



**U.S. Department of  
Transportation**

Office of the Secretary  
of Transportation

# **Intermodal Technical Assistance Activities For Transportation Planners**

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August 1993

Prepared by  
Office of Intermodalism

**MESSAGE BY**  
**ASSOCIATE DEPUTY SECRETARY MICHAEL P. HUERTA**

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) identified a new shift in transportation priorities -- the need to obtain the optimum yield from existing transportation resources, rather than solely relying on expansion as we have in the past. In an austere fiscal environment, we need to better manage the resources we have to meet the increasing future transportation needs of this country. This is truly the challenge of the decade for all of us and intermodalism is the philosophy which will help us reach that goal.

Intermodalism under ISTEA has been called revolutionary -- a new way of doing business in the transportation industry and planning environment. Intermodalism does not encompass a highly visible new nationwide construction program as we have seen in the past. Rather, it is a new management philosophy which advocates full integration and coordination of the existing national transportation systems for maximum efficiency.

What does intermodalism include? It incorporates all assets (trains, planes, ships, buses, railroads, cars, bicycles), all associated infrastructure (roads, airports, railroads, terminals, bridges), and the information which flows with the movement of people and goods over this system. It also recognizes new technology and the role it plays in influencing and modifying our transportation capability.

Intermodalism requires efficient connections between modes, choices among alternative modes, and communication and cooperation within the transportation community. It advocates making better transportation planning decisions and considering the full range of alternatives, while assuring that safety and environmental benefits are integral to the final product. It requires looking for maximum mobility and thinking in terms of a transportation system -- the total trip combining all modes, not just individual segments.

The intermodal transportation challenge we face is the application of this new management philosophy to a mature transportation infrastructure, where increasing demands for the movement of people and goods and protection of the environment must now be met by improved planning, management and maintenance rather than by expansion as in the past.

As we in the Office of Intermodalism pursue our mandate to coordinate Federal intermodal policy, we see one of our roles as helping to foster a better intermodal planning environment for those of you faced with making daily transportation decisions. This publication serves that purpose by providing information on intermodal technical assistance activities being supported by the Department. As a resource document, it contains a compilation of available tools to help you respond to the new technical requirements of ISTEA and the Clean Air Act Amendments of 1990 (CAAA). It identifies these activities and their products -- studies, conferences, courses, reports, data, and models -- that the Department has available or under development. We hope it is responsive to your needs and look forward to receiving back your comments and suggestions for future initiatives.



# COMMENTS

RE: INTERMODAL TECHNICAL ASSISTANCE FOR TRANSPORTATION PLANNERS

Request: A few minutes of your time will contribute significantly to our efforts to improve the quality of Federal intermodal technical assistance programs. Please complete and return this postage-paid comment sheet.

Michael P. Huerta  
Associate Deputy Secretary  
Director, Office of Intermodalism

1. Is this listing of intermodal technical assistance activities a useful resource? What changes in format or additional information would you like included for future editions?

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2. Do you have suggestions for modifying listed activities to address unfulfilled needs?

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3. What types of technical assistance are most helpful to you as a transportation planner?

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4. Are there areas not addressed in this publication for which technical assistance projects should be initiated? What are these areas and your recommendations for needed projects?

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5. How can DOT make the results, or products, of technical assistance more readily available to you?

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6. Should consideration be given to expanding the listing beyond DOT-initiated activities and, if so, what other areas/groups should be included?

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Your name: \_\_\_\_\_ Title: \_\_\_\_\_

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**DEPARTMENT OF TRANSPORTATION  
INTERMODAL TECHNICAL ASSISTANCE ACTIVITIES  
FOR TRANSPORTATION PLANNERS**

Prepared by  
U.S. Department of Transportation  
Office of the Secretary of Transportation  
Office of Intermodalism

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## **Overview**

This document identifies intermodal technical assistance activities originating within the U.S. Department of Transportation (DOT) which should be of use to metropolitan planning organizations (MPOs) and State and local planners in fulfilling their responsibilities under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and the Clean Air Act Amendments of 1990 (CAAA).

## **Background**

One of the top priorities of DOT is to be responsive to the needs of transportation planners across the United States, particularly in implementing ISTEA and CAAA. Along those lines, ISTEA mandates that DOT provide intermodal data and technical assistance to State, metropolitan planning organization (MPO) and local planners. Both ISTEA and CAAA impose requirements on planners for which additional technical assistance may be needed.

ISTEA also mandated the establishment of an Office of Intermodalism within the Office of the Secretary of Transportation (OST). By this action, the Administration and Congress created a single, high level focal point within the government for the coordination and advocacy of activities involving more than one mode of transportation.

There are many activities, both ongoing and planned, within DOT which are intended to meet intermodal transportation planning needs for State, MPO and local organizations. There are other activities which, although not specifically designed for such use, are relevant to State, MPO and local planning. As an initial step in determining the Department's responsiveness to these needs, the Office of Intermodalism, in conjunction with DOT's modal administrations and other OST offices, conducted an informal survey of intermodal technical assistance activities originating within the Department. The results of this survey are presented in this document.

## **What is technical assistance?**

For purposes of this document, technical assistance activities are those programs and projects which will provide State, MPO and local transportation planners with tools to help them meet new requirements -- the new way of doing business -- imposed upon them by ISTEA and CAAA. These can be in-house or contracted activities which will produce (1) a product intended to be of use to these planners or (2) products which we feel should be made available to them even though the original proposer did not specifically make that designation. These products can take many forms:

- o outreach/educational information -- workshops, conferences, formal training courses
- o analytical models -- planning, travel demand forecasting, congestion management, air quality assessments (anything that better reflects and models the dynamics of the travel decision or planning processes)

- o data -- available data bases on infrastructure or assets, methodology for collecting data, data characteristics, data standardization (anything which makes accurate, current, responsive data available)
- o technical information/documents -- pamphlets, books, studies (hard copy or electronic sources of information)

Except for activities of the National Highway Institute (NHI) of the Federal Highway Administration (FHWA) and the Volpe National Transportation Systems Center (VNTSC) of the Research and Special Programs Administration (RSPA), the intermodal technical assistance activities in this document are limited to DOT headquarters efforts. There may be other technical assistance activities which originate in the regional offices of DOT modal administrations which are not identified. There may also be activities within DOT headquarters which have not been included in this survey, some of which are in a preliminary stage of development. It is anticipated that future publications will be more comprehensive, potentially including similar activities being conducted by external groups and other supplementary information.

### **Uses for the information**

The information presented in this document is intended to serve two purposes. First, the list of intermodal technical assistance activities is a source of information for both planners and Federal officials about technical assistance products under development or completed within DOT. Each listing includes a title, a description of the product of the activity, a description of potential users, an availability date, a contact for obtaining further information, and a description of the activity. Course listings of the NHI also include a course number and the name and telephone number for a course coordinator through whom arrangements for presentation of the course can be made. It should be noted that completion of projects with future dates may be subject to the availability of fiscal resources.

Second, this document is a starting point for determining if technical assistance needs of State, MPO and local planners are being met by the DOT effort. The listing of technical assistance activities is indicative of where DOT is investing its efforts. We seek to determine if these activities are responsive to the needs of users and to identify further areas where intermodal technical assistance projects should be initiated. Your completion of the comment sheet at the front of this document is essential to this phase of our project.

Activities are grouped into a number of topical areas, as shown in the table of contents. Although many activities address two or more subject areas, they have been listed only once under the most appropriate heading. To aid the reader in identifying activities of interest, the index at the end of this document contains an alphabetical listing, a course listing, and a listing by DOT lead administration.

Inquiries concerning this document may be directed to the U.S. Department of Transportation, Office of Intermodalism, S-3, 400 Seventh Street, SW., Washington, DC 20590-0002; (202) 366-5781.

## **AREAS OF INTERMODAL TECHNICAL ASSISTANCE ACTIVITY:**

### **AIR QUALITY ANALYSIS:**

#### **ADVANCED TRANSPORTATION -- AIR QUALITY ANALYSIS (COURSE)**

**Product:** Course.

**Users:** Federal, State and local transportation and air quality agency personnel.

**Availability Date:** Available Fall 1994.

**Coordinator:** Harry Hersey, NHI, (703) 285-2778.

**Technical Information:** Patrick DeCorla-Souza, FHWA, (202) 366-4076.

**Course Number:** 15260

This three-day National Highway Institute (NHI) course will emphasize advanced practices for system level modeling and analysis of travel demand management (TDM) and transportation control measures (TCMs). It will focus on analysis of multimodal infrastructure investment, transportation/land use policies, and transportation system indicators required by the mobile source emissions modeling process. Topics to be covered will include state-of-the-art procedures for land use forecasting, travel demand modeling, estimation of TDM/TCM impacts, and air quality analysis procedures for both regional and project level application.

#### **A SUMMARY: AIR QUALITY PROGRAMS AND PROVISIONS OF THE INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (REPORT)**

**Product:** Report.

**Users:** State, local, and MPO planners; FHWA; FTA; EPA.

**Availability Date:** Currently available.

**Contact:** Alicia Sharp, FHWA, (202) 366-4836.

This brochure summarizes the air quality programs and provisions of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), with special emphasis on the increased funding for environmental programs, strengthened planning requirements, and the new Congestion Mitigation and Air Quality Improvement Program.



**A SUMMARY: TRANSPORTATION PROGRAMS AND PROVISIONS OF THE CLEAN AIR ACT AMENDMENTS OF 1990 (REPORT)**

**Product:** Report.

**Users:** State, local, and MPO planners; FHWA; FTA; EPA..

**Availability Date:** Currently available.

**Contact:** Alicia Sharp, FHWA, (202) 366-4836.

**CLEAN AIR TRANSPORTATION PROJECT (STUDY, NEWSLETTER, WORKSHOPS)**

**Product:** Reports, clean air newsletter, clean air workshops, and expert panels.

**Users:** State, MPO and local transportation and air quality planners.

**Availability Date:** The newsletter is published quarterly. The manuals are currently available. Workshops and panels are completed.

**Contact:** Abbe Marner, FTA, (202) 366-0096; James Shrouds, FHWA, (202) 366-2074; or Mark Howard, NARC, (202) 457-0710.

This brochure summarizes the transportation programs and requirements of the CAAA. Topics covered include requirements for transportation-related pollutants, the conformity and transportation planning processes, emissions standards and fuel requirements, and a detailed list of contacts and glossary.

This project, administered through the National Association of Regional Councils (NARC), is intended to coordinate DOT/EPA activities in response to the CAAA with State, MPO and local planners. Major products have been a manual entitled "Best Practices in Urban Transportation Modeling," a quarterly clean air-transportation newsletter, and a manual on the effects of transportation control measures. A series of workshops on air quality and transportation issues was held throughout the country during the first years of experience with the CAAA and its impact on transportation planning. In addition, technical panels were organized to comment on each of the products being developed by EPA, DOT or NARC in response to CAAA.

**COSTS AND EFFECTIVENESS OF TRANSPORTATION CONTROL MEASURES: A REVIEW AND ANALYSIS OF THE LITERATURE (REPORT)**

**Product:** Report.

**Users:** State, local, and MPO planners; FHWA; FTA; EPA.

**Availability Date:** December 1993.

**Contact:** Mark Howard, NARC, (202) 457-0710; or, Alexander Elles-Boyle, FHWA, (202) 366-2079.

**EVALUATION OF "MOBILE" VEHICLE EMISSION MODEL (REPORT)**

**Product:** Evaluation report.

**Users:** State, local, and MPO planners; FHWA; FTA; EPA.

**Availability Date:** September 1993.

**Contact:** Dick Schoeneberg, FHWA, (202) 366-2076.

**FUNDAMENTALS OF AIR QUALITY FOR HIGHWAY PLANNING AND PROJECT DEVELOPMENT (COURSE)**

**Product:** Course.

**Users:** Federal, State and local transportation and air quality agency personnel.

**Availability Date:** Available 1993.

**Coordinator:** Al Miller, NHI, (703) 285-2787.

**Course Number:** 14217

This report, prepared under the FHWA/EPA/FTA-sponsored NARC Clean Air Project, offers a review of TCMs, focusing on those specified in the CAAA. The report focuses on the emissions reduction potential and cost effectiveness of these TCMs using actual experience and modeled projections.

The CAAA imposed more stringent requirements for the conformity of transportation plans, programs, and projects with State implementation plans for the attainment of National Ambient Air Quality Standards. The EPA's MOBILE model is the primary analytical tool for predicting vehicle emissions resulting from proposed projects and determining whether conformity exists. This report evaluates the model, with emphasis on its utility in evaluating transportation activities.

This five-day NHI course covers transportation/air quality considerations at both the systems planning and project development stages of analysis. Through a combination of lecture, workshops, case studies and computer exercises the following topics will be discussed: Federal legal and regulatory requirements; atmospheric and meteorologic conditions of concern; emission trends and characteristics of transportation activities; analysis techniques at both regional and project levels; documentation and reporting. This course is designed for Federal, State and local transportation and air quality agency personnel.

