1996-1997 Annual Report

CUTR

Center for Urban Transportation Research
College of Engineering
University of South Florida
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Gary L. Brosch, Director

**Editor**  
Patricia Henderson

**Associate Editor**  
Jeffery Hess

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Maria Berlin
Building for the Future

The new CUTR building opened in early 1997. More than just a physical structure, it stands as a symbol of the effort and dedication that hundreds of CUTR researchers and staff, community leaders, and friends have invested in improving the future of our nation's transportation needs. The building is a reality.

Your support will give shape to our dreams for the future:

• **Scholarships** to enable our students to devote their time and interest to academic excellence.

• **Fellowships** to help attract the highest caliber of researchers in the nation to address critical transportation needs.

• **Naming opportunities** for meeting rooms, laboratories and public areas that reflect a personal commitment to the role you played in strengthening our nation's transportation infrastructure as we enter the 21st century.

We invite you to take part in this exciting journey to the future. For information on how you can play a meaningful role, contact Jo-Ann Alessandrini, Director of Development for the USF College of Engineering, (813) 974-9896.
The University of South Florida is rapidly becoming one of America's best institutions of higher education. The evidence of our improvement is everywhere—in the academic backgrounds of our incoming freshmen, in the credentials and prestige of our faculty, in the growth of our endowment, in the new facilities available to our students, faculty, and staff, and in the appearance of our campuses. CUTR's contribution to our quest for excellence is unquestionable. As it approaches its ten-year anniversary, CUTR, through its quality research and professionally-active and dedicated faculty and staff, continues to be a "point of pride" for USF.

Betty Castor
President, University of South Florida

CUTR continues to utilize the unique expertise of its individual and collective faculty in the development of new fundamental knowledge, processes, or procedures that will benefit all humanity. Its multidisciplinary approach to solving transportation problems is exemplary, and its emphasis on conveying the results of its research to decision-makers, transportation professionals, and the general public through training, education, conferences, and publications has laid the foundation for continued success. I congratulate CUTR on another successful year and look forward to a continued partnership in working toward improving the quality of life for all.

Michael Kovac
Dean, USF College of Engineering
Mission

To serve as a resource for policymakers, transportation professionals, the education system, and the public by providing high quality, objective transportation research.

Vision

To earn a national reputation through excellence and innovation in transportation research.

Values

We maintain the highest level of integrity.
We treat everyone with dignity and respect.
We practice open and honest communications and share information freely.
We strive to make CUTR a fulfilling place to work.
We contribute to the quality of life in our communities.

Guiding Principles

We contribute to the public good through high quality, objective transportation research, delivered on time within budget.
We emphasize innovative, multidisciplinary approaches to solving transportation problems.
We proactively cultivate clients to assure the long-term sustainability of the center.
We encourage individual initiative, balanced with cooperation and teamwork to best apply the appropriate expertise to each project.
We are responsive to the suggestions and concerns of others.
We value a diverse staff and provide equal opportunities for employment, professional development, and advancement for qualified individuals.
We participate in self-improvement and professional development programs to achieve our maximum potential.
We contribute to the future of the transportation profession by providing practical work experience and educational opportunities for students.
We reward quality and excellent performance.
We encourage charitable activities.
We did it! After years of hard work and dedication from our researchers, support staff, students, USF and State administrators, the Legislature, our CUTR Advisory Board, and supporters in both the public and private sectors, our new building was completed in March 1997. With a lot of anticipation and a little bit of sweat, we moved in—and immediately began taking advantage of the new opportunities afforded by increased space and expanded facilities.

Continuing education courses for transportation professionals and decisionmakers are being developed and will be offered by year’s end. Teleconferences on a variety of transportation-related topics are being held, and more are scheduled or planned. CUTR has become a central meeting place for our project sponsors and for transportation groups throughout the state, thus affording better communication between the profession and the community. Our Resource and Information Center has expanded and is used daily by USF and CUTR faculty and students, as well as members of the public and private sectors. Our GIS and graphics capabilities continue to expand. And our researchers, no longer in the cramped work spaces of our modular units, have a renewed sense of commitment to their work, to finding innovative solutions to transportation problems.

One of the aspects of moving into a new building that has amazed me is the number of people who have asked if I am leaving. Now that CUTR is firmly established and highly successful, and the building is complete, they think that I need a new challenge, saying that some people are “builders” and that, when it’s finished, they move on.

With me, that certainly is not the case. Transportation technologies are changing very rapidly, and the future is exciting. Who knows what will be commonplace in ten years. Will we be driving electric or fuel-celled cars? Will we be riding a train to get to school, to visit friends, to attend USF Bull football games? Will we take college classes from palmtop computers at home—or at the beach? On a broader scale, how will we fund transportation in the future? Through higher gas taxes? Through taxes based on the distance or time of day we travel? How will we provide mobility for the elderly or those with disabilities? How will we provide mobility and yet preserve the environment?

