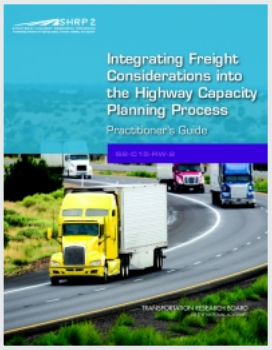

Integrating Freight Considerations into the Highway Capacity Planning Process: Practitioner's Guide

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SHRP 2
STRATEGIC HIGHWAY RESEARCH PROGRAM
Accelerating solutions for highway safety, renewal, reliability, and capacity

Integrating Freight Considerations into the Highway Capacity Planning Process

Practitioner's Guide

S2-C15-RW-2

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

THE SECOND STRATEGIC HIGHWAY RESEARCH PROGRAM

Integrating Freight Considerations into the Highway Capacity Planning Process: Practitioner's Guide

SHRP 2 Report S2-C15-RW-2

Cambridge Systematics, Inc.

TRANSPORTATION RESEARCH BOARD

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SUBJECT AREAS

Freight Transportation
Highways
Planning and Forecasting

THE SECOND STRATEGIC HIGHWAY RESEARCH PROGRAM

America's highway system is critical to meeting the mobility and economic needs of local communities, regions, and the nation. Developments in research and technology—such as advanced materials, communications technology, new data collection technologies, and human factors science—offer a new opportunity to improve the safety and reliability of this important national resource. Breakthrough resolution of significant transportation problems, however, requires concentrated resources over a short time frame. Reflecting this need, the second Strategic Highway Research Program (SHRP 2) has an intense, large-scale focus, integrates multiple fields of research and technology, and is fundamentally different from the broad, mission-oriented, discipline-based research programs that have been the mainstay of the highway research industry for half a century.

The need for SHRP 2 was identified in *TRB Special Report 260: Strategic Highway Research: Saving Lives, Reducing Congestion, Improving Quality of Life*, published in 2001 and based on a study sponsored by Congress through the Transportation Equity Act for the 21st Century (TEA-21). SHRP 2, modeled after the first Strategic Highway Research Program, is a focused, time-constrained, management-driven program designed to complement existing highway research programs. SHRP 2 focuses on applied research in four areas: Safety, to prevent or reduce the severity of highway crashes by understanding driver behavior; Renewal, to address the aging infrastructure through rapid design and construction methods that cause minimal disruptions and produce lasting facilities; Reliability, to reduce congestion through incident reduction, management, response, and mitigation; and Capacity, to integrate mobility, economic, environmental, and community needs in the planning and designing of new transportation capacity.

SHRP 2 was authorized in August 2005 as part of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The program is managed by the Transportation Research Board (TRB) on behalf of the National Research Council (NRC). SHRP 2 is conducted under a memorandum of understanding among the American Association of State Highway and Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), and the National Academy of Sciences, parent organization of TRB and NRC. The program provides for competitive, merit-based selection of research contractors; independent research project oversight; and dissemination of research results.

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FOREWORD

David J. Plazak
SHRP 2 Senior Program Officer, Capacity and Reliability

Freight traffic has generally been growing at a rate faster than passenger traffic on the nation's highway network. As a result, freight bottlenecks have begun to develop at various points throughout the network. These have historically been near ports and other intermodal facilities. However, future travel forecasts are beginning to show the effects on congestion of growing freight traffic on urban freeways, urban arterials, and some cross-country routes in rural areas. The ability to understand freight flows and forecast freight demand is taking on greater and greater importance. Efficient freight movement is directly tied to the economic well-being of states and localities. Most transportation agencies are increasingly focusing on effectively engaging and seeking the input (and ultimately meeting the needs) of private freight stakeholders.

The second Strategic Highway Research Program (SHRP 2) initiated two projects designed to improve the nation's ability to plan for increased freight-related traffic and to begin to address the growing issue of freight bottlenecks. Project C15 provides guidance to transportation agencies at the state, regional, metropolitan, and local levels on how best to collaborate with private-sector freight stakeholders in planning and developing future highway capacity. As both Project C15 and the accompanying Project C20 (freight demand modeling and data improvement) indicate, transportation agencies and private-sector freight stakeholders begin with different perspectives. Transportation agencies are often trying to plan, design, develop, and construct public infrastructure projects that will take a decade or more to put in place and are then expected to meet aggregate freight flow needs for many more decades. In contrast, many private-sector freight stakeholders begin with the perspective of optimizing particular supply chains. Their interest tends to have a narrow, short-term focus. Supply chains are optimized over days and weeks rather than decades, and they are reoptimized on a repeated basis. Yet private-sector freight stakeholders are important users of the infrastructure that public agencies are planning and developing.

This great difference in perspectives and time horizons can make it difficult for public agencies to effectively collaborate with private-sector freight stakeholders. The C15 freight practitioner's guide provides examples of good practices for such collaboration. It provides examples of the types of stakeholder involvement that work best with private-sector freight stakeholders. Perhaps most important, the C15 freight practitioner's guide provides a clear indication of which parts of the capacity project planning and development process are most important for obtaining freight stakeholder input. This guidance should be useful to the many transportation agencies that are now conducting freight plans or considering freight as part of corridor plans or project development efforts.

CONTENTS

ABOUT THE GUIDE

The nation's freight shippers, receivers, and carriers depend on transportation agencies to provide new highway capacity to meet the demands of growing domestic commerce and international trade. Yet, the traditional highway planning process has not broadly engaged these freight stakeholders in the planning process. As state departments of transportation (DOTs) and metropolitan planning organizations (MPOs) make efforts to improve the quality of their interaction with the freight community, *Integrating Freight Considerations into the Highway Capacity Planning Process: Practitioner's Guide* offers timely guidance and examples of best practices. The Second Strategic Highway Research Program (SHRP 2) Project C15 was developed primarily through interviews and case studies collected through discussions with public- and private-sector freight stakeholders across the United States. The case studies and other research culminated in this guide, which uses the four-phase SHRP 2 highway planning framework to help agencies know when, how, and who to engage from the freight stakeholder community at each stage: long-range transportation planning, corridor planning, programming, and environmental review and permitting.

1 INTRODUCTION

HISTORY OF FREIGHT PLANNING

The practice of freight transportation planning has evolved significantly over the last decade, catalyzed by the enhanced freight-planning requirements embodied in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and a growing national concern about insufficient freight capacity. The U.S. Department of Transportation (U.S. DOT), state DOTs, and metropolitan planning organizations (MPO)—the entities largely responsible for planning, programming, and delivering transportation projects—have started to invest in personnel, training, data, and consulting expertise to build freight programs that take into account the needs of freight stakeholders. This rise in freight planning reflects a broadening recognition of the economic, social, and environmental benefits of efficient goods movement. More recently, freight planning acknowledges the risk of diminishing transportation infrastructure productivity without wise planning and reinvestment, especially in our national highway system. Legislation reauthorizing the national highway program, Moving Ahead for Progress in the 21st Century (MAP21), enacted in July 2012, enhances many of the concepts relating to freight from SAFETEA-LU, including the endorsement of freight advisory groups and development of statewide freight plans. As it is implemented, the law will help institutionalize many of the recent efforts to improve freight-planning practices by DOTs and MPOs and promote freight mobility and capacity as very critical issues for planners throughout the United States to consider (http://www.fhwa.dot.gov/map21/).

Since the completion of the Interstate system in the 1970s, our nation's highways have become our commercial lifeline. Even with the recent resurgence of freight-rail in the United States, the 2007 Commodity Flow Survey (CFS) shows that trucks continue to move nearly one-half of all freight ton-miles (46%, the same proportion as

freight-rail). More important, the CFS indicates that U.S. highways carry the vast majority of commodity value—over $9.5 trillion in 2007, representing nearly 90% of national freight value and nearly 70% of 2007 gross domestic product (GDP). These statistics represent unprecedented growth of freight movement across all modes—especially highways—made possible by the capacity investments of previous decades, freight modal deregulation, technology, consumer affluence, and international trade.

Interest in freight planning surged in the late 1990s as the freight industry and policy makers realized that productivity gains from earlier investments were beginning to diminish. Around that time, the national freight system, particularly the highway and road network, began to show signs of overload as freight and passenger growth outpaced capacity. This mismatch was most pronounced in major urban areas that suffered from heavy congestion and highway bottlenecks, slowing the movement of trucks and adding to the cost of transportation. The pace of growth also began to overwhelm some rural Interstate highways and other U.S. and state arterials as both freight and passenger traffic increased without commensurate investment in new lane-mile capacity. Moreover, it became increasingly apparent that highway system redundancy was lacking, forcing vehicles to travel, for example, on a single, critical corridor[1] and endure congestion because no reasonable alternate route was available.

To address these concerns, leading transportation organizations have developed a growing body of resources to inform and direct freight-planning practice. The Transportation Research Board (TRB), the American Association of State Highway Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), and other organizations have developed training materials, studies, and guides to foster expertise and to weave freight considerations into established planning processes. In addition, some states, MPOs, and other transportation planning and programming organizations have started to develop and implement sophisticated mechanisms to systematically and comprehensively address a broad spectrum of goods movement-related issues through their planning activities. While much progress has been made, there remains room for improvement as agencies place greater emphasis on the freight aspects of transportation planning in the future. This project—to synthesize and disseminate best practices of collaborative market-based highway-freight planning—comes at an important point in the country's economic and transportation history as freight and passenger demand eclipse land system capacity.

Within the guide, the term *freight* implies the transport of raw materials, production inputs, and finished goods by surface transportation and includes shipments by integrators, such as FedEx and UPS. It does not pertain to small trucks used in service industries, such as plumbers and electricians, since policy makers generally count those trucks as passenger vehicles.

DEVELOPING MARKET-BASED GUIDANCE

While the significant and growing body of work provides important insight and instruction, the freight stakeholders with whom the research team spoke indicated they would appreciate a comprehensive guide to integrating freight considerations into the

highway planning process to enhance the work that already has been produced. In response, the Strategic Highway Research Program 2 (SHRP 2) commissioned the development of this guide specific to integrating freight considerations into highway planning. One critical element of this work is its recognition of the key role private-sector freight stakeholders should have in the collaborative planning and decision-making process. Obtaining input from freight system users in the highway planning process is critical for several reasons, including the following:

- ***Economic impacts.*** Companies make decisions about cargo-handling facilities (e.g., distribution centers operated by beneficial cargo owners, or BCOs,[2] and warehouses operated by third-party logistics service providers) based on current and future conditions and investments in transportation infrastructure, especially highways. In some cases, route selection is discretionary if alternate routes are available. These decisions affect the economic competitiveness and vitality of communities and regions. Highway planning—to sustain or help regional economies grow—must take into account the freight decision-making process to realize full growth potential.
- ***Market forces.*** Freight highway users are sensitive to dynamic market forces. To remain competitive, BCOs as well as motor carriers quickly alter supply chains and transportation patterns to adapt to changing trends, events, conditions, and costs (e.g., fuel prices, availability and cost of labor, sources of production inputs, opportunities in new and existing sales markets, or changing requirements of customers). To make wise investment decisions, highway planners must understand how market forces influence the way BCOs and motor carriers use the highway system to ensure alignment of public investment in transportation with the needs of industry.
- ***Infrastructure needs.*** By considering the perspectives of motor carriers and BCOs, states and MPOs may develop a more comprehensive approach to identifying highway needs, including critical commercial flows. Motor carriers can quickly identify system bottlenecks and needed investments based on the repeated experience of their drivers. Soliciting direct input from truck drivers, not only motor carrier executives and dispatchers, can yield valuable information. The research team's recent outreach with the freight community in Maryland suggests relative unanimity among motor carriers in identifying specific highway investment needs.
- ***Forecasting flows.*** Because of sensitivities to market forces and highway conditions, freight movements are difficult to forecast, especially over the long term. To account for this uncertainty, highway planning efforts should engage knowledgeable logisticians to develop more plausible future scenarios that take into account potential shifts in supply chain strategies.
- ***Multiple jurisdictions.*** Effective freight planning requires multijurisdictional cooperation to coordinate public actions and to understand how industries use the system across local boundaries and state lines. When state, regional, and local policy makers cooperate and align their plans, programs, and outreach, better outcomes result.

- *Environmental outcomes.* Freight operations have a significant impact, both positive and negative, on air quality, land use sustainability, and local environmental conditions (e.g., the National Environmental Policy Act, or NEPA) as motor carrier fleets adapt to changing highway conditions, markets, and technologies (e.g., cleaner diesel, liquid natural gas, and idling reduction). Motor carriers and BCOs are becoming more aware and concerned about sustainability, and there is growing commitment to modifying operations and equipment to improve the quality of the environment.
- *Safe operations.* Similarly, truck fleet operating characteristics must be considered as a part of any sound and realistic strategy to provide a safe operating environment for all kinds of vehicles. For example, public-sector transportation agencies should work with industry to identify highway segments that should be improved to enhance safety. Ameliorating safety issues results in improved freight mobility.

GUIDE OBJECTIVE

While many aspects of highway freight planning would benefit from improved methods and best practices guidance, this guide focuses specifically on one aspect. The objective of this guide is to make highway capacity planning more effective through better engagement of the freight industry. This guide will help highway planners from state DOTs and MPOs and private industry stakeholders more effectively and collaboratively plan and develop highway capacity improvements to improve goods movement. It identifies appropriate freight considerations and directs state DOTs, MPOs, stakeholders, and other decision makers on how and at which points to integrate these considerations within the transportation planning process—from the identification of strategies, policies, and projects for highway improvements within long-range plans to final environmental clearance through the NEPA process and permitting of specific highway improvements. The guide integrates market-based information into the planning process to reduce the likelihood of the public sector making poor project choices (e.g., funding projects that do not align with freight needs or provide little benefit to freight stakeholders). Case studies and best practice examples illustrate successful methods for integrating freight considerations at all stages and phases of project planning to sharpen decision making and lead to better investments that serve passenger and goods movement.

Material from the guide, including case studies and major findings, are integrated into the SHRP 2 Transportation for Communities—Advancing Projects through Partnerships/PlanWorks website for broader distribution. Transportation for Communities—Advancing Projects through Partnerships (TCAPP) has been renamed PlanWorks.

GENERAL APPROACH

To fully account for the important market-driven behavior and interests of the private-sector freight community, the research team organized its actions around a proposed set of seven key freight considerations:

1. Economy;
2. Industry logistics patterns for transporting raw materials, components, and finished products from point of origin to point of consumption;
3. Freight infrastructure;
4. Commodity flows;
5. Quality of service;
6. Environment; and
7. Safety.

These considerations focus on market forces appropriate to freight planning but also take into account the six external processes established by the SHRP 2 program and outlined in TCAPP/PlanWorks. Those external processes are air quality conformity, land use, natural environment, human environment, capital improvement, and safety/security.

Market-Based Freight Considerations

Market-based freight considerations are organized hierarchically to demonstrate a chain of influence starting with the economic demand for goods and culminating with environmental and safety outcomes. Growing demand for goods can lead to higher volume of traffic flows on a regional transportation system by trucks, but not necessarily on a particular route, potentially affecting the performance of the entire system. Economic demand for goods also underpins the logistics and supply chain decisions by industry. BCOs use highway infrastructure in a way that maximizes profit by minimizing cost, transit time, and distance between producers and consumers. The way in which the freight industry uses the highway freight system manifests itself through commodity flows of raw materials, production inputs, and finished goods. BCOs and motor carriers react and adjust to the travel conditions (e.g., speed and transit time reliability) to maximize operating efficiency, profits, and quality of service. Their ultimate actions affect the environment and safety outcomes.

The overall efficacy of a region's or state's freight infrastructure dictates how well, from an economic and efficiency standpoint, goods and services can flow across the system. With deficiencies in the freight transportation infrastructure on a systemic level, BCOs and motor carriers may seek out other sources of raw materials and production inputs or markets for finished goods, with rising transportation costs influencing their location decisions. Environmental considerations also play a major role in accommodating freight transportation infrastructure. Issues such as air quality, noise,

bright lights, malodorous smells and other affects can contribute to environmental impacts for neighbors in the vicinity of cargo-handling facilities. Paramount to the decision-making process for freight users, safety and security issues help to drive location decisions, routes, and other operational considerations.

Figure 1.1 introduces examples of each of the market-based freight-planning considerations and describes how freight interests could be affected by the public planning or project development process.

Market-Based Freight Considerations	Examples of Planning Considerations *How does the planning or project activity affect . . .*
Economy	• Economic competitiveness (e.g., business retention or attraction) • Employment retention or expansion • Market composition (producer and consumer) • User costs (freight transportation and warehousing) • Passenger-related economic benefits
Industry Logistics Patterns	• Supply chain structure • Regional distribution networks (multistate and urban) • Mode share (highway, rail, water, air)
Freight Infrastructure	• Multimodal network connectivity • Access to existing/new markets (e.g., to a BCO or manufacturing cluster) • Physical capacity (e.g., lanes, bridges, road elevation or grade) • Operational capacity (e.g., freight throughput as a function of better speed, reliability, information, or changes in truck size and weight) • Corridor chokepoints
Commodity Flows	• Freight flows by route (long-distance, regional, and local deliveries) • Commodity movements • Mode choice by commodity (including intermodal movements which may utilize highway for a portion of the trip)
Quality of Service	• Improve speed • Enhance reliability (e.g., maintaining flow along key freight corridors) • Driving experience (for freight and passenger vehicles) • Enhance system redundancy (choice of routes) • Cost (tolls, etc.)
Environment	• Air quality conformity • Communities (e.g., human environment, urban deliveries, livability) • Land use decisions and vice versa (e.g., location, pattern, sustainable growth) • Climate change (e.g., carbon output or infrastructure adaptation) • Natural environment (e.g., water quality, soil, wildlife, NEPA)
Safety and Security	• Safety (e.g., crash rates, types of crashes, locations of crashes, severity of crashes) • Security of critical infrastructure • Hazardous materials movement • Safe movement of overdimensional cargo • Human factors – Truck parking

Figure 1.1. *Examples of market-based freight-planning considerations.*

Current Planning Practice

The guide links the considerations to the four phases of transportation decision making of the SHRP 2 program: long-range transportation planning (LRTP), programming with fiscal constraint (PRO), corridor planning studies (COR), and environmental review merged with permitting (ENV). It includes guidance to help transportation agencies recognize when and how to integrate freight considerations into the decision-making process, identifies appropriate freight stakeholders at the most opportune points of engagement, and highlights best practices for effective types of engagement. The basis for identifying the key decision points for freight is the SHRP 2 decision flow diagram, which includes 44 decision points taken by decision makers throughout these four phases of the planning process. These decision points are presented in Table 1.1 and in the TCAPP/PlanWorks website.

The guide presents strategies for engagement of freight stakeholders during each of the 44 decision points during the planning, programming, and environmental review processes that can yield the greatest benefit. At each freight decision point, the Guide describes the information and techniques that planners can use at each decision point to integrate freight interests into the process.

TABLE 1.1. SHRP 2 DECISION FLOW DIAGRAM

Decision Point	Long-Range Transportation Planning (LRTP)	Programming (PRO)	Corridor Planning (COR)	Environmental Review and Permitting (ENV and PER)
1	Approve scope of LRTP	Approve revenue source	Approve scope of corridor planning services	Reach consensus scope of environmental review
2	Approve vision and goals	Approve methodology for identifying project costs and criteria for allocating revenue	Approve problem statements and opportunities	Approve and publish the notice of intent
3	Approve evaluation criteria, methodology, and performance measures	Approve project list drawn from adopted plan scenario or solution set	Approve goals for the corridor	Approve purpose and need/reach consensus on project purpose (PER-1)
4	Approve transportation deficiencies	Approve project prioritization	Reach consensus on scope of social, cultural, natural, and environmental review and analysis	Approve public notice (PER-2); reach consensus on study area
5	Approve financial assumptions	Reach consensus on draft TIP	Approve evaluation criteria, methodology, and performance measures (potential solutions)	Approve evaluation criteria, methodology, and performance measures
6	Approve strategies (projects)	Adopt TIP by MPO	Approve range of solution sets	Approve full range of alternatives/approve resource agency public notice (PER-3)
7	Approve plan scenarios	Approve TIP by Governor or his designee and incorporate into STIP	Adopt preferred solution set	Approve alternatives to be carried forward (Per-4)
8	Adopt preferred plan scenario (internal)	Reach consensus on draft STIP	Approve evaluation criteria and methodology for prioritization (implementation)	Approve draft EIS/ reach consensus on jurisdictional determination (PER-5)
9	Adopt finding of conformity by MPO (air quality)	Approve STIP with respect to conformity and fiscal constraint	Adopt priorities for implementation	Approve preferred alternative
10	Adopt LRTP by MPO			Approve final NEPA document
11	Approve conformity analysis (federal conformity determination)			Approve record of decision/render permit decision (PER-6)

Note: Ssome decision points under ENV and PER that focused on government procedure were consolidated.
TIP = transportation improvement program; STIP = state transportation improvement program; MPO = metropolitan planning organization; EIS = environmental impact statement; NEPA = National Environmental Policy Act.
Source: Cambridge Systematics, Inc.

Guide Users

This guide is intended for the use of DOT and MPO staff planners and managers and their collaborators, including consultants, partner organizations, and local jurisdictions. However, others may find the guide helpful. Each audience will likely use it in different ways. Table 1.2 provides some ideas on how the guide might inform and be useful to various parties.

TABLE 1.2. GUIDE USES BY VARIOUS AUDIENCES

Target Audience	Guide Uses
Transportation agencies: FHWA, state DOTs	• To provide guidance on how and when to engage different types of stakeholders during the various phases of planning processes. • To help prioritize resources, staff, and actions to more effectively integrate freight into the planning process.
Private sector	• To understand the various phases of highway planning processes and at which stages input from private firms is most valuable.
BCOs	• To understand which points in the decision process affect shipments and to focus input to transportation agencies to improve supply chain efficiency.
Logisticians	• To allow third-party logistics service providers (3PL) and others involved in arranging freight to enrich their potential contributions to network planning.
Motor carriers	• To illustrate how their first-hand knowledge of the system can inform project designs and studies of bottlenecks and highway system impediments.
Railroads	• To show how critical "last mile" connectors are between rail yards and access roads. • To provide insight to railroads on when their input and involvement related to modal shifts is most important.
Commercial real estate developers	• To improve understanding of highway planning and better synchronize efforts of real estate and land use decision makers with transportation planning.
Chambers of commerce and business groups	• To know how the highway planning processes function and to inform members of how they might be involved at the most important points.
Economic development agencies	• To define at which points their involvement might be most beneficial for the economic stakeholders (and their regional economies).
Port authorities and marine terminal operators (MTO)	• To understand the various phases of the highway planning processes and at which stages their input is most valuable. • To show how critical "last mile" connectors are between seaports and access roads.
Local governments	• To improve regional and state coordination, including transportation and land use decisions affecting goods movement.
Other stakeholders	• To provide general information on the planning processes related to freight and the other stakeholders involved.

Since this guide is focused around previous SHRP 2 research on collaborative decision making, a background in the use of the decision flow diagram and other tools is helpful but not necessary to maximize the effectiveness of the guide tools. Figure 1.2 displays the structure of the guide, which incorporates the market-based freight-planning considerations and national best practices to develop the decision flow diagram for engaging freight stakeholders in collaborative decision making and the critical decision points.

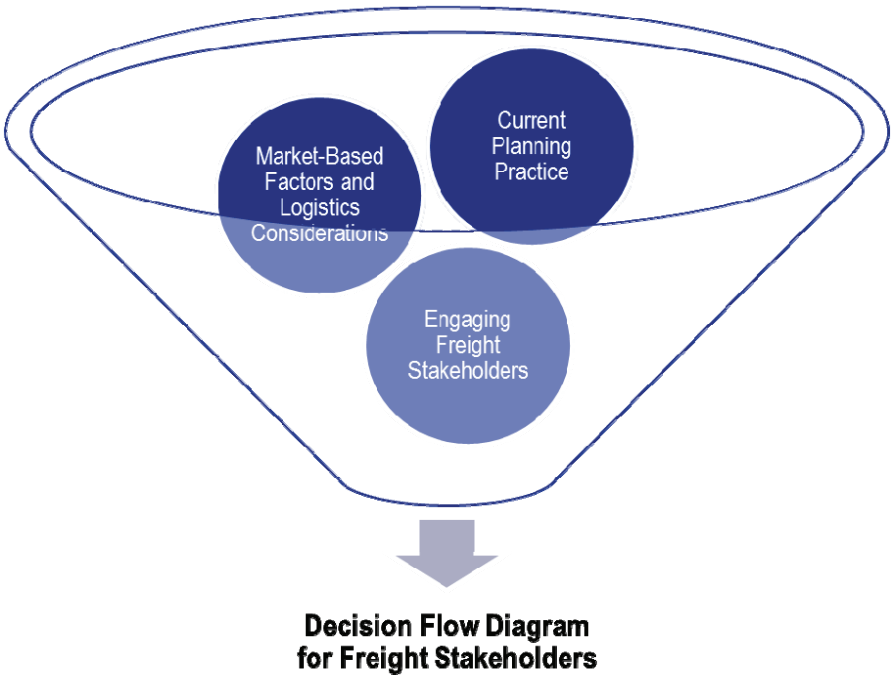


Figure 1.2.
Guide structure.

NOTES

1. Depending on the project, the corridor under consideration can be relatively short (several miles) or quite long (hundreds of miles, possibly running through multiple states). In terms of freight stakeholder involvement, it is easier to engage representatives from the freight community on short corridors because of the relatively confined set of system users and the likelihood that their concerns are relatively homogeneous. Long corridors have a far greater number of stakeholders with more divergent views and needs.