**INTERIM WORKSHOP ON ADVANCED  
TRANSPORTATION – AIR QUALITY  
ANALYSIS (COURSE)**

**Product:** Course.

**Users:** Federal, State and local transportation and air quality agency personnel.

**Availability Date:** Fall 1993.

**Contact:** Patrick Decorla-Souza, FHWA, (202) 366-4076.

**Course Number:** 15265

This two-day NHI course will emphasize advanced practices for system level modeling and analysis of travel demand management and transportation control measures. It will focus on transportation system indicators required by the mobile source emissions modeling process, and the estimation of vehicle miles of travel (VMT). Topics to be covered include state-of-the-practice procedures for land use forecasting, travel demand modeling using the four-step process, estimation of TDM/TCM impacts, and air quality analysis procedures for both regional and project level application. Procedures will be demonstrated through case studies and workshops. An understanding of the travel demand forecasting process is a prerequisite for this course.

**MANUAL OF TRANSPORTATION – AIR  
QUALITY MODELING FOR  
METROPOLITAN AREAS (GUIDANCE  
MANUAL)**

**Product:** Guidance manual.

**Users:** State, local, and MPO planners; FHWA; FTA; EPA.

**Availability Date:** September 1993.

**Contact:** Mark Howard, NARC, (202) 457-0710; or, Alexander Elles-Boyle, FHWA, (202) 366-2079.

Prepared under the FHWA-EPA-FTA sponsored National Association of Regional Councils Clean Air Project, this manual reviews the state of transportation modeling today, focusing primarily on travel demand forecasting, and suggests strategies for responding to specific analysis needs (especially with regard to air quality).

**TRANSPORTATION & AIR QUALITY  
PLANNING GUIDELINES (GUIDANCE  
MATERIAL)**

**Product:** Guidance material.

**Users:** State, local, and MPO planners; FHWA;  
FTA; EPA.

**Availability Date:** Currently available.

**Contact:** Robin Miles-McLean, EPA, (313)  
741-7890; or, Kathy Laffey, FHWA, (202) 366-  
2077.

**TRANSPORTATION CONTROL MEASURE  
INFORMATION DOCUMENTS (REPORT)**

**Product:** Report.

**Users:** State, local, and MPO planners; FHWA;  
FTA; EPA.

**Availability Date:** Currently available.

**Contact:** Mark Simons, EPA, (313) 668-4420;  
or, Alexander Elles-Boyle, FHWA, (202) 366-  
2079.

This project, carried out by the EPA together with the FHWA under a CAAA mandate included in Section 108 (e), involved the update of the 1978 Transportation-Air Quality Planning Guidelines and publication of guidance on the development and implementation of transportation and other measures necessary to demonstrate and maintain attainment of the National Ambient Air Quality Standards.

This project, carried out by the EPA together with the FHWA under a 1990 Clean Air Act Amendments mandate, involved the development of a series of synthesized reports on the transportation control measures included in Section 108 (f) of the CAAA. Descriptions of the various strategies, together with information on implementation and resources, are included.

**VEHICLE MILES TRAVELED (VMT)  
FORECASTING AND TRACKING  
GUIDELINES (GUIDANCE MATERIAL)**

**Product:** Guidance material.

**Users:** State, local, and MPO planners; FHWA;  
FTA; EPA.

**Availability Date:** Currently available.

**Contact:** Robin Miles-McLean, EPA, (313)  
741-7890; or, Chris Fleet, FHWA, (202) 366-  
64056.

In conjunction with the FHWA, the EPA issued VMT Forecasting and Tracking guidance required under Section 187 (a) of the CAAA. States are required to forecast and track VMT in the process of carrying out State Implementation Plans for the attainment of National Ambient Air Quality Standards, and this guidance offers recommendations on how to meet these requirements.

## **CITIZEN/INDUSTRY PARTICIPATION:**

### **BEST PRACTICES IN COLLABORATIVE DECISION MAKING (STUDY)**

**Product:** Manual entitled "Working Together on Transportation Planning: A Guide to Collaborative Decision Making".

**Users:** MPOs, transit operators, State and local government, public interest groups, private sector.

**Availability Date:** November 1993.

**Contact:** William B. Menczer, FTA, (202) 366-4060; or Angela Fogle, National Association of Regional Councils (NARC), (202) 457-0710.

The purpose of this study is to assist MPOs understand and apply collaborative decision making models in developing long range plans and transportation improvement programs (TIPs). The Intermodal Surface Transportation Efficiency Act of 1991 requires early and inclusive public involvement in transportation planning. The National Association of Regional Councils and its subcontractor, the Program for Community Problem Solving, will investigate methods of improving community and private sector participation in the planning process used by MPOs in making important planning and programming decisions. The product of this effort will be the identification of best practices for MPOs to use to allow them and the communities and businesses they serve to collaborate more effectively throughout transportation planning activities.

### **BUILDING NEW PARTNERSHIPS: THE RAILROAD INDUSTRY AND METROPOLITAN PLANNING ORGANIZATIONS (OUTREACH)**

**Product:** Final report; interim products: seminars, roundtables, discussions between MPOs and railroads.

**Users:** State and local governments, MPOs, railroads.

**Availability Date:** Report due April 1994; dates to be determined for interim products.

**Contact:** Donald Ostrander, NARC, (202) 457-0710 or Robert Martin, FRA, (202) 366-0359.

FRA and the National Association of Regional Councils are working to improve relationships between MPOs and railroads by sponsoring a series of seminars and roundtables on successful rail/MPO projects, as demonstrations of the potential for cooperation. The objective of this effort is to improve the working relationships between local governments and railroads.

**PRIVATE SECTOR INVOLVEMENT IN  
THE METROPOLITAN PLANNING  
PROCESS (PAPERS; WORKSHOPS)**

**Product:** 2 issue papers; 12-15 workshops in metropolitan areas

**Users:** State, MPO and local planners.

**Availability Date:** May through August 1993

**Contact:** Sheldon Edner, FHWA, (202) 366-4066.

This project will lead to the preparation, printing and dissemination of publications prescribing the metropolitan planning process and the role of the private sector transportation provider and user. It will also produce at least two issue papers that will describe and analyze the issues facing private transport providers and users under the ISTEA. These documents will be utilized as part of a series of 12-15 workshops held in selected metropolitan areas to solicit and encourage private sector transport provider and transport user community participation in the metropolitan transportation planning and programming process. These workshops will be supported by the National Association of Regional Councils, the American Association of State Highway Transportation Officials and the Coalition for Safe and Efficient Transportation. The workshops will be held in conjunction with local metropolitan planning organizations and lead to an enhanced and continuing involvement of the private transport provider and transport user community in the metropolitan planning process.

## CONGESTION MANAGEMENT:

### **BEFORE/AFTER STUDY OF THE VIRGINIA RAILWAY EXPRESS (VRE) (STUDY)**

**Product:** Report.

**Users:** State, MPO and local planners.

**Availability Date:** August 1993.

**Contact:** Dwayne Weeks, FTA, (202) 366-0096.

This study is intended to produce an analysis of "pre-VRE," conditions pertaining to travel behavior, mode split, transportation impacts, and land use development so that, in the future, a second study can analyze changes that may be attributed to the Virginia Railway Express. The study will eventually demonstrate the ability of commuter rail operations to attract single occupant vehicles users, reduce congestion, or influence development patterns by providing information on the impacts of the VRE on these types of conditions.

### **CONGESTION MANAGEMENT INTERIM TRAINING (COURSE)**

**Product:** Course.

**Users:** State, MPO and local planners; FHWA.

**Availability Date:** September 1993.

**Contact:** Doug Laird, FHWA, (202) 366-5972.

This one-day course is designed to provide participants with a basic understanding of the design, implementation, and administration of congestion management systems, and a national overview of current practices related to congestion management systems. This course will be offered on an interim basis from the time the final management system regulations are issued until the NHI congestion management courses are ready. It should be of interest to FHWA, State, MPO, and other local government management and staff interested in the implementation of congestion management systems.



**CONGESTION MANAGEMENT STATE OF THE PRACTICE REVIEW (STUDY)**

**Product:** Final report on state-of-the-art congestion management activities and congestion management system reference material.

**Users:** State, MPO and local planners.

**Availability Date:** FY 1994

**Contact:** Brian Hoeft, FHWA, (202) 366-2501.

**CONGESTION MANAGEMENT SYSTEMS PROTOTYPE (MODELS)**

**Product:** Prototype congestion management systems that will serve as guidance to state and local agencies in meeting regulatory requirements.

**Users:** State, MPO and local planners.

**Availability Date:** FY 1994

**Contact:** Brian Hoeft, FHWA, (202) 366-2501.

This project is designed to identify existing congestion management system (CMS) programs as well as other congestion management related activities in areas without a formal CMS, identify the elements of the various programs and activities, and report on each with the focus on problems and opportunities. This information will be incorporated into a final report, expected in FY 1994, that will be used in interim technical assistance on CMS's to be provided to State, MPOs, and local governments while the NHI courses on CMS's are being developed.

This project is designed to provide technical assistance and guidance to State, MPO, and local governments who are required, under the ISTEA, to prepare a CMS. Prototype CMS's would be developed for different scenarios to illustrate a policy, program, and institutional plan for developing, establishing, and implementing CMS's. It is scheduled for completion in FY 1994.

## **CONGESTION MANAGEMENT FOR MANAGERS (COURSE)**

**Product:** Course.

**Users:** FHWA, State, MPO, and other local government managers interested in the implementation of congestion management systems.

**Availability Date:** Available Fall 1993.

**Coordinator:** Harry Hersey, NHI, (703) 285-2778.

**Technical Information:** Doug Laird, FHWA, (202) 366-5972.

**Course Number:** 15258

This one-day NHI course will focus on legislation, regulations, definitions and issues relative to CMS's. The requirements of the new regulations for CMS's will be discussed in detail. The relationship of CMS's to the metropolitan and statewide planning processes, environmental requirements, and other management systems (i.e., public transportation, intermodal, safety, pavement and bridge) will be discussed in detail. General development guidelines for CMS's and a detailed review of actions required and funding mechanisms available to establish, develop, implement and administer CMS's will be provided. This course is designed for mid- and upper-level managers at State and local levels as well as representatives from MPO's, transit agencies and other organizations who will be responsible for establishing congestion management systems. There are no prerequisites.

## **CONGESTION MANAGEMENT FOR TECHNICAL STAFF (COURSE)**

**Product:** Course.

**Users:** State, MPO, and other local government staff interested in the implementation of congestion management systems.

**Availability Date:** Available Fall 1993.

**Coordinator:** Harry Hersey, NHI, (703) 285-2778.

**Technical Information:** Doug Laird, FHWA, (202) 366-5972.

**Course Number:** 15259

This three-day NHI course is designed to provide participants with a basic understanding of the methodologies for the measurement of congestion, strategies for relieving congestion, and the design and operation of a CMS. It is designed for planners and engineers at State and local levels as well as representatives from MPO's, transit agencies and other organizations who will be participating in the development and implementation of CMS's. There are no prerequisites.

**MODELING THE EFFECTIVENESS OF  
CONGESTION MANAGEMENT ON AN  
AREAWIDE BASIS (STUDY)**

**Product:** Report.

**Users:** State and local planners; persons responsible for reviewing CMS programs.

**Availability Date:** December 1994.

**Contact:** Brian Gardner, FHWA, (202) 366-4061.

This project will develop a set of multi-modal transportation system performance measures, supporting analysis, and data collection procedures. These measures are aimed at measuring and monitoring congestion on a transportation system as part of a CMS. Particular emphasis is placed on the practicality and user-orientation of the performance measures. The final report should be of use to State and local planning staff; other individuals involved with planning, designing, implementing, and reviewing CMS's; and individuals involved in transportation systems planning.

## ECONOMIC ANALYSIS

### HIGHWAY-RAIL CROSSING RESOURCE ALLOCATION PROCEDURE (MODELS)

**Product:** Computer data printouts for highway-rail crossing prioritization.

**Users:** Federal, state, local government officials, railroads, planning consultants.

**Availability Date:** Currently available.

**Contact:** Bruce George or Thomas Woll, Federal Railroad Administration (FRA), (202) 366-0533.

Highway-rail crossing safety improvements frequently consist of the installation of active motorist warning devices such as flashing lights and gates. This Procedure was developed to assist states and railroads in identifying candidate crossings for improvement and recommends those that will yield the greatest accident reduction benefit while considering the cost, budget limit, and effectiveness of the type of warning device. The Procedure consists of two analytical models: (1) the Accident Prediction Formula, which computes the expected number of accidents at crossings based on information available in the inventory and crossing accident data files; and (2) the Resource Allocation Model, which selects candidate crossings for improvements on a cost effective basis and recommends the type of warning device to be installed. The objective of this effort is to assist states and railroads in determining effective allocations of Federal funds for highway-rail crossing improvements.

### PORT CAPITAL EXPENDITURES (STUDY)

**Product:** Report (yearly).

**Users:** Port authorities and planners.

**Availability Date:** November 1993.

**Contact:** Bill Dean, Maritime Administration (MARAD), (202) 366-5472.

This report analyzes the results of the American Association of Port Authorities (AAPA) capital expenditure survey for 1992. The study classifies capital expenditures by facility type and new construction versus modernization/rehabilitation for the study year and for a 5 year projection. The methods of financing capital expenditures are thoroughly examined.

