a region. Many states and MPOs around the country have completed stand-alone, integrated, or multimodal freight profiles or studies. States and MPOs should conduct these studies in order to develop a more detailed understanding of the regional freight system, the type and volume of freight movements moving along that system, and the key bottlenecks affecting freight efficiency. Most importantly, states and MPOs should link the results of these efforts to the existing transportation planning and programming process by identifying specific freight-related projects or activities that can enter the project planning and programming pipeline, helping to mainstream freight issues within the process.
- **Reach out to chambers of commerce to better understand freight needs.** Chambers of commerce, which represent the interests of local or statewide businesses, have strong relationships with the business and industry community and typically have a deep understanding of how a local or statewide transportation system meets the needs of their members. These organizations also can provide insight into the types of transportation system improvements that would improve their ability to attract or retain key industries. Becoming involved in chamber of commerce activities can be an effective way to understand the transportation needs of the business community and translate those needs into potential projects for consideration in the statewide or metropolitan transportation planning process.
- **Identify freight “hot spots.”** An effective way that states and MPOs can get a better sense of freight needs and deficiencies is to conduct a freight ‘hot spot’ analysis. The purpose of a hot spot analysis is to identify locations, intersections, or grade crossings that may be in need of safety or operational improvements. In many cases, hot spot analyses can be conducted using data already collected by state, metropolitan, or local agencies. Crash data, for example, can be mapped against the freight transportation system in order to identify high-crash intersections for trucks. Intersection studies can then be conducted at these locations to determine how well these intersections meet the needs of freight movements and to identify potential solutions (e.g., turning radii improvements, signal retimings) that would improve the safety and efficiency of these areas. Similarly, grade crossing or highway level-of-service information can be used to identify areas that may have other safety, congestion, or operational concerns.

Conducting a freight hot spots analysis provides a low-cost way to identify potential freight needs and deficiencies for consideration in the transportation planning and programming process.

- **Develop a freight component to travel demand models.** Most states and MPOs have developed or have access to a travel demand model. In many cases, trucks are included. In some cases, trucks are included as part of non-home-based work trips and are assigned under the same assumptions of all non-home-based work trips. In other cases, truck trips are estimated as a percentage of overall traffic movements. Truck trips have different trip characteristics than private autos. States and MPOs that rely on their travel demand models to identify potential issues for consideration in the planning and programming process should develop a truck-specific component that is developed with freight-specific characteristics, and then is integrated into the overall assignment. This type of effort may require resources that are beyond the reach of some MPOs. In such cases, these MPOs should work with their DOTs to develop truck components to regional models. Many DOTs, including Virginia, Wisconsin, and others, work closely with their MPOs to support freight modeling efforts.
- **Participate in multijurisdictional coalitions.** Freight movements are increasingly national and global in scope, but their impacts are felt more locally on statewide and metropolitan MPO transportation systems. As a result, regionalism is an important concept that must be recognized in order to effectively identify freight needs and deficiencies. In many cases, freight-related needs and deficiencies in one jurisdiction can have significant impacts on the safety, reliability, and mobility of freight movements in an entirely different region. For that reason, it is critical that states and MPOs understand regional transportation issues and their associated statewide and local impacts. Regional coalitions, such as the I-95 Corridor Coalition, the Eastern Border Transportation Coalition, the Gary-Chicago-Milwaukee Corridor, the West Coast Corridor Coalition, and other groups provide effective forums for states and MPOs discuss transportation issues that transcend jurisdictional boundaries. In addition to allowing state and MPO staff to better understand regional transportation issues, these groups also provide opportunities to exchange ideas and share lessons learned among peers.
- **Assess data needs and develop an ongoing data collection program.** Many states and MPOs are frustrated with the adequacy of freight-related data: publicly available data are often not provided at a sufficient level of detail to support statewide or metropolitan freight planning and the private sector freight industry is often hesitant to share their data, particularly when it is unclear how it will be utilized by public agencies. However, good freight planning and programming often starts with good freight data and it is important to collect and analyze freight-related data in support of the identification of needs and deficiencies. Before undertaking data collection activities, it is important for states and MPOs to assess their freight data needs. Some states and MPOs may find that existing data from Federal sources (e.g., Commodity Flow Survey, STB Carload Waybill Sample, Army Corps of Engineers Ports and Waterways data); or state sources (e.g., truck counts, land-use data, agricultural shipment data) are sufficient to meet their needs. Others may determine that a more

detailed data collection program is required. A critical first step for all states and MPOs in developing a data collection program is to identify their data needs and match those needs up against available data to identify data gaps and potential data collection opportunities to guide future freight planning activities. Once data needs are understood, an ongoing data collection program should be developed. Data collection activities take many forms. Some states and MPOs collect and synthesize data from public sources and supplement it with data taken from surveys or interviews with private sector freight stakeholders. Others purchase commodity, vehicle flow, or econometric data from private sources on a routine basis. Still others use origin/destination intercept surveys, mail out surveys, or truck trip diaries. No matter the type of data that are necessary to support the identification of needs and deficiencies, it is critical that a routine freight data collection program based on the available data as well as new opportunities identified through a data needs analysis be developed.

- **Learn about freight transportation.** There are many opportunities for states and MPOs to learn about freight transportation; its impacts on local transportation systems; and how other agencies have identified and addressed freight issues. In addition to the formal freight planning and modeling courses available from the National Highway Institute (NHI), there are several programs available from FHWA to assist states and MPOs in incorporating freight into their planning programs. These include the FHWA’s Freight Peer to Peer program; the FHWA “Talking Freight” seminar series; and technical assistance available from the FHWA Resource Centers. In addition, there are many industry publications and events that state and MPO staff can take advantage of to learn about industry trends and how they may affect local transportation systems.

## ■ 4.2 Plan Development

- **Proactively reach out to private sector freight community during the long-range planning process.** The long-range planning process provides states and MPOs with the opportunity to engage the private sector freight community in the development of goals and objectives to meet specific transportation needs. Although it sounds pedestrian, setting freight-specific goals and objectives is an important step in mainstreaming freight within the transportation planning process, as it sets the tone for how a DOT or MPO will allocate staff and financial resources to address freight mobility needs. Engaging the private sector in the goal-setting process of a long-range plan has two important benefits. First, it allows state DOT and MPO staff to better understand trends and issues affecting the statewide and metropolitan transportation systems from a freight perspective, helping them to craft goals, objectives, strategies, and policies that meet comprehensive transportation and mobility needs. Second, it can help the private sector freight community better understand the public-sector planning process and provide them a voice in the development of transportation priorities and the allocation of resources. Because traditional public outreach efforts,

such as public hearings or meetings, often do not attract significant numbers of private sector stakeholders, it is important that DOTs and MPOs develop specific outreach strategies to hear from this segment of the community. Examples of freight-specific outreach strategies include mail-out surveys or interviews with the private sector freight community; focus groups with key constituencies (e.g., shippers, carriers, manufacturers, business owners); or the establishment of freight advisory committees or other such groups to provide input to the long-range planning process. DOT and MPO staff should also engage the private sector freight community “on their turf” by attending key private sector events, such as meetings of statewide or local motor carrier associations, shipper associations, shortline rail associations, traffic/transportation clubs or other groups, and offering to provide updates on the long-range planning process and how freight stakeholders can provide input.

- **Identify key freight corridors or facilities of statewide or regional significance within long-range planning documents.** Another way to more effectively link long-range goals with nearer-term actions is to define key freight corridors and facilities that contribute to statewide or regional economic competitiveness, mobility, or quality of life. Identifying key freight corridors and facilities within a long-range planning document can have several important benefits. First, it can provide structure and focus to a freight planning program, particularly at a statewide level, by allowing states and MPOs to focus potential investments on those corridors and facilities that have the greatest impact on economic competitiveness, mobility, or quality of life. While specific projects need not be identified, defining key freight corridors and outlining specific objectives for those corridors (e.g., improve access to port/intermodal facilities, implement ITS technologies to improve flow, improve access to highway facilities to spur economic development) can improve the ability of states and MPOs to identify freight-specific projects and help ensure that those projects are consistent with statewide or regional goals. Second, it can provide statewide continuity for individual corridor plans developed by MPOs or other planning partners. Finally, identifying key freight corridors and facilities can help emphasize freight’s importance to regional economies and regional mobility, both within a state and among different states and jurisdictions. This information, in turn, can be used to develop advocates or champions for freight planning and project development within agencies and among other constituencies, helping to propel statewide or metropolitan freight planning efforts.
- **Develop an implementation strategy for the long-range plan.** While freight issues are often addressed generally in statewide or metropolitan long-range plans, many states and MPOs struggle with how to link the broad goals and objectives defined in long-range plans, which are often developed on a 20- to 25-year horizon, with the specific activities defined in their work programs, which are often developed on a much shorter time horizon. An implementation strategy can be an effective link between these two documents by more precisely defining the key actions, strategies, activities, or projects that are necessary in the short-term to meet the freight-related goals and objectives defined for the long-term. In addition to being useful in guiding resource allocations, measuring performance, and ensuring that day-to-day activities are consistent with the goals and policies set out in the long-range plan, an

implementation strategy document can be an effective way to translate freight-related goals into freight-related actions.

- **Use freight profiles and studies to drive projects.** Even in areas where there are not yet high-level advocates for freight planning or freight improvements, planning studies, such as freight plans, regional profiles, corridor studies, or other activities, can be good vehicles for building freight advocates within and outside a transportation planning organization. This is because these planning activities can be excellent sources to identify and describe potential freight issues (and their impacts), reach out to the private sector freight community (including industry), and identify potential solutions to issues. Many states and DOTs conduct planning activities with little or no follow up. For example, freight profiles or studies may result in a better understanding of freight needs and deficiencies, but those needs and deficiencies are not translated into projects. One way that some states and MPOs have combated this is to define specific freight projects within their long-range planning documents. Identifying specific projects that can help meet the broad goals and objectives often found in these documents is an effective way to keep freight issues in the mainstream and show how freight improvements link back to overall mobility, safety, and efficiency goals of DOTs and MPOs. Those DOTs and MPOs that have successfully developed and implemented freight improvement projects are often those that have taken the results of freight planning studies and driven them forward toward implementation in this way.
- **Develop freight performance measures that link to existing planning documents.** Development of freight performance measures can help state DOTs and MPOs evaluate how well they are meeting transportation goals and objectives. Freight performance measures also can be used to more effectively target investments to address identified freight performance issues by helping DOTs and MPOs monitor the performance of the statewide and metropolitan transportation systems to identify key problem areas. Just as important as identifying key performance measures freight is the ability to mainstream these performance measures into existing transportation planning and programming processes. Linking freight data collection and performance measurement to existing processes can help ensure that freight issues become mainstreamed within an MPO or DOT and allow freight projects to compete more effectively in the regional prioritization and funding processes. States and MPOs have developed a range of techniques to effectively link freight performance measurement with existing processes. Some states and MPOs develop freight “report cards” that help measure progress toward key freight-related goals and objectives included in the long-range plan. Others specifically link freight performance measures with policy statements, goals, and strategies outlined in long-range transportation plans. Linking freight performance measures to existing planning activities and documents helps to more fully integrate freight into statewide and metropolitan transportation planning and programming processes.

## ■ 4.3 Project Programming

- **Include freight representation on project evaluation committees.** The private sector freight community can provide the background, training, and expertise necessary to address freight in statewide and metropolitan planning processes. Private sector participation is important in all phases of the transportation planning process, and is particularly important in the programming process where potential projects are evaluated for inclusion on a TIP or STIP. States and MPOs should include private sector freight representation, such as industry associations, economic development corporations, or shippers and carriers on project evaluation committees because these stakeholders are often able to more effectively articulate the potential public benefits of freight transportation investments, such as how freight-specific projects could improve economic development and competitiveness, safety and security, and overall mobility. In addition, engaging the private sector in this way promotes a sense of fairness and openness to the TIP/STIP development process and can encourage the private sector freight community to stay engaged in the transportation planning process for the long-haul.
- **Develop freight-friendly, quantifiable criteria and guidance for project evaluation.** Many states and MPOs do not use evaluation criteria that reflect potential economic and business development benefits of freight improvement projects. As a result that many freight projects never appear on a TIP/STIP or are ranked very low. So that freight projects can be given fair consideration in the project evaluation process, project evaluation criteria that give more recognition of and emphasis to freight projects should be developed. Some states have developed quantifiable criteria in categories such mobility, economic development impacts, safety/security, and other “freight-friendly” areas. Just as important as developing criteria that reflect the potential benefits of freight-specific improvement projects is the development of guidance to assist in the application of those criteria. Developing concrete guidance to assist project evaluators in the assessment and ranking of projects can help eliminate bias and ensure that all potential projects are treated equally within the evaluation process.
- **Refocus approach to setting transportation priorities.** Many of the processes and procedures used by states and MPOs were developed to evaluate and prioritize highway improvements. This is one reason why freight improvement projects – particularly nonhighway improvements – often have difficult time successfully navigating the planning and programming process and appearing on TIPs and STIPs. Setting priorities for nonhighway improvement projects often involves making modal tradeoffs, e.g., justifying why investing in a freight rail project may be a better use of public resources than improving highway capacity. Some states and MPOs have begun to refocus their approach to setting transportation priorities in order to more effectively evaluate modal tradeoffs. Table 4.1 describes how Florida DOT’s approach has evolved. Other states and MPOs also should refocus their approach to setting transportation priorities, as this would allow them to better assess multimodal

tradeoffs and understand how freight improvements can link directly to existing mobility, environmental, and economic goals.