2. Within the context of the guide, a BCO can be either the shipper/supplier/factory or the consignee/receiver/buyer, depending on when and where product ownership and liability transfers between the two parties according to the agreed-on sales terms. Sales terms dictate, among other things, the party responsible for determining the routing and mode of transport. International Chamber of Commerce (INCO) terms of sale are the most commonly used in international trade. Free on Board (FOB) and Free Alongside (FAS) are two common INCO terms.

2 CURRENT PRACTICE

This section of the guide summarizes the current practice of integrating freight into the highway planning process. The information was developed through three research activities: (1) a review of the existing body of literature, guides, and studies; (2) interviews with national transportation agencies and associations; and (3) case studies conducted throughout the United States.

EXISTING LITERATURE

As part of the research for this guide, the existing literature was reviewed and interviews were conducted with industry leaders and organizations involved in freight and transportation planning to inventory existing planning practice and explore the perception of how well that guidance is being applied. The literature included guides, studies, and plans that provide a cross section of available resources and reflect existing planning practice. The following sections show the written resources reviewed for the preparation of this guide, many of which may be of interest to guide readers.

Library of Background Research Sources

TRB

These sources include the National Cooperative Highway Research Program, or NCHRP; National Cooperative Freight Research Program, or NCFRP; and the Strategic Highway Research Program or SHRP.

- NCHRP Report 594: *Guidebook for Integrating Freight into Transportation Planning and Project Selection Processes*
- NCHRP Report 570: *Guidebook for Freight Policy, Planning, and Programming in Small- and Medium-Sized MPOs*

- NCHRP Report 618: *Cost-Effective Methods and Planning Procedures for Travel Time, Delay, and Reliability*
- NCHRP Report 606: *Forecasting Statewide Freight Toolkit*
- Special Report 297: *Funding Options for Freight Transportation Projects*
- NCFRP Report 1: *Public and Private Sector Interdependence in Freight Transportation Markets*
- NCFRP Report 2: *Institutional Arrangements for Freight Transportation Systems*
- NCFRP Report 12: *Framework and Tools for Estimating Benefits of Specific Freight Network Investments*
- NCFRP Report 7: *Identifying and Using Low-Cost and Quickly Implementable Ways to Address Freight-System Mobility Constraints*
- NCFRP Report 8: *Freight-Demand Modeling to Support Public-Sector Decision Making*
- NCFRP Report 14: *Guidebook for Understanding Urban Goods Movement*

AASHTO

- AASHTO: Freight Bottom Line Report series
- AASHTO: State Rail Planning Best Practices

FHWA

- FHWA: Freight Cross-Cutting Resource Guide (ongoing)
- National Highway Institute (NHI) Course 139006: Integrating Freight into the Transportation Planning Process
- NHI Course 129003: Advanced Freight Planning
- NHI Course 139002: Multimodal Freight Forecasting in Transportation Planning
- NHI Course 139001: Freight Planning Course
- NHI Course 139005: Freight Planning and Environmental Considerations
- NHI Course 139009: Engaging the Private Sector in Freight Planning
- U.S. DOT: *Guide to Quantifying the Economic Impact of Federal Investments in Large-Scale Freight Transportation Projects*
- FHWA: Building Capacity Between Public and Private Sectors in the Freight Community: A Resource Manual
- FHWA: *Quick Response Freight Manual Update*
- FHWA: *Resource Center Training on Engaging the Private Sector in Freight Planning*
- FHWA: *Guidebook for Engaging the Private Sector in Freight Transportation Planning*

State Freight-Planning Studies

- Maryland Statewide Freight Plan
- Kansas Statewide Freight Study
- Minnesota Statewide Freight Plan
- Indiana Multimodal Freight and Mobility Plan

Metropolitan and Regional Freight Planning

- Metropolitan Washington Council of Governments: *Enhancing Consideration of Freight in Regional Transportation Planning*
- Puget Sound Regional Council: *Integrating the Evaluation of Freight Corridor Projects into the Congestion Management Process, and Long-Range Transportation Planning*

The available guides, planning guides, and processes provide useful strategies to maintain freight's presence and voice throughout the planning process, many directly applicable to the decision-making process for highway capacity additions. The literature highlights three major elements that are critical for effective freight-planning efforts and promoting efficient engagement with the freight community during the long-range planning, project programming, corridor planning, and NEPA processes:

1. ***Freight self-assessment.*** This process generally involves needs identification, development of freight policy objectives, evaluation of commodity flows and industry logistics patterns, an assessment of quality of freight service, and identification of bottlenecks and other physical and operational deficiencies and impediments. A freight self-assessment also generally includes an identification of staff or freight experts within an agency to shepherd freight matters through the planning process.
2. ***Stakeholder outreach.*** Existing resources provide clear strategies to recognize freight stakeholder needs and promote early involvement of both public and private freight stakeholder groups throughout the planning process. The literature supports the formation of freight advisory committees or councils for ongoing collaboration and discussion. (State freight advisory committees were also codified in MAP-21 Section 117.) Recommended stakeholder roles within these committees include assisting in the development of goals and objectives for the freight program, reviewing or refining project lists, ranking and prioritizing projects, providing data, helping identify funding opportunities, and advocating for projects.
3. ***Data analysis.*** The literature also suggests appropriate data sources that planners and policy makers can use to better understand freight issues within their communities. For example, data describing existing and forecasted transportation system conditions and freight volumes are useful in educating and engaging the private sector. Freight data are also invaluable in developing or refining existing performance measures and tracking economic growth and benefits associated with freight projects.

The existing literature and planning practices outline approaches for developing a freight-planning program; however, the recommendations do not always translate well to the process for making decisions on highway capacity improvements. The following describes ways that current literature and practice could be improved to provide highway planning practitioners with the strategies and tools needed to properly consider freight in the highway planning decision-making process:

1. ***Improve the evaluation methodology for assessing freight impacts during NEPA.*** The literature provides detailed information on methods for developing metrics to evaluate project benefits and costs for freight for project programming but little information on how to use or adapt these metrics for the NEPA process. The body of literature would be strengthened with a clearer evaluation methodology.
2. ***Better integrate economic considerations, logistics, and commodity flow decisions into the process for project programming and environmental review.*** There is limited information in the existing literature on how to apply the information collected during the initial planning phases on the general economy, industry logistics patterns, and commodity data into the NEPA phase.
3. ***Clarify the key freight-related decision points in the highway planning process.*** The literature includes useful information on the types of freight stakeholders to engage and the types of questions to ask; however, the information is less clear on the specific stakeholders (i.e., BCOs versus motor carriers) and the different level of engagement expected and required at key decision points.
4. ***Direct more attention to the role of regulatory issues in freight decisions throughout all phases of the highway decision-making process.*** When determining long-range goals for the freight infrastructure system, regulation (e.g., truck size and weight or hours of service rules) is a key consideration and greatly influences logistics decisions. These types of issues are rarely considered in the current long-range planning process.

Figure 2.1 summarizes the literature review findings by showing which of the existing research and guides provide good, partial, or limited coverage of market-based freight-planning considerations for each phase in the planning process. This graphic points out some of the gaps that this guide and other emerging resources will help fill.

INTERVIEWS WITH INDUSTRY LEADERS

Interviews with industry stakeholders were conducted across three categories: private freight stakeholders (BCOs and motor carriers), other private and nonprofit highway planning stakeholders, and government organizations involved in freight and highway planning policy at the national level. Through the interviews the research team sought stakeholders' views on best practices in integrating freight into highway planning, including integration of the seven market-based freight-planning considerations described in Figure 2.1 and initial insight, into appropriate decision points for freight stakeholder engagement. These insights were later validated by the case studies. The team also sought to determine what could be improved in the planning process—from the freight stakeholder perspective.

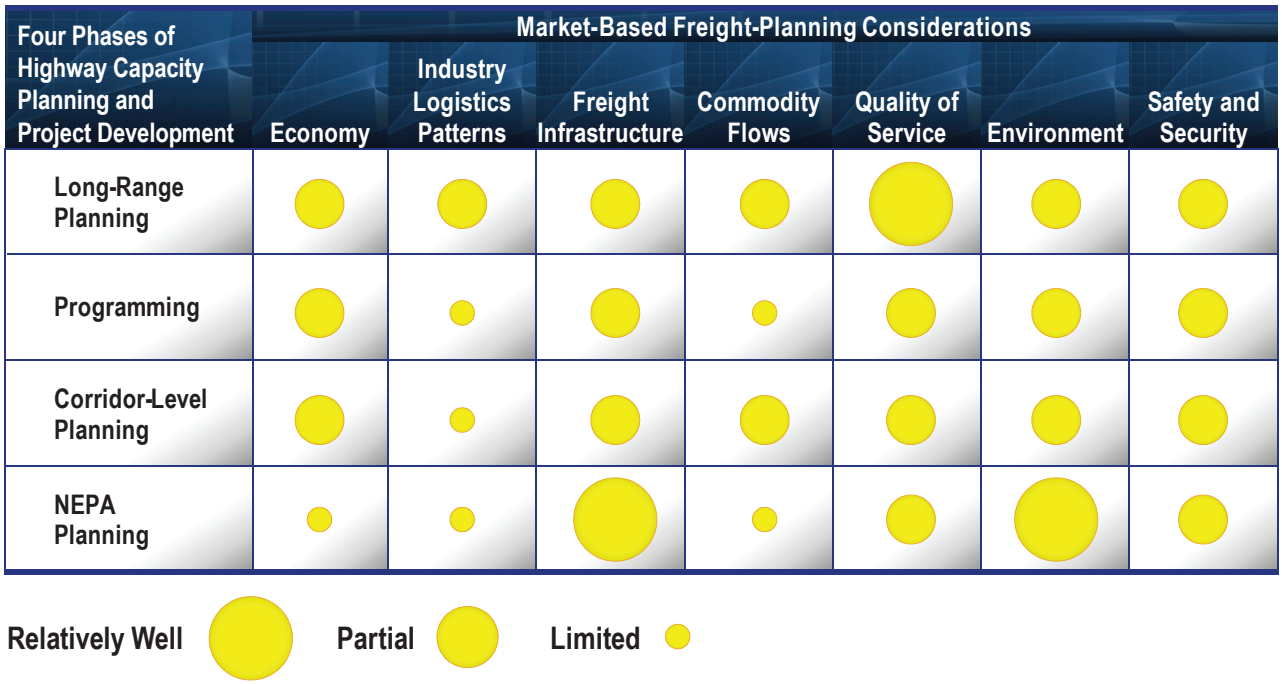


Figure 2.1. *Effectiveness of existing literature in addressing freight considerations in the highway decision making process.*

CASE STUDIES

The research team conducted 11 interviews with transportation agencies, private-sector freight companies, and other freight stakeholders to gain perspective on best practices. The case studies were selected because they exhibited the following characteristics:

- Evidence of collaboration;
- Geographic/economic diversity;
- Projects that have not been in the spotlight previously;
- Successful integration of market-based freight-planning considerations;
- Consideration of private-sector concerns in the planning process;
- Diversity across highway decision-making phases (LRTP, PRO, COR, ENV [or NEPA]); and
- Feedback from cooperative sponsors and stakeholders.

Table 2.1 lists the case studies conducted during guide development. The following section summarizes lessons learned from the case studies and the other examples of current practice. Full summaries of the case studies are available at www.trb.org/Main/Blurbs/170008.aspx.

TABLE 2.1. CASE STUDIES COMPLETED

Phase	Case Study	Organization	Urban/ Rural	Region	Region (W/MW/E/S)
LRTP	Baltimore MPO Freight Movement Task Force	Baltimore Metropolitan Council	Urban	Coastal	E
LRTP	Kansas City Regional Freight Outlook	Mid-America Regional Council (MARC)/KC SmartPort	Urban	Inland	MW
LRTP	Delaware Valley Regional Planning Commission (DVRPC) Goods Movement Task Force	DVRPC	Urban	Coastal	E
PRO	Mid-Ohio Regional Planning Commission (MORPC) Freight Transportation Improvement Program (F-TIP)	MORPC/Columbus Chamber	Urban	Inland	MW
PRO	Seattle Freight Mobility Advisory Committee	City of Seattle	Urban	Coastal	W
PRO	Puget Sound Regional Council (PSRC) Regional Freight Mobility Roundtable (RFMR)	PSRC	Urban	Coastal	W
COR	1-70 Truck Only Lanes	Led by Indiana DOT (partnership with Missouri, Ohio, Illinois DOT)	Rural/ Urban	Inland	MW
COR	Freight Plan Implementation[a]	Georgia DOT	Rural/ Urban	Inland	S
COR	San Diego Association of Governments (SANDAG) State Route (SR) 905 Freeway Project	SANDAG MPO	Urban	Coastal	W
NEPA	I-5 Columbia River Crossing	Oregon DOT/Washington State DOT	Urban	Inland	W
NEPA	I-710 Environmental Impact Report/Environmental Impact Statement (EIR/EIS) Process[a]	Caltrans/LA Metro	Urban	Coastal	W

Note: W = West; MW = Midwest; E = East; and S = South.
[a] Projects/programs conducted or assisted by Cambridge Systematics' staff.

THE COLLABORATIVE DECISION-MAKING PROCESS: WHAT WORKS?

The literature review, interviews, and case studies provide insight on best practices in integrating freight into the planning process and ways in which the practice could be improved. Tables 2.2 and 2.3 catalog best practices from these sources. Table 2.2 provides overarching best practices—applicable to the entire planning process. Table 2.3 describes best practices that are more specific to the four decision-making phases.

TABLE 2.2. CURRENT BEST PRACTICES TO INTEGRATE FREIGHT INTO THE HIGHWAY CAPACITY PLANNING PROCESS: ALL PHASES OF THE PLANNING/DECISION-MAKING PROCESS

Nurture "freight champions." Freight champions are individuals with the ability to mobilize interest in advancing freight planning. A freight champion may be a private-sector leader, a policy maker, or an individual working for a transportation agency. An important role of the freight champion is to be a face for freight and to build trust and relationships with industry stakeholders.
Engage early and frequently. Engagement should be conducted early and often but targeted at key decision points to help conserve resources and avoid stakeholder fatigue, which can cause participants to lose interest in the planning process altogether.
Improve freight-planning capacity. Agencies should continue their efforts to improve freight-planning knowledge and staff capacity. Stakeholders indicate that freight agency staff with knowledge of freight issues, trends, and operations provide additional value to the outreach and maximize the benefits of stakeholder engagement**.**
Collaborate with other agencies. Work with other agencies and organizations to share private-sector freight stakeholder input, which sometimes makes its way into the planning process through elected officials and others with frequent and direct contact with the business community (e.g., Chambers of Commerce, economic development organizations).
Improve interagency communication. Communications can break down between local, regional, or state government institutions and the DOT and MPO planners related to the highway impacts of new development projects (e.g., a BCO purchases property near a highway interchange through an arrangement with local leaders, causing a bottleneck; and the DOT is instructed to "make it work"). Inclusion of the MPO in discussions is helpful.
Assist policy makers. Build their knowledge about supply chain and logistics; help them connect with freight constituents.
Prepare focused meetings and materials. Stakeholders respond to plans and products that already have been prepared or summarized in a way that minimizes the time they need to spend reviewing materials. Stakeholder meetings should be focused, with clearly defined agendas and action items.
Institutionalize outreach. Establish regular meetings and outreach activities to build relationships and to improve the understanding of freight issues in the jurisdiction.
Implement limited but creative engagement to be most effective. Use technology, other venues (industry events), focus groups, and so forth. Engagement depends on the scale of the freight stakeholder interest in the project. A more robust engagement strategy can be developed for a major truck route improvement versus a commuter route with few trucks.
Post and integrate feedback. Transportation agencies should assimilate feedback from private-sector stakeholders, post it online, and make sure that stakeholders recognize that their valuable feedback is being integrated into the planning documents.

TABLE 2.3. CURRENT BEST PRACTICES TO INTEGRATE FREIGHT INTO THE HIGHWAY CAPACITY PLANNING PROCESS: LONG-RANGE AND CORRIDOR PLANNING, PROJECT SELECTION, AND NEPA

Long-Range Planning	Corridor Planning	Project Selection	NEPA
Engage the private sector early. Engagement during the initial stages of the long-range planning process is consistent with the interests of private-sector stakeholders. ***Assist policy makers.*** Build their knowledge about supply chain and logistics. This helps them connect with freight constituents. ***Establish Freight Advisory Committees.*** These committees have been very effective in many jurisdictions to facilitate ongoing engagement with freight stakeholders, improve knowledge sharing between DOT and MPO planners and private-sector representatives, and build ongoing relationships. ***Incorporate freight data and metrics.*** Stakeholders would like to see better incorporation of freight data and freight-oriented performance metrics (e.g., commodity flows, throughput) into highway planning. ***Improve multimodal planning.*** The existing planning process is focused on maximizing the operations within specific modes with little network optimization across modes. Agencies should work with stakeholders to integrate other modal considerations, including cost, to reflect the realities of freight mode choice.	***Integrate freight into corridor studies.*** Make sure that freight is represented in corridor studies. Listen to transportation system user feedback in establishing the scale of those studies. Industry stakeholders prefer to be engaged at major decision points, defined ahead of time in the development of corridor plans (e.g., before a final decision is made) to ensure that input is considered on alignments, route characteristics, and effects on freight operations. ***Work with motor carriers to address planning and truck operations issues.*** Motor carriers report success in working with DOTs and MPOs on long-range corridor studies, not only on highway improvement issues but on operational issues like truck parking. ***Improve dialogue and data on multistate and national corridor relationships.*** Stronger relationships with state and national trade associations would be helpful to enable better understanding of freight stakeholder priorities and trends in trade flows along freight corridors. Differentiating between the different types of trade flows between imports and exports, and domestic shipments that pass through a state or region, is also important.	***Seek input on programming.*** Freight stakeholders are often engaged by non-DOT organizations (e.g., Chambers of Commerce, economic development department staff, mayors, or governor's offices) for project programming. However, they too often are asked to provide feedback on a list of projects already under development, rather than to help formulate that list. They would prefer to be involved early in the development of the program. ***Increase freight focus during programming.*** Freight stakeholders indicate a preference for even more involvement with highway planners to ensure that freight-beneficial projects are prioritized. They would like to see freight metrics incorporated into the project selection criteria. Freight stakeholders are interested in how funding is allocated to projects and are amenable to public-private partnerships (PPP). ***Define freight as a programming category.*** A dedicated category for freight-oriented projects or a mechanism for giving additional "points" to freight-beneficial projects in State Transportation Improvement Program/ Transportation Improvement Program (STIP/TIP) evaluations should be developed to increase freight stakeholder interest.	***Integrate logistics and trade into NEPA.*** The NEPA process has institutionalized many practical engagement points for freight stakeholders through the public comment process and other advocacy, yet there is room for improvement. Industry stakeholders believe that the NEPA review and approval process is much too lengthy to effectively consider the logistics and trade decisions for industry. ***Consider freight in alternatives analysis.*** The NEPA process should incorporate logistics and freight decisions into the alternatives analysis. It also should look at what is counterfactual (what will happen to freight transportation if the project is not built; not necessarily only the "no project alternative"). ***Make NEPA outreach substantive.*** Freight stakeholders sometimes sense that NEPA outreach activities are simply procedural (e.g., a box-checking exercise). Stakeholders often feel like the process does not yield effective solutions to freight issues and can raise issues for the freight community (e.g., residents' truck, noise, or air quality concerns may inhibit industrial/ warehouse development; community groups may oppose distribution center development because of perceived traffic impacts).

3 MARKET-BASED FREIGHT-PLANNING FACTORS

Public-sector representatives increasingly understand that freight is directly linked to local, regional, statewide, and national economics. As a result, the integration of market-based considerations into planning practice currently is undergoing an evolution, from a low level several years ago to a stronger focus on these issues under present circumstances. Likely, the recent recession and the focus on infrastructure and economic development as a means to weather the economic downturn has contributed to a raised awareness of the benefits of promoting freight transportation. Several legislative efforts to boost the economy, from the American Recovery and Reinvestment Act (ARRA) to the multiple rounds of Transportation Investments Generating Economic Recovery (TIGER) grant funding programs, have encouraged jurisdictions not only to begin planning for freight transportation investments (if they have not already done so) but also to reorient existing planning, design, and construction programs to better accommodate freight movement. Overwhelmingly, industry representatives interviewed during this guide's development reported their support for a national freight policy—one that would help codify freight planning at the local, regional, and national level and help prioritize projects and programs that promote economic development. The MAP21 transportation authorization bill makes an effort to further this process through the following actions:

- Establishment of a national freight policy to better align the goals of freight transportation system users throughout the United States;
- Establishment of a national freight network to strategically direct resources to improve freight system performance;
- Promotion of freight-planning activities, including the development of state freight plans and engagement with freight stakeholders at the state level; and

- Prioritization of freight projects in the planning and funding allocation process by providing the opportunity for the secretary to increase the federal funding share to 95% for Interstate system and 90% for other projects.

With the enhanced focus on freight within the transportation planning process, it becomes more important for agencies to also recognize and integrate market-based factors affecting goods movement into the planning process. According to interviews with industry representatives, market-based issues are sometimes considered in the freight-planning process, generally leaving room for improvement. Table 3.1 presents the strengths and weaknesses of the current practice of integrating market-based freight considerations into the planning process.

HOW CAN WE INCREASE THE ATTENTION GIVEN TO MARKET-BASED CONSIDERATIONS?

A growing understanding of how the private-sector market economy works and the roles that different freight stakeholders play in that market will improve the interaction with stakeholders in freight planning. Some key strategies could include the following:

- Allowing staff to participate in private-sector sponsored conferences and workshops to foster mutual understanding of freight issues.[1]
- Engaging with organizations that are more involved in day-to-day coordination with freight stakeholders such as chambers of commerce, economic development departments, or trade associations (e.g., state trucking associations or BCO groups).

A strong recognition of freight transportation issues in the planner's jurisdiction can go a long way to effective engagement with major freight stakeholders. Freight stakeholders need to know that they are dealing with someone who understands their issues and is serious about finding a solution that will positively affect the transportation system. Invariably, projects and programs that are designed to add capacity to a particular highway corridor will be well received by the trucking community and other users; but it is the planner's responsibility to work with those stakeholders to identify other solutions (which may be more feasible) to meet the same market-based goals. The next chapter provides some strategies to engage private-sector stakeholders based on lessons learned from existing literature, interviews with industry leaders, and case studies that highlight national best practices.

NOTE

1. The I-95 Corridor Coalition's Freight Academy and the Freight Planning 101 Course offered by the FHWA can help prepare planners to better understand the perspective of private-sector freight stakeholders.

TABLE 3.1. CURRENT STRENGTHS AND WEAKNESSES IN INTEGRATING MARKET-BASED FREIGHT-PLANNING CONSIDERATIONS

Market-Based Freight Considerations	Strengths in Existing Planning Practice	Weaknesses (Room for Improvement)
Economy	National efforts to link highway funding to a robust cost-benefit analysis framework have contributed to freight-oriented highway projects getting needed attention and prioritization. Industry stakeholders are frequently involved in these efforts, especially railroads, marine terminal operators, and motor carriers. These cost-benefit analyses are largely related to maximizing economic development associated with transportation projects. In certain jurisdictions, freight projects have been prioritized based on economic development benefits. It is clear the state of the practice is moving in the right direction.	Freight planning could be improved as public and private stakeholders reach a more comprehensive and mutual understanding of the way in which transportation decisions affect economic activity and vice versa. For example, there are challenges in reconciling the fundamental differences in timing/schedules of industry and government in project implementation (the private sector works on a schedule of weeks and months, while highway planners work on a schedule of years and decades).
Industry logistics patterns	State DOTs and MPOs are making an effort to better understand the decisions made by stakeholders in the supply chain management and logistics industry. Joint participation in workshops and advisory committees and the attendance of DOT planners at industry conferences could increase the sharing of knowledge and ideas.	While the highway planning community is improving its knowledge of supply chains and logistics patterns, there is room for improvement. For example, planners may need to apply a supply chain orientation to questions and research on how logistics affect the highway system (e.g., What are your future export and import growth projections? and Where are you experiencing freight congestion in your supply chain?). In addition, planners need to better understand how supply chains are continuously adjusted to minimize business disruptions. Policy makers should care about what happens beyond their jurisdictional borders and take a broader view since supply chains are generally long and complex and not limited to a city or state. BCOs and logistics service providers should recognize that agencies would greatly benefit from their involvement in freight planning.

(continued)

TABLE 3.1. CURRENT STRENGTHS AND WEAKNESSES IN INTEGRATING MARKET-BASED FREIGHT-PLANNING CONSIDERATIONS (continued)

Market-Based Freight Considerations	Strengths in Existing Planning Practice	Weaknesses (Room for Improvement)
Freight infrastructure	Efforts by state DOTs, industry organizations, and the federal government to evaluate highway flows and freight infrastructure limitations have improved the base of freight-planning information. For example, recent highway bottleneck research by the FHWA has provided planners with an initial list of national highway bottlenecks for consideration in state and local planning efforts. Since commodity flows are regional, national, and international in nature, it is important to continue to track these efforts to better understand the impact of freight bottlenecks on the entire goods movement system.	Supply chains operate across borders; attention to regional efforts in highway planning is critical to developing infrastructure that meets the needs of global supply chains. If there is a bottleneck, chances are that all efforts by industry to make operations more efficient (e.g., hours of service, rerouting, night operations) have already been employed to mitigate the negative impacts and resolve the bottleneck; the transportation agency will have to add capacity and/or implement operations improvements. Regardless, highway planners should work closely with industry (and industry with highway planners) to jointly identify potential solutions to freight infrastructure deficiencies—including changes to operations.
Commodity flows	Numerous educational opportunities and a strong culture of conferences and networking are improving public-sector understanding of commodity flows. Courses offered through the National Highway Institute, trainings and guides produced by TRB and FHWA, and other knowledge-sharing efforts have greatly contributed to the freight knowledge base of planners. The growing understanding of freight data and their utility in understanding commodity flows is improving.	Highway planners should continue to improve their understanding of cargo origins and destinations to know which part of the market to monitor and where transportation issues might arise in the future.
Quality of service	Coordination between jurisdictions on highway planning has improved in recent years. Because freight moves across borders, this coordination is crucial to ensure that freight projects are developed in an operationally viable way. The I-95 Corridor Coalition (mid-Atlantic and Northeast states) and the Mid-American Freight Coalition (Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Ohio, and Wisconsin) are two examples of organizations that effectively promote freight-planning efforts across local and state borders.	There is a lack of understanding about how freight stakeholders use the highway system across local, regional, and state boundaries. A greater effort in cross-border coordination is necessary (for both public-sector planners and private companies making logistics and real estate decisions).