**WHAT PORTS MEAN TO THE ECONOMY  
(STUDY)**

**Product:** Report.

**Users:** Port planners; State, MPO and local planners.

**Availability Date:** January 1994.

**Contact:** Evie Kalketenidou , MARAD, (202)  
366-5127.

This report is based on an input-output analysis which assesses interindustry purchases of goods and services. The report will show in quantifiable terms how the port industry is economically linked with every other sector of the economy. The economic impacts will be presented in terms of jobs generated, sales revenues, payroll, contribution to GDP and tax revenues.

## **ENVIRONMENTAL AND SOCIAL IMPACT ANALYSIS:**

### **ENVIRONMENTAL EXTERNALITIES AND SOCIAL COSTS OF TRANSPORTATION SYSTEMS -- MEASUREMENT, MITIGATION AND COSTING (BIBLIOGRAPHY)**

**Product:** An annotated bibliography and two charts.

**Users:** State and local transportation planning officials and policy makers, railroad officials, modal administrations; the environmental community.

**Availability Date:** August 1993.

**Contact:** Marilyn Klein, FRA, (202) 366-0358.

This bibliography summarizes several recent reports/articles that address measuring, mitigating, and costing transportation's environmental and social impacts. The first chapter provides an overview of social and environmental transportation impacts. Subsequent chapters address individual areas of impact -- air and water pollution, noise, energy, safety, community disruption, congestion, and hazardous materials. The last chapter summarizes the scope of research currently underway. The purpose of this project is to allow planners, policy makers, legislators, and other interested parties to make better informed decisions about modal choices.

### **HAZARDOUS WASTE: IMPACT ON HIGHWAY PROJECT DEVELOPMENT (COURSE)**

**Product:** A 4-day training course.

**Users:** State, MPO, and environmental consultants.

**Availability Date:** Currently available.

**Coordinator:** George Jones, NHI, (703) 285-2776.

**Technical Information:** Edith Chalk, FHWA, (202) 366-2070.

**Course Number:** 14229

This course focuses primarily on the requirements of the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The course provides a solid background on application of these laws to the Federal-aid highway program. Also the responsibilities of EPA, State agencies and environmental contractors are discussed in detail.

**HISTORIC AND ARCHEOLOGICAL PRESERVATION (COURSE)**

**Product:** A 3-day training course.

**Users:** State, MPO, and environmental consultants.

**Availability Date:** Currently available.

**Coordinator:** George Jones, NHI, (703) 285-2776.

**Technical Information:** Bruce Eberle, FHWA, (202) 3660-2060.

**Course Number:** 14211

**MODELS FOR DETERMINING THE WATER QUALITY IMPACT OF HIGHWAY RUNOFF (MODELS)**

**Product:** Software models for determining pollutant loading from highway runoff. Also user guides are available.

**Users:** State, MPO, and environmental consultants.

**Availability Date:** Currently available.

**Contact:** Fred Bank, FHWA, (202) 366-5004.

This NHI course provides information on the National Historic Preservation Act and its 1992 amendments, the requirements that must be met for Federal actions, the level of coordination necessary, and case study examples. The student will learn about the operation of the State Historic Preservation Office, and the historic preservation responsibilities of the National Park Service and the Advisory Council on Historic Preservation.

The models allow for better decision-making by determining the pollutant loadings from highway runoff and the selection of methods for mitigating the pollutants when necessary. Requirements of the Clean Water Act and State laws may require data to justify the issuance of permits and the methods for mitigation (such as grassy swales and detention basins). The model input consists of such information as rainfall data, average daily traffic (including truck traffic mix), and size of watershed. The model development relied on data collection throughout the United States including information from the National Urban Runoff Pollution Study conducted by EPA.

**THE FUNCTIONAL ASPECT OF WETLANDS (COURSE)**

**Product:** A 2 to 4-day training course.

**Users:** State, MPO, and environmental consultants.

**Availability Date:** Currently available.

**Coordinator:** George Jones, NHI, (703) 285-2776

**Technical Information:** Paul Garrett, FHWA, (202) 3660-2067.

**Course Number:** 14218

This NHI course teaches a technique to determine the values of common wetland functions and provides introductory material on wetland policy and with a concluding session on the optimal methods for developing successful wetland mitigation. The valuation technique should be utilized after the wetland delineation has been completed and would be useful in the determination of the necessary amount of wetland mitigation.

**TRANSPORTATION AND THE ENVIRONMENT (BIBLIOGRAPHY)**

**Product:** 52 page annotated bibliography.

**Users:** State and local transportation planning officials and policy makers, railroad officials, modal administrations.

**Availability Date:** Currently available.

**Contact:** Marilyn Klein, FRA, (202) 366-0358.

This annotated bibliography is the result of an effort to determine the extent to which models have been developed that permit comparisons among transportation options and the environmental impacts of those options. It covers recent publications that describe or offer insights into the environmental effects of transportation systems and how public policies are addressing transportation related environmental issues. Its objective is to allow planners, policy makers, legislators, and other interested parties to make better informed decisions about modal choices.



## **GEOGRAPHIC INFORMATION SYSTEMS:**

### **APPLICATION OF GEOGRAPHIC INFORMATION SYSTEMS FOR TRANSPORTATION (COURSE)**

**Product:** Course.

**Users:** State, MPO and local planners.

**Availability Date:** Currently available.

**Coordinator:** George Jones, NHI, (703) 285-2776.

**Technical Information:** Roger Petzold, FHWA, (202) 366-4074.

**Course Number:** 15129

A geographic information system (GIS) is a system of hardware, software, data, personnel, organizations and institutional arrangements for collecting, storing, analyzing, and disseminating information about areas of the earth. Geographic Information System for Transportation (GIS-T) is the adaptation of the technology to transportation issues specific to the management and analysis of transportation networks. This three-day NHI course provides an introduction to GIS-T and specific examples of the GIS being applied to transportation. It is intended for State highway agencies, Metropolitan Planning Organizations, and local governments that are interested in the implementation of a GIS-T.

### **NATIONAL INTERMODAL NETWORK (DATA BASE)**

**Product:** ASCII files on CD-ROM that can be imported into Trans Cad, Arc Info, and other GIS packages.

**Users:** DOT policy analysts, Bureau of the Census, Department of Defense; State, MPO and local transportation planners.

**Availability Date:** 1993; files containing the highway and rail networks are currently available on the Bureau of Transportation Statistics (BTS) *Transportation Data Sampler* CD-ROM.

**Contact:** Rolf Schmitt, BTS, (202) 366-3282.

Oak Ridge National Laboratory has compiled data on highway, railroad, waterway, aviation, and pipeline networks with intermodal connections for use in calculating distances for the Commodity Flow Survey. These networks are based on 1:2,000,000 maps and are generally accurate to 500 meters. Emphasis has been placed on topological accuracy rather than planimetric accuracy for use in routing situations. Increased planimetric accuracy is anticipated when the data base is "snapped" to digital line graphs at 1:100,000. The objective of the project is to provide a basic data set to perform descriptive analyses of network data for use in GIS applications.

## **RAILROAD GEOGRAPHIC INFORMATION SYSTEM (DATA BASES)**

**Product:** Data bases of geographically referenced information associated with the national railroad network, available on computer disc in ASCII format.

**Users:** Federal, State and local governments; railroads.

**Availability Date:** Currently available.

**Contact:** Raphael Kedar, FRA, (202) 366-2920.

## **USE OF GIS IN TRANSIT PLANNING (DATA BASE, MODEL)**

**Product:** Data, procedures.

**Users:** FTA, FHWA, State and MPO planners.

**Availability Date:** To be determined.

**Contact:** Paul Verchinski, FTA, (202) 366-1612.

The Federal Railroad Administration (FRA) has developed a GIS for the national railroad network. The GIS manages extensive data bases of geographically-referenced information associated with over 160,000 miles of railroad lines. The railroad GIS constitutes an accurate computerized representation of all rail lines and includes pertinent information such as ownership, trackage rights, traffic volumes, passenger service, defense essential designation, and more. Some data elements are not in the public domain. The objective of this program is to facilitate the performance of traffic simulations and the analysis of multi-modal issues.

In an effort to use new technologies to strengthen planning, this proposed project will work with State and MPO planners which have identified corridors to be evaluated for alternative highway and transit improvements. Up to 60 layers of data will be developed to analyze environmental issues, land use, traffic patterns, transit routing, historic sites, right of way utilization, etc. Procedures will be developed, tested and documented on how to do corridor analyses using GIS. Demonstration applications will be developed. GIS may provide a means of speeding up local planner and FTA review of alternative analyses.

## INTERMODAL FACILITIES PLANNING:

### ACCESS FOR INTERMODAL FACILITIES (COURSE)

**Product:** Course.

**Users:** FHWA, State, and local planning staff and other individuals directly involved in transportation system planning.

**Availability Date:** Under development for early 1995.

**Coordinator:** Al Miller, NHI, (703) 285-2787.

**Technical Information:** Lee Chimini, FHWA, (202) 366-4068.

**Course Number:** 15264

### ACCOMMODATING TRANSIT IN HOV DESIGN (STUDY, CONFERENCES)

**Product:** Guidance manual, conferences, and journal articles.

**Users:** State, MPO, and local planners.

**Availability Date:** FY 1995.

**Contact:** Nancy Grubb, FTA, (202) 366-0096.

This course will focus on the methodologies for the planning and design of landside access to seaports, truck and rail terminals, as well as airports and mass transit terminals. It will cover the design elements for access facilities to intermodal terminals, the evaluation of these facilities and strategies for improving the efficiency in the movement of people and goods. The course is intended for technical staff involved in the planning and design of access facilities for intermodal terminals.

The ISTEA prohibition on using flexible highway funds for single occupancy vehicle (SOV) projects in nonattainment areas will lead to much greater emphasis on high occupancy vehicle (HOV) facilities. Guidance is needed on how best to incorporate transit facilities and operations into HOV facilities design. This project will develop a guidance manual on issues such as: (1) the number, location, and design of transit centers or stations; (2) T-ramps or other means to provide bus access between the HOVway and transit centers; (3) signalization options on HOV arterial facilities that give buses priority or to allow buses to maneuver across lanes to make turns or pick-up; and (4) consideration into investments in bus fleet expansion to provide new or enhanced service. This is to ensure that State highway departments, who traditionally spend FHWA funds strictly on highway projects, are aware of information on how to accommodate transit into their designs.

**AIRPORT GROUND ACCESS PLANNING GUIDE (GUIDEBOOK)**

**Product:** Guide for planning ground access to airports.

**Users:** State DOTs, MPOs, airport consultants and planners, airport authorities; DOT.

**Availability Date:** FY 1995.

**Contact:** Michele Waxman Johnson, FHWA, (202) 366-0702.

This project will develop a guide for 1) conducting planning studies for airport ground access, given the characteristics of a specific airport and metropolitan area; 2) assessing the impact of new airport ground access facilities on the transportation system; 3) evaluating alternative designs for ground access to airports; and 4) surveying and collecting necessary travel data to conduct airport ground access studies.

**DESIGN OF PASSENGER FACILITIES FOR THE ORLANDO MAGLEV SYSTEM (STUDY)**

**Product:** Report on the planning and design process, illustrating modifications to adapt to "real world" requirements.

**Users:** Planners and designers of airport ground access systems.

**Availability Date:** Currently available.

**Contact:** Zale Anis, Volpe National Transportation Systems Center (VNTSC), (617) 494-2184 or Larry Kiernan, FAA, (202) 267-8784.

This is a case study, administered through the VNTSC, of the planning and design of two passenger stations for the proposed Maglev demonstration project at Orlando International Airport. It was completed in April 1992. The objective of this project was to document the process of planning and designing passenger stations for airport access, with emphasis on the evolution of functional, programmatic and design concepts due to financial, political, institutional and technical exigencies. The report is intended for planners and designers of airport ground access systems.

**DEVELOPMENT OF NOTEBOOK  
COMPUTER SOFTWARE TO COLLECT  
TRIP GENERATION DATA AT  
INTERMODAL PASSENGER AND  
FREIGHT TERMINAL FACILITIES  
(SOFTWARE, DATA BASE)**

**Product:** Notebook computer software to collect trip generation data at intermodal facilities. Summary report containing sample trip generation data at intermodal facilities.

**Users:** Transportation planners, MPO's, state and local governments, intermodal facility operators and planners.

**Availability Date:** Phase I, the feasibility study and prototype development, mid-1994. Phase II, software development and data collection, will be complete in 1996.

**Contact:** Michele Waxman Johnson, FHWA, 202-366-0702.

In the past, emphasis was given to research and development of trip generation rates for hundred of land uses. There is little current research being conducted in the area of intermodal passenger and freight terminal facilities. With the current interest in intermodal facilities, there is a great need for this data and, more importantly, for software to collect this data using notebook computers. In this project, notebook computer software will be developed to collect trip generation data at intermodal facilities. The software will be tested by collection, collation, and establishment of trip generation and attraction rates and equations for sample intermodal facilities.

## **MEASURING GROUND ACCESS TO AIRPORTS (STUDY)**

**Products:** 1) Development of Methodology Report, 2) Compilation of the Accessibility Index for each of the large hub airports in the United States.

