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Department
of Transportation

**Federal Transit
Administration**

TRANSIT PLANNING AND RESEARCH PROGRAMS

Fiscal Year 1993 Project Directory
April 1994

Office of Technical Assistance and Safety

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16. Abstract This Directory contains brief descriptions of Transit Planning and Research Projects initiated during Fiscal Year 1993 by the Federal Transit Administration, U. S. Department of Transportation. Its purpose is to inform the public, and especially the transit industry of the nature and scope of work underway to assist State and local agencies in improving services and reducing the cost of public transit. Under the Transit Planning and Research Program, assistance is provided in a broad range of disciplines, including Advanced Public Transportation Systems, Clean Air, Finance, Human Resources and Productivity, Information, Policy Analysis and Evaluation, Regional Mobility, Safety and Security, Technology Development, Transit Accessibility, Planning and Project Development, Transit Cooperative Research, and the National Transit Institute,					
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**Federal Transit
Administration**

The Administrator

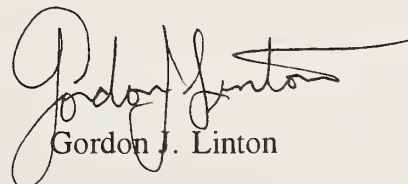
400 Seventh St., S.W.
Washington, D.C. 20590

A Message from the Federal Transit Administrator:

As we move toward the next century, transit programs must change to serve the critical transportation needs of this nation. The most successful transit systems are those which take people from where they are to where they want to go, when they want to go, at a price they can afford, and do so safely and securely. These principles are the basis for Federal Transit Administration policies and programs.

At this time, Americans are concerned with a variety of transit issues. These include providing greater mobility, especially for those with disabilities, the elderly, those in need, and those living in rural areas; improving air quality by such means as use of alternative fuels, clean diesel engines, and such devices as particulate traps or catalytic converters on transit buses; taking advantage of advanced transit technologies in areas such as navigation, information, and communication; and making all transit systems safer and more secure by such means as training, development of regulatory guidelines, and an intensive drug and alcohol information and testing program. These, and a number of other areas of concern to the public and the transit industry are being treated by the projects listed in this directory of Transit Planning and Research Programs.

The directory will provide you with information on grants and contracts in such areas as advanced public transportation systems, clean air, finance, human resources and productivity, information, policy analysis and evaluation, regional mobility, safety and security, technology development, transit accessibility, planning and project development, and transit cooperative research. All are aimed at assisting communities and transit operators in their efforts to provide the best possible service to users within available resources.

A handwritten signature in black ink, appearing to read "Gordon J. Linton". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Gordon J. Linton



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INTRODUCTION

This directory contains brief descriptions of transit planning, research, and safety projects initiated during Fiscal Year 1993 by the Federal Transit Administration of the U. S. Department of Transportation. Its purpose is to inform the public, and especially the transit industry, of the nature and scope of work underway to assist State and local agencies in improving services and reducing the cost of public transportation.

Transit assistance is provided by the Federal Transit Administration primarily in the form of information on and development and introduction of improved techniques. This information is disseminated by means of technical reports, workshops and meetings, and training courses. In addition to initiating development of new procedures and techniques, funding is provided to help evaluate and introduce techniques and products developed in the private sector. Federal Transit Administration assistance concentrates on seeking broad applications to improve human resources productivity, information, policy analysis and evaluation, regional mobility, technology development, accessibility, planning, operations, maintenance, planning, and safety and security.

Another important role of the Federal Transit Administration is to facilitate the flow of information on solutions and improvements which have been developed locally and which can be used by large segments of the transit community. In this capacity, FTA serves as a clearinghouse for current information on state-of-the-art and problem solving resources. FTA also sponsors various activities to expedite effective transfer of knowledge regarding new methods, initiatives, and techniques.

The current transit planning, research, and safety programs are based on needs and problems expressed by State and local agencies through a number of channels, such as industry groups and liaison boards, special user advisory groups, and general solicitations.

This directory was prepared by the Program Management Staff (TTS-5) of the Office of Technical Assistance and Safety, Federal Transit Administration, U. S. Department of Transportation, Washington, D. C. 20590. Copies may be obtained by contacting that office.

All media inquiries regarding these programs should be directed to the Office of Public Affairs at the same address, or you may phone 202, 366-4043.

ADVANCED PUBLIC TRANSPORTATION SYSTEMS

Project Title: Advanced Public Transportation Systems
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$570,000 **Funding Source:** Section 26
Project Manager: Denis J. Symes **Project Number:** MA-26-0023

Description: These activities are required to allow the Advanced Public Transportation Systems program to increase the transit market share, improve safety and security, reduce operating costs, increase system revenues, and assist in responding to legislative mandates, including the Americans with Disabilities Act, clean air, and energy issues. The human factors involved in applying advanced technologies to public transportation systems considering both the public and transit personnel will be identified and evaluated. Transit needs for allocations of the telecommunication frequency spectrum will be assessed and assistance provided to the Federal Transit Administration in responding to related issues. Transit system architecture issues are being identified and assistance provided in developing and coordinating specific parallel system architecture recommendations. Information security issues related to the accumulation of data by transit agencies as a result of using advanced technologies will be identified and assessed..

Project Title: Evaluations of Operational Tests
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$250,000 **Funding Source:** Section 26
Project Manager: Ronald J. Fisher **Project Number:** MA-26-0024

Description: The evaluation component is the key to the Advanced Public Transportation System program. It is through evaluation of operational tests and of a limited number of other systems or services that the Federal Transit Administration will be provided with valuable information in order to add to the body of knowledge on how to effectively and efficiently enhance public transportation. Evaluation planning activities were continued with completion of the evaluation guidelines document and the Bellevue, Washington, evaluation plan. An evaluation plan is being developed for the Denver Smart Vehicle project as well as for any other operational tests initiated during the year. Contractor support is being obtained by the Volpe National Transportation Systems Center for evaluation implementation at all APTS project locations.

Project Title: Requirements and Standards Support for Advanced Passenger Transportation Systems

Grantee/Contractor: Volpe National Transportation Systems Center

Location: Cambridge, Massachusetts

Funding: \$750,000

Funding Source: Section 26

Project Manager: Ronald J. Fisher

Project Number: MA-26-0024

Description: The development of user requirements and equipment standards is being coordinated and technical expertise provided in analyzing specifications. Information on the software and database structure is being reviewed, analyzed, and disseminated in order to develop a standard data structure for rideshare, paratransit, pre-trip planning, and other multi-modal trip decision making. Specification guidelines for integrating transit into transportation management centers will be developed, especially in coordination with traffic management.

Project Title: California Smart Commuter

Grantee/Contractor: California Department of Transportation

Location: Sacramento, California

Funding: \$750,000

Funding Source: Section 26

Project Manager: Ronald E. Boenau

Project Number: CA-26-0007

Description: The Federal Transit Administration has a requirement to analyze data and perform evaluations relating to urban/suburban mobility and congestion and transportation requirements for urban residents to access employment opportunities. This project is to: (a) review and develop technology applications for transit, paratransit and ride sharing, (b) develop a research and development laboratory, (c) develop, implement and evaluate a real-time rideshare matching system, (d) develop, implement and evaluate a pre-trip planning system, and (e) evaluate projects related to the Advanced Passenger Transportation System program.

Project Title: Winston-Salem Mobility Management

Grantee/Contractor: City of Winston-Salem

Location: Winston-Salem, North Carolina

Funding: \$220,000

Funding Source: Section 26

Project Manager: Ronald E. Boenau

Project Number: NC-26-7000

Description: State and local funds were used to analyze and develop a mobility management operational test for the Winston-Salem area. Existing social service transportation was identified along with fixed-route transportation services. This project affords a unique opportunity to develop, test, and analyze the mobility management concept since the City's transportation department manages all social service paratransit, fixed-route transit, traffic control, and community transportation planning. A mobility management system for human services transportation is being developed and operationally tested and a plan is being developed for a subsequent mobility management system for fixed-route transportation.

Project Title: Chattanooga Smart Card
Grantee/Contractor: Chattanooga Area Regional Transportation Authority
Location: Chattanooga, Tennessee
Funding: \$75,000 **Funding Source:** Section 26
Project Manager: Sean Ricketson **Project Number:** TN-26-0003

Description: Presently, the Chattanooga Area Regional Transportation Authority provides downtown shuttle service that runs from the north end to the south end of the downtown area. CARTA is constructing auto intercepts along the shuttle route. These intercepts will relieve congestion and act as boarding areas for public transportation. CARTA will receive support for this ongoing downtown parking and circulator effort. The planning and development of a smart card fare and parking system will be used to increase the appeal of transit and park-and-ride lots in the downtown area. The project is examining use of smart cards for both the payment of parking fees and for transit fares on the downtown circulator. Enabling people to use one fare medium for both services will provide a good opportunity to test the potential benefits of advanced fare media technology.

Project Title: Rogue Valley Mobility Manager
Grantee/Contractor: Rogue Valley Council of Governments
Location: Central Point, Oregon
Funding: \$80,000 **Funding Source:** Section 26
Project Manager: Ronald E. Boenau **Project Number:** OR-26-0002

Description: Phase II of this project focused on improved coordination among transportation providers which is of great interest to Federal Transit Administration efforts in regional mobility. The Jackson County area of Oregon is typical of hundreds of urban/rural areas which are in need of coordinated transportation. The demonstration of the Mobility Manager concept to integrate transportation users, providers and funding sources in a rural environment, is being completed. This concept will extend mobility management to frequent travelers (Phase II) and the general public (Phase III). Advanced electronic technology is being used to record financial transactions and includes magnetic-stripe farecards. The initial operational phase focused on providing transportation service to the disabled who are unable to use fixed route transit.

Project Title: Denver Smart Bus Evaluations
Grantee/Contractor: Denver Regional Transportation District
Location: Denver, Colorado
Funding: \$120,000
Project Manager: Denis J. Symes
Funding Source: Section 26
Project Number: CO-26-7000

Description: As part of the Department of Transportation intelligent vehicle highway system program, the Denver Regional Transportation District has been identified as a potential site for a project to assess fleet management improvements made possible through use of automatic vehicle location equipped buses. This project is collecting data for the operational test implementation by the Denver RTD and the Westinghouse Transportation Management Systems Division.

Project Title: Technical Assistance/Evaluation
Grantee/Contractor: Kuo and Associates, Inc.
Location: Washington, D. C.
Funding: \$48,809
Project Manager: Sean Ricketson
Funding Source: Section 26
Project Number: VA-26-0005

Description: The Federal Transit Administration has a requirement to analyze data and perform evaluations relating to urban/suburban mobility and congestion and transportation requirements for urban residents to access employment opportunities. The Office of Technical Assistance and Safety is sponsoring innovative projects to improve urban mobility, reduce congestion, and improve air quality by reducing dependence on the single occupant automobile. These projects involve transportation system and components development, transportation demand management, innovative transportation services, and evaluating projects underway to improve transportation. To successfully support these projects, technical experience in a number of diverse areas is required. This project is providing the required expertise to provide technical support to these areas. The tasks to be performed include studies, analyses, and evaluations of ongoing or proposed advanced technologies.

Project Title: Milwaukee Automatic Vehicle Location Evaluation
Grantee/Contractor: Milwaukee County Department of Public Works
Location: Milwaukee, Wisconsin
Funding: \$50,000
Project Manager: Sean Ricketson
Funding Source: Section 26
Project Number: WI-26-7000

Description: Milwaukee County is collecting data on the performance of their automatic vehicle location and bus fleet management systems in support of an evaluation plan developed by the Volpe National Transportation Systems Center for the Advanced Public Transportation Systems program. Operational tests and their accompanying evaluations are key elements of the intelligent vehicle highway system initiative. The automatic vehicle location system is designed to track buses and ensure accurate schedule performance, increase overall operating efficiency, and assist in fleet management activities.

Project Title: Twin Cities "Travlink" and "Genesis" Evaluation
Grantee/Contractor: Minnesota Department of Transportation
Location: St. Paul, Minnesota
Funding: \$400,000
Project Manager: Sean Ricketson
Funding Source: Section 26
Project Number: MN-26-7000

Description: This project supports data collection and evaluation for the intelligent vehicle highway system operational tests, "Travlink" and "Genesis." Travlink is an automatic vehicle location and information system providing real-time transit and traffic data to travelers at home, work, and at transit terminals. Travlink will test the integration of various advanced technologies into a comprehensive system for increasing transit ridership by providing better information to the traveler. Genesis will test the effectiveness of a personal communications device which will provide real-time route-specific information for highways and public transportation. The data collection and evaluation effort is being conducted in conjunction with the Volpe National Transportation Systems Center National Evaluation Plan, ensuring consistency with other operational test evaluations. This effort will also disseminate evaluation data to other transportation agencies considering similar systems.

CLEAN AIR

Project Title: Alternative Fuels Safety Review/Audit
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$350,000 **Funding Source:** Section 9
Project Manager: Steven W. Sill **Project Number:** MA-90-7004

Description: There are major safety considerations regarding the use of alternative fuels that must be addressed. The integrity of the onboard tanks, as well as their safe storage and maintenance, is critical to ensure safe operation. Adequate ventilation and measurement of vapor concentrations to assure safe levels is of concern. The refueling of these vehicles also raises a number of safety issues that must be reviewed. Under a cooperative agreement with the Federal Transit Administration, the National Institute for Occupational Safety and Health has conducted health and safety audits at Triboro Coach in Jackson Heights, New York, Seattle Metro, and the Los Angeles County Metropolitan Transportation Authority to evaluate the health and safety impacts of methanol in a transit environment. Similar on-site audits are being conducted for other alternative fuels including compressed natural gas and liquefied natural gas. A comprehensive technology assessment of CNG and LNG with regard to transit operations, maintenance, cost, health and safety is being conducted. Each alternative fuel presents different safety and health impacts and concerns when used in a transit environment. This program is a continuation of Federal Transit Administration efforts to perform safety audits of alternative fuels installations.

Project Title: Technical Support for the Fuel Cell/Battery Bus Demonstration
Grantee/Contractor: Battelle Memorial Institute
Location: Columbus, Ohio
Funding: \$185,000 **Funding Source:** Section 26
Project Manager: Shang Q. Hsiung **Project Number:** OH-26-0001

Description: Technical support is being provided for the evaluation of the Phase II efforts of the fuel cell/battery bus demonstration. This includes monitoring the progress of development of the prototype fuel cell buses and the systems design for a full-size fuel cell bus. It also includes an assessment of the economic feasibility of a fuel cell bus.

Project Title: Fuel Cell/Battery Bus Program

Grantee/Contractor: Department of Energy

Location: Washington, D. C.

Funding: \$1,800,000

Project Manager: Shang Q. Hsiung

Funding Source: Section 26

Project Number: DC-26-0001

Description: This is a joint coordinated effort with the Department of Energy to demonstrate the feasibility of a fuel cell/battery propulsion system for an urban transit bus. The efforts for Phase I, Proof-of-Feasibility, have been successfully completed. A brassboard model of the fuel cell/battery propulsion system demonstrated its technical feasibility. The expected emission results of a fleet of 200 fuel cell/battery buses is equal to one current diesel bus. The economic feasibility, however, could not be definitively determined. The Phase II effort will result in the development of three prototype medium-size fuel cell/battery buses and the systems design for a full-size fuel cell/battery transit bus. These buses use methanol fuel as the source for the hydrogen used in the fuel cell. One will be used in Los Angeles in coordination with South Coast Air Quality Management District efforts, one will be located at Georgetown University in Washington, D. C. The third prototype will be demonstrated in revenue service at CARTA in Chattanooga. The systems design for a 40-foot standard size bus is being conducted in conjunction with the Transportation Manufacturing Corporation.