(continued)

TABLE 3.1. CURRENT STRENGTHS AND WEAKNESSES IN INTEGRATING MARKET-BASED FREIGHT-PLANNING CONSIDERATIONS (continued)

Market-Based Freight Considerations	Strengths in Existing Planning Practice	Weaknesses (Room for Improvement)
Environment	NEPA provides a codified process to assess environmental impacts from highway projects. It can provide an accounting of impacts relating to noise pollution, congestion, and other concerns relating to freight operations; and it can help identify appropriate mitigation strategies. The process also can validate freight projects by highlighting the benefits relating to air quality improvement from an improvement in highway flows or the quality of life benefits stemming from economic development within a depressed region.	Land use and freight connections need to be better understood (i.e., low-cost land next to highway interchanges). The environmental impacts of not completing the project should also be considered, in a multimodal context.
Safety	Safety plays a major role in the business decisions of freight stakeholders. Many freight organizations have worked to determine funding priorities for safety projects. Many DOTs are currently working to assess safety challenges on the highway system; however, the safety findings are not always properly communicated.	A closer connection should be forged between safety planning (i.e., Strategic Highway Safety Plans) and long-range freight highway planning (long-range plans, transportation improvement programs).

4 ENGAGING FREIGHT STAKEHOLDERS

Highway planning efforts have traditionally involved a wide range of stakeholders, depending on the interests and goals of the project and the needs of the individual organizations. Important stakeholders in a traditional planning process for highway capacity additions may include the following:

- Local governments;
- Residents within the study area and neighborhood associations;
- Commuters;
- Community leaders, including representatives from chambers of commerce and industry associations;
- Advocacy groups such as those representing environmental concerns and bicycle, pedestrian, or transit users; or
- Regulatory agencies (local, regional, state, and federal).

Each stakeholder group has a role to play and generally a strong position on the desired outcome of the projects. Often their interests are limited to local impacts. By contrast, freight stakeholders often have interests that cover a much broader area (i.e., their interests and travel patterns might spread across several MPO regions or states and beyond). For example, a manufacturer whose plant is located near a proposed highway improvement project may represent just one of several freight stakeholders potentially affected by the decision. Others include the suppliers, customers, vendors, and truck drivers who deliver to and pick up from the facility.

This chapter focuses on methods to engage freight stakeholders in the highway planning process by answering the following questions:

- Who are the freight stakeholders?
- When is it best to engage freight stakeholders?
- What are the methods to engage freight stakeholders?
- How to increase the efficacy of freight stakeholder outreach?

WHO ARE THE FREIGHT STAKEHOLDERS?

The freight stakeholders in your jurisdictions are the people, firms, organizations, or agencies that are somehow affected by goods movement. The Freight Stakeholders box illustrates—at a high level—the types of freight stakeholders directly involved in the movement of freight.

Freight Stakeholders

Private-Sector Freight Stakeholders
BCOs

Logisticians

Motor carriers

Railroads

Industrial real estate developers

Chambers of commerce and other business associations

Economic Development Agencies

Port Authorities and Marine Terminal Operators (MTOs)

Local Governments

Transportation Agencies
FHWA, state DOTs, MPOs

Other Stakeholders
Environmental and community groups, general public

Given the diversity of firms, agencies, and other groups interested, there is no single approach to engaging freight stakeholders in the planning and decision-making process. The interests of each firm or organization depend on its unique characteristics: its mission, its operations, the way it moves goods, its manufacturing process, product, profitability, marketing, and so on. Manufacturers, for example, are in the business of producing products and are less concerned with how finished goods get from point A to point B, and more concerned that they do get there—at a low cost and in the time frame promised to the customer. Other freight stakeholders, such as motor carriers, are in the business of moving cargo from origin to destination; they are often most concerned about potential routes and have a strong institutional knowledge of the highway system and its strengths and weaknesses. Still other freight stakeholders, such as BCOs, want the products they purchase to arrive at the destination as scheduled, as ordered, damage-free, and at the most economical cost. To improve collaborative decision making, it is critical to understand what motivates different types of freight stakeholders. This section discusses the primary motivations and interests of freight stakeholders, starting with the private sector.

Private-Sector Freight Stakeholders

Beneficial Cargo Owners

BCOs may benefit from the time savings or other efficiencies provided by transportation improvements. Engaging BCOs in the freight-planning process is important because they understand the nuances and dynamics of supply chains and how those supply chains use multimodal transportation systems. BCOs may be especially helpful in prioritizing freight investments because of

their broad understanding of the location and transportation characteristics of their business operations. BCOs can also identify transportation system deficiencies from the supply chain perspective and may offer potential solutions to address those issues.

BCO engagement can be difficult to obtain for a variety of reasons. This guide addresses the challenges of drawing out the voices of BCOs and third-party logistics service providers early and often in planning cycles. It also offers some potential strategies to more effectively make these stakeholders an integral part of the process and describes the benefits that public agencies can derive from implementing these strategies.

Logisticians

Logisticians arrange freight transportation for BCOs. Some BCOs employ their own in-house logisticians, but many BCOs hire third-party logistics (3PL) service providers. Logisticians perform a number of different functions, including the procurement of waterborne, rail, air, or trucking transportation required to move a product or input from production to consumption. They may also arrange transfers, warehousing, and fulfillment. The logistician's job is to design trips (as part of a supply chain) at the lowest cost or to meet other desired goals—such as fast transit time. Given their detailed understanding of the costs, timing, and other variables of freight movement, logisticians can provide a clear perspective on the importance of certain corridors or proposed improvements in the context of their supply chain. However, many past outreach efforts have failed to engage logisticians, in part because of the highly proprietary nature of their intelligence about the transportation system. After all, logisticians gain a competitive advantage with this knowledge and can be reluctant to share information.

Motor Carriers

Highway capacity planning efforts should engage motor carriers, not just because they represent a portion of the traffic on the highway, but because of the institutional knowledge and experience of drivers, dispatchers, and other company representatives acquired through years or decades of driving on the study corridor. More than automobile drivers—who can relate problems on a specific section of highway with which they have daily familiarity vis-à-vis their commutes or other journeys—the trucking industry understands the relative severity and longevity of problems on the highway network and how congestion or bottlenecks on one portion of the highway can negatively affect a larger portion of the corridor. This experience enables them to provide valuable input on the potential infrastructure investments (where, what, how much) to alleviate bottlenecks and system impediments and improve freight velocity.

Railroads

The trucking industry is the single largest customer of U.S. freight-rail industry. The relationship between trucking and rail has become more interdependent and synergistic with the advent and proliferation of containerized shipping methods, particularly over the past two decades. International and dedicated domestic shipping containers provide a high level of modal flexibility. The rail industry currently is undergoing dramatic changes to keep pace with the growth of intermodal demand. Major intermodal yards

have transformed railroad intermodal networks into hub-and-spoke systems. The multimodal nature of today's freight railroads means that planners should involve rail carriers in highway capacity planning because they have the ability to make concurrent or future investments on parallel corridors that may affect highway demand.

Industrial Real Estate Developers

Industrial real estate developers and property managers build and operate facilities which support goods movement. Their assets include warehouse, distribution, transfer, and fulfillment buildings. For this group, the relationship between sites (built and proposed) and the transportation system is the most important aspect of the highway capacity process. Truck, rail, port, and airport access and proximity are key variables in the site selection process. As such, they have a vested interest in the highway planning process.

Chambers of Commerce and Other Business Organizations

Chambers of commerce and other business organizations (e.g., forestry associations, manufacturer associations, and agriculture associations) are often interested in freight transportation projects as a means of sustaining business in a region or improving competitiveness. Chambers of commerce are typically local or municipal in scale but may cover broader regions (e.g., regional boards of trade), or the nation (e.g., the U.S. Chamber of Commerce).

Freight-related national business organizations often focus on federal policy (e.g., American Trucking Associations, American Associations of Railroads). In every state capital business associations represent their constituents on issues related to freight and transportation; these organizations include state trucking associations, agricultural associations, safety groups, and highway engineering groups. These groups are often sophisticated in their understanding of transportation policies, operations, and

Insight from the Case Studies
Role of the Columbus, Ohio, Chamber in the Planning for I-70

For many years, the MPO and Chamber of Commerce had overlapping freight advisory roles. Both groups struggled to keep stakeholders engaged in freight-beneficial projects. The MPO also experienced staff turnover and shifting regional priorities. The current iteration of the Columbus Region Logistics Council has been active since 2008 and includes four specific committees: the infrastructure, workforce, technology, and business environment committees. The Mid-Ohio Regional Planning Commission (MORPC) is most heavily involved with the infrastructure committee. Committee meetings are run by the Chamber, with planning and feedback provided by the MPO. The current organizational framework enables MORPC to become more directly involved in industry collaboration. Through the council, MORPC was able to better gain access for advocacy efforts, validate regional transportation needs, and explore funding opportunities. The region's freight-planning efforts and the partnership between MORPC and the Chamber have helped create a specific success at the Rickenbacker Intermodal terminal and have expanded activities throughout the region, attracting new business and contributing to the health of the regional economy.

the impacts of certain projects, including freight. Often the business organizations will collaborate with individual members (e.g., BCO) to take an official position on a proposed improvement. Traditionally, these groups have been active stakeholders in the highway planning process and should be encouraged to participate in the future.

Economic Development Agencies

Economic development organizations assist governments in sustaining and increasing economic activity. These agencies are involved in the freight-planning process in many jurisdictions because of the connection between transportation mobility (and investment) and economic performance. Agencies also work closely with companies that are expanding, launching, or relocating. As such, economic developers are attuned to the transportation needs of these firms and frequently work with their transportation agency partners to assist in the development of highway access to new buildings, sites, or factories. Economic development agencies are valuable not only for their understanding of the way in which highway capacity investments benefit businesses, but these agencies can also serve as gatekeepers to freight-dependent firms and constituents that may be interested in the planning process.

Ports and Airports

If the plan or project is located in an area with an active seaport, inland port, or airport, efforts should be made to engage the port authority and its MTO or the airport authority. The operations, marketing, and strategy staff associated with the port or airport can provide unique insight into the needs of their users. Ports and airports are often some of the greatest generators of truck and rail traffic in a region and should be consulted on local freight projects, corridor projects, and other studies.

Insight from the Case Studies
Involvement of the Ports in the I-710 Project

A growing recognition of deficiencies on a major truck corridor, Interstate 710 (I-710) connecting the San Pedro Bay ports in Southern California to markets outside the region, led the Los Angeles Metropolitan Transportation Authority and several other project partners to conduct a detailed major corridor study (MCS) in 2005. The purpose was to explore the implementation of improvements, including the potential for dedicated truck lanes. On completion of the MCS, the agency partnership elected to develop an EIR/EIS to comply with state and federal environmental statutes to move the project forward.

The organizations involved in both the MCS planning effort and the ongoing environmental review included the San Pedro Bay ports (Port of Los Angeles and Port of Long Beach), the Gateway Cities Council of Governments (consisting of nearly 30 cities in southern Los Angeles County adjacent to the I-710 corridor), Caltrans, and California State University Long Beach (through its METRANS program). The EIR/EIS outreach built on historical participation in corridor planning on I-710 by many regional stakeholders, each with a particular interest in the potential benefits from improving the corridor. The ports and other stakeholders were primarily interested in truck-related issues (including congestion, air quality, safety, and access). As a result, the scope of study was better defined, and it also fostered a constructive dialogue between the ports and the local community.

Local Governments

Local governments should be an integral part of the discussion about highway capacity improvements. Local governments often control truck route regulations, land use, and other factors affecting local goods movement. Local governments are becoming increasingly interested in the connections between freight transportation and freight-dependent land uses.

Transportation Agencies

While transportation agencies are responsible for leading the highway capacity process, they are also stakeholders in the process. To ensure that freight is integrated during the highway capacity process, the agency should make sure that its freight staff remains involved in the project, even if the project is being led by another office or division. In some cases, offices or divisions of the DOT, MPO, or other agency have much to offer to the freight-planning process, including the ability to integrate operations, safety, or other special topics.

Other Freight Stakeholders

A variety of other groups or individuals may be interested in freight-planning outcomes and may want to collaborate. Depending on the scope of the project, environmental, air quality, community groups, or private individuals may wish to be engaged in the process. As a rule of thumb, agencies should invite all the groups who are typically engaged in transportation planning, corridor studies, programming, or NEPA activities to be engaged in freight. Because many projects contain a freight element but are not necessarily freight focused, these groups and individuals may already be at the table; it may simply be a matter of making sure they understand the freight dimensions of the plan or project.

WHEN IS IT BEST TO ENGAGE FREIGHT STAKEHOLDERS?

To determine which projects should have a freight outreach element and the level of engagement from each type of freight stakeholder, a series of questions should be asked. The questions should be customized for the project or plan and existing conditions. The responses will help the agency tailor its outreach strategies and properly allocate resources for freight engagement.

Should the Agency Engage Freight Stakeholders in the Plan or Study?

To determine whether the planning agency should engage freight stakeholders (the why?), the following sample questions can be asked:

- For projects: Is the project or program located on a major freight corridor (e.g., access to a port of entry, major interstate)?
- For plans: Is the project an independent freight study?

Who Should the Agency Engage?

To determine which freight stakeholders (the who) the planning agency should engage, the following questions can be asked:

- Are there key BCOs or motor carriers that operate in proximity to this highway project?
- Will the plan or project affect other stakeholders, including those located outside the study area but which use the infrastructure?
- For how many and what types of stakeholder engagement do the project's scope and resources allow?

How Should the Agency Engage Freight Stakeholders?

To determine the where, when, and how, the following questions can be asked:

- Does a current freight-planning program or organized freight-stakeholder group exist?
- What are the best ways to engage this group?
  - Through a freight advisory committee (e.g., Delaware Valley Regional Planning Commission Philadelphia Goods Movement Task Force) or another study advisory group;
  - Through other means, such as interviews; or
  - Through existing stakeholder contacts (e.g., if some or all of the stakeholders have existing relationships with a partner agency such as the economic development authority).
- What are the agency's resources for freight outreach? How many meetings, surveys, and so on will (a) meet the needs of the project and (b) match agency resources (e.g., staff, travel/outreach budget, consultants)?

Insight from the Case Studies
Delaware Valley Regional Planning Commission (DVRPC) Philadelphia Case Study

According to DVRPC staff, freight stakeholders in the DVRPC area prefer to be engaged early and often. Members are informed and aware of upcoming topics and high-interest issues and are generally prepared to offer feedback at meetings. DVRPC uses a quarterly freight stakeholder's meeting (Goods Movement Task Force) to engage the freight community through periodic presentations on regional freight-oriented topics and the development of priority project lists for the long-range planning process. One particular approach that DVRPC employs to engage stakeholders is to use their insight on solutions to a larger issue (such as traffic problems on Interstate 95) and develop a tangible outcome (such as a letter of support for a potential solution) that formalizes the engagement. This allows the group to build confidence and provide a useful contribution to the process, rather than just to "check a box." Getting freight projects into regional plans help DVRPC members build confidence about their contributions to freight-planning efforts.

What Outcomes Should the Engagement Yield?

- What are the expected outcomes from the engagement activities (e.g., better understanding of regional/statewide logistics trends, list of projects that are beneficial for freight stakeholders, increased industry support)?
- Does the agency have specific outreach needs and desired information from certain stakeholder groups?
  - Public- versus private-sector stakeholder outreach needs;
  - Intra-agency groups;
  - Different outreach methods for different groups; and
  - High-level planning versus local operational considerations.

WHAT ARE THE METHODS TO ENGAGE FREIGHT STAKEHOLDERS?

Transportation agencies can employ a wide range of strategies to engage the freight stakeholder community. Engagement activities can be conducted through a freight advisory committee (see steps in the How to Establish a Freight Advisory Committee box) through creation of a project-specific ad hoc grouping based on specific project needs, or through other methods.

How to Establish a Freight Advisory Committee or Prepare a Stakeholder Outreach List in Five Easy Steps

1. Research any previous studies that engaged the freight community and note any contacts with industry groups, trucking associations, railroads, or other freight-dependent organizations.
2. Identify preferences for size and scale of the group and how much you intend to use members.
3. Contact the state trucking association and regional chamber of commerce to request contacts from organizations in the region who might have members willing to participate in the planning action. (Note: In most areas, freight stakeholders have been engaged in one capacity or another, such as for a bridge or other large project.) MPOs can contact local jurisdictions to connect with additional stakeholders.
4. Prepare a list of potential advisory committee members with full contact information and vet the stakeholder list with either the MPO, local jurisdictions, or a partner organization (such as a chamber of commerce or regional or statewide economic development organization). This advisory group can be institutionalized or ad hoc and should consist of a large or small range of stakeholders. Some stakeholders, such as larger organizations with greater resources (e.g., Class I railroads), may have ongoing involvement; other organizations (such as small BCOs or motor carriers) may wish to be included only in mass media outreach material (e-mail blasts, meeting announcements, surveys) that will allow them the opportunity to provide feedback on specific issues that apply to them.
5. Gauge stakeholder interest in participating in the project. Try to find an angle to explain the benefits from their participation (e.g., funding for improvements to truck routes, improved access to a warehouse).

In passive outreach efforts, agencies disseminate information to a large group of people with varying degrees of interest in the final outcome. However, the results of this outreach may or may not provide any specific or usable feedback.

Common outreach methods include the following:

- Establish freight advisory committees.
- Convene freight stakeholder meetings, in which the agency makes a presentation on the plan, project, or program, including details on the project, such as study area, time frame for completion, known effects on the community, and expected result.
- Hold workshops at which public agencies assemble stakeholders to work through some issues using visual displays of information and formal and informal facilitation techniques to elicit comment and ultimately reach consensus.
- Disseminate project materials, including newsletters, by mail or e-mail with a request for comment.
- Regularly update websites to keep stakeholders informed and provide a repository of documents and other resources.
- Conduct interviews with stakeholders, both in-person and by telephone or, depending on the stakeholder, through online survey tools.

These activities comprise both passive and active outreach methods. Active outreach efforts generally entail a request for specific feedback or some kind of vetting process, whereas passive outreach is generally intended to disseminate information and engage a large group of people at the same time. Depending on the type and complexity of the project or the level of controversy, several different methods could be employed to engage stakeholders. Specific approaches to each of these methods are detailed.

Freight Advisory Committee

For the agency to maintain freight contacts and build trust, it is helpful to have a permanent group of private-sector representatives and key freight stakeholders available to advise and interact with the MPO or DOT. Committee members can rotate out as needed, but a core group should remain for some period of time for the sake of continuity and to maintain institutional knowledge. The committee should meet as regularly as makes sense, provide advice, and report to a high-level person such as a DOT director or state transportation commission. Committees such as these can provide ongoing technical input on formal local, regional, or state transportation plans; vet ideas and potential solutions; compel public officials to consider the multimodal transportation system beyond local jurisdictional boundaries; recognize issues from a macro view rather than a project-to-project perspective; and help ensure the public agency adequately addresses the concerns of the freight community.

Freight Stakeholder Meetings

Freight stakeholder meetings can take a number of forms but typically include at least the following components: (1) information on the plan or project provided by the agency and (2) an opportunity for stakeholders to comment. Often the agency starts the meeting with a presentation or speaker. In some cases, the agency uses an open-house format with poster boards to disseminate information. Agency staff, who may sometimes be supported by consultants, are present to answer questions, engage attendees in discussion, and record notes and comments from stakeholders. For example, the Commonwealth of Virginia recently hosted a freight open house with poster boards and comment card stations where attendees could sit down and record their observations on the development of a statewide freight plan.

Workshops

A workshop is a type of freight stakeholder meeting; it is typically lengthier (sometimes a half day or a full day) than a traditional outreach meeting and requires attendees to participate in a series of interactive activities. Workshops are helpful if agencies want to collaboratively engage freight stakeholders to make decisions (e.g., voting, consensus-building exercises). Workshop attendees can also validate findings, strategies, and goals of the planning effort. Workshops work best if they are by invitation so as to bring together a balanced mix of perspectives. Expectations for the workshop should be spelled out. Agencies might require RSVPs and provide a meal if the meeting spans several hours.

Focus Groups

Focus groups are professionally facilitated meetings, often run by a market research firm. Focus groups are designed to conduct an in-depth assessment of the perceptions, priorities, and insights of freight stakeholders. Focus groups work best in a small-group format. Finding the right stakeholder mix is essential for the focus group to yield usable information. For example, if competing firms are involved in the meeting, they may not reveal much information.

Project Materials

Project materials include documents, plans, newsletters, and other materials meant to inform and engage stakeholders. Transportation agencies have significant expertise in developing effective documents and tools for outreach to the general public. Brevity is the most important characteristic of project materials—for example, graphics, maps, tables, and a format that lends itself to quick absorption.

Study Websites

Study websites are necessary to distribute project materials, to keep stakeholders informed. There is no particular formula for making a freight-oriented study website successful. The same principles that apply to other project materials should be followed (e.g., brevity, clarity, and organization to make the experience efficient). Websites must be updated regularly to remain effective.

Interviews

Planners may be more successful in collecting information and feedback to inform the decision-making process by conducting in-person visits. These visits (or interviews) help build the agency's credibility and foster relationship building. Telephone interviews can also be effective. Regardless of which method is used, interviews provide an opportunity for a two-way conversation. In the absence of other stakeholders (e.g., at a group meeting), business participants often feel more comfortable describing their operations and challenges. Interviewees appreciate the opportunity to review the document in draft form, especially if the agency develops an interview summary.

HOW TO INCREASE THE EFFICACY OF FREIGHT STAKEHOLDER OUTREACH

Freight stakeholder outreach is often an example of the concept of planting seeds and harvesting later. Unlike public outreach, which can yield immediate feedback and quick results, freight engagement can require an extended period of concentrated effort before participants—especially private firms—determine that participation will be mutually beneficial. Successful freight outreach efforts often exhibit the following characteristics:

- ***Develops custom outreach approaches.*** Public-sector agencies and project sponsors and staff must be creative when attempting to engage freight stakeholders and employ various methods, sometimes ones that differ from those used to engage private citizens and other types of stakeholders. For example, public forums and open houses are not always well attended by the freight community. Methods that work best for freight stakeholders include formal working group meetings, technical advisory committees, interviews and requests for input via phone and in-person meetings, presentations in the field, and listening sessions.
- ***Sets reasonable expectations.*** Agencies should also manage their expectations and not be too ambitious when attempting to engage freight stakeholders. Some efforts, despite careful planning and footwork may not capture broad input from the freight stakeholder community. Agencies should be prepared for that possibility and expect to step back and evaluate how the program can become more successful in the future.
- ***Leverages freight advisory committee members.*** One or more members of the freight advisory committee could be recruited to participate on official planning committees and offer valuable input during the planning cycle. These participants can act as project ambassadors to advocate for the project with their colleagues.
- ***Recognizes the importance of timing.*** There is a perception within the private-sector freight community that often they are invited to become involved too late in the planning process to have real influence on the outcome; and at times the most appropriate individuals are not targeted for participation regardless of the timing. These factors lead to a lack of compelling incentive for private industry stakeholders to get heavily involved in freight transportation discussions with DOT and

MPO planners. BCOs and motor carriers are mostly interested in participation during the project selection and alternatives analysis phase of the planning process, but especially before the settlement and allocation of funds. Once the NEPA process has begun, there is less flexibility in determining project outcomes, and resources for projects have generally already been allocated.

- ***Recognizes differences in planning horizons.*** Successful engagement takes into account the disparity among public and private stakeholders' operational time frames and priorities. Public-sector horizons might be 20 or 30 years, while private-sector planning is typically short term (1 to 5 years). This disconnect can lead to differences in expectations and outcomes for public and private partners and can hamper participation (during busy cycles). For instance, late summer and fall are very busy periods for many shippers to prepare for the holiday season. This is not always the best time to engage stakeholders.
- ***Uses freight stakeholders to identify and prioritize needs.*** Carriers, shippers, and other stakeholders know the system very well and have the ability to assist in identifying general areas of congestion and bottlenecks. They are not necessarily helpful in pinpointing specific problems. However, they are good at vetting needs/deficiencies and proposed solutions based on a thorough data-based analysis. This vetting helps agencies prioritize investments.
- ***Engages the freight community early.*** Early involvement from the freight community is essential to address the project's purpose and needs, and to develop an evaluation framework and performance measures to ensure the designs developed meet the purpose and needs. Paying attention to freight stakeholder input at the beginning and throughout the planning process will demonstrate to them that policy makers value their input and want them to be engaged, which will make freight stakeholders more willing to dedicate their time to participating in the future.
- ***Includes freight in nonfreight projects and plans.*** Issues arise when key freight stakeholders are not invited to participate in the long-range transportation planning process in cases in which the project purpose is not clearly defined for freight. Regular meetings of freight advisory committees provide a means of overcoming this problem by providing a forum for both BCOs and motor carriers to discuss ongoing priorities. Including these advisory committees in public-sector meetings ensures a more comprehensive private-sector involvement. Examples of public-sector advisory groups include the Marine Transportation System National Advisory Council (MTSNAC), Puget Sound Regional Council (PSRC), Regional Freight Mobility Roundtable, and Delaware Valley Regional Planning Commission (DVRPC) Goods Movement Task Force. The case studies for the PSRC and DVRPC describe their best practices in more detail.
- ***Takes advantage of NHI and other training resources.*** Agency staff can become more effective at fostering collaboration with the private sector by participating in training programs (e.g., NHI 139003: Advanced Freight Planning). This also applies to top government officials who are sometimes not engaged or supportive of freight-planning efforts, likely because of their lack of knowledge about freight matters. It

is important for top officials to be advocates of projects that will benefit the freight community, and educating them one-on-one may be the most effective method. Adding a component that details what motor carriers and BCOs do and the role they play in the freight transportation system can further broaden the understanding of industry needs. Arranging on-site learning for policy makers offers a more complete understanding of freight operations and needs. It is critical for policy makers to interact and learn from system users so they can make better decisions. Additionally, teaching DOT and MPO planners the appropriate questions to ask of industry stakeholders is critical to the assimilation of freight-planning knowledge into the planning process. Using operations as an example, planners need to know that industry logistics decisions are generally short term (not necessarily day to day, but frequently monthly or annually) and that freight routing decisions can change very quickly in response to trends and changing conditions; conveying this information to planners can be critical to expanding the effectiveness of highway projects that serve a freight need.