**Users:** Planners and designers of airport ground access systems.

**Availability Date:** Accessibility indexes will be described and demonstrated for several large hub airports in the next published edition of the National Plan of Integrated Airport Systems, due September 1, 1993. Project completion is scheduled for December 1, 1994. Accessibility indexes for all large hub airports will be published in the 1995 edition of the National Plan of Integrated Airport Systems.

**Contact:** Zale Anis, VNTSC, (617) 494-2184 or Larry Kiernan, FAA, (202) 267-8784.

## **NEW DENVER AIRPORT MOBILITY STUDY (GUIDANCE MATERIAL)**

**Product:** Site planning guidelines.

**Users:** City, transit agency, MPO and airport planners and developers.

**Availability Date:** February 1994.

**Contact:** Effie Stallsmith, FTA, (202) 366-5653.

This project, administered through the VNTSC, will develop a methodology for assessing the accessibility, in terms of travel time, of major airports to surrounding metropolitan areas. An "accessibility index" will be determined and compiled for each of the large hub airports in the U.S. Accessibility indices will be useful in describing airport accessibility, making comparisons between airports, identifying trends and estimating the effects of proposed improvements to highway and transit systems. The objective of this project is to develop and implement a standard technique for expressing the "reachability" of major commercial service airports. This project is part of an assessment of capital investment needs for airports in the United States and is primarily intended for airport planners.

These guidelines will assist in developing the airport corridor in a manner that promotes transit use and access. They will identify design criteria for transit facilities on and off the airport. These facilities may include pedestrian ways, waiting areas, park and ride lots, transit centers, and street and highway access. Land use designs more conducive to transit riders and access by transit vehicles are other important areas. Key concepts to be addressed will include the encouragement of on-site services, concentration of mixed use development along the transit routes, reduction of building setbacks, and implementation of locally supported land use and zoning policies.

**PASSENGER CONSIDERATIONS FOR AIRPORT ACCESS BY HIGH-SPEED RAIL (STUDY)**

**Product:** Report on the factors affecting passenger use of high-speed rail access to airports, including station placement and design, system support, ease of transfer, through-ticketing and baggage handling, and security, with a schematic framework for analyzing alternatives.

**Users:** Planners and designers of airport ground access systems.

**Availability Date:** December 1993.

**Contact:** Zale Anis, VNTSC, (617) 494-2184 or Larry Kiernan, FAA, (202) 267-8784.

**PORT INTERMODAL VIDEO (OUTREACH)**

**Product:** Video.

**Users:** Shippers; State, MPO and local planners.

**Availability Date:** January 1994

**Contact:** Kelly Chapman, MARAD, (202) 366-0256.

This project, administered through the VNTSC, will identify factors affecting passenger use of high-speed rail access to airports and describe how these factors should be considered in the design of airport intermodal terminals. The objective is to identify and investigate specific factors that influence the success of rail and maglev systems in airport applications, with emphasis on design and operational issues. The report is primarily intended for airport transit planners.

This project is for the production of a port intermodal video for the use of shippers as well as State and local planners to educate the audiences on the importance of ports and port activities to the fluid intermodal movements of domestic and international goods and to the national economy.

**PROJECT PLANNING SEMINAR  
(SEMINAR)**

**Product:** Planning seminar.

**Users:** State, MPO and local planners.

**Availability Date:** Presented annually.

**Contact:** Donald Emerson, FTA, (202) 366-0096.

This is a 3-day seminar on the alternatives analysis process for staff from agencies that have recently begun, or expect to begin, an analysis of major transit investments. Updated to integrate new concerns of ISTEA, topics for discussions fall within three general areas: procedural requirements, the structure and content of the Draft Environmental Impact Statement, and technical guidelines for various elements of the analysis. This seminar is held at FTA headquarters in Washington, D.C.

**REVIEW OF SELECTED EUROPEAN RAIL  
ACCESS SYSTEMS TO AIRPORTS  
(STUDY)**

**Product:** Report on the relative success of European rail systems in providing airport access, identifying the key factors that determine their market share.

**Users:** Airport ground access planners, airport authorities and State, MPO and local planners.

**Availability:** December 1993

**Contact:** Zale Anis, VNTSC, (617) 494-2184 or Larry Kiernan, FAA, (202) 267-8784.

This study will review prominent European applications of rail and transit for airport access, identifying the principal factors that affect their market share. It is intended to provide insight into the relative success of rail and transit access to European airports and highlight principles that are applicable to U.S. systems for use of airport ground access planners, airport authorities and State, MPO and local planners.

**TECHNICAL MODELS TO ANALYZE  
INTERMODAL PASSENGER TERMINALS  
(STUDY, MODEL)**

**Product:** Documentation will consist of background material, case studies, tutorials and software.

**Users:** Transportation planners and engineers.

**Availability Date:** June 1994

**Contact:** Dane Ismart, FHWA, (202) 366-4071.

The city of Milwaukee has a grant from the FTA to conduct a feasibility study for an intermodal passenger terminal facility. This study, administered through the University of Wisconsin, will draw on the experiences of the Milwaukee study to create a unified set of tools for evaluating the effectiveness of intermodal passenger facilities and to document these tools so that they can be readily applied by practicing transportation planners and engineers.



## INTERMODAL FREIGHT TRANSPORTATION:

### FEASIBILITY OF DEVELOPING AN INTERMODAL FREIGHT MODEL FOR MASSACHUSETTS (MODEL)

**Product:** Model for intermodal freight transport.

**Users:** State, MPO and local planners.

**Availability Date:** FY 1994.

**Contact:** Dane Ismart, FHWA, (202) 366-4071.

### IMPACT OF INTERMODAL FREIGHT MOVEMENTS ON HIGHWAY INFRASTRUCTURE, CAPACITY, AND PRODUCTIVITY (STUDY)

**Product:** Report and data base.

**Users:** State, MPO and local transportation planners, trade organizations and DOT modal administrations.

**Availability Date:** FY 1994.

**Contact:** Arthur Jacoby, FHWA, (202) 366-0281; or Dr. Bahar Norris, VNTSC, (617) 494-2150.

Phase I of this study will investigate and assess current data sources and approaches to the modeling of intermodal freight transport. Phase II will focus on specific needs in developing a model for intermodal freight transport for Massachusetts beginning with the creation of a commodity travel survey. It will also identify the specifications for such a model including impedance functions, path and intermodal transfer choices, and information on network link flows for use in calibration of models or direct estimation. This model should be of use to State, MPO and local planners.

This multi-year research effort, administered through the VNTSC, will evaluate intermodal operations to document current bottlenecks and assess the impacts of intermodal systems on the efficiency of the highway transportation system. Baseline information on highway/truck intermodal interface facilities, terminal access, shipment coordination, and State and federal regulations will be consolidated from primary and secondary sources. The end product will be a report identifying existing problems and options for implementing improvements in the highway/truck intermodal system and identifying policy implications; and a database on highway/truck intermodal interface facilities, markets, carriers, shippers and commodities, terminal access, shipment coordination, and State and Federal regulations. This information should be of use to State, MPO and local transportation planners, trade organizations and DOT modal administrations.

**INTERMODAL FREIGHT VIDEO  
(OUTREACH)**

**Product:** Video.

**Users:** State, MPO and local planners; shippers and carriers.

**Availability Date:** December 1993.

**Contact:** Kelley Chapman, MARAD, (202) 366-0256.

**PUBLIC POLICY FOR FREIGHT  
TRANSPORTATION - PHASE ONE  
(STUDY)**

**Product:** Report.

**Users:** Policy makers at the Federal, State and local level; transportation planners.

**Availability Date:** FY 1994.

**Contact:** Arthur Jacoby, FHWA, (202) 366-0281.

This project is for production of an intermodal freight video. Its objectives are to increase awareness and demonstrate the vital importance of U.S. ports to our economy and national security and to show the critical role that ready access between the port and surface transportation systems can play in ensuring an efficient and cost-effective intermodal transportation system.

This project, administered through the Transportation Research Board (TRB) of the National Academy of Sciences, will convene a committee to explore the potential usefulness and feasibility of a comprehensive baseline study of freight transportation to measure the subsidies provided to freight modes and the external costs of freight transportation and to assess the consequences of such subsidies and external costs on the amount of freight traffic and its distribution among modes. The report for phase one will contain an assessment of the feasibility of a comprehensive economic analysis of freight transportation subsidies and external costs; preliminary estimates of the scale of these subsidies and external costs; and, if warranted, recommendations about the technical approach and tasks that should comprise a comprehensive analysis.

## **INTERMODAL SYSTEMS -- PLANNING AND MANAGEMENT**

### **ESTIMATION OF THE IMPACTS OF TRANSPORTATION ALTERNATIVES (COURSE)**

**Product:** Course.

**Users:** State, MPO and local planners.

**Availability Date:** Available Fall 1993.

**Coordinator:** Harry Hersey, NHI, (703) 285-2778.

**Technical Information:** Patrick Decorla-Souza, FHWA, (202) 366-4076.

**Course Number:** 15257

This three-day NHI course will provide participants with guidelines for selecting criteria to measure attainment of economic, social, and environmental objectives for multimodal transportation alternatives. Sketch planning procedures to estimate these measures for system, corridor, and project level analysis will be demonstrated using case study workshop examples for both highway and transit modes. Topics to be covered include estimation of public and private costs; air pollutant emissions and concentrations; energy consumption; safety/security, economic development, equity and other social and environmental impacts; and techniques for cost-benefit and cost-effectiveness analysis. The course will demonstrate techniques to present the evaluation results in a manner easily comprehensible by the public and community decision makers. It is intended for FHWA, State, MPO and local government planning staffs with transportation planning experience.

### **FLEXIBLE/INNOVATIVE FUNDING (WORKSHOPS)**

**Product:** Workshops.

**Users:** State, MPO and local planners, elected officials.

**Availability Date:** Workshops will start in 1994.

**Contact:** Richard Steinman, FTA, (202) 366-4060

This is a three year cooperative agreement with the American Public Transit Association and the Government Finance Officers Association to provide outreach workshops to State and local planners on the flexible funding made available by ISTEA. Workshops would focus on the changes in planning process requirements, with a focus on participation elements, the eligibility of projects under ISTEA programs, case studies of successful efforts at multimodal project selection, and opportunities for innovative funding.

## **HIGHWAY-RAIL CROSSING ELIMINATION (STUDY)**

**Product:** Standard guidelines to identify crossings as candidates for elimination, model legislation vesting authority in a State-level entity, and analytic procedure for assessing the need for a crossing.

**Users:** State, city and county planners.

**Availability Date:** Spring 1994.

**Contact:** Bruce George, FRA, (202) 366-0533.

FRA and FHWA staff are working with the National Conference of State Rail Officials (NCSRO) to consider methods to facilitate elimination of one-fourth of the nation's grade crossings, a goal jointly established by the FRA and FHWA. The committee is developing guidelines to identify crossings as candidates for elimination and is surveying State laws regarding opening and closure of crossings. The committee plans to develop model legislation vesting authority in a State-level entity, and an analytic procedure for assessing the need for a crossing. The purpose of this study is to facilitate elimination of 25 percent of the nation's crossings. This will enable State and local highway authorities to allocate scarce resources to the remaining crossings for improvements or grade-separation.

## **INTERMODAL MANAGEMENT SYSTEMS FOR MANAGERS (COURSE)**

**Product:** Course.

**Users:** State, MPO and local planners.

**Availability Date:** Under development for 1994.

**Coordinator:** Al Miller, NHI, (703) 285-2787.

**Course Number:** 15262

This course is designed to provide a basic understanding of the legislation and regulations relative to intermodal management and offers basic guidance on the design, implementation, and administration of intermodal management systems.

**INTERMODAL MANAGEMENT SYSTEMS  
FOR TECHNICAL STAFF (COURSE)**

**Product:** Course.

**Users:** Practitioners responsible for designing and implementing intermodal management systems.

**Availability Date:** Under development for 1994.

**Coordinator:** Al Miller, NHI, (703) 285-2787.

**Course Number:** 15263

**INTERMODAL TRANSPORTATION  
ACCESS TO U.S. PORTS (REPORT)**

**Product:** Reports (3).

**Users:** Port planners; State, MPO and local planners.

**Availability Date:** August 1993.

**Contact:** Kelly Chapman, MARAD, (202) 366-0256.

**MARAD ISTE A IMPLEMENTATION  
(OUTREACH)**

**Product:** Brochure and compendium of reports.

**Users:** Port agencies; State, MPO and local planners.

**Availability Date:** August 1993.

**Contact:** James Carman, MARAD, (202) 366-4357.

This course is designed for practitioners responsible for designing and implementing intermodal management systems. The material covers in detail the administration and implementation of an intermodal management system.

This report is a compilation of individual port site visit reports written as a result of the activities of a Departmental Interagency Working Group. These reports were provided to the National Research Council's Transportation Research Board as background material in their investigation of landside access problems and potential solutions facing U.S. ports.

This project is intended to identify for the port community the opportunities within the ISTE A for addressing specific port-related policies and projects and to present a strategic focus to the ports for accomplishing the objective of ensuring that port projects and plans are considered through metropolitan and statewide planning programs. Products will include a brochure and a compendium of reports addressing 16 individual ports.