Project Title: Electric Transit Vehicle Institute Challenge Grant

Grantee/Contractor: Chattanooga Area Regional Transportation Authority

Location: Chattanooga, Tennessee

Funding: \$50,000

Project Manager: Shang Q. Hsiung

Funding Source: Section 26

Project Number: TN-26-0002

Description: The Chattanooga Area Regional Transportation Authority is adding a large number of electric buses to its system. A test facility specific to electric vehicles, Electrotek, is available. A manufacturer of electric buses, Advanced Vehicle Systems, is located in the area. CARTA is supporting the efforts of the Electric Transit Vehicle Institute to promote the design, production and use of electric vehicles in transit. ETVI is serving as the facilitator and resource center for electric vehicle development for the transit industry and is providing the opportunity for the research, design, development, and demonstration of electric transit vehicles, components, and support systems. ETVI is also coordinating transit industry efforts in electric vehicles through the establishment of a technical coordinating committee, conferences, and information dissemination activities.

Project Title: New York State Consortium Electric Vehicle Program
Grantee/Contractor: New York Metropolitan Transportation Authority
Location: New York, New York
Funding: \$2,300,000 **Funding Source:** Section 26
Project Manager: Shang Q. Hsiung **Project Number:** NY-26-0006

Description: The New York Metropolitan Transportation Authority, on behalf of the New York State Consortium, is developing and demonstrating a low-floor hybrid electric transit bus. The hybrid electric bus development program is a 2-phase, 2-year program. In Phase I, a mule vehicle will be designed, fabricated, and tested to demonstrate the hybrid electric bus concept and to establish the capability of the low floor design. In Phase II, a pre-production prototype will be designed, fabricated, and tested to demonstrate a true low-floor full-size transit bus with low emissions and high energy efficiency. The drive system includes a state-of-the-art vehicle system controller and an innovative, compact, fully integrated wheel motor. Estimates of the production cost of the hybrid electric bus will be determined in the business study planned in Phase II.

Project Title: Liquefied Natural Gas Bus Demonstration
Grantee/Contractor: Los Angeles County Metropolitan Transportation Authority
Location: Los Angeles, California
Funding: \$420,000 **Funding Source:** Section 3
Project Manager: Shang Q. Hsiung **Project Number:** CA-03-3502

Description: There is growing in the interest of liquefied natural gas as an alternative to compressed natural gas to alleviate the weight penalty incurred from the use of CNG tanks. This information will provide the Los Angeles County Metropolitan Transportation Authority and the transit industry with the basis for evaluating the use of LNG buses in transit service. LACMTA will conduct a 1-year demonstration project to test the benefits of operating heavy duty transit buses on liquefied natural gas. The project includes design and mock-up of a prototype LNG bus, development of an LNG bus specification, retrofit of two additional LNG buses, operational evaluation of the LNG buses in revenue service, and emissions testing of an LNG bus. The results will provide the Federal Transit Administration and LACMTA with operational data on these transit buses. Technical problems, safety issues, and other characteristics unique to LNG are being addressed.

Project Title: Alternative Fuels Initiative Data Collection And Evaluation
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$180,000 **Funding Source:** Section 26
Project Manager: Steven W. Sill **Project Number:** MA-26-7000

Description: The transition of the Nation's bus fleets to cleaner burning alternative fuels and clean diesel engine systems requires careful evaluation of their impacts on daily transit bus operations and maintenance, as well as the necessary support facility infrastructure. Data collection and evaluation support for projects are provided under the Federal Transit Administration Clean Air program. This support assists grantees to set up their demonstrations, collect monthly data from test sites, process and review monthly data, submit data in a standard format to the Department of Energy on a quarterly basis, and integrate this data with test data generated from the DOE emission testing. Special studies relevant to determining the impact of alternative fueled vehicles on the transit industry may also be conducted as directed by FTA. The effort also includes preparing evaluation reports of specific demonstrations as well as cross-cutting analyses.

Project Title: Advanced Lead Acid Battery Consortium Electric Vehicle Program
Grantee/Contractor: International Lead Zinc Research Organization
Location: Research Triangle Park, North Carolina
Funding: \$1,200,000 **Funding Source:** Section 26
Project Manager: Shang Q. Hsiung **Project Number:** NC-26-0003

Description: The International Lead Zinc Research Organization, with the Advanced Lead Acid Battery Consortium, is developing supporting technology and hardware in the areas of rapid recharging and battery management as they apply specifically to lead-acid battery systems. The systems being developed are generic and can be applied with modifications to other battery technologies. The results will be hardware in the form of a charging/cable/coupling unit and a functional, simple, inexpensive battery management system including an electronic fuel gauge. This project is also evaluating performance of cells in long strings and the impact of rapid recharge/discharge cycling on cell/battery life. Supporting technology for the battery management system is in the form of the effectiveness of various types of sensors in lead acid batteries and a useful algorithm for monitoring and control of an electric vehicle battery system.

Project Title: Transit Facility Guidelines for Alternative Fuels
Grantee/Contractor: Battelle Memorial Institute
Location: Columbus, Ohio
Funding: \$100,000
Project Manager: Shang Q. Hsiung
Funding Source: Section 26
Project Number: OH-26-0001

Description: A major cost component of a change to alternative fuels is the cost to modify or construct new fueling, maintenance, and storage facilities. At present, Pierce Transit, the Los Angeles County Metropolitan Transportation Authority, Houston Metro, and Santa Cruz Metropolitan Transit have ongoing efforts to assess the changes to facilities required to accommodate alternative fueled buses. These projects are examining the impacts of complete change-over of a bus garage facility to such fuels with regard to structural, electrical, ventilation, fire suppression, emergency equipment, and spill/leak disposal systems. This project is compiling and summarizing information from these projects in the form of guidelines for conversion of an existing facility to alternative fuels or design of a new facility for alternative fuels. This will provide critical information necessary for conversion and design of alternative fuel transit facilities.

Project Title: Development of a Domestic Fuel Cell Transit Bus
Grantee/Contractor: Georgetown University
Location: Washington, D. C.
Funding: \$4,880,000
Project Manager: Shang Q. Hsiung
Funding Source: Section 26
Project Number: DC-26-7002

Description: A fuel cell transit bus produced in the United States is being developed by supporting the non-recurring engineering and tooling necessary for a domestic fuel cell system. In addition, similar support is being provided to prepare U. S. manufacturers and suppliers for the production of fuel cell transit buses in Fiscal Year 1996.

Project Title: Fuel Cell/Battery Bus Facility
Grantee/Contractor: Georgetown University
Location: Washington, D. C.
Funding: \$7,000,000
Project Manager: Shang Q. Hsiung
Funding Source: Section 26
Project Number: DC-26-7003

Description: A facility to house, maintain, and monitor the performance of fuel cell buses is being designed and constructed at Georgetown University. This facility is to be integrated into an overall transportation facility that will be constructed during completion of development of the fuel cell bus. The facility is being designed and constructed in accordance with code requirements of the Environmental Protection Administration and the District of Columbia..

FINANCE

Project Title: Technical Support for the Finance Program
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$100,000 **Funding Source:** Section 26
Project Manager: Edward L. Thomas **Project Number:** MA-26-0029

Description: Technical support is being provided to the Office of Technical Assistance and Safety in the area of transit finance. The Volpe National Transportation Systems Center is conducting special studies and assisting in program and project development and technical workshops, seminars, and conferences. In addition, data is being collected on results of Federal Transit Administration projects, seminars, and workshops. Additionally, a catalogue of Innovative Financing Strategies will be developed. The catalogue will be disseminated nationally and will list persons to contact for detailed information.

Project Title: Finance Task Order
Grantee/Contractor: KPMG Peat Marwick
Location: Vienna, Virginia
Funding: \$55,013 **Funding Source:** Section 6
Project Manager: Richard P. Steinmann **Project Number:** VA-06-0144

Description: Transit finance has taken on added importance with the requirements in the Intermodal Surface Transportation Efficiency Act that local transportation plans and TIPs be financially constrained. In addition, increasing transit investment needs and limitations on financial resources requires transit operators to consider a wide range of financing mechanisms. This is the third year of this task order contract for support to the Office of Policy in the area of Finance. Task orders may include efforts to assess the financial implications of the definitions of capital versus operating assistance. This project provides resources necessary to evaluate effects of financing alternatives.

Project Title: Assessment of Financial Control Systems and Risk in the Transit Construction Industry
Grantee/Contractor: EG&G Dynatrend
Location: Woburn, Massachusetts
Funding: \$119,975
Project Manager: Edward L. Thomas
Funding Source: Section 9
Project Number: MA-90-7005

Description: State-of-the art of financial and cost accounting systems for infrastructure construction programs are being assessed, state-of-the-practice in the use of advance control systems transit agencies determined, and the risk of fixed guideway construction projects estimated. Control systems are being reviewed for their capabilities in tracking project payables, receivables, payrolls, job costs, change orders, equipment inventory, and contractor performance. The assessment will establish the degree to which existing technology integrates the flow of funds and project scheduling systems. In addition, selected transit agencies will be contacted to determine the degree to which they use project financial control systems and procedures for their construction programs. Finally, using the principles of the capital asset pricing model, an aggregate level of risk will be computed for fixed guideway projects constructed in the United States since 1972.

HUMAN RESOURCES AND PRODUCTIVITY

Project Title: Causes and Consequences of Free Parking
Grantee/Contractor: University of California
Location: Los Angeles, California
Funding: \$72,500 **Funding Source:** Section 26
Project Manager: M. Marina Drancsak **Project Number:** CA-26-7000

Description: The University of California is examining the causes and consequences of free parking in order to propose policy options that address problems presented by widespread free parking and evaluate probable outcomes of proposed policy reforms. This research focuses on validated parking as a demand side subsidy and minimum parking requirements in zoning ordinances as a supply side subsidy.

Project Title: Developing Mobility Indices for Transportation Planning
Grantee/Contractor: Georgia Institute of Technology
Location: Atlanta, Georgia
Funding: \$84,500 **Funding Source:** Section 26
Project Manager: M. Marina Drancsak **Project Number:** GA-26-7000

Description: The Georgia Institute of Technology is examining and developing mobility indices or performance measures that can be incorporated into the multimodal planning process at the State, regional and corridor levels. Changes are being identified for existing planning models and data collection techniques that allow mobility indices to be used in transportation planning. Specific recommendations to the Federal Transit Administration are being developed for support of such an approach toward planning in transit agencies throughout the United States.

Project Title: Audio-Visual Communication Systems to Improve Transit Accessibility
Grantee/Contractor: Oregon State University
Location: Corvallis, Oregon
Funding: \$84,500 **Funding Source:** Section 26
Project Manager: M. Marina Drancsak **Project Number:** OR-26-7000

Description: Oregon State University is developing a working document to serve as the basis for the development of international standards for electronic communication and information technologies and provide a comprehensive summary of such commercially available technologies and research prototypes. The project results are designed to improve transit accessibility for individuals with sensory and cognitive impairments.

Project Title: Connecticut Transit Managerial Training
Grantee/Contractor: Connecticut Transit
Location: Hartford, Connecticut
Funding: \$37,500 **Funding Source:** Section 26
Project Manager: Pauline A. D'Antignac **Project Number:** CT-26-0001

Description: Connecticut Transit has undergone a comprehensive training assessment and is offering a variety of managerial training courses to its supervisory, technical/professional, and managerial personnel. Training being offered includes such subjects as Improving Written Communications, Demand Response Scheduling and Operations, and Transit Service Planning and Scheduling.

Project Title: Massachusetts Bay Transportation Authority Managerial Training
Grantee/Contractor: Massachusetts Bay Transportation Authority
Location: Boston, Massachusetts
Funding: \$100,000 **Funding Source:** Section 26
Project Manager: Pauline A. D'Antignac **Project Number:** MA-26-0032

Description: The Massachusetts Bay Transportation Authority has undergone a comprehensive training assessment. MBTA is offering a variety of managerial training courses to its supervisory, technical/professional, and managerial personnel. Training being offered includes such subjects as Employee Skills-Performance Based Skills, Stress Management, and AIDS Awareness.

Project Title: Gary Public Transportation Corporation Managerial Training
Grantee/Contractor: Gary Public Transportation Corporation
Location: Gary, Indiana
Funding: \$30,350 **Funding Source:** Section 26
Project Manager: Pauline A. D'Antignac **Project Number:** IN-26-0002

Description: The Gary Public Transportation Corporation has undergone a comprehensive training assessment. GPTC is offering a variety of managerial training courses to its supervisory, technical/professional, and managerial personnel. Training being offered includes such subjects as Americans with Disabilities Act Workshop, Total Quality Management, and Coaching and Counseling Skills.

Project Title: Los Angeles County Metropolitan Transportation Authority
Managerial Training
Grantee/Contractor: Los Angeles County Metropolitan Transportation Authority
Location: Los Angeles, California
Funding: \$182,150 **Funding Source:** Section 26
Project Manager: Pauline A. D'Antignac **Project Number:** CA-26-0023

Description: The Los Angeles County Metropolitan Transportation Authority has undergone a comprehensive training assessment. LACMTA is proposing to offer a variety of managerial training courses to its supervisory, technical/professional, and managerial personnel. Training being offered includes such subjects as Executive Management Continuing Education Program, and Transportation Planning and Management Programs.

Project Title: Labor/Management Cooperation In Community Outreach
Grantee/Contractor: Municipality of Metropolitan Seattle
Location: Seattle, Washington
Funding: \$100,000 **Funding Source:** Section 26
Project Manager: Charles T. Morison **Project Number:** WA-26-0002

Description: The Federal Transit Administration continues to play a role in promoting labor and management cooperation in the transit industry. This program is designed to improve perceptions about the public safety of transit among operators and members of the community through educational activities and conducting community outreach on appropriate behavior on buses. Educational and community outreach activities include how and where to report transit-related security problems. A partnership between Seattle Metro and the community to develop innovative public safety solutions within current resources is being developed. This project will add significantly to the information regarding labor/management cooperation, safety enhancement techniques, and participative management in a labor intensive environment.

Project Title: Department of Transportation Summer Intern Program for Diverse
Groups
Grantee/Contractor: Bowie State University
Location: Bowie, Maryland
Funding: \$75,000 **Funding Source:** Section 20
Project Managers: Charlene M. Wilder/Patricia Cass **Project Number:** MD-26-0011

Description: Based on a competitive process, twenty students were selected to spend ten weeks in Washington, D. C., working on a research project developed with mentors located at the various modes within the U. S. Department of Transportation. These students also took a number of field trips in order to be exposed to the operational environments of transit, highway, rail, and air transportation operations.

Project Title: Combining Capital Development with Human Resources Management
Grantee/Contractor: Memphis Area Transit Authority
Location: Memphis, Tennessee
Funding: \$100, 000
Project Manager: Charles T. Morison
Funding Source: Section 26
Project Number: TN-26-0001

Description: The Memphis Area Transit Authority is being supported and stimulated to prepare its workforce for the introduction of new technology in the form of rail trolley service. The second phase will refine and demonstrate training in support of the new trolley service. This project continues to have a significant impact on operations, maintenance and management of transit service in Memphis. MATA is coordinating training to respond to the introduction of trolley service to the region. This project will continue to document and evaluate the importance of human resources planning as a component of capital development when introducing new technology relating to service. It will assist in protecting the Federal investment and evaluate the results of this case study for use throughout the industry.

