



U.S. Department
of Transportation

**Urban Mass
Transportation
Administration**

TECHNICAL ASSISTANCE AND SAFETY PROGRAMS

FISCAL YEAR 1990 PROJECT DIRECTORY

January 1991

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16. Abstract This Directory contains brief descriptions of Technical Assistance and Safety Projects initiated during Fiscal Year 1990 by the Office of Technical Assistance and Safety (UTS), Urban Mass Transportation Administration (UMTA) 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. Under the Technical Assistance and Safety Program, assistance is provided to a broad range of disciplines, including initiatives in Congestion and Mobility, Environment, Financial Leveraging, Human Resources, Infrastructure and Equipment, Outreach and Support, Safety and Drug, and Transportation Disadvantaged.					
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U.S. Department
of Transportation

**Urban Mass
Transportation
Administration**

The Administrator

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

A MESSAGE FROM THE ADMINISTRATOR

The National Transportation Policy, signed by President Bush in February of 1990, outlined a number of policy themes that set the framework for the multimodal transportation programs of the Department of Transportation. They reflect the significant input received through the extensive outreach efforts undertaken during the development of this policy. The Urban Mass Transportation Administration research program implements all six themes of the National Transportation Policy.

I am personally committed to the research program, and I further believe that our program should reflect the needs of all sectors of the transit industry. In order to accomplish this, I invited one hundred top managers from the transit industry to a two-day R&D Priorities Conference last September in order to solicit their research and planning agenda for the next five years.

As the projects listed in this directory demonstrate, a growing number of communities are finding innovative, effective ways to meet their transportation challenges: forging alliances between the public and private sectors in the design of policies and programs; forming coalitions that include all segments of the community as active participants; and developing regional strategies to combat congestion. The value of these strategies goes beyond their importance to UMTA and the mass transit industry, however. Each of them is also a building block in the foundation of Transportation Secretary Skinner's National Transportation Policy.

This directory will provide you with information on UMTA programs in such initiatives as human resources, outreach and support, financial leveraging, safety and drugs, environment, transportation disadvantaged, and congestion and mobility. Although each initiative has different short-term objectives, their long-term goals complement one another. All are designed to help communities and transit operators in their efforts to give people the best possible service within available resources.

Brian W. Clymer
Administrator

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INTRODUCTION

This directory contains brief descriptions of Technical Assistance and Safety projects initiated during Fiscal Year 1990 by the Urban Mass Transportation Administration (UMTA) 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. Under the Technical Assistance and Safety Program, assistance is provided under a number of Initiatives, including *Congestion and Mobility, Environment, Financial Leveraging, Human Resources, Infrastructure and Equipment, Outreach and Support, Safety and Drug, and Transportation Disadvantaged.*

Technical assistance is provided by UMTA primarily in the form of information on, and sponsoring the development and introduction of, improved techniques. Information is disseminated by means of technical reports and by workshops and training courses. In addition to initiating development of new techniques, the Technical Assistance and Safety Program provides funding to help evaluate and introduce techniques and products developed by the private sector. UMTA technical assistance concentrates on seeking broad applications to improve productivity, performance, maintenance, and safety and security.

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

The current Technical Assistance and Safety Program is based on needs and problems expressed by State and local agencies through a number of channels, including conferences and workshops, such as the UMTA R&D Priorities Conference held September 17-18, 1990, in Kansas City, Missouri, industry liaison boards, special user advisory groups, and general solicitations. The projects described in this volume are managed by the Associate Administrator for Technical Assistance and Safety. An alphabetical listing of project monitors is provided in Appendix D.

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

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

CONGESTION AND MOBILITY INITIATIVE

The *Congestion and Mobility Initiative* is intended to meet the management objective of improving the ability of transit to alleviate congestion and improve mobility. This initiative includes the Regional Mobility, Intelligent Vehicle Highway System, and Rural Assistance Programs. These three programs are designed to encourage and help local communities to improve transportation mobility and reduce traffic congestion. They involve a combination of technical assistance, studies and analyses, and various outreach activities.

The Regional Mobility Program involves technical assistance and outreach efforts designed to encourage and help local communities implement various demand management strategies and innovative transportation services. Typical transportation demand management strategies include various employer/employee programs, such as ridesharing, parking management, and alternative work hours. They also include effective organizational arrangements, such as transportation management associations and traffic management ordinances. These strategies complement effective planning studies that integrate land use and transportation plans as well as the use of preferential treatments, such as HOV and reversible lanes on existing roads, transit stores, transportation centers, and transit stops. The Regional Mobility Program encourages the use of these complementing strategies and techniques. It also encourages the implementation of such innovative transportation services as Transit-Chek, market-based fare programs, circulation/shuttle services, and reverse commute programs, all designed to maximize and increase the use of transit.

The Intelligent Vehicle Highway System Program would apply advances in electronics to improvements in travel on the Nation's highways. These electronic applications, sometimes called "smart highways" or "smart vehicles", open major opportunities to develop "smart travelers" in urban and rural settings. It is possible, with the electronic advances in communications and information systems, to provide the traveler with critically important insights before starting the trip. Ridesharing options may be identified that save the traveler time and money and reduce the number of vehicles on the highway. Travelers in rural areas without access to private transportation may learn of a good ridesharing option. Information on modal options, along with travel conditions, parking availability, etc., could well become readily available in the home, at work, or at major trip generators during the 90's. The Fiscal Year 1990 effort under this program involves studies and analyses designed to determine the most optimum use of IVHS technology to improve overall mass transportation mobility.

The Rural Assistance Program provides technical assistance to State departments of transportation, local rural communities, and nonprofit agencies who undertake activities to enhance efficiency and productivity in the provision of rural public transportation. The program consists of two elements: the Rural Transit Assistance Program (RTAP) and Research/Demonstrations. The program will address the development of training modules, enhance the UMTA RTAP Resource Center, expand the peer-to-peer matching service, and develop four RTAP regional meetings.

Project Title: Study of Transportation Service in Pima County
Grantee/Contractor: Pima County Department of Transportation and Flood Control District
Location: Tucson, Arizona
Funding: \$50,000 Funding Source: Section 8
Project Monitor: Salvator Caruso Project Number: AZ-08-7002

Description: The objective of this project is to forge a partnership between the public and private sectors in Pima County to evaluate additional methods of providing and financing transportation services and for managing parking. This planning study will (1) project future travel demand based on population, employment and retail patterns; and (2) evaluate options for organizing and financing improved service using the resources of both the public and private sector.

Project Title: Test and Evaluation of an Advanced Traveler Information System for Intelligent Vehicle Highway Systems
Grantee/Contractor: California State Department of Transportation, Division of Mass Transportation
Location: Sacramento, California
Funding: \$25,000 Funding Source: Section 6
Project Monitor: Ronald E. Boenau Project Number: CA-06-0242

Description: This project provides an opportunity for public and private sectors of the transportation industry to jointly test an audiotex/videotex based advanced traveler information system in suburban communities in California. The communication technologies of audiotex/videotex permit residential and business users to interact with remote computer systems over telephone lines to obtain transportation as well as other types of information.

Project Title: State Route 78 Transportation Demand Management Plan
Grantee/Contractor: San Diego Association of Governments
Location: San Diego, California
Funding: \$200,000 Funding Source: Section 8
Project Monitor: Edward L. Thomas Project Number: CA-08-7001

Description: This project is for the second year of a 3-year program to develop and implement a transportation demand management plan for a network of transportation management associations in North San Diego County. It will include development of a project management plan; identification, analysis, and evaluation of different transportation demand management strategies; and development and implementation of a marketing plan.

Project Title: **Pleasanton Transportation System Management Study**
Grantee/Contractor: City of Pleasanton Department of Planning and Community Development
Location: Pleasanton, California
Funding: \$70,000 Funding Source: Section 8
Project Monitor: John S. Durham Project Number: CA-08-7007

Description: This study will aid the City of Pleasanton in development of a methodology for monitoring and evaluating the cost effectiveness of employer/community transportation systems management (TSM) programs; and in development of cost effectiveness ratings of specific TSM measures in suburban settings.

Project Title: **Regional Mobility Planning Grant**
Grantee/Contractor: Sacramento Area Council of Governments
Location: Sacramento, California
Funding: \$50,000 Funding Source: Section 8
Project Monitor: John S. Durham Project Number: CA-08-7011

Description: This project will determine the nature of current travel patterns in rapidly growing suburban areas of Sacramento, identify effective transportation control strategies, and develop consensus among local business, government and community leaders on how best to mitigate regional mobility problems.

Project Title: **Guidelines for Transportation Demand Management Programs**
Grantee/Contractor: Institute of Transportation Engineers, Inc.
Location: Washington, D. C.
Funding: \$140,000 Funding Source: Section 6
Project Monitor: Joseph M. Goodman Project Number: DC-06-0623

Description: This project will develop, test, and refine guidance materials that can be used by public and private agencies to develop, implement, and evaluate effective transportation demand management programs. The guidance package will consist of a case studies report from eight employment sites, a written manual on planning, implementing, and evaluating transportation demand management programs, and an optional videotape.

Project Title: **Human Service Transportation Coordination and Assistance Program**

Grantee/Contractor: Community Transportation Association of America

Location: Washington, D. C.

Funding: \$246,000

Funding Source: Section 6

Project Monitor: Roger Tate

Project Number: DC-06-0635

Description: The Community Transportation Association of America will be responsible for developing a human service technical assistance program. CTAA will create a data base listing all human service agencies involved in the provision of client transportation, coverage by the Community Transportation Reporter of human service transportation issues, et al.

Project Title: **Promote State Strategies to Reduce Regional Congestion**

Grantee/Contractor: National Governors' Association, Center for Policy Research

Location: Washington, D. C.

Funding: \$70,000

Funding Source: Section 6

Project Monitor: Joseph M. Goodman

Project Number: DC-06-0637

Description: This project will provide States with information about proven strategies to reduce regional congestion and improve air quality by promoting transportation modes other than single occupancy motor vehicles.

Project Title: **Development of Anacostia Riverfront in Southwest D. C.**

Grantee/Contractor: Federal City Council

Location: Washington, D.C.

Funding: \$200,000

Funding Source: Section 8

Project Monitor: Gwendolyn R. Cooper

Project Number: DC-08-7004

Description: This project provides for development of comprehensive transportation strategies for a Federal employment complex in Southwest Washington, D. C., along the Anacostia River. Innovative transportation planning will occur simultaneously with land use planning before development commences, not after a problem has arisen.