- ***Informs and educates public officials and the public.*** To reach agreement on potential project designs, it is important to educate the public, government officials, and other stakeholders about how supply chains function and the connections among trade, freight mobility, and a vibrant economy. Freight stakeholders can be instrumental in providing technical information in this endeavor.
- ***Uses freight stakeholders to inform highway design.*** Freight stakeholders are knowledgeable about such things as truck turning radii, moving over-dimensional cargo, and behavioral issues like truck acceleration and the impact of the steepness of a particular grade. Therefore, establishing an official freight working group (or technical committee) to be involved in addressing day-to-day operations and technical issues, such as potential conceptual designs, can be vital to the project's progress and enable project designers to deliver better designs and solutions.
- ***Collects and integrates critical information from the private sector.*** Freight stakeholders can be reluctant to offer candid comments and proprietary business profiles, strategies, and data to public-sector representatives during official surveys or interviews, knowing their information will be included in a report, which will

Insight from the Case Studies
Baltimore Metropolitan Council Case Study

The Baltimore Metropolitan Council's (BMC) Freight Movement Task Force (FMTF) includes representatives of the Class I railroads (both Norfolk Southern and CSXT railroads), key regional BCOs (including McCormick Spices), the Maryland Motor Truck Association (MMTA), and representatives from local jurisdictions. The railroads originally became involved through the development of rail access plans during the past decade and have remained consistently engaged. Other stakeholder involvement has centered on providing insight and feedback to origin–destination (O–D) surveys, routing, and measuring volumes of truck traffic on highway facilities for specific studies.

become part of the public domain. Under these circumstances it is unreasonable to expect businesses to provide information that they feel might undermine their competitive position. Yet, there are critical pieces of information on how stakeholders use the system that are vitally important in improving agency efforts to integrate freight into the capacity planning process. One way to potentially gain powerful insights into freight stakeholder perspectives and needs is to deploy staff with knowledge of the freight industry. This is not to say that government agencies will have no success in engaging freight stakeholders, but their staff or representatives must be knowledgeable about goods movement and supply chains to be more credible with the private sector. Staff with freight knowledge will instill stakeholders with confidence in the agency and will have a higher likelihood of prompting helpful responses during interviews and meetings. They may be able to potentially gain access to proprietary data that would inform the planning process. And they may offer assurances that the proprietary data collected will be kept confidential.

- ***Continually seeks fresh perspective.*** Effective freight outreach efforts should attempt to continually engage new or different stakeholders to provide fresh perspectives. The insights provided by firms and organizations who have not previously been engaged—or have not been asked for their views on a specific project—can improve an agency's ability to make decisions and can reenergize existing stakeholders. Sometimes their input will be novel; in other instances it will validate existing views or data analysis. The stakeholder renewal process should reduce agency dependency on individuals or companies who consistently participate in the process or who the government calls upon on a regular basis. To renew the stakeholder pool, agencies should reach out through networking and proactive reconnaissance with partners (e.g., economic development agencies) and by working with trade associations to engage their members. This should include a mix of small and large firms and shippers with diverse goods movement needs.
- ***Keeps stakeholders informed.*** Keeping freight stakeholders informed about critical issues, design changes, decision points, and key milestones during the planning process is critical to keeping them involved. Throughout this process, planners should be respectful of freight stakeholders' time by not overloading them with extraneous information or constantly soliciting general input. Let them focus on critical and technical issues and decisions.
- ***Recognizes the linkage between transportation and economic vitality.*** When a freight stakeholder testifies at a public meeting or provides input on the project, he/she actually represents numerous jobs, not only himself or herself. Freight stakeholders are sometimes concerned that a few vocal individuals, speaking only for themselves or a few others, can drown out the input and opinions of the business community, thereby causing potential harm to economic vitality. Freight stakeholders can provide important background information and a clear understanding of the issues and technicalities and, therefore, should be heard. Freight stakeholders agree that citizens should be afforded equal access to the planning process, but the

project decision making should depend on the quality and relevance of the information contributed.

- *Articulates benefits of participation.* It is important to codify the message of "what is in it for me" to provide to freight stakeholders before soliciting their input and support. They will be much more likely to engage, as well as be more forthcoming with information if they see direct value and personal or company benefit as a result of their involvement. Too often, freight stakeholders are asked to be involved in meetings and discussions on freight issues at which public agency staff and/or their consultants do not properly express how stakeholders can benefit from involvement.
- *Recognizes that responses may be stronger for projects than for plans.* Freight stakeholders are generally more interested in discussing real projects once funding has already been secured and there is a strong likelihood that the projects will be completed. While engagement may be practical and substantive during earlier planning phases or conceptual project development, many freight stakeholders may be more responsive when discussing projects that will likely affect their near-term operations. For example, when soliciting feedback about projects from motor carriers, planners should clearly focus on the target area. An effective effort will take this into account.

Summary of Effective Methods

Identifying how different types of stakeholders respond to various levels of engagement is critical to effective communication and feedback. Table 4.1 shows which outreach method may be the most effective by freight stakeholder type. *Effective* is defined as the ability of the activity to motivate a response or participation in the activity. The table is divided into two major sections: Focused Outreach on the left and Ongoing Dialogue on the right. Under each of these headings are listed some (but not all) the potential strategies to engage freight stakeholders in the collaborative decision-making process. Cells with open circles indicate a general interest by the stakeholder in participating. Solid circles indicate a high likelihood of success in effective collaboration with freight stakeholder. Empty cells indicate that the particular outreach method is likely to yield little useful information if employed for that kind of stakeholder.

The application of this table might differ widely by jurisdiction, depending on the mix of stakeholders, the project/plan in question, and other variables. The following are constants:

- Public or quasipublic agencies are inclined to participate in most types of engagement methods.
- Telephone interviews—and to a lesser extent in-person meetings—are generally effective across most stakeholder types.
- Participation in events or committees—when the individual has been personally invited and the event is clearly defined—is often strong.

TABLE 4.1. MOST EFFECTIVE OUTREACH METHODS FOR KEY FREIGHT STAKEHOLDERS

	Focused Outreach				Ongoing Dialogue	
Key Freight Stakeholders	Freight Meetings	Workshops or Focus Groups	Telephone and In-Person Interviews	Surveys (e.g., online)	Freight Committee	One-on-One Meetings
BCOs	○	○	●		○	○
Logisticians	○		○			○
Motor carriers	●	●	○		●	○
Railroads	○	●	●	○	●	●
Commercial real estate	○	●	●		○	●
Chambers of commerce and business groups	●	●	●	●	●	●
Economic development agencies	●	●	●	●	●	●
Port authorities and marine terminal operators	●	●	●	●	●	●
Local governments	○	○	●	○	●	●
Transportation agencies	●	●	●	○	●	●
Other stakeholders	○	○	○	○	●	

Note: ● = high likelihood of success in effective collaboration with freight stakeholder, ○ = general interest by the stakeholder in participating, and empty cells = likely to yield little useful information if employed for that type of stakeholder.

The Toolkit section of Chapter 6 provides additional depth on several outreach topics.

WHAT ARE THE BENEFITS FOR PUBLIC-SECTOR AGENCIES FROM IMPROVED FREIGHT OUTREACH?

Effective collaboration with freight stakeholders can prove beneficial to public-sector agencies in the following ways:

1. The public-sector agency will find more success in maintaining and enhancing the multimodal transportation system to meet the needs of freight stakeholders.
2. Highway projects with the most relevance and positive impact on freight stakeholders will be more appropriately ranked and prioritized.
3. Freight stakeholders can put forward alternative system solutions and technical input; all potential solutions will be more effectively vetted, pointing to the solution that has the best cost/value ratio and that will most positively affect the movement of freight.

4. Cooperation among the freight community, other types of stakeholders, and public-sector agencies will be enhanced, and project opposition will be minimized.
5. Local, regional, and state economic vitality and retention of existing and attraction of new businesses can be directly attributable to transportation infrastructure projects and public policies that reduce congestion and enable speed-to-market for products.

Freight stakeholder contributions to the collaborative decision-making process for highway capacity additions can not only enhance the advocacy for the project but provide a breadth and depth to the project evaluation process. Freight stakeholders are unique in their connection to the regional and statewide economies and can expound the importance of market-based considerations in the planning process.

5 DECISION POINTS

KEY DECISION POINTS FOR FREIGHT STAKEHOLDERS

The unifying paradigm of the SHRP 2 program is the four-phase decision flow structure: long-range transportation planning (LRTP); programming (PRO); corridor planning (COR); and environmental review and permitting (ENV). The SHRP 2 program has defined more specific steps within the decision flow structure. In response to the interview and case study findings, the freight decision flow diagram outlines the individual steps of the highway planning process and highlights the most important findings in a two-dimensional way. The first dimension highlights the most critical decision points for engaging freight stakeholders among the 11 decision points of the SHRP 2 framework. As shown in Figure 5.1, the shaded cells in the matrix illustrate the relative importance of the decision points for freight. Four points stand out as the most critical and are shaded darkest blue. They include (in order of importance) identification of needs, potential improvements, development of evaluation criteria (note: potential improvements and development of evaluation criteria have equal importance), and project/plan review. More critical points are shaded medium blue, while less critical points are shaded light blue. This relative rating system is intended to help transportation agencies prioritize their outreach efforts. For example, an MPO planner developing a long-range plan may only have available resources to engage freight stakeholders during two of the major decision points. In that case, the planner should focus the outreach during the needs identification and either the identification of potential improvements or development of the evaluation criteria.

The second dimension—illustrated by the *Consumer Reports*–style circles and semicircles embedded to the left of each cell—depicts the desired level of effort for engaging freight stakeholders during the course of making each decision. The level of engagement ranges from little/no engagement to extensive engagement. At the

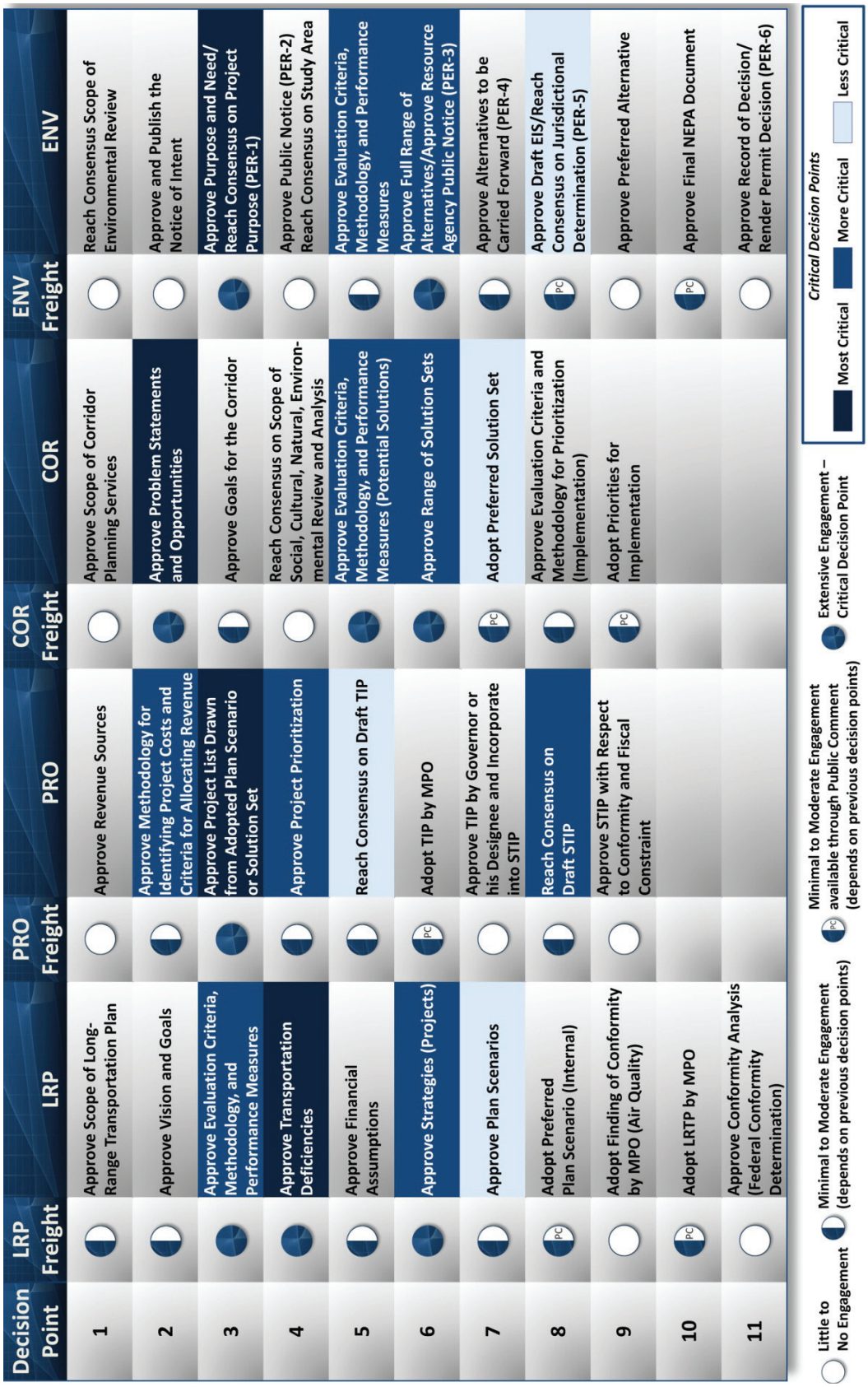


Figure 5.1. *SHRP2 decision flow diagram including stakeholder engagement and relative importance of decision points for freight.*

extensive engagement level, transportation agencies should ensure that the freight community offers substantial feedback, demonstrating the ideal level of engagement for the freight stakeholders.

Note that this guide excludes four decision points in the overall SHRP 2 decision-making framework because those points are procedural and would not involve stakeholder interaction (the most up-to-date overall framework, which includes all the decision points, is at http://www.trb.org/Main/Blurbs/170008.aspx). Excluded decision points are ENV 9, Approve Resource Agency Purpose and Need; ENV 11, Approve Final Jurisdictional Determination; ENV 12, Reach Consensus on Avoidance and Minimization for Least Environmentally Damaging Practicable Alternative (LEDPA); and ENV 15, Render Permit Decision and Approve Avoidance and Minimization.

The guide reflects the structure proposed in the SHRP 2 program, but the guidelines should not be viewed as hard and fast. For example, some policy makers may find that combining PRO with the policy topic and placing them before the LRP process makes more sense for their regional conditions. Agencies should not be afraid to tailor these suggestions to suit their needs.

This section describes the role for freight stakeholders at each decision point in the planning process across the four phases. While many of the decision points optimally require extensive engagement of freight stakeholders, others require little or none to help guide the planning process and integrate freight considerations into the planning process. Identifying an appropriate freight stakeholder group for each project can be challenging; if there is an existing group or list of stakeholders that can be used for the current planning efforts, using it would save project resources. For example, eliciting support from stakeholders is a very time consuming process as it takes time not only to identify appropriate freight stakeholders who can add value to the planning process, but even more to build the institutional trust for their involvement. At the outset, planners should ask the following initial questions to determine the value of identifying or reconvening a group of stakeholders that has previously offered support:

- For the latest iteration of the LRP, was there a separate section for freight transportation in the modal discussion and was freight integrated throughout the LRP?
- Has there been a recent (i.e., within the last 5 years) statewide or regional freight study that identified or engaged freight stakeholders?
- Who are those stakeholders? Did they provide any useful feedback?
- Has there been any ongoing contact with those stakeholders either through the DOT or MPO or a partner organization (e.g., economic development organization, chamber of commerce)?

If a freight advisory committee or council does exist, announce the development of the LRP (or STIP/TIP, corridor study, or NEPA document preparation) at a regularly scheduled meeting—or organize a new meeting if the group is inactive—and share the anticipated role for stakeholders (e.g., when they will be called on to provide feedback, identify needs, evaluate criteria, offer strategies) and the time frame. If an ongoing group does not exist, DOT and MPO staff should develop a freight stakeholder list

most appropriate for the scope and scale of the study (i.e., smaller study likely would yield a smaller list of participants). The list could include major industry participants, motor carriers (or the regional or state trucking association), the railroads, and economic development stakeholders (such as the chamber of commerce), among others. The FHWA *Guidebook for Engaging the Private Sector in Freight Planning* provides more detail on forming a stakeholder advisory group for freight stakeholders.

LONG-RANGE PLAN

Freight projects and issues should be included in the LRP, and their number should be based on the role of freight transportation in either the region or state.

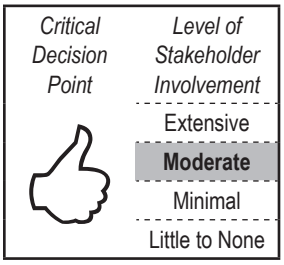
Engagement of freight stakeholders during the development of the LRP should involve the formation or activation of a freight advisory committee or other collection of stakeholders to provide feedback during each phase of the process. A kickoff meeting at the outset of the project to discuss the scope (LRP 1), vision and goals (LRP 2), and system needs (LRP 4) can help members get acclimated to the process and provide insight into the priorities of system users.

The LRP process has four critical decision points for freight. This is not to say that the other decision points are irrelevant; however, in a constrained environment (e.g., time, funding), engagement at these four decision points will yield the greatest value to the MPO or DOT planners in understanding freight interests. The four critical decision points are as follows:

- Approve Evaluation Criteria, Methodology, and Performance Measures LRP 3.
- Approve Transportation Deficiencies, LRP 4.
- Approve Strategies (Projects), LRP 6.
- Approve Plan Scenarios, LRP 7.

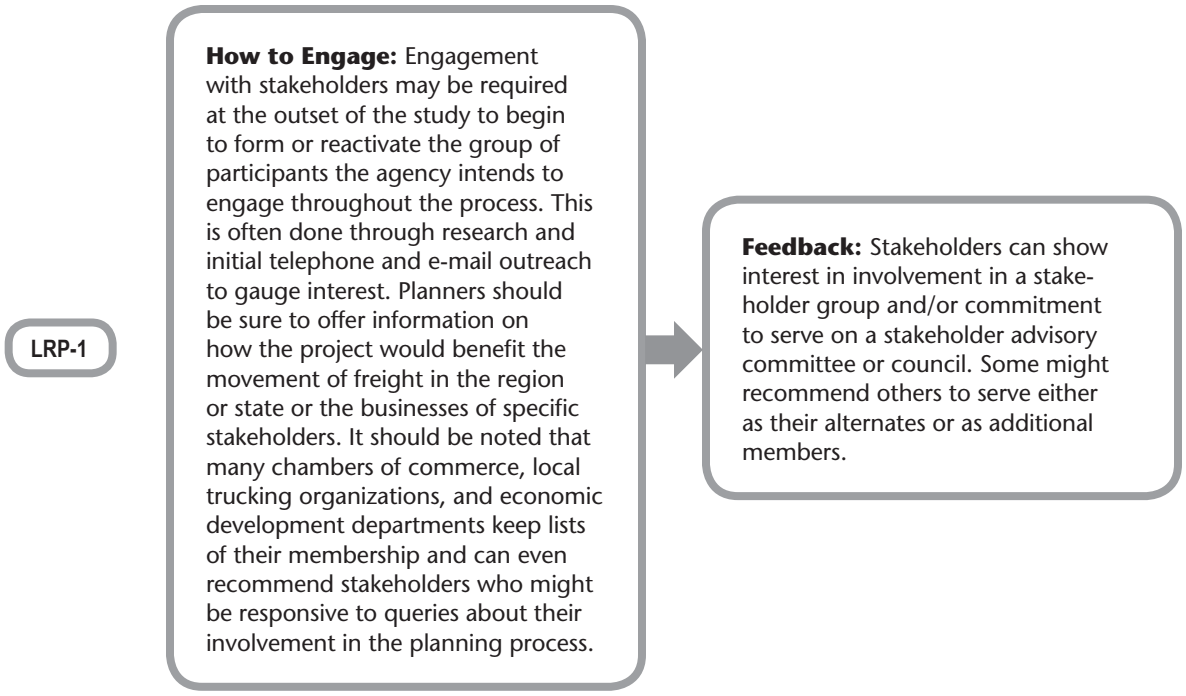
The following sections outline the role for freight stakeholders at each decision point in the long-range planning process and describe potential engagement activities and expected feedback from stakeholders following the engagement effort.

LRP 1: Approve Scope of Long-Range Transportation Plan[1]



In many jurisdictions, the scope of the long-range plan includes several chapters or sections describing the role of different modes (e.g., bicycles, transit, airports, highways, rail, and pipeline) in the region's or state's transportation system. The movement of freight on the transportation system (i.e., the commodity flows on trucks, trains, through the air, through pipelines, and on the water) can generally be evaluated in one of two ways:

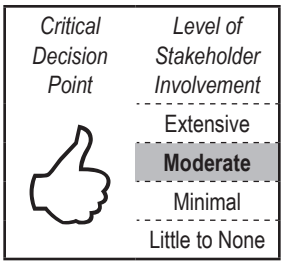
1. A separate freight modal section that includes a discussion of goods movement activities in the region on each mode; or
2. Discussion of how freight issues relate to travel on each mode within individual modal sections.



Whichever method is selected, discussion should be included on the interconnections between modes. For example, the Existing Facilities or Current Trends sections of the LRP may include information on the roadway network in the state or region, including annual average daily traffic (AADT) or volume to capacity (V/C) ratio data or maps and general trends or issues on the roadway network (i.e., key bottlenecks). To account for freight, the LRP could include an evaluation of data on existing truck routes, annual average daily truck traffic (AADTT), location of major freight facilities, and/or tables and charts on commodity flows by truck. The freight elements of the LRP should also consider the relationship of truck trips (and planned facilities) to other modal needs and plans, including bus and bicycle plans for that section of the freight corridor.

The level of stakeholder involvement during the initial development of the scope and scale of the long-range plan is focused on marshaling resources and identifying an appropriate strategy for reaching out to the freight stakeholder community. Involvement with the freight stakeholder community during the early work is most effective in conjunction with decision points LRP 2 and LRP 4 to give the stakeholders not only the context of the study, but also some substantive information to which they can respond. Most of the efforts at this early stage should be on establishing a diverse and potentially engaged stakeholder group that can maintain involvement throughout the planning process.

LRP 2: Approve Vision and Goals



Freight stakeholders should also be consulted when developing the long-range transportation plan vision and goals, especially when economic development, business attraction, and quality of life are concerned. Freight system users, like business leaders, manufacturers, and consumers, are able to provide insight into their long-range goals and objectives; and freight stakeholder outreach provides planners with a better understanding of those goals. Certain key stakeholders (such as large BCOs, manufacturers, growers, and processors in the region) may provide insight into broader regional, national, or international trade and transportation trends that may affect future infrastructure needs in the MPO region or state where the LRP is being developed. It is important to recognize and account for the potential incongruence between the planning horizons of freight stakeholders, many of whom represent the private sector, and the planning horizon for the LRP. The LRP will have a planning horizon of 20 years or sometimes more, while many freight stakeholders might consider 2 to 5 years as a long-range planning horizon.

Freight stakeholder involvement at this phase can be either minimal or moderate depending on resources or whether an existing freight advisory group can be reengaged. As already noted, it is usually best to consolidate the engagement activities, especially when several issues can be addressed at one time. Including the discussion of the scope of work, vision and goals, and other issues can help maximize the outreach effort and maintain goodwill with stakeholders in the freight community who might feel "fatigue" at constantly being asked for information and advice.

During the development of the vision and goals, some participants such as major BCOs may be more focused on high-level issues (e.g., regional or national logistics and industry trends) and may be more interested in systemic highway improvements (national policies, connections between states). Motor carriers or local businesses may be more concerned with local access issues such as truck-turning radii, congestion on city streets, delivery schedules, and truck parking.

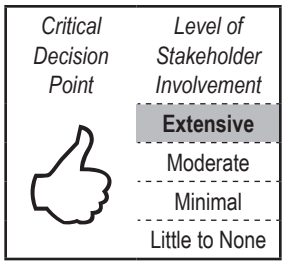
Insight from the Case Studies
Coordinating Freight Stakeholder Engagement Between MPO and State Activities

In a recent statewide planning effort—the Maryland Statewide Freight Plan—the Baltimore Metropolitan Council's (BMC) Freight Movement Task Force (FMTF) was involved in organizing the region's stakeholder response, which included helping identify members to serve on the advisory task force. The participants in the group were expected to provide insight on evaluation criteria, visioning, and project identification. For other regional or statewide projects that required insight or data from stakeholders, this information has been provided through one-on-one interviews conducted by consultants or the BMC staff themselves.