Project Title: Adaptive Control of Transit Operations.
Grantee/Contractor: University of Maryland
Location: College Park, Maryland
Funding: \$84,500
Project Manager: M. Marina Drancsak
Funding Source: Section 26
Project Number: MD-26-7002

Description: The University of Maryland is developing methods for controlling the movement of transit vehicles along their routes using adaptive control systems. This is based on extensive work already completed at the University in the areas of adaptive signal control for urban road networks, control of operations on transit routes, and optimization of timed-transfer transit systems. It is part of a continuing effort to develop advanced urban transportation management systems that fully exploit intelligent vehicle highway systems technology.

Project Title: Development and Implementation of Civil Rights Compliance Review Manuals

Grantee/Contractor: Volpe National Transportation Systems Center

Location: Cambridge, Massachusetts

Funding: \$399,000

Funding Source: Section 26

Project Manager: Harry T. Takai

Project Number: MA-26-2001

Description: A on-site civil rights compliance review manual is being developed by the Volpe National Transportation Systems Center. This manual includes: Equal Employment Opportunity; Title VI of the Civil Rights Act of 1964, as amended (service delivery); Disadvantaged Business Enterprise programs; and Section 504 of the Rehabilitation Act of 1973, as amended and the Americans with Disabilities Act of 1990. Actual on-site civil rights compliance reviews of Federal Transit Administration recipients are being conducted using the manuals developed in the first phase of this project. This assists the Office of Civil Rights in monitoring the civil rights activities of transit agencies and transit vehicle manufacturers.

Project Title: Disadvantaged Business Enterprise Training and Technical Assistance Program

Grantee/Contractor: Southeastern Pennsylvania Transportation Authority

Location: Philadelphia, Pennsylvania

Funding: \$75,000

Funding Source: Section 26

Project Manager: Alice J. Royal

Project Number: PA-26-2002

Description: Disadvantaged business enterprises have encountered administrative problems in getting contracts from the Southeastern Pennsylvania Transportation Authority. To solve these problems, SEPTA is providing assistance to DBEs encountering numerous types of contracting problems. They are hosting several workshops which have been identified by their DBE office in the areas of preventive law, contract administration, estimating, bidding, financial support systems, effective marketing strategies, and SEPTA's certification programs. The workshops allow extensive opportunities for formal and informal exchange through classroom instruction, group activities, networking, and shared resource materials. In order to avoid training not relevant to certain DBEs, workshops are being broken down into three separate business classifications: (1) suppliers and vendors, (2) professional services, and (3) construction services. These workshops are expected to provide DBEs with the necessary expertise to enhance future contracting opportunities, not only with SEPTA, but also with others having needs in their areas.

Project Title: Cooperative Education and In-House Training
Grantee/Contractor: New Jersey Transit Corporation
Location: Newark, New Jersey
Funding: \$100,000 **Funding Source:** Section 26
Project Manager: D. Michael Virts **Project Number:** NJ-26-2001

Description: The New Jersey Transit Corporation is training inner city high school students for job opportunities in skilled areas of the local transit agency and also providing training to current NJTC employees in areas where there is an under-utilization of women and minorities in the skilled craft positions.

Project Title: Bus Maintenance and Repair Training
Grantee/Contractor: Tohono O'odham Nation
Location: Sells, Arizona
Funding: \$50,000 **Funding Source:** Section 26
Project Manager: D. Michael Virts **Project Number:** AZ-26-2002

Description: Sun Tran, the transit authority in Tucson, Arizona, is in need of trained bus maintenance and repair mechanics. The Tohono O'odham Nation has a need for job training for tribe members. High unemployment exists on this Native American reservation in Arizona. The Papago Indians from the Tohono O'odham Nation in Arizona are being trained in skilled craft positions in bus maintenance and repair. This training is divided between classroom instruction and on-the-job training to become enable them to become apprentices and then later to enter skilled craft positions. Training facilities in nearby Tucson are utilized for this purpose. All instructors are qualified to instruct both in the classroom and at the bus maintenance and repair facility.

Project Title: National Transportation Consortium
Grantee/Contractor: National Transportation Consortium of Minority Colleges and Universities, Inc.
Location: Washington, D. C.
Funding: \$10,000 **Funding Source:** Section 26
Project Manager: Linda W. King **Project Number:** PA-26-2001

Description: The National Transportation Consortium focuses on and conducts on-site recruitment at colleges and universities having a high enrollment of Native American, Hispanic, and Asian Pacific American students. The cost of teaching a course on Introduction to Transportation is being subsidized by the Consortium. Finally, the Consortium is conducting an on-site survey of existing NTC members in order to evaluate and provide guidance to minority and women students enrolled in the course.

Project Title: Disadvantaged Business Enterprise Marketing Support for the 1993 American Public Transit Association Exposition

Grantee/Contractor: Regional Transit Authority

Location: New Orleans, Louisiana

Funding: \$116,000

Funding Source: Section 26

Project Manager: Alice J. Royal

Project Number: LA-26-2002

Description: The Regional Transit Authority received support for its efforts to identify, recruit, and provide managerial marketing assistance to various transit-related disadvantaged business enterprises. RTA is also recruited and assisted these firms in participating as exhibitors at the American Public Transit Association Exposition held in New Orleans in October 1993. This effort provided an opportunity for DBEs to be exhibitors at EXPO 93 in order to market their goods and services establish a communication network with participating transit agencies and manufacturers.

Project Title: Trans Tech Academy of Cardozo High School

Grantee/Contractor: Trans Tech Academy of Cardozo High School.

Location: Washington, D. C.

Funding: \$75,000

Funding Source: Section 26

Project Manager: Alice J. Royal

Project Number: DC-26-2003

Description: A transit studies curriculum for students from low income families for careers in the mass transit field are being developed and implemented. This includes classroom courses in transit, summer internships, and/or cooperative education student interns in the Federal Transit Administration and/or local transit professionals, field trips to transit authorities, presentations by transit professionals and FTA, and transit career guidance counseling for each student regarding long range goals for transit employment, including colleges with schools of transportation. This transit training program is increasing employment opportunities for inner city youth of the District of Columbia and benefits both the transit industry and the city.

Project Title: Integrating Service Routes and Route Deviation with Urban, Suburban, and Rural Transit and Paratransit Services

Grantee/Contractor: University of Arizona

Location: Tucson, Arizona

Funding: \$73,300

Funding Source: Section 26

Project Manager: Elizabeth J. Solomon

Project Number: AZ-26-7000

Description: A study is being done that draws together, synthesizes, and documents the operating experience of transit operators across the United States and Europe who have implemented, provided, or evaluated service routes or route deviation services. Research products include a series of cost-effectiveness guidelines and warrants and implementation strategies for operators in urban, suburban, and rural areas.

Project Title: Complaint Investigation Material
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$50,000
Project Manager: Harry T. Takai
Funding Source: Section 26
Project Number: MA-26-2001

Description: Complaint investigations of transit agencies are being conducted in the program areas of Equal Employment Opportunity, Title VI of the Civil Rights Act of 1964 (service delivery), Disadvantaged Business Enterprise, and Section 504 Americans with Disabilities programs. This effort is to assist the Federal Transit Administration Office of Civil Rights in investigating civil rights complaints filed against transit agencies.

INFORMATION

Project Title: Transit Technical Assistance Network
Grantee/Contractor: MacDorman & Associates/Comsis
Location: McLean, Virginia
Funding: \$640,000
Project Manager: Bert Arrillaga

Funding Source: Section 26
Project Number: VA-06-0146

Description: The Transit Technical Assistance Network provides free technical assistance to the transit industry. Its twofold purpose is to foster the dissemination of transportation innovations and promote Federal Transit Administration policy initiatives. The network consists of more than 300 transportation professionals who provide short-term technical assistance using a peer-to-peer approach. In addition, an extensive library of information on all aspects is maintained to fulfill industry needs. The network responds to requests for information and technical assistance from public, private, and non-profit entities in the areas of Regional Mobility, Finance, and Planning Methods. Funding includes support for an Operational Planning Symposium and the 4th Transit Planning and Research Priorities Workshop.

Project Title: Resource Information System
Grantee/Contractor: George Mason University
Location: Fairfax, Virginia
Funding: \$250,000
Project Manager: Gwendolyn R. Cooper

Funding Source: Section 26
Project Number: VA-26-0003

Description: Development is being continued for an information resource system at George Mason University to address the information needs of the transit community and development of on-line access to the transit resource database utilizing a systems engineering approach in further developing and refining a national level, advanced technology information center. The center will include information sharing technology to support top level officials, legislators, and public groups active in the field of mass transit. The resource information system will support various Federal Transit Administration activities and provide cooperative education opportunities for students in the mass transit field.

Project Title: Study of the Microcomputer Software Clearinghouse
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$75,000 **Funding Source:** Section 26
Project Manager: Ross W. Adams **Project Number:** MA-26-0025

Description: The Department of Transportation Office of the Inspector General reported that the concept of software sharing may offer promise for potential savings to the Federal Government. The Federal Transit Administration disagreed with the finding of the OIG. Based on past experiences in this area, FTA feels that the ability to realize these savings may not be universally applicable and has indicated that previous unsuccessful attempts to promote software sharing have shown that the potential for savings is questionable. After holding joint discussions on this matter, it was agreed that FTA would conduct a study of the potential for saving Federal funds by promoting software sharing among transit entities. This project is fully investigating the economics of software sharing and includes reviewing lessons learned from previous efforts, identifying alternative means for promoting software sharing, analyzing possible FTA roles and their related costs and benefits, analyzing associated legal issues, and examining potential risks connected with meaningful and successful software sharing.

Project Title: Technical Assistance and Research Dissemination
Grantee/Contractor: National Academy of Sciences Transportation Research Board
Location: Washington, D. C.
Funding: \$400,000 **Funding Source:** Section 26
Project Manager: John S. Durham **Project Number:** DC-26-0022

Description: The Transportation Research Board is a unique resource of highly regarded experts which can develop and disseminate new information addressing transit issues. This project, matched with other State, local, and private funding, allows TRB to manage and administer the extensive network of professionals and experts that forms their membership. The efforts of the National Academy of Sciences to allow experts in all areas of the transit industry to join together in improving the safety, effectiveness and sufficiency of mass transit services and provide for operation of the mass transit sub-file of the Transportation Research Information Services will be continued under this project.

Project Title: Implementing the Metric System
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$25,000 **Funding Source:** Section 26
Project Manager: John S. Durham **Project Number:** MA-26-0026

Description: Recent U. S. laws, in recognition of the inherent competitive advantages of using the metric system, now require that all Government agencies convert to the metric system of measurement and encourage such conversion by their clients. The internal needs of the Federal Transit Administration, such as training and promotional material for use in converting to the metric system, are being provided for under this project.

Project Title: 1990 Census Data on Transit Use and Commuter Behavior
Grantee/Contractor: Joint Center for Political Studies
Location: Washington D. C.
Funding: \$100,000 **Funding Source:** Section 26
Project Manager: John R. Day **Project Number:** DC-26-6020

Description: In the spring of 1992, journey to work data from the 1990 Census became available. This research involves detailed analysis of Census data on transit use and commuter behavior. This is an update to a similar analysis performed on 1980 Census data by- the Joint Center for Political Studies. Unlike a parallel study already underway by the Office of the Secretary of Transportation, this research focuses on urbanized areas and transit use. In addition, cross-sectional and longitudinal analyses are being conducted for individual selected urbanized areas.

Project Title: Section 15 Data Collection and Report Production
Grantee/Contractor: DIGICON Corporation
Location: Bethesda, Maryland
Funding: \$2,000,000 **Funding Source:** Section 26
Project Manager: Marvin Futrell **Project Number:** MD-26-9002

Description: Under Section 15, detailed summaries of financial and operating data are submitted to the Federal Transit Administration by the Nation's mass transit systems. This data is used to assist in meeting information needs in planning for public transportation services and making investment decisions at the Federal, State, and local levels. It is also used as a management tool to assist in the planning, design, and evaluation of transportation related projects. This project provides technical support to the Office of Grants Management in the areas of Section 15 data validation, database maintenance, training, and annual report production.

Project Title: Section 15 Technical Support
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$300,000 **Funding Source:** Section 26
Project Manager: Paul Branch **Project Number:** MA-26-9002

Description: Major technical support is being provided for management of the Section 15 program. The Volpe National Transportation Systems Center has the responsibility of technically advising the Federal Transit Administration on software upgrades and developing software to run the Section 9 apportionment formula. VNTSC is revising Volumes I and II of the USOA, the basic documentation of the accounting and financial systems of the Section 15 program. New technology is being created through technical research of the Section 15 data. This includes advising FTA on software for the Section 9 apportionment formula. Additionally, this project facilitates the apportionment process for Section 9 recipients. Grantees receive funding more quickly to improve their competitive edge, purchase equipment, and develop new technology to create jobs in the transit industry. The safety and service effectiveness of the transit industry will be improved through research of Section 15 data. Section 9 recipients will utilize the revised Volumes I and II of the USOA to report Section 15 data. This revision will improve the understanding of the accounting and financial procedures required by the Section 15 program.

Project Title: Section 15 Performance Profiles
Grantee/Contractor: Materials Computers and Communication, Inc.
Location: Alexandria, Virginia
Funding: \$200,000 **Funding Source:** Section 8
Project Manager: Paul Branch **Project Number:** VA-08-9014

Description: Technical performance profiles are being provided to Federal Transit Administration regional personnel and triennial review contractors for use as an overview of each grantee's performance. These profiles are used during the triennial review, program desk review, and site visits. They serve as support to the FTA oversight program and are necessary to evaluate effectiveness, efficiency, and overall management of grantees. The performance profiles are produced to highlight strengths and weaknesses through reported Section 15 data. This data is aggregated to indicate service effectiveness, vehicle efficiency, and maintenance efficiency. FTA is required to perform a full review and evaluation of Section 9 grant recipients once every three years. These profiles support these triennial reviews with technical performance indicators and improves the competitive edge of the transit industry. The performance profiles contain a peer group analysis that indicates how particular grantees are performing compared to similar agencies nationwide. This allows Federally funded transit agencies to conform their systems to a national standard.

Project Title: Federal Transit Administration Publications Dissemination
Grantee/Contractor: Research and Special Programs Administration
Location: Washington, D. C.
Funding: \$85,000 **Funding Source:** Section 26
Project Manager: Sean Libberton **Project Number:** DC-26-9004

Description: The Research and Special Programs Administration is continuing the dissemination of Federal Transit Administration planning and research products. This agreement is also being used for printing, announcing, and disseminating completed technical studies. The ultimate result of this project is widespread dissemination of completed reports to the transit industry.

Project Title: Print and Disseminate Copies of the Advance Notice of Proposed Rulemaking on Drugs and Alcohol
Grantee/Contractor: Office of the Secretary of Transportation
Location: Washington, D. C.
Funding: \$27,750 **Funding Source:** Section 26
Project Manager: Edith M. Rodano **Project Number:** DC-26-0011

Description: The Office of Technical Assistance and Safety, working in conjunction with the Office of the Chief Counsel, determined that it is vital to the Safety Program to disseminate copies of the Advance Notice of Proposed Rulemaking on drugs and alcohol published in the *Federal Register* to the entire transit industry. To accomplish this, a "Dear Colleague" letter for signature by the Administrator was prepared for the purpose of transmitting this ANPRM to concerned individuals.