**Table 4.1 Evolution of Florida DOT Approach to Setting Transportation Priorities**

From...	To...
Individual modes and facilities	Complete end-to-end trip
Individual jurisdictions	Economic regions and trade corridors
Capacity and throughput	Reliability and bottlenecks
Travel time and vehicle operating costs	Business logistics and economic competitiveness
Reacting to economic growth and community/ environmental impacts	Proactive planning for economic, environmental, and community goals

- Review existing TIP/STIP to identify freight projects.** In many cases, states and MPOs are already addressing freight movements within their transportation planning programs, albeit indirectly. States and MPOs should review their existing transportation planning documents, particularly their most recent TIPs and STIPs, to evaluate their “freight friendliness” and highlight projects that promote goods movement and economic development efforts. Some states and MPOs, particularly those that are impacted by a high-level of truck movements, may find that their existing improvement programs are already benefiting freight movements. States and MPOs also should consider adding a freight section to the TIP/STIP to specifically identify and highlight those projects that have freight benefits. Understanding how an existing transportation improvement program benefits freight movements can help build credibility with the private sector freight industry and encourage them to identify other, more freight-focused, improvement projects for consideration in the future.
- Build advocacy among key decision-makers by focusing on benefits.** One of the keys to the getting freight projects from the planning stage to the programming and implementation stages is to build advocacy for freight-specific projects among key regional decision-makers, including DOT/MPO management, industry and business leaders, local citizens, and statewide or local elected officials. One of the most effective ways to build advocacy among these groups is to effectively describing describe potential benefits of proposed projects. A critical first step in describing benefits is to understand who the potential advocates for a project are and how they would share in the benefits of the proposed improvement. Clearly, different stakeholders have different focus areas: business and industry tend to be primarily concerned with how a proposed improvement would affect economic competitiveness and growth; local citizens and elected officials tend to be more concerned with the traffic, air quality,



noise, and public safety impacts; and DOT and MPO management are often most concerned with maximizing scarce resources and ensuring that regional or statewide mobility goals are met. By understanding the players involved and their interests, states and MPOs can more effectively describe how the benefits of potential freight improvements could accrue to each of these individual stakeholders. Building advocacy among these key constituencies – more so than project evaluation criteria/guidance, innovative funding/financing techniques, and prioritization processes – is critical to moving freight-specific projects forward. If key decision-makers understand the potential public benefits of a project and buy-in to those benefits, it will have a much easier time moving from planning to programming to implementation. Additionally, being able to effectively describe benefits and how they would accrue to different groups can help open the door to discussing how costs could be shared.

- **Identify opportunities for innovative public/private partnerships.** There are many examples of states and MPOs that have used innovative funding and financing tools and techniques and/or public-private partnerships to effectively leverage Federal and state funding sources for large freight improvement projects. Examples include the Alameda Corridor project, the Freight Action Strategy Team (FAST) set of projects, and the Reno Transportation Rail Access Corridor, among others. Bringing private sector funding to the table is important during the project programming phase as potential projects that have nonpublic funding attached to them are normally looked upon more favorably during the project evaluation process than those that do not. In addition to the “traditional” public-private partnership arrangement, whereby the public and private sectors contribute funds toward the completion of a freight improvement project, states and MPOs should also identify opportunities for more innovative arrangements with private sector stakeholders. Innovative arrangements are those that make freight improvement projects more attractive to the public sector in the absence of direct contributions of cash by private sector stakeholders. Examples include lease-back arrangements, through which the private sector donates property to a state or local government and then leases it back for a given period of time (thereby providing a steady stream of income to the state/locality); donation of air rights over completed freight facilities, which the state or local government can then turn into revenue by leasing to a third party; or innovative pay-back arrangements for up-front capital, such as the use of tolls to pay back an initial investment. These innovative public-private partnerships can be a win-win for the public and private sectors, as they can effectively leverage public sector investments while minimizing up-front capital expenditures by the private sector freight community.
- **Develop and utilize alternative funding programs for freight projects.** Getting to projects is where many of the most successful freight planning programs have built their credibility and created the momentum to move forward. However, as described earlier, many states and MPOs have a hard time funding freight improvement projects within the traditional planning and programming process, as deserving and necessary freight improvements have to compete with other deserving and necessary nonfreight transportation improvements for limited funding. Several states and MPOs have recognized that there are alternative funding approaches that work for freight improvements and that can be used to implement freight improvements outside of or

in concert with the traditional process. Examples include the Congestion Mitigation and Air Quality (CMAQ) program, which has been used successfully in nonattainment areas to make freight improvements; small-capital improvement programs, which link the maintenance and operations budgets of local governments (in the case of an MPO) or district offices (in the case of a state DOT) to make short-term improvements, such as traffic signal retimings, pothole repairs, or installation of directional signage to improve freight flows; and state-specific funding programs, such as rail access programs, harbor improvement programs, or multimodal improvement programs that target investments on specific types of freight projects or facilities. Developing and utilizing these kinds of innovative programs together with traditional ones is one way to move freight improvement projects forward and maintain momentum for a freight planning program.

## ■ 4.4 Project Development and Implementation

- **Balance public and private requirements and needs during project development.** It is critically important to balance the needs and requirements of both the public and private sectors during the project development phase, as an effective partnership depends on both parties feeling comfortable with what they are getting out of the arrangement. The most effective way to balance public and private needs and requirements is to develop and maintain continuous relationships with the private sector freight participants. Cultivating and maintaining these relationships on a day-to-day basis can help ensure that finished projects meet the transportation and logistics needs of industry while simultaneously meeting the economic development, air quality, and community livability needs of the public sector. An example of how to effectively balance public and private needs and requirements during the project development phase is provided by the development of the Detroit Intermodal Freight Terminal (DIFT). The Michigan DOT worked closely with other public and private DIFT stakeholders to better understand the public and private benefits of consolidating intermodal operations in the region and to recognize and address the needs and requirements of both the public and private sectors. For instance, both the public and private sector DIFT stakeholders recognized the potential public benefits of DIFT-related rail improvements in the forms of jobs created or retained, improved rail service to industrial customers, or reduction in traffic congestion and were willing to discuss cost-splitting of these improvements. This forum also allowed the private sector DIFT stakeholders to better understand potential public issues and concerns. For instance, maintaining and improving air quality is a major concern of the public sector DIFT stakeholders and many public sector DIFT stakeholders pushed for on-terminal paving to be included within the DIFT improvement package (something the railroads may not have accomplished had they managed the project without public sector involvement). Through the effective private sector relationships developed and sustained by the DOT, appropriate cost-sharing strategies were identified and discussed before they became “show-stoppers.” Engaging the private sector freight

community when raising and addressing these concerns in the project development process allowed the project to move forward more effectively.

- **Identify key points of contact to facilitate interagency coordination.** There are a variety of activities that occur once a freight improvement project moves into the project development and implementation stage, including more detailed scoping and design, a more formal assessment of the potential environmental impacts, and activities associated with the acquisition of required permits and approvals. Given the number of agencies that can become involved in these processes, coordinating the activities during the project development and implementation process is a challenge often faced by state DOTs and MPOs. It is important that states and MPOs coordinating these activities first identify the agencies and entities involved and then identify a primary and a secondary point-of-contact for project-related matters. This can help ensure close coordination and regular exchange of information that can facilitate the design, environmental studies and compliance, and permitting activities associated with the project.
- **Clearly define roles and use MOUs to balance assurances while reserving flexibility.** As described earlier, traditional and innovative public-private partnerships are good ways to effectively leverage Federal and state funding sources for freight improvement projects. However, one of the principal challenges associated with public-private partnerships is that they can take years to develop and bear fruit. This can lead to two issues. First, both the public and private sector participants can become concerned that the personnel that originally developed the partnership will not be around in 10 or 20 years when the arrangement may be ready to come to fruition often through the construction of a freight improvement. This is particularly true for large freight infrastructure projects, which tend to have long planning and programming horizons and involve many different types of agencies and entities in both the public and private sectors. Second, many private sector participants or potential participants are hesitant to commit to specific funding shares or amounts over a 10- or 20-year horizon, given the volatility often associated with the private sector freight industry. A memorandum of understanding (MOU) provides an effective vehicle through which to formally define the roles of each agency or partner within a public-private or public-public partnership and can help ensure freight projects continue to move forward toward implementation. The most effective MOUs are those that balance stability with flexibility. Stability is provided by documenting partnership arrangements and defining the role of each agency in the partnership. This can help preserve organizational memory and ensure that the partnership arrangement can withstand changes in personnel at the participating agencies and entities. Flexibility is provided by defining a framework for cost-sharing of improvements without ascribing individual shares among participants. This can help ensure that all parties will participate in providing funding while allowing for potential changes in the ability of individual participants to share in the costs due to market forces or other reasons. This also helps ensure that no one party, whether it be from the public or private sector, is left “holding the bag” if another party attempts to back out.

# 5.0 Development of the Freight Planning and Programming Guidebook

The literature review, interviews, case studies, and best practices, combined with the project team’s experience in developing other guidebooks and freight planning-related resources, led to the development of several principles that were used to steer the development of the Freight Planning and Programming Guidebook. These guiding principles, along with an overview of the Freight Planning and Programming Guidebook structure and content, are provided in the following sections.

## ■ 5.1 Guiding Principles for Guidebook Development

As discussed above, the following principles were developed from the literature review, interviews, case studies, and best practices. Keeping these principles in mind during the development of the Freight Planning and Programming Guidebook helped to ensure that the final product can be a practical resource to state DOT and MPO freight planning practitioners.

### *Guiding Principle No. 1: Understand the Target Audience*

When developing a guidebook – or any freight planning resource – it is critical to understand who will be using it and, by extension, how it will be used. Understanding the target audience for this Freight Planning and Programming Guidebook allowed us to develop its framework and content appropriately and in a way that meets the needs of its intended users. The final Freight Planning and Programming Guidebook is targeted at transportation planners at state DOTs, MPOs, or other agencies who are trying to more effectively mainstream freight issues within existing transportation planning and programming activities. This target audience includes agencies and staff that are new to freight planning, and need guidance in identifying freight needs and deficiencies for inclusion in the transportation planning and programming pipeline; as well as those that already have conducted significant freight planning activities and are looking for methods to more effectively link long-range plans or freight plans and studies with actual projects that can be programmed, developed, and implemented.

### ***Guiding Principle No. 2: Ensure the Guidebook Complements Existing Freight Planning Resources***

FHWA, TRB, NCHRP, AASHTO, and others have designed, developed, and delivered a wide range of resources that have helped advance the level of freight knowledge among state DOT and MPO technical staff. Examples include the Guidebook for Freight Policy, Planning, and Programming in Small- and Mid-Sized Metropolitan Areas (developed as part of NCHRP Project 8-47), FHWA’s “Talking Freight” Seminar Series, National Highway Institute (NHI) freight training courses, and other workshops and seminars provided as part of FHWA’s Freight Professional Development Program. It was critical that the Freight Planning and Programming Guidebook be developed to complement and enhance the information already contained in these resources, allowing users to further the state-of-the-practice in programming and delivering freight improvement projects. Users of this Guidebook are actively directed to other available freight planning and programming resources, where appropriate.

### ***Guiding Principle No. 3: Highlight Both Technical and Partnership/Outreach Activities***

One of the key findings of this research is that both technical proficiency in freight planning activities (e.g., collection and analysis of data, development of criteria and performance measures, assessing project benefits, understanding strengths and limitations of available funding sources) and successful development of partnerships and outreach activities (e.g., establishing relationships with the private sector community, cultivating and using traditional and innovative public-private partnerships) are important components of successful freight planning and programming at states and MPOs. As such, it was important that the Freight Planning and Programming Guidebook provide techniques, processes, and practices in both these subject areas. Providing tools to help DOTs and MPOs improve both their technical competence related to freight and their ability to develop and maintain relationships with key freight stakeholders will allow Guidebook users to more effectively mainstream freight issues within existing transportation planning and programming processes.

### ***Guiding Principle No. 4: Use Case Studies to Provide How-To Examples***

Whether they are starting a freight planning program from scratch, enhancing an existing freight planning program, or looking for guidance on how to conduct a specific freight planning activity, state DOT and MPO freight planning practitioners can benefit tremendously from understanding lessons learned and critical success factors from other agencies that already have undertaken such activities. The project team’s experience working with a wide range of state DOTs, MPOs, and regional coalitions has shown that case study examples are effective ways to demonstrate how freight planning and programming concepts are being used in the field. The techniques, processes, and practices described within the Freight Planning and Programming Guidebook are supported with case study vignettes, where appropriate, in order to provide how-to

examples and to allow freight planning practitioners to learn from the experiences of others.

***Guiding Principle No. 5: Organize the Guidebook So That It Is Useful to Both Novice and Advanced Freight Planning Practitioners***

Freight planning activities differ from state to state and from region to region. Some states and MPOs, motivated by the impacts of a key freight facility (e.g., port, airport, or intermodal terminal), a galvanizing issue (e.g., construction of a new border crossing), or a legislative/political mandate (i.e., completion of a legislatively mandated study) have developed fairly robust freight planning programs and activities. Other states and MPOs, for a variety of reasons, are just beginning to address freight within the transportation planning process or have conducted ad hoc or stand-alone freight planning activities that have not yet been incorporated into day-to-day statewide and metropolitan planning and programming activities. In order to become a meaningful resource to a wide range of state and MPO transportation planning practitioners, the Freight Planning and Programming Guidebook was developed so that it provides useful information and techniques for both novice users and for those users who are for interested in more sophisticated freight planning and programming techniques. The Guidebook was organized so that those that may be new to freight planning can obtain guidance on effectively incorporating freight into existing transportation planning processes from beginning to end; while pointing more advanced users to specific techniques or processes that can be used to enhance existing freight planning and programming activities.