LRP-2

How to Engage: A stakeholder kick-off meeting should be held to present the vision and goals of the overall long-range transportation plan. It is generally best to have stakeholders respond to vision and goals that have already been at least partially developed by staff since many will be unfamiliar with the process. The project kickoff meeting to discuss information at these initial decision points could be combined with others. For example, one meeting could discuss freight needs relating to the scope of work (LRP 1), project vision and goals (LRP 2), and transportation needs (LRP 4).

Feedback: Comments should be solicited from stakeholders on outreach strategy, project goals (and consistency with stakeholder goals), and recommendations for additional participants in the stakeholder group.



LRP 3: Approve Evaluation Criteria, Methodology, and Performance Measures

Performance measures are used in the development of long-range plans to prioritize projects and programs in the jurisdiction and provide ways to vet worthy projects in a constrained funding environment. Strategies for evaluating the efficiency and operation of freight-oriented facilities can differ from those used for other modes and should take into consideration the needs and goals of the freight users. Performance measures for evaluating freight projects can include both quantitative and qualitative measures. Evaluation criteria could include, among others, mobility or congestion considerations for trucks; access to clusters of manufacturing, logistics, or distribution activities; safety and security; and cost of operations.[2]

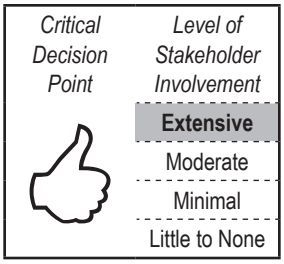
Trucking companies, railroads, and business representatives should be able to review and contribute to the development of performance criteria and evaluation methodologies. Private stakeholders may suggest new metrics or provide access to data sources and other information to determine the impact of the long-range planning program on the existing and future goods movement operations. Smaller-scale freight stakeholders may not have a clear understanding of evaluation criteria or performance measures, but a more active freight advisory group may be able to validate the selection of specific performance measures with a relatively uniform voice. Soliciting the input of a freight advisory group at this point provides a chance to integrate the goals and requirements of system users into the planning process, leading to a better project outcome.

How to Engage: Discussions with a freight advisory group (or an ad hoc collection of freight stakeholders) can help review and vet the evaluation criteria to be used in the long-range plan. It may be most practical to have preliminary criteria already developed so stakeholders can respond, instead of having them come up with criteria from scratch. This can also be done at a meeting with the goals (LRP 2) and deficiencies (LRP 4).
Separately engaging freight-planning staff in other jurisdictions (e.g., cities within an MPO area or neighboring region) can help ensure consistency between identifying and promoting freight-beneficial projects throughout a region or state.

Feedback: Private stakeholders can recommend or provide access to data sources and other information to determine the impact of the long-range planning program on the existing and future goods movement operations. Freight participants can also help validate performance measures and evaluation framework to assess transportation projects for their relative freight benefit.

LRP-3

LRP 4: Approve Transportation Deficiencies (Needs Identification)



Perhaps the most critical decision point for engaging freight stakeholders is the identification of transportation deficiencies. Highway system deficiencies such as major interchange bottlenecks likely affect both the freight community and passenger community (e.g., daily commutes, leisure travel, school trips). However, freight stakeholders will be able to identify concerns for the transportation system as it relates to truck and other goods movement mobility. These concerns may include geometric shortcomings (e.g., the turning radii for trucks exceeds the constructed turning apron),

Insight from the Case Studies
Vetting the Project List with Freight Stakeholders at the Delaware Valley Regional Planning Commission (DVRPC)

When the LRP is developed, the Goods Movement Task Force (GMTF) at the Delaware Valley Regional Planning Commission is presented with the opportunity to review and comment and provide an endorsement of the draft plan. This provides value to private-sector stakeholders; however, it is important for the public-sector organization to balance the amount of review required with the time constraints and level of interests of certain stakeholders. Many stakeholders are satisfied with a review of the final product as a final check, as opposed to continually reviewing and providing feedback on draft plans.

One very important component in the DVRPC outreach method was the distribution of only relevant sections of the draft LRP documents rather than the entire document for the private-sector freight stakeholders to review, saving participants' time and more efficiently soliciting their feedback in the process.

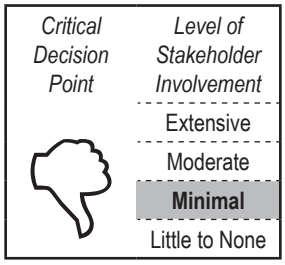
peak travel demand for freight vehicles (e.g., deliveries, through trips from region to region), safety issues, and conflicts between freight and passenger vehicles.

Freight users should be heavily involved in the discussion of needs to provide insight into how transportation infrastructure decisions can affect product flows, logistics, BCO supply chain strategies and decisions, shipment transit times, operating costs, and regional economic development. Some freight stakeholders, such as smaller motor carriers or BCOs that only operate in a small section of the study area, may not have the resources to participate in all these discussions, but they should be able to review and comment on data sources and lists of identified needs once developed.

LRP-4

How to Engage: Data collected through telephone or in-person interviews, charrette or stakeholder workshops, detailed surveys, and simple question and answer sessions in a meeting are effective methods. Meetings can also help validate survey/interview findings.

Feedback: Survey/interview responses can include lists or validation of infrastructure needs, specific bottleneck locations, and operational and institutional constraints that could be mitigated by transportation improvements.



LRP 5: Approve Financial Assumptions

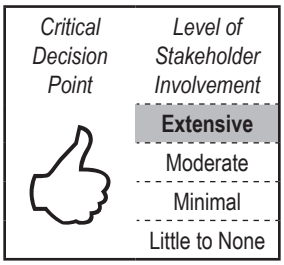
The discussion of financial assumptions (i.e., how the improvements outlined in the LRTP will be paid for) should take into consideration both the short- and long-term needs of the freight community. Explaining the planning and funding horizon (often at least 25 to 30 years) to freight stakeholders can sometimes be a challenge since they generally plan infrastructure and investments on a much shorter (often less than 2 to 5 years) time scale. Taking some time to explain the local, state, and federal funding and project finance processes can minimize confusion down the road (although it is probably best not to overwhelm stakeholders with all the details of highway finance). This decision point probably does not require a separate discussion with stakeholders unless there is significant interest in exploring public–private partnerships (PPP) or all new roads in the jurisdiction are toll roads (to discuss the impact on business). Freight stakeholders are often amenable to discussing PPP solutions to developing projects on a quicker time frame, but generally are only interested in "real" projects (i.e., projects that have dedicated funding or are expected to be completed in a relatively short time frame—3 to 5 years).

How to Engage: Input can be provided through the freight advisory committee or other stakeholder group as a review and comment item during regularly scheduled meetings or specific off-line discussion with key affected stakeholders.

Feedback: There may be no feedback at this stage. However, in many parts of the country, such as in Central Ohio (MORPC), freight stakeholders have helped identify outside funding sources (such as federal grants or partnerships) that may provide opportunities for regionally significant freight-beneficial projects to gain support from decision makers. If there are a lot of projects in the region that require private support, off-line discussion with certain stakeholders (major BCOs, railroads) may yield additional information on funding or partnership opportunities.

LRP-5

LRP 6: Approve Strategies (Projects)

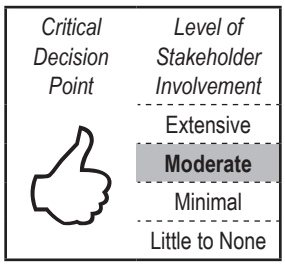


This is one of the most crucial decision points, probably the second most important behind identification of needs, and the most important to many stakeholders, especially daily users of the transportation system such as motor carriers. Proposed LRP projects and strategies should meet the needs and long-range goals of stakeholders and take into consideration future economic, logistics, and other goods movement trends. This decision point provides the opportunity to ensure that projects in the LRP provide benefit to freight users as well as other constituencies such as commuters, alternative mode advocates, and smart growth proponents. For nonconforming regions for air quality, some engagement of freight stakeholders can help planners develop alternative strategies, including projects to help reach attainment goals. DOTs and MPOs tend to focus on system capacity when determining which projects to put forward. Freight stakeholders need more than adequate system capacity (e.g., a different type of intersection or grade on a highway on ramp, redundant/alternate routes). Planners should not overlook these other needs during the project design phase.

LRP-6

How to Engage: Review of the project list or LRP strategies might be a topic of discussion at a freight advisory group meeting. The meeting could be coupled with collecting information on needs (LRP 4) or discussing long-term financing (LRP 5). A survey might allow respondents to propose potential solutions (e.g., add additional travel lanes on roadway *X* between highway *Y* and highway *Z*) to connect to a major BCO distribution center.

Feedback: Based on the evaluation criteria (LRP 3) and identification of needs (LRP 4), freight stakeholders can provide insight into a specific project and/or improvement strategies that would enhance the movement of goods in the region or state and meet the state's or region's goals (LRP 2). Many potential solutions to meet freight mobility needs may already be included in the potential project list from previous versions of the LRP not yet constructed. Attention and recognition from the freight community can help highlight those projects with a benefit for goods movement flows. Stakeholders can also propose other projects that may not yet have been identified or considered.



LRP 7: Approve Plan Scenarios

The approval of plan scenarios phase allows freight stakeholders to review the scenarios that have been developed by staff to cover all issues and constituencies in the LRP process (e.g., transit, bicycles, commuters, land use, air quality, regulatory and other planning considerations). Agency staff involved in working with the freight community and on freight issues should review plan scenarios to ascertain if freight considerations are included before presenting the plan to stakeholders. Stakeholders should then be given the opportunity to respond to the scenarios before they are compiled into a draft LRP for public review. The freight stakeholder community can also use this opportunity to prepare a letter of support to decision makers if there is consensus for the LRP to forward.

Note that the final four decision points in the LRP process (LRP 8 through LRP 11) are typically administrative steps by the MPO or state transportation commission ensuring that the LRP is approved and adopted according to statute, with adequate public hearing. Freight stakeholders should have the opportunity and be encouraged to comment at public hearings, along with the public at large. Freight stakeholders will likely have little interest in direct engagement beyond this point; however, they may appreciate updates on public hearing times and venues and the status of the plan approval. These updates can be made through the mailing or distribution list associated with the freight advisory committee or other ad hoc advisory group for the LRP process.

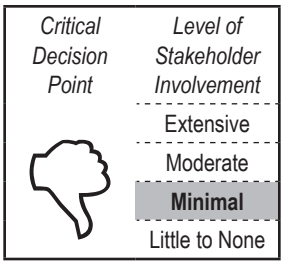
How to Engage: Freight stakeholder groups should be encouraged to provide comments on the LRP scenarios or project list as they relate to freight. This could take the form of distributing the draft plan to some or all stakeholders who have been involved in the process and giving them a specific time frame in which to provide feedback. Another strategy would involve conducting a workshop or meeting to explain the final strategies and how stakeholder input was incorporated.

Feedback: Freight stakeholders should be given ample opportunity during this phase to promote the plan scenario or project list that best meets their needs. This provides the best "last chance" for freight stakeholders to provide substantive feedback on the contents of the LRP before the administrative approval process begins.

LRP-7

LRP 8: Adopt Preferred Plan Scenario (Internal)

There may or may not be a public comment component to officially selecting the LRP-preferred scenario. If the public is invited to participate in public meetings during this decision point, freight stakeholders may provide feedback to support preferred scenarios or projects.



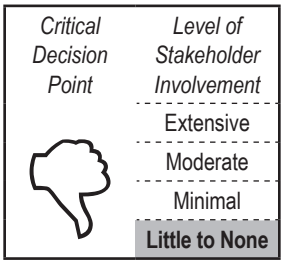
How to Engage: Freight stakeholders should be invited to provide feedback on the preferred LRP plan scenario through the traditional public comment process.

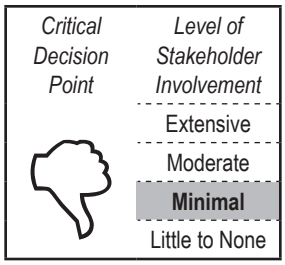
Feedback: Freight stakeholders can provide public comments to be compiled by MPO or state DOT planners, to provide validation to the question: Did we get it right?

LRP-8

LRP 9: Adopt Finding of Conformity by MPO (Air Quality)

The freight community is typically underrepresented in MPO and state air quality planning, except when there are major air quality issues and/or a push for additional regulation on emissions from trucks. Air quality models may estimate truck air quality effects (mostly PM10), but freight stakeholders are not typically consulted, and the finding of conformity is a regulatory decision with no direct role for freight stakeholders. For nonconforming regions, planners should make a special effort to engage freight stakeholders, especially motor carriers, at earlier stages (especially LRP 4 and LRP 6) to help strategize about how to reach attainment goals as part of a broader regional or statewide transportation planning strategy.





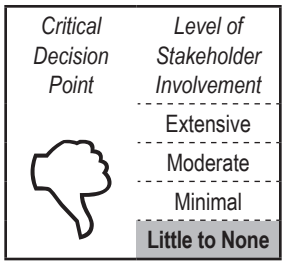
LRP 10: Adopt LRTP by MPO

If freight stakeholders have participated throughout the planning process and provided comments during the development of the draft LRP products, and especially the approval of plan scenarios (LRP 7 and LRP 8), minimal engagement should be required at this point. Still, stakeholders can be encouraged to remain involved in the public approval process through public comment. This will help ensure that freight needs are properly incorporated into the final adopted LRP.

LRP-10

How to Engage: Freight stakeholders should be invited to provide feedback on the final LRP through the traditional public comment process.

Feedback: Freight stakeholders can provide further public comments beyond the comments provided during the draft LRP review to ensure that freight issues are integrated into the final product.



LRP 11: Approve Conformity Analysis (FHWA)

This is an administrative decision by the FHWA and other regulatory agencies on the air quality attainment of a particular region. If an MPO is located in a nonattainment area, additional consultation with motor carriers may be needed if mitigation strategies would adversely affect transportation operations or costs. Otherwise, there is no role for freight stakeholders during this decision point.

PROJECT PROGRAMMING—DEVELOPMENT OF THE TRANSPORTATION IMPROVEMENT PROGRAM (TIP/STIP)

Building on the outreach strategies and findings from the development of the long-range transportation plan, the transportation improvement program (TIP) or state transportation improvement program (STIP) identifies funding opportunities for projects and programs in the short and medium term. Many jurisdictions that construct the TIP or STIP directly from the LRP without much additional analysis and engagement with freight stakeholders should use information previously provided. That information includes outreach performed during the LRP process or from the development of freight-specific plans. For example, if an MPO or state has developed a freight plan, the plan may identify freight-specific projects for potential inclusion in the TIP or STIP.

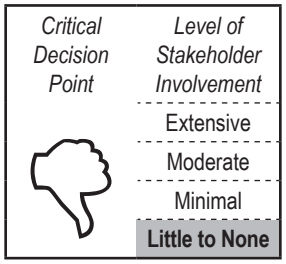
Sometimes, the LRP and TIP/STIP are developed concurrently. Thus, the level of involvement of freight stakeholders during this planning phase should take into consideration the scale of the involvement during the LRP. If the processes of LRP and PRO are conducted concurrently, the planner should seek to inform the stakeholders of the process and consolidate interviews and surveys, stakeholder meetings and workshops, and other engagement opportunities.

The four critical decision points for the PRO process are as follows:

- Approve Methodology for Identifying Project Costs and Criteria for Allocating Revenue, PRO 2.
- Approve Project List Drawn from Adopted Plan Scenario or Solution Set, PRO 3.
- Approve Project Prioritization, PRO 4.
- Reach Consensus on Draft TIP, PRO 5.

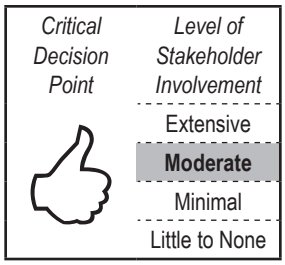
The following sections outline the role for freight stakeholders at each decision point during the project programming phase. More robust levels of engagement during the TIP/STIP development process will likely be based on whether or not substantive information was collected from freight stakeholders during the LRP process. More substantive information collected during the development of the LRP probably will make less engagement with freight stakeholders necessary during the development of the TIP/STIP.

PRO 1: Approve Revenue Sources



The level of involvement during the approval of revenue sources decision point will depend largely on the type of stakeholders affected by the potential project or transportation program. BCOs may have little interest at this early stage unless the transportation improvements or revenue options will cause their freight rates to increase (through higher tolls, longer routing, transit delays, or reduced freight carrier competition). Freight carriers (including the railroads) may want to be included in the discussion at this stage to highlight their opposition to or approval of alternative revenue sources; it may be possible to address this point in conjunction with other issues such as evaluation criteria. Different types of revenue proposals such as tolling of a certain roadway (but not a parallel roadway) could provide a competitive advantage for one mode/BCO/motor carrier over another through changes in travel speed and reliability and cost of shipments. Large or very complex transportation projects might necessitate earlier coordination with key freight stakeholders to identify potential PPP opportunities. Many DOTs and MPOs begin an early dialogue with these stakeholders to solicit private-sector financial support for projects beneficial to private industry. These discussions can take place in either a public or private forum, but potential solutions should be vetted by the overall freight stakeholder community.

Revenue supporting transportation projects for the TIP/STIP are based on a variety of sources (federal and state gasoline taxes, air quality improvement funds, congestion management funding sources, and local and regional sales taxes). Freight stakeholders have little role in the approval of revenue sources; however, they should be presented with the revenue information to help them understand a constrained funding environment and convey the importance of project prioritization. This information may best be presented in the context of the next phase, Approve Methodology for Identifying Project Costs and Criteria for Allocating Revenue.



PRO 2: Approve Methodology for Identifying Project Costs and Criteria for Allocating Revenue

Freight projects have the same opportunity to compete for funds as other projects; however, few jurisdictions nationally have a defined TIP/STIP funding category for freight projects, as opposed to having a separate category for rail, transit, bicycle, or other nonhighway modal projects. Finding strategies to ensure that freight-oriented or freight-beneficial projects receive the appropriate designation and attention may improve funding outcomes. Highway projects with more vocal constituencies might be prioritized over freight-oriented projects simply because they garner less support from decision makers. It should be noted that all highway projects serve freight users in some form—even if only by improving the route for a local delivery by the U.S. Postal Service, UPS, FedEx, or other couriers. The methodology for allocating funds should highlight benefits that improve the connection between freight transportation facilities such as warehouses, manufacturing plants, and distribution centers and customers, or enhance the flow of goods on the highway network through capacity improvements and operational enhancements.

Insight from the Case Studies

The Freight Transportation Improvement Program (F-TIP)

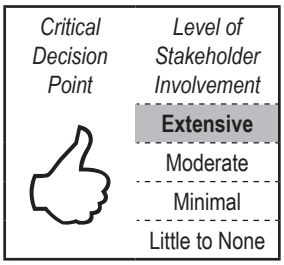
The Mid-Ohio Regional Planning Commission (MORPC) is the MPO for Columbus, Ohio. MORPC has focused on ways to better prioritize freight projects using the TIP. Its process has culminated in the development of an F-TIP—a subset listing of projects in the TIP that have a strong benefit for freight. The inclusion of projects in the F-TIP is not a particularly scientific process. Rather, MPO staff—with input from the private- and public-sector freight communities—identify the roads and other facilities in the region that access key freight areas. The F-TIP is developed after the TIP so only those projects expected to be funded are included in the F-TIP. Truck counts and other readily available data including potential fuel consumption reductions from improvements may be used to validate the inclusion of certain corridors.

How to Engage: Outreach can be done during advisory committee meetings or through telephone interviews with key stakeholders who have relevant knowledge of or interest in the benefits of freight projects. This process can use criteria and metrics similar to those developed for the LRTP. For regions with a large role for private funding of transportation (toll roads), additional interviews can be conducted with motor carrier and transportation industry executives to validate toll and revenue assumptions and potential supply chain impacts.

Feedback: Recommendations of the benefits to freight users resulting from improvements to the highway system and/or validation and buy-in of the ranking criteria should be solicited.

PRO-2

PRO 3: Approve Project List Drawn from Adopted Plan Scenario or Solution Set

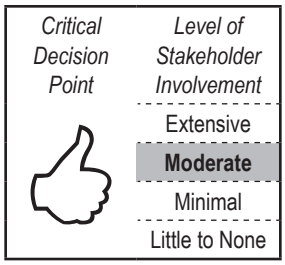


The decision point during the LRP process that identifies a proposed project list should already have identified a list of freight needs from a combination of stakeholder outreach and data analysis. If the LRP adequately used available data and sought input from the private sector to develop a list for programming consideration, this decision point may not require much additional discussion of freight projects and engagement of freight stakeholders. However, this is a critical decision point with extensive engagement required to ensure that the freight project needs are reflected in the project programming process and that freight stakeholders have been given an adequate opportunity to provide their feedback on the project list.

How to Engage: The project list should be shared with freight stakeholders at an advisory committee meeting or through surveys and interviews. Because several months may have passed since the LRP process concluded (along with a possible transition of DOT or MPO staff, new political figures, or changing regional economic needs), at this decision point planners can reengage with freight stakeholders and provide them with a tangible list of freight-oriented projects to respond to regarding inclusion in the TIP/STIP.

Feedback: Comments on whether all freight needs are accommodated in the existing project list will come at this point. This is especially crucial if the TIP/STIP is developed on a separate time frame from the LRP, and worthy new projects might need to be integrated into the TIP/STIP.

PRO-3



PRO 4: Approve Project Prioritization

Stakeholders should be involved in the development of criteria and prioritization methods to ensure the process reflects economic realities during the PRO 2 decision point. PRO 4 also is a critical decision point and is used for stakeholders to review how the methodology prioritized the projects. It is conceivable at this phase that the evaluation criteria might be modified if it appears that the ranking of worthy projects looks unreasonable. The ranking methodology also could be vetted with some test projects to ensure that the criteria meet the needs of constituents. Since there is often no dedicated funding stream for freight-beneficial projects, these projects need to be highlighted in other ways. Identifying other benefits of the projects, beyond the economic and mobility benefits for trucks such as "improves safety" or "promotes economic development," is important. The benefits from a freight perspective would have been captured in PRO 2.

Insight from the Case Studies
Project Prioritization for Freight

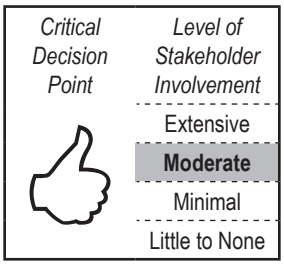
The Seattle Freight Advisory Board (SFAB), managed through the City of Seattle DOT, has wrestled with properly prioritizing freight projects for many years. The freight project prioritization methodology differs from other modes to some extent. For example, it recognizes challenges such as physical clearances and weight limitations. In this regard, the input from freight stakeholders is essential to ensure that projects accommodate the special needs of certain products, such as overdimensional cargo.

PRO-4

How to Engage: The most effective outreach methods during this phase include stakeholder meetings, interviews, or surveys to understand the highway improvements that would best meet stakeholder needs. If stakeholders had previously been involved in the vetting of the evaluation criteria, they should not have any issues with the results.

Feedback: Freight stakeholders should review the selected projects most beneficial for freight against both other freight-beneficial projects and those projects less important to freight movement. This is especially important if there is no designated freight project category in the TIP. Freight stakeholders could help planners identify the value of projects (e.g., monetary, time) to freight movement.

PRO 5: Reach Consensus on Draft TIP



One of the four critical decision points on which to engage stakeholders during the project programming process is the review of the draft TIP. Private-sector stakeholders indicated during the development of case studies that this was the most important decision point for many of them, simply because they often did not have the time or knowledge of the planning process to remain involved throughout. Stakeholders may want to review the outcome of the prioritization process to know how well the projects that are most important to them have been ranked. Thus they still have the opportunity to provide input. While members of the freight community may not agree with the methods or procedures the approving body (generally the DOT commission or MPO board) uses to reach its decisions, it is important that they are able to comment before those deliberations. In addition, freight stakeholders should have the opportunity to review how decision makers plan to allocate any freight-specific funds (e.g., funding for National Highway System Intermodal Connectors, TIGER grant monies, environmental mitigation funds).

Insight from the Case Studies
Avoiding Stakeholder Fatigue

The Mid-Ohio Regional Planning Commission (MORPC), in Columbus, Ohio, has extensive experience in engaging the freight stakeholder community. For many years the MPO has cooperated with the regional Chamber of Commerce to promote activity and address needs at the Rickenbacker Inland Port in Columbus. The entity that facilitates this engagement is the Columbus Region Logistics Council (CRLC), on which both MPO and chamber staff serve.

In addition to providing feedback during the long-range planning process and TIP development, the CRLC plays a role in soliciting outreach for specific freight-planning studies. The CRLC holds regular meetings and has initiated a range of projects in recent years, including the Central Ohio Logistics Roadmap. In addition, MORPC has conducted major studies on access to Rickenbacker.

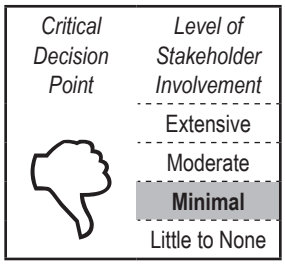
Effective outreach methods with freight stakeholders have included one-on-one discussions and interviews, as well as presentations during scheduled meetings. Focus groups have also played a major role in providing feedback from industry, especially during recent studies. Feedback has been much more effective when the stakeholders were responding to a specific product or issue.

Before these cooperative engagement efforts were codified, MORPC sometimes received feedback from stakeholders identifying concerns such as the long duration and occasional lack of focus during stakeholder meetings and a limited understanding of private-sector interests. In response, the MPO set a consistent schedule for meetings, outlined expectations of membership, and developed specific agendas for meetings.