## **OPERATIONS PLANNING GUIDANCE (STUDY)**

**Product:** Report.

**Users:** State, MPO, and local planners.

**Availability:** FY 1995.

**Contact:** Nancy Grubb, FTA, 366-0096.

In evaluating future transit alternatives for a corridor, it is critically important that the operating plans be properly developed. This project will produce guidance describing good planning practices for developing long-range transit operating plans. Topics to be covered include design of feeder bus and timed-transfer routes, collector and line haul considerations for HOV lanes, analysis of travel time data, and integration of express and local routes. This guidance will supplement FTA's project planning guidance entitled "Procedures and Technical Methods for Transit Project Planning."

## **PERFORMANCE MEASURES FOR INTERMODAL MANAGEMENT SYSTEMS (WORKSHOPS; GUIDEBOOK)**

**Product:** Workshops and guidebook.

**Users:** State, MPO and local planners.

**Availability Date:** The workshops are ongoing; availability of guidebook to be determined.

**Contact:** Dane Ismart, FHWA, (202) 366-4071.

This project will develop and disseminate performance measures for intermodal management systems through workshops across the country -- the first was in New York, NY on May 12, 1993. The intent is to consolidate comments from the workshop participants into briefing papers, and then consolidate the information into a guidebook which would identify common performance measures. The information should be of use to State, MPO and local planners.

## **RAILROAD AND FREIGHT TRANSPORTATION PLANNING (COURSES)**

**Product:** Three 2-3 day courses.

**Users:** State, MPO and local planners.

**Availability:** First seminar, on general rail issues, expected in late Fall 1993. Others will follow in 1994.

**Contact:** Robert Martin, FRA, (202) 366-0359.

The FRA is currently developing a series of three courses on rail-oriented transportation planning, covering passenger and freight issues; intermodal issues; and freight transportation. The courses will be aimed specifically at planners responsible for developing state and MPO intermodal transportation plans under the Intermodal Surface Transportation Efficiency Act of 1991. The objective of this program is to give State and local planners better grounding in rail issues.

## LAND USE -- TRANSPORTATION INTERFACE:

### CASE STUDY ANALYSIS OF THE IMPACTS OF ALTERNATIVE LAND USE AND TRANSPORTATION POLICIES ON SYSTEM PERFORMANCE AND AIR QUALITY (STUDY)

**Product:** Reports describing findings.

**Users:** State and local planners and policy makers.

**Availability Date:** June 1994.

**Contact:** Patrick DeCorla-Souza, FHWA, (202) 366-4076 or Fred Ducca, FHWA, (202) 366-0182.

### LANDSIDE ACCESS TO PORTS (OUTREACH)

**Product:** Reports.

**Users:** Port agencies and planners; State, MPO and local planners.

**Availability Date:** Currently available.

**Contact:** James Carman, MARAD, (202) 366-4357.

This research will evaluate, through case studies, the positive and negative impacts of alternative combinations of transportation policies and land use policies. It is expected to be completed in June 1994 and should be of interest to State and local planners and policy makers.

A study by the Transportation Research Board of the National Research Council, on landside access to ports, determined that intense non-maritime land use competition in port areas was acting to limit the development of adequate terminal facilities and routes for rail and highway access. This project, educational in nature, is intended to persuade port and local planners to prepare for the future by establishing maritime zones and routes. Products completed on this issue are: Access to U.S. Ports: Phase I. General Cargo Ports, TRB, 1992; Landside Access to Ports, TRB, 1993 (Final Report).

**LAND USE POLICIES AND PUBLIC INFRASTRUCTURE AND SERVICE COSTS (STUDY)**

**Product:** Report.

**Users:** State, MPO and local planners and policy makers.

**Availability Date:** FY 1996.

**Contact:** Patrick DeCorla-Souza, FHWA, (202) 366-4076.

This research will develop a system to account for public and social costs and benefits of alternative land use and transportation policies. Social costs will include environmental consequences as well as impacts on cultural, recreational and other community resources. The incidence of costs and benefits will also be evaluated. When completed in FY 1996, the end products will be a handbook describing procedures to account for all costs and benefits of transportation policies, and a report evaluating alternative policies. These products should be of use to State, MPO and local planners and policy makers.

**LAND USE VIDEO (OUTREACH)**

**Product:** Video

**Users:** State, MPO, local planners, local elected officials, planning commissioners and developers.

**Availability Date:** FY 1994.

**Contact:** Dwayne Weeks, FTA, (202) 366-0096.

With a grant from FTA, the San Diego Metropolitan Transit Development Board (MTDB) is developing a professionally produced script and video illustrating the linkage and interactions between land use planning and transportation planning. This video will illustrate ways to make land use development more supportive of transit.

**LONGITUDINAL LAND USE (STUDY)**

**Product:** Report.

**Users:** State, MPO and local planners.

**Availability Date:** March 1994.

**Contact:** Frederick Ducca, FHWA, (202) 366-0182.

This project, administered through the VNTSC, is part of FHWA's Travel Model Improvement Program. It will analyze land use and transportation changes in the Boston area during the last 40 years. A statistical analysis will determine to what extent land use and transportation are interrelated. It is scheduled for completion in March 1994 and the final report should be of interest to State, MPO and local planners, universities, FHWA and FTA.



**MEASURING THE LAND USE AND ECONOMIC DEVELOPMENT IMPACTS OF FIXED GUIDEWAY TRANSIT (STUDY)**

**Product:** Report documenting the land use and economic development impacts of existing transit facilities.

**Users:** State, MPO, and local planners.

**Availability Date:** FY 1995.

**Contact:** Dwayne Weeks, FTA, (202) 366-0096.

**RAILROAD-HIGHWAY GRADE CROSSING IMPROVEMENT PROGRAM (COURSE)**

**Product:** Course.

**Users:** Federal, State, and local transportation agencies responsible for the design, construction, and/or maintenance of railroad-highway crossings.

**Availability Date:** Currently available; a revision will be available January 1994.

**Coordinator:** Harry Hersey, NHI, (703) 285-2778.

**Technical Information:** Robert C. Winans, FHWA, (202) 366-4656.

**Course Number:** 38005

This project is intended to help planners determine the potential impacts of new fixed guideway transit on land use and the potential for economic development around transit station sites. A number of existing rail, busway, and people mover systems will be studied to determine the impacts they had. Other factors contributing to the impact will be identified.

This one to two day NHI course is to train personnel in a systematic approach to developing solutions to railroad-highway grade crossings. Target audiences are those who have interest in, or are directly responsible for the administration of a highway-rail intersection improvement program. Material will be supported by examples, case studies, and microcomputer workshops. The objective of this course is to provide these audiences with technical instructions on highway-rail intersection improvements including the selection, installation and maintenance of highway-rail intersection traffic control devices and crossing surfaces. FHWA is in the process of preparing a supplement to the 1986 handbook, Railroad-Highway Grade Crossings, which will be included in this course.

## **METROPOLITAN AND STATEWIDE PLANNING ACTIVITIES:**

### **ACCESS MANAGEMENT, LOCATION AND DESIGN (COURSE)**

**Product:** Course.

**Users:** FHWA, States, MPOs, and local governments; individuals involved in most aspects of transportation system planning, design, implementation, and maintenance.

**Availability Date:** Currently available.

**Coordinator:** Harry Hersey, NHI, (703) 285-2778.

**Technical Information:** Brian Hoeft, FHWA, (202) 366-2501.

**Course Number:** 15255

This three-day NHI course provides a comprehensive and detailed discussion of access management along our streets and highways. The general benefits as well as the social, economic, political and legal implications of access control are examined in detail. Existing access management practices and policies from sample States and jurisdictions are presented as examples of what types of programs have been initiated and how effective they have been. At the heart of the course, is an in-depth discussion of management techniques and the warrants for their use. A significant portion of the course covers techniques and procedures for evaluating the impacts of access control on the safety and operations of the highway system. This course is designed for Federal, State, and local planners and engineers who are currently involved or expect to be involved in decisions on and/or design of access to existing sites or new development.

### **CORRIDOR PRESERVATION FOR TECHNICAL STAFF (COURSE)**

**Product:** Course.

**Users:** Technical staff involved in project development, planning, project development, and right-of-way functions at the Federal, State, and local levels.

**Availability Date:** Currently available.

**Coordinator:** George Jones, NHI, (703) 285-2776.

**Course Number:** 15130

This two-day NHI course explains the objectives of corridor preservation and presents case studies illustrating the application of corridor preservation efforts. The case studies identify various approaches to corridor preservation including different levels of corridor analysis (i.e., planning studies, feasibility analyses, and phased environmental documents) and various types of land use controls. The course was developed for technical staff involved in project development, planning, project development, and right-of-way functions at the Federal, State, and local levels.

**EFFICIENT SUBURBAN ACTIVITY CENTERS (STUDY)**

**Product:** Handbook.

**Users:** State, MPO and local planners.

**Availability Date:** October 1995.

**Contact:** Patrick DeCorla-Souza, FHWA, (202) 366-4076.

The purpose of this research is to develop a handbook for use by State and local governments in directing the evolution of transportation-efficient suburban activity centers through strategic site design improvements. Included will be prototypes of physical designs, zoning, site design standards, parking regulations, travel demand reduction ordinances, etc. Application of the designs and strategies will be demonstrated through case study sites. The project is scheduled for completion in October 1995.

**FINANCIAL CAPACITY ANALYSIS MODEL FOR MPO'S (MODEL)**

**Product:** Financial analysis method.

**Users:** MPOs, State agencies, transit agencies.

**Availability Date:** December 1993.

**Contact:** Edward L. Thomas, FTA, (202) 366-0264.

The National Association of Regional Councils in cooperation with the San Francisco Bay Area Metropolitan Transportation Commission developed a Lotus 1-2-3 based model, called "Finance Plan," for assessing financial capacity. Once cost and revenue data are entered in the model, the model can project asset replacement requirements, account for different intergovernmental grants, analyze alternative financing strategies, and indicate the ability of local and State transportation agencies to meet future capital, operating, and maintenance funding requirements. Finance Plan summarizes complex multi-modal financing simply, for quickly determining the financial consequences of changes in project construction schedules, inflation, interest rate assumptions, revenue forecasts, and projected cost increases.

**FINANCIAL PLANNING FOR  
METROPOLITAN PLANNING  
ORGANIZATIONS (MPO'S) (COURSE)**

**Product:** Training course.

**Users:** MPO and transportation planners.

**Availability Date:** FY 1994.

**Contact:** Edward Thomas, FTA, (202) 366-0264; or Dwayne Weeks, FTA, (202) 366-0096.

This course is being developed through the National Transit Institute at Rutgers University and will provide training to improve the financial analysis and planning capabilities of MPO staff and other transportation professionals. This course will provide a review of ISTEA and CAAA planning and financing requirements. It will focus on both the cost and revenue aspects of financial analysis and planning at the MPO level. Subjects to be covered include: (1) scheduling and cost estimating techniques, including life cycle costing; (2) distinctions between costing methods applicable to each of the stages of project development (i.e. planning, preliminary design, final design, construction, and operation); (3) revenue estimating methodologies; (4) principles of cash flow analysis; (5) innovative financing concepts; (6) financial risk assessment; and (7) models for assessing project and financial capacity and transportation financial planning. The primary objective is to provide a basic understanding of the fundamentals of financial analysis and planning they apply to transportation planning and programming practices.

## **HIGHWAY PROJECT TRAFFIC FORECASTING (COURSE)**

**Product:** Course.

**Users:** State and local planning and design technical staffs.

**Availability Date:** Currently available; a 1994 update is planned.

**Coordinator:** Harry Hersey, NHI, (703) 285-2778.

**Technical Information:** Doug Laird, FHWA, (202) 366-5972.

**Course Number:** 15251

This three-day NHI course presents the technical relationships between the system planning and project development processes. It focuses on effective use of products of the planning process to support decision making at the project level and to provide input for project "purpose and need." Major topics include refinement of computerized traffic forecasts and other "post processing" techniques, developing design hour volumes, intersection analysis, safety analysis, and developing traffic data for air quality analysis. It is intended to enable participants to use the urban transportation planning process more effectively. The course was developed for State and local planning and design technical staffs and individuals involved in developing and using project data to support project decisions and project design. Available in 1994, there will be an update of the existing course to integrate new environmental concerns and safety analysis procedures.

## **IMPROVED HIGHWAY TRAVEL CONSIDERATIONS FOR AN AGING POPULATION (COURSE)**

**Product:** One-day training course.

**Users:** State, MPO and local planners.

**Availability Date:** Currently available.

**Coordinator:** George Jones, NHI, (703) 285-2776.

**Technical Information:** Hal Lunenfeld, FHWA, (202) 366-2217.

**Course Number:** 13353

This NHI course is designed to give participants who provide transit and transportation services for aging drivers, pedestrians, and transit users with detailed information concerning their problems and needs. Upon completion of the course, participants should be aware of the problems and needs of aging drivers and pedestrians, understand important aging population issues, identify current and future research and development programs for aging drivers and pedestrians, and be able to identify and apply aging driver and pedestrian countermeasures.