***Guiding Principle No. 6: Highlight Common Stumbling Points and Offer Potential Solutions***

While it is nearly impossible to develop a guidebook that can provide solutions to every possible freight planning and programming obstacle faced by states and MPOs, our research has identified several common stumbling points that affect statewide and metropolitan freight planning and programming activities. Clearly it was important to provide techniques, processes, and practices that can help states and MPOs more effectively incorporate freight issues into existing transportation planning activities within this Guidebook. Nearly as important, though, was to identify the common stumbling points that can hinder the application of these techniques, processes, and practices and to offer potential solutions, as these can help encourage DOT and MPO practitioners to employ these strategies in the field and maintain momentum for new or enhanced freight planning and programming activities.

***Guiding Principle No. 7: Organize Guidebook So That It Helps DOTs and MPOs Mainstream Freight Issues Within Existing Activities***

Those states and MPOs that have developed successful freight planning programs and have planned, programmed, developed, and implemented freight improvement projects are most often those that have effectively mainstreamed freight within existing statewide and metropolitan transportation planning activities. In fact, the success of freight

planning and programming activities is directly linked to the ability to successfully integrate freight issues within existing processes, allowing freight projects to more effectively compete with other statewide and metropolitan transportation needs in the prioritization of projects and the allocation of funds. It was critical that the Freight Planning and Programming Guidebook provide techniques, processes, and practices that allow DOT and MPO practitioners to effectively integrate freight issues within existing transportation planning activities, rather than create new, stand alone freight planning processes.

## ■ 5.2 Guidebook Organization and Content

The Freight Planning and Programming Guidebook was developed so that it is consistent with the guiding principles described above and meets the freight planning and programming needs of its intended audience. The following sections describe the overall framework for how the Freight Planning and Programming Guidebook is structured and organized.

### **Section 1.0 – Introduction**

This section has several objectives. First, it describes the purpose of the guidebook and the factors that helped motivate its development. These factors include Federal surface transportation legislation, which continues to encourage states and MPOs to include freight issues within the transportation planning process; increasing international trade and globalization, which has heightened the importance of a safe, reliable, and secure transportation system; the fact that while many states and MPOs have developed freight planning programs, freight projects still find it difficult to receive equal consideration in the establishment of priorities and the programming of funds; and acknowledgment from private industry that public investments will be considered – and in many cases required – to meet increasing freight demands. This section also describes the target audience for and the overall organization of the Guidebook.

#### *Associated Guiding Principles*

- Guiding Principle No. 1: Understand the target audience.

### **Sections 2.0 and 3.0 – Setting the Stage/Use of the Guidebook**

These two sections have several objectives. First, they provide an overview of the transportation planning and programming process (a streamlined version of what is described in Section 2.0 of this Project Report) and describe the importance of mainstreaming freight within that process. This helps users target the types of activities

they may wish to focus on in Section 4.0 (described below). Second, these sections provide general guidance on freight issues that transcend the entire transportation planning and programming process. These are practices or procedures that our research has shown to be critical to successful freight planning and programming and often affect more than one step in the process. Examples include designating a freight technical (lead to take ownership of freight program development and implementation) and developing relationships with the private sector freight community (which is a hallmark of all successful statewide and metropolitan freight planning activities).

Finally, these sections describe how to use the Guidebook. The recommended practices described in Section 4.0 of the Guidebook are organized by the individual elements of the transportation planning process (i.e., Needs Identification, Plan Development, Programming, and Project Development/Implementation), but are modular in nature. That is, they are able to be read, understood, and implemented individually or as part of a comprehensive freight planning program. Novice users are encouraged to become familiar with the entire document from the Needs Identification phase to the Project Development/Implementation phase, to help these users understand how freight can be integrated throughout the entire transportation planning and programming process. More advanced users, or those with more developed freight planning programs and activities, are encouraged to pick and choose the individual modules within Section 4.0 that meet their needs and allow them to enhance existing programs.

### *Associated Guiding Principles*

- Guiding Principle No. 5: Organize the guidebook so that it is useful to both novice and advanced freight planning practitioners; and
- Guiding Principle No. 7: Organize guidebook so that it helps DOTs and MPOs mainstream freight issues within existing activities.

## **Section 4.0 – Integrating Freight within the Transportation Planning and Programming Process**

The purpose of this section is to provide recommended techniques, practices, and procedures to allow states and MPOs to better integrate freight issues within existing transportation planning and programming processes. As described above, the recommended practices described in this section are organized around the individual phases of the transportation planning process. Organizing recommended techniques, practices, and procedures in this way illustrates the ways in which freight transportation issues can be integrated and brought into the mainstream of transportation planning so that they receive equal consideration in the establishment of priorities and the programming of funds.

Several recommended techniques, practices, and procedures are provided for each phase of the transportation planning and programming process, organized as follows:



- **Recommended Technique, Practice, or Procedure** – This section describes the recommended technique, practice, or procedure, providing detail on its importance and on the steps necessary to carry out or administer the activity.
- **Case Study Example** – As described earlier, case study examples are effective ways to demonstrate how freight planning and programming concepts are being used in the field and can be tremendously useful to guidebook users. The techniques, processes, and practices described within the Freight Planning and Programming Guidebook are supported with case study vignettes from actual practices of states and MPOs, where appropriate.
- **Key Data, Training, and Other Resources** – Many recommended techniques, practices, or procedures have specific data or training needs associated with them. In addition, there are several other freight planning-related resources, including guidebooks and other references developed by FHWA, NCHRP, and others, that will be useful to users of this Freight Planning and Programming Guidebook. For each recommended technique, practice, or procedure, the key data sources, training resources, and other appropriate freight-related resources are listed and users are referred to the Freight Resource Tool Box (Section 5.0).
- **Common Stumbling Points and Potential Solutions** – As discussed above, it is important to identify the common stumbling points that can hinder the application of the recommended techniques, processes, and practices. For each recommendation, both common stumbling points and potential solutions are described so that DOT and MPO practitioners can more effectively put the recommendations described in the guidebook to work in the field.

### *Associated Guiding Principles*

- Guiding Principle No. 2: Ensure the guidebook complements existing freight planning resources.
- Guiding Principle No. 3: Highlight both technical and partnership/outreach activities.
- Guiding Principle No. 4: Use case studies to provide how-to examples.
- Guiding Principle No. 6: Highlight common stumbling points and offer potential solutions.

### **Section 5.0 – Freight Resource Tool Box**

The purpose of this section is to provide more detail on the existing freight data, training, and other freight-related resources described within the recommended techniques, practices, and processes provided in Section 4.0 and to provide references for more detailed follow-up by users.

Resource categories include publicly available freight data and analytical tools, freight training resources, links to other transportation planning and programming-related guidebooks, and fully developed best practice case studies. In most cases, full copies of existing resources are not provided. Rather, this section provides descriptions of available and relevant freight resources, an overview of each resource’s applicability to the methods, practices, and techniques described in this Guidebook, and information and/or a link to direct users in obtaining copies.

### *Associated Guiding Principles*

- Guiding Principle No. 2: Ensure the guidebook complements existing freight planning resources.

## 6.0 Suggested Topics for Further Research

The research project turned up two general areas where additional research would have clear value: improving the ability of states and MPOs to quantify the public benefits of multijurisdictional freight investments; and identifying, describing, and disseminating best practices in developing advocates for freight planning efforts.

### ■ 6.1 Tools and Methods for Quantifying Public Benefits of Multijurisdictional Freight Investments

As described earlier, freight movements are increasingly national and even global in scope, affecting the transportation systems of multiple MPOs, states, and countries. As such, improvements to one element of the system can have benefits that ripple throughout the supply and distribution chain. When investments in one state or MPO result in benefits to several other states or MPOs, it is often difficult to determine how costs, risks, and benefits should be shared. Although there are some analytical tools and techniques available, some of which are described in the Freight Planning and Programming Guidebook developed as part of this effort, there is a need to develop and disseminate guidance to state DOTs and MPOs that helps freight planning practitioners effectively utilize these tools across jurisdictional boundaries.

Better understanding and quantifying the potential public benefits of freight investments may allow public sector transportation agencies to target their investments more effectively across the entire transportation system. In addition, it may allow these agencies to allocate transportation resources in proportion with overall system needs and potential benefits.

### ■ 6.2 Developing Advocates for Freight Planning

One of the key findings of this effort was that building advocacy among key transportation decision-makers – more so than project evaluation criteria/guidance, innovative funding/financing techniques, and prioritization processes – is critical to moving freight-specific projects forward. If key decision-makers understand the potential public benefits of a project and buy-in to those benefits, it will have a much easier time

moving from planning to programming to implementation. In addition, being able to effectively describe benefits and how they would accrue to different groups can help open the door to discussing how costs could be shared.

It is critical to help transportation decision-makers, including DOT/MPO management, industry and business leaders, local citizens, and statewide or local elected officials understand the importance of freight transportation as well as the challenges associated with improving the freight system's ability to absorb future growth. An educational effort targeted at high-level transportation decision-makers can help groom high-level advocates within state DOTs, MPOs, and state legislatures for rail planning activities. These advocates, in turn, can help ensure that freight issues are appropriately reflected in transportation planning and policy guidance and also can help provide or allocate staff and funding resources to accomplish planning, programming, and project development activities.

There is a need to identify and disseminate guidance to state DOTs and MPOs on how to effectively develop these freight planning advocates. Through identification and sharing of best practices, sponsorship of peer exchanges, development of targeted workshops, or other strategies, NCHRP, TRB, FHWA, AASHTO, and other entities should assist state DOTs and MPOs in developing these high-level advocates for freight planning and programming activities.

# Appendix A – Research Plan

## ■ Introduction

### Background

In the Intermodal Surface Transportation Efficiency Act (ISTEA, enacted 1991), Congress for the first time explicitly encouraged states and metropolitan planning organizations (MPO) to incorporate freight and goods movement into their transportation planning and programming activities. The Transportation Efficiency Act for the 21<sup>st</sup> Century (TEA-21, enacted 1998) helped further focus Federal, state, and MPO attention on freight issues. Due in part to the freight planning emphasis of ISTEA and TEA-21, state departments of transportation (DOT), MPOs, and local planning agencies have become much more aware of the need to maintain and improve the safety, security, reliability, and productivity of the freight transportation system and to address freight’s impacts on transportation systems, economic development activities, and overall quality of life. Communities, business leaders, economic development agencies, and other stakeholders also are beginning to realize that a region’s freight transportation system, as much as land cost, labor availability, and tax policy, is critical to its economic vitality. This has been particularly apparent over the last decade as the domestic economy has continued to expand and diversify, industries have begun to manage international supply and distribution chains, and the U.S. has continued to compete in a recessive market place.

In response to these and other influences, many states and MPOs have conducted successful freight planning activities and are incorporating freight into traditional transportation planning programs and processes, particularly long-range plans. In fact, 84 percent of MPO survey respondents to a recent Federal Highway Administration (FHWA) survey reported including freight issues in their most recent long-range transportation plans.<sup>1</sup> There are many examples of MPOs that have embraced freight planning by looking at local freight needs and reaching out to the freight community for advice and guidance on developing freight transportation improvements. The Broward County, Florida MPO, for example, recently developed a freight element as part of its 2025 Long-Range Transportation Plan. The MPO conducted personal interviews with freight stakeholders in Broward County, as well as focus groups with representatives from regional shippers/receivers, carriers, and government/interest groups. These outreach activities allowed MPO staff to better understand the freight issues affecting their region’s transportation system and helped them to develop a framework for an ongoing freight

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<sup>1</sup> *Freight Planning at States and MPOs: An Analysis of FHWA Freight Activity Surveys*, FHWA.

transportation planning program. Other MPOs, including those in Indianapolis, New York, Chicago, Columbus, Ohio, and San Francisco have developed similar approaches to addressing regional freight needs.

Incorporation of freight issues into statewide long-range plans is even more common. An analysis of 48 long-range statewide transportation plans revealed that each had addressed freight transportation at some level.<sup>2</sup> Many states have built statewide pictures of freight movement and are beginning to tie freight policy and transportation investments more closely to state economic development goals. The Ohio DOT recently conducted a statewide freight study to develop a clearer picture of existing and future freight movements on its highway corridors; assess freight's impact on the State's roadways; and make recommendations to deal with these demands, while maintaining strong economic growth. The Ohio DOT incorporated many of the results and recommendations of this study into its most recent long-range transportation plan, Access Ohio. The States of Wisconsin, California, Florida, New Jersey, Texas, and others are additional examples of states that have actively incorporated freight issues into their long-range transportation planning activities.

But while the inclusion of freight in long-range plans has helped raise the profile of freight and emphasize the importance of incorporating freight into statewide and metropolitan transportation planning programs, many state DOTs and MPOs still find it difficult to program, develop, and implement projects that benefit freight movements. Even in states and MPOs where freight is addressed within long-range planning documents, freight issues are not often translated into actual freight improvement projects that appear in Transportation Improvement Programs (TIP) and Statewide Transportation Improvement Programs (STIPs).

The experiences of the Cambridge Systematics, Inc. team suggest that there are several reasons why states and MPOs may have a difficult time programming and implementing freight improvement projects.

1. State DOTs and MPOs find it difficult to identify freight improvement projects for inclusion in the planning process. Some states and MPOs do not fully understand how transportation problems affect freight operations, making it difficult to formulate systematic approaches to address freight needs at the state or metropolitan level. As a result, states and MPOs have difficulty translating the general discussions of freight in their long-range plans into projects that can specifically address freight infrastructure and operational problems. In addition, in many state DOTs and MPOs, freight improvement projects must be “sponsored” by an MPO member agency or developed in-house. This discourages private-sector freight stakeholders from proposing freight projects during the needs identification phase of the transportation planning process. This sometimes requires that private sector freight stakeholders lobby members of the state DOT or MPO in order to ensure that freight-specific project proposals are entered

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<sup>2</sup> *Evaluation of Statewide Long-Range Transportation Plans*, FHWA Office of Intermodal and Statewide Planning by the Volpe National Transportation Systems Center.

into the formal planning process, adding an extra layer of work to a process that the private sector freight industry already perceives as overly bureaucratic and inflexible. In other cases, the private sector freight industry is not involved in or does not understand the public sector process for planning, programming, and implementing improvements and is not provided the opportunity to submit project ideas for consideration.