Project Title: **Strategic Planning Study**
Grantee/Contractor: Atlanta Regional Commission
Location: Atlanta, Georgia
Funding: \$75,000 Funding Source: Section 8
Project Monitor: Salvator Caruso Project Number: GA-08-7003

Description: The objectives of this strategic planning study are to: (1) study the impacts of development plans on mass transportation requirements in perimeter center; (2) outline in detail mass transportation system deficiencies; and (3) develop a mobility plan for implementation by perimeter center transportation management association.

Project Title: **Innovative Transportation Services Plan**
Grantee/Contractor: Oahu Metropolitan Planning Organization
Location: Honolulu, Hawaii
Funding: \$75,000 Funding Source: Section 6
Project Monitor: Edward L. Thomas Project Number: HI-06-0005

Description: The purpose of this project is to support the effort of the Oahu Metropolitan Planning Organization to work with the Leeward Oahu Transportation Management Association in developing innovative transportation services for the central Oahu and Ewa areas. These services will be implemented by LOTMA and major employers. The project has three primary tasks: the first task is to gain a better understanding of the mobility problems and markets in the subject area; task two will produce a TDM plan; and task three will result in the final report.

Project Title: **Entrepreneurial Services**
Grantee/Contractor: B. W. Cooper Tenant Management Corporation
Location: New Orleans, Louisiana
Funding: \$64,433 Funding Source: Section 20
Project Monitor: Stewart McKeown Project Number: LA-20-2003

Description: The purpose of this project is to provide technical assistance in the refinement of the business plan and operating strategy for the implementation of a self-sufficient reverse commuter service from New Orleans to employment centers in the surrounding areas.

Project Title: **Rural Transit Assistance Program National Program**
Grantee/Contractor: American Public Works Association
Location: Chicago, Illinois
Funding: \$702,750 Funding Source: Section 18
Project Monitor: Roger Tate Project Number: IL-18-X903

Description: The American Public Works Association will be responsible for providing technical assistance to the Rural Transit Assistance Program (RTAP) National Program through the development of training modules; continuation of the UMTA RTAP Resource Center and Hotline; expanding the peer-to-peer matching service; and developing regional RTAP seminars in cooperation with participating State departments of transportation.

Project Title: **Regional Mobility Support**
Grantee/Contractor: Dynatrend, Inc.
Location: Woburn, Massachusetts
Funding: \$100,000 Funding Source: Section 8
Project Monitor: Walter Kulyk Project Number: MA-08-7001

Description: This project provides support for assistance in developing program and project concepts and special studies. Assistance is provided to local governments and the private sector for seminars and outreach activities.

Project Title: **Transportation Management Association Planning Around the I-90 Corridor**
Grantee/Contractor: Town of Natick
Location: Natick, Massachusetts
Funding: \$28,000 Funding Source: Section 8
Project Monitor: John S. Durham Project Number: MA-08-7006

Description: This project will assist the Metrowest Growth Management Committee in initial planning and development of a defined program of activities to be implemented by a transportation management association meeting local suburban mobility needs.

Project Title: **Route 128 Regional Corridor Planning Study**
Grantee/Contractor: City of Woburn
Location: Woburn, Massachusetts
Funding: \$52,000 Funding Source: Section 8
Project Monitor: John S. Durham Project Number: MA-08-7007

Description: The objective of this project is to complete a study of the Route 128 corridor that will serve as an action plan of short-term and intermediate actions to mitigate traffic congestion in the corridor.

Project Title: **Study and Evaluation Activities**
Grantee/Contractor: Booz, Allen, and Hamilton, Inc., Applied Research
Location: Bethesda, Maryland
Funding: \$200,000 Funding Source: Section 8
Project Monitor: Walter Kulyk Project Number: MD-08-7001

Description: This project is providing support for evaluation of projects associated with congestion and mobility initiatives. The grantee will conduct case studies and evaluate model programs in use throughout the country.

Project Title: **Multi-State Technical Assistance Program**
Grantee/Contractor: North Carolina Department of Transportation
Location: Raleigh, North Carolina
Funding: \$106,000 Funding Source: Section 6
Project Monitor: Roger Tate Project Number: NC-06-0012

Description: The North Carolina Department of Transportation, on behalf of the Multi-State Technical Assistance Project, is developing a comprehensive financial guidelines manual. This manual will assist rural and small urban transportation providers and State transit officials in developing efficient financial managerial techniques.

Project Title: **Tenth National Conference on Rural Public Transportation**
Grantee/Contractor: North Carolina Department of Transportation
Location: Raleigh, North Carolina
Funding: \$45,000 Funding Source: Section 18
Project Monitor: Roger Tate Project Number: NC-18-X904

Description: The objective of this cooperative agreement is to provide financial support to the North Carolina Department of Transportation in its sponsorship of the Tenth National Conference on Rural Public Transportation. The conference will be held in Asheville, North Carolina, on October 13-16, 1990.

Project Title: **Innovative Service Strategic Planning Study**
Grantee/Contractor: Central Oklahoma Transportation and Parking Authority
Location: Oklahoma City, Oklahoma
Funding: \$100,000 Funding Source: Section 8
Project Monitor: Gwendolyn R. Cooper Project Number: OK-08-7001

Description: The objective of this project is to aid the Central Oklahoma Transportation and Parking Authority in the development of innovative transit services in the northwest quadrant. Options to be considered will include reverse commute services from the central areas to suburban job sites and employer supported strategies in the suburban centers as alternatives to single occupant automobile use.

Project Title: Analysis of a Flexible Operating Command and Control System
Grantee/Contractor: Tri-County Metropolitan Transportation District of Oregon
Location: Portland, Oregon
Funding: \$54,000 Funding Source: Section 6
Project Monitor: Ronald E. Boenau Project Number: OR-06-0013

Description: This project will provide a critical review of a West German automated command and control system that integrates fixed-route transit, dial-a-ride, minibus, and contract taxi services for application in the United States. The flexible operations command and control system will be tested in Portland, Oregon. The review will assess the feasibility of adding audiotex/videotex components, carpool matching, and IVHS components.

Project Title: Intelligent Vehicle Highway System Initiative
Grantee/Contractor: Texas Transportation Institute
Location: College Station, Texas
Funding: \$90,000 Funding Source: Section 6
Project Monitor: Ronald E. Boenau Project Number: TX-06-0072

Description: The objective of this cooperative agreement is to support the efforts of the Texas A&M Research Foundation to utilize intelligent vehicle highway system technology to promote and encourage the use of buses, vanpools, carpools, and transitways in Houston. The recipient will develop a comprehensive study design, evaluate alternative approaches to traveler information systems and technologies, and establish the information gathering process.

Project Title: Preparing Implementation Plans
Grantee/Contractor: Texas Department of Human Services
Location: Austin, Texas
Funding: \$50,526 Funding Source: Section 6
Project Monitor: Stewart McKeown Project Number: TX-06-0073

Description: The Texas Department of Human Services will prepare an implementation plans for a subsequent Section 3 entrepreneurial services project which will be developed in 1990. This demonstration project will be aimed at assisting local entrepreneurs in Houston, Beaumont, and San Antonio in developing transportation services for families participating in TDHS employment services

Project Title: **Suburban Mobility Consortium**
Grantee/Contractor: Virginia Department of Transportation
Location: Richmond, Virginia
Funding: \$230,000 Funding Source: Section 6
Project Monitor: John S. Durham Project Number: VA-06-0138

Description: The Virginia Department of Transportation will establish and manage a consortium of national organizations responsible for addressing suburban mobility issues. This consortium will improve the dissemination of knowledge regarding new approaches to providing suburban mobility to individuals responsible for addressing suburban mobility problems. The consortium will assist in marketing UMTA's *Suburban Mobility Initiative* and provide for better exchange of ideas among professionals.

Project Title: **National Center for Regional Mobility**
Grantee/Contractor: George Mason University
Location: Fairfax, Virginia
Funding: \$220,000 Funding Source: Section 11
Project Monitor: John S. Durham Project Number: VA-11-0018

Description: George Mason University will develop an academic center of excellence relative to the Nation's growing suburban mobility needs. This center will serve as a model for the development of other regional centers concerned with suburban mobility issues and their resolutions. Development of a National Center for Suburban Mobility will focus attention on this issue and provide a unique resource for resolving mobility problems and promoting professional growth in this area.

Project Title: **Vermont Transportation Brokerage Demonstration**
Grantee/Contractor: North East Kingdom Community Action Agency
Location: Newport, Vermont
Funding: \$75,000 Funding Source: Section 6
Project Monitor: Roger Tate Project Number: VT-06-0003

Description: This Congressionally mandated project will provide assistance to the North East Kingdom Community Action Agency in Newport, Vermont, to establish a regional transportation brokerage. The project will also establish transportation dispatching units in rural areas of the North East Kingdom.

Project Title: Suburban Mobility Transit Service Demonstration
Grantee/Contractor: Municipality of Metropolitan Seattle
Location: Seattle, Washington
Funding: \$125,000 Funding Source: Section 6
Project Monitor: Joseph M. Goodman Project Number: WA-06-0036

Description: The objective of this project is to implement two new transit services for Bellevue, Washington, that will provide alternatives to auto dependent commuters. These services, a downtown circulator bus and a guaranteed ride home, are designed to encourage a mode shift from solo driving to higher occupancy modes by reducing the need by commuters for their cars for midday use or to return home at an irregular time.

ENVIRONMENT INITIATIVE

Transportation's impacts on air quality were recognized as part of the 1977 Clean Air Act amendments, which required coordination between the Environmental Protection Agency (EPA) and the Department of Transportation. Emissions from mobile sources, i.e., cars, buses, etc., contribute significantly to urban air pollution. Currently, approximately one hundred metropolitan areas do not meet EPA's National Air Quality Standards for ozone and carbon monoxide. The attainment of these clean air standards is proving to be extremely difficult with current diesel and gasoline fueled vehicles. This not only impacts the immediate urban area in terms of poor air quality, but also impacts distant localities through acid rain and climatic changes caused by the greenhouse effect.

The *Environment Initiative* is designed to meet the UMTA objective to improve the environment under the President's management by objectives system. The *Initiative* consists of a Clean Air Program, which is subdivided into two program elements to reflect different approaches in reducing emissions from transit buses: Alternative Fuels and Diesel Improvements.

Under the Alternative Fuels element, projects will be undertaken to move the use of alternative fuels, such as methanol, ethanol, and compressed natural gas, into the mainstream of transit operations. Under the Diesel Improvements element, efforts will be made towards improving existing diesel bus emissions through use of emission improvement kits (e.g., the use of after-treatment devices such as particulate traps, catalytic converters, etc., and fuel additives) and through improvement of new diesel engine technologies that offer the promise of meeting the 1991 EPA emission standards for transit buses.

