Sample
Participant Workbook
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Advancing Freight Planning

Participant Workbook

NATIONAL HIGHWAY INSTITUTE

U.S. Department of Transportation
Federal Highway Administration

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I. Introduction

The National Highway Institute (NHI) course *Advanced Freight Planning* is a two-day course intended to provide advanced, in-depth, hands-on understanding of freight transportation and how freight can be incorporated into state and MPO planning and project programming processes. The course is designed to cover:

- The impact of freight and goods movement on state and local economies;
- The role of transportation in modern business logistics / supply chain management;
- Freight planning and programming best practices with an emphasis on techniques that have been successfully used by other public agencies to bring freight projects from planning to reality; and
- Freight stakeholders and how they can benefit from the public sector planning process.

This course is designed to build upon previous freight planning efforts by providing advanced knowledge about freight planning, such as:

- Why freight is important to local and regional economic competitiveness;
- How non-highway freight modes, such as expedited air cargo, container ship and intermodal rail operate, and what are the trends affecting these modes;
- How to identify, prioritize, develop, and implement freight supportive projects; and
- Global issues affecting modal trends and technology development in the freight transportation environment.

II. Course Overview

Today state and regional planning agencies are increasingly reliant on international trade to support local economic development. Public transportation agencies are being challenged to support modern business supply-chain management through investments and policy actions affecting transportation service providers across all modes. To help American businesses succeed in the global trade environment, government agencies responsible for

transportation planning must foster integrated modal systems by supplying infrastructure and info-structure that can support responsive, reliable transportation for goods in motion.

Over the past several decades there has been growing interest and understanding among federal, state and local governments, as well as the greater business community regarding the impact of freight movements on economic vitality, and the consequences of inadequate or unreliable transportation systems. However, due to a multiplicity of issues and barriers, state and local transportation agencies have struggled to identify, incorporate, and implement freight supportive projects into their planning and project implementation programs.

Historically, private sector stakeholders responsible for material and product transportation and public officials responsible for transportation infrastructure investment, have had little or no interaction aside from economic and safety regulation. While most economic regulation has been dissolved, lingering attitudes have fostered public sector resistance to seek business involvement in the planning process (and resistance within the private sector to get involved). Providing planners with a better understanding of private sector operations and the importance of freight to regional economic success, may foster more interaction between public and private transportation planners and practitioners, and help address the nation's freight transportation needs.

The supply of courses focusing on freight planning is inadequate. Most college level logistics programs cater to the private sector. Developing and marketing this training course is crucial to the advancement of the goals and objectives put forth by FHWA.

Advanced Freight Planning is a two-day course aimed at transportation professionals involved in multi-modal planning and program management. The course provides techniques and strategies designed for those individuals directly involved in the implementation of transportation planning, programming and allocation of resources. The course will be structured to explain to participants why an understanding of freight is important. It will provide participants with the skills needed to identify, prioritize, develop and implement freight supportive projects. It will identify tools and teach skills focusing on:

- "Selling" a freight plan;
- "Doing" a freight plan; and
- "Using" a freight plan.

The "selling" session will focus on identifying to whom, why and how planners need to sell the benefits of freight planning; the "doing" session will focus on adapting planning activities to integrate freight by providing an in-depth

examination of supply chain management and its impact on transportation planning; and, the "using" session will focus on implementing a freight plan in coordination with a long range transportation plan and identifying projects through the planning process that will be programmed into the State or MPO Transportation Improvement Program (S/TIP).

III. Course Goal and Outcomes

Course Goal

The goal of this course is to:

Promote the development of more multi-modal transportation systems by providing public and private sector transportation planners with tools, techniques, and noteworthy practices to further integrate freight and more effectively engage the private sector in the public sector transportation planning and programming processes.

Course Outcomes

At the end of this course, participants will be able to:

- Describe the importance of freight mobility to the economy
  - Discuss how freight transportation needs differ for major industry sectors
  - Describe the role of the freight transportation systems in supporting economic competitiveness
- Discuss major trends affecting various modes of freight transportation, and their potential impacts on regional transportation systems
  - List the factors that influence private sector freight transportation decisions
  - Discuss how private sector needs can inform public sector performance measures
- Demonstrate methods for freight project selection and implementation
  - Summarize methods for identifying and prioritizing freight projects
  - Discuss the benefits of engaging private sector stakeholders in project identification

- List potential funding mechanisms for freight projects

IV. Course Agenda

The course agenda is provided on the following pages. Please note that actual class start times may vary between 8 am and 9 am but will not exceed 8 hours per day.