2. Most freight improvement projects are evaluated for inclusion in TIPs and STIPs using the same set of criteria that are used for evaluating nonfreight improvement projects. These criteria typically consider how a proposed project will improve highway volume-to-capacity ratios, highway level-of-service ratings, and safety. Some freight improvement projects receive decent scores for these criteria, but most fail because, for example, a freight connector improvement project typically serves fewer total vehicles than a competing suburban intersection improvement. Missing are evaluation criteria that reflect the economic and business development benefits of freight improvement projects, such as how they may improve shipping-time reliability or the extent to which they may attract or retain businesses and jobs in an area. States and MPOs are beginning to consider such criteria during their project evaluation processes, but most do not do so today. The result is that many freight improvement projects never appear on a TIP or are ranked very low.
3. There are limited resources for funding freight-specific improvement projects. States and metropolitan areas commit a large portion of their budgets to the maintenance and preservation of their existing highway systems. In addition, transit, bike, and pedestrian improvement projects often compete for limited transportation funds. This competitive funding environment leaves few resources available to fund freight-specific improvement projects. While highway-related freight improvement projects are usually eligible for funding under Federal and state highway programs, multimodal and intermodal projects must often be shoehorned into air-quality mitigation (e.g., Congestion Mitigation and Air Quality [CMAQ]) or safety programs (e.g., highway-rail grade-crossing separation programs). Rail improvements to private rail terminals and lines are usually not eligible for public support except indirectly through loan credit-support programs. Despite the link to economic development and jobs, states and MPOs often find it difficult to justify spending money on nonhighway projects or projects that are perceived to inordinately benefit the private sector freight community.
4. States and MPOs find it difficult to initiate and sustain public-private partnerships. The private sector freight community can provide the background, expertise, and resources necessary to address freight issues in statewide and metropolitan planning processes and can assist in the development and implementation of improvements. Major freight improvement projects often involve innovative financing and public-private partnerships that are more complex than those associated with traditional highway improvements. There are several examples of public-private partnerships, including the Alameda Corridor, the Freight Action Strategy Team (FAST), the Chicago Regional Environmental and Transportation Efficiency (CREATE) project, and the Mid-Atlantic Rail Operations (MAROps) study, that have resulted in the

successful planning, development, and implementation of freight improvement projects. These examples illustrate the importance of the private sector's participation in development of a regional or statewide transportation program. However, in practice, many states and MPOs find it difficult to develop and sustain relationships with the private sector freight community that result in the identification and implementation of actual freight improvement projects. Developing and sustaining public-private partnerships is particularly difficult for states and MPOs that have not fully incorporated the private sector freight industry into their transportation planning activities.

5. States and MPOs find it difficult to allocate the costs and benefits of multijurisdictional freight improvement projects. Freight movements are increasingly national and even global in scope, affecting the transportation systems of multiple MPOs, states, and countries. As such, improvements to one element of the system can have benefits that ripple throughout the supply and distribution chain. When investments in one state or MPO result in benefits to several other states or MPOs, it is often difficult to determine how costs, risks, and benefits should be shared. States and MPOs find it difficult to justify spending money on projects whose costs are local, but whose benefits accrue regionally or nationally. Multijurisdictional coalitions like the I-95 Corridor Coalition have been instrumental in identifying regionally significant transportation improvement projects, including the program of regional rail improvements identified in the MAROps study. However, organizations like the I-95 Corridor Coalition find it difficult to actually implement improvement projects, as they often have little controlling authority to address the issues and concerns raised by coalition members<sup>3</sup> or provide funding to projects that may address those concerns. This often prevents such regional improvement projects from moving beyond the planning stage.
6. Some freight improvement projects are delayed in the project development phase of the planning process because of the need for elaborate interagency coordination. Intermodal freight improvement projects are often complex and involve several agencies. Interlocking requirements for coordination, permit approvals, hearings, etc., can significantly expand the time required to plan and implement projects, often driving up the cost of a project significantly. Port projects, in particular, are complex and costly for public agencies. They usually are located in environmentally sensitive waterfront areas; are adjacent to older, often low-income communities; and may generate additional truck or rail trips in air quality nonattainment regions. The problems of managing freight improvement projects in these areas are further complicated by pressures to “reclaim waterfronts” by replacing low-revenue generating developments, such as warehouses and distribution centers, with higher-revenue generating development patterns, such as housing and high-value commercial/industrial land uses. Without effective interagency coordination, freight improvements in such complex areas often stumble and die.

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<sup>3</sup> *Challenges with Multi-State/Jurisdictional Transportation Issues*, FHWA, May, 2001.



The Cambridge Systematics team has worked closely with the National Cooperative Highway Research Program (NCHRP) and the FHWA in the design, development, and delivery of resources to help freight planning practitioners and transportation decision-makers better understand the issues and trends affecting freight movements; how those trends affect statewide and local transportation systems and economic development efforts; and how freight interests can be better integrated into existing transportation planning programs. Several recent and current efforts have helped advance the level of freight knowledge among state DOT and MPO technical staff, including:

- **National Highway Institute (NHI) Course “Integrating Freight in the Transportation Planning Process”** – This course – designed, developed, and delivered by Cambridge Systematics for the FHWA – provides an introduction to freight transportation and its common issues and concerns; describes ways in which freight can be more fully incorporated into state and metropolitan transportation planning processes; and provides participants with the resources necessary to successfully address freight in the state and metropolitan planning processes. The course, which has been delivered in 18 locations across the country, provides participants with a basic understanding of freight transportation, and aims to motivate state, local, regional, and Federal transportation planners to improve the ways by which freight issues and needs are incorporated into their transportation planning programs. More than 300 state DOT and MPO transportation planners have taken advantage of this course to better integrate freight into their planning processes.
- **NCHRP Project 8-36, Task 33 – Best Practices in Statewide Freight Planning Guidebook** – The NCHRP, on behalf of the American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on Planning (SCOP), commissioned a guidebook to describe successful freight planning elements and programs of various degrees of complexity and cost for both new freight planning practitioners and for veteran freight planning professionals at state DOTs. As part of this effort, Cambridge Systematics identified and examined best practices in statewide freight planning with an emphasis on practices that help states better understand goods movement. Cambridge Systematics also identified critical lessons learned from these experiences that were used to develop a guidebook that helps states better integrate freight into their transportation planning processes and economic development policies. The guidebook has been delivered to NCHRP and the AASHTO SCOP for further dissemination.
- **NCHRP Project 8-43, Methods for Forecasting Statewide Freight Movements and Related Performance Measures** – This project will compile a suite of freight analysis techniques useful to state DOT freight planning practitioners. To date, Cambridge Systematics has identified the needs of states with respect to freight forecasting and assessed the ability of various methods to address those needs. The interim report for NCHRP Project 8-43 has been provided to the project panel for review and comment, after which Cambridge Systematics will develop a toolkit that provides a unique set of freight performance evaluation tools combining mobility, economic impact, benefit/cost, air quality, and safety analysis tools.

- **NCHRP Project 8-47, Guidebook for Freight Policy, Planning, and Programming in Small- and Mid-Sized Metropolitan Areas** – Small- and mid-sized MPOs have had particular problems meeting the freight planning requirements of ISTEA and TEA-21 due to their limited staff and financial resources and the even more limited freight data available to them compared to larger MPOs. Recognizing these issues, NCHRP is working to develop resources aimed specifically at small- and mid-sized MPOs that will facilitate the integration of freight issues into the transportation planning process. Cambridge Systematics is developing a Guidebook for Freight Policy, Planning, and Programming in Small- and Mid-Sized Metropolitan Areas that will be designed to provide small- and mid-sized MPO staff with step-by-step instructions to develop comprehensive freight planning programs. The Interim Report currently is being reviewed and the Guidebook will be completed by mid-2005.
- **“Talking Freight” Seminar Series** – The FHWA’s Office of Freight Management and Operations, in partnership with other organizations, is hosting a series of seminars for freight planning practitioners and other interested parties via the Internet and telephone as part of a broader Freight Professional Development Program initiative. Seminar topics include Freight Data and Decision-making Tools, Urban Goods Movement and Planning, and Freight Advisory Groups. Cambridge Systematics assisted the FHWA in developing a presentation for the seminar discussing Incorporating Freight in the Transportation Planning Process – How to Get Started.

Taken together, these and other efforts have:

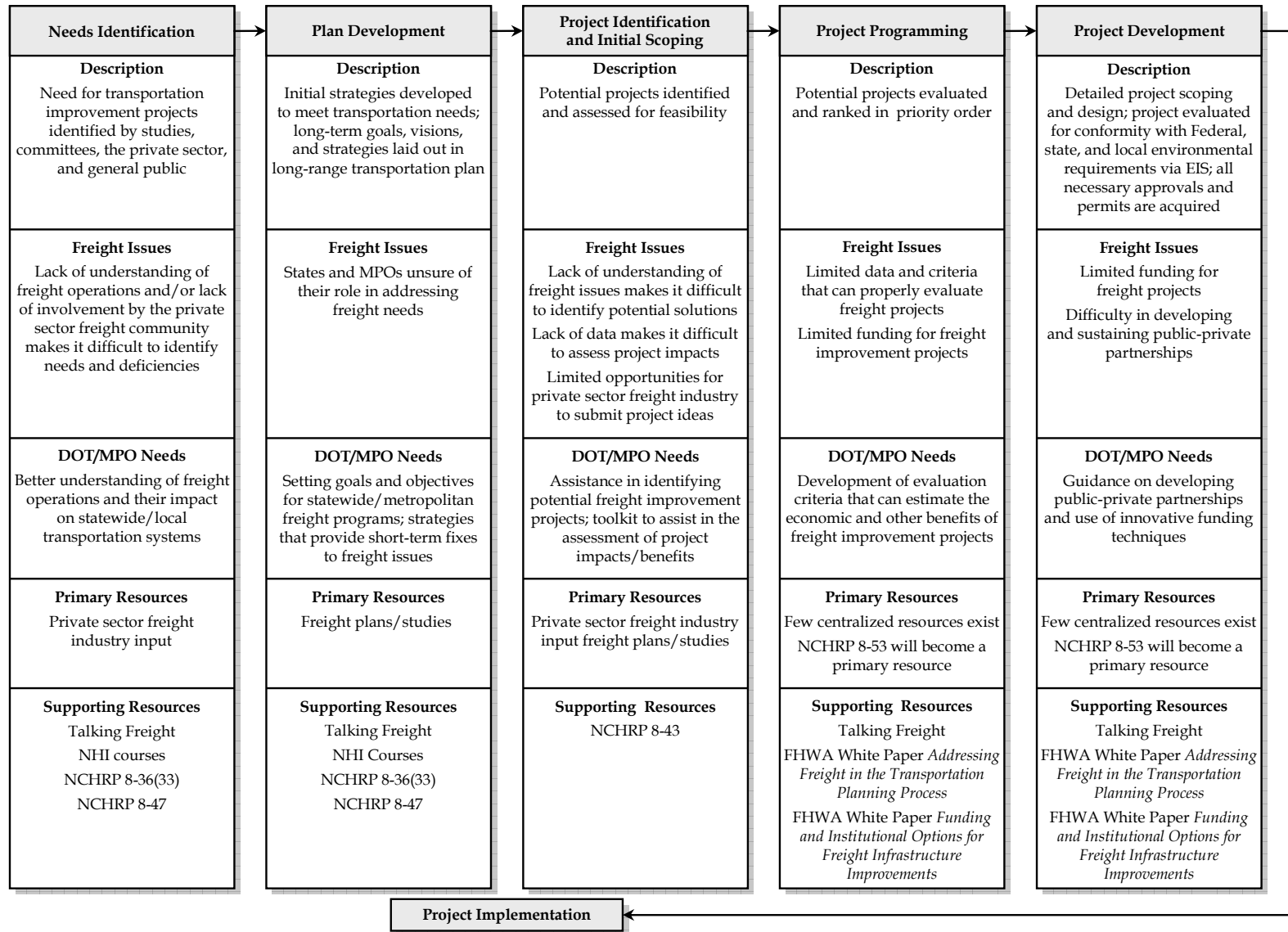
- Provided state DOTs, MPOs, and other transportation planning agencies with the resources to better incorporate freight into their transportation planning programs;
- Emphasized the incorporation of freight issues into long-range planning activities;
- Highlighted the importance of engaging the private sector freight industry in the transportation planning process; and
- Provided instruction on the identification and utilization of freight data and analytical tools to facilitate freight planning.

Many states and MPOs have taken advantage of these opportunities to better incorporate freight into long-range planning activities; approach the private sector freight community and include their input in planning activities; and even develop freight-specific planning initiatives, such as stand-alone freight plans and studies. In general, what is missing from these existing resources is specific guidance to both state DOTs and MPOs in translating the general discussions of freight in their long-range plans or stand-alone freight studies into actual freight programs and projects. The *Guidebook for Freight Policy, Planning, and Programming in Small- and Mid-Sized Metropolitan Areas*, being developed as part of NCHRP Project 8-47, begins to address the development of freight programs and projects specifically for small- and mid-sized MPOs by providing step-by-step instructions for the development of a freight program. However, state DOTs and MPOs will need further guidance on programming, developing, and implementing freight improvement projects within the traditional transportation planning process.