Reducing emissions from transit vehicles presents a unique opportunity to improve air quality. Such vehicles generally operate in the most congested corridors of urban travel and emit pollutants at the ground level in contrast to industrial smokestacks. Recent research on buses in actual revenue operation reveals a higher level of emissions than originally thought. EPA has established stricter standards for new bus purchases in 1991 and thereafter.

These new standards will be extremely difficult to meet on a cost-effective basis with currently available diesel engine technology. Proposed amendments to the Clean Air Act call for the phase-in of alternatively fueled buses in urban areas of over one million population. This phase-in would require that 10% of all new transit buses purchased in such areas in 1991 be alternatively fueled, 25% in 1992, 60% in 1993, and 100% in 1994 and thereafter. However, there are efforts underway to expand the definition of alternative fuels to include "clean diesel engine systems" (those using after-treatment devices with a low sulphur diesel fuel) to permit their use in new transit buses in these urban areas.

Project Title: Phase II Fuel Cell Development
Grantee/Contractor: Department of Energy, Office of Transportation Systems
Location: Washington, D. C.
Funding: \$1,157,000 Funding Source: Section 6
Project Monitor: Shang Q. Hsiung Project Number: DC-06-0566

Description: This Congressionally mandated program, in conjunction with the Department of Energy, is to determine the feasibility of a phosphoric acid fuel cell/battery propulsion system for urban bus applications. A 4-phase program has been established jointly with DOE. Phase I is designed to provide the proof-of-feasibility of such a system. Phase II encompasses the development of a system conceptual definition with supporting analyses.

Project Title: Study and Evaluation Activities
Grantee/Contractor: Battelle Memorial Institute Columbus Laboratories
Location: Columbus, Ohio
Funding: \$1,558,000 Funding Source: Section 6
Project Monitor: Vincent R. DeMarco Project Number: OH-06-0056

Description: This project provides support for transit equipment and technology, transit industry studies, safety and security, project evaluation, and suburban mobility activities

FINANCIAL LEVERAGING INITIATIVE

The *Financial Leveraging Initiative* has as its goal encouraging localities to leverage scarce Federal resources for mass transit systems. This goal will be achieved by increasing the mix of local public and private sector financial participation, and reducing the cost of transit facilities and equipment. Diversification of the transit funding bases will result in more balanced distribution of financial risk and produce significant economies of scale.

Since 1978, Federal, State, and local governments have invested over \$40 billion in transit real estate, facilities, and vehicles. This suggests a need for more prudent management of public assets. Tax reform and declines in Federal funding sources have ushered in a new era in municipal finance. DOT and UMTA policies provide added importance to the *Financial Leveraging Initiative*. UMTA's Major Capital Investment Policy, Section 303 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, and Secretary Skinner's overmatch initiative established financing as a key criterion for determining new start funding. UMTA's Financial Capacity Assessment Policy (UMTA Circular 7008.1) and Private Enterprise Policy offer other bases for the *Financial Leveraging Initiative*.

The *Financial Leveraging Initiative* includes three program areas: System Financing, Joint Development, and Cost Efficiency. The System Financing Program will promote creative financing, innovative implementation approaches, and techniques of good professional practice in transit finance. This program contains two elements: Joint Financing and Financial Planning and Management.

The Joint Development element provides training in the technical aspects of transit finance, support UMTA Regional Offices in financial capacity reviews, and conduct studies of critical financing issues. This element contains Parking and Value Capture elements. The program is designed to assist public bodies establish partnerships with the private sector to implement site specific, joint development projects, such as transit stations, maintenance facilities, or bus transfer centers that require joint cooperation and funding at the local and private levels. The Parking element promotes use of existing transit systems through provision of reserved, shared-use, and jointly developed parking facilities. The Value Capture element fosters development of enhanced revenue streams.

The Cost Efficiency Program is aimed at assisting in the stewardship of UMTA's capital grant program and to promote efforts to reduce transit asset costs. This program contains four elements: Railcar Cost Containment, Energy Bulk Power, Competitive Services, and Alternatives Analysis and Preliminary Engineering Reviews. The Railcar Cost Containment element supports railcar acquisition through innovative procurement approaches. The Energy Bulk Power element will assist in the refinement of the "Bulk Power Purchase" concept. The Competitive Services element will encourage transit agencies and local governments to promote competition in the provision of transit services. The Alternatives Analysis and Preliminary Engineering Reviews element will provide technical assistance to UMTA Headquarters and Regional Offices and localities on work programs, analysis methodologies, and results associated with the development of draft and final Environmental Impact Statements.

Project Title: Update, Revise, and Expand the Characteristics of Urban Transportation Systems
Grantee/Contractor: Urban Institute
Location: Washington, D. C.
Funding: \$100,000 Funding Source: Section 6
Project Monitor: Ross W. Adams Project Number: DC-06-0636

Description: This project will assess, update, revise and expand the characteristics of the urban transportation systems manual. This manual is the basic transit planning reference on conventional and innovative urban transportation technologies operating within the United States and abroad.

Project Title: Transit Capital Project Support
Grantee/Contractor: KPMG Peat Marwick
Location: Washington, D. C.
Funding: \$125,000 Funding Source: Section 8
Project Monitor: Edward L. Thomas Project Number: DC-08-7001

Description: The grantee will conduct special studies for regional mobility, joint development, and system financing programs. These studies will result in the development of course materials for financial planning courses being conducted for UMTA.

Project Title: New Starts Financial Reviews
Grantee/Contractor: Dynatrend, Inc.
Location: Woburn, Massachusetts
Funding: \$95,000 Funding Source: Section 9
Project Monitor: Edward L. Thomas Project Number: DC-90-7016

Description: The contractor will conduct financial reviews of Honolulu, Jacksonville, and Atlanta. Several other areas may be included on an as-needed basis. The reviews will cover the financial conditions of the transit agencies and their funding partners, the stability and reliability of the revenue base, and the capability of these agencies to finance a new start project while continuing to operate, maintain, and recapitalize the existing transit systems. Emphasis will be placed on those areas considering innovative financing and procurement strategies.

Project Title: Revised Methodology for Evaluating Financing Plans
Grantee/Contractor: KPMG Peat Marwick
Location: Washington, D. C.
Funding: \$100,000 Funding Source: Section 9
Project Monitor: Edward L. Thomas Project Number: DC-90-7023

Description: This project is developing revised criteria for reviewing the financial plans associated with major capital investment projects. Existing UMTA criteria will be assessed. In addition, practices in other Federal agencies and the private sector will be assessed.

Project Title: Develop Plans for a Prototype Activity Center
Grantee/Contractor: Greater Orlando Chamber of Commerce
Location: Orlando, Florida
Funding: \$100,000 Funding Source: Section 6
Project Monitor: Edward L. Thomas Project Number: FL-06-0054

Description: This project is supporting the efforts of the Greater Orlando Chamber of Commerce in developing an implementation plan for a prototype activity center. This plan will be designed to improve the center's access and internal circulation. The project will establish a steering committee of public and private sector representatives, develop a detailed work plan, and identify problems and assess improvements in the selected activity centers. An implementation plan will be produced.

Project Title: Bulk Power Purchase Study
Grantee/Contractor: Carnegie-Mellon University
Location: Pittsburgh, Pennsylvania
Funding: \$199,990 Funding Source: Section 6
Project Monitor: Jeffrey G. Mora Project Number: PA-06-0120

Description: Carnegie-Mellon University is studying the feasibility of a demonstration of bulk power purchasing by a consortium of rail transit authorities. The grantee will focus on four principal study areas: (1) document the power costs and consumption patterns of the five cooperating transit authorities, (2) forecast power consumption for the five transit authorities for a 10-year period, (3) identify and evaluate potential non-traditional bulk power sources, and (4) document potential.



HUMAN RESOURCES INITIATIVE

The *Human Resources Initiative* focuses on various activities designed to promote improved performance and increased productivity in the transit industry and the promotion of university based research and professional development activities. This program area is organized to enhance innovation and excellence in transit system management, labor/management relations, training at both the managerial and technical level, and university based research and education programs.

This *Initiative* will concentrate on increasing productivity and efficiency in the public transportation industry by improving the skills and ability of the workforce. Labor/management relations are a focus area of the UMTA *Human Resources Initiative* in which UMTA has an opportunity to act as a catalyst in making the public transportation industry more conducive to improvements in workrule procedures. Managerial Training will continue to promote innovative programs at the State and multi-State level. The concept of pooling resources to promote training among many transit industries has proven to be a cost-effective approach that has expended industry training efforts far beyond expectations.

The University Research and Training Program involves both the UMTA Competitive University Program and the University Transportation Centers Program. The competitive aspect of the program annually awards grants for research proposals generated by principal investigators that focus on a broad spectrum of issues related to the UMTA mission. The University Transportation Centers Program is a collaborative effort involving the Office of the Secretary and the Federal Highway Administration that has led to the establishment of a university based transportation Center in each of the ten Standard Federal Regions. Using specific themes, the Centers are designed to encourage the development of multi-disciplinary programs of transportation research and education in consortium arrangements involving some sixty-nine leading universities throughout the country.

Project Title: **Develop Guidelines for Transit Systems**
Grantee/Contractor: Connecticut Transit
Location: Hartford, Connecticut
Funding: \$97,516 Funding Source: Section 6
Project Monitor: Ronald E. Boenau Project Number: CT-06-0020

Description: This project is developing a procedural guide for the design, implementation, and evaluation of employee assistance programs for transit systems. A survey will be conducted among transit agencies and a technical project committee will provide technical assistance from knowledgeable professionals in the field. The project will document successful programs in other transit systems and the private sector.

Project Title: **Develop and Conduct a Human Resource Conference**
Grantee/Contractor: Indiana University
Location: Bloomington, Indiana
Funding: \$59,649 Funding Source: Section 6
Project Monitor: Charles T. Morison Project Number: IN-06-0019

Description: Indiana University will plan, develop, and conduct a national conference on human resources management in the transit industry. The focus of the conference is the challenge that lies ahead in attracting and retaining a qualified work force prepared and motivated to operate, maintain and manage public transportation in this country over the next ten years. The conference will be held in Boston on July 11-13, 1991, in cooperation with the American Public Transit Association. APTA's Human Resources and General Managers annual meetings have been scheduled around the conference.