PRO-5

How to Engage: The draft project list should be presented at a freight advisory committee or other stakeholder meeting to gain feedback or solicit responses through direct mailings to key stakeholder groups. The list should clearly identify top and secondary priority projects and the expected time frame for implementation, as well as some background on how the project evaluation system was applied.

Feedback: Stakeholders should review and provide comment on the draft document to ensure that freight issues and other needs, identified previously, are addressed by projects in the TIP/STIP.



PRO 6: Adopt TIP by MPO

This decision point is a procedural action by the decision-making body (generally the MPO board or state transportation commission) to officially adopt the TIP/STIP. However, the adoption process is sometimes driven by multiple public meetings in which freight stakeholders can take part. Their involvement can help promote desired projects and programs that have a discernible benefit for goods movement flows. The direct involvement by freight stakeholders at this stage is minimal, but planners can encourage and help organize the stakeholders with whom they work to turn out for the public meetings and provide a face to the needs of this important constituency. Some DOTs and MPOs have a specially identified transportation improvement program for freight; freight-beneficial projects are highlighted through stakeholder input or parallel freight-planning processes. Drawing attention to these projects can help not only in the project prioritization but also can open up the MPO or DOT to additional outside support when freight-specific funding sources become available.

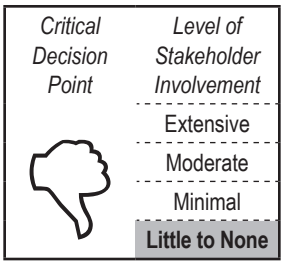
Note that the final three decision points in the PRO process are typically administrative steps by the MPO or state transportation commission, ensuring that the TIP/STIP is approved and adopted according to statute, with adequate public hearing, similar to the adoption of the LRP. Freight stakeholders should have the opportunity and be encouraged to comment at public hearings, along with participants from the public at large; however, they would likely have little interest in direct engagement beyond this point.

PRO-6

How to Engage: Based on previous input, agency staff can invite freight stakeholders to participate in public meetings, write letters of recommendation to promote certain projects, and generally support freight beneficial improvements through discussions with policy makers.

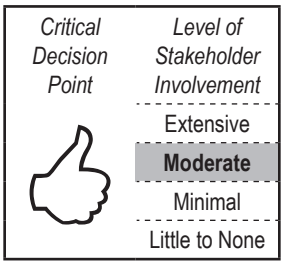
Feedback: Public comments from freight stakeholders are compiled by MPO/DOT staff.

PRO 7: Approve TIP by Governor or His Designee and Incorporate into STIP



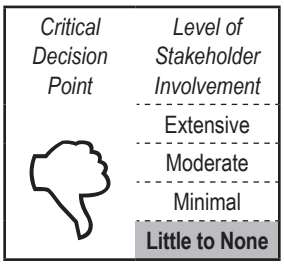
During this decision point, agency staff should review the STIP or TIP to ensure that all projects included meet federal, state, or regional requirements and appropriately represent freight interests in the study area. There is no role for freight stakeholders during this decision point.

PRO 8: Reach Consensus on Draft STIP



Planning groups at the state DOT will develop consensus on the STIP and prepare draft documents for public review and comment. Freight stakeholders can be invited to comment, along with the general public, although they would already have had the opportunity to do so at a regional level during PRO 6 (this phase presents projects at the statewide level). This decision point can still provide an important opportunity to engage portions of the state (e.g., non-MPO portions) in helping prioritize short-term investments that would benefit freight. For example, agricultural and rural portions of the state could use this as an opportunity to ensure that projects represent their interests and meet their needs.

PRO 9: Approve STIP with Respect to Conformity and Fiscal Constraint



This decision point is only a procedural action by DOT commissions or boards to approve the final STIP, along with the U.S. DOT. This decision point does not involve freight stakeholders.

CORRIDOR PLANNING

Corridor studies, especially those that explore improvements on major freight routes, provide opportunities not only to better understand the movement of goods and logistics patterns, but also to explore both capacity and operational improvements that could meet the needs of system users. Because corridors link production, processing/storage, and consumption activities that can span vast geographies, corridor studies should be led by the state DOT or a consortium involving the DOT, the MPOs, or other jurisdictions on the route. These efforts may depend on the support of DOT district office staff, local governments, and other planning organizations such as land use, zoning, or economic development staff in the study. If the corridor study is focused on an important freight corridor (e.g., proposing truck-only lanes or major access improvements to facilities such as a seaport, cargo airport, or rail yard), freight stakeholders should be engaged as early and often in the process as possible. Engagement with stakeholders during the corridor planning process (COR) can build on previous engagement efforts, although it is critical to identify stakeholders who have a defined interest within the study corridor itself (such as operators of warehouses on the corridor or a major facility operator such as an airport, seaport, or rail yard).

Sometimes corridor studies can have relatively short project limits, such as a local truck corridor. When defining the freight corridor—whether it spans hundreds of miles or just a few miles—DOT and MPO planners should recognize that freight corridors are defined by use, not by arbitrary milepost cutoffs. Regardless of corridor length, planners should ensure that stakeholders that actually operate within the study corridor are involved in the corridor planning process.

A kickoff meeting at the outset of the corridor study project to talk about the problem statement and opportunities (COR 2) and goals for the corridor (COR 3) can provide a solid foundation for stakeholder engagement. That foundation will be valuable during subsequent phases of the study when planners seek to identify strategies and solutions for solving the corridor's issues.

There are four crucial decision points for freight in the corridor planning process. These decision points will yield the greatest value to the MPO or DOT planners as they seek to recognize freight interests and mobility concerns along the corridor in question. The four critical decision points for the COR process are as follows:

1. Approve Problem Statements and Opportunities, COR 2.
2. Approve Evaluation Criteria, Methodology, and Performance Measures (Potential Solutions), COR 5.
3. Approve Range of Solution Sets, COR 6.
4. Adopt Preferred Solution Set, COR 7.

The following sections outline the role for freight stakeholders at each decision point, as well as engagement activities and strategies and expected feedback from stakeholders following the engagement effort. It is important to note that attention to issues such as tolling, hours of operation, and known regional logistics trends

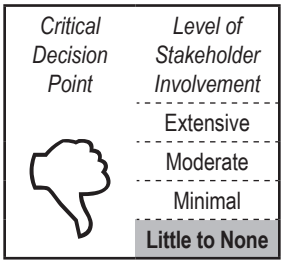
Insight from the Case Studies
Engaging a Broad Range of Stakeholders

In Atlanta, Georgia, the Georgia DOT planning team for the Georgia Statewide Freight and Logistics Plan has worked to identify appropriate freight stakeholders for its outreach efforts. Before the development of the plan, Georgia DOT generally worked with a relatively small core group of freight stakeholders—including the Georgia Motor Trucking Association, Georgia Ports Authority, and representatives from the major rail and airport sectors—on both its long-range and corridor planning efforts. The elevated profile of freight transportation planning throughout the latter 2000s prompted the governor to initiate a Freight and Logistics Task Force; that group expanded the scope of outreach efforts to include a broader range of stakeholders and a more formal stakeholder advisory group of high-profile industry representatives.

For corridor planning in Georgia, if the corridor study includes a major freight interest or issue, Georgia DOT might convene a separate freight stakeholder outreach initiative. Georgia DOT has experienced more constructive stakeholder engagement when outreach methods are customized for the local environment.

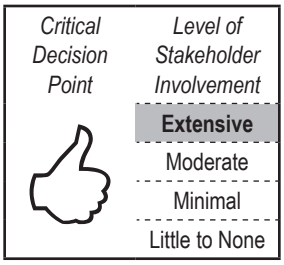
(e.g., prominent trucking corridors or a situation in which the only way a particular improvement would be funded is through tolls) could influence the scope and scale of the corridor study and might drive additional analysis. An example would be including a related tolling evaluation in the corridor study to determine stakeholders' views on the topic. Stakeholder lists from previous planning efforts can be used with special attention paid to coverage within the corridor plan area.

COR 1: Approve Scope of Corridor Planning Services



The lead agency in corridor studies develops the scope of work of the corridor study based on previous analyses and traffic studies (which often were conducted during long-range planning exercises or regional freight studies) and determines if the corridor requires a more extensive evaluation of specific issues or a specific improvements strategy. The LRP and freight-planning processes will have also helped the DOT or MPO gain a better understanding of important freight corridors in the state. Freight stakeholders can also ask the MPO to initiate a corridor study based on identified needs or growth potential.

COR 2: Approve Problem Statements and Opportunities

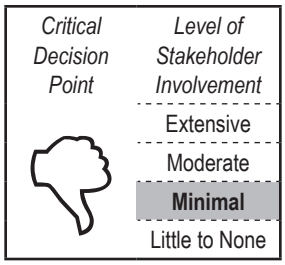


The identification of problem statements and opportunities (i.e., needs) along a particular highway corridor requires extensive engagement with freight stakeholders. Depending on trade issues or logistics patterns within the corridor (e.g., proximity to a seaport, distribution centers, manufacturing facilities, truck-lane corridor), freight stakeholders may provide immense value by helping define the limits of the study and supplying data on truck volumes at specific interchanges, future business expansion plans, and physical and operational issues. If the corridor is expected to be a tolled facility, freight stakeholders (especially motor carriers) should also be interviewed to validate assumptions and potential supply chain reactions (e.g., will the toll affect the supply chain cost structure in a way that would lead to disinvestment on the corridor?). The identification of needs and opportunities is probably the most important role that freight stakeholders can play during the development of corridor plans and is a critical decision point.

How to Engage: Telephone or in-person interviews or survey outreach should be conducted to determine freight stakeholder needs within the corridor and to recognize existing logistics patterns, planned development opportunities, and regional commodity flows.

Feedback: A list of needs and issues for freight users within the corridor plan area, including a validation of appropriate project limits, access issues, and other challenges will result. In some circumstances, freight stakeholders may be able to provide additional detail on their operations that would aid in the study of the corridor (e.g., key distribution facilities, truck traffic levels at certain interchanges, primary hours of operation for users).

COR-2



COR 3: Approve Goals for the Corridor

The goals for the corridor will be developed in consultation with planning staff, as well as a broad range of stakeholder interests (including local governments; pedestrian, bicycle, and transit interests; freight users; and commuters). As willing participants in the planning process, freight stakeholders, along with other users of the system, have a role in approving those goals. Whether or not the corridor is a major truck route, freight stakeholders can help in the planning process and validation of goals by providing data on logistics patterns, truck volumes, and expectations for future growth in business within the project limits of the corridor plan. This information is beneficial during the previous decision point, and the engagement efforts should be combined.

COR-3

How to Engage: It is important to discuss goals during the outreach efforts from COR 2, including one-on-one interviews and surveys.

Feedback: This phase allows stakeholders to share insights into how corridor improvements might affect their cost structure and operational activities and benefit not only the freight community, but the motoring public as well. For example, freight stakeholders can guide the development of goals for a truck-only lane corridor study revolving around not only operational improvements but also a reduced risk for accidents involving trucks. The level of engagement with freight stakeholders at this decision point depends greatly on the importance of the corridor to regional and statewide freight movement.

Insight from the Case Studies

Freight Stakeholders' Role in Evaluating Projects During a Corridor Study

Often when the San Diego Association of Governments (SANDAG) in San Diego, California, is undertaking a corridor study (especially along a major truck route), freight stakeholders are involved in forming evaluation criteria and vetting projects. SANDAG currently uses evaluation criteria for projects that provide additional "points" for freight benefit(s); this practice allows those projects to gain increased recognition in project prioritization. Additionally, freight considerations are included in the multimodal project evaluation framework, and freight projects have the opportunity to compete for Proposition 1B funds (a source of state funding) to reduce air pollution emissions in California.

Insight from the Case Studies

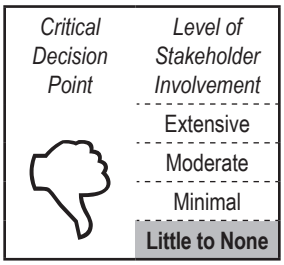
Freight Stakeholders' Role in Defining Goals During Corridor Planning

During the corridor planning process for the I70 truck lanes in Ohio, Indiana, Illinois, and Missouri, the lead proponents of the study made the effort to reach out to the trucking community. In 2009, after preliminary discussions on the project purpose, the state DOTs from each of the coalition states met with representatives from each of the four state trucking associations, an owner-operator association, and one large motor carrier to introduce the project and obtain initial feedback.

Stakeholders expressed interest in gaining more information about the project focus and how it related to individual state planning efforts. The coalition states did not form a formal freight advisory committee for the project, instead utilizing ad hoc meetings and focus groups to identify needs and explore opportunities for the corridor, such as the use of longer-combination/higher-productivity vehicles.

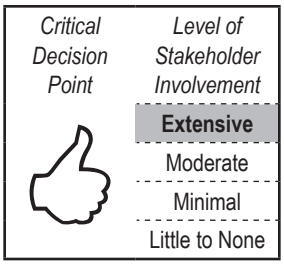
Representatives from the private sector revealed their priorities for the corridor early on in the project development process. Those priorities included identifying operational and access issues from the project, resolving revenue and cost issues, and improving the understanding of benefits from the project (e.g., safety benefits).

COR 4: Reach Consensus on Scope of Social, Cultural, Natural, Environmental Review and Analysis



The work of planning staff to reach consensus on the scope of the social, cultural, natural, and environmental review does not require any engagement with the freight stakeholder community. However, during this decision point, planners should highlight those traffic operational issues—including the movement of freight—that might lead to environmental impacts from noise, hazardous waste, and air quality. The decision on the scope of environmental review is made by planners based on the perceived impacts from a project.

COR 5: Approve Evaluation Criteria, Methodology, and Performance Measures (Potential Solutions)

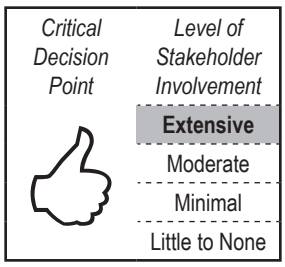


The approval of the evaluation criteria and performance measures for a corridor study is a critical decision point for freight stakeholders and requires extensive engagement. Suggested performance measures that are important to industry stakeholders include traffic and/or truck volume, velocity (average mph), capacity (existing and future truck or rail volume), congestion levels (during normal and peak traffic periods—which, for freight, may differ from traditional commute times), pollution index (carbon emissions, especially diesel particulates), and safety considerations (crashes/fatalities or highway/rail grade crossings). Performance measures used by the DOT or MPO organization may not accurately account for logistics considerations or goods movement flows on major freight corridors; efforts should be made by planners to better understand the influences of logistics patterns within the corridor study area, with insight from specific stakeholders. Listening attentively to freight stakeholder input improves project outcomes.

COR-5

How to Engage: Planners should prepare potential evaluation criteria and provide them to freight stakeholders through e-mail, mail, or posting on a project website to solicit feedback. Since many freight stakeholders may be unfamiliar with the process for evaluating transportation projects, a workshop or other activity (participants may include only a specially invited subset of the larger stakeholder committee) to discuss, validate, and approve evaluation criteria may be necessary.

Feedback: Freight stakeholders can validate selected performance measures or suggest other measures to evaluate the effects of projects on the movement of freight throughout the corridor (e.g., the potential for diversion from truck to rail).



COR 6: Approve Range of Solution Sets

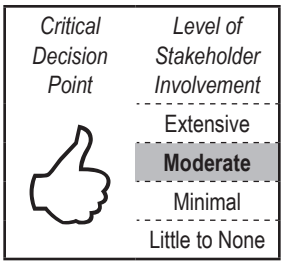
Potential solution sets to address corridor issues could include capacity improvements, intelligent transportation systems (ITS), or other safety improvements; classification upgrade or downgrade; or any other combination of these solutions. Solution sets will drive the improvement program or allocation of funding, as well as influence the potential for PPPs. This is a critical decision point for freight stakeholders; however, distinct freight stakeholder groups may find value in different solutions depending on their own operational needs. For example, some motor carriers proximate to the corridor may support a certain type of access improvement based on their own routing needs; a BCO may have more interest in a broader solution that provides mobility benefits for motor carriers traveling through the study area. There does not necessarily have to be consensus from all freight stakeholders; however, BCOs and carriers may want their preferred solutions to be highlighted by the DOT or MPO during the next decision point.

COR-6

How to Engage: If there is an active freight stakeholder group, this engagement can include a presentation to the group on the various potential solutions for improving the corridor. Surveys or other outreach tools can be used to allow freight stakeholders to rank the solutions based on the previously vetted evaluation criteria and other input collected throughout the development of the corridor study.

Feedback: Freight stakeholders can provide feedback and recommendations for the solution(s) that best support economic development and their operations (e.g., routing, other logistics considerations). Each participant can rank the solution sets, allowing planners to winnow the list of preferred solutions and promote those most beneficial to the freight community.

COR 7: Adopt Preferred Solution Set



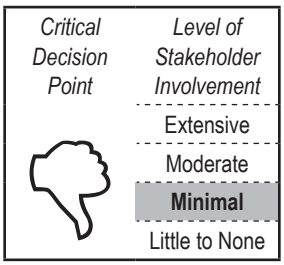
The adoption of the preferred solution set provides the final opportunity to engage freight stakeholders and also is a critical decision point. During this decision point, DOT and MPO planners propose that the board of the organization adopt a particular solution set. This decision point takes on additional urgency if previous outreach efforts have not provided the opportunity to vet all the potential solutions. The COR 7 decision point thus allows freight stakeholders to review those solutions promoted through the MPO and DOT staff analysis and outreach with other stakeholder groups. Freight stakeholders should be engaged again to confirm the preferred solution that would be meeting the needs of freight users. Ideally, this engagement would occur during the approval of solution sets (COR 6).

How to Engage: In addition to validating the preferred solutions during COR 6, freight stakeholders should be encouraged to submit comments along with the general public when the final solution is being considered for adoption.

Feedback: Stakeholders can provide feedback on their preferred solution either during COR 6 or in response to a separate outreach effort. Sometimes, if the stakeholder group represents more homogeneous interests, a letter can be produced to the planning board promoting a particular solution as best representing the interests of the freight community.

COR-7

COR 8: Approve Evaluation Criteria and Methodology for Prioritization (Implementation)

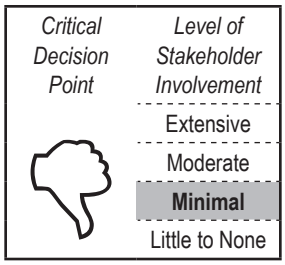


The last two decision points require only minimal engagement with freight stakeholders. Decision point COR 8 involves the approval of the evaluation criteria for the selected solution set. Outreach with freight stakeholders during COR 5 would have provided adequate information for determining stakeholder views on appropriate criteria. If freight stakeholders have provided adequate feedback during COR 5 (or other previous phases), there is little need for further interaction.

How to Engage: This can be a confirmation item during regularly scheduled stakeholder meetings. If there are no ongoing meetings, stakeholders do not necessarily have to be reengaged for this decision point unless the MPO or DOT planners feel there is a particular dearth of input from freight stakeholders on evaluation criteria.

Feedback: Stakeholders can provide valuable insight into the economic impacts of decisions as well as provide background data and information on how sequencing of projects may affect logistics decisions. However, this information may be more valuable during the identification of potential solutions.

COR-8



COR 9: Adopt Priorities for Implementation

The adoption of the solution sets recommended in the corridor study is at the discretion of the MPO or DOT staff. These agencies should already have considered the input, including priority areas for improvements of all stakeholder groups, including freight stakeholders. There is minimal involvement with freight stakeholders during this decision point.

COR-9

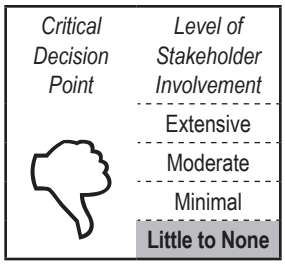
How to Engage: Freight stakeholders, as part of the general public review and comment, should be invited to submit feedback on the final corridor plan.

Feedback: Public comments from freight stakeholders are compiled by DOT planners.

ENVIRONMENTAL REVIEW AND PERMITTING (NEPA PROCESS)

There is a growing body of literature on integrating freight into the NEPA process, most notably the 2010 FHWA planning guide, *Integrating Freight into NEPA Analysis* (http://ops.fhwa.dot.gov/freight). These resources describe not only the data and information needed for proper evaluation of freight interests during a NEPA study but also provide some insight into how to assimilate freight stakeholder outreach into the already robust public involvement process. The critical decision points for engaging freight stakeholders during the NEPA process correlate with those identified during the LRP, PRO, and COR phases: identifying needs and appropriate evaluation criteria, determining appropriate solutions, and reviewing and validating the draft document—in this case, a categorical exclusion, environmental assessment, or environmental impact statement.

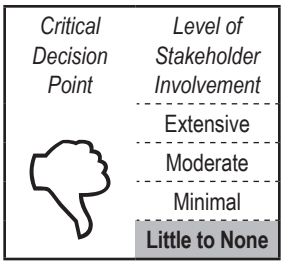
The following sections outline the role for freight stakeholders at each decision point, as well as engagement activities and strategies and expected feedback from stakeholders following the engagement effort.



ENV 1: Reach Consensus Scope of Environmental Review

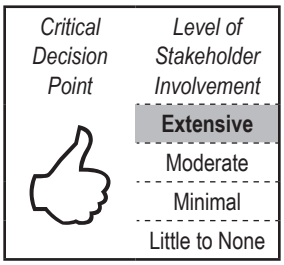
The first decision point in the environmental review process is to reach consensus on the scope of that environmental review. Although the lead agency role in the NEPA process for highway projects generally falls to the FHWA, state DOTs play a major role in coordinating technical studies and environmental analysis. Depending on the perceived level of impact of the project, FHWA and the state DOT staff work with other participating and cooperating stakeholders (e.g., federal, state, and local historic preservation organizations; federal and state departments of fish and wildlife; the U.S. Army Corps of Engineers) to determine the level of environmental document and permitting approvals required. While there is no legal requirement for stakeholder participation at this point, it may be good practice to involve shippers, carriers, and goods receivers when determining the scope of the environmental review.

ENV 2: Approve and Publish the Notice of Intent



This decision point involves a procedural action by the lead agency. The notice of intent (NOI) to begin the NEPA process and prepare an environmental document is placed in the *Federal Register*, typically by the FHWA for highway projects. When the NOI is published, planners should advise their regional freight stakeholders that the NOI is in the *Federal Register*. Freight stakeholders should take note of the level of environmental document approved in the register to determine the time frame for approval and the level of stakeholder outreach recommended during the environmental review process. No additional engagement is needed with freight stakeholders at this point in the NEPA process.

ENV 3/PER-1: Approve Purpose and Need/Reach Consensus on Project Purpose



The approval of the purpose and need is a critical decision point for the engagement of freight stakeholders during the NEPA process. At this point, stakeholders of all kinds, including those representing the goods movement community can describe the importance of the project to economic development, improved regional logistics, and enhanced flows of goods and services to, from, and within the community. The purpose and need is the justification for the project and is a critical decision point to promote worthy projects for freight. Stakeholders should be encouraged to provide feedback on what information should be included in the purpose and need to represent freight interests. Since the statement of purpose and need is sometimes composed with technical language more familiar to environmental professionals, it might help to have stakeholders respond to the purpose and need once it has been developed, rather than trying to develop a freight purpose and need from scratch. This is especially critical if the project is intended to support economic development or retain

Insight from the Case Studies
Freight Stakeholder Outreach During the NEPA Process

The Columbia River Crossing (CRC)—a project of the DOTs for Oregon and Washington State in the Portland, Oregon/Vancouver, Washington, area—formally entered the NEPA process in 2005. As part of the public outreach process for the project, a 39-member task force was established to determine the project's vision, values, purpose, and needs. The task force comprised freight stakeholders on both sides of the river, including the ports of Portland and Vancouver USA, motor carriers, BCOs, and business people, as well as environmental groups, neighborhood associations, municipalities, and other government agencies.

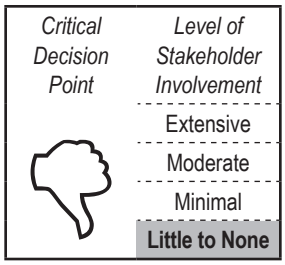
In 2007, a freight working group with approximately 13 members was established to ensure that freight needs were adequately addressed. Members served on the working group until 2011, and the group continued into 2012 on an ad hoc basis to help inform final design and construction planning of the CRC bridge alternative. The group helped educate CRC staff, government officials, and the public about the nuances of how freight moves in the Portland/Vancouver metro region and how the multimodal transportation system is used.

business and increase jobs under a competitive funding program such as TIGER. Freight stakeholders should be engaged by the DOT or MPO planners to promote the case of industry. MPO staff can play an invaluable role in identifying appropriate stakeholders to participate in advisory committees or working groups throughout the duration of the NEPA process.

ENV-3

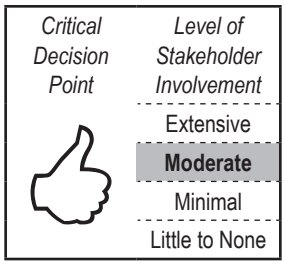
How to Engage: Especially for projects with an important freight interest, such as a major trucking corridor, freight stakeholders should be involved to help the lead agency develop and review the purpose and need for the project. Since this is an early part of the NEPA process, the discussion of purpose and need can take place during a kickoff meeting or other introductory presentation associated with the NEPA process. Freight stakeholders might participate as part of a larger community advisory group for the project or as a stand-alone group representing goods movement interests alone.

Feedback: At this decision point, freight stakeholders can describe the importance of the project for regional economic development, as well as mobility, safety, and other benefits for freight in the region. They can provide source data, such as the number of trucks on a certain corridor or the anticipated reduction in delay from an improved highway. Stakeholders can also share insight on potential disbenefits associated with not completing the project.