Figure 1.1 shows the major elements of the traditional statewide and metropolitan transportation planning process; describes the issues associated with incorporating freight into the process; lists the freight planning and programming needs of states and MPOs; and shows the primary and supporting resources available to states and MPOs when addressing these issues. As can be seen in Figure 1.1, NCHRP and other initiatives have provided states and MPOs with the resources to more effectively identify freight needs and deficiencies and incorporate freight issues into long-range plans. There is, however, a lack of resources available to states and MPOs when addressing the project programming and project development issues associated with freight transportation.

The completion of this project and the development of a *Guidebook to Integrate Freight into Transportation Planning and Project-Selection Processes* will fill this void by providing states and MPOs with techniques to more fully incorporate freight throughout the entire transportation planning process and more effectively plan, develop, program, and implement freight improvement projects. The guidebook developed by this project will enhance and complement much of the work already sponsored by NCHRP, FHWA, and others. The guidebook will be a key resource to freight planning practitioners and other stakeholders, allowing states and MPOs to successfully incorporate freight into existing transportation planning processes and then program and deliver freight projects.

**Figure A.1 Freight Issues and Resources within the Transportation Planning Process**



## Objectives

The goal of this project is to develop a guidebook that will assist state DOTs and MPOs integrate freight into their transportation planning and programming processes. This guidebook will focus specifically on project development and implementation issues that have not been fully explored by other freight planning initiatives conducted to date. This will include identification and dissemination of best practices, and development of step-by-step instructions to guide programming, development, and implementation of freight improvement projects at state DOTs and MPOs. The project has three specific objectives:

1. Identify practices, procedures, and processes that can be used by state DOTs, MPOs, and other transportation planning agencies to more effectively incorporate freight needs across all modes into the transportation planning and programming process, focusing specifically on programming and delivery of freight improvement projects. These practices, procedures, and processes will be practical in nature and will be derived from methods being used by freight planning practitioners in the field as well as the real-world planning and programming experiences of the Cambridge Systematics team.
2. Develop a guidebook based on the identified best practices, procedures, and processes for use by state DOTs, MPOs, and other transportation planning agencies to effectively integrate freight into existing planning, programming, and implementation processes. The best practices will cover a wide range of DOT and MPO functions, including funding and financing of freight improvement projects; development of data and tools to identify potential projects and evaluate them for inclusion in a TIP or STIP; and creation of public-private partnerships to facilitate the development, funding, and delivery of freight improvement projects. The best practices presented in the guidebook will be illustrated with case studies wherever possible. The guidebook developed as part of this project will be designed to be used in conjunction with existing freight planning resources previously developed by FHWA and NCHRP. This guidebook, when used in conjunction with these other resources, will help states and MPOs mainstream freight issues within all elements of a transportation planning program.
3. Develop an outreach program to promote the methods and processes for freight planning and programming that will be developed and documented in the guidebook. The marketing plan for the materials will make maximum use of conventional means of dissemination (direct mail flyers, presentations at major transportation planning conferences) as well as more cutting-edge methods (web-based distribution, on-line links to information sources).

## ■ Research Approach

The Cambridge Systematics team brings broad experience in developing freight plans, policies, and studies for states and MPOs; in developing tools for use by states and MPOs as part of their freight planning activities; and in building and sustaining public-private partnerships to develop and implement freight improvement projects. In addition, Cambridge Systematics has led the development of many of the tools used to evaluate and prioritize potential transportation and freight transportation improvements. The real-world freight planning and programming experiences of the Cambridge Systematics team, coupled with the analysis of best practices, processes, and procedures being used to guide freight planning and programming at states and MPOs, will allow us to develop a useful guidebook to support statewide and metropolitan freight programming activities and will complement the freight planning tools already available to freight planning practitioners.

### **Task 1. Review Existing Freight Planning and Programming Activities**

#### *Objective*

The objective of this task is to review all available literature relating to the freight planning and programming methods of states and MPOs. This literature review will specifically focus on the freight programming methods of states and MPOs, including the development of public-private partnerships to identify, fund, and implement freight-specific improvement projects and the development and use of criteria and other tools to evaluate potential freight improvement projects for inclusion in TIPs and STIPs. The Cambridge Systematics team, having completed a large number of similar reviews, will leverage these existing efforts, highlighting initiatives focusing on programming and implementation.

#### *Approach*

The Cambridge Systematics team will collect and review all available material related to freight planning and programming activities of states and MPOs, focusing on the programming of freight projects. The Cambridge Systematics team has had broad experience in developing statewide and metropolitan freight plans and studies, in developing tools to guide freight planning and programming by states and MPOs, and in developing and nurturing innovative public-private partnerships and other techniques to translate freight planning activities into actual freight improvement projects. The literature search will build on the work team members recently have conducted for the FHWA (*Addressing Freight in the Planning Process* authored by James Brogan and Michael Fischer); NHI (*Integrating Freight in the Transportation Planning Process* course, developed and taught by James Brogan and other Cambridge Systematics team members); and the NCHRP (*Best Practices in Statewide Freight Planning Guidebook* (Project 8-36, Task 33) and *Guidebook for Freight Policy, Planning, and Programming in Small- and Medium Sized MPOs* (Project 8-47)). Completion of these and other efforts have allowed us to better

understand how states and MPOs approach freight planning, the challenges they face in identifying and programming freight improvements, and the ways that they have addressed these challenges.

In addition, Cambridge Systematics is a recognized leader in providing asset management services and has developed innovative tools, policies, and strategies to assist states and MPOs in planning, prioritizing, and implementing improvements to bridges, roadways, and pavement systems. Cambridge Systematics currently is examining the state-of-the-art in the relationship between transportation planning activities and programming transportation investments through NCHRP Project 8-50 – Factors that Support the Planning-Programming Linkage. The literature review and surveys of state DOTs and MPOs conducted as part of NCHRP Project 8-50 have allowed us to better understand the link between transportation planning and programming of traditional highway and bridge projects and may provide insights as to how best to incorporate freight into these processes. As such, the results of that literature search and survey will be reviewed as part of this task.

This task also will include a review of relevant literature relating to innovative freight planning and programming efforts, such as the MAROps study; the Alameda Corridor; FAST; New Jersey Portway; and the CREATE project. These and other innovative activities have allowed states and MPOs to overcome many of the freight programming challenges described earlier and many have resulted in the development, funding, and implementation of large-scale freight improvement projects. Because Cambridge Systematics team members have been closely involved in these and other innovative efforts from both the public and private sector sides, we are well-suited to identify and understand the challenges associated with these activities as well as to describe the lessons learned that can be used to guide the development of other, similar efforts by other states and MPOs.

The product of this task will be a comprehensive summary of the existing freight planning and programming activities of states and MPOs. As part of this summary, the effectiveness of these planning and programming activities, as measured by their impact on transportation system efficiency, their ability to build and sustain relationships with private sector freight stakeholders, their ability to mainstream freight planning within a state or MPO, and other factors, will be described. We will use this analysis to identify potential case studies in freight planning and programming for further investigation.

### *Work Steps*

- **Collect and review all available material describing existing statewide and metropolitan freight planning and programming activities.** Previous efforts of the Cambridge Systematics team, described above, have provided a solid foundation on which to conduct a review of existing statewide and metropolitan freight planning and programming activities. We will supplement these existing materials with other available information describing the freight planning and programming activities of states and MPOs, focusing specifically on the programming of freight improvement projects. Important resources include state and MPO freight surveys completed by the

FHWA (Freight Planning at States and MPOs: An Analysis of FHWA Freight Activity Surveys, authored by James Brogan), the small- and medium-sized MPO freight planning surveys and case studies conducted by Cambridge Systematics for NCHRP Project 8-47, the literature review, interviews, and case studies conducted as part of NCHRP Project 8-50, and the performance measurement and analytical tool information collected and reviewed as part of NCHRP Project 8-43.

- **Collect and review all available materials describing innovative freight planning and programming efforts.** As discussed above, Cambridge Systematics team members have been closely involved in many innovative freight planning and programming efforts, including the MAROps study, the development and completion of the Alameda Corridor, New Jersey Portway, the CREATE project, and others. We will collect relevant information and materials from these and other innovative approaches to describe how states and MPOs have worked with the private sector freight community in developing, funding, and implementing freight improvement projects.
- **Evaluate the effectiveness of existing freight planning and programming activities.** There are many examples of effective freight planning and programming activities of states and MPOs. It is important to develop a wide range of approaches that states and MPOs can use when developing, programming, and implementing freight improvement projects. A range is critical given the varying degrees of freight issues affecting statewide and metropolitan transportation systems as well as the resources available to states and MPOs to conduct freight planning activities. As part of NCHRP Project 8-36, Task 33, Best Practices in Statewide Freight Planning, Cambridge Systematics developed criteria to help determine the effectiveness of the freight planning activities of state DOTs. Table 1.1 provides examples of these criteria, several of which (shown in italics) may be relevant to this project. These criteria will be reviewed and enhanced to evaluate the effectiveness of existing statewide and metropolitan freight planning activities in this task.
- **Identify potential freight planning and programming case studies.** Using the results of the literature search, we will identify potential case study examples of statewide and metropolitan freight planning and programming activities, focusing on the development, programming, and implementation of freight improvement projects. These potential case studies will be further developed in Task 2.



**Table A.1 NCHRP 8-36, Task 33 – Statewide Freight Planning Categories and Criteria to Determine Success**

Planning Category	Criteria to Determine Success
Long-range planning process	<ul style="list-style-type: none"> <li>• Freight studies are completed and results are incorporated into general transportation planning process.</li> <li>• Freight issues are included in long-range plans.</li> <li>• <i>Freight improvement projects are identified.</i></li> <li>• <i>Study results in the identification of new policy, legislation, or funding programs.</i></li> </ul>
Organizational structure	<ul style="list-style-type: none"> <li>• Freight issues are handled by a single division/section.</li> <li>• Organizational structure resulted in more efficient consideration of freight issues across modes.</li> </ul>
Data and analytical tools	<ul style="list-style-type: none"> <li>• Commodity flow/state freight profiles are developed.</li> <li>• Freight models or other analytical tools are developed.</li> <li>• Tools and profiles are utilized during general transportation planning process.</li> </ul>
Private sector participation	<ul style="list-style-type: none"> <li>• Private sector advisory group has been formed and meets regularly.</li> <li>• <i>Private sector stakeholders eligible to submit project ideas for consideration, either through advisory group or independently and have identified specific freight improvement projects.</i></li> </ul>
Multijurisdictional coordination	<ul style="list-style-type: none"> <li>• State is an active participant in multijurisdictional coalitions and has been involved in completion of a regional freight plan or study.</li> <li>• <i>Coordination resulted in identification or programming of regional freight priorities or improvement projects.</i></li> </ul>

### *Schedule and Deliverables*

Task 1 will be undertaken over the first three months of this project. The deliverables for this task include a summary of existing freight planning and programming activities in states and MPOs that will be documented as part of the interim report (Task 4); and a list of potential freight planning and programming case studies for further development in Task 2.

## **Task 2. Document Successful Freight Planning and Programming Practices**

### *Objective*

The objective of this task is to document successful freight planning and programming practices of states and MPOs by developing detailed case studies based on the findings of Task 1. Interviews with public and private sector stakeholders involved in developing, programming, and implementing freight improvement projects will allow us to expand on the information collected as part of the Task 1. These interviews will provide a better understanding of the challenges faced by states and MPOs in programming freight improvement projects as well as identify the critical success factors that could be useful to other states and MPOs in conducting freight planning and programming activities.

### *Approach*

The literature search conducted in Task 1, combined with Cambridge Systematics team experience in statewide and metropolitan freight planning and programming, will be used to identify potential case study examples of statewide and metropolitan freight planning and programming activities, focusing on the development, programming, and implementation of freight improvement projects and the use of innovative public-private partnerships.

Cambridge Systematics team members have been closely involved in many innovative freight planning and programming efforts within both the public and private sectors, and have many contacts within state DOTs, MPOs, and the private sector freight industry. For example, Cambridge Systematics developed the Freight Transportation Investment Model for the Mid-Ohio Regional Planning Commission (MORPC) to estimate the economic benefits of transportation improvements. This tool, which calculates travel time savings, and the number of new jobs, income, and industrial output that would be stimulated by potential improvements, is used by the MPO during the transportation planning and programming process to evaluate and prioritize potential improvements. While at CSX, Randy Evans worked with five Mid-Atlantic states (New Jersey, Maryland, Pennsylvania, Delaware, and Virginia) and the I-95 Corridor Coalition to develop a series of 71 infrastructure, operational, and information technology improvements totaling \$6.0 billion. Cambridge Systematics, along with Mr. Evans, then estimated the economic impacts and benefits of these improvements to the railroad industry, to highway users within the Mid-Atlantic region, and to industries located there. Gill Hicks was the General Manager of the Alameda Corridor project, one of the largest public works projects in the country. Successful completion of the Alameda Corridor involved developing and nurturing public-private partnerships and developing innovative funding and financing techniques with a wide range of public and private freight stakeholders. Finally, Cambridge Systematics currently is working with the Florida DOT to develop a methodology to identify, evaluate, and rank projects along the state's Strategic Intermodal System (SIS). This methodology will allow the state to program, develop, and implement transportation improvements across all modes, and allow DOT planners to better

understand and address safety, mobility, and economic competitiveness factors of potential improvements.

The case studies will benefit from the Cambridge Systematics team’s experience and contacts. We will build upon existing case studies and experience, where appropriate, to focus exclusively on programming and implementation issues. We will coordinate with the NCHRP 8-53 project panel, as appropriate, to finalize the state DOTs and MPOs selected for further analysis. Detailed in-person interviews will be conducted with the key players – public and private – involved in the development, programming, and implementation of freight improvement projects in order to better understand the challenges associated with programming freight improvements and to identify critical success factors that can be useful to other states and MPOs when conducting freight planning and programming activities. The information provided by this task will be summarized and used as inputs to Task 3 to identify recommended practices, processes, and procedures to guide statewide and metropolitan freight planning and programming activities.