Project Title: **Training Program in Public Transit**
Grantee/Contractor: Utah Transit Authority
Location: Salt Lake City, Utah
Funding: \$90,000 Funding Source: Section 6
Project Monitor: Ronald E. Boenau Project Number: UT-06-0005

Description: The Disney and Peters approach to service, people management, and the showcasing of pockets of excellence will be modified for the transit industry and developed into a national excellence in transit program with extensive use of video and other training materials. A steering committee will be formed from a representative group of five transit properties to assist the Utah Transit Authority in conducting this training program.

Managerial Training Grants

Project Title: **Regional Training Grant**
Grantee/Contractor: City of Phoenix
Location: Phoenix, Arizona
Funding: \$100,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: AZ-10-0020

Description: The objective of this regional effort is to bring together the various public transportation providers to participate in training activities that will benefit overall human resource development on a cost effective basis. The proposed program will include heavy emphasis on the local community college system and allow small systems to send employees to local training.

Project Title: **Single Agency Training Grant**
Grantee/Contractor: Santa Cruz Metropolitan Transit District
Location: Santa Cruz, California
Funding: \$15,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: CA-10-0321

Description: This grant will provide assistance to the transit agency in the training of managerial, technical, and professional personnel. The grantee will make available, through public and private institutions, a variety of training courses and activities for its employees.

Project Title: **Statewide Training Grant**
Grantee/Contractor: Alameda-Contra Costa Transit District
Location: Oakland, California
Funding: \$98,425 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: CA-10-0325

Description: The Alameda-Contra Costa Transit District, acting as recipient on behalf of other agencies within the State of California, will conduct training for managerial, technical, and professional personnel. This training will be responsive to the needs of the participating agencies.

Project Title: **Regional Training Grant**
Grantee/Contractor: Metropolitan Transit Development Board
Location: San Diego, California
Funding: \$47,050 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: CA-10-0326

Description: The Metropolitan Transit Development Board will provide training on behalf of the public transportation providers in the region. The objective of this regional effort is to bring together the various public transportation providers to participate in training activities that will benefit overall human resource development on a cost effective basis. The program will include a heavy emphasis on the local community college.

Project Title: **Statewide Training Grant**
Grantee/Contractor: Connecticut Transit
Location: Hartford, Connecticut
Funding: \$25,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: CT-10-0016

Description: Connecticut Transit, representing other transit operators in the State of Connecticut, will utilize public and private training institutions and organizations to engage in a variety of training courses and activities for the participating agencies.

Project Title: **Single Agency Training Grant**
Grantee/Contractor: Metropolitan Atlanta Rapid Transit Authority
Location: Atlanta, Georgia
Funding: \$49,375 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: GA-10-0053

Description: The Metropolitan Atlanta Rapid Transit Authority will conduct a comprehensive training program for all managerial and supervisory personnel in the organization as a result of a training plan developed to create an improved customer service philosophy throughout the organization. The program is based on three initiatives: strategic planning, basic management skills, and capitalizing on diversity. MARTA will use local resources whenever possible.

Project Title: **Regional Training Grant**
Grantee/Contractor: Regional Transportation Authority
Location: Chicago, Illinois
Funding: \$89,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: IL-10-0154

Description: The Regional Transportation Authority will use this funding on behalf of the public transportation providers in the region. Training, as identified in the grant, will include supervisors and mid to upper managers. Training will be conducted at local training resources to the maximum extent possible.

Project Title: **Single Agency Training Grant**
Grantee/Contractor: Massachusetts Bay Transportation Authority
Location: Boston, Massachusetts
Funding: \$100,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: MA-10-0080

Description: The Massachusetts Bay Transportation Authority has undergone an extensive needs analysis in the design and preparation of a comprehensive training program to address the needs of its employees. The training program will provide management training for its senior and mid-level managers and first-line supervisors. It also plans to offer skill specific courses, such as business, writing, and listening skills.

Project Title: **Single Agency Training Grant**
Grantee/Contractor: Metropolitan Transportation Commission
Location: Minneapolis, Minnesota
Funding: \$75,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: MN-10-0047

Description: The Metropolitan Transit Commission has undergone an extensive needs analysis in the design and preparation of a comprehensive training program to address the needs of its employees. The MTC training program consists of five components. Some of the topics included in its program plan are: transit management, effective presentation skills, introduction to Microsoft Word, and creative training techniques.

Project Title: **Single Agency Training Grant**
Grantee/Contractor: Bi-State Development Agency
Location: St. Louis, Missouri
Funding: \$45,825 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: MO-10-0044

Description: The Bi-State Development Agency is implementing two types of training programs: the core program and the elective. The core program is basically an interagency training program conducted by Bi-State's staff. This program is required to be taken by all first-line supervisors, but mid-level managers may also participate. Bi-State has approximately 13 courses under its elective program, including assertiveness, decision making, problem solving and conflict resolving, financial management and accountability, communication and team building, and management audit of performance.

Project Title: **Single Agency Training Grant**
Grantee/Contractor: New York City Transit Authority
Location: Brooklyn, New York
Funding: \$100,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: NY-10-0251

Description: The New York City Transit Authority has developed a comprehensive training plan to address the training needs of its employees. NYCTA will provide training opportunities for approximately 355 employees. Its proposed training program consists of seven courses which include: transit management program, transit operations supervisors seminar, project management training, and PACE for end users and managers.

Project Title: **Statewide Training Grant**
Grantee/Contractor: Central New York Regional Transportation Authority
Location: Syracuse, New York
Funding: \$100,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: NY-10-0252

Description: The Central New York Regional Transportation Authority, on behalf of the New York State Public Transit Managers' Association, is providing assistance in training managerial, technical, and professional transit employees throughout the State. The training is conducted locally and will also make limited use of nationally recognized training institutions. The objective of this program is to bring together the members of the association in cooperation with CNYRTA to establish priorities for training and to conduct training in response to those needs.

Project Title: **Statewide Training Grant**
Grantee/Contractor: Miami Valley Regional Transit Authority
Location: Dayton, Ohio
Funding: \$150,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: OH-10-0163

Description: The Miami Valley Regional Transit Authority, acting as recipient on behalf of the public transit agencies in the State of Ohio, the Ohio Public Transit Association, and the Ohio Department of Transportation, will conduct training responsive to the needs of the participating agencies.

Project Title: **Single Agency Training Grant**
Grantee/Contractor: Chattanooga Area Regional Transportation Authority
Location: Chattanooga, Tennessee
Funding: \$9,250 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: TN-10-0031

Description: The Chattanooga Area Regional Transportation Authority is preparing a training program of ten courses which include: orientation to third party contracting, risk management seminar, Battelle workshop/implementing drug testing program, and transit marketing.

Project Title: **Single Agency Training Grant**
Grantee/Contractor: Corpus Christi Regional Transit Authority
Location: Corpus Christi, Texas
Funding: \$27,978 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: TX-10-0108

Description: The Corpus Christi Regional Transportation Authority has developed a comprehensive training plan designed to provide a broad range of learning experiences to all levels of management within the organization. The grantee has identified fifteen training courses that will be offered to its employees. These courses include: Business writing skills, operations management for transit, finance management for transit, and marketing management for transit.

Project Title: **Statewide Training Grant**
Grantee/Contractor: Fort Worth Transportation Authority
Location: Fort Worth, Texas
Funding: \$70,250 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: TX-10-0109

Description: The Fort Worth Transportation Authority, representing members of the Southwest Transit Association, will utilize public and private training institutions and organizations to engage in a variety of training courses and activities for participating agencies.

Project Title: **Single Agency Training Grant**
Grantee/Contractor: Utah Transit Authority
Location: Salt Lake City, Utah
Funding: \$100,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: UT-10-0025

Description: Under this grant, the Utah Transit Authority will conduct training for managerial, technical, and professional personnel. UTA has developed a comprehensive training plan to address the training needs of its employees. They plan to offer their employees courses in the following areas: customer service, managerial development and practices, transit development and planning, budgeting, time management, and stress management.

Project Title: **Regional Training Grant**
Grantee/Contractor: Municipality of Metropolitan Seattle
Location: Seattle, Washington
Funding: \$98,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: WA-10-0110

Description: The Municipality of Metropolitan Seattle will conduct a comprehensive series of courses for managerial, technical, and professional employees using local resources wherever possible. The objective of the proposed training is to better prepare transit professionals for the changing social and technical demands both inside and outside the agency.

University Research and Training Grants

Project Title: **University Transportation Centers Program**
Grantee/Contractor: Department of Transportation, Office of the Secretary
Location: Washington, D. C.
Funding: \$4,985,000 Funding Source: Section 11
Project Monitor: Frank E. Enty Project Number: DC-11-1101

Description: This is an amendment to administer the University Transportation Centers Program as set forth in Section 314 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, which authorizes the Secretary to make grants to one or more nonprofit institution of higher learning. The goal of the program is to attract the Nation's best talent to the study of transportation and to develop new strategies for training for better transportation professionals for the future.

Project Title: **Research and Training Grant**
Grantee/Contractor: Georgia State University
Location: Atlanta, Georgia
Funding: \$55,800 Funding Source: Section 11
Project Monitor: M. Marina Drancsak Project Number: GA-11-0021

Description: This project will examine traditional and non-traditional financing techniques available to transit agencies, that can stimulate profitable private investment in urban railcars without relinquishing public control over transit facilities and services.

Project Title: **Research and Training Grant**
Grantee/Contractor: Georgia Institute of Technology Research Institute
Location: Atlanta, Georgia
Funding: \$84,800 Funding Source: Section 11
Project Monitor: M. Marina Drancsak Project Number: GA-11-0022

Description: The purpose is to better understand the actual and potential role of transportation management associations (TMA) in the regulation, financing, and operation of transportation demand management (TDM) programs. The research will systematize knowledge of the emerging privatization process as it applies to TMAs in terms of formulation, organization, management, operations, and evaluation. The research views TMAs as a vehicle for TDM.

Project Title: **Research and Training Grant**
Grantee/Contractor: City of Worcester
Location: Worcester, Massachusetts
Funding: \$70,600 Funding Source: Section 11
Project Monitor: M. Marina Drancsak Project Number: MA-11-0050

Description: The purpose of this research is to develop a framework for the fire safety analysis of transit systems. This will involve development of a risk assessment approach (including a training workbook) and appropriate documentation.