**IMPROVING TRANSIT MARKET RESEARCH PRACTICE (STUDY)**

**Product:** Research marketing methods manual.

**Users:** State, MPO, and local planners.

**Availability Date:** FY 1995.

**Contact:** Ronald Jensen-Fisher, FTA, (202) 366-0096.

Transit has become a more significant part of modern communities in light of mandates and new funding opportunities originating in such legislation as the Clean Air Act Amendments, the Americans with Disabilities Act and the ISTEA. This project is to develop a manual which discusses the implementation of different methods and techniques for doing market research for various types of transit services, i.e., express bus, E&H services, jitneys, etc. This program is designed to assist communities in their transit decision making through accurate market analysis. It will be achieved by compiling successful market analysis techniques used for the transit industries. In addition, this program will seek innovative new methods for achieving this goal by researching techniques used by other industries which can be adapted to the transit markets.

**INTELLIGENT VEHICLE-HIGHWAY SYSTEMS (IVHS) PLANNING AND PROJECT DEPLOYMENT PROCESS (GUIDANCE MATERIAL)**

**Product:** Written report.

**Users:** State, local, MPO, and private sector transportation professionals.

**Availability Date:** Currently available.

**Contact:** Shelley Lynch, FHWA, (202) 366-2300.

This paper was prepared by FHWA as an aid to transportation professionals interested in implementing IVHS services in their area. The paper outlines a needs-based approach to planning for IVHS deployment. The paper uses two flow charts to describe the basic steps in IVHS planning: needs analysis, coalition building, user service identification, functional requirements and architecture, and development of a local strategic deployment plan.

## **METHODOLOGIES FOR EVALUATING BUS TRANSIT AND HOV LANE PROJECTS (STUDY)**

**Product:** Report.

**Users:** State, MPO and local planners.

**Availability Date:** June 1994.

**Contact:** Dane Ismart, FHWA, (202) 366-4071 or Patrick DeCorla-Souza, FHWA, (202) 366-4076.

## **PROJECT EVALUATION METHODS TRAINING (COURSE)**

**Product:** Course.

**Users:** State, MPO and local planners.

**Availability Date:** Available 1994.

**Coordinator:** Harold Lunenfeld, FHWA, (202) 366-2217.

## **REVIEW OF TRANSPORTATION PLANNING PROCESSES IN METROPOLITAN AREAS (STUDIES)**

**Product:** Formal written reports giving examples of the decision making and planning processes of individual MPOs.

**Users:** Local MPOs, FTA, FHWA.

**Availability Date:** Reports on individual MPOs issued as completed.

**Contact:** Deborah Burns, FTA, (202) 366-1637.

This study, administered through the University of Oklahoma and the Oklahoma Department of Transportation, will examine evaluation procedures for fixed guideway projects intended to serve both bus transit and HOVs. When completed in June 1994, a report will document advantages and disadvantages of various procedures, and provide recommendations and should be of use to State, MPO, and local planners and policy makers.

The course involves evaluation of traffic-operations projects. It is divided into three parts. Part 1 is an overview of the Evaluation Process. Part 2 provides case studies of simple and complex traffic-operations projects, including a completed IVHS project. Part 3 provides guidelines for conducting evaluations.

FTA and FHWA have oversight responsibilities and, therefore, the need to review and evaluate urban planning processes. This is accomplished through periodic policy and committee meeting attendance, and through review of related program documentation, such as Unified Planning Work Programs (UPWPs), technical reports, and Transportation Improvement Plans. Using periodic process reviews as another appropriate mechanism, FTA and FHWA have started reviewing the largest 33 urbanized areas. This effort, administered through the VNTSC, will continue over the next 2-3 years. The objective of this effort is to look at the overall decision making and planning process in light of ISTEA and CAAA requirements.

**SITE IMPACT ANALYSIS AND ASSESSMENT (COURSE)**

**Product:** Course.

**Users:** State, MPO and local planners.

**Availability Date:** Under development for December 1994.

**Contact:** Brian Gardner, FHWA, (202) 366-4061.

This project will develop and provide for presentation of a course in site impact analysis and assessment. Upon completion of the course, each participant should be able to: understand and apply the recommended practices for estimating and evaluating the traffic impacts for a given site and understand the recommended techniques for developing and applying traffic impact assessments; effectively review, evaluate, and critique a site traffic impact analysis; select impact assessment techniques appropriate for their area and the development type; grasp the social, legal, and economic ramifications associated with impact assessments. The course should be of interest to State and local transportation planning staff responsible for reviewing traffic impact studies submitted by developers, site planners and transportation systems planners.

**STATEWIDE HIGHWAY PLANNING PROCEDURES (COURSE)**

**Product:** Course.

**Users:** State, MPO and local planners.

**Availability Date:** Currently available.

**Coordinator:** George Jones, NHI, (703) 285-2776.

**Course Number:** 15127

This three to four day NHI course focuses on the Statewide highway planning process, travel forecasting procedures and other planning-related areas. It is intended for State and Federal planning professionals and new managers that desire a fast-paced review of the state-of-the-practice.



## RESOURCE CENTERS:

### **CENTRALIZED TECHNOLOGY SHARING PROGRAM (CLEARINGHOUSE)**

**Product:** Reports.

**Users:** State and local policy-making officials.

**Availability Date:** About 20 to 30 reports are issued each year.

**Contact:** John Hohl, Research and Special Programs Administration (RSPA), (202) 366-4208.

#### **Technology Sharing Reports:**

Single copies order: U.S. Department of Transportation, Publications Division (M-443.2), Washington, D.C. 20590, (202) 366-2099.

Bulk orders: National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161, (703) 487-4650.

Mailing list: Technology Sharing Program (DRT-10), U.S. Department of Transportation, Washington, D.C. 20590.

This program disseminates selected products from DOT's research and development program which deal with priority issues and concerns raised by State and local governments. It also disseminates innovative State and local government products to a national audience and promotes development of technical assistance mechanisms throughout the DOT. The objective of this program is to support more effective State and local government decision-making and, through that, more effective use of Federal grant funds, by making available at no cost technical materials and reports which bear on the process. The active inventory of this program is some 250 studies on a range of modal and intermodal topics. About 20 to 30 reports are issued each year. These reports are of use to State and local policy-making officials and others in the transportation community.

The following are representative documents available through the DOT Centralized Technology Sharing Program:

- o An Assessment of Travel Demand Management Approaches at Suburban Activity Centers, DOT-T-92-06, July 1989
- o Characteristics of Urban Transportation Demand (An Update), DOT-T-88-18, July 1988
- o Characteristics of Urban Transportation Systems (Revised Edition), DOT-T-93-07, September 1992
- o Corridor Transportation Management for Highway Reconstruction: Southeastern Expressway, Massachusetts 1984-1985, DOT-I-86-35, May 1986
- o Current Use of Geographic Information Systems in Transit Planning, DOT-T-92-02, August 1991
- o Elderly and Disabled Transportation Plan for the Merrimack Valley, DOT-T-88-13, September 1987
- o Evaluation of Travel Demand Management Measures to Relieve Congestion, DOT-T-90-14, February 1990
- o A Guide to Strategic Planning for Transit Properties, DOT-T-90-07, December 1988
- o Guidelines for Transit-Sensitive Suburban Land Use Design, DOT-T-91-13, July 1991
- o How to Limit Traffic Congestion in Your Community, DOT-I-84-25, February 1984
- o The Impact of Changing Women's Roles on Transportation Needs and Usage, DOT-I-85-01, September 1983
- o Increasing the Productivity of the Nation's Urban Transportation Infrastructure: Measures to Increase Transit Use and Carpooling, DOT-T-92-17, January 1992
- o Linking Goods Movement and Economic Development: A Case Study Analysis, DOT-I-85-36, December 1984
- o National Transportation Strategic Planning Study, March 1990
- o Planning Guidelines for Suburban Transit Services, DOT-T-90-08, August 1988
- o A Self-Instructing Course in Disaggregate Mode Choice Modeling, DOT-T-93-18, December 1986
- o Some Critical Aspects of Ferry Planning, DOT-I-87-29, February 1982
- o Transit-Linked Development: A Case Study of Atlanta's MARTA System, DOT-I-85-24, January 1985
- o Transportation Implications of Telecommuting, April 1993
- o University Transportation Centers Project Abstracts, Fiscal Year 1992, April 1992
- o Uptown Houston Comprehensive Transportation Strategy, DOT-T-93-27, March 1991
- o Urban Transportation Planning in the United States: An Historical Overview (Fourth Edition), DOT-T-93-02, November 1992
- o Urban Rail Transit Projects: Forecast Versus Actual Ridership and Cost, DOT-T-91-04, October 1990

**COMMUNITY/CORRIDOR TRAFFIC SAFETY PROGRAMS (RESOURCE CENTER, COURSE)**

**Product:** Course and technical assistance program.

**Users:** State, MPO and local planners.

**Availability Date:** Currently available.

**Contact:** Barbara Sauers, National Highway Traffic Safety Administration (NHTSA), (202) 366-0144 .

This activity is intended to promote and support community/corridor traffic safety initiatives through training, technical assistance, collaboration and coordination at the State, regional and local levels. A training course is offered to teach State and local highway safety professionals information and skills to implement local highway safety programs. An outreach program provides technical assistance and linkages with existing State and local traffic safety initiatives. Intended primarily for State and local highway safety professionals, community/corridor traffic safety considerations are of concern to State, MPO and local planners engaged in intermodal (e.g., highway/ pedestrian/ bicycle) transportation planning.

**CONSORTIUM FOR REGIONAL MOBILITY (STUDY, CONFERENCES)**

**Product:** Products include a directory of MPOs; an issue brief "Combatting Congestion: Policy Options for Local Officials"; publication of "Mobility Facts", "Tackling Gridlock", a special issue of ITE Journal dedicated to innovative efforts to improve regional mobility in urban areas, a quarterly newsletter "Mobility Time"; and numerous conferences and workshops which have focused on regional mobility, air quality, and commuter transportation issues.

**Users:** State, MPO and local planners.

**Availability Date:** Ongoing.

**Contact:** Gwen Cooper, FTA, (202) 366-0198

The Consortium was formed to improve the dissemination of knowledge about regional mobility issues. It provides a unique forum for the exchange of regional mobility-related information to professional organizations concerned with identifying and implementing solutions to widely experienced regional mobility problems. The Consortium is comprised of George Mason University, American Public Works Association, Association for Commuter Transportation, the Institute of Transportation Engineers, the National Association of Counties and the Virginia Department of Transportation. Its objective is to develop and publish a quarterly newsletter and monologues on specific solutions that could aid in reducing congestion, while at the same time improving air quality.

**INFORMATION RESOURCE CENTER --  
GEORGE MASON UNIVERSITY  
(REPORTS, DATA BASES,  
CONFERENCES)**

**Product:** Computer software; reports; assistance in conduct of various FTA conferences and workshops; on-line access to a resource information system (RIS).

**Users:** State, MPO and local governments, transit agencies, professional organizations, Transportation Research Board, FTA.

**Availability Date:** Some products are currently available. The RIS has been developed.

**Contact:** Walter Kulyk, FTA, (202) 366-4991.

**NATIONAL BICYCLIST AND  
PEDESTRIAN CLEARINGHOUSE  
(REPORTS, GUIDANCE MATERIAL)**

**Product:** Reports.

**Users:** State, MPO and local planners; Federal agencies.

**Availability Date:** Many reports are currently available.

**Contact:** Barbara McMillen, FHWA, (202) 366-4634.

This activity, undertaken through a grant to George Mason University, involves the continuing development and refinement of a national advanced technology information center. Using a systems engineering approach, a resource information system is being developed to address the information needs of the transit community. Information technology sharing will be included to support government officials, legislators and public groups active in the field of mass transportation. RIS will be used in support of various FTA-sponsored activities. The objective of this activity is to develop on-line access to an information resource data base, to implement the on-line capability for use by the transit community, and to conduct demonstrations on the capability of a computer-supported decision-making system and the RIS.

This FHWA clearinghouse provides study reports and guidance material concerning the use and safety of bicycling and walking as travel modes. For example, products of the National Bicycling and Walking Study include a final study report and 24 case study reports on specific topics relating to increased use and safety of bicycling and walking.

**NATIONAL HIGHWAY INSTITUTE  
(COURSES)**

**Product:** Courses.

**Users:** Federal, State and local governments and planners.

**Availability Date:** Many courses are currently available, others are under development. Individual listings of many of these courses appear elsewhere in this document.

**Contact:** Barry Nunemaker, NHI, 6300 Georgetown Pike, McLean, Virginia 22101, (703) 285-2772.

The National Highway Institute (NHI) is the technical training division of the Federal Highway Administration and serves as one of the primary offices for the transfer of new technology, both nationally and internationally. Arrays of training courses are available through the State Programs Division of NHI that address topics relating to new technology, current highway research, applications of new procedures, utilizing new materials, federal policy changes and environmental guidelines. The National Highway Institute has developed a series of courses to assist State and local governments and planners which cover travel demand forecasting, census applications, arterial capacity and planning, and access management. They are developing new courses for intermodal planning and management systems and access to intermodal facilities.