### *Work Steps*

- **Collect additional data that describe specific freight planning and programming activities of states and MPOs.** Information on the potential freight programming case studies identified in Task 1 will be collected via in-person interviews with the public and private sector stakeholders involved the effort. These interviews will be designed to collect additional background on the project, detailed information about the challenges associated with conducting freight programming activities, and the specific actions taken by freight planning practitioners to overcome those challenges. The following provides an outline of the type of information that will be collected:
  - How the project was initiated (e.g., identified by a private sector freight stakeholder, identified in a long-range plan or freight study) and if that process differs from how potential improvement projects normally enter the planning process;
  - How the project was evaluated for inclusion in the TIP or STIP (e.g., Were freight-specific criteria used to evaluate potential projects? What data and tools were utilized to estimate costs and benefits of potential projects?);
  - The types of agencies involved in developing and approving the project (e.g., Were there environmental, economic development, or other agencies/stakeholders championing or hindering the effort?);
  - The degree of involvement/interest in the project by the private sector freight community;
  - How the project was funded (e.g., Federal funding programs, state funding programs, innovative funding or financing methods, public-private partnerships, combinations of sources); and

- How the project’s success is being measured (e.g., What criteria are used to determine success? Did the project result in the development of a continuing metropolitan or statewide freight planning program?).
- **Develop case studies for several key projects to document successful statewide and metropolitan freight planning and programming practices.** We will summarize the information collected during the in-person interviews and develop no more than 25 case study examples of successful freight planning and programming practices of states and MPOs. These case study examples will focus on identifying critical success factors that could be useful to other states and MPOs when conducting freight planning and programming activities.

### *Schedule and Deliverables*

This task will be completed in months 3 through 9 of the project. The deliverable for this task is a set of freight planning and programming case studies, which will be used in the development of recommended practices, processes, and procedures in Task 3 and will be included in the interim report in Task 4.

## **Task 3. Develop Recommended Practices, Processes, and Procedures**

### *Objective*

The objective of this task is to develop recommended practices, processes, and procedures to guide freight planning and programming at states and MPOs, focusing on translating the general discussions of freight in long-range plans and other planning documents into actual freight improvement projects that can be developed, programmed, and implemented. The recommendations will be presented in such a way as to allow states and MPOs to mainstream freight issues throughout their transportation planning processes. This task also will result in a proposed guidebook framework to incorporate freight issues and projects within the traditional transportation planning and programming process.

### *Approach*

The Cambridge Systematics team will utilize the interviews and case studies developed in Task 2 to develop recommendations for states and MPOs to identify, evaluate, prioritize, develop, and implement projects that benefit freight movements. Key issues that prevent freight issues from being translated into actual freight improvement projects that appear in TIPs and STIPs, as well as issues that prevent freight improvement projects from being implemented, also will be identified and summarized.

Previous efforts, most notably NCHRP Projects 8-36, Task 33 and 8-47, and NHI freight planning courses, have been developed or are being developed by the Cambridge Systematics team to help guide and support the freight planning activities of states and MPOs. These have provided or will provide states and MPOs with techniques to more

effectively engage the private sector freight community in the transportation planning process; to obtain, develop, and utilize freight data and analytical tools to support freight planning activities; to organize themselves in ways that facilitate freight planning; and to develop freight-specific plans, studies, and initiatives in support of transportation planning activities. Due in part to the availability of these resources, many states and MPOs have begun to engage the private sector, develop freight plans and studies to understand freight movements and their associated impacts, and incorporate freight into their long-range planning activities. As discussed earlier, though, many states and MPOs – even those with active freight planning programs – still find it difficult to identify, prioritize, fund, and deploy freight improvement projects. The recommended practices, processes, and procedures developed as part of this task will complement these existing resources by highlighting the challenges associated with programming freight improvement projects and providing techniques, using case study examples, that will help states and MPOs more successfully develop, prioritize, and fund freight improvement projects.

Recommendations to guide freight planning and programming at states and MPOs will be organized around the individual phases of the transportation planning process, from the initial generation of the idea for a project through project implementation. This will illustrate the ways in which freight issues have been integrated into statewide and metropolitan planning processes, while identifying deficiencies that can restrict these activities. In addition, it is important that freight transportation be integrated and brought into the mainstream of transportation planning so that it receives equal consideration in the establishment of priorities and the programming of funds. Organizing the recommended practices, procedures, and processes around the individual phases of the transportation planning process will facilitate development of a guidebook that will help states and MPOs to more fully incorporate freight throughout the transportation planning process.

Freight planning and programming recommendations will be organized around the following phases of the transportation planning process:

- **Needs Identification** – This phase describes how potential freight improvement projects enter the transportation planning process. Like most other types of transportation projects, there are a number of different ways in which freight improvement projects can be identified and formulated. Often, the ideas for potential freight improvements can be identified by statewide or metropolitan freight plans or studies. In other cases, formal or informal consultation with private sector freight stakeholders can result in a better understanding of freight needs and deficiencies and can often result in freight project ideas.
- **Plan Development** – The plan development phase occurs after the transportation needs of an area are identified. Once transportation needs are identified, initial strategies for dealing with those needs can be fleshed out. At the conclusion of the plan development stage, the area’s transportation vision and goals are described in a long-range transportation plan. As discussed earlier, some states and MPOs find it challenging to translate these broad vision and goals into actual projects that can benefit freight movements.

- **Project Programming** – The project programming phase occurs after long-range plan development and is the phase in which states and MPOs begin the process of actually implementing transportation improvement projects. First, however, proposed projects must appear on a TIP or STIP. Both TIPs and STIPs must include all projects within the state for which Federal funds are anticipated, along with non-Federally funded projects that increase capacity or are otherwise regionally significant. Projects identified in TIPs and STIPs must be consistent with an approved metropolitan or statewide long-range transportation plan. These projects also must have an identified funding source, as TIPs and STIPs are required to be fiscally constrained. Thus, ideas that make it to this stage in the planning process are on their way to actual implementation. However, funding sources for freight projects can be limited and the criteria used to select projects for inclusion in the TIP may or may not include special criteria that properly account for the benefits of freight projects. The analytical tools available to evaluate freight projects with respect to a standard set of metrics that could be used in selecting projects also can be limited.
- **Project Development** – The project development stage of the transportation planning process includes a more detailed scoping and design of the potential project along with a more formal assessment of the necessary permitting and approval activities. This includes activities such as project studies (e.g., environmental studies), preliminary engineering, design, National Environmental Policy Act (NEPA) reviews, and any local zoning and land use approvals. If this part of the process is not conducted properly, the result can be significant delays in the project programming and implementation phases as alternatives are re-reviewed and new stakeholders are brought into the process for the first time. Because large, regionally significant freight projects can be jurisdictionally complex and can occur in environmentally sensitive areas, the complexity of coordinating the activities at this stage in the process is heightened.
- **Project Implementation** – After FHWA and state DOT approval of the proposed transportation improvement project is obtained, detailed construction plans are developed, and right-of-way (if necessary) and construction permits are acquired. Finally, a construction contract is let and awarded and work on the project begins. Project implementation can help build credibility and maintain momentum for freight planning activities and is a key last step in developing and delivering freight improvement projects.

### *Work Steps*

- **Develop recommendations for practices, procedures, and processes that could be used to better incorporate freight into the transportation planning and programming process.** These practices will be based on the case studies developed in Task 2, as well as the lessons learned from all data collection and analysis and Cambridge Systematics team experience. Practices will be provided in two ways. First, recommended practices for the individual elements of the transportation planning process (i.e., needs identification, plan development, project programming, project development, and implementation) will be provided. This will highlight the

specific actions required within each element of the process. Second, procedures on how to stitch these elements together within an integrated transportation planning process also will be described. This organizational approach will provide useful input to the guidebook for freight planning and programming, resulting in a report and guidebook that will be useful to all types of states and MPOs, including those with existing freight planning programs and those that may be new to freight planning. The recommended practices, processes, and procedures will address several issues, including:

- Private-public partnerships, including enhanced private sector participation in planning, programming, and project development, innovative financing, ownership, and joint public and private decision-making;
  - Expanded and ongoing private participation in the planning process and in providing freight data;
  - Innovative institutional arrangements for planning, managing, and funding multijurisdictional projects;
  - Development and use of separate freight planning processes by state DOTs and MPOs;
  - Use of programming tools to evaluate expected project performance;
  - Performance expectations of freight improvement projects in terms of safety, congestion relief, environmental protection, and security; and
  - Development and use of analytical methods for establishing the appropriate geographic and institutional scope of and responsibilities for freight transportation projects or programs.
- **Develop initial guidebook outline.** An initial outline for the guidebook will be developed based on the best practices, procedures, and processes identified in this task. The guidebook will be designed to provide states and MPOs step-by-step instructions for more fully integrating freight into transportation planning and programming activities. This initial outline will be further refined as part of Task 4.

### *Schedule and Deliverables*

This task will be completed in months 9 through 11 of the project. The recommendations, along with the guidebook outline, will be documented and included in the interim report, which will be developed in Task 4.

## **Task 4. Develop Interim Report**

### *Objective*

The objective of this task is to compile the results of the first three tasks into an interim report that will document the best freight planning and programming practices of states

and MPOs. This will include documentation of existing data and information, identification of best practices for statewide and metropolitan freight planning and programming, and the development of recommended practices, processes, and procedures. The interim report also will provide the annotated outline for the guidebook.

### *Approach*

The results of the first three tasks will be organized into a report that will document the freight planning and programming challenges faced by states and MPOs and report on best practices. Detailed case study examples of real-world freight planning and programming solutions, as well as critical success factors that can be useful to other states and MPOs, will be provided. The interim report will provide the major source of documentation that will be used to construct the final guidebook. The initial outline for the guidebook developed in Task 3 will be enhanced and annotated for inclusion as part of the interim report.

### *Work Steps*

- **Describe the challenges associated with freight planning and programming at states and MPOs.** Many states and MPOs, even those with active freight planning programs, have trouble identifying, developing, programming, and implementing freight improvement projects. In addition, some have had trouble mainstreaming freight issues within traditional transportation planning and programming activities. This section will describe the common challenges faced by states and MPOs when attempting to integrate freight into the transportation planning and programming process.
- **Describe best practices for freight planning and programming.** The best practices will be presented as detailed case studies in each of the phases of the transportation planning process, including needs identification, plan development, project programming, project development, and implementation. These case studies also will include a set of critical success factors that could be useful to other states and MPOs.
- **Describe recommended practices, procedures, and processes for statewide and metropolitan freight planning and programming.** The recommended freight planning and programming practices will be organized in a way that facilitates development of the guidebook. Recommended practices, procedures, and processes will be identified in each individual element of the transportation planning process. In addition, recommendations for how to mainstream freight issues within a comprehensive, continuous transportation planning program will be provided.
- **Finalize and annotate guidebook outline.** The guidebook outline developed in Task 3 will be revised and annotated for inclusion in the interim report.



## *Schedule and Deliverables*

This task will be undertaken in months 11 through 13 of the project, with month 14 set aside for review and approval by the NCHRP panel. The deliverable for this task will be a report documenting the challenges faced by states and MPOs when conducting freight planning and programming activities and will include documentation of best practices in freight planning and programming organized by the elements of the transportation planning process using case study examples. An annotated outline of the guidebook also will be provided.

## **Task 5. Prepare Outreach Plan**

### *Objective*

The objective of the outreach effort will be to obtain input and feedback from the freight planning community regarding the content, organization, and presentation format of the guidebook. Specifically, we will seek input on the following topics:

- The general organizational structure of the guidebook;
- The validity of the best practices and their applicability to other states and MPOs; and
- How effectively the information in the guidebook is presented.

### *Approach*

In preparing the outreach plan, we will develop a core advisory group of freight planning practitioners who have had successful experiences in freight planning and programming. This group will include the DOT and MPO freight planning practitioners who participated in the Task 2 interview and case study development activities. In addition to these practitioners, we will solicit volunteers from other groups, such as the FHWA Freight Council, a group comprised of volunteers from FHWA Division Offices, Resource Centers, and Headquarters; the Association of MPOs (AMPO), which provided feedback on the work products developed by Cambridge Systematics for NCHRP Project 8-47; and the AASHTO SCOP and SCORT (Standing Committee on Rail Transportation).

Development of public-private partnerships is often an important component of successful freight planning and programming activities. So that the resulting guidebook can be useful to all types of freight stakeholders, we will solicit comments and feedback from several current and potential freight industry partners, including AASHTO's SCORT; the Association of American Railroads (AAR); the American Association of Port Authorities (AAPA); the American Trucking Associations (ATA); the Intermodal Association of North America (IANA); the Freight Stakeholders Coalition; and others. Allowing the private sector freight community to review and comment on the draft materials will result in a more useful guidebook to state DOT and MPO freight planning practitioners and also may encourage the private sector freight industry to become more

fully engaged in the statewide and metropolitan transportation planning and programming process.

The outreach plan will involve both traditional and more “cutting edge” methods. One element of the outreach plan will involve distributing draft materials, such as the interim reports, PowerPoint presentations that outline the approach of the guidebook, and sample materials/sections of the guidebook. These materials will be distributed to the advisory group for comment. A second approach to outreach will be the maintenance of a web page on the Cambridge Systematics web site that provides the same draft materials that are being reviewed by the advisory group. We will develop methods to contact practitioners in the freight planning community and advise them of the availability of the materials. The use of FHWA’s Freight Planning LISTSERV may be an effective tool for this contact. Innovative methods, using e-mail and the Internet, will be developed to allow these practitioners to participate in “virtual” listening sessions by submitting comments on the available materials.