Project Title: Printing and Distribution of Office of Technical Assistance and Safety Technical Reports
Grantee/Contractor: Office of the Secretary of Transportation
Location: Washington, D. C.
Funding: \$35,000 **Funding Source:** Section 26
Project Manager: Edith M. Rodano **Project Number:** DC-26-0011

Description: The Office of Technical Assistance and Safety provides financial assistance to projects which explore technologies, service concepts, new techniques, and analytic tools for operating and managing transit. In order to make this information available to concerned and interested transit groups, it is necessary that it be disseminated throughout the country, usually in the form of printed reports. This interagency agreement with the Office of the Secretary of Transportation provides funds for the printing and distribution of these reports.

Project Title: National Personal Transportation Study
Grantee/Contractor: Federal Highway Administration
Location: Washington, D. C.
Funding: \$200,000 **Funding Source:** Section 26
Project Manager: Fred Williams **Project Number:** DC-26-6016

Description: National Personal Transportation Study data is used extensively in the biennial Section 308 transit performance and condition reports to Congress. The NPTS is a survey of 20,000 households on personal transportation information, including auto ownership, mode choice, work trip behavior, and socio-economic characteristics. Conducted every seven years until 1990, it will now be conducted every three years to more closely monitor travel behavior. The Federal Transit Administration is represented by the Office of Budget and Policy on the Department of Transportation Advisory Board that also includes the Office of the Secretary of Transportation, Federal Highway Administration, and National Highway Traffic Safety Administration. This project represents the FTA share of the study, which is managed by FHWA. NPTS uniquely allows aggregate analysis of the transit market in the total transportation picture. It also allows aggregate socio-economic analysis of transit patrons, allowing a glimpse into the role of transit in urban society while, by contrast, the Census covers only work travel.

Project Title: National Technology Initiative
Grantee/Contractor: Department of Transportation
Location: Washington, D. C.
Funding: \$12,770 **Funding Source:** Section 26
Project Manager: Irving Chambers **Project Number:** DC-26-7006

Description: This program is a joint coordinated effort with the Office of the Secretary of Transportation to support the National Technology Initiative "town meetings" held throughout the United States. The Volpe National Transportation Systems Center supported the Department of Transportation role in NTI, a series of 1-day "town meetings" to promote awareness of industry opportunities to commercialize new technologies from Federal laboratories. The purpose and scope of this project is to promote the use by U. S. industry of technology to strengthen the domestic economy and compete in global markets. NTI promotes better understanding of opportunities for industry to commercialize new technology advances and the transfer of technology from government to the private sector.

POLICY ANALYSIS AND EVALUATION

Project Title: Bay Area Rapid Transit Impact Program Update
Grantee/Contractor: University of California
Location: Berkeley, California
Funding: \$200,007
Project Manager: Richard P. Steinmann
Funding Source: Section 26
Project Number: CA-26-7003

Description: The BART impact program was a major 6-year effort, conducted during the first four year of service and completed in 1978, which studied the broadest range of impacts of major transit investments needed for future investment decisions and the Federal Transit Administration program for use in the Section 308 report. Many of the impacts required more time to mature, so this project will update the findings of the BART impact program. It will implement the study designed by the University of California in the initial phase of the project. The study design, developed under the first phase of this project, focuses on efforts to assess changes in impacts since the BART impact program was completed. This study addresses the impacts most likely to have changed, specifically on the transportation system and travel behavior, land use, and institutions in the region served by BART.

Project Title: Metropolitan Atlanta Rapid Transit Authority Impact Study Update
Grantee/Contractor: Atlanta Regional Commission
Location: Atlanta, Georgia
Funding: \$57,700
Project Manager: Richard P. Steinmann
Funding Source: Section 26
Project Number: GA-26-6001

Description: The MARTA rail impact study was conducted during the yearly years of service. Information on the impacts of major transit investments is needed to support future investment decisions and the Federal Transit Administration program for the Section 308 report. Many of the impacts required more time to mature. This project assesses changes in the impacts of MARTA since the initial study was completed in 1982. The initial requirement is for development of a study design and, upon approval of the design, provision of necessary resources to perform the study which focuses on transportation system travel and land use patterns. This in-depth case study complements a current nationwide study by the FTA Office of Grants Management of land use impacts of new starts.

Project Title: Transit in the Highway Economic Requirements System Model
Grantee/Contractor: Federal Highway Administration
Location: Washington, D. C.
Funding: \$25,000 **Funding Source:** Section 26
Project Manager: Richard P. Steinmann **Project Number:** DC-26-6014

Description: The Joint Highway/Transit Needs Report now uses separate approaches for estimating transit and highway needs. While efforts are being made to assure that definitions of scenarios are consistent between highways and transit, a more rigorous multimodal approach is needed. This project provides the Federal Transit Administration share of a joint project with FHWA to develop a method to include transit alternatives in the Highway Economic Requirements System. HERS is a new model for developing estimates of highway needs being implemented for the first time for the 1994 Report on Highways and Transit Conditions, Performance, and Needs. The system estimates needs by determining the most cost beneficial project to deal with a deficiency. Adding transit to the alternatives will make this a better basis for estimating transit needs in the joint report.

Project Title: Flexible/Innovative Funding Workshops
Grantee/Contractor: American Public Transit Association
Location: Washington, D. C.
Funding: \$98,095 **Funding Source:** Section 26
Project Manager: Richard P. Steinmann **Project Number:** DC-26-6018

Description: The flexible funding available under the Intermodal Surface Transportation Efficiency Act will only be used if State and local officials are fully aware of the evolving potential for their use. This project is developing and conducting a series of workshops on this flexible and innovative funding. In the first year, preliminary research, workshop design, and one or more pilot workshops were conducted. Upon successful completion of first year efforts and Federal Transit Administration approval of design of the workshops, a second year of efforts, to include actual conduct of the workshops, will be entered into. These workshops will begin only after the first year of experience with availability and use of these funds and will have real examples to present. Later, FTA and the Federal Highway Administration can use the workshops as a forum to advance new options as they evolve in order to solve problems.

Project Title: Flexible/Innovative Funding Workshops
Grantee/Contractor: Government Finance Officers Association, Government Finance Research Center
Location: Washington, D. C.
Funding: \$90,494
Project Manager: Richard P. Steinmann
Funding Source: Section 26
Project Number: DC-26-6019

Description: The flexible funding available under the Intermodal Surface Transportation Efficiency Act will be used only if State and local officials are fully aware of the evolving potential for their use. This project will develop and conduct a series of workshops on this flexible and innovative funding. This is the first year of a probable 3-year program in which the GFRC (in cooperation with the American Public Transit Association) will conduct preliminary research, workshop design, and one or more pilot workshops. Upon successful completion of first year efforts and Federal Transit Administration approval of design of the workshops, a second year of efforts, to include actual conduct of the workshops, will be entered into. These workshops will begin after the first year of experience with availability and use of these funds and will have real examples to present. Later, FTA and the Federal Highway Administration can use the workshops as a forum to advance new options as they evolve in order to solve problems.

Project Title: Policymaker Outreach
Grantee/Contractor: U. S. Conference of Mayors
Location: Washington, D. C.
Funding: \$75,000
Project Manager: Charles A. Hedges
Funding Source: Section 26
Project Number: DC-26-6011

Description: Most State and local elected officials, particularly when they are new to the job, have little training or experience to prepare them for the types of decisions they must make concerning public transportation. This project makes available to them information needed to make intelligent, responsible decisions concerning urban public transportation, particularly cost-effective private sector services. Publication and dissemination of the U. S. Conference of Mayors journal, *Public Transportation Decisionmaker*, initiated in Fiscal Year 1992, is being continued. In addition to publishing two to three issues of the journal each year, the U. S. Conference of Mayors will include articles on technical assistance available from the Federal Transit Administration and showcase best examples of public/private partnership in transportation in its bimonthly newspaper, *U. S. Mayor*.

Project Title: **Intermodal Surface Transportation Efficiency Act Participation Process**

Grantee/Contractor: National Association of Regional Councils

Location: Washington, D. C.

Funding: \$200,000

Funding Source: Section 26

Project Manager: Charles A. Hedges

Project Number: DC-26-6013

Description: The flexible funding provision of the Intermodal Surface Transportation Efficiency Act depends on the active participation of all the major consumers of transportation services, including private sector, environmental, and other community groups. Inadequate participation by these groups has long been recognized as one of the major problems in regional transportation planning. This project identifies best practices being developed by metropolitan planning organizations to increase community and private sector participation in regional transportation planning in order to implement the new public participation process required by ISTEA. The product of this effort will be experience and documentation of strategies used to achieve this objective.

REGIONAL MOBILITY

Project Title: Satellite Telecommuting Center
Grantee/Contractor: Los Angeles County Metropolitan Transportation Authority
Location: Los Angeles
Funding: \$100,000 **Funding Source:** Section 26
Project Manager: Joseph M. Goodman **Project Number:** CA-26-0016

Description: A local demonstration of a telecommuting work center is being conducted for businesses in Los Angeles County. Employers in the County and in other counties in Southern California are subject to the requirements of Regulation XV, a rule of California air quality legislation, to take action to reduce the average vehicle occupancy of their workers. Employers and employees in eight other large non-attainment U. S. metropolitan areas are also subject to Clean Air Act requirements. This project assists in the national effort by providing an example and by evaluating the effectiveness of this concept.

Project Title: Joint Federal Highway Administration/Federal Transit Administration Operational Action Program
Grantee/Contractor: Federal Highway Administration
Location: Washington, D. C.
Funding: \$350,000 **Funding Source:** Section 26
Project Manager: Joseph M. Goodman **Project Number:** DC-26-0015

Description: This program is providing Federal Transit Administration support for the Joint FHWA/FTA Operational Action Program for Improving Mobility. This is the third cycle for this program which 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 region-wide basis. The selection of projects is by competitive solicitation.

Project Title: Team Transit
Grantee/Contractor: Metropolitan Transit Commission
Location: Minneapolis, Minnesota
Funding: \$300,000
Project Manager: John S. Durham
Funding Source: Section 26
Project Number: MN-26-0002

Description: Since it started in October 1991, Team Transit has facilitated the development of 22 miles of exclusive bus lanes on Minnesota Department of Transportation highways, plus 2.5 miles of bus lanes in downtown St. Paul. Temporary bus lanes have been constructed through major road closures in Minneapolis and St. Paul. Dozens of other improvements are in progress or have been planned. The current project list includes numerous ramp meter bypasses, bus lanes, and larger park-and-ride lots. Under the terms of this agreement, the Metropolitan Transit Commission provides for improved transit services through intergovernmental partnerships. This program serves to increase the speed and effectiveness of transit by improving roadways and other facilities. Partners in Team Transit include the Metropolitan Transit Commission, Minnesota Department of Transportation Metropolitan Council, Regional Transit Board, and the Cities of Minneapolis and St. Paul. Team Transit is designed to tear down traditional barriers to interagency cooperation.

Project Title: Metropool "Metrochek" Support System
Grantee/Contractor: Washington Metropolitan Area Transportation Authority
Location: Washington D. C.
Funding: \$400,000
Project Manager: Bert Arrillaga
Funding Source: Section 26
Project Number: DC-26-0025

Description: The Washington Metropolitan Area Transportation Authority has developed a program that will use the existing Metrorail magnetic farecard as fare media which are recognized and accepted by regional transit agencies. This card, known as "MetroChek", can be used to purchase transportation from any area provider or directly from WMATA. WMATA will provide these MetroCheks and act as the broker for those received from other providers. This project provides equipment to implement the system.

Project Title: Rural Transit Assistance Program National Program
Grantee/Contractor: American Public Works Association
Location: Chicago, Illinois
Funding: \$750,000 **Funding Source:** Section 26
Project Manager: Roger Tate **Project Number:** IL-26-7000

Description: Continuing support is being given to the efforts of the American Public Works Association in providing technical support to the Federal Transit Administration RTAP Program, Review Board, and the State Program. APWA continues its outreach activities, to include State and local rural transit officials, in order to be responsible for enhancement of the National clearinghouse for rural transit technology sharing and information dissemination, continue the creditable and effective peer-to-peer matching service, be responsible for the development of two new training modules per year, and to focus on dissemination of information to State departments of transportation on issues relating to rural and specialized transportation.

Project Title: Development of a Transportation Management Association Program
Grantee/Contractor: San Diego Association of Governments
Location: San Diego, California.
Funding: \$200,000 **Funding Source:** Section 26
Project Manager: Joseph M. Goodman **Project Number:** CA-08-7001

Description: This is the fourth year of a multi-year program to develop and implement a transportation demand management plan. This project includes completion of the development, approval and implementation of a financial plan to establish the North San Diego County Transportation Management Association as a continuing locally supported body. It also completes the tests of transportation demand management software being developed for use by employers to meet regulatory requirements and achieve congestion management and air quality goals. TMA services, such as the State Road 78 highway advisory, will be continued.

Project Title: Consortium for Regional Mobility
Grantee/Contractor: Commonwealth of Virginia Department of Transportation
Location: Richmond, Virginia
Funding: \$350,000 **Funding Source:** Section 26
Project Manager: Walter Kulyk **Project Number:** VA-26-7000

Description: The Virginia Department of Transportation and George Mason University continue to direct and manage the Consortium, currently consisting of five national professional organizations which have promoted regional mobility at the State and local levels. Ways in which mobility could be enhanced in increasingly congested suburban areas are being further developed and refined. Activities being undertaken include outreach through conferences, workshops, and newsletters to identify and assist constituents of the member organizations involved in improving mobility, as well as dissemination of information on results of regional mobility projects funded by the Federal Transit Administration.

Project Title: Development of Statewide Coordinated Transit Districts in the State of Kansas

Grantee/Contractor: Kansas Department of Transportation

Location: Topeka, Kansas

Funding: \$74,537

Funding Source: Section 26

Project Manager: Elizabeth J. Solomon

Project Number: KS-26-0003

Description: Model procedures to implement Statewide coordinated transit districts in Kansas are being developed. This project provides efficient performance monitoring and reporting procedures needed by Kansas transit agencies. It also provides coordinated districtwide marketing and training programs.

Project Title: Business Transportation Council

Grantee/Contractor: International Downtown Executives Association

Location: Washington D. C.

Funding: \$200,000

Funding Source: Section 26

Project Manager: Charles A. Hedges

Project Number: DC-26-6009

Description: This project supports the second year of the Business Transportation Council, specifically: (1) two to three Council meetings and preparation for these meetings; (2) regional meetings during the fall of 1992 in different cities to give the Secretary of Transportation and administrators within the Department of Transportation the opportunity to meet with local business leaders, learn of their concerns, and encourage their participation in local decision making; (3) research and preparation of papers for task force work initiated at the first Council meeting; (4) publication of a newsletter; (5) administration; and (6) travel expenses for Council and Task Force members.

Project Title: Analysis of Urban Goods Movements

Grantee/Contractor: International Downtown Executives Association

Location: Washington D. C.

Funding: \$20,000

Funding Source: Section 26

Project Manager: Charles A. Hedges

Project Number: DC-26-6017

Description: This project enables the International Downtown Executives Association to provide logistical, administrative, and research support to the Business Transportation Council Urban Goods Movement Task Force as it seeks to identify: (1) the stake of businesses in the efficient movement of goods and services; (2) the proper role of goods and services planning in the metropolitan planning organization transportation planning process; and (3) specific areas where the business community and the MPOs should work together, including a suggested division of activities.