Project Title: **Research and Training Grant**
Grantee/Contractor: Morgan State University, Transportation Studies Center
Location: Baltimore, Maryland
Funding: \$73,100 Funding Source: Section 11
Project Monitor: M. Marina Drancsak Project Number: MD-11-0009

Description: This research is to define and examine the market, financial, and institutional factors that characterize successful private sector reverse commute services; to identify market opportunities and locations for private sector provision of reverse commute services in the Baltimore Metropolitan area; and to recommend institutional mechanisms that promote and support private sector reverse commute services. Overall, the research will focus on conditions and locations of potential markets and types of services that will efficiently and effectively serve those markets.

Project Title: **Research and Training Grant**
Grantee/Contractor: Oregon State University
Location: Corvallis, Oregon
Funding: \$83,800 Funding Source: Section 11
Project Monitor: M. Marina Drancsak Project Number: OR-11-0006

Description: This research will design and evaluate a "universal" wheelchair securement system for transit vehicles (bus and paratransit) that will accommodate and safely secure a variety of mobility devices.

Project Title: Research and Training Grant
Grantee/Contractor: University of Texas at Austin
Location: Austin, Texas
Funding: \$31,900
Project Monitor: M. Marina Drancsak

Funding Source: Section 11
Project Number: TX-11-0021

Description: This project will examine and compare current and "historic" reverse commute services, extracting the transferable and promising elements from each so that other cities and providers could adapt promising ideas while avoiding common pitfalls. The project will develop a resource guide for communities, agencies, and private and public providers attempting to determine the feasibility of reverse commute services in their own community, and to structure and organize successful reverse commute services.

INFRASTRUCTURE AND EQUIPMENT INITIATIVE

The goal of the *Infrastructure and Equipment Initiative* is to optimize the use of UMTA and grantee funds to improve the efficiency of the Nation's transit systems in an era of continually increasing costs. Three program areas are included in this initiative which are designed to: assist in the modernization of existing bus and rail systems in the most efficient manner, provide new systems with proven technologies and management techniques, improve the competitiveness of the domestic transit industry, and provide transit agencies with the information that will assist them in their equipment procurements and in their efforts to provide a more reliable and efficient service to the public.

The domestic bus, rail, and automated guideway transit equipment manufacturers have been negatively impacted in the past fifteen years by foreign competition in spite of such efforts as Buy American legislation. A number of traditional and new transit manufacturers have abandoned the business, e.g., Pullman Standard, St. Louis Car, Boeing Vertol, and Rohr. The International Competition Program will attempt to build on existing technologies and management techniques used domestically or abroad to increase the competitiveness of the domestic transit equipment manufacturers.

UMTA provides millions of dollars annually for the purchase and rehabilitation of bus and railcar rolling stock and fixed facilities under various grant programs. The Infrastructure Program consists of projects that will result in reduced capital and operating costs and improved transit system operational performance. The general category of rail modernization and rehabilitation, including construction/project management, is part of this program area. Construction/program management is of particular importance as a result of poor quality and other construction problems, schedule delays, and cost overruns on some UMTA funded capital projects in recent years.

Congressional concern with reliability of new buses led to the establishment of the Altoona Bus Testing Center. The Industrial Productivity Program is designed to provide technical support to the bus testing activities at Altoona and to efforts to assist transit authorities in their ongoing efforts to reduce maintenance costs.

Project Title: **Electric Bus Line Feasibility Study**
Grantee/Contractor: California State Department of Transportation, Division of
Mass Transportation
Location: Sacramento, California
Funding: \$705,635 Funding Source: Section 14
Project Monitor: Irving Chambers Project Number: CA-14-0001

Description: CALTRANS will conduct a study to examine the feasibility of constructing and operating an electric bus line. This study is based on the electric magnetic coupling technology which is in the developmental stage.

Project Title: **Tunneling Research**
Grantee/Contractor: Transportation Research Board, National Academy of Sciences
Location: Washington, D. C.
Funding: \$35,000 Funding Source: Section 6
Project Monitor: Jeffrey G. Mora Project Number: DC-06-0638

Description: The objective of this project is to provide support to the National Academy of Sciences Geotechnical Board for studies and assessments, which will advance the state-of-the-art in tunneling, assist UMTA's grantees in more cost-effective tunneling, and develop alternative solutions to difficult geotechnical problems.

Project Title: **Innovative Technology Study**
Grantee/Contractor: Transit Development Corporation, Inc.
Location: Washington, D. C.
Funding: \$50,000 Funding Source: Section 6
Project Monitor: Jeffrey G. Mora Project Number: DC-06-0642

Description: This project, jointly sponsored by the Ontario Ministry of Transportation and UMTA, will identify, evaluate, and recommend the deployment of innovative technologies in order to make repetitive maintenance activities conducted in unpleasant environments more efficient and cost effective. This project will identify appropriate technologies transferrable to the transit industry to make these types of maintenance operations easier to perform. Technologies to be reviewed will be applicable to both bus and rail system maintenance.

Project Title: **Quality Assurance and Quality Control Guidelines**
Grantee/Contractor: Dynatrend, Inc.
Location: Woburn, Massachusetts
Funding: \$275,000
Project Monitor: Vincent R. DeMarco
Funding Source: Section 6
Project Number: MA-06-0189

Description: This project will develop quality assurance and quality control guidelines for use by UMTA grantees concerned with improving performance of transit construction. These guidelines will be disseminated to UMTA staff and grantees.

Project Title: **Waterborne Transit Ferry Study**
Grantee/Contractor: University of Massachusetts, Boston Urban Harbors Institute
Location: Boston, Massachusetts
Funding: \$750,000
Project Monitor: Irving Chambers
Funding Source: Section 6
Project Number: MA-06-0197

Description: Phase one of this study will create a comprehensive database of descriptive and statistical information on ferry services operating throughout the Nation. This information will be compiled into a report and made available to public and private organizations interested in waterborne mass transportation.

Project Title: **Rail Corrugation Study**
Grantee/Contractor: Mass Transit Administration
Location: Baltimore, Maryland
Funding: \$215,000
Project Monitor: Jeffrey G. Mora
Funding Source: Section 6
Project Number: MD-06-0141

Description: The Mass Transit Administration will study the causes of rail corrugation. The grantee will also test and evaluate alternative mitigation measures. A comprehensive final report on the results of the project will be prepared.

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OUTREACH AND SUPPORT INITIATIVE

The *Outreach and Support Initiative* supports work in all the UTS offices to accomplish the objective of developing useful UTS outputs that are effectively disseminated to the industry. The initiative is composed of the Outreach Program and the Support Activity. Logistics for the office, such as printing and maintenance of mailing lists, along with technical program support, have been identified. Also, the key elements of the Outreach Program process have been established.

The Outreach Program is composed of several key elements. UMTA has traditionally provided general support to the Transportation Research Board of the National Academy of Sciences to include issues of concern to public transportation. Specific funding is sometimes provided to undertake special studies of interest to UMTA. Also, specific support has been obtained from TRB to maintain and update information on current published research in the public transportation field.

Technical assistance is also provided to public or private agencies of UMTA policy initiatives and technical innovations through a network of experts and practitioners called the Public/Private Transportation Network. The assistance is of very limited duration for the purpose of building awareness in the agency of the potential the policy or initiative holds for their activities.

Finally, the feedback from the public transportation industry is valuable in shaping the UTS research agenda. Focused group discussions with leaders of the industry are supported through such techniques as roundtables.

The Support Activity involves the logistics necessary for UTS to carry on its communications with the transit industry. Printing and maintenance of mailing lists are examples of the basic support needs funded under this activity.

Project Title: **Information Dissemination Activities**
Grantee/Contractor: Transportation Research Board, National Academy of Sciences
Location: Washington, D. C.
Funding: \$225,000 Funding Source: Section 6
Project Monitor: John S. Durham Project Number: DC-06-0632

Description: This project supports the National Academy of Sciences in providing for experts in the transit industry to collectively improve the safety, effectiveness, and sufficiency of mass transit. It also provides for UMTA's centralized, widely accessible abstracting service for mass transportation innovations. This funding contributes to the Transportation Research Board annual meeting, committee meetings and publications, conferences, field visits, and the Urban Mass Transportation Research Information Service.

Project Title: **1991 Urban Mass Transportation Administration National Conference**
Grantee/Contractor: Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$200,000 Funding Source: Section 6
Project Monitor: Lawrence L. Schulman Project Number: MA-06-0199

Description: The objective of this project is to provide funding to the Transportation Systems Center to support the planning, preparation, and management of the Urban Mass Transportation Administration National Conference, May 29-31, 1991, in Orlando, Florida. This conference is intended to provide a forum at which UMTA, the Office of the Secretary of Transportation, and other appropriate officials of the administration can exchange ideas with transportation providers, suppliers, consultants, and academia.

Project Title: **Public/Private Transportation Network**
Grantee/Contractor: Technology Research and Analysis Corporation
Location: Arlington, Virginia
Funding: \$638,402 Funding Source: Section 6
Project Monitor: Bert Arrillaga Project Number: VA-06-0124

Description: This contract supports the technical assistance activities of the Public/Private Transportation Network. The focus of this program is the adoption of exemplary practices in the mass transit industry through the use of recognized experts who have experience in overcoming common problems. The emphasis is on planning by analogy using successful innovative projects as models and new techniques to achieve successful implementation of such practices.

SAFETY AND DRUG INITIATIVE

The safety and security of public transportation in the new decade will be vital. The perception of safety will be essential to attract a safety conscious traveling public. And, with insurance, medical, lost time, and liability claims at stake, safe operations will be a bottom line necessity.

UMTA has a limited, but vital, role in assuring safety. First, it must rid the transit workplace of drugs and alcohol. Second, under safety, it must monitor and provide for the active oversight of transit operations, either directly or through others, and also continue its work in human factors through training, information exchange, and technical assistance to optimize the performance of the Nation's transit safety.

This *Safety and Drug Initiative* consists of two programs: Drug and Alcohol and Safety.

The Drug and Alcohol Program will support the implementation of the drug rule with activities on updating the guideline manual to reflect recent drug rule changes and information collection/analyses to assist in monitoring the drug program. In addition, activities include alcohol rule regulatory evaluation, additional drug workshops, and development of training modules.

The Safety Program will focus on completing activities initiated in the early 1980's in areas of fire/smoke and toxicity research and emergency response and planning. The final Safety Information Reporting and Analysis System (SIRAS) report will be published and activities on safety information will be transitioned to the Section 15 program. Support will also be provided to States in the Safety area for privately financed people movers and oversight of rural transit operations. Training activities in operator safety will continue and three additional course developments will be added to the safety curriculum.