ENV 4/PER-2: Approve Public Notice/Reach Consensus on Study Area

This decision point involves an administrative action by DOT or MPO planners and is a regulatory requirement for Section 404 (Clean Water Act) permitting. There is no role for freight stakeholders during this decision point. However, during the approval of the purpose and need, freight stakeholders will have had the opportunity to review the study area limits for the environmental review to ensure that logistics considerations are accounted for (i.e., the study area for the project encompasses or is directly adjacent to key regional or statewide freight transportation facilities such as bridges, rail yards, or major manufacturing activity clusters).



ENV 5: Approve Evaluation Criteria, Methodology, and Performance Measures

As with the other three phases in the highway planning process—long-range planning, project programming, and corridor planning—the confirming of the evaluation criteria and performance measures is a critical decision point for freight stakeholders. If available, information should be collected from previous planning efforts on evaluation criteria that have been used in the jurisdiction during other phases of the planning process. Moderate engagement of freight stakeholders provides insight on appropriate data sources that allow planners to properly evaluate project alternatives and costs and benefits.

Insight from the Case Studies
Freight Stakeholders Help Develop Evaluation Criteria

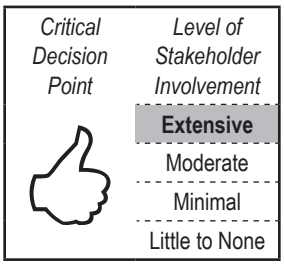
During the public outreach process for the CRC EIS, DOT and MPO staff from Oregon DOT, Washington State DOT, and other agencies used several different methods to evaluate alternatives to ensure they met the project's purpose and need statement. These methods included actively soliciting stakeholder feedback at meetings, encouraging official public comment, and establishing the freight working group (the freight advisory committee for the project). The freight working group was the first group to review early design details of the bridge and evaluation criteria for project alternatives to ensure freight needs were addressed. A performance measures advisory group was formed, as well as a focus group to evaluate various plans for the Marine Drive Interchange between I5 and the Port of Portland and industrial areas. Freight stakeholders participated in both of these groups.

How to Engage: Freight stakeholders should be invited to provide feedback on already-developed performance measures and data that can be used to evaluate construction and traffic impacts, as well as long-term routing decisions resulting from the highway improvement. This can be done during ongoing stakeholder advisory committee discussions or through targeted outreach (letters, surveys) to potentially affected freight stakeholders. Many organizations use a subgroup of freight stakeholders who may have a clearer understanding of, or more experience with, the public planning process to vet performance measures and evaluation criteria.

Feedback: Validation of the performance measures and data used in the alternatives evaluation results.

ENV-5

ENV 6/PER-3: Approve Full Range of Alternatives/Approve Resource Agency Public Notice



This decision point is one of the most crucial and provides freight stakeholders the opportunity to review and comment on the proposed project alternatives before they have been winnowed down to a few to be carried forward for detailed evaluation. Freight stakeholders may have a unique ability to identify project alternatives that hold a key interest for goods movement, which might not be recognized by other stakeholder groups or planning staff. Stakeholders can then provide a range of project preferences and justification as to the benefits and impacts associated with one alternative or another.

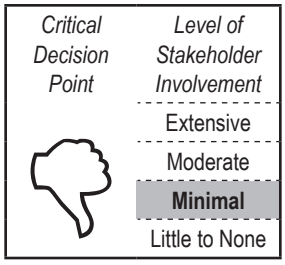
Insight from the Case Studies
Developing Goods Movement Alternatives for the I-710 Corridor in Los Angeles County, California

During the course of developing the I-710 major corridor study in 2005 (a precursor to the NEPA document), the study team conducted interviews with private-sector freight stakeholders to help identify traffic/air quality impacts and to screen alternatives. Their input helped create several goods movement alternative scenarios to be evaluated in the environmental analysis. These scenarios maximized goods movement benefits within the corridor through both capacity enhancements and transportation system management and technology alternatives.

ENV-6

How to Engage: During both the alternatives analysis and development of a preferred alternative, the lead agency should identify a group of freight stakeholders representative of a variety of interests (e.g., BCOs, motor carriers, alternative modes such as rail and ports) and conduct direct engagement activities (such as charettes or workshops on project benefits) to help the group understand each alternative.

Feedback: Ideally, stakeholders can classify those alternatives that have the greatest benefit for freight interests, to help planning staff consolidate the list of alternatives. Stakeholders may also simply identify acceptable alternatives that meet their needs.



ENV 7/PER-4: Approve Alternatives to be Carried Forward

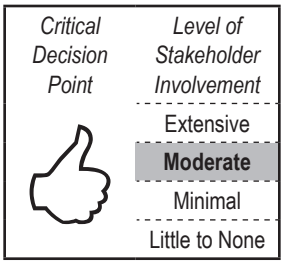
The decision point to approve alternatives to be carried forward for full environmental review takes into consideration feedback from the lead agency, participating and cooperating organizations (including resource agencies), interest groups, and stakeholders. Often, the lead agency starts with a very large list of distinct alternatives, some having strong similarities with one another and with a range of implementation strategies, costs, perceived impacts, and benefits. To provide a more comprehensive evaluation of project alternatives, planners often screen a list of full alternatives (ENV 6) and develop a more manageable list of alternatives for the comprehensive environmental review. For example, the full list might include eight project alternatives, but only three—including a no-build alternative—might receive full environmental evaluation.[3] To determine which alternatives are desired by the widest group of stakeholders, freight community representatives can continue to be engaged in a freight advisory committee or be included on a larger community advisory committee.

How to Engage: Stakeholders should be encouraged to participate in the alternatives analysis process, by attending public meetings and making their preferred alternative known to the lead agency through targeted freight outreach (i.e., one-on-one or telephone interviews). Both the approval of the full list of alternatives and the alternatives to be carried forward can be reviewed at the same meetings or interviews.

Feedback: The preferred alternative(s) for the freight community (i.e., the most beneficial project alternative) will be identified.

ENV-7

ENV 8/PER-5: Approve Draft EIS/Reach Consensus on Jurisdictional Determination



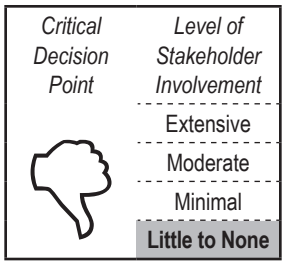
During the development of the draft EIS, environmental professionals should continue to engage freight stakeholders to help properly measure the costs and benefits associated with the preferred and/or other alternatives. The draft EIS includes an explanation of the environmental impacts, as well as the recognized costs and benefits associated with each alternative, and recommends a preferred alternative from the lead agency's perspective that best meets the needs of the organization and considers input from all constituents. The public review period for the draft EIS can range from 30 to 90 days, depending on the complexity of the project and the range of issues. Freight stakeholders have no role in determining the appropriate jurisdiction for permitting purposes (PER-5) because the responsibility for securing permits lies with the lead agency. However, if issues related to right-of-way, encroachments, or other constraints might affect a freight stakeholder representative, DOT staff would best be served by engaging those stakeholders early.

An example of a project that would warrant such engagement is a bridge or overpass improvement that crosses over a railroad right-of-way. Environmental impacts (in this example) would have to include the potential impacts on rail operations during design, staging, and construction, and this information would be included in the environmental document. Publishing the draft EIS provides not only the stakeholders who are directly engaged but also the general public the opportunity to comment on potential impacts from the project that may or may not already have been addressed. The review of the draft EIS is a critical decision point for freight, and it is important for the DOT to engage stakeholders to ensure that the project alternative most beneficial for freight is properly highlighted. It is possible that the alternatives with the most benefit for freight do not "make the cut" during the alternatives screening process. If so, this decision point provides another opportunity to review and comment on the conclusions of the environmental document.

ENV-8/PER-5

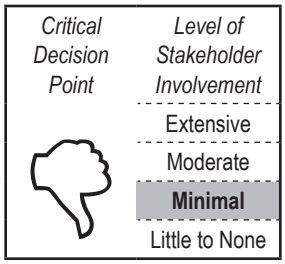
How to Engage: During the public comment period for the draft EIS, freight stakeholders should be encouraged to review and comment on the draft document.

Feedback: Public comments can be compiled by DOT staff and may have support at the local level from MPO staff and other participating and cooperating organizations.



ENV 9: Approve Preferred Alternative

The approval of the preferred alternative following the production of the draft environmental document is the responsibility of the lead agency. By this point, freight stakeholders have had several opportunities to offer recommendations for the alternatives that best meet their needs (i.e., ENV 6 and ENV 8). There is no additional role for freight stakeholders during this decision point.



ENV 10: Approve Final NEPA Document

Similar to the previous decision point, the approval of the final environmental document is the responsibility of the lead agency. That agency provides responses to the comments from stakeholders (including freight and the public at large), incorporates comments into the document (including whether or not the conclusions of the environmental document were changed as a result), and publishes a final NEPA document for final approval. The final environmental document should include copies of the public comments along with any feedback from freight stakeholders. Once the final document has been prepared with all the constituent parts, it can be approved by the lead agency.

ENV-10

How to Engage: Freight stakeholders should be encouraged to review the final EIS to ensure that their comments made during the draft EIS process were incorporated, especially if the project has a key freight interest. DOT and MPO staff should keep their freight stakeholders informed as to the progress of the approval of the environmental document.

Feedback: Any final public comments from freight stakeholders should be compiled by DOT staff.

ENV 11/PER-6: Approve Record of Decision/Render Permit Decision

The record of decision (ROD) for the final approval of the NEPA document is issued by the lead agency, generally the state DOT or FHWA for highway projects. The ROD includes the alternatives considered (ENV 7), selected alternative (ENV 9), and justification for the selection, and provides information on the strategies to mitigate identified environmental impacts from the project. Following this approval, permits can be collected from regulatory agencies; the freight community may play a small role in the approval of permits if there are private property right-of-way concerns. There is generally no other role for freight stakeholders during this decision point and no engagement activities necessary.

The review and approval process proscribed by NEPA provides the opportunity for DOT environmental professionals to engage freight stakeholders and understand how their interests are met by different project alternatives. Because public engagement during this process can sometimes be a very large undertaking—especially if the project is extremely complex or affects diverse interest groups—engaging freight stakeholders at the four critical decision points helps environmental professionals conserve resources and maximize the interest and availability of the freight community. If the process is handled properly, freight stakeholders can provide valuable insight on not only the need for the project and the effect of the project on local and regional businesses and supply chains, but also the most appropriate strategies to promote the project's benefits from a perspective that is not always evident—that of private-sector transportation users.

PRIVATE-SECTOR PERSPECTIVE

To effectively engage private-sector freight stakeholders in the collaborative decision-making process, it is critical to understand their preferences and perspectives. Throughout the case studies are examples of times when engagement provided the desired results and other times when it was less successful. Building on the critical decision points for each phase in the highway planning process, the following box gives a fictitious account of a typical "day in the life" of a BCO supply chain executive, who describes the decision points for the NEPA process from her own perspective.

This fictitious but highly realistic representation was prepared by one of the consultants to illustrate why and at what points in the planning processes it is important for public-sector officials to gain the input of BCOs. This consultant previously managed international supply chain activities for two large importers of fast moving consumer goods and has participated on tasks forces and committees involved in large public-sector transportation infrastructure projects.

A Year in the Life of a Freight Stakeholder

I am Jane Smith, Vice President of Supply Chain and Logistics, at Rainbow Kids Apparel Inc., a 15-year-old privately held company located in an urban center in the Pacific Northwest, which sells high-end products in over 400 children's boutiques across the United States. In large part because of economical labor rates, our company contracts with suppliers in China and Vietnam to produce our designs, which we import through the ports of Portland, Tacoma, and Seattle as well as San Francisco International Airport, Portland International Airport, and Sea-Tac International Airport. Last year we imported 5,000 40-foot equivalent units (FEU) via ocean and 100,000 kilos of air freight. Our sales are growing rapidly; imports are forecasted to increase 25% annually during the next 5 years.

We control selection of logistics service providers and pay the international transportation costs because of our buying terms with suppliers. We negotiate service and rate agreements with three containerized ocean carriers, two air freight forwarders, and two motor carriers that transport the ocean containers after clearance by U.S. Customs and Border Protection from the West Coast marine terminals to our only distribution center (DC) adjacent to our headquarters. Orders from our retail customers are filled by our distribution center staff. Outbound shipments are moved via truck or UPS Ground or UPS Air based on the routing decisions of our customers, since they pay the domestic shipping costs from our DC to their facilities.

For 5 years I've served on my city's Freight Committee, an organization comprising business people across a wide range of industries, all having a great interest in advocating for freight mobility. My committee colleagues work for local manufacturers (e.g., electronics and computers), importers (e.g., footwear, apparel, and department store merchandise), exporters (e.g., recycled metals and agricultural products), logistics service providers (e.g., motor carriers, ocean carriers, air freight forwarders, warehouse operators, ports, barge operators, and railroads), business and industry trade associations, transportation consultants, commercial real estate companies, and local government agencies (e.g., the city transportation bureau, regional MPO, and economic development agency). A representative of the state DOT usually attends the monthly 2-hour meetings. The Freight Committee, which was established 8 years ago by the mayor, provides advice and service to the mayor, city council, and city bureaus on multimodal transportation issues affecting the region. Some issues we've recently weighed in on include recommending how and when lanes should be closed on a critical freight route to minimize truck delays during construction, suggesting where a lane should be added to a stretch of highway to increase freight mobility and how truck turning radii should be considered when repairing and constructing new intersections, and analyzing whether establishing a travel demand management (TDM) policy in the city center would reduce congestion during peak periods.

Initial members of the Freight Committee were appointed by the mayor based on recommendations from his staff and community business leaders. New potential members are usually recruited and voted onto the committee by existing members. The organization often submits letters of support to the mayor on various initiatives that would improve freight mobility and furnishes input during the planning phases of public transportation infrastructure projects within the city limits. Moreover, members provide testimony on behalf of the committee at public hearing on projects and educate government officials and private citizens whenever possible about the importance of freight mobility and its positive impact on the regional economy.

Because of my reputation as a supply chain and logistics expert, 2 years ago, the state DOT director invited me to serve on the Freight Advisory Committee, which advises the DOT director and State Transportation

(continued)

Commission on issues, policies, and programs that affect multimodal freight mobility across the state. This includes identifying high-priority freight mobility projects for consideration in the DOT's statewide transportation improvement program. The Freight Advisory Committee also advises on transportation policy related to goods movement. The advisory committee is a high visibility group that is well respected by the transportation commissioners, DOT director, and staff and has the ability to positively influence transportation-related decisions made at the state level. Two-hour meetings are held every other month. Similar to the city Freight Committee, members of the state Freight Advisory Committee are leaders in their industries and are primarily BCOs, logistics service providers, and business and trade association representatives. Recently, the Freight Advisory Committee was enlisted to determine the most crucial highway corridors in the state for freight and to identify the top road and highway bottlenecks that cause delays in transporting freight.

The CEO and CFO of my company support my participation on these two committees and believe that through my service and advocacy, the multimodal transportation system in our region, the Pacific Northwest, and further afield will be enhanced. We hope that freight mobility will be improved and our firm's profitability will be positively affected over time through reductions in highway congestion. Peak-period congestion has had a detrimental effect on our company, driving up our transportation costs. We've had to make adjustments in our operations as a result. Because our headquarters and DC are located between the port and downtown, where road congestion is heavy, we decided last year to start operating our DC around-the-clock 4 days per week so that we can meet the stringent on-time delivery demands of our customers. We would prefer to operate only during the day shift, but I've expressed my opinion to executive management that that will not be efficient until such time as traffic flows improve. Improvements could be accomplished through such methods as better signal synchronization, creation of alternate truck routes that trucks can use if their primary route is congested, and expansion of lanes on critical freight corridors, especially on the city's east side.

During our regular biweekly meetings, I report to our CEO about the activities and initiatives on which both freight committees are working. He likes being informed about the progress being made as a result of my committee work and also gains a better understanding of the impediments to freight mobility that continue to exist. His key interest lies in improving traffic flow on the major highways on which our inbound goods travel to the DC. He realizes congestion also affects the ability of our workers to get to work on time.

Though I derive satisfaction from serving on the freight committees, I have a great deal of responsibility within my company; so I must carefully budget my time on activities which will likely result in some benefit to my company. I cannot waste time sitting in endless freight project meetings while mind-numbing data are presented but few positive outcomes result.

At the beginning of 2011, the DOT director invited me and three other members of the Freight Advisory Committee to participate on a 26-person task force charged with providing input during the NEPA process for the redesign of Port Road, which connects the port with the interstate highway. This is a critical connector heavily traveled by trucks and is located not far from my company's headquarters and DC. Because this is a big public works project governed under NEPA regulations, the state DOT understood that soliciting public input was not only required but beneficial to the entire process and would result in a road design more acceptable to a wide range of users.

The state DOT succeeded in recruiting task force members from varied stakeholder sectors to ensure the most diverse opinions, experiences, and expertise were represented. The task force comprises the local MPO,

(continued)

environmental groups, and neighborhood associations. My Freight Advisory Committee colleagues and I were the voices of the business community, which was important because, through our participation, we gave freight stakeholders a seat at the table.

When the state DOT director wrote to potential task force members inviting us to participate, the letter included background information on the project. It also informed us of the critical roles we would play in moving the NEPA process through to the stage at which the draft environmental impact statement (EIS) is approved and submitted to the federal government. The task force was charged primarily with helping create the purpose and need statement, laying out metrics by which the project would be measured, vetting a range of potential alternatives, determining and voting on the most favorable one (the locally preferred alternative), and finally, reviewing the draft EIS. Expectations were set in the invitation letter: 3-hour meetings would be held once a month, and the task force was expected to be engaged for a year and a half.

During the first task force meeting, which was held about a month after the invitation letters were sent, the project director and staff furnished additional project details and elaborated on what was expected of members. They showed us the project planning process timeline and key decision points in which the task force would be involved. The project director introduced the project coordinator, who would function as the formal liaison between task force members and project staff. Staff also made it clear that all task force meetings would be held in a public forum and videotaped for airing on the local public TV station; and toward the end of each meeting, time would be allotted for public comment. We were told that if we needed to miss a meeting, we could assign an alternate to attend on our behalf to take notes and provide comments; however, the alternate would not be allowed to vote on critical decisions.

The task force was assembled after the first two decision points of the NEPA process—Reach Consensus on Scope of Environmental Review, and Approve and Publish Notice of Intent—had been completed, since those decision points were more administrative in nature and didn't require the input of the task force.[4]

The third decision point—Approve Purpose and Need/Reach Consensus on Project Purpose (PER-1)—was the most critical for freight stakeholders' involvement. This is particularly true because freight stakeholders like me prefer to be engaged in planning public infrastructure projects as early in the process as possible so that the end product actually benefits our companies. This part of the process, however, was a bit challenging for me: the environmentalists and several neighborhood association representatives on the task force had their own agendas and sometimes seemed disinterested when freight stakeholders explained why this project is so important to BCOs, logistics service providers, and the regional economy. We freight stakeholders felt we clearly identified the issues that exist on Port Road from a freight user's perspective and what we thought the project goals and desired outcomes should be. DOT staff seriously listened to our input; and as a result of lots of discussion during the first three meetings, the task force finally reached consensus and adopted a purpose and need statement that, for the most part, addressed the freight industry's concerns and will guide the entire project over the next 5 years as it moves from planning through NEPA to completion of construction. Before the third meeting, the project coordinator e-mailed task force members a draft purpose and need statement formulated from our discussions, which we revised slightly before voting for its adoption.

The task force was not involved in the fourth decision point: Approve Public Notice (PER2)/Reach Consensus on Study Area. However, the DOT staff solicited our feedback during the next two meetings on decision point five:

(continued)

Approve Evaluation Criteria, Methodology, and Performance Measures. As business professionals and freight stakeholders, we are used to having metrics assigned against which our performance is measured. Often our personal compensation rests, at least in part, on meeting those standards. Task force members appreciated that the DOT staff recognized the importance of establishing criteria and methods to evaluate how well the project will meet the purpose and need statement and asked us to be part of this decision step. A couple of metrics that we felt were important for the project were reduction in congestion during peak travel times and reduction in the traffic crash rate.

Decision point six—Approve Full Range of Alternatives/Approve Resource Agency Public Notice (PER-3)—was also an important decision step in which the DOT engaged the task force. Once the engineers produced 10 potential alternatives, task force members had the opportunity to vet the alternatives, which occurred over the course of three meetings. We all spent a great deal of time learning about the alternatives and analyzing them based on our experiences and needs. We were shown drawings and data on the computer screen and were invited to ask questions. In addition, project staff prepared binders containing the basic technical specifications and sketches of each design so we could review the materials outside the meeting. This was the decision point for which freight stakeholders on the task force were able to provide valuable technical input during the meetings. We described how freight actually moves in the corridor and educated DOT staff and other stakeholders about BCO supply chain dynamics. We provided information such as the necessary turning radii needed for trucks, as well as how grade elevation affects truck acceleration. I was even asked by project staff to present a 20-minute primer on my company's supply chain flow from Asia to our DC and on to a large customer in Chicago.

Though there was lots of material to wade through and three formal meetings at which staff presented technical design data, I was glad to have the time to gain an understanding of and form my own opinion about the best potential alternatives. A few times I e-mailed the project coordinator to request an explanation of some finer engineering points related to one alternative and was satisfied with the explanations provided. I did hear two freight stakeholders complain that we were bombarded with too much information; but in the end, these people were glad they had the opportunity to weigh in on the final alternative selections. Each of us was asked to rank the 10 alternatives in order of most- to least-favorable on an Excel spreadsheet template before the meeting at which the vote for the three highest-ranked alternatives would be taken. At that meeting, the project coordinator displayed our individual rankings on the computer screen and collated our voice votes. The task force ultimately voted to discard six alternatives that likely wouldn't be feasible or desirable, and recommended the three most promising alternatives that warranted further study. At that point, it was up to the DOT to complete decision point seven: Approve Alternatives to Be Carried Forward (PER-4).

The task force had a chance to weigh in during decision point eight—Approve Draft EIS/Reach Consensus on Jurisdictional Determination (PER-5)—which we felt was important to ensure the DOT had thoroughly addressed the concerns of all stakeholders. The project coordinator e-mailed us the entire draft EIS and asked us to embed comments directly into the document and e-mail our revisions back. If an individual had only a few comments to make, he or she was invited to simply e-mail them to the project coordinator. To my knowledge, the coordinator received written feedback from at least 20 task force members. We asked that the draft EIS be revised in several areas to provide more clarity and correct some glaring errors. The freight stakeholders particularly wanted the connection between freight mobility and a healthy economy emphasized in the draft EIS and also specified that alternative 6 provided the highest chance for increased velocity and improved safety for trucks.

(continued)

It was not the job of task force members to engage in decision point nine—Approve Preferred Alternative—since that was the responsibility of other project stakeholders such as the MPO, which met on their own to discuss and approve the preferred alternative. At our most recent task force meeting, the project coordinator explained that the task force had no official authority to be part of this design approval step.

Once that took place, we arrived at decision point 10—Approve Final NEPA Document—and the task force was called on to officially vote on whether the final document addressed all our concerns. That was the task force's last official act. Now that we have reviewed the final NEPA document, the task force has been sunsetted. The DOT will shepherd the project to decision point 11: Approve Record of Decision/Render Permit Decision (PER-6). Soon after that, construction should commence.

Overall, I found participating on this task force rewarding and know my contribution of time and expertise was valued by project staff. But the project was lengthy and intense at times. Because of the diversity of stakeholders, needs, and views, we encountered some rough patches during which consensus among task force members was difficult to reach. However, the project director, coordinator, and staff did a great job in keeping the task force members on track to meet the timeline milestones; smoothing over the bruised egos of certain members; and ensuring every task force member had opportunities to ask questions, provide feedback, and raise concerns, whether during task force meetings or privately via phone or e-mail. Staff kept us informed on how the task force was doing along the way against expectations and made some suggestions about how we could help make the process more efficient. They also were quick to answer our technical and administrative questions.

I knew when agreeing to serve on the task force that the process would take a lot of time and effort and would not always be easy. Still, I must admit that during these many months of meetings, analysis, and discussion, I occasionally wondered if the process would ever end. The sheer volume of technical data presented was often overwhelming. My sentiments were shared by other task force members, but each of the 26 people who joined the task force stayed on till we completed decision point 10. Project staff seemed to sympathize with our frustrations, but in the end, I don't think much could have been done to shorten the time the task force was engaged in the NEPA process. The nature of the decision steps in the process and the amount of information we had to review because of the project's complexity took time. All the task force members genuinely wanted the NEPA process to be done right and the best possible alternative identified and carried forward. I firmly believe the final outcome will be better than if the DOT had not engaged a task force and that freight stakeholders will benefit from the task force's efforts to improve freight mobility through this important freight corridor.

Taking into account the perspective offered by Jane in "A Year in the Life of a Freight Stakeholder" box and other research conducted for this project, Figure 5.2 presents the decision-making process from the private-sector viewpoint.