### ***Work Steps***

- **Organize core group of freight planning practitioners.** This group will consist of representatives from state DOTs and MPOs interviewed as part of Task 2 as well as other practitioners from the FHWA Freight Council, AMPO, AASHTO, and other groups.
- **Make plans to distribute draft materials to advisory group.** Comments and feedback on the draft materials will be solicited via e-mail and telephone. Comments and feedback received during this process will be synthesized by the Cambridge Systematics team for potential incorporation into the final guidebook.
- **Plan listening sessions.** The Cambridge Systematics team will plan at least one listening session with as many members of the core advisory group as possible at a major transportation planning conference. Potential locations include the TRB Annual Meeting, the TRB Planning Applications Conference, the TRB summer freight committee meetings, FHWA Division Planners Conference, or other opportunities. Similar listening sessions are being planned by Cambridge Systematics as part of NCHRP Project 8-47. Planning and executing listening sessions for this project can build from the experiences and the network of contacts developed as part of that effort.
- **Develop a web page on the Cambridge Systematics web site providing access to the draft materials.** Cambridge Systematics will develop a web page as part of the Cambridge Systematics web site that will allow members of the core advisory group and others to review and comment on draft materials, including the interim report, Microsoft PowerPoint presentations, and the guidebook outline. This web site may include key links to and from other appropriate web sites, such as FHWA Office of Freight Planning and Operations, AMPO, AASHTO, FHWA Offices of Statewide and Metropolitan Planning, and others.

- **Develop an e-mail list of freight planning practitioners and private sector freight industry contacts.** This e-mail list will be developed from our network of state DOT, MPO, and freight industry contacts, recommendations from the NCHRP 8-53 project panel, the FHWA’s Freight Planning LISTSERV (if appropriate), and other sources. We will use this e-mail list to solicit comments and feedback on the draft materials.
- **Develop draft presentation materials for the outreach activities.** With guidance from the advisory group and the NCHRP 8-53 project panel, we will develop draft presentation materials for use in the outreach activities to be conducted in Task 6. A key component of these draft presentation materials will be information on other freight planning resources available to state DOT and MPO freight planners, such as Guidebook for Freight Planning in Small- and Mid-Sized Metropolitan Areas developed as part of NCHRP Project 8-47; the data and analysis toolkit developed as part of NCHRP Project 8-43; and the Best Practices in Statewide Freight Planning Guidebook developed as part of NCHRP Project 8-36, Task 33 and how this effort complements those existing resources.

### *Schedule and Deliverables*

This task will be undertaken in months 15 through 17. The deliverable for this task will be a plan to guide the outreach efforts. The plan will include the names and contact information for the core advisory group of freight planning practitioners, plans for the listening session, a prototype of the web page, and an e-mail list for dissemination of the draft materials. It also will include draft presentation materials summarizing the guidebook and how this project fits in with existing freight planning resources available to freight planning practitioners.

## **Task 6. Conduct Outreach Sessions**

### *Objective*

The objective of this task is to conduct outreach activities and obtain input on the format and content of the guidebook. This input will be synthesized and used to finalize the guidebook as part of Task 7.

### *Approach*

We will finalize the draft materials developed in Task 5 and conduct the outreach sessions described in the outreach plan. These outreach sessions will involve both in-person and “virtual” contact with members of a core advisory group as well as other members of the freight planning community. As part of these outreach activities, the Cambridge Systematics team will synthesize and incorporate the feedback and comments received into the final guidebook as part of Task 7.

### *Work Steps*

- **Distribute project materials to the core advisory group and solicit feedback.** The Cambridge Systematics team will synthesize the comments and feedback received from this group for potential inclusion in the final guidebook.
- **Conduct the listening session with the core advisory group.** As discussed earlier, this listening session will be held in conjunction with a major transportation planning conference, if possible.
- **Develop the project web page and post draft materials.** The web site will provide users with the ability to submit comments on the posted materials.
- **Develop an e-mail communications list and solicit input from the larger freight planning community.** As the freight planning community is the target audience for the final guidebook, the Cambridge Systematics team will actively seek feedback from state DOT and MPO freight planning professionals and other stakeholders. We will use a variety of sources to develop this e-mail communications list, including existing state DOT and MPO contacts, contacts from previous NCHRP projects, including projects 8-47 and 8-43, and the FHWA Freight Planning LISTSERV, if appropriate.
- **Synthesize comments and incorporate into final guidebook.**

### *Schedule and Deliverables*

This task will be undertaken in months 18 and 19. Comments from the review sessions will be incorporated on a continual basis into revisions to the organization, content, and presentation of the guidebook.

## **Task 7. Prepare Final Guidebook and Final Report**

### *Objective*

The objective of this task is to prepare the final guidebook in a suitable format for ongoing use by statewide and metropolitan freight planners and to document technical activities of this project in a final report. The guidebook will provide a “how-to” approach for effective freight planning and programming supplemented with case study examples to demonstrate different approaches that states and MPOs can take to more effectively incorporate freight into transportation planning and programming activities.

### *Approach*

The final guidebook will be prepared based on the input from the core advisory group, the NCHRP 8-53 project panel, and comments received at the listening session, the web page, and other outreach efforts. As described previously, the guidebook will be organized in such a way that will be useful to state DOTs, MPOs, and other transportation

planning agencies when considering freight issues in transportation planning and programming decisions. The final guidebook will be designed to provide states and MPOs step-by-step instructions for more fully integrating freight into transportation planning and programming activities and will illustrate the different ways that states and MPOs can plan and program freight improvement projects using case study examples.

The guidebook developed as part of this project will be designed to be used in conjunction with existing freight planning resources previously developed by Cambridge Systematics for FHWA and NCHRP. This guidebook, when used in conjunction with these other resources, will help states and MPOs mainstream freight issues within all elements of a transportation planning program.

This task also will involve documenting the activities of this project in a final report that will be submitted to the NCHRP 8-53 project panel. This report will include summaries and descriptions of the technical activities conducted in support of the project as well as the key findings of the research. The final report build off the interim report, incorporating comments received on the interim report, as well as work completed in Tasks 5 through 7.

### *Work Steps*

- **Enhance annotated guidebook outline with case study examples.** The annotated outline for the guidebook, developed in Task 4, will be enhanced using case study examples developed as part of this project.
- **Incorporate comments of the core advisory group and the freight planning community.** Comments received during the outreach activities conducted in Task 6 will be synthesized and incorporated into the final report and guidebook.
- **Prepare draft final report and draft guidebook in both hard-copy and electronic formats.**
- **Prepare final report and final guidebook in both hard-copy and electronic formats following review and comment by the NCHRP 8-53 project panel.**

### *Schedule and Deliverables*

This task will be undertaken during months 20 and 21 of the project. This will include a three-month review period at the end of the project to the entire NCHRP Project 8-53 panel to review and comment on the draft final report and guidebook before they are finalized. Both the guidebook and the final report will be developed in two formats: 1) a hard-copy version and 2) a CD-ROM. The CD-ROM may include internal hyperlinks connecting case study materials and best practices to allow freight planning professionals to quickly and easily access only the information that is most pertinent to their needs. The CD-ROM also will provide links to web sites that contain additional freight planning resources.

A final project report also will be prepared as part of this task. This report will document the project and all the activities that were undertaken in order to produce the final guidebook. As part of the final report, the Cambridge Systematics team will identify gaps in the current state of the practice for future research and will suggest a plan for training activities to help disseminate the techniques described in the guidebook or to foster partnerships among both public and private freight stakeholders.

## ■ Anticipated Research Results

At the conclusion of this project, the Cambridge Systematics team will have developed a guidebook for incorporating freight into statewide and metropolitan transportation planning and programming activities. The guidebook will document best practices in freight planning and programming and provide real-world examples of how these practices have been applied to successfully identify, develop, program, and implement freight improvement projects in a variety of state and metropolitan settings. The approach to presenting these materials has been described earlier in this proposal. It will be a results-oriented presentation that will be developed and vetted with extensive input from freight planning practitioners in the audience for whom it is intended.

The Cambridge Systematics team has compiled a significant base of information describing the issues and challenges faced by states and MPOs when incorporating freight into their transportation planning and programming processes as well as examples of states and MPOs that have developed innovative solutions to these challenges. In addition, the Cambridge Systematics team has been and continues to be involved in developing resources to guide freight planning activities at states and MPOs through NCHRP Projects 8-47, 8-43, and 8-36 (Task 33) as well as with the FHWA Freight Professional Development program and the National Highway Institute. The guidebook will take advantage of this expansive body of material and will draw on the innovative approaches developed by the Cambridge Systematics team in developing and programming freight improvement projects across the country.

A planning and programming guidebook is only effective if it is in the hands of practitioners and is being used. The Cambridge Systematics team has developed an outreach plan that leverages our contacts within the freight planning community and will ensure that the guidebook is available to all freight planning practitioners at the state and metropolitan levels. The recommended outreach and dissemination methods include working with the FHWA Freight Council, AASHTO, and AMPO to get information to freight planning practitioners at the state and local levels; developing a web-based version of the guidebook that can be accessed through links to the National Transportation Library; making presentations about the guidebook at major planning conferences and meetings (e.g., TRB Annual Meeting, TRB Planning Applications conference, AMPO Annual Meeting); and promoting the guidebook during our delivery of NHI planning courses across the country.

The final component of this project will be to recommend activities that encourage and stimulate use of the guidebook during statewide and metropolitan transportation planning and programming activities. It is not enough simply to disseminate information – the guidebook must be promoted as a useful tool to planners and then supported. This can be accomplished through workshops and ongoing support by national agencies such as the NCHRP, AMPO, and the FHWA Freight Professional Development program. The Cambridge Systematics team will provide a list of recommendations to establish this ongoing support based on the research and outreach conducted as part of this project.

## ■ **Applicability of Results to Practice**

The results of this project will fill a critical gap in the resources available to state DOTs and MPOs when incorporating freight within existing transportation planning and programming processes. By providing step-by-step instructions, supported by real-world case study examples, states and MPOs will be better able to plan, develop, program, and implement freight improvement projects and mainstream freight issues throughout the transportation planning process. In addition, this research should identify other gaps in the state-of-the-practice and in current Federal programs that should be helpful as the next generation of freight planning and programming policies are being developed.

# Appendix B – List of Interviewees

## *California*

- Doug Kimsey, Metropolitan Transportation Commission (SF Bay Area MPO)

## *Delaware*

- Mike Kirkpatrick, Delaware Department of Transportation

## *Florida*

- Annette Lapkowski, Florida Department of Transportation
- Doug McCleod, Florida Department of Transportation
- Frank Baron, Miami Dade Metropolitan Planning Organization

## *Illinois*

- Luann Hamilton, Chicago Department of Transportation
- Joe Alonzo, Chicago Department of Transportation
- Jason Tai, Illinois Department of Transportation
- Gerald Rawling, Chicago Area Transportation Study

## *Indiana*

- Steve Smith, Indiana Department of Transportation

## *Maine*

- Kevin Rousseau, Maine Department of Transportation

## *Michigan*

- Larry Karnes, Michigan Department of Transportation

## *Minnesota*

- Cecil Selness, Minnesota Department of Transportation
- John Tompkins, Minnesota Department of Transportation



### *Missouri*

- Kevin Triggs, East-West Gateway Coordinating Council (St. Louis MPO)

### *Nevada*

- Gary K. Robinson, Jacobs Engineering under contract with the City of Reno
- Steve Varela, City of Reno Government

### *Ohio*

- Erika Witzke, Mid-Ohio Regional Planning Council
- Tiffany Tyler, Mid-Ohio Regional Planning Council
- Dave Dysard, Toledo Metro Area Council of Governments
- Tim Gahagan, Toledo Metro Area Council of Governments

### *Pennsylvania*

- Ted Dahlburg, Delaware Valley Regional Planning Commission

### *Rhode Island*

- Katherine Trapani, Rhode Island Department of Transportation

### *Texas*

- Mario Medina, Texas Department of Transportation
- Dieter Billek, Texas Department of Transportation
- John Bourne, HNTB Corporation under contract with Texas Department of Transportation

### *Washington*

- Peter Beaulieu, Puget Sound Regional Council
- Hugh Conroy, Whatcom Council of Governments
- Barbara Ivanov, Washington Department of Transportation
- Karen Schmidt, Freight Mobility Strategic Investment Board
- Glenn Miles, Spokane Regional Transportation Council
- Mark Hallenbeck, Washington Transportation Research Center
- Ed McCormack, Washington Transportation Research Center
- Geraldine Poor, Port of Seattle
- Christine Wolf, Port of Seattle

# Appendix C – Interview Guide

## ■ Interview Approach

The goal of this project is to assist state DOTs and MPOs to better integrate freight into their transportation planning and programming processes, focusing specifically on project development and implementation issues that have not been fully explored by other freight planning initiatives conducted to date. The purpose of these interviews is to identify best practices in freight planning and programming associated with the five themes that were identified during the course of the Task 1 literature review (described below). These in-person interviews provide an opportunity to collect more detailed information about successful freight planning and programming practices at selected states and MPOs.

### *Theme 1: Effective Use of Planning Process*

This theme describes how states and MPOs incorporate freight into the transportation planning process, focusing specifically on how these agencies take the general language contained in long-range plans and translating it into actual improvement projects. This theme also will focus on how states and MPOs effectively identify freight needs and deficiencies and potential solutions. The following activities would be addressed by the interviews within this theme:

- How states and MPOs identify freight-specific needs and deficiencies;
- How states and MPOs identify and develop freight-specific improvement projects; and
- How institutional strategies and policy guidance can help states and MPOs improve and target freight mobility investment.

### *Theme 2: Project Selection Processes*

This theme describes how states and MPOs evaluate potential freight improvement projects for inclusion within a TIP or STIP, focusing on the use of freight-specific (or “freight-friendly”) evaluation criteria. The following activities would be addressed by the interviews within this theme:

- How freight-specific evaluation criteria or models have been developed and used as part of a TIP/STIP prioritization process; and
- If states and MPOs are using freight-specific improvement programs (e.g., “freight TIPs”).