Table 1: Course Agenda:

Day 1		**Length**
Time	**Lesson Title**	**(minutes)**
8:30 – 9:15	Lesson 1: Introduction and Overview	45
9:15 – 10:05	Lesson 2: Selling the Importance of Freight Planning	50
10:05- 10:25	Break	20
10:25 - 11:25	Lesson 2: Selling Freight Planning (cont.)	60
11:25 - 12:25	Lunch	60
12:25 - 1:25	Lesson 3: Supply Chain and Private Sector Dynamics	60
1: 25-1:45	Break	20
1:45 - 2:30	Lesson 3: Supply Chain and Private Sector Dynamics	45
2:30-3:15	Lesson 4: Doing Freight Planning	45
3:15- 3:35	Break	20
3:35 - 4:00	Lesson 4: Doing Freight Planning (cont.)	25
4:00 - 4:30	Lesson 5: Day 1 Wrap-up Presentation	30

Day 2 Time	Lesson Title	Length (minutes)
8:30 - 9:00	Lesson 6: First Day Review	30
9:00 - 9:40	Lesson 4: Doing Freight Planning (Exercise)	40
9:40 - 10:00	Break	20
10:00 - 11:20	Lesson 7: Using Freight Planning	80
11:20 - 12:20	Lunch	60
12:20 - 1:10	Lesson 8: Freight Project Implementation	50
1:10 - 1:30	Break	20
1:30 – 2:10	Lesson 8: Freight Project Implementation (cont.)	40
2:10 - 3:10	Lesson 9: Individual Exercise: Action Plan	60
3:10 - 3:30	Break	20
3:30 - 4:30	Lesson 10: End of Course Test Review and Wrap-up	60

V. Course Material

Lesson 7: Using Freight Planning

Lesson 7: Using Freight Planning - Identifying Projects

Learning Outcomes

- Summarize methods for identifying freight projects
- Discuss the benefits of engaging private sector stakeholders in project identification

7-2

Identifying Freight Projects

- Identifying freight needs
- Translating needs into projects

7-3

Identifying Freight Needs

- Review existing transportation plans
- Interview freight stakeholders
- Observe freight routes and facilities
- Analyze existing and new data to identify deficiencies
- Consult economic development agencies

7-4

Translating Freight Needs to Freight Projects

- Define what constitutes a freight project
- Existing and new data use
- Stakeholder input
- Inventory of freight routes and facilities
- Existing plans

7-5

Defining a Freight Project

- Does not have to be explicitly freight oriented
- Any project that has direct impact on improving freight movements
- Evaluating impact on freight of all projects as part of planning process

7-6

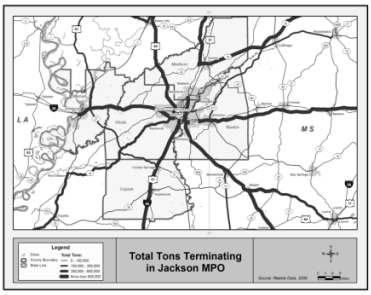
Example- Florida DOT

- All projects requests subject to same documentation
- Documentation requires information on impacts on freight movement
- Projects with freight benefits receive additional consideration in screening process

7-7

Using Data for Identifying Freight Projects

- Commodity flow data
- Origin-destination data
- Establishment data
- Crash data
- Bottleneck and chokepoint identification



7-8

Using Stakeholder Input to Identify Projects

- Identify key transportation infrastructure
- Develop list of safety hotspots
- Identify bottlenecks
- Discuss operational issues
- Respond to public sector analysis

7-9

Example: Mississippi DOT

- Intermodal Committee comprised of short line railroad and river port managers
- Meet quarterly to discuss project needs
- Committee votes on what projects get funded
- DOT funds the program out of programming budget