**NATIONAL TRANSIT INSTITUTE  
(COURSES, RESOURCE CENTER)**

**Product:** Training and technical support materials.

**Users:** Transit employees at the Federal, State and local level.

**Availability Date:** Ongoing through FY 1997.

**Contact:** Charles Morison, FTA, (202) 366-0245 or NTI, (908) 932-1700.

ISTEA established the National Transit Institute (NTI) at Rutgers University to support the national training and development needs of the transit industry. The FTA modeled the NTI after the National Highway Institute. Courses will be developed on a number of subjects relating to Federal regulations, standards and policy initiatives, in addition to industry-defined training and a clearinghouse and referral service. Purpose of this project is to develop and implement a national program of training for Federal, State, and local transportation employees; to conduct a clearinghouse relating to training and development; and establish a network of referral and technical assistance relating to training and human resources development in transit.

**PUBLIC PRIVATE TRANSPORTATION NETWORK (RESOURCE CENTER)**

**Product:** Technical assistance and information dissemination.

**Users:** Transit agencies, local and State governments, private operators, transportation management associations, and the Federal government.

**Availability Date:** Currently available.

**Contact:** Bert Arillaga, FTA, (202) 366-9267.

The Public Private Transportation Network (PPTN) is a free technical assistance program funded by the Federal Transit Administration and managed by MacDorman & Associates and COMSIS Corporation. PPTN assists a wide range of organizations and individuals. PPTN assistance is available through on-site visits by experts; speakers and discussion facilitators at seminars, conferences, and workshops; technical publications; telephone consultations; document reviews; industry referrals; a monthly news letter (Network News); and a computer bulletin board system (The Transit Information Exchange BBS). PPTN can be accessed by calling 1-800-522-7786 or writing to PPTN, 8737 Colesville Road, Silver Spring, MD., 20910-3921.

**UNIVERSITY TRANSPORTATION CENTERS PROGRAM (RESEARCH, STUDIES)**

**Product:** Education, research and technology transfer at university-level centers.

**Users:** Many of the projects are targeted for State, MPO and local planners.

**Availability Date:** Hundreds of projects have been completed; there are many ongoing projects.

**Contact:** Jennifer Jordan, Office of University Programs, RSPA, (202) 366-5442.

The objective of the University Transportation Centers (UTC) program is to advance U.S. technology and expertise in the many disciplines comprising transportation through education, research, and technology transfer at university-level centers of excellence. The University Transportation Centers have become focal points for solving present and future transportation problems and for training the next generation of leaders in the field. The Program originally established and operated transportation centers in 10 Federal regions. ISTEA has reauthorized the UTC Program for an additional six years and added three new centers to the program. In its first four years of operation, over 300 projects were established. Many of the completed and ongoing projects are targeted for use of State, MPO and local planners.

## **UNIVERSITY TRANSPORTATION CENTERS CLEARINGHOUSE (REPORTS)**

**Product:** Reports.

**Users:** State, MPO and local planners.

**Availability Date:** Many reports are currently available.

**Contact:** Ann Marie Quinn, The Pennsylvania State University, Research Office Building, University Park, PA 16802-4710, (814) 863-3614.

## **VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER (RESEARCH, STUDIES, CONFERENCES)**

**Product:** Products include reports, data bases, models, conferences.

**Users:** Federal, State and local governments.

**Availability Date:** Dates are specific to sponsored projects.

**Contact:** Lynn C. Murray, VNTSC, RSPA, (617) 494-2224.

The purpose of this clearinghouse is to disseminate University Transportation Center Program reports and to prepare other program-wide information devices for use by the Centers and the transportation community. The Clearinghouse fosters technology transfer and provides ready access by transportation professionals to obtain information on current research and project results. Reports are of use to State, MPO and local planners.

The John A. Volpe National Transportation Systems Center, located in Cambridge, Massachusetts, is DOT's transportation and logistics research and analysis center. It provides DOT and other organizations with the capability to identify and resolve transportation problems which require advanced and coordinated systems and technological research and development. Both through in-house staff and in combination with contract research, the Center provides studies, analyses, systems development, and research to meet the needs of customers. The Center develops integrated systems approaches to crosscutting (interagency and/or intermodal) transportation issues and is recognized by government, the transportation community and academia as a focal point for the assimilation, generation, and interchange of knowledge concerning transportation and logistics systems. It does not appear as a "line item" in the Federal budget, but is industrially funded by its sponsors. Annually, the Center conducts approximately 300 sponsored projects in research, development and operations engineering.

## TRANSPORTATION STATISTICS:

### 1990 CENSUS TRANSPORTATION PLANNING PACKAGE (CTPP) ON CD-ROM (DATA BASE)

**Product:** CTPPs on CD-ROM. Software to display and retrieve the data from the CD-ROMs.

**Users:** State and MPO transportation planners; DOT policy officials and program managers, EPA, regional economic development agencies, marketing firms.

**Availability Date:** 1993-1994.

**Contact:** Philip Fulton, BTS, (202) 366-3282.

### 1990 NATIONWIDE PERSONAL TRANSPORTATION SURVEY (NPTS) (DATA BASE)

**Product:** Reports and data diskettes.

**Users:** State, MPO and local planners.

**Availability Date:** Currently available.

**Contact:** Susan Liss, FHWA, (202) 366-5060; or Pat Harrington, VNTSC, (617) 494-2450.

The CTPP is a set of special tabulations of 1990 census data produced by the Bureau of the Census, tailored to meet the data needs of transportation planners. Statewide packages and urban packages for the "CTPP region" defined by each MPO will be produced. The CTPP includes data by geographic area of residence, place of work, and journey-to-work flows. Statewide data are provided for cities and counties; urban CTPPs provide data for traffic analysis zones and census tracts. The objective of the CD-ROM project is to make the data contained on the CTPP computer tapes easily accessible and widely available.

NPTS compiles national data on the nature and characteristics of personal travel. It addresses a broad range of travel in the United States, providing data on all personal trips for all purposes and all modes of transportation. NPTS data may be used to describe current travel patterns and, used with projections of demographic change, can be a valuable tool in forecasting future travel demand. Information collected for each trip on a travel day includes the purpose, mode, trip length, day-of-week, time-of-day, vehicle used, and vehicle occupancy. This report series provides tables and charts from NPTS surveys from 1990, 1983, 1977, and 1969. Two reports are currently available, a third, will be available in Fall, 1993. Data diskettes and tapes with the 1990 survey results are available through VNTSC.



### **1993 COMMODITY FLOW SURVEY (DATA BASE)**

**Product:** Tabulations will be produced on 9-track computer tape and CD-ROM. Tabulations by origin-destination flows by type of commodity, modes used, shipment size, trip distance, and other characteristics are planned to be published by the Bureau of the Census in 1995.

**Users:** DOT policy officials, the Congress, State, MPO and local planners; Federal economic policy making organizations, regional development organizations, shippers, carriers.

**Availability Date:** 1995.

**Contact:** Jim Aanestad, Bureau of the Census, (301) 763-7347 or Rolf Schmitt, BTS, (202) 366-3282.

### **CHARACTERISTICS OF INTERMODAL TERMINALS (DATA BASE)**

**Product:** A statistical summary for planning and operating purposes.

**Users:** State and local agencies, transit agencies, and MPOs.

**Availability Date:** 1995.

**Contact:** Edward L. Thomas, FTA, (202) 366-0264.

This survey, conducted by the Bureau of the Census, will collect data on 24 million shipments from approximately 200,000 manufacturing, mining, merchant wholesale, and selected other establishments. Flow data by type of commodity will be reported by all modes used for the shipment, the shipment weight, and the value of the shipment. The data will be collected at the ZIP Code level and reported for each pair of States and of 89 aggregations of Bureau of Economic Analysis economic areas. The 1993 survey will differ from its 1977 predecessor in greatly expanded industry coverage and in its treatment of intermodalism. The objective of the survey is to provide basic information about the quantity and geography of commodity movements by all modes.

This report will develop a summary of the most important characteristics of various intermodal terminals. Information will be collected on terminals with various transit (heavy rail, light rail, commuter rail, and bus), intercity rail, intercity bus, and aviation services. It will consider attributes like: levels of service by mode, transfer provisions, characteristics of waiting areas, operating costs, economic activity, capital replacement and rehabilitation costs, transit and auto access, parking facilities, and surrounding land use patterns. The report format will be similar to the recently published, "Characteristics of Urban Transportation Systems", and it will be periodically updated.

## **HIGHWAY-RAIL CROSSING ACCIDENTS/INCIDENTS (DATABASE)**

**Product:** Data base of highway-rail crossing accidents and incidents, available on tape or diskette.

**Users:** State, MPO and local planners, FRA, railroads, Operation Lifesaver.

**Availability Date:** Data are currently available for 18 years.

**Contact:** Stan Ellis, FRA, (202) 366-2760.

## **HIGHWAY-RAIL CROSSING INVENTORY PROGRAM (DATA BASE)**

**Product:** Computer data printouts of highway-rail crossing characteristics

**Users:** Federal, State, local government officials, railroads, planning consultants.

**Availability Date:** Currently available.

**Contact:** Bruce George or Thomas Woll, FRA, (202) 366-4656.

FRA maintains a data base of highway-rail crossing accidents and incidents which is of use in safety and planning analyses. The data base contains records of all collisions between highway users and railroad equipment at rail-highway grade crossings. Statistics are compiled to determine and target high risk crossings so resources can be allocated for improvements.

The U.S. Highway-Rail Crossing Inventory was completed in 1975 as a result of a concerted Federal, state and railroad effort to inventory all crossings in the nation. Each crossing was assigned a unique number. Information regarding the type, location, and physical and operational characteristics was collected and keyed into a computer database. The inventory is used for reporting accidents and the data for analyzing crossing improvement projects. The FRA assumed the responsibility as custodian of the inventory database while the states and railroads have endeavored to keep the records current on a voluntary basis. Currently, there are approximately 325,000 crossings nationwide. The objective of this program is to allow the Federal Government, states and railroads to identify a specific crossing and analyze data regarding identification, physical and operational characteristics of any and all crossings.

**MONTHLY PRODUCTION OF MODAL  
TRANSBORDER DATA (DATA BASE)**

**Product:** Freight flow data for U.S. imports and exports to and from Canada and Mexico; available as data files in dBase format.

**Users:** DOT, State, MPO and local government managers interested in transborder freight flows.

**Availability Date:** Monthly beginning in August 1993.

**Contact:** Rolf Schmitt, BTS, (202) 366-3282.

In April 1993, the Bureau of the Census entered into a contract with the Department of Transportation's Bureau of Transportation Statistics to provide unpublished freight flow data for U.S. exports and imports to and from Canada and Mexico. In some cases, such as U.S. exports to Canada and Mexico, the surface mode of transport had previously not been in machine-readable form. Data will be provided three months after the end of the collection month. Confidential files with geographic, border crossing, and commodity detail will be provided to BTS for DOT use; other government agencies must obtain Census approval before BTS can release them. The files to be released to the public will be organized in two ways to satisfy Census' confidentiality regulations: those with commodity emphasis and those with geographic emphasis. The purpose of this program is to provide information needed to monitor increased traffic associated with North American Free Trade Agreement and provide border communities better data to plan transportation improvements.

**PASSENGER FLOW SURVEY (DATA  
BASE)**

**Product:** Tabulations in electronic media (probably 9-track computer tape and CD-ROM) as well as printed reports will be produced.

**Users:** DOT policy officials, the Congress, State, MPO and local planners; travel and tourism industry.

**Availability Date:** Data products are expected in 1996.

**Contact:** Philip Fulton, BTS, (202) 366-3282.

The survey will measure interstate and interregional passenger travel nationwide by trip and traveler characteristics for all modes and for intermodal combinations. Plans call for the survey to be undertaken in 1995. The objective of the survey is to provide basic information about the quantity and geography of passenger movements by all modes.

**RAILROAD WAYBILL SAMPLE (DATA BASE)**

**Product:** Information concerning rail traffic flow patterns ; 9-track computer tape in ASCII fixed field format..

**Users:** State, MPO and local planners, FRA, railroads.

**Availability Date:** Currently available; generated yearly.

**Contact:** Peter Kerr, FRA, (202) 366-0366.

**TELEPHONE CONTACT LIST OF TRANSPORTATION STATISTICS EXPERTS (DATA BASE)**

**Product:** The contact list will be made available in electronic form and as a publication.

**Users:** Federal, State, and local transportation data users.

**Availability Date:** 1993; the list will be updated periodically.

**Contact:** Kathleen Bradley, VNTSC, (617) 494-2614 or Philip Fulton, BTS, (202) 366-3282.

The Carload Waybill Sample is a proprietary sample of freight waybills submitted by Class I railroads to the Interstate Commerce Commission (ICC). The sample includes information for railroad movements showing origination and termination points, participating railroads, interchange locations, commodities and volume. A public use version of the waybill sample is available from the ICC. The objective of this program is to facilitate the analysis of rail traffic flow patterns.

The contact list, administered through the Volpe National Transportation Systems Center, will include the name, address, telephone number, affiliation, and subject matter expertise of each individual. The list will be placed in an electronic database that will allow the user to cross-reference the specialist with their area of expertise. The objective of this project is to make transportation data easily accessible and widely available.

## **TRANSPORTATION DATA BASE INVENTORY (DATA BASE)**

**Product:** A periodically updated inventory of data sources. The inventory will be made available in electronic and printed form.