Project Title: **Commercial Driver's Licensing Test Preparation Program**
Grantee/Contractor: Amalgamated Transit Union
Location: Washington, D. C.
Funding: \$180,000 Funding Source: Section 6
Project Monitor: Mary L. Anderson Project Number: DC-06-0629

Description: The Amalgamated Transit Union will develop a Commercial Driver's Licensing Test Preparation Program. This training module will consist of a comprehensive workbook and audio-visual materials to assist bus operators and mechanics in successfully mastering the knowledge and skills tests requirements as mandated by the Commercial Motor Vehicle Safety Act of 1986.

Project Title: **Safety and Security Cooperative Training Program**
Grantee/Contractor: Federal Aviation Administration, Transportation Safety Institute
Location: Oklahoma City, Oklahoma
Funding: \$390,000 Funding Source: Section 6
Project Monitor: Franz K. Gimmler Project Number: DC-06-0634

Description: Management training is essential for transit agencies to develop, implement, and maintain successful system safety programs. With existing and new technology being introduced and used by transit agencies, the safety risks generated by such is extraordinarily complex. Therefore, this effort is designed to educate transit managers and line personnel in passenger and property protection through hazard identification and resolution.

Project Title: **Commercial Driver's Licensing Test Preparation Program**
Grantee/Contractor: Amalgamated Transit Union
Location: Washington, D. C.
Funding: \$120,000 Funding Source: Section 6
Project Monitor: Mary L. Anderson Project Number: DC-06-0640

Description: The Commercial Driver's Licensing Test Preparation (CDL) Program will translate into Spanish three study booklets, a 60-minute audiovisual tape, a 45-minute audio cassette tape, and the Facilitator's Guide. The second task is for ATU to develop a program of instructions to assist functionally illiterate bus operators and mechanics in mastering the knowledge and skills portion of the CDL examinations.

Project Title: System Safety Policy Audiovisual Program
Grantee/Contractor: Washington Metropolitan Area Transit Authority
Location: Washington, D. C.
Funding: \$50,000 Funding Source: Section 8
Project Monitor: Mary L. Anderson Project Number: DC-08-7005

Description: The purpose of this project is to support the efforts of the Washington Metropolitan Area Transit Authority to evaluate transit safety and security concepts to achieve improved performance and operation of mass transit systems. This project will result in the development of an audiovisual program to be shown to high level officials (including policy board membership) of mass transportation organizations.

Project Title: Substance Abuse in the Transit Industry
Grantee/Contractor: Booz, Allen, and Hamilton, Inc., Applied Research
Location: Bethesda, Maryland
Funding: \$364,000 Funding Source: Section 9
Project Monitor: Judy Meade Project Number: DC-90-7021

Description: The contractor will conduct a national survey of UMTA grantees concerning drug and alcohol use. The lack of substantive data on the extent of substance abuse by employees in the transit industry has made it difficult to document and justify the need for Federal regulations mandating drug and alcohol testing of sensitive safety personnel. The results of this project should provide that information.

Project Title: Bus Accident Causal Data
Grantee/Contractor: Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$200,000 Funding Source: Section 9
Project Monitor: Roy Field Project Number: DC-90-7022

Description: The objective of this project is to support activities in bus accident causal analysis.

Project Title: Transit Security Practices Audit
Grantee/Contractor: Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$130,000 Funding Source: Section 9
Project Monitor: Roy Field Project Number: DC-90-7024

Description: The Transportation Systems Center will support activities in transit security practices audit.

Project Title: **Section 22 Safety Investigation**
Grantee/Contractor: Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$50,000 Funding Source: Section 6
Project Monitor: Ronald D. Kangas Project Number: MA-06-0195

Description: The Transportation Systems Center will prepare a Comprehensive Plan, Statement of Work, and cost estimates for performing a Section 22 safety investigation of the New York Metropolitan Transportation Authority.

Project Title: **Technical Assistance and General Support**
Grantee/Contractor: Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$1,700,000 Funding Source: Section 6
Project Monitor: Steven A. Barsony Project Number: MA-06-0196

Description: The Transportation Systems Center will assist UTS in such programs as the Northeast Rail Corridor Study, IVHS program development, and other programs.

Project Title: **Section 22 Safety Investigation**
Grantee/Contractor: Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$500,000 Funding Source: Section 9
Project Monitor: Ronald D. Kangas Project Number: NY-90-A002

Description: The objective of this effort is to provide technical assistance in carrying out the safety investigation of the New York Metropolitan Transportation Authority and its operating elements. This investigation will include MTA management and operating elements.

Project Title: **Random Drug Testing Manual**
Grantee/Contractor: Battelle Memorial Institute Columbus Laboratories
Location: Columbus, Ohio
Funding: \$100,000 Funding Source: Section 4
Project Monitor: Judy Meade Project Number: OH-03-4501

Description: Battelle is developing a manual to facilitate random drug testing of transit employees. The manual will be a comprehensive how-to package including design, selection mechanics, organizational implementation, and solutions to on-site operational and logistical problems encountered by transit systems.

Project Title: **Bus Safety Emergency Equipment Guidelines**
Grantee/Contractor: Cambria County Transit Authority
Location: Johnstown, Pennsylvania
Funding: \$77,650 Funding Source: Section 8
Project Monitor: Mary L. Anderson Project Number: PA-08-7005

Description: The purpose of this cooperative agreement is to support the efforts of the Cambria County Transit Authority in evaluating emergency preparedness concepts with respect to various bus safety components. As a result of this evaluation; standardized concepts will be developed and implemented to assist in achieving improved operation of mass transportation systems. These voluntary standardized guidelines will be made available to the transit industry for adoption and inclusion as part of their bid specifications for urban transit buses.



TRANSPORTATION DISADVANTAGED INITIATIVE

The *Transportation Disadvantaged Initiative* will assist the various program areas within UMTA, its recipients, and other transportation providers in meeting the requirements of Section 504 of the 1973 Rehabilitation Act and other pending legislation and regulations, such as the Americans with Disabilities Act, in providing transportation services for persons with disabilities. For disabled persons, accessibility to transportation services can affect their access to opportunities in almost all avenues of life. This *Initiative* is composed of two programs: Disabled Americans Program and Special Services Program.

The Disabled Americans Program will assist the transit industry, disabled organizations, and disabled transit patrons in providing greater accessibility to transportation services needed to improve the quality of life for disabled persons. It will develop a comprehensive model program to focus on five key concerns of people with disabilities and local transit operators seeking to improve transportation accessibility. These areas are: identifying persons with disabilities in the community, developing effective outreach and marketing strategies, developing training programs for transportation providers, developing travel assistance programs for people with disabilities, and applying appropriate technology to overcome critical barriers to transportation and accessibility.

In the area of Safety, the program will provide assistance to the disabled community by developing a handbook for maintaining wheelchair life and securement devices. The program will also conduct a review of available technology for high level boarding, such as on old rail systems, and the impact of this technology in terms of safety. The program will encourage, promote, and assist in the development of non-Federal criteria for wheelchair securement devices. The demand for safe and adequate public transportation services for persons with disabilities is growing and will continue to do so in the future.

Project Title: **Improved Transportation for People with Disabilities**
Grantee/Contractor: National Easter Seal Society, Inc., Office of Governmental Affairs
Location: Washington, D. C.
Funding: \$650,000
Project Monitor: Roger Tate
Funding Source: Section 6
Project Number: DC-06-0599

Description: This Congressionally mandated project is designed to improve access to mass transportation services for people with disabilities. The project will develop a cooperative model program which will focus on five key concerns of people with disabilities and local transit operators, both urban and rural, who wish to improve mass transit accessibility.

APPENDIX A

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY PROJECT NUMBER

APPENDIX A

TECHNICAL ASSISTANCE AND SAFETY 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.

OH-03-4501 Battelle Memorial Institute Columbus Laboratories, Columbus, Ohio, p.40

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.

CA-06-0242 California State Department of Transportation, Division of Mass Transportation, Sacramento, California, p.4

CT-06-0020 Connecticut Transit, Hartford, Connecticut, p.20

DC-06-0566 Department of Energy, Office of Transportation Systems, Washington, D. C., p.14

DC-06-0599 National Easter Seal Society, Inc., Office of Governmental Affairs, Washington, D. C., p.44

DC-06-0623 Institute of Transportation Engineers, Inc., Washington, D. C., p.5

DC-06-0629 Amalgamated Transit Union, Washington, D. C., p.38

DC-06-0632 Transportation research Board, National Academy of Sciences, Washington, D. C., p.36

DC-06-0634 Federal Aviation Administration, Transportation Safety Institute, Oklahoma City, Oklahoma, p.38

DC-06-0635 Community Transportation Association of America, Washington, D. C., p.6

DC-06-0636 Urban Institute, Washington, D. C., p.16

DC-06-0637 National Governors' Association, Center for Policy Research, Washington, D. C., p.6

DC-06-0638 Transportation Research Board, National Academy of Sciences, Washington, D. C., p.32

DC-06-0640 Amalgamated Transit Union, Washington, D. C., p.38

DC-06-0642 Transit Development Corporation, Inc., Washington, D. C., p.32

FL-06-0054 Greater Orlando Chamber of Commerce, Orlando, Florida, p.17

HI-06-0005 Oahu Metropolitan Planning Organization, Honolulu, Hawaii, p.7

IN-06-0019 Indiana University, Bloomington, Indiana, p.20

MA-06-0189 Dynatrend, Inc., Woburn, Massachusetts, p.33

MA-06-0195 Transportation Systems Center, Cambridge, Massachusetts, p.40

MA-06-0196 Transportation Systems Center, Cambridge, Massachusetts, p.40

MA-06-0197 University of Massachusetts, Boston Urban Harbors Institute, Boston, Massachusetts, p.33

MA-06-0199 Transportation Systems Center, Cambridge, Massachusetts, p.36

MD-06-0141 Mass Transit Administration, Baltimore, Maryland, p.33

Section 6 (continued)

NC-06-0012	North Carolina Department of Transportation, Raleigh, North Carolina, p.9
OH-06-0056	Battelle Memorial Institute Columbus Laboratories, Columbus, Ohio, p.14
OR-06-0013	Tri-County Metropolitan Transportation District of Oregon, Portland, Oregon, p.10
PA-06-0054	Carnegie-Mellon University, Pittsburgh, Pennsylvania, p.17
TX-06-0072	Texas Transportation Institute, College Station, Texas, p.10
TX-06-0073	Texas Department of Human Services, Austin, Texas, p.10
UT-06-0005	Utah Transit Authority, Salt Lake City, Utah, p.20
VA-06-0124	Technology Research and Analysis Corporation, Arlington, Virginia, p.36
VA-06-0137	Virginia Department of Transportation, Richmond, Virginia, p.11
VT-06-0003	North East Kingdom Community Action Agency, Newport, Vermont, p.11
WA-06-0036	Municipality of Metropolitan Seattle, Seattle, Washington, p.12

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.