Project Title: Outreach to State Legislatures

Grantee/Contractor: American Legislative Exchange Council

Location: Washington D. C.

Funding: \$200,000

Funding Source: Section 26

Project Manager: Rosemary E. Woods

Project Number: DC-26-6015

Description: As States look to ways to stretch their tax dollars, they are looking increasingly at services that can be provided either by the private sector or a partnership of the private and public sectors. This project is an effort to inform legislators of the benefits of competitive contracting and entrepreneurial services infrastructure privatization. Under an earlier program, the American Legislative Exchange Council prepared individual State briefing packages and briefed State legislators about the benefits of competitive contracting in America's mass transit systems. This program builds upon the policy papers in infrastructure privatization, entrepreneurial services, and competitive contracting and prompt the introduction and enactment of appropriate legislation. It involves three separate tasks: State legislative briefings, technical support, and newsletters.

Project Title: Transportation Demand Management Training and Information Activities

Grantee/ Contractor: Institute of Transportation Engineers

Location: Washington, D. C.

Funding: \$100,000

Funding Source: Section 26

Project Manager: Joseph M. Goodman

Project Number: DC-26-0020

Description: Additional transportation demand management training and information activities are being conducted by the Institute of Transportation Engineers. These build on work by ITE under prior projects. This is in support of Intermodal Surface Transportation Efficiency and Clean Air Acts which require State and local officials and employers to take action to reduce employee generated employee travel. The Federal Government has an obligation to provide technical assistance to local officials and employers. The ongoing and proposed efforts are aimed at fulfilling this obligation.

Project Title: Evaluation of the Joint Federal Transit Administration/Federal Highway Administration Operation Action Program for Improving Mobility

Grantee/Contractor: Volpe National Transportation Systems Center

Location: Cambridge, Massachusetts

Funding: \$212,000

Funding Source: Section 26

Project Manager: Joseph M. Goodman

Project Number: MA-26-7002

Description: In Fiscal Year 1991, the Federal Transit Administration and Federal Highway Administration began the Joint FTA/FHWA Operation Action Program for Improving Mobility. This program is aimed at demonstrating cooperative intermodal relationships to foster implementation of comprehensive, low-cost, innovative strategies that reduce congestion and improve mobility and air quality on a regionwide basis. Twenty-two projects were selected through a competitive solicitation and funded in Fiscal Years 1991 and 1992. The Volpe National Transportation Systems Center is evaluating the effectiveness of the Joint FTA/FHWA Program through an in-depth review of a selected sample of the 22 projects funded to date. A report will be issued documenting these case studies and summarizing the accomplishments of the other projects.

Project Title: Orange County Congestion Pricing Project Evaluation

Grantee/Contractor: Volpe National Transportation Systems Center

Location: Cambridge, Massachusetts

Funding: \$250,000

Funding Source: Section 26

Project Manager: Joseph M. Goodman

Project Number: MA-26-7003

Description: A congestion pricing demonstration program in Orange County, California, is being monitored and evaluated. The demonstration involves the addition of priced commuter lanes in the median of State Road 91 in Orange County. The design and construction of these lanes is being carried out with private funding. Evaluation of this project will help determine the feasibility of using pricing as a means to control traffic congestion and alleviate local air pollution problems.

Project Title: Joblinks Employment Transportation Initiative
Grantee/Contractor: Community Transportation Association of America
Location: Washington, D. C.
Funding: \$1,500,000 **Funding Source:** Section 26
Project Manager: Roger Tate **Project Number:** DC-26-0030

Description: The Community Transportation Association of America is guiding the development, planning, and testing of two to three innovative models for improving employment-related transportation for urban and rural residents in Arkansas, California, Kentucky, Michigan, North Carolina, and Oregon. CTAA is responsible for the overall project activities of the Joblinks Initiative. It is developing a mechanism for promoting and expanding public/private transportation services to unemployed and under-employed persons and demonstrating effective local models for overcoming transportation related barriers to job training and employment opportunities. CTAA will also provide assistance for an independent evaluation and prepare a final report of the project activities.

Project Title: Charter Bus Services Demonstration
Grantee/Contractor: Gardner Consulting Planners, Inc.
Location: Los Angeles, California
Funding: \$50,000 **Funding Source:** Section 26
Project Manager: Ross W. Adams **Project Number:** CA-26-0009

Description: The Office of Technical Assistance and Safety has identified a wide variety of transit services and financial issues as worthy of technical support to acquire a better understanding of those factors impacting the cost-effectiveness and efficiency of transit services. This demonstration is providing support for the conduct of a demonstration to revise charter bus regulations. The new regulations permit transit operators to provide charter services for the purpose of meeting transportation needs of governmental, civic, charitable, and other community activities which otherwise would not be served in a cost-effective and efficient manner. This demonstration program consists of data collection, validation, analysis and evaluation, program monitoring, and report preparation.

Project Title: Technical Support for Regional Mobility
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$100,000 **Funding Source:** Section 26
Project Manager: Joseph M. Goodman **Project Number:** MA-26-0030

Description: This effort provides for technical support to assist the Federal Transit Administration in the conduct of the Regional Mobility Program. This assistance includes fact finding, analyses, consultation, report preparation, and research dissemination. This project also provides technical support to State and local governments and FTA in the planning and conduct of workshops, seminars, conferences, and symposiums to bring together officials of State and local governments, metropolitan planning organizations, the financial community, developers, employers, citizens, and other private sector organizations.

Project Title: South Natomas Transportation Management Association Circulator
Grantee/Contractor: California Department of Transportation
Location: Sacramento, California
Funding: \$25,000 **Funding Source:** Section 8
Project Manager: Walter W. Strakosch **Project Number:** CA-08-8019

Description: Planning is being conducted for a local circulator service designed to connect an office park complex with existing light rail and bus service. South Natomas is a rapidly growing suburb of Sacramento where local developers, employers, and commercial property owners have formed the South Natomas Transportation Management Association to alleviate traffic congestion and meet air quality standards. CALTRANS is the sponsor and is working with the South Natomas TMA to develop business, financial, and service plans for the proposed service. This project assists in meeting the air quality goals set by the new Commute Alternative Rule which is being developed through the Sacramento Air Quality Management District. This rule requires that employers with 40 or more employees achieve an alternative transportation mode use by 40 percent their employees.

Project Title: Owens Express Humanitarian Transportation Service Reverse Commute Service
Grantee/Contractor: Chicago Area Transportation Study
Location: Chicago, Illinois
Funding: \$14,915
Project Manager: Carlos A. Peña
Funding Source: Section 26
Project Number: IL-80-X002

Description: The Owens Express Humanitarian Transportation Service of Chicago is expanding an existing reverse commute service to the suburbs of Cook, DuPage, and Lake Counties. This program is for service and marketing planning needed to efficiently expand services to new employment areas. In addition, this project identifies potential riders, locates employers who need workers, and provides job interview training.

Project Title: Development of Community-Based Transportation Businesses to Serve Persons with Disabilities
Grantee/Contractor: University of Tennessee
Location: Knoxville, Tennessee
Funding: \$125,000
Project Manager: Anthony Dittmeier
Funding Source: Section 26
Project Number: TN-26-0004

Description: This is seed money for an ongoing program designed to develop transportation entrepreneurs in Knoxville and Memphis, Tennessee. The program focuses on providing new transportation options for the disabled through a program of technical training and assistance provided to qualified entrepreneurs. Training scholarships are given to carefully screened participants to develop business plans for community based transportation services, design financial strategies for operating the new services, assist in securing start-up funding, and provide technical assistance during initial operation of the service. This is a cost-effective way of providing transportation in niche markets where the public provider does not have the capability to do so..

Project Title: Rural Transportation Service for the Disadvantaged in Southeast Missouri
Grantee/Contractor: Missouri Highway and Transportation Department
Location: Jefferson City, Missouri
Funding: \$89,100
Project Manager: Charles L. Donald
Funding Source: Section 26
Project Number: MO-26-0002

Description: Business opportunities, particularly for the working poor, are being established in order to serve the mobility needs of the transportation disadvantaged in a 21-county area in southeast Missouri. The demands for health care travel are coordinated with existing work trips taken by low and middle income workers to and from their places of employment. These services fill a critical need for transportation that cannot be met by any other provider in this area.

Project Title: Commuter Service
Grantee/Contractor: Madison County Human Resource Agency
Location: Canton, Mississippi
Funding: \$217,008 **Funding Source:** Section 3
Project Manager: Leonard A. Lacour **Project Number:** MS-03-0009

Description: The Madison County Human Resource Agency is sponsoring this entrepreneurial service project that involves three private sector ventures: Gateway, Inc.; Delta Travel, Inc.; and Graves Transport Company. This project provides for vehicle depreciation/lease cost for equipment used to implement transportation services for 18 months. -Each of the three operators will provide fixed route commuter and reverse commute service within an 8-county area in the central and lower Delta regions of Mississippi. The services are intended to be self-supporting through user fees, employer contributions, and contract revenue. The project increases the availability and accessibility of affordable public transportation services within the area while improving coordination between public and private sector transportation providers. In addition, it encourages and supports the local economy by assisting in the development of new business ventures as well as responding to employee transportation needs of major local industries.

Project Title: Competitive Services Board
Grantee/Contractor: National Association of Regional Councils
Location: Washington, D. C.
Funding: \$110,000 **Funding Source:** Section 26
Project Manager: Jimmy Yu **Project Number:** DC-26-6010

Description: The Competitive Services Board provides a forum for public and private transit providers to exchange ideas on how transit operators can solicit competitively provided services and how private transit providers can respond in a way that is most mutually beneficial. The project provides the administrative and program services to support the Board's activities. Past publications of the Board's findings include Principles of Cost Comparison, Dealing with Labor Requirements, Institutional Arrangements for Competitive Contracting, and Service Bonding Requirements. Making competition work requires both public and private sector cooperation. This activity is aimed at fostering this cooperation and developing the practical implementation strategies needed to make competition work.

SAFETY AND SECURITY

Project Title: Safety and Security Training
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$165,000 **Funding Source:** Section 26
Project Manager: Judy Meade **Project Number:** MA-26-0008

Description: This activity consists of three parts: (1) review and revise the Bus System Safety Course, (2) provide system safety and security training support, and (3) review environmental training needs. The Federal Transit Administration training program is directed at training personnel from transit systems, State and Federal oversight organizations, consultants to mass transit, and transit system suppliers.

Project Title: Safety and Security Clearinghouse
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$20,000 **Funding Source:** Section 26
Project Manager: Rhonda M. Crawley **Project Number:** MA-26-0011

Description: The Clearinghouse serves as a focal point for all requests for written materials and resources currently available on the subject of the transit safety. It includes reports, technology updates and related information.

Project Title: Safety and Security Bulletin Board
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$35,000 **Funding Source:** Section 26
Project Manager: Rhonda M. Crawley **Project Number:** MA-26-0012

Description: The Bulletin Board requires constant management to ensure the timeliness and accuracy of the information, such as safety training opportunities and meetings which is conveyed to the users. This funding supports ongoing maintenance of the computerized bulletin board currently in place at the Volpe National Transportation Systems Center.

Project Title: Safety Management Information System Report Preparation
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$50,000 **Funding Source:** Section 26
Project Manager: Carole A. Ferguson **Project Number:** MA-26-0009

Description: Beginning in 1992, the Federal Transit Administration upgraded the Safety Information Reporting and Analysis System by creating a new and expanded publication on transit safety called the *Safety Management Information Statistics*. The data for this new report is derived from the input of transit operators to the Section 15 Data Reporting System and provide safety performance tracking for all modes of transit. The Federal Transit Administration is also planning to incorporate information on employee accidents and transit crime into SAMIS.

Project Title: Los Angeles Metro Blue Line Grade Crossing Safety Improvement
Grantee/Contractor: Federal Highway Administration
Location: Washington, D. C.
Funding: \$50,000 **Funding Source:** Section 26
Project Manager: Rhonda M. Crawley **Project Number:** DC-26-0026

Description: The Federal Transit Administration, in collaboration with the Federal Highway Administration and the Federal Railroad Administration, is funding an intermodal project to enhance grade crossing safety in mixed traffic situations, e.g., pedestrians, automobiles, and rail transit. The objective of this project is to test and evaluate technologies that support the enforcement of traffic laws and decrease the frequency of grade crossing traffic violations and accidents at Los Angeles Metro Blue Line grade crossings.

Project Title: State Safety Oversight Tracking
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$75,000 **Funding Source:** Section 9
Project Manager: Roy Field **Project Number:** MA-90-7008

Description: The Federal Transit Administration is developing for fixed guideway systems a process to determine compliance by States with the safety oversight requirements of Section 28 of the Federal Transit Act. Information on each State's compliance is being made available.

Project Title: Drug and Alcohol Management Information System
Grantee/ Contractor: Battelle Memorial Institute
Location: Columbus, Ohio
Funding: \$185,000 **Funding Source:** Section 26
Project Manager: Judy Meade **Project Number:** OH-26-0001

Description: The Omnibus Transportation Employee Testing Act of 1991 provided the Federal Transit Administration with a mandate that requires its grantees to develop and implement drug and alcohol programs. The FTA drug and alcohol rules require grantees to submit annual reports on their testing programs. These reports serve not only as a compliance tool, but will also provide FTA with data necessary to evaluate effectiveness of the regulations and support any future modifications to the program. In order to analyze the content of the reports, FTA must establish and maintain a computerized management information system capable of generating information in the form of an annual summary to be utilized by the Office of the Secretary of Transportation, FTA, Congress, and the transit industry. This funding will serve to develop the management information system, process and analyze the first year's reports from grantees, and generate the first annual summary.

Project Title: Enforcement and Compliance Strategies for Drug and Alcohol Regulations
Grantee/ Contractor: Battelle Memorial Institute
Location: Columbus, Ohio
Funding: \$50,000 **Funding Source:** Section 26
Project Manager: Judy Meade **Project Number:** OH-26-0001

Description: The current strategy of the Federal Transit Administration for compliance monitoring of its drug and alcohol regulations has three components: (1) self-certification, (2) annual reports, and (3) triennial reviews. However, after three years, the other Department of Transportation operating administrations, which utilize formal and frequent site visits by inspectors to employers, have discovered numerous and serious instances of drug rule compliance failures. In addition, it has become apparent that collection site and medical review officers are frequently in violation. Because it has a statutory mandate to withhold funds for failure to comply with the rules, the Federal Transit Administration must be certain that its funds support only those grantees meeting requirements of the rules. It is recognized that the ability of grantees to comply is related directly to availability of increasingly scarce resources because of Americans with Disabilities and Clean Air requirements. This think piece project is exploring any additional strategies that FTA may wish to consider for future action.

Project Title: **Anti-Drug Information Center**
Grantee/Contractor: Office of the Secretary of Transportation, Assistant Secretary for Budget and Programs
Location: Washington, D. C.
Funding: \$5,000 **Funding Source:** Section 6
Project Manager: Judy Meade **Project Number:** DC-06-0660

Description: The Anti-Drug Information Center, located at the Transportation Safety Institute in Oklahoma City, was established by the Office of the Secretary of Transportation to serve as a clearinghouse and bulletin board for dissemination of information related to the Department of Transportation industry drug and alcohol testing regulations.