**Users:** Federal, State, and local transportation data users.

**Availability Date:** 1993.

**Contact:** Kathleen Bradley, VNTSC, (617) 494-2614 or Philip Fulton, BTS, (202) 366-3282.

## **TRANSPORTATION DATA HOTLINE (OUTREACH)**

**Product:** An on-going transportation data hotline.

**Users:** Federal, State, and local transportation data users.

**Availability Date:** 1993.

**Contact:** Kathleen Bradley, VNTSC, 617-494-2614 or Philip Fulton, BTS, 202-366-3282.

This project, administered through the Volpe National Transportation Systems Center, will compile an inventory of publicly available transportation data products developed within the Federal government in electronic form, printed reports that are regular compilations of statistics, and compendia or guides to information sources. The objective of the project is to make transportation data easily accessible and widely available.

This project establishes a toll-free telephone number to answer public inquiries relating to transportation information. The "hotline" will provide both modal and multimodal transportation statistics including operational, financial, and physical characteristics of the industry. It also will respond to inquiries of a more general nature, and provide referrals as needed. The hotline number will be located at the Volpe Center in Cambridge, Massachusetts. The objective of this project is to make transportation data easily accessible and widely available.

## **TRAVEL DEMAND FORECASTING:**

### **1990 CENSUS TRANSPORTATION PLANNING PACKAGE APPLICATIONS (COURSE)**

**Product:** Course.

**Users:** FHWA, State, MPO and local government managers that are interested in the uses and applications of the Census journey to work information.

**Availability Date:** Currently available.

**Coordinator:** George Jones, NHI, (703) 285-2776.

**Technical Information:** Christine Kefauver, FHWA, (202) 366-9229.

**Course Number:** 15131

This course will familiarize participants with 1990 Census data and the Census Transportation Planning Package (CTPP). It will demonstrate uses of the CTPP for both statewide and urban applications for both small and large urbanized areas. Topics discussed: travel forecasting procedures, simplified modeling techniques, microcomputer applications, and other data processing techniques using CTPP.

### **EQUILIBRIUM IN TRAVEL FORECASTING (STUDY)**

**Product:** Report.

**Users:** State, MPO and local planners.

**Availability Date:** June 1994.

**Contact:** Frederick Ducca, FHWA, (202) 366-0182.

This project, administered through the Portland Metropolitan Services Division (an MPO), is part of FHWA's Travel Model Improvement Program. It will look at equilibrium issues in the travel forecasting process. It will focus on feedback from the assignment process to mode split, trip distribution and land use forecasting. Testing will be done under different traffic and congestion scenarios. It is expected to be completed in June 1994 and should be of use to State governments and MPOs.

**INTRODUCTION TO URBAN TRAVEL DEMAND FORECASTING (COURSE)**

**Product:** Courses.

**Users:** State, MPO and local planners and FHWA personnel relatively new to planning who wish to gain a better understanding of the principles and techniques of travel demand forecasting.

**Availability Date:** Currently available.

**Coordinator:** Harry Hersey, NHI, (703) 285-2778.

**Contact:** **Field Course:** Patrick DeCorla-Souza, FHWA, (202) 366-4076. **Headquarters Course:** Christine Kefauver, FHWA, (202) 366-9229.

**Course Number:** 15254

**LAND USE TRANSPORTATION AIR QUALITY (LUTRAQ) (STUDY)**

**Product:** Report concerning revised forecasting procedures and policy evaluations.

**Users:** State, MPO and local planners.

**Availability Date:** March 1994.

**Contact:** Frederick Ducca, FHWA, (202) 366-0182.

This is an NHI four-day introductory course in travel demand forecasting. The course has been updated to integrate new concerns of ISTEA and CAAA. It covers the traditional four-step planning process of trip generation, trip distribution, mode choice, and traffic assignment. It also covers information needs and the development of networks and zone structures. This course is offered both in the field and at FHWA headquarters in Washington, D.C. The headquarters course includes a software demonstration day where several transportation planning microcomputer packages are demonstrated. There are three options to the field course. It can be presented (1) using the microcomputer package used by the host agency to reinforce the theory taught, (2) as a non-computerized course with hand-solved workshop problems, or (3) as the Urban Transportation Planning System (UTPS) course.

This project, administered through the Oregon Department of Transportation and the 1000 Friends of Oregon, is part of FHWA's Travel Model Improvement Program. It will look at pedestrian-oriented and transit-oriented development, combined with demand management measures, as a policy to reduce total travel. It involves applying state-of-the-art models of transportation and land use to these issues. It is scheduled for completion in March 1994. The end product will be revised forecasting procedures and policy evaluations of interest to State, MPO and local planners.

**MODEL IMPROVEMENT EVALUATION  
(OUTREACH)**

**Product:** Reports; review panel support.

**Users:** State, MPO and local planners; FHWA, contractors on model development.

**Availability Date:** September 1994.

**Contact:** Frederick Ducca, FHWA, (202) 366-0182.

This project, administered through the Texas Transportation Institute, is part of FHWA's Travel Model Improvement Program. It will provide support for the model improvement effort by providing for dissemination of results and providing support for a review panel to oversee and give comments on the model development. Customers are FHWA, contractors on model development, State governments, and MPOs. The project is scheduled for completion in September 1994.

**MODEL IMPROVEMENT STUDY DESIGN  
(STUDY)**

**Product:** Report.

**Users:** State, MPO and local planners.

**Availability Date:** July 1993.

**Contact:** Frederick Ducca, FHWA, (202) 366-0182.

This project, administered through the VNTSC, is part of FHWA's Travel Model Improvement Program. It will encompass a review of major Federal and State legislation influencing the travel forecasting process. Combined with a prototype redesign of the travel forecasting process, this will form the basis of an improved travel forecasting process. When completed in July 1993, the report will be of use to FHWA, FTA, EPA and universities and should be of interest to State, MPO and local planners.

**MULTI-CRITERIA ASSIGNMENT  
(STUDY)**

**Product:** Report.

**Users:** State, MPO and local planners.

**Availability Date:** June 1995.

**Contact:** Frederick Ducca, FHWA, (202) 366-0182.

This project, administered through the VNTSC, is part of FHWA's Travel Model Improvement Program. This project will improve network analysis capabilities by providing for pathfinding with combined highway and transit networks and by improving the capability of network algorithms to respond simultaneously to price and cost. Dynamic (time-of-day) assignment techniques will be developed. Completion is scheduled for June 1995. The final report should be of use to State, MPO and local planners.



**SITE DESIGN AND DEMAND MANAGEMENT (STUDY)**

**Product:** Report.

**Users:** State, MPO and local planners; FHWA.

**Availability Date:** September 1993.

**Contact:** Frederick Ducca, FHWA, (202) 366-0182.

This project, administered through Cambridge Systematics, Inc., is part of FHWA's Travel Model Improvement Program. It will identify the relationship between urban design and demand management. Data on urban design will be cross classified with demand management to determine the effects of urban design on demand management and transit. When completed in September 1993, it should be of use to FHWA and State, MPO and local planners.

**STUDY OF SUCCESSFUL TRANSIT SYSTEMS (STUDY)**

**Product:** Report.

**Users:** State, MPO, and local planners.

**Availability Date:** FY 1994.

**Contact:** Nancy Grubb, FTA, (202) 366-0096.

This project will identify the factors which lead to an increase in transit ridership in a cost effective manner. Current transit systems under study include Houston and San Diego.

**TRANSPORTATION SIMULATION (TRANSIMS) (STUDY)**

**Product:** Report and prototype software of travel demand models.

**Users:** State, MPO and local planners.

**Availability Date:** FY 1995.

**Contact:** Frederick Ducca, FHWA, (202) 366-0182.

This project, administered through the Los Alamos National Laboratories, is part of FHWA's Travel Model Improvement Program. It is a large, multi-year effort to design the next generation of travel forecasting procedures. The project will involve forecasting a set of activities to be satisfied, the effect of satisfying these activities on the network, an evaluation of whether the activities meet constraints of the trip maker, and a readjustment of the activity chain. The end products, scheduled for FY 1995, will be a report and prototype software of travel demand models which should be of use to State, MPO and local planners.

## **TRAVEL TIME BUDGETS (STUDY)**

**Product:** Report.

**Users:** Travel demand forecasters and modelers.

**Availability Date:** FY 1994.

**Contact:** Ronald Jensen-Fisher, FTA, (202) 366-0096.

FTA and FHWA are jointly undertaking major research to improve the travel forecasting process. This project would examine available data to determine whether there is evidence to either support or refute the theory that individuals have a travel time budget and a travel cost budget that serve as limits to how much travel individuals are willing to make. Establishing the travel time budget theory would directly improve the ability to forecast individual response to additional highway capacity, and would support the Alternatives Analysis process and the analysis of air quality.

## **TRAVEL DEMAND MANAGEMENT:**

### **DESIGN AND APPLICATION OF TRAVEL DEMAND MANAGEMENT (TDM) TECHNIQUES INCLUDING TELECOMMUTING PROGRAMS (COURSE)**

**Product:** Training course and workbook.

**Users:** State, local, and private sector transportation professionals.

**Availability:** Spring 1994.

**Contact:** Wayne Berman, FHWA, (202) 366-4069.

This NHI course is designed to assist individuals in the public and private sectors who are responsible (or will be responsible) for implementing TDM and/or telecommuting programs. The course will help these individuals understand the concepts of TDM and how to effectively plan, design, implement, operate, and evaluate TDM and telecommuting projects. The course will also provide assistance on the use of the latest guidance materials and technical tools for analyzing TDM and telecommuting that have been developed by FHWA and FTA.

### **HIGH OCCUPANCY VEHICLE (HOV) FACILITIES PLANNING, DESIGN, IMPLEMENTATION, OPERATIONS, AND EVALUATION (COURSE)**

**Product:** Three-day training course.

**Users:** State, MPO and local planners.

**Availability Date:** May 1995.

**Contact:** Jerry Emerson, FHWA, (202) 366-2221.

This NHI course is designed to assist individuals in the public and private sectors who are responsible (or will be responsible) for implementing HOV projects. Upon completion of this NHI course, each participant should be able to: understand the concepts of HOV facilities and how they can be applied; understand what is needed to successfully plan, design, market, implement, operate, and evaluate effective HOV facilities; and understand and be able to use the guidance materials and technical tools.

**Course Number:** 13372

**IMPLEMENTING EFFECTIVE TRAVEL DEMAND MANAGEMENT (TDM) MEASURES (STUDY, GUIDEBOOK, MODEL)**

**Product:** Guidebooks, synthesis report, and micro-computer tool.

**Users:** State, MPO and local transportation professionals and private sector employers.

**Availability Date:** FY 1994.

**Contact:** Wayne Berman, FHWA, (202) 366-4069; or Joseph Goodman, FTA, (202) 366-0240.

**JOINT FTA/FHWA OPERATIONAL ACTION PROGRAM FOR IMPROVING MOBILITY (STUDIES)**

**Product:** Reports.

**Users:** State and local governments and MPOs.

**Availability Date:** Ongoing; reports issued as completed.

**Contact:** Joseph Goodman, FTA, (202) 366-0240, or Wayne Berman, FHWA, (202) 366-4069.

This project is designed to provide technical assistance guidance materials and analysis tools to individuals in the public and private sector who are (or will be) responsible for planning and implementing travel demand management programs, i.e. programs to increase the use of carpools, vanpools, and public transit at an employment site, at an activity center, along a corridor, or within an area. The materials consist of a TDM program reference document and synthesis of experience report, an employer guidance manual, a TDM planning guidance manual, a TDM effectiveness microcomputer model, a data collection and evaluation guidance manual, and a promotional video.

This project is aimed at demonstrating cooperative intermodal relationships that foster the implementation of an array of comprehensive, well-planned, low cost strategies to reduce congestion and improve mobility and air quality on a regional basis. Funds are provided as incentive to encourage local agencies to adopt innovative, intermodal, and cost-effective strategies to address congestion problems and mobility.

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## Glossary of Acronyms

AAPA	American Association of Port Authorities
AASHTO	American Association of State Highway and Transportation Officials
BTS	Bureau of Transportation Statistics
CAAA	Clean Air Act Amendments of 1990
CALTRANS	California Department of Transportation
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CMS	Congestion Management Systems
CTPP	Census Transportation Planning Package
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FY	Fiscal Year
GIS	Geographical Information System
ICC	Interstate Commerce Commission
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
IVHS	Intelligent Vehicle/Highway Systems
MAGLEV	Magnetic levitation
MARAD	Maritime Administration
MPO	Metropolitan Planning Organization
NARC	National Association of Regional Councils
NHI	National Highway Institute
NHTSA	National Highway Traffic Safety Administration
NPTS	National Personal Transportation Survey
NTI	National Transit Institute
OST	Office of the Secretary of Transportation
PPTN	Public Private Transportation Network
RCRA	Resource Conservation and Recovery Act
RSPA	Research and Special Programs Administration
TCM	Transportation Control Measure
TDM	Travel Demand Management
TIP	Transportation Improvement Plan
UPWP	Unified Planning Work Program
UTC	University Transportation Centers
UTPS	Urban Transportation Planning System
VMT	Vehicle Miles of Travel
VNTSC	Volpe National Transportation Systems Center