AZ-08-7002	Pima County Department of Transportation and Flood Control District, Tucson, Arizona, p.4
CA-08-7001	San Diego Association of Governments, San Diego, California, p.5
CA-08-7007	City of Pleasanton Department of Planning and Community Development, Pleasanton, California, p.5
CA-08-7011	Sacramento Area Council of Governments, Sacramento, California, p.5
DC-08-7001	KPMG Peat Marwick, Washington, D. C., p.16
DC-08-7004	Federal City Council, Washington, D. C., p.6
DC-08-7005	Washington Metropolitan Area Transit Authority, Washington, D. C., p.39
GA-08-7003	Atlanta Regional Commission, Atlanta, Georgia, p.7
MD-08-7001	Booz, Allen, and Hamilton, Inc., Applied Research, Bethesda, Maryland, p.9
MA-08-7001	Dynatrend, Inc., Woburn, Massachusetts, p.8
MA-08-7006	Town of Natick, Natick, Massachusetts, p.8
MA-08-7007	City of Woburn, Woburn, Massachusetts, p.8
OK-08-7001	Central Oklahoma Transportation and Parking Authority, Oklahoma City, Oklahoma, p.9
PA-08-7005	Cambria County Transit Authority, Johnstown, Pennsylvania, p.41

Section 9: Grants for use only in urbanized areas with a population of less than 200,000.

DC-90-7016	Dynatrend, Inc., Woburn, Massachusetts, p.16
DC-90-7021	Booz, Allen, and Hamilton, Inc., Applied Research, Bethesda, Maryland, p.39
DC-90-7022	Transportation Systems Center, Cambridge, Massachusetts, p.39
DC-90-7023	KPMG Peat Marwick, Washington, D. C., p.17
DC-90-7024	Transportation Systems Center, Cambridge, Massachusetts, p.39
NY-90-A002	Transportation Systems Center, Cambridge, Massachusetts, p.40

Section 10: Grants to States, local bodies, and agencies thereof (and operators of public transportation services) to provide fellowships for training of professional employees in managerial, technical, and professional positions in the public transportation field.

AZ-10-0020	City of Phoenix, Phoenix, Arizona, p.21
CA-10-0321	Santa Cruz Metropolitan Transit District, Santa Cruz, California, p.31
CA-10-0325	Alameda-Contra Costa Transit District, Oakland, California, p.21
CA-10-0326	Metropolitan Transit Development Board, San Diego, California, p.22
CT-10-0016	Connecticut Transit, Hartford, Connecticut, p.22
GA-10-0053	Metropolitan Atlanta Rapid Transit Authority, Atlanta, Georgia, p.22
IL-10-0154	Regional Transportation Authority, Chicago, Illinois, p.23
MA-10-0080	Massachusetts Bay Transportation Authority, Boston, Massachusetts, p.23
MN-10-0047	Metropolitan Transportation Commission, Minneapolis, Minnesota, p.23
MO-10-0044	Bi-State Development Agency, St. Louis, Missouri, p.24
NY-10-0251	New York City Transit Authority, New York, New York, p.24
NY-10-0252	Central New York Regional Transportation Authority, Syracuse, New York, p.24
OH-10-0163	Miami Valley Regional Transit Authority, Dayton, Ohio, p.25
TN-10-0031	Chattanooga Area Regional Transportation Authority, Chattanooga, Tennessee, p.25
TX-10-0108	Corpus Christi Regional Transit Authority, Corpus Christi, Texas, p.25
TX-10-0109	Fort Worth Transportation Authority, Fort Worth, Texas, p.25
UT-10-0025	Utah Transit Authority, Salt Lake City, Utah, p.26
WA-10-0110	Municipality of Metropolitan Seattle, Seattle, Washington, p.26

Section 11(a): Grants to public and private nonprofit institutions of higher learning to assist in establishing or carrying on comprehensive research in the problems of transportation in urban areas.

GA-11-0021 Georgia State University, Atlanta, Georgia, p.27
GA-11-0022 Georgia Institute of Technology Research Institute, Atlanta, Georgia, p.27
MA-11-0050 City of Worcester, Worcester, Massachusetts, p.28
MD-11-0009 Morgan State University, Transportation Studies Center, Baltimore, Maryland, p.28
OR-11-0006 Oregon State University, Corvallis, Oregon, p.11
VA-11-0018 George Mason University, Fairfax, Virginia, p.29

Section 11(b): Grants to one or more nonprofit institutions of higher learning to establish and operate one regional transportation center in each of the ten Federal regions which comprise the Standard Federal Regional Boundary System.

DC-11-1101 Department of Transportation, Office of the Secretary, Washington, D. C., p.27

Section 14: Special effort to preserve the national beauty of the countryside, public park and recreation lands, wildlife and waterfowl refuges, and important historical and cultural assets in the planning, design, and construction of urban mass transportation projects.

CA-14-0001 California State Department of Transportation, Division of Mass Transportation, Sacramento, California, p.32

Section 18: Funding for public transportation projects in other than urbanized areas allocated on a formula basis.

IL-18-X903 American Public Works Association, Chicago, Illinois, p.8
NC-18-X904 North Carolina Department of Transportation, Raleigh, North Carolina, p.8

Section 20: Financial assistance for national and local programs that address human resources needs as they apply to public transportation activities.

LA-20-2003 B. W. Cooper Tenant Management Corporation, New Orleans, Louisiana, p.7

APPENDIX B

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY STATE



APPENDIX B

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY STATE

Arizona

- AZ-08-7002 Pima County Department of Transportation and Flood Control District, Tucson, p.4
AZ-10-0020 City of Phoenix, Phoenix, p.21

California

- CA-06-0242 California Department of Transportation, Division of Mass Transportation, Sacramento, p.4
CA-08-7001 San Diego Association of Governments, San Diego, p.4
CA-08-7007 City of Pleasanton Department of Planning and Community Development, Pleasanton, p.5
CA-08-7011 Sacramento Area Council of Governments, Sacramento, p.5
CA-10-0321 Santa Cruz Metropolitan Transit District, Santa Cruz, p.21
CA-10-0325 Alameda-Contra Costa Transit District, Oakland, p.21
CA-10-0326 Metropolitan Transit Development Board, San Diego, p.22
CA-14-0001 California State Department of Transportation, Division of Mass Transportation, Sacramento, p.32

Connecticut

- CT-06-0020 Connecticut Transit, Hartford, p.20
CT-10-0016 Connecticut Transit, Hartford, p.22

District of Columbia

- DC-06-0566 Department of Energy, Office of Transportation Systems, Washington, p.14
DC-06-0599 National Easter Seal Society, Inc., Office of Government Affairs, Washington, p.44
DC-06-0623 Institute of Transportation Engineers, Inc., Washington, p.5
DC-06-0629 Amalgamated Transit Union, Washington, p.38
DC-06-0632 Transportation Research Board, National Academy of Sciences, Washington, p.36
DC-06-0635 Community Transportation Association of America, Washington, p.6
DC-06-0636 Urban Institute, Washington, p.16
DC-06-0637 National Governors' Association, Center for Policy Research, Washington, p.6
DC-06-0638 Transportation Research Board, National Academy of Sciences, Washington, p.32
DC-06-0640 Amalgamated Transit Union, Washington, p.38
DC-06-0642 Transit Development Corporation, Inc., Washington, p.32
DC-08-7001 KPMG Peat Marwick, Washington, p.16
DC-08-7004 Federal City Council, Washington, p.6
DC-08-7005 Washington Metropolitan Area Transit Authority, Washington, p.39
DC-11-1101 Department of Transportation, Office of the Secretary, Washington, p.27
DC-90-7023 KPMG Peat Marwick, Washington, p.17

Florida

FL-06-0054 Greater Orlando Chamber of Commerce, Orlando, p.17

Georgia

GA-08-7003 Atlanta Regional Commission, Atlanta, p.7

GA-10-0053 Metropolitan Atlanta Rapid Transit Authority, Atlanta, p.22

GA-11-0021 Georgia State University, Atlanta, p.27

GA-11-0022 Georgia Institute of Technology Research Institute, Atlanta, p.27

Hawaii

HI-06-0005 Oahu Metropolitan Planning Organization, Honolulu, p.7

Illinois

IL-10-0154 Regional Transportation Authority, Chicago, p.23

IL-18-X903 American Public Works Association, Chicago, p.8

Indiana

IN-06-0019 Indiana University, Bloomington, p.20

Louisiana

LA-20-2003 B. W. Cooper Tenant Management Corporation, New Orleans, p.7

Maryland

DC-90-7021 Booz, Allen, and Hamilton, Inc., Applied Research, Bethesda, p.39

MD-06-0141 Mass Transit Administration, Baltimore, p.33

MD-08-7001 Booz, Allen, and Hamilton, Inc., Applied Research, Bethesda, p.9

MD-10-0009 Morgan State University, Transportation Studies Center, Baltimore, p.28

Massachusetts

DC-90-7016 Dynatrend, Inc., Woburn, p.16

DC-90-7022 Transportation Systems Center, Cambridge, p.39

DC-90-7024 Transportation Systems Center, Cambridge, p.39

MA-06-0189 Dynatrend, Inc., Woburn, p.33

MA-06-0195 Transportation Systems Center, Cambridge, p.40

MA-06-0196 Transportation Systems Center, Cambridge, p.40

MA-06-1097 University of Massachusetts, Boston Urban Harbors Institute, Boston, p.33

MA-06-0199 Transportation Systems Center, Cambridge, p.36

MA-08-7001 Dynatrend, Inc., Woburn, p.8

MA-08-7006 Town of Natick, Natick, p.8

MA-08-7007 City of Woburn, Woburn, p.8

MA-10-0080 Massachusetts Bay Transportation Authority, Boston, p.23

MA-11-0050 City of Worcester, Worcester, p.28

NY-90-A002 Transportation Systems Center, Cambridge, p.40

Minnesota

MN-10-0047 Metropolitan Transportation Commission, Minneapolis, p.23

Missouri

MO-10-0044 Bi-State Development Agency, St. Louis, p.24

New York

- NY-10-0251 New York City Transit Authority, New York, p.24
NY-10-0252 Central New York Regional Transportation Authority, Syracuse, p.24