Project Title: **State Safety Oversight Training Program**
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$125,000 **Funding Source:** Section 9
Project Manager: Roy Field **Project Number:** MA-90-7006

Description: The Federal Transit Administration has been directed by Section 28 of the Federal Transit Act, established by the Intermodal Surface Transportation Efficiency Act of 1991, to issue rulemaking requiring States to oversee the safety of their fixed rail guideways. This project is developing a training course for safety employees of State oversight agencies to prepare them to fulfill the provisions in the Act. A pilot session for this training is being conducted.

Project Title: **Oversight Investigation of the New York Metropolitan Transportation Authority**
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$315,000 **Funding Source:** Section 9
Project Manager: Ronald D. Kangas **Project Number:** NY-90-A005

Description: The Federal Transit Act provides the Federal Transit Administration with oversight authority to conduct in-depth examinations of unsafe conditions in local transit systems. This project was mandated by Congress under Section 339 of the Department of Transportation and Related Agencies Appropriation Act of 1990. This activity involves the Section 22 safety investigation of the New York Metropolitan Transportation Authority and its operating elements. On-site investigations have been completed and this effort now focuses on corrective action plans and implementation of these actions by transit agencies. This supports FTA Region II and its project management officer in the oversight of the corrective actions to be performed by MTA and its operating elements.

Project Title: Transportation Safety Institute Training

Grantee/ Contractor: Transportation Safety Institute

Location: Oklahoma City, Oklahoma

Funding: \$450,000

Project Manager: Judy Meade

Funding Source: Section 26

Project Number: OK-26-0003

Description: The partnership between the Transportation Safety Institute, the Volpe National Transportation Systems Center, and the Federal Transit Administration to provide safety training has been of benefit to the transit industry for years. Many transit safety professionals have been involved as associate instructors or students at TSI. Several safety related courses developed by VNTSC as part of the FTA integrated approach to training are conducted by Institute. The National Transportation Policy and FTA Strategic Plan both mention the importance of education and training to enhance the quality of the transit workforce, and the Transit Planning and Research Priorities Conferences identified this as a most important program of the Office of Safety. This is sustaining support to TSI for the conduct of over 200 courses, including Bus and Rail System Safety, Bus Accident Prevention, Rail and Bus Accident Investigation, and Train-the-Trainer. The TSI transit safety and security training is attended annually by approximately 3,500 transit industry employees. Five new courses are being added to the program and some existing courses were updated in Fiscal Year 1993.

TECHNOLOGY DEVELOPMENT

Project Title: Suspended Light Rail Transit
Grantee/Contractor: Milwaukee County
Location: Milwaukee, Wisconsin
Funding: \$333,333
Project Manager: Jeffrey G. Mora
Funding Source: Section 3
Project Number: WI-03-3500

Description: Milwaukee County is preparing a refined proposal in support of its efforts to build a suspended light rail transit system. Information on the feasibility and cost of using this technology at a selected site includes ridership estimates, vehicle and guideway requirements, system specifications, operating cost estimates, station interface requirements, etc.

Project Title: Suspended Light Rail Transit
Grantee/Contractor: Montgomery County
Location: Rockville, Maryland
Funding: \$333,333
Project Manager: Jeffrey G. Mora
Funding Source: Section 26
Project Number: MD-03-3500

Description: Montgomery County is preparing a refined proposal in support of its efforts to build a suspended light rail transit system. Information on the feasibility and cost of using this technology at a selected site includes ridership estimates, vehicle and guideway requirements, alternative route alignments, construction and operating costs, patronage projections, station interface requirements, etc.

Project Title: Suspended Light Rail Transit
Grantee/Contractor: Bay Area Rapid Transit District
Location: Oakland, California
Funding: \$333,330
Project Manager: Jeffrey G. Mora
Funding Source: Section 3
Project Number: CA-03-3501

Description: The Bay Area Rapid Transit District is preparing a refined proposal in support of its efforts to build a suspended light rail transit system. Information on the feasibility and cost of using this technology at a selected site includes vehicle and guideway requirements, system specifications, evaluation of compliance with seismic, safety/emergency, Americans with Disabilities Act and other code requirements, construction and operating cost estimates, ridership and revenue estimates, and station interface requirements.

Project Title: Suspended Light Rail Transit
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$180,000 **Funding Source:** Section 9
Project Manager: Jeffrey G. Mora **Project Number:** MA-90-7009

Description: Technical support is provided to the Federal Transit Administration in management and oversight of the Congressionally mandated suspended light rail transit system technology pilot project. The technical report will include preparing technical analyses and other materials.

Project Title: Computerized Brake Dynamometer
Grantee/Contractor: New York Metropolitan Transportation Authority
Location: New York, New York
Funding: \$150,000 **Funding Source:** Section 26
Project Manager: Irving Chambers **Project Number:** NY-26-0002

Description: Brake safety and maintenance problems are a major concern of transit agencies. Removal of wheels to inspect brakes is costly and time consuming. The use of this new brake diagnostic dynamometer will reduce maintenance costs since the tires do not have to be removed and provide a more accurate method of determining braking capability. The New York City Transit Authority is studying the effectiveness of incorporating a combined brake test, front wheel alignment, and suspension analysis during scheduled preventive maintenance inspection. This includes the evaluation of an available computerized brake testing dynamometer along with determination of its usefulness of performing these tests.

Project Title: Tunneling Technology
Grantee/Contractor: National Academy of Sciences
Location: Washington, D. C.
Funding: \$35,000 **Funding Source:** Section 26
Project Manager: Jeffrey G. Mora **Project Number:** DC-26-0010

Description: Federal Transit Administration grantees are receiving assistance in reducing the high cost of tunneling and solving geotechnical problems. This effort includes collection and dissemination of technical information on tunneling technology, advanced drilling technologies, risk mitigation in geotechnical engineering, underground construction safety management, and continued support activities for the U. S. National Committees on Rock Mechanics and Tunneling Technology.

Project Title: Advanced Automatic Train Control
Grantee/Contractor: Bay Area Rapid Transit District
Location: Oakland, California
Funding: \$200,000 **Funding Source:** Section 26
Project Manager: Venkat R. Pindiprolu **Project Number:** CA-26-0014

Description: The Bay Area Rapid Transit District is developing an advanced automatic train control system which will enable operation of trains at shorter headways than currently possible. The goal is to increase transit system capacity to meet BART's projected ridership when planned extensions are completed. Phase 1 was a survey of relevant technologies and Phase 2 was the development of a system design. Phase 2 was funded under the original agreement. This project funds Phase 3, Preparation for Testing.

Project Title: Graffiti Removal and Protection Evaluation
Grantee/Contractor: Metro-Dade Transit Agency
Location: Miami, Florida
Funding: \$85,000 **Funding Source:** Section 26
Project Manager: Jeffrey G. Mora **Project Number:** FL-26-0001

Description: The Metro-Dade Transit Agency is testing and evaluating the latest graffiti-proof materials and removal methods on its system. Metro-Dade is identifying products to remove and/or protect surfaces from graffiti, develop material application and removal procedures, test the selected products for a period of one year on Metrorail and Metromover systems, collect information on product performance, and submit a report on the results of the project.

Project Title: Rail Transportation Energy and Power Cost Reduction
Grantee/Contractor: Carnegie Mellon University
Location: Pittsburgh, Pennsylvania
Funding: \$315,000 **Funding Source:** Section 26
Project Manager: Jeffrey G. Mora **Project Number:** PA-26-0008

Description: One or more energy management power cost reduction techniques developed in Phase I are being evaluated as a means of reducing power costs: These techniques are: (1) energy storage, (2) local utility bypass (buying power from a non-local utility or threat of bypass), and (3) energy conservation which allows local utilities to buy back conserved energy negating the need to add generating capacity. Carnegie Mellon is inviting all electrically powered rail transit systems in the U. S. to participate and is establishing a cooperative relationship with the Canadian Institute of Guided Ground Transport at Queen's University in Canada to exchange information on energy management techniques and strategies used in Canada. Rail transit industry suppliers, including utilities, are being invited to participate in the project.

Project Title: Small Business Innovative Research Program
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$383,950 ***Funding Source:*** Section 26
Project Manager: Stewart N. McKeown ***Project Number:*** MA-26-7005

Description: Public Law 97-210, the Small Business Innovation Development Act of 1982, as revised in 1992, mandates that a minimum of 1 percent of the Federal Transit Administration extramural research and development obligation be set aside for the small business innovative research program. An additional 9 percent must be included for Volpe National Transportation Systems Center general and administrative costs for Fiscal Year 1993. The SBIR is an annual program coordinated by the Small Business Administration which includes research of interest to the Department of Transportation conducted by small businesses, thereby stimulating technological innovation and commercialization in that sector. Within the DOT, the SBIR program is administered by VNTSC using funding and topics provided by DOT administrations.

Project Title: Factors Influencing Successful Implementation of Intermodal
Guideway Public Transit Systems
Grantee/Contractor: Florida International University in concert with the University of South
Florida
Location: Miami, Florida
Funding: \$3,000,000 ***Funding Source:*** Section 26
Project Manager: Venkat R. Pindiprolu ***Project Number:*** FL-26-7000

Description: Working with the University of South Florida, Florida International University is conducting a joint interdisciplinary research effort into factors that influence successful implementation of intermodal guideway public transit systems. Issues being examined include technology options, integration of modes, measures for assessing system effectiveness, policies that support system effectiveness, guideway transit system competitiveness, and other related research issues as needs develop. The final report will enable planners and decision makers for existing and new systems to focus attention on the specifics of intermodal guideway systems that have significant potential for success.

Project Title: Bus Testing Fee Subsidy
Grantee/Contractor: Pennsylvania Transportation Institute
Location: Altoona, Pennsylvania
Funding: \$560,000
Project Manager: Bart W. Mancini
Funding Source: Section 3
Project Number: PA-03-0238

Description: The Federal Transit Administration pays 80 percent of the fee for bus testing directly to the Pennsylvania Transportation Institute, the operator of the Bus Testing Center, on a reimbursable basis for tests performed. The remaining 20 percent must be paid by the bus manufacturer or entity having the vehicle tested and is due in full at the time of delivery of the vehicle to the Testing Center. This 80 percent subsidy applies only to the standard fee schedule, which includes the normal costs for testing, inspections, vehicle servicing, routine maintenance, and fuel. The Federal share payment of the bus testing fee was authorized under the Intermodal Surface Transportation Efficiency Act of 1991. On March 13, 1992, FTA announced in a Federal Register Notice that the agency would provide an 80 percent Federal share of the fee for new bus models tested at the Altoona Bus Testing Center. The Federal share of the cost associated with this testing program reduces the financial burden for those who are required to have their vehicles tested at the Center.

Project Title: Bus Testing Technical Support
Grantee/Contractor: Booz-Allen and Hamilton, Inc.
Location: Bethesda, Maryland
Funding: \$122,746
Project Manager: Bart W. Mancini
Funding Source: Section 26
Project Number: MD-26-0001

Description: There is a need to expedite Federal Transit Administration response to requests concerning bus testing determinations on a case-by-case basis as well as develop finding reports on each determination request, including a determination assessment. Technical expertise is being provided to address specific bus issues. Recently, Booz-Allen and Hamilton developed a draft document which specifies testing requirement guidelines for use for 4- and 5-year vehicles and partial bus testing procedures to be applicable to all new bus model categories. This project is providing technical support in all areas of this program. This includes, but is not limited to, review of bus testing determination requests, development of finding reports, performance of studies and analyzes, and participation in meetings and conferences.

Project Title: Bus Testing Revolving Loan Fund
Grantee/ Contractor: Pennsylvania Transportation Institute
Location: Altoona, Pennsylvania
Funding: \$560,000
Project Manager: Bart W. Mancini

Funding Source: Section 3
Project Number: PA-31-0003

Description: The Pennsylvania Transportation Institute is the contract operator of the Federal Transit Administration Bus Testing Center at Altoona, Pennsylvania. By law, costs of operation and maintenance of the Center are to be paid from testing fees. Of these fees, 80 percent is paid by the Federal Government and 20 percent by the manufacturers of vehicles tested. Testing fees are set by the Federal Transit Administration on the basis of costs. Due to fluctuations in the number of vehicles tested and tests completed at any given time, the Center has experienced cash flow problems which threaten their operation. This project establishes a revolving loan fund to be used to smooth out Center cash flow as necessary to meet current operating and maintenance costs. PTI is authorized to make withdrawals from the fund in such amounts as are necessary to meet estimated cash disbursement needs for the next calendar month. PTI must provide FTA with a semiannual report of their 12-month forecast of costs and expected revenues from bus testing. These reports will be used as the basis for adjustments to the bus testing fee schedule.

TRANSIT ACCESSIBILITY

Project Title: Project ACTION
Grantee/Contractor: National Easter Seal Society, Inc.
Location: Washington, D. C.
Funding: \$2,000,000
Project Manager: Roger Tate

Funding Source: Section 26
Project Number: DC-26-0028

Description: The National Easter Seal Society Project ACTION (Accessible Community Transportation in Our Nation) continues to develop demonstrations in the area of transit accessibility. Congress has mandated that projects be designed and developed in the following categories: (1) identify persons with disabilities and their transportation needs; (2) develop outreach and marketing strategies; (3) develop training programs for transit providers; (4) develop assertive programs for people with disabilities; (5) without engaging in operations, apply appropriate technology to solve critical barriers to transportation and accessibility; and (6) provide technical assistance to private entity transportation providers. In Fiscal Year 1993, a national component was added to emphasize the following initiatives: (1) enhance the national resource center and clearinghouse in disseminating Project ACTION products and materials to National and local levels, and (2) develop a system or process for evaluating different types of accessible transportation technologies.

Project Title: Detectable Warning Surfaces
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$100,000
Project Manager: Vincent R. DeMarco

Funding Source: Section 26
Project Number: MA-26-0031

Description: The Federal Transit Administration is continuing its research efforts to evaluate the detectability and durability of various products that can be used as tactile detectable warning surfaces for rail platform edges and on slopes (such as on curb ramps) to meet the requirements of Americans with Disabilities Act regulations. These tests include environmental laboratory accelerated life testing of selected products and limited on-site demonstrations of these products at selected rail systems.

Project Title: Transit Accessibility Audits
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$350,000 **Funding Source:** Section 9
Project Manager: Vincent R. DeMarco **Project Number:** MA-90-7010

Description: The safety of persons with disabilities is a major concern to transit operators. Persons with mobility or visual impairments have been seriously injured or killed by falling off platforms or lifts. On-site audits on the implementation of accessibility equipment and facilities are being conducted to determine lessons learned that could assist the Federal Transit Administration and the transit industry in implementing Americans with Disabilities Act requirements with regard to equipment and facilities and to formulate recommendations for research and development projects to improve accessibility.

Project Title: Technical Studies in Support of Americans with Disabilities Act Requirements
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$250,000 **Funding Source:** Section 26
Project Manager: Gary DeLorme **Project Number:** MA-26-9003

Description: Exemplary practices and procedures to assist transit agencies in improving their accessibility program are being documented. This technical information will be highlighted and disseminated to the industry through a quarterly technical ADA publication. The effort includes: (a) paratransit eligibility; (b) programs to encourage fixed route service for the disabled (reducing paratransit service); (c) exemplary procedures and practices used in paratransit and fixed-route service; (d) public participation and outreach programs; and (e) paratransit demand forecasting. The *Access-able Briefs* produced as a result of this project will be published as an insert to the Project ACTION quarterly *Update Magazine*, which has an industrywide circulation of over 3,000. These featured best practices provide guidance to transit operators in implementing improved and more cost effective accessible service. The briefs also highlight joint Federal Transit Administration and National Transit Institute ADA training courses. The report will help reduce mistakes in compliance practices and aid in implementing improved accessible procedures and policies.