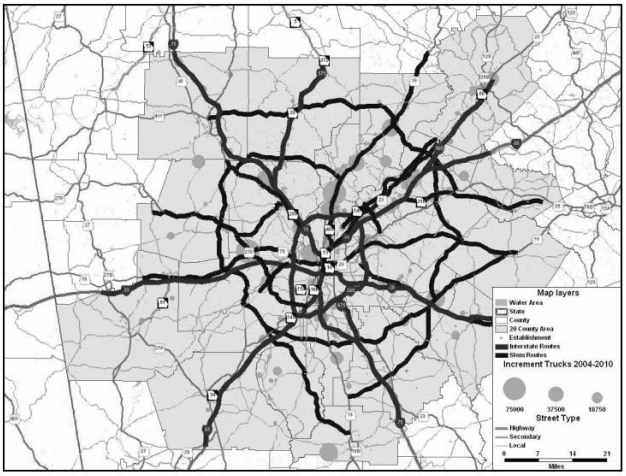
7-10

Using Inventory to Identify Freight Projects

- Designating a freight sub-system
- Documenting connectors to major freight generators
- Integrating land use inventories

7-11

Example – Atlanta Regional Commission



7-12

Impact of Existing Plans on Freight Movements

- Include all transportation projects
- Develop methods for recognizing projects that direct benefits on freight movement
- Incorporate both quantitative and qualitative measures

7-13

Potential Objectives of Freight Projects

- Safety and security
- Mobility/system performance
- Economic development and land use
- Growth management
- Intermodalism
- Environment impacts

7-14

Short-Term Freight Projects

- "Quick start projects"
- Relatively small investments can yield significant returns
- Important because demonstrate commitment
- Often stakeholder driven so build support
- Tend to be localized

7-15

Medium and Long Term Projects

- Larger investments
- More likely to be multi-modal
- Incorporated in TIP and STIPs
- Opportunity for public-private partnership

7-16

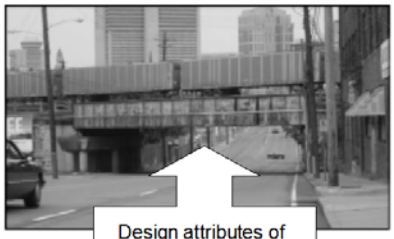
Example- Nashville, TN

Problem:

Proposed Actions:

Interim –Install a vehicle height detector system in advance of the overpass

Long-term- Improve clearance by lowering road bed.



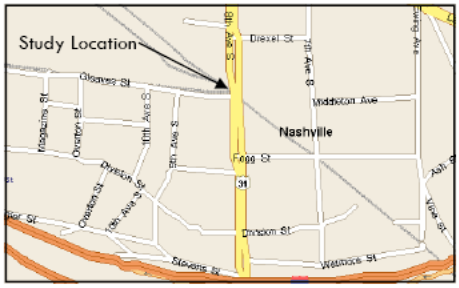
Design attributes of bridge create inadequate bridge height

7-17

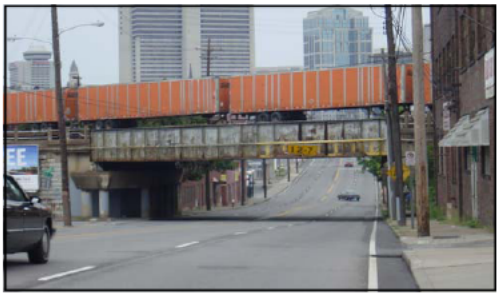
NASHVILLE AREA MPO - REGIONAL FREIGHT STUDY
FAST ACTION PROJECTS

PROJECT #2	8TH AVENUE RAIL BRIDGE
SOURCE	MOTOR CARRIER SURVEY
LOCATION	DAVIDSON COUNTY (NASHVILLE, TN)
JURISDICTION	T.D.O.T.
PROBLEM	DESIGN ATTRIBUTES OF THE BRIDGE CREATE INADEQUATE HEIGHT CLEARANCE FOR TRUCKS.
PROPOSED ACTIONS	INTERIM SOLUTION: STUDY TO DETERMINE THE FEASIBILITY AND DESIGN PARAMETERS FOR THE INSTALLATION OF A VEHICLE HEIGHT DETECTION SYSTEM IN ADVANCE OF OVERPASS IN BOTH DIRECTIONS TO WARN OF CLEARANCE PROBLEMS. LONG-TERM SOLUTION: DETERMINE FEASIBILITY OF IMPROVING CLEARANCE HEIGHT BY LOWERING ROADWAY SECTION.

Eight Avenue South looking south at railroad overpass



Location Map



Eight Avenue South looking north at railroad overpass looking south on