North Carolina

- NC-06-0012 North Carolina Department of Transportation, Raleigh, p.9
NC-18-X904 North Carolina Department of Transportation, Raleigh, p.9

Ohio

- OH-03-4501 Battelle Memorial Institute Columbus Laboratories, Columbus, p.40
OH-06-0056 Battelle Memorial Institute Columbus Laboratories, Columbus, p.14
OH-10-0163 Miami Valley Regional Transit Authority, Dayton, p.25

Oklahoma

- DC-06-0634 Federal Aviation Administration, Transportation Safety Institute,
Oklahoma City, p.38
OK-08-7001 Central Oklahoma Transportation and Parking Authority, Oklahoma
City, p.9

Oregon

- OR-06-0013 Tri-County Metropolitan Transportation District of Oregon,
Portland, p.10
OR-11-0006 Oregon State University, Corvallis, p.28

Pennsylvania

- PA-06-0054 Carnegie-Mellon University, Pittsburgh, p.17
PA-08-7005 Cambria County Transit Authority, Johnstown, p.41

Tennessee

- TN-10-0031 Chattanooga Area Regional Transportation Authority, Chattanooga,
p.25

Texas

- TX-06-0072 Texas Transportation Institute, College Station, p.10
TX-06-0073 Texas Department of Human Services, Austin, p.10
TX-10-0108 Corpus Christi Regional Transit Authority, Corpus Christi, p.25
TX-10-0109 Fort Worth Transportation Authority, Fort Worth, p.25
TX-11-0021 University of Texas at Austin, Austin, p.29

Utah

- UT-06-0005 Utah Transit Authority, Salt Lake City, p.20
UT-10-0025 Utah Transit Authority, Salt Lake City, p.26

Vermont

- VT-06-0003 North East Kingdom Community Action Agency, Newport, p.11

Virginia

- VA-06-0124 Technology Research and Analysis Corporation, Arlington, p.36
VA-06-0137 Virginia Department of Transportation, Richmond, p.11
VA-11-0018 George Mason University, Fairfax, p.29

Washington

- WA-06-0036 Municipality of Metropolitan Seattle, Seattle, p.12
WA-10-0110 Municipality of Metropolitan Seattle, Seattle, p.26

APPENDIX C

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY GRANTEE/CONTRACTOR



APPENDIX C

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY GRANTEE/CONTRACTOR

- Alameda-Contra Costa Transit District, Oakland, California: CA-10-0325, p.21
Amalgamated Transit Union, Washington, D. C.: DC-06-0629, p.38; DC-06-0640,
p.38
American Public Works Association, Chicago, Illinois: IL-18-X903, p.8
Atlanta Regional Commission, Atlanta, Georgia: GA-08-7003, p.7
- Battelle Memorial Institute Columbus Laboratories, Columbus, Ohio: OH-03-4501,
p.40; OH-06-0056, p.14
Bi-State Development Agency, St. Louis, Missouri: MO-10-0047, p.24
Booz, Allen, and Hamilton, Inc., Applied Research, Bethesda, Maryland:
DC-90-7021, p. 39; MD-08-7001, p. 9
- California Department of Transportation, Division of Mass Transportation,
Sacramento, California: CA-06-0242, p.4; CA-14-0001, p.32
Cambria County Transit Authority, Johnstown, Pennsylvania: PA-08-7005, p.41
Carnegie-Mellon University, Pittsburgh, Pennsylvania: PA-06-0120, p.17
Central New York Regional Transportation Authority, New York, New York:
NY-10-0252, p.24
Central Oklahoma Transportation and Parking Authority, Oklahoma City, Oklahoma:
OK-08-7001, p.9
Chattanooga Area Regional Transportation Authority, Chattanooga, Tennessee:
TN-10-0031, p.25
Community Transportation Association of America, Washington, D. C.:
DC-06-0635, p.6
Connecticut Transit, Hartford, Connecticut: CT-06-0020, p.20; CT-10-0016, p.22
Cooper, B. W., Tenant Management Corporation, New Orleans, Louisiana:
LA-20-2003, p.7
Corpus Christi Regional Transit Authority, Corpus Christi, Texas: TX-10-0108,
p.25
- Dynatrend, Inc., Woburn, Massachusetts: DC-90-7016, p.16; MA-06-0189, p.33;
MA-08-7001, p.8
Energy, Department of, Office of Transportation Systems, Washington, D. C.:
DC-06-0566, p.14
- Federal Aviation Administration, Transportation Safety Institute, Oklahoma
City, Oklahoma: DC-06-0634, p.38
Federal City Council, Washington, D. C.: DC-08-7004, p.6
Fort Worth Transportation Authority, Fort Worth, Texas: TX-10-0109, p.25
- George Mason University, Fairfax, Virginia: VA-11-0018, p.29
Georgia Institute of Technology Research Institute, Atlanta, Georgia:
GA-11-0022, p.27
Georgia State University, Atlanta, Georgia: GA-11-0021, p.27

Indiana University, Bloomington, Indiana: IN-06-0019, p.20
 Institute of Transportation Engineers, Inc., Washington, D. C.: DC-06-0623,
 p.5

KPMG Peat Marwick, Washington, D. C.: DC-08-7001, p.16; DC-90-7023, p.17

Massachusetts Bay Transportation Authority, Boston, Massachusetts: MA-10-0080,
 p.23

Massachusetts, University of, Boston Harbors Institute, Boston, Massachusetts:
 MA-06-0197, p.33

Mass Transit Administration, Baltimore, Maryland: MD-06-0141, p.33

Metropolitan Atlanta Rapid Transit Authority, Atlanta, Georgia: GA-10-0053,
 p. 22

Metropolitan Transit Development Board, San Diego, California: CA-10-0326,
 p.22

Metropolitan Transportation Commission, Minneapolis, Minnesota: MN-10-0047,
 p.23

Miami Valley Regional Transit Authority, Dayton, Ohio: OH-10-0163, p.25

Morgan State University, Transportation Studies Center, Baltimore, Maryland:
 MD-11-0009, p.28

Natick, Town of, Natick, Massachusetts: MA-08-7006, p.8

National Easter Seal Society, Inc., Office of Government Affairs, Washington,
 D. C.: DC-06-0599, p.44

National Governors' Association, Center for Policy Research, Washington, D. C.:
 DC-06-0637, p.6

New York City Transit Authority, New York, New York: NY-10-0251, p.24

North Carolina Department of Transportation, Raleigh, North Carolina:
 NC-06-0012, p.9; NC-18-X904, p.9

North East Kingdom Community Action Agency, Newport, Vermont: VT-06-0003, p.11

Oahu Metropolitan Planning Organization, Honolulu, Hawaii: HI-06-0005, p.7

Oregon State University, Corvallis, Oregon: OR-11-0006, p.28

Orlando, Greater, Chamber of Commerce, Orlando, Florida: FL-06-0054, p.17

Phoenix, City of, Phoenix, Arizona: AZ-10-0020, p.21

Pima County Department of Transportation and Flood Control, Tucson, Arizona:
 AZ-08-7002, p.4

Pleasanton, City of, Department of Planning and Community Development,
 Pleasanton, California: CA-08-7007, p.5

Regional Transportation Authority, Chicago, Illinois: IL-10-0154, p.23

Sacramento Area Council of Governments, Sacramento, California: CA-08-7011,
 p.5

San Diego Association of Governments, San Diego, California: CA-08-7001, p.4

Santa Cruz Metropolitan Transit District, Santa Cruz, California: CA-10-0321,
 p.21

Seattle, Municipality of Metropolitan, Seattle, Washington: WA-06-0036, p.12;
 WA-10-0110, p.26

Technology Research and Analysis Corporation, Arlington, Virginia: VA-06-0124,
p.36

Texas Department of Human Services, Austin, Texas: TX-06-0073, p.10

Texas Transportation Institute, College Station, Texas: TX-06-0072, p.10

Texas, University of, at Austin, Austin, Texas: TX-11-0021, p.10

Transit Development Corporation, Inc., Washington, D. C.: DC-06-0642, p.32

Transportation Systems Center, Cambridge, Massachusetts: DC-90-7022, p.39;
DC-90-7024, p.39; MA-06-0195, p.40; MA-06-0196, p.40; MA-06-0199,
p.36; NY-90-A002, p.40

Transportation, Department of, Office of the Secretary, Washington, D. C.:
DC-11-1101, p.27

Transportation Research Board, National Academy of Sciences, Washington, D. C.:
DC-06-0632, p.36; DC-06-0638, p.32

Tri-County Metropolitan Transportation District of Oregon, Portland, Oregon:
OR-06-0013, p.10

Urban Institute, Washington, D. C.: DC-06-0636, p.16

Utah Transit Authority, Salt Lake City, Utah: UT-06-0005, p.20; UT-10-0025,
p.26

Virginia Department of Transportation, Richmond, Virginia: VA-06-0137, p.11

Washington Metropolitan Area Transit Authority, Washington, D. C.: DC-08-7005,
p.39

Woburn, City of, Woburn, Massachusetts: MA-08-7007, p.5

Worcester, City of, Worcester, Massachusetts: MA-11-0050, p.28

APPENDIX D

OFFICE OF TECHNICAL ASSISTANCE AND SAFETY PROJECT MONITORS

APPENDIX D

OFFICE OF TECHNICAL ASSISTANCE AND SAFETY PROJECT MONITORS

Inquiries regarding projects listed herein may be directed to the project monitor at the organization shown below, c/o Office of Technical Assistance and Safety, Urban Mass Transportation Administration, Washington, D. C. 20590.

Name	Organization
Adams, Ross W.	Office of Mobility Enhancement
Anderson, Mary L.	Office of Safety
Arrillaga, Bert	Service Assistance Division
Boenau, Ronald E.	Training and Information Division
Caruso, Salvator	Capital Development Division
Chambers, Irving	Office of Engineering Evaluations
Cooper, Gwendolyn R.	Capital Development Division
DeMarco, Vincent R.	Office of Engineering Evaluations
Drancsak, M. Marina	Research and Rural Transportation Division
Durham, John S.	Service Assistance Division
Enty, Frank E.	Office of Training, Research and Rural Transportation
Field, Roy	Office of Safety
Gimmler, Franz K.	Office of Safety
Goodman, Joseph M.	Service Assistance Division
Hsiung, Shang Q.	Office of Engineering Evaluations
Kangas, Ronald D.	Office of Safety
Kulyk, Walter	Office of Mobility Enhancement
McKeown, Stewart	Service Assistance Division
Meade, Judy	Office of Safety
Mora, Jeffrey G.	Office of Engineering Evaluations
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