PLANNING AND PROJECT DEVELOPMENT

Project Title: 42nd Street Transitway Demonstration Study
Grantee/Contractor: City of New York Department of Transportation, 42nd Street Development Corporation
Location: New York, New York
Funding: \$900,000 **Funding Source:** Section 26
Project Managers: Letitia Thompson/Edward L. Thomas **Project Number:** NY-26-0007

Description: A study is being conducted of conceptual designs, operating plans, costs, ridership, traffic impacts, private sector financing arrangements, and turnkey procurement for transit improvements in Midtown Manhattan. This study is assessing improvements on 42nd Street from the West Side to the East River. In order to facilitate coordination, an interagency steering committee will be established. Emphasis is being placed on integrating transit improvements with existing services, and options for private sector design, financing, construction, and operation of the resulting improvements.

Project Title: Transportation Activity Center
Grantee/Contractor: City of Harvey
Location: Harvey, Illinois
Funding: \$325,000 **Funding Source:** Section 26
Project Manager: Effie S. Stallsmith **Project Number:** IL-26-7005

Description: This project addresses policy directives as dictated by the Intermodal Surface Transportation Efficiency and Federal Transit Acts. ISTEA has as a primary emphasis the inclusion of intermodalism in transportation planning. This includes coordination of transit projects with other modal facilities. The Federal Transit Act also requires coordinated transportation planning and encourages participation of private enterprise. In order to accomplish this, it is necessary to develop efficient and coordinated mass transit systems with an intermodal emphasis to help solve some urban problems. This is a study of the feasibility of integrating transit with commuter rail for the City of Harvey through the development of an intermodal Regional Transportation Activity Center at the Dixie Square Mall.

Project Title: Transit-Based Development in the United States: A Review of Recent Experiences and Assessment of Opportunities for Transit Agencies
Grantee/Contractor: Regents of the University of California Institute of Urban and Regional Development
Location: Berkeley, California
Funding: \$44,859
Project Manager: Effie S. Stallsmith
Funding Source: Section 26
Project Number: CA-26-0022

Description: The Intermodal Surface Transportation Efficiency Act requires consideration of land use policies and economic development criteria in making new start evaluations. However, the Federal Transit Administration does not currently have the information necessary to determine how a proposed project may promote economic development, and many management planning organizations and local government agencies need guidance in this area. This project is the first phase in developing this information and focuses on transit-based development of America's heavy rail and light rail transit lines. A review is being made of rail transit systems, and existing transit based development and plans for future development are being established. A telephone and mail information gathering effort is laying the groundwork for a possible second phase of detailed case studies and a third phase of implementation work with selected transit districts. The ultimate aim is to determine whether development, particularly residential development, within a one-quarter to one-third mile radius of transit stations can be encouraged.

Project Title: Turnkey Demonstration
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$75,000
Project Manager: Edward L. Thomas
Funding Source: Section 26
Project Number: MA-26-0028

Description: The Intermodal Surface Transportation Efficiency Act calls for solicitation of turnkey demonstration projects as precursors of guidelines on turnkey development. In order to produce these guidelines, each phase of these projects must be evaluated. This effort necessitates oversight funding of project construction schedules and the test period. Support is being provided to the Federal Transit Administration for implementation and management of the Turnkey Demonstration Program. The contractor is assisting in analyzing such issues as special requirements and problems encountered in the turnkey Request for Proposal process, contractor selection criteria, performance bond requirements, the role of the private sector in turnkey projects, and impacts of turnkey procurements on capital costs. In the subsequent year, this project will assist in analyzing such project elements as the impact of turnkey procurement on cash flow management, master project, scheduling, financial controls, and risk management.

Project Title: Turnkey Demonstration Support
Grantee/Contractor: Gardner Consulting Planners, Inc.
Location: Redondo Beach, California
Funding: \$50,000
Project Manager: Edward L. Thomas
Funding Source: Section 26
Project Number: CA-26-0009

Description: The National Transportation Policy encourages public/private partnerships in the planning, design, financing, construction, and operation of transit systems. The Intermodal Surface Transportation Efficiency Act of 1991 contains special provisions for turnkey demonstrations and regulations on such procurements. This project provides the Federal Transit Administration with support needed to implement and manage the Turnkey Demonstration Program. The contractor is assisting with technical assistance, outreach, documentation, and evaluation efforts. Since they are based on the West Coast, assistance in these tasks is for selected demonstration projects in that area. Specific efforts include developing the evaluation plan for projects and providing technical assistance to transit agencies, developers, employers, and State and local government agencies involved in the Turnkey Demonstration Program. This project assists FTA to evaluate the efficiencies of the turnkey procurement effort compared with traditional procurement methods in terms of cost effectiveness, risk management, project management, and other factors.

Project Title: Planning and Project Development Technical Support
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$100,000
Project Manager: Bert Arrillaga
Funding Source: Section 26
Project Number: MA-26-0027

Description: Technical support is being provided to the Federal Transit Administration for all areas of the Planning and Project Development Program. The Volpe National Transportation Systems Center is assisting the Federal Transit Administration in: (1) development of program concepts and projects including assistance with demonstration projects; (2) carrying out special studies such as preparation of issues papers, documentation of local experiences, and collection of data; (3) technical assistance to local governments, grantees and the private sector, including development of materials for mobility seminars, preparing joint financing agreements, and organizing transportation management associations; (4) outreach and information dissemination efforts, such as writing background papers and preparing materials for technical presentations and seminars; and (5) evaluations of the impacts of transit agency capital and operating projects.

Project Title: Census Transportation Planning Package: User Support Hotline
Grantee/Contractor: Federal Highway Administration
Location: Washington, D. C.
Funding: \$83,000 **Funding Source:** Section 26
Project Manager: Sean Libberton **Project Number:** DC-26-9009

Description: This Hotline helps users of the Census Transportation Planning Package and the National Personal Transportation Survey obtain information about each data base and provides basic assistance on how to use the data for specific highway and transit purposes. The primary mechanism for provision of this assistance is a Users Support Hotline staffed by a certified U. S. Census Programmer/Analyst and managed by the Volpe National Transportation Systems Center. The Hotline was originally established in 1991 with joint funding from the Federal Transit Administration and Federal Highway Administration and has so far been very successful in linking State departments of transportation and metropolitan planning organizations with the tools to effectively interpret and manage available data.

Project Title: Planning Program Support
Grantee/ Contractor: Washington State Department of Transportation
Location: Olympia, Washington
Funding: \$100,000 **Funding Source:** Section 26
Project Manager: Nancy J. Grubb **Project Number:** WA-26-9001

Description: Guidance is being developed on how to incorporate transit facilities and operations into high occupancy vehicle facility design. For HOVways on freeways, it will consider the number, location, and design of transit centers of stations, the number and location of bus bays and shelters at park-and-ride lots, T-ramps, or other means to provide bus access between the HOVways and transit centers, and buses to move between HOV lanes and other lanes. The project will also look at signalization options to give buses priority or to allow buses to maneuver across lanes to make turns or pick-ups on arterial HOV facilities. In conjunction with any HOVway, the study will consider investment in bus fleet expansion to provide new or enhanced service, use of articulated buses, and new or expanded bus maintenance garages to accommodate additional buses. A guidance manual on these issues is being developed and information from the manual disseminated through conferences, Transportation Research Board papers and journal articles, and other means.

Project Title: North-South Station Rail Link Feasibility Study
Grantee/Contractor: KPMG Peat Marwick
Location: Vienna, Virginia
Funding: \$125,566 **Funding Source:** Section 26
Project Manager: Sheila Cohen **Project Number:** VA-26-9001
and

Grantee/Contractor: STV/Seelye, Stevenson, Value and Knecht
Location: New York, New York
Funding: \$77,505 **Funding Source:** Section 26
Project Manager: Sheila Cohen **Project Number:** NY-26-9001

Description: The feasibility of a rail connection between North Station and South Station in Boston is being analyzed. Connecting these two stations would better serve commuters to Boston as well as Amtrak riders traveling through the city. Two tunnel alignments are being studied, one following Congress Street and the other along the Central Artery alignment.

Project Title: Alternatives Analysis Staff Support
Grantee/Contractor: S. G. Associates, Inc.
Location: Annandale, Virginia
Funding: \$115,355 **Funding Source:** Section 26
Project Manager: Ronald Jensen-Fisher **Project Number:** VA-26-9002

Description: The number of new start projects is far in excess of the ability of the Federal Transit Administration to provide technical oversight in a timely fashion. Without this oversight, FTA cannot satisfactorily manage the new start program and provide useful cost effectiveness data to top management and the Congress. Task order contractors are providing technical support to the Office of Grants Management in review of project planning studies. Areas of review are capital operating and maintenance costing, financial assessment, environmental impact assessment, and ridership forecasting.

Project Title: Travel Behavioral Research
Grantee/Contractor: Federal Highway Administration
Location: Washington, D. C.
Funding: \$200,000 **Funding Source:** Section 26
Project Manager: Ronald Jensen-Fisher **Project Number:** VA-26-9014

Description: Conformity requirements of the Clean Air Act and difficulties with past transit projections imply that significant improvements are needed in current model structures. The objective of this study is to discover travel behavioral correlations which will result in improved travel demand model structures. The determinants of travel behavior are being studied using data which has been collected from comprehensive travel behavioral surveys conducted recently. The comprehensive nature of this survey allows for examination of many travel demand issues which have been unresolved due to limited data.

Project Title: Travel Time Budgets
Grantee/Contractor: Federal Highway Administration
Location: Washington, D. C.
Funding: \$150,000 **Funding Source:** Section 26
Project Manager: Ronald Jensen-Fisher **Project Number:** VA-26-9015

Description: In the 1970's, the theory was advanced that individuals have a travel time budget and a travel cost budget. These budgets serve as limits to how much travel individuals are willing to do. This project is examining available data to determine whether evidence exists to either support or refute this theory. Information being examined includes panel surveys, recent home interview surveys, the National Personal Transportation Survey, and other sources. Conclusions will be drawn on the validity of travel budgets and methods of incorporating budgets into the traditional travel forecasting process. The Federal Highway Administration and Federal Transit Administration are jointly undertaking a major update of the travel forecasting process. This project ties directly into that effort. Establishing the travel time budget theory would directly improve the ability to forecast individual response to additional highway capacity, supporting the alternatives analysis process. Further, the concept has implications for analysis of air quality.

Project Title: Portland Intermodal Terminal Study
Grantee/Contractor: Greater Portland Council of Governments.
Location: Portland, Maine
Funding: \$65,000 **Funding Source:** Section 26
Project Manager: Judith A. Molloy **Project Number:** ME-26-0002

Description: The City Manager has requested funding to develop an intermodal terminal for Portland. The Federal Transit Administration recently awarded a project to the Maine Department of Transportation for a study of commuter rail from Boston to Portland which included selection of a station site from three potential sites in Portland. This project is for preliminary design work for the station and includes layout, vehicular traffic access, intermodal connections, rail operations assessment, and integration with other existing and potential uses.

Project Title: Orlando Intermodal Terminal Study
Grantee/Contractor: Orange-Seminole-Osceola Transportation Authority
Location: Orlando, Florida
Funding: \$400,000 **Funding Source:** Section 26
Project Manager: Brian A. Glenn **Project Number:** FL-26-0003

Description: In 1988, Florida enacted the Maglev Demonstration Act which authorized the granting of a State franchise for private sector development of a demonstration of Maglev technology in Florida. In June of 1991, the Governor and Florida Cabinet awarded a franchise for this demonstration to MAGLEV Transit, Inc. MTI is an American company with considerable Japanese and German involvement. The Bechtel Corporation will build the system. A preliminary site selection study was completed and now a site planning study for the International Drive Station and support facilities is required. The private developer has completed conceptual plans for this station, but these do not include capacity and interfaces with local transit, Orlando Airport, and intercity bus and rail services. There is a need for the State, local governments, and the developer to complete preliminary design studies to accommodate all of these services. The study will include plans for an interface with local transit providers and hotel shuttles, highway access and parking, and interface with amusement park transportation. The Orlando Airport is planning for the Maglev to enter the airport using AIP funds, and looks on the International Drive Station as an off-site airline.

Project Title: Chicago Intermodal Terminal Study
Grantee/Contractor: Illinois Department of Transportation.
Location: Chicago, Illinois
Funding: \$160,000 **Funding Source:** Section 26
Project Manager: Carlos Peña **Project Number:** IL-26-0003

Description: Chicago is a key hub in a midwest high speed rail network of lines linking St. Louis, Detroit, and Milwaukee. These lines have been designated a high speed rail corridor under Section 1010 of Intermodal Surface Transportation Efficiency Act and show great promise for development. A key element of this high speed rail system is linking downtown areas with the airports. Routes to St. Louis, Detroit, and Milwaukee will link airports as well as city centers. Chicago METRA and the city have been discussing the possibility of an intermodal terminal at O'Hare Airport which joins METRA and Amtrak service with local bus service and the airport people mover. The airport has major ground access problems and is looking for an alternative bus marshaling site. The terminal would be located on an airport satellite parking lot crossed by a rail line owned by the Wisconsin Central Railroad which, according to the DOT, is in favor of shared use of the line. A site selection study was done by METRA and a preliminary design for a bus terminal has also been completed. By combining public transportation providers and tour operators, the resulting enclosed multi-use facility will result which would provide a direct link between O'Hare and the entire midwest rail passenger network.

Project Title: Milwaukee Intermodal Terminal Study
Grantee/Contractor: Wisconsin Department of Transportation
Location: Madison, Wisconsin
Funding: \$100,000 **Funding Source:** Section 26
Project Manager: Carlos Peña **Project Number:** WI-26-0001

Description: Milwaukee to Chicago is on one of the high speed rail corridors selected under Section 1010 of the Intermodal Surface Transportation Efficiency Act. It is important that Milwaukee have a well designed, high capacity, downtown passenger terminal which combines public transit with intercity service providers. The high speed rail line planned to Chicago could connect to General Mitchell Airport outside Milwaukee and would provide an important link in the midwest network and with O'Hare Airport. This project is preparing a plan to develop an intermodal transportation center in the Milwaukee area with necessary facilities and connections to efficiently link inter- and intra-regional transportation modes serving the area. Inter-regional modes to be served include existing Amtrak service, potential future high speed rail passenger service linking the Milwaukee and Chicago areas, commercial air passenger service, and intercity bus service operated by private carriers. A consensus is being developed on the location and development of an intermodal transportation terminal and connections to efficiently link inter- and intra-regional travel modes in the greater Milwaukee area. Currently, these facilities are located in individual terminals with no connectors. The implementation of an intermodal transportation terminal after completion of this study is expected to significantly enhance the use of multimodal transportation in southwestern Wisconsin and lessen dependence on the private auto for travel.