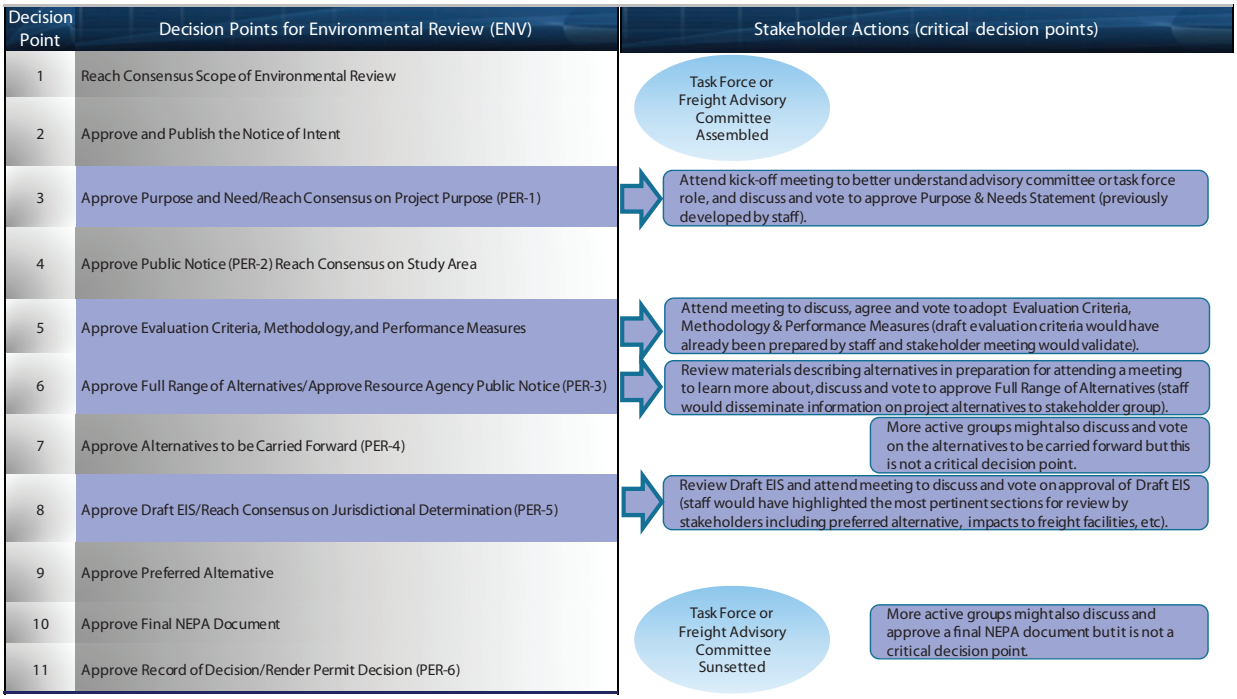


Figure 5.2. *Key decision points from a hypothetical BCO's perspective. Note that critical decision points are consistent with Figure 5.1. This diagram reflects a more active stakeholder group that might have greater resources for engagement during additional decision points. If the Freight Advisory Committee was convened to address a specific project, then it will likely be sunsetted once the NEPA process has been completed. Sometimes an existing freight advisory group is brought in to provide advice and service while the group continues its routine advocacy work.*

NOTES

1. A thumbs-down symbol denotes that this is not a critical decision point for freight stakeholders; a thumbs-up symbol suggests that this is a critical decision point.

2. The SHRP 2 report *Performance Measurement Framework for Highway Capacity Decision Making* (http://www.trb.org/Publications/Blurbs/161859.aspx) contains additional examples of appropriate freight performance measures. The statewide freight plans for Maryland and Minnesota and MPO freight studies from MARC (the Kansas City MPO) and DVRPC (the Philadelphia MPO) also include some excellent examples.

3. More information on the NEPA process for alternatives analysis can be found on FHWA's website at http://environment.fhwa.dot.gov/projdev/index.asp.

4. Although the SHRP 2 C15 decision flow diagram and planning framework was not used in the outreach directed to this task force, the research team was involved in many of the same steps to meet the project's goals.

6 APPLYING THE GUIDE'S TOOLS

Planning practitioners can use the decision flow diagram to guide their engagement of freight stakeholders. Key elements of the engagement process include the utilization of freight advisory committees, interviews and surveys, and focus groups and ad hoc meetings to guide the long-range planning and programming process, corridor planning, and NEPA analysis to ensure that freight considerations and interests are properly included. Although many planning processes evolve organically from previous efforts, applying the freight decision flow diagram at any point in an ongoing process will enhance the practitioners' ability to elicit valuable insight into BCO, motor carrier, and economic development needs within regions and states and expand on existing stakeholder dialogue. Figure 6.1 illustrates how market-based freight-planning considerations, the SHRP 2 decision-making diagram, and existing freight-planning resources converge to identify the critical freight-related decision points. Figure 6.2 reflects an active stakeholder group that might have more resources available during additional decision points.

WHERE TO BEGIN: THE TOOLKIT

This section provides more depth on several topics introduced in the guide. These toolkit topics are designed to help agencies implement and sustain some of the more difficult elements of a freight stakeholder outreach program. Appropriate outreach methods for freight stakeholders can help transportation planning practitioners conserve resources and maximize the value of the feedback offered by private-sector stakeholders in the highway planning process. Users of the guide may have noted that many of the most effective outreach strategies can be used during the development of several of the key decision points in the planning process. These strategies include many of the same tools that practitioners use during the conventional public outreach

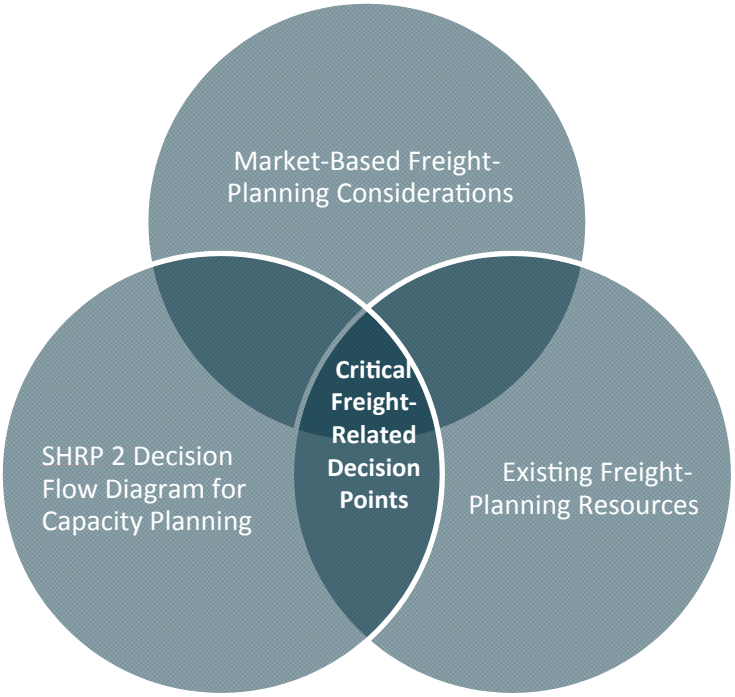


Figure 6.1. *Where we have been: Convergence.*

process but are customized to freight. The toolkit topics in this chapter include the following:

- How to initiate a freight advisory committee
- How to sustain a freight advisory committee
- How to leverage existing contacts in your state
- How to find and collaborate with a freight champion
- How to attract and maintain freight stakeholder participation
- How to use freight data to support freight outreach

HOW TO INITIATE A FREIGHT ADVISORY COMMITTEE

Planners can obtain valuable project-specific and ongoing feedback from knowledgeable freight stakeholders by forming a freight advisory committee. To increase the likelihood of success and maximize the value to policy makers, the following are suggested techniques that have worked well in locations around the nation:

- Define the mission, meeting schedule (i.e., monthly, every other month, or quarterly on the same day of the week), and critical priorities and projects.

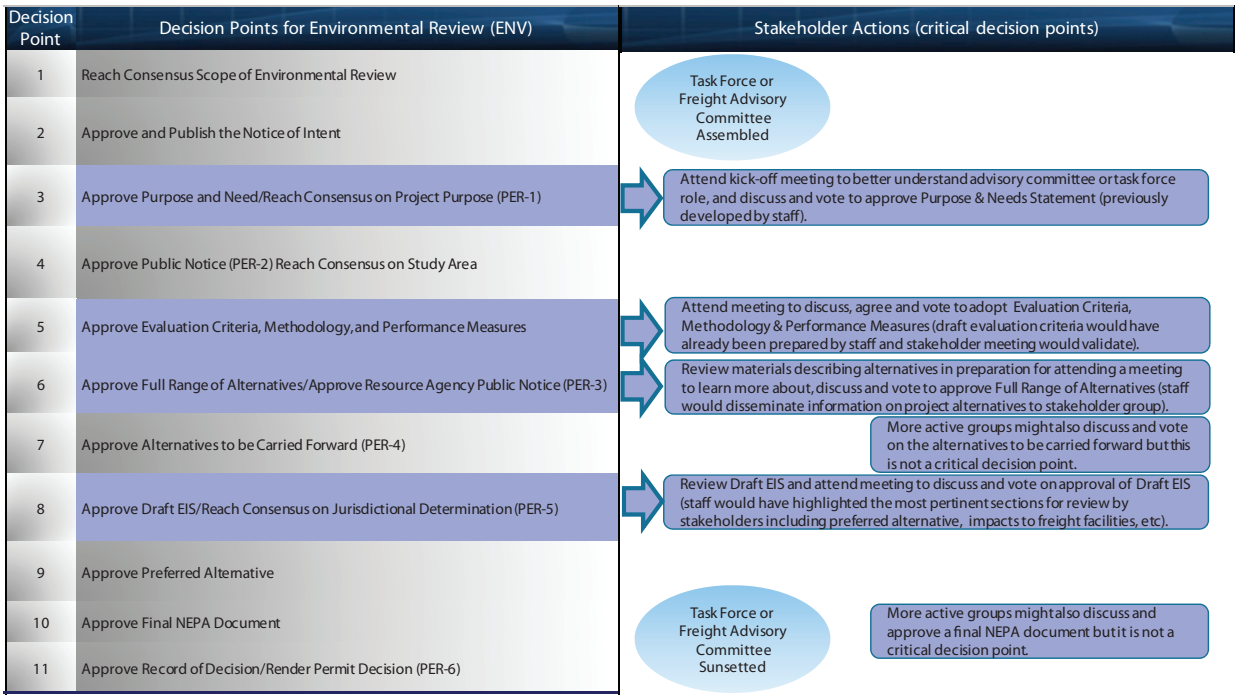


Figure 6.2. *Key decision points from a hypothetical BCO's perspective.*
Note: Critical decision points are consistent with Figure 5.1 in Chapter 5, but this diagram reflects a more active stakeholder group that might have greater resources for engagement during additional decision points. If the Freight Advisory Committee was convened to address a specific project, then it will likely be sunsetted once the NEPA phase has been completed. Sometimes an existing freight advisory group is brought in to provide advice and service, while the group continues to perform its routine advocacy work.

- Determine the governance structure, including minimum and maximum number of members and nonvoting ex officio members, type of person for chair and assistant chair roles (from private or public sector), sponsor agency representative, terms of service for the chair and assistant chair, and whether members have term limits or serve at their will.
- Develop a list of potential members from a cross section of the freight industry. The committee might comprise representatives from BCOs, motor carriers, port authorities, airport authorities, marine terminal operators, ocean carriers, ocean and air freight forwarders, railroads, integrators (FedEx and UPS), city transportation bureaus, local economic development agencies, mayors' offices, state DOTs, chambers of commerce, and industry and trade associations.
- Identify an appropriate regular meeting venue that is convenient and pleasant for members.
- Ensure that the letter of invitation sent to potential members is signed by a high-level policy maker, such as the governor, mayor, state DOT director, or state transportation commission chair.

HOW TO SUSTAIN A FREIGHT ADVISORY COMMITTEE

Transportation agencies sometimes struggle with sustaining an advisory committee once it is established. The following ideas might help to sustain the committee:

- Limit the meeting to 2 hours or less; distribute an agenda and meeting materials in advance; and adhere to the agenda.
- Provide food and nonalcoholic beverages.
- Identify the most critical freight infrastructure projects on which the committee should focus advocacy efforts.
- Invite various external speakers to make short presentations during each meeting on topics of interest (e.g., mayoral candidates can offer their perspectives on transportation, the state DOT director can explain programs and projects, a representative of the bicycle association can communicate the needs of that stakeholder group, a representative of an environmental group can provide perspective on how transportation projects negatively and positively affect the environment). This fosters open-mindedness and cooperation.
- Develop a communication plan and calendar for periodic meetings with key policy makers to educate them on supply chain dynamics and advocate for critical freight infrastructure projects that will benefit the freight community.
- Craft position papers on critical freight-related subjects for distribution during advocacy efforts.
- Write letters and provide public testimony in support of critical freight projects.
- Provide opportunities for networking among members.
- Communicate via e-mail with members during the month as important issues arise and their input is desired, but be careful not to bombard members with too many requests for input or involvement.
- Consistently remind members how the sponsor agency values their participation and feedback.

HOW TO LEVERAGE EXISTING CONTACTS IN YOUR STATE

When establishing a plan to engage freight stakeholders, instead of starting from scratch, find the organization that already has good contacts and relationships with members of the freight community and work with them to initiate efforts. The agency with freight industry contacts could be the local MPO, state DOT, chamber of commerce, trucking association, or other public agency. Align your efforts with theirs to reduce duplicative outreach, otherwise it may overwhelm and confuse freight stakeholders and lead to stakeholder fatigue and loss of interest in engagement.

HOW TO FIND AND COLLABORATE WITH A FREIGHT CHAMPION

Find a freight champion, someone widely respected and dynamic who can advocate for freight interests among public-sector agencies. For example, this freight champion can help DOT and MPO staff understand how and why it is important to incorporate freight issues into their plans and programs and solicit input from freight stakeholders on transportation infrastructure projects early in the planning stages. This person might be a high-level executive in a state organization (even the DOT director) or a private-sector leader. Regardless of his or her station or employer, the freight champion should be effective in catalyzing action and inspiring firms and individuals to collaborate on freight transportation planning.

HOW TO ATTRACT AND MAINTAIN FREIGHT STAKEHOLDER PARTICIPATION

Freight stakeholders generally want to participate in the decision-making process, but policy makers have a limited number of opportunities in which to engage them before they lose interest. Stakeholders can lose interest if they feel the process is not advancing with clear goals and outcomes or that their corporate bottom line will not be improved through continued involvement. Planners call this *freight stakeholder fatigue*. Because large infrastructure projects take a long time to plan and complete, engaging public-sector stakeholders over the course of the project can be difficult. Moreover, the time horizons of the public and private sectors differ greatly.

Challenges of Attracting and Maintaining Freight Stakeholder Participation

Freight stakeholders often perceive that public-sector transportation infrastructure projects are highly complex and take far too long to plan and execute, often in excess of a decade, sometimes resulting in only marginal tangible benefits for their businesses. They find the public-sector planning process to be tedious and are reluctant to spend much of their limited time sitting in meetings, listening to presentations, and offering feedback—which they believe is not always taken to heart and incorporated into the plan. Their frustration grows when they see infrastructure projects completed with little net gain in system capacity and/or freight velocity, particularly if transit, commuter, bicycle, and pedestrian solutions are perceived to be a greater priority than freight mobility enhancements.

In particular, BCOs and logistics service providers may be reluctant to become involved in transportation infrastructure planning activities for several reasons. Public agencies can help stakeholders overcome hesitancy using the following methods.

1. ***Concerns about confidentiality.*** Public-sector agencies cannot assure freight stakeholders that the proprietary information they provide will be kept confidential; official documents produced during the study become part of the public domain and are discoverable under the Freedom of Information Act. BCOs consider their supply chains to be a strategic advantage; therefore, they often decline to participate in outreach sessions because they do not want proprietary strategies and

operational profiles to be made public. Logistics service providers also do not want their competitors to know how they manage their businesses, who their customers are, and the volume of cargo they handle. These risks can outweigh any potential benefit to be derived by the stakeholder's company.

What can the agency do? If stakeholders are hesitant to participate because they do not want to share information, transportation agencies can focus their inquiries on a broader geographic level (e.g., the highway corridor) to avoid disclosure of corporate strategy or operations. For example, instead of asking for the number of trucks, the agency can work with the firm to identify, in more general terms, the types of operations that use the corridor (commodities) and the problems they face on the highway.

2. ***Potential negative outcomes.*** Conclusions drawn by public agencies based on information collected from stakeholders might negatively affect the shareholder value of the companies. Once gathered, freight stakeholders cannot control how the public agency uses or interprets the information.

   What can the agency do? One way of limiting this fear is by allowing the stakeholders to review any materials that use information they provided before it is publicly released—even in draft form.

3. ***Limited impact.*** The freight stakeholder may perceive that the infrastructure project may not deliver enough specific benefits to the stakeholder's company to warrant participation in the planning process, particularly on projects with long planning and execution timelines. It is the law of diminishing returns.

   What can the agency do? Agency staff should remind stakeholders that the highway planning process will yield much better long-term results with their input. Agencies can also assuage these concerns by focusing on short-term projects that provide immediate benefit to stakeholders—such as access improvements, road repairs, and traffic signal improvements. This type of activity promotes trust and increases stakeholders' willingness to endure longer-term planning processes.

4. ***Fear of being lost in the noise.*** Because there are usually many types of stakeholders—including private citizens, neighborhood associations, bicyclists, public transit users and promoters, and environmental groups for any given transportation infrastructure project—freight stakeholders may believe their voices will be drowned out by other types of stakeholders who are more vocal and willing and have more time to speak out in public forums.

   What can the agency do? This challenge can be overcome by engaging stakeholders in the development of a prioritization process, in which they help set the criteria and weighting for the projects. The use of benefit-cost analysis is also helpful as it tends to provide high benefits to freight projects.

5. ***Disparate time frames: public versus private sector.*** Often projects progress in fits and starts, and lack a clear direction. This is frustrating to freight stakeholders who are responsible for achieving rapid results in their own businesses, unlike public agencies whose planning and implementation horizons can be decades long.

Stakeholder fatigue can set in if policy makers are not creative in stimulating and maintaining interest over the course of the planning process.

What can the agency do? Agencies can schedule meetings at a reasonable frequency, have a specific and limited agenda, stay on task during the meeting, explain the progress that has been made thus far, offer food and beverages, and make the meeting an opportunity for networking.

6. ***Lack of public-sector and private citizen understanding.*** The majority of private citizens and legislators do not have a clear understanding and possess limited knowledge of how supply chains function, the myriad ways products move from origin to destination, and the economic value of freight mobility. Freight stakeholders might believe that the solutions developed will not be relevant or address their concerns because of this lack of understanding. Transportation is not taught in schools, so policy makers have to obtain their knowledge of how freight stakeholders use the multimodal transportation system in other ways.

   What can the agency do? This guide, freight advisory committees, industry experts, universities with transportation and logistics programs, and other sources can be helpful in providing that valuable education. Policy makers also need to be careful in approaching public citizens and take time to explain transportation and logistics concepts and terminology to help them broaden their perspectives.

7. ***Inclusion of private citizens in freight stakeholder meetings.*** Inviting private citizens to freight stakeholder meetings can be beneficial in terms of building bridges between these groups that often have very different views and interests, and providing a forum for BCOs and other freight stakeholders to educate the public about supply chain dynamics and freight movement. This can lead to more citizen support for freight projects. However, depending on the circumstances, planners should be aware that BCOs do not always welcome the attendance of citizens—who may sidetrack the meeting's agenda in an effort to advocate for their own interests rather than listen to the information that BCOs provide.

   What can the agency do? Planners should proceed cautiously and tightly control meetings to keep everyone on task if citizens are invited.

HOW TO USE FREIGHT DATA TO SUPPORT FREIGHT OUTREACH

Agencies use freight data to evaluate the economic effects of highway projects and to paint a general picture of the regional freight system. Freight data can be a powerful tool to engage freight stakeholders in the planning process: the careful use of such data can raise the credibility of the DOT and provide freight stakeholders with broad market information that may benefit their firms.

Several guides recommend using data from a variety of sources, both private and public, so analysts can evaluate the nature of the overall economy, the direction in which the economy is moving (robust growth, stagnant, or in decline), and the types of industries and firms that exist in a particular region. Private firms are accustomed to "triangulating" between data sets and will typically respect this approach.

- ***NCHRP Report 594, The Guide for Integrating Freight into the Transportation Planning and Project Selection Processes,*** recommends identifying "corridors or facilities of statewide or regional significance" during the long-range planning or corridor planning phases. National corridors or facilities of statewide or regional significance have been highlighted by FHWA; additional local corridors of significance (for freight flows) can be identified by analyzing a variety of economic, mobility, or strategic metrics to identify concentrations of warehouse and cargo-handling facility space or a disproportionate number of freight-oriented firms located within a particular highway corridor. The MAP-21 legislation further promotes the identification of freight corridors at the national level. This identification of key corridors and concentrations of freight activity is especially critical during the long-range planning process. Challenges associated with the understanding and sharing of freight data include the following:
- ***Identification of sources and use.*** Some available data are free, such as the FHWA's Freight Analysis Framework (FAF) and trade data from the U.S. Department of Commerce. The FHWA's FAF assists planners in determining trade trends and freight flows. Additionally, some data are available from private sources, including trade associations or research organizations. Another data source on imports that can be further used is customs entry information on imported goods collected by the U.S. Bureau of Customs and Border Protection.
- ***Nonproprietary data.*** Planners often need access to data retained by the private sector. For DOT and MPO planners to access proprietary data from BCOs and motor carriers, they need to know how to clearly describe the need and purpose for the data; timing (both duration of collected data and when the data are needed); and the required format (file type, size restrictions). Too often, planners are unaware of the sensitivities associated with certain types of data and/or how to formally request only the data they need, which may not include the proprietary data elements and therefore be nonproprietary.
- ***Proprietary data.*** Private-sector data generally contain proprietary information that companies are often reluctant to share; however, private industry representatives often discuss and share trends in freight movement at industry forums and conferences. Some key examples are the Retail Industry Leaders Association Logistics Conference and the Intermodal Association of North American Conference. These types of venues may provide a valuable source of data for public-sector planners who attend, as well as an opportunity to establish industry contacts for future data collection efforts. Obtaining proprietary data from BCOs can be challenging because BCOs recognize that, once data are provided to a public-sector agency, there is no way to protect that data from dissemination in the public realm. DOT and MPO planners must be cognizant of the sensitive nature of BCO proprietary data. BCOs may be more inclined to furnish some data rather than none if planners carefully approach BCOs for specific and limited data while providing explanations about how the data will be used.

Potential recommendations for improving the freight-planning process include the following:

- ***Expanding the recognition and understanding of freight data sources.*** Some freight stakeholders familiar with the FAF data indicated interest in seeing more funding allocated to improving and refining the database for purposes such as gaining a better understanding of day-to-day freight operations and routing. Other private data sources, such as TRANSEARCH[1] or PIERS,[2] are generally familiar to the private sector and use proprietary methods to develop freight information databases. Data from these sources are readily available for purchase by public-sector planners, but the cost can discourage their use.
- ***Promoting the sharing and expanded use of freight-specific data.*** Trade or business organizations can act as intermediaries between firms and the public sector for the sharing of freight data. Similarly, DOT planners can gain insight through participation in industry forums to better understand industries' decision-making processes, as well as the data used to make transportation decisions. The value of data is only recognized through the data's proper application. It is critical that public-sector planners understand and respect the confidential nature of BCO supply chain data and implement safeguards to prevent the unintended, unauthorized dissemination of such proprietary data. To this end, the importance of educating DOT and MPO planners on how to use the data properly should be a shared priority of both private- and public-sector stakeholders.

NOTES

1. TRANSEARCH is a commercial data product developed by IHS Global Insight, Inc., which incorporates a mix of public-sector and proprietary data to estimate freight flows.

2. PIERS is a database of U.S. waterborne trade activity for both imports and exports.

GLOSSARY

beneficial cargo owner (BCO). A BCO can be either the shipper/supplier/factory or the consignee/receiver/buyer, depending on the point in time and location at which product ownership and liability transfers between the two parties and according to the agreed on sales terms. Sales terms dictate, among other things, the party responsible for determining the routing and mode of transport. International Chamber of Commerce (INCO) terms of sale are the most commonly used in international trade. Free on Board (FOB) and Free Alongside (FAS) are two common INCO terms.

Class I railroad. The U.S. Surface Transportation Board has three classifications for railroads: Class I, Class II, and Class III. Class I railroads are those with operating revenues of at least $378.8 million (U.S. dollars) in 2009. Class I carriers typically operate in many different states and concentrate largely on long-haul, high-density intercity traffic lanes. There are seven Class I railroads: Burlington Northern Santa Fe, CSX, Canadian National, Canadian Pacific, Kansas City Southern, Norfolk Southern, and Union Pacific.

third-party logistics service provider (3PL). A 3PL is a company that provides a variety of transportation and logistics services to shippers, such as air freight forwarding, ocean freight forwarding, trucking, warehousing, and value-added services. 3PLs can be asset-based companies that own warehouses and trucks, or non-asset-based companies that lease facilities and equipment.

transloading. Transloading is the process by which a 3PL transfers the contents of an import ocean container directly into a 53-foot domestic truck or rail container at a U.S. gateway port for onward movement to a store or distribution center. The 3PL typically arranges for the inland transportation with the motor carrier or intermodal marketing company (IMC) on behalf of the importer. Importers select transloading into domestic equipment to reduce the per unit cost of inland transportation from

the U.S. gateway port to the inland destination because the contents of three ocean containers can generally fit into two 53-foot domestic truck or rail containers. Transloading usually takes place at large gateway ports, including the ports of Los Angeles, Long Beach, New York and New Jersey, and Savannah where ocean carriers make first vessel calls on their vessel itineraries.

value-added services (VAS). 3PLs perform VAS for BCOs, usually those with higher value cargo, to make the products floor-ready for sale. VAS activities include the following:

- Picking and packing specific cartons or units from cartons per the BCO's allocation and assembling the cartons or units into a customer order for onward movement by truck.
- Applying and/or scanning barcode labels.
- Applying price tickets to products.
- Performing product quality control.
- Reboxing and relabeling.
- Kitting individual components into an assembled product for retail sale (e.g., combining a cell phone, case, and charger).

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RELATED SHRP 2 RESEARCH

A Framework for Collaborative Decision Making on Additions to Highway Capacity (C01)

Interactions Between Transportation Capacity, Economic Systems, and Land Use (C03)

Freight Demand Modeling and Data Improvement (C20)