### ***Theme 3: Use of Analytical Tools/Performance Measures***

This theme describes how states and MPOs use analytical tools and methodologies to assess the impacts and benefits of potential freight improvement projects. This theme also discusses how states and MPOs use performance measurement techniques to evaluate the performance and expected performance of projects. The following activities would be addressed by the interviews within this theme:

- How states and MPOs use of analytical tools (such as travel demand models and forecasts, quick response/sketch planning tools, etc.), to identify potential needs, deficiencies, or projects;
- How states and MPOs use of data, analytical tools, and methodologies to assess public and private benefits of freight improvement projects and/or estimate the impacts of potential improvements; and
- The types of performance measurement techniques used by states and MPOs and how freight factors into these performance measures.

### ***Theme 4: Innovative Funding and Financing Techniques***

This theme describes how states and MPOs use innovative funding and financing techniques for freight improvement projects. The following activities would be addressed by the interviews within this theme:

- How states and MPOs use of traditional funding programs and sources to fund freight planning activities and freight improvements;
- How states and MPOs use of innovative funding programs and sources to fund freight planning activities and freight improvements;
- How public-private funding partnerships and agreements are developed; and
- If tolls, truck only lanes, or other innovative freight financing/improvement strategies are being used by states and MPOs to finance freight improvements.

### ***Theme 5: Partnerships***

This theme describes how states and MPOs develop partnerships with other DOTs and MPOs, with other public agencies, and with the private sector freight community to identify, plan, development, fund, and implement freight improvement projects. The following activities would be addressed by the interviews within this theme:

- The level of involvement of the private sector freight community in the planning and project selection process of states and MPOs;
- The level of involvement of economic development agencies or chambers of commerce in planning and project selection; and
- How states and MPOs develop partnerships with their counterparts in other agencies to identify regional freight issues and develop potential solutions.

## ■ Interview Questions

The successful identification, development, programming, and implementation of freight improvement projects will likely involve several of the themes described above. While interviewers should touch on each of the five themes, as appropriate, each interview should primarily focus on those one or two key themes of interest. Interview questions for each of the five themes are provided in the following sections.

### Background Questions

*The purpose of these questions is to better understand the motivation for freight planning activities. It provides the context from which the existing freight activities have grown. Information will be collected to help characterize the main catalysts for freight planning activities at the state DOT or MPO.*

1. Is freight planning given the same level of emphasis as passenger or transit planning? Why or why not?
2. What were the principal motivating factors that caused you to become involved in freight planning? Was there a particular need that emerged? Was it politically charged?
3. Was there a “high-level” champion or advocate for freight planning? If so, who? Internal or external to the organization?
4. What level of staff (or other) resources are dedicated to freight activities and how are they funded?

## Theme 1 Questions: Effective Use of Planning Process

1. Does your most recent long-range plan address freight issues? If so, how? (obtain copy if available).
2. Explain the processes you use to identify transportation system needs and deficiencies. Do you identify freight-specific needs and deficiencies using this process? If not, how are freight needs and deficiencies identified?
3. How are potential transportation improvement projects identified? Explain how project identification relates to needs and deficiencies identification. How do you justify moving a project from the idea stage to the planning/programming stage?
4. Do you currently have any freight-specific improvement projects in your planning and programming pipeline? If so, where are they within the process? What obstacles have they faced/overcome during the process?
5. Who is eligible to generate potential improvement project ideas (DOT/MPO staff, private sector, others)?
6. Has your state or MPO developed institutional strategies or policy guidance to improve or to target freight mobility investment? Please describe these strategies/policies. What do they do? How and why were they developed? How do they impact your ability/motivation to conduct freight planning activities?

## **Theme 2 Questions: Project Selection Processes**

1. Describe how projects move from planning to programming. What has to happen before a potential project can appear on a TIP or STIP?
2. Have any freight-specific improvement projects “made the leap” from planning to programming? Why or why not?
3. Does your most recent TIP or STIP include freight improvement projects (obtain copy if available)?
4. How are transportation improvements evaluated for inclusion in the TIP or STIP? Do you have project selection criteria that relate to freight or economic development (obtain copy of criteria, if available)? If so, what are they and how were the criteria selected/developed? How is information/data generated to support these criteria? Do you use any analytical tools or metrics to support project prioritization?
5. Do you believe freight projects within your jurisdiction are on a “level playing field” in terms of competing with other, nonfreight projects? Why or why not? What do you think prevents freight-specific improvement projects from being identified, programmed, and implemented (e.g., lack of management/public support for freight projects, inability to identify public benefits)? Are there any changes you would suggest to enhance the viability of freight projects in the selection process?
6. Do you have freight-specific improvement programs (i.e., separate improvement programs expressly dedicated to freight projects, such as “freight TIPs”)? If so, how was the program developed, what are its resources, and how does it prioritize projects?

### **Theme 3 Questions: Use of Analytical Tools and Performance Measures**

1. What data and analytical tools (e.g., commodity flow data, travel demand models and forecasts, quick response/sketch planning tools, etc.) do you use to identify potential needs, deficiencies, or projects? Explain how these data and/or tools are applied. Do these tools have freight-specific components? Please explain.
2. What are the key strengths and critical weaknesses of the data and tools you use?
3. Do you use data, analytical tools, and methodologies to assess the benefits (public and/or private) of freight improvement projects and/or estimate the impacts of potential improvements? Please explain. What are the key strengths and weaknesses of these data, tools, or methodologies?
4. Do you utilize performance measures as part of your transportation planning activities? If so, what are they and how were they developed and how are they applied? Are there any freight-specific performance measures? If not, how do you measure success?
5. How do you ensure that you have the right data to support your planning and programming needs? Do you have a data management program? Do you regularly update these data? Are provisions included in your work programs to provide resources for regular updates?
6. (for MPOs) Does your state DOT support your efforts to evaluate the performance of freight projects (data needs and analytical tools)? If so, how? If not, what type of support would be most helpful?

## **Theme 4 Questions: Innovative Funding and Financing Techniques**

1. What traditional funding programs and sources do you use to support freight planning or freight improvement projects (e.g., FHWA Planning funds, National Highway System funds, Surface Transportation Program Funds, congressional earmarking, safety-related funds, FRA funds, ITS Integration Program)? What are the key strengths and weaknesses of these funding programs?
2. Have you used innovative finance/funding sources (e.g., CMAQ, TIFIA, SIBs, ITS, other investment tools) to support freight improvements? Would the freight project have been possible without the innovative financing? Have they succeeded in accelerating the expected timelines/completion dates of freight projects?
3. Do you use any state-specific funding/financing programs for freight improvement projects (e.g., shortline rail access programs)? What are the key strengths and weaknesses of these programs?
4. Do existing funding and financing programs limit your ability to fund and finance freight improvements? If so, how? What types of funding and financing strategies or tools would most improve your ability to program and implement freight projects?
5. Have you engaged in any public-private funding partnerships and agreements to expedite or fund projects? Please explain. Where the funding arrangements formalized somehow? How was the proportion of public versus private costs determined? Please describe the challenges associated with developing and maintaining these agreements. What advice would you give to other states and MPOs who are interested in entering into these kinds of agreements?
6. Have you or have you considered using tolls or other methods to support general or freight-specific transportation improvements? Why or why not?



## **Theme 5 Questions: Development of Partnerships**

1. With what other agencies do you coordinate freight planning and programming activities?
2. Have you developed interregional partnerships (with other MPOs or state DOTs) to identify, plan, or implement freight improvement projects?
3. Are you involved in any multijurisdictional coalitions? If so, how has participation in these groups affected your freight planning and programming activities?
4. (for MPOs) Do you have a strong relationship with your state DOT?
5. To what degree is the private sector freight community involved in the transportation planning process? What types of people participate from the private sector? Do you have an active freight advisory group or other such committee? If not, do you do other kinds of informal outreach? Please explain.
6. What is the private sector's role in the planning process, i.e., do they recommend and evaluate specific freight improvement projects; do they assist in the identification of major freight issues and concerns; do they provide policy guidance?

## Wrap-Up

*This section provides an opportunity for the interviewee to discuss the degree of success of his/her freight planning and programming activities and think about ways that critical lessons learned could be transferred to other states and MPOs.*

1. Do you believe your freight planning program is successful? How do you judge success?
2. Do you think your freight planning and programming activities could be replicated by other states or MPOs? If so, what do you think are the critical factors that determine success? If not, please describe why it is region-specific.
3. If you were going to give advice to another state or MPO about the most important things to be focused on to develop effective freight planning and programming processes, what would that advice be?
4. Who else should I talk with?

# Appendix D – NCHRP Project 8-53

## Outreach Plan

### ■ Introduction

The objective of the outreach effort is to obtain input and feedback from the freight planning community regarding the content, organization, and presentation format of the guidebook. Specifically, it is expected that the freight planning community will provide inputs on the following topics:

- The general organizational structure of the guidebook;
- The validity of the best practices and their applicability to other states and MPOs; and
- How effectively the information in the guidebook is presented.

These objectives will be achieved by soliciting inputs from a Core Advisory Group, and then extended to the wider freight community through the use of the Internet (e.g., web pages and e-mail correspondence). The formation of the Core Advisory Group and the development of methods to engage the freight community concerning this project are the main goals of this outreach plan.

This Outreach Plan consists of several work steps:

- Identify **Core Advisory Group**;
- Develop plans for a **Listening Session** to elicit feedback;
- Design **web page** to provide access to project materials (e.g., interim report, presentations, draft guidebook, etc.) to Core Advisory Group;
- **Select and develop materials** to be used in outreach effort; and
- Develop a system to **synthesize comments**.

## ■ Identify Core Advisory Group

The Core Advisory Group represents freight planning practitioners who have had successful experiences in freight planning and programming. This group will include the DOT and MPO freight planning practitioners who participated in the Task 2 interview and case study development activities. In addition to these practitioners, volunteers will be identified from other groups, such as the FHWA Freight Council, a group comprised of volunteers from FHWA Division Offices, Resource Centers, and Headquarters; the Association of MPOs (AMPO), which provided feedback on the work products developed by Cambridge Systematics for NCHRP Project 8-47; and the AASHTO SCOP (Standing Committee on Planning) and SCORT (Standing Committee on Rail Transportation).

Draft materials, including the Interim report, PowerPoint presentations that outline the approach of the guidebook, and sample materials/sections of the guidebook will be distributed to the Core Advisory Group for comment.

## Private Sector Freight Community

The development of public-private partnerships is frequently cited as an important component of successful freight planning and programming activities. As a consequence, comments and feedback will be solicited from several current and potential freight industry partners, including AASHTO's SCORT; the Association of American Railroads (AAR); the American Association of Port Authorities (AAPA); the American Trucking Associations (ATA); the Intermodal Association of North America (IANA); the Freight Stakeholders Coalition; and others. The private sector freight community's comments on the draft materials will make the guidebook more germane to state DOT and MPO freight planning practitioners while further encouraging the private sector freight industry to become more fully engaged in the statewide and metropolitan transportation planning and programming processes. The guidebook will be a more useful tool by including the feedback of a more complete range of freight stakeholders.

## Other Freight Community Practitioners and Contacts

The use of FHWA's Freight Planning LISTSERV can be used to inform a larger group of freight planning practitioners about the materials that are available for comment on the project web page.

## ■ Web Page

Cambridge Systematics will develop and maintain a web site that provides the same draft materials (e.g., the interim report, Microsoft PowerPoint presentations, and guidebook

outline) that are being reviewed by the Core Advisory Group. Practitioners in the freight planning community will be contacted (by e-mail and/or by phone) and advised concerning the availability of the materials on-line. The web site will provide a means (e.g., an e-mail link and on-line feedback forms) for practitioners to comment on the available project materials.

This web site will include key links to other appropriate web sites such as FHWA Office of Freight Planning and Operations, AMPO, AASHTO, FHWA Offices of Statewide and Metropolitan Planning, and others.

## ■ **Plan for Listening Session**

A listening session is being planned with as many members of the Core Advisory Group as possible at the TRB's 31<sup>st</sup> Annual Summer Ports, Waterways, Freight, and International Trade Conference to be held in La Jolla, California, July 9-11, 2006. Similar listening sessions were held by Cambridge Systematics as part of NCHRP Project 8-47.

## ■ **Selection of Materials to Be Presented and/or Distributed to Practitioners**

With guidance from the Core Advisory Group and the NCHRP 8-53 project panel, draft presentation materials for use in the outreach activities will be developed. This will include a mock-up of the web site, the specific materials to be forwarded to the practitioners for feedback, the presentation slides to be used for the listening session in La Jolla (including a summarization of the guidebook structure and content), the interim report, draft sections of the guidebook, etc.

This also will include information on other freight planning resources available to state DOT and MPO freight planners, including:

- The Guidebook for Freight Planning in Small- and Mid-Sized Metropolitan Areas developed as part of NCHRP Project 8-47;
- The data and analysis toolkit developed as part of NCHRP Project 8-43; and
- The Best Practices in Statewide Freight Planning Guidebook developed as part of NCHRP Project 8-36, Task 33.

In order to provide context, the ways in which NCHRP Project 8-53 complements these existing resources will be explained.

## ■ **Synthesis of Feedback**

Comments and suggestions for the guidebook will be arriving to the project team via e-mail, through the web site, from the listening session, and by telephone. These comments will be maintained at a central clearinghouse at Cambridge Systematics and then organized by theme into a summary document. The summary document will include responses from the project team regarding how the comments can be best integrated into the guidebook. However, the guidebook may not be the most suitable channel to address all comments. When such instances occur, suggestions will be made regarding other possible options to answer or further explore particular comments.