Project Title: Denver Intermodal Terminal Study
Grantee/Contractor: Denver Regional Council of Governments
Location: Denver, Colorado
Funding: \$93,000 **Funding Source:** Section 26
Project Manager: Donald D. Cover **Project Number:** CO-26-0002

Description: Denver Mayor Webb has requested funding for further study of rail to both Stapleton Airport and the new International Airport from downtown Denver. Because of its study of airport access improvement alternatives, the Federal Transit Administration has recommended a study with exclusive focus on an airport-CBD rail link. The Federal Railroad Administration and FTA believe that a study element focusing on improved access to existing intercity rail and bus facilities should also be added to the proposed scope. FTA and FRA are in agreement that a study of airport access alternatives should be included in the next phase of work. The City of Denver has informally agreed to this. The project is part of a draft unified plan work program voted on in November 1992. The Denver Regional Council of Governments has informally agreed to provide funds to the City for the study. This project is only for a planning study conditioned on inclusion of a study of airport access options.

Project Title: Seattle Intermodal Terminal Study
Grantee/Contractor: Washington State Department of Transportation
Location: Olympia, Washington
Funding: \$150,000
Project Manager: Rita M. Healy
Funding Source: Section 26
Project Number: WA-80-X003

Description: Seattle is one of the high speed rail corridors selected under Section 1010 of the Intermodal Surface Transportation Efficiency Act. The corridor extends from Eugene, Oregon, through Portland and Seattle into Vancouver, British Columbia. This is Phase II of a study for a downtown intermodal terminal at the southernmost station of Seattle's bus subway. The impetus for this is growth of traffic and pollution problems. The city recently completed a study of commuter rail service possibilities for the area and is discussing operating requirements and costs with Amtrak, Burlington Northern, Union Pacific, and others. The city has also studied a high speed connector to SEATAC airport. In January 1992, the Federal Railroad Administration gave \$500,000 to the State toward a high speed rail feasibility in the Vancouver-Seattle-Portland area. The funding requested for an intermodal terminal study would connect these rail systems with city transit, Greyhound Bus, tour operators, and other transportation providers at the Burlington Northern downtown station.

Project Title: San Antonio Intermodal Terminal Study
Grantee/Contractor: San Antonio-Bexar County Management Planning Organization
Location: San Antonio, Texas
Funding: \$93,000
Project Manager: Margaret J. Crist
Funding Source: Section 26
Project Number: TX-26-0008

Description: The State of Texas submitted an application for a Section 1010 grant for the corridor between San Antonio and Monterrey, Mexico. This corridor was not selected, but an application by the Metropolitan Planning Organization to study development of an intermodal terminal on San Antonio's east side has strong local, State, and private backing. The MPO is planning a feasibility study for an intermodal terminal for downtown San Antonio near the current VIA local transit operator-owned rail station to result in a conceptual design for the project, capital and operating cost estimates, and a financial and implementation strategy. The specific scope of work is being overseen by a public/private steering committee composed of representatives from Amtrak, Greyhound, Kerrville Bus Company of Texas, High Speed Rail, the San Antonio-Laredo-Monterrey operator, the Texas Department of Transportation, VIA Metropolitan Transit, the City of San Antonio, the Federal Aviation Administration, and the Southern Pacific and Union Pacific Railroads.

Project Title: Detroit Intermodal Terminal Study
Grantee/Contractor: Michigan Department of Transportation
Location: Lansing, Michigan
Funding: \$150,000
Project Manager: Mary J. Campbell
Funding Source: Section 26
Project Number: MI-26-0004

Description: Detroit is one of the high speed rail corridors selected under Section 1010 of the Intermodal Surface Transportation Efficiency Act. The City and State Departments of Transportation have completed a site selection study for an intermodal terminal and have determined it should be at New Center located at the junction of heavily traveled Woodward Avenue and a major rail corridor. The terminal blends Amtrak, local/regional transit, intercity bus, taxi, airport shuttle, and highway travel modes together in one centralized connecting hub. The center will also support anticipated new services, including regional rail, VIA Rail Canada, and planned high speed intercity rail operations and serve as an effective mechanism to interface literally all local, regional, and intercity transportation resources with major economic, social, educational, and commercial activities within the City of Detroit and throughout the southeast Michigan region. Funds have been requested for a planning and engineering design study. This terminal has been designed to serve as a strategic transportation hub to facilitate not only expanded intermodal mobility benefits, but also contribute directly toward a variety of urban development opportunities within the Woodward Corridor area. The center will link all existing and future rail passenger services directly to this area which is the most heavily traveled transit artery in the region. This important new rail/transit link is further complemented by intermodal links with airport shuttle service to Detroit Metropolitan and Detroit City Airports and with intercity bus, taxi, and highway services.

Project Title: Review of Local Planning Processes and Products Staff Support
Grantee/Contractor: Volpe National Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$150,000
Project Manager: Deborah Burns
Funding Source: Section 26
Project Number: MA-08-9030

Description: The number of ongoing urban transportation planning efforts is far in excess of the ability of the Federal Transit Administration to provide technical and administrative oversight in a timely fashion. Without this oversight, FTA cannot satisfactorily manage the Section 8 planning program to assure compliance with Federal statutes and regulations. Therefore, ongoing support for FTA Headquarters and Regional staff in their review of local planning processes and the products derived from them is being provided by the Volpe National Transportation Systems Center. The Clean Air and Americans with Disabilities Acts focused new attention on transportation improvement programs as well as adopted long range and State implementation plans developed as part of the ongoing transportation planning process. There is also a need for review of ongoing efforts for compliance with joint Federal Transit Administration/Federal Highway Administration metropolitan planning regulations.

Project Title: Evaluation of Construction Projects

Grantee/Contractor: FAI, Inc.

Location: McLean, Virginia

Funding: \$117,091

Project Manager: Salvator S. Caruso

Funding Source: Section 26

Project Number: VA-26-7003

Description: Cost overruns typically experienced on major transit capital projects suggest that transit agencies may be using weak contracts. A study of 13 fixed guideway projects indicates that capital cost variances for these projects range from 26 to 150 percent. Change orders and claims were major contributing factors. Several Federal Transit Administration project management oversight contractors indicated that improved contracts may reduce the amount of capital cost variance. Consistent with the National Transportation Policy and the FTA Strategic Plan, this project is evaluating contracts used by transit agencies for design and construction of capital projects, including new fixed guideway systems and maintenance facilities. Based on these evaluations, the contractor will make recommendations for elimination of ambiguities and contradictory language in contracts to better define responsibilities and provide more effective incentives to control change orders and avoid claims. This project will improve productivity and reduce cost of transit construction projects.

TRANSIT COOPERATIVE RESEARCH

Project Title: Transit Cooperative Research Program
Grantee/Contractor: National Academy of Sciences Transportation Research Board
Location: Washington, D. C.
Funding: \$7,750,000 **Funding Source:** Section 26
Project Manager: John S. Durham **Project Number:** DC-26-0023

Description: The Transportation Research Board is providing for the selection and conduct of projects under the second annual agenda of the Transit Cooperative Research Program. TCRP is a continuing program of operator-oriented, problem-solving research that examines high priority topics of common interest to the transit industry.

NATIONAL TRANSIT INSTITUTE

Project Title: National Transit Institute
Grantee/Contractor: Rutgers The State University of New Jersey
Location: New Brunswick, New Jersey
Funding: \$3,000,000
Project Manager: Charles T. Morison

Funding Source: Section 26
Project Number: NJ-26-2901

Description: Section 29 of the Intermodal Surface Transportation Efficiency Act established the National Transit Institute at Rutgers University to be funded at \$3 million for each of six fiscal years from 1992 through 1997. Rutgers, on behalf of the National Transit Institute, is developing and conducting training and providing technical assistance in response to the training and education needs of the transit industry. NTI program elements include Federal program responsibility training, industry defined training, and clearinghouse and referral services.

Appendix A
Projects By Project Number

Section 3: Grants or loans to assist States and local bodies in financing the introduction into public transportation service of new technology in the form of innovative and improved products.

- CA-03-3501, Bay Area Rapid Transit District Oakland, 51
- CA-03-3502, Los Angeles County Metropolitan Transportation Authority, 11
- MD-03-3500, Montgomery County, Rockville, 51
- MS-03-0009, Madison County Human Resource Agency, Canton, 44
- PA-03-0238, Pennsylvania Transit Institute, Altoona, 55
- PA-31-0003, Pennsylvania Transit Institute, Altoona, 56
- WI-03-3500, Milwaukee County, 51

Section 6: Research, development, and demonstration projects in all phases of urban mass transportation to improve mass transportation service and contribute toward meeting total urban transportation needs effectively and safely.

- VA-06-0144, KPMG Peat Marwick, Vienna, 15
- VA-06-0146, MacDorman & Associates/Comsis, McLean, 25

Section 8: Development of transportation plans and programs which are formulated on the basis of transportation needs with due consideration to comprehensive long-range land use plans, development objectives, and their probable effect on the future development of urban areas of more than fifty thousand population.

- CA-08-7001, San Diego Association of Governments, 37

- CA-08-8019, California Department of Transportation, Sacramento, 42
- MA-08-9030, Volpe National Transportation Systems Center, Cambridge, 68
- VA-08-9014, Materials Computers and Communication, Inc., Alexandria, 28

Section 26: Funds projects under Sections 6, 8, 10 (managerial training), 11 (university research and training), and 20 (human resources).

- AZ-26-2002, Tohono O'odham Nation, Sells, 22
- AZ-26-7000, University of Arizona, Tucson, 23
- CA-26-0007, California Department of Transportation, Sacramento, 4
- CA-26-0009, Gardner Consulting Planners, Inc., Los Angeles, 41, 61
- CA-26-0014, Bay Area Rapid Transit District, Oakland, 53
- CA-26-0016, Los Angeles County Metropolitan Transportation Authority, 35
- CA-26-0022, Regents of the University of California Institute of Urban and Regional Development, Berkeley, 60
- CA-26-0023, Los Angeles County Metropolitan Transportation Authority, 19
- CA-26-7000, University of California, Los Angeles, 17
- CA-26-7003, University of California, Berkeley, 31
- CO-26-0002, Denver Regional Council of Governments, 66
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- CT-26-0001, Connecticut Transit, Hartford, 18
- DC-26-0001, Department of Energy, 10
- DC-26-0010, National Academy of Sciences, 52
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- DC-26-0015, Federal Highway Administration, 35
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- DC-26-0660, Office of the Secretary of Transportation, Assistant Secretary for Budget and Programs, 48
- DC-26-2003, Trans Tech Academy of Cardozo High School, 23
- DC-26-6009, International Downtown Executives Association, 38
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Appendix D Project Managers

Inquiries regarding projects listed in this directory may be directed to the project monitor at the organizations shown below. For Headquarters employees, the mailing address is Office of Technical Assistance and Safety (except where otherwise indicated), Federal Transit Administration, 400 Seventh Street, S.W., Washington, D. C. 20590, and the area code is 202. See the last page of this appendix for Regional Office addresses.

- Adams, Ross W., Office of Mobility Enhancement, 366-0253
Arrillaga, Bert, Chief, Service Assistance Division, 366-0231
Boenau, Ronald E., Advanced Public Transportation Systems Division, 366-0195
Branch, Paul, Audit Review and Analysis Division, Office of Grants Management, 366-9301
Burns, Deborah, Resource Management Division, Office of Grants Management, 366-1612
Campbell, Mary J., Program Development, FTA Region V, 312, 353-2865
Caruso, Salvator S., Capital Development Division, 366-0217
Cass, Patricia, Office of the Associate Administrator for Technical Assistance and Safety, 366-0185
Chambers, Irving, Office of Engineering, 366-0238
Cohen, Sheila, Planning Analysis and Support Division, Office of Grants Management, 366-0096
Cooper, Gwendolyn R., Capital Development Division, 366-0198
Cover, Donald D., Program Operations Staff, FTA Region VIII, 303, 844-3242
Crawley, Rhonda M., Office of Safety, 366-0196
Crist, Margaret J., Program Operations, Region VI, 817, 860-9663
D'Antignac, Pauline A., Rural Transportation and Information Division, 366-0234
Day, John R., Industry Analysis Division, Office of Budget and Policy, 366-1671
DeLorme, Gary, Office of Regional Operations, Office of Grants Management, 366-6009
DeMarco, Vincent R., Deputy Director, Office of Engineering, 366-0224
Dittmeier, Anthony, Program Operations, Region IV, 404, 347-1885
Donald, Charles L., Deputy Regional Administrator, Region VII, 816, 523-0204
Drancsak, M. Marina, Program Management Staff, 366-0201
Durham, John S., *See Cooper, Gwendolyn R., above*
Ferguson, Carole A., Office of Safety, 366-0219
Field, Roy, Office of Safety, 366-0202
Fisher, Ronald J., Director, Office of Training, Research and Rural Transportation, 366-4995
Futrell, Marvin, Chief, Audit Review and Analysis Division, Office of Grants Management, 366-1610
Glenn, Brian A., Program Operations, Region IV, 404, 347-1885
Goodman, Joseph M., Service Assistance Division, 366-0240
Grubb, Nancy J., Planning Analysis and Support Division, Office of Grants Management, 366-0096
Healy, Rita M., Program Operations, Region X, 206, 220-7954
Hedges, Charles A., Office of Private Sector Initiatives, Office of Budget and Policy, 366-1666
Hsiung, Shang Q., Office of Engineering, 366-0241
Jensen-Fisher, Ronald, Planning Analysis and Support Division, Office of Grants Management, 366-0096
Kangas, Ronald D., Office of Engineering, 366-0212
King, Linda W., Operations Division, Office of Civil Rights, 366-2285
Kulyk, Walter, Director, Office of Mobility Enhancement, 366-4991
Lacour, Leonard J., Program Operations, Region IV, 404, 347-1885
Libberton, Sean, Resource Management Division, Office of Grants Management, 366-0055
Mancini, Bart W., Office of Engineering, 366-8063
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Meade, Judy, Office of Safety, 366-0188
Molloy, Judith A., Program Operations, Region I, 671, 494-2444
Mora, Jeffrey G., Office of Engineering, 366-0215
Morison, Charles T., Office of Training, Research and Rural Transportation, 366-0245
Peña, Carlos A., Program Development, Region V, 312, 353-2865
Pindiprolu, Venkat R., Office of Engineering, 366-8061
Ricketson, Sean, Advanced Public Transportation Systems Division, 366-6678
Rodano, Edith M., Program Management Staff, 366-0191
Royal, Alice J., Program Management Division, Office of Civil Rights, 366-0816

Sill, Steven W., Office of Engineering, 366-0220

Solomon, Elizabeth J., Research, Rural Transportation and Information Division, 366-0242

Stallsmith, Effie S., Capital Development Division, 366-5653

Steinmann, Richard P., Policy Development Division, Office of Budget and Policy, 366-4060

Strakosch, Walter W., Program Development Staff, Region IX, 415, 744-3116

Symes, Denis J., Advanced Public Transportation Systems Division, 366-0232

Takai, Harry T., Program Management Division, Office of Civil Rights, 366-0816

Tate, Roger, Chief, Research, Rural Transportation and Information Division, 366-0235

Thomas, Edward L., Chief, Capital Development Division, 366-0264

Thompson, Letitia, Deputy Regional Administrator, Region II, 212, 264-8162

Virts, D. Michael, Program Management Division, Office of Civil Rights, 366-0816

Wilder, Charlene M., Office of Personnel, Office of Administration, 366-6737

Williams, Fred, Industry Analysis Division, Office of Budget and Policy, 366-4060

Woods, Rosemary E., Office of Private Sector Initiatives, Office of Budget and Policy, 366-1682

Yu, Jimmy, Office of Private Sector Initiatives, Office of Budget and Policy, 366-1666

FTA Regional Offices

Region I

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