I don’t know the answers to these questions, and that is why my job—and that of CUTR—is not nearly finished. Our new building is a wonderful milestone, but it is just a tool to help us do our jobs better. It signifies teamwork, innovation, and dedication. As we approach our ten-year anniversary, we will not measure our success by our new building—we will measure success by what we do in it.

Gary L. Brosch
Director
In 1991, a National Urban Transit Institute was established at CUTR by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. Through 1997, the bill awards $1 million annually to a consortium of Florida universities that includes the University of South Florida, Florida A&M University, Florida State University, and Florida International University. Each university is conducting research projects to address issues critical to the transit industry as part of this program. Selected projects conducted by CUTR include:

**Journal of Public Transportation**—a quarterly, international academic journal focusing on public transportation.

**African-Americans, Other Minorities, and Women in the Transit Industry**—examined the role of transit as it relates to these populations and evaluated the effect that changes in the transit industry and society have had on employment and contracting opportunities.

**Improving Paratransit Productivity: Automatic Vehicle Locator Applications**—assessed the potential benefits of AVL technology to determine whether paratransit providers would benefit from using AVL systems.

**Timing Considerations in Planning Major Transit Investment Projects**—examined whether and when investment timing should be considered and how it might be considered in current processes.

**GIS as a Tool for Examining Environmental Equity Issues in Public Transportation**—demonstrated how GIS can be applied to identify adverse impacts of transit on minority and low income populations.

Studies currently under way in the fourth year include:

- **Impacts of ADA on Public Transportation**
- **NPTS Travel Data Analysis**
- **Perspectives on the Future of Public Transit**
- **Opportunities for the Coordination of General Public Transit and School Bus Transportation**
- **Public Involvement Handbook for Transit Agencies**
- **Modeling Transit Captive and Choice Rider Behavior**

Since 1993, Metropolitan Dade County and CUTR have been partners in an interlocal agreement that allows the Dade County MPO and the Metro-Dade Transit Agency to utilize CUTR for a variety of transit-related issues of both an operational and a policy nature. CUTR has provided assistance on more than 25 task orders, which include:

**MDTA Strategic Management Plan**—CUTR conducted a historical and environmental scan of MDTA’s performance and issues and facilitated focus group meetings with staff members. The agency’s strengths, weaknesses, opportunities, and threats were identified, as were its critical success factors for the next three years.

**Transit Service Performance Analysis and Monitoring Process**—This study identified the processes currently used by MDTA to collect, analyze, and use ridership and schedule-related data at MDTA. CUTR reviewed the state-of-the-art for these processes and recommended better utilization of existing hand-held electronic survey units, a streamlined route report structure, and the development of a new annual report summarizing route performance.

**Bus Cleaning Procedures**—CUTR reviewed complaints regarding dirty buses and the existing methods of bus cleaning at MDTA and identified the latest techniques and technology associated with bus cleaning at peer transit agencies.

**Review of the Transit Operating System**—CUTR examined MDTA’s Transit Operating System (the key communications tool between bus operations and maintenance personnel) to determine if it should be upgraded or replaced. The investigation concluded with a recommendation to improve the existing system. Among the most prominent findings was speeding the operator check-in process by installing an operator identification swipe-card device and printer to provide the operators with information about the location of their

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National Urban Transit Institute
S. Polzin, G. Brosch
Sponsor: USDOT, Research and Special Programs Administration

Public Transportation

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Dade County Technical Assistance
J. Volinski
Sponsor: Dade County
Guideway Transit and Intermodalism: Function and Effectiveness
S. Polzin
Sponsor: Federal Transit Administration

UTR is engaged in a collaborative three-year project with the Lehman Center for Transportation Research at Florida International University in Miami to look at factors leading to successful implementation of intermodal guideway public transit systems. A major goal of this project is to provide a framework to aid transit agencies, local planning organizations, the Federal Transit Administration, state departments of transportation, and the transportation community in the planning, design, and implementation of such systems. The research effort is examining ways to facilitate intermodal connections, remove transfer barriers, and increase ridership for transit.

Several publications have been produced as part of the project. Case studies have been prepared on intermodal urban rail transit systems and facilities in Atlanta, Baltimore, Cleveland, Miami, Pittsburgh, Portland, Sacramento, San Diego, and San Francisco.


Four research books relating to the function and effectiveness of guideway transit are being prepared on the subjects of technology, planning, policy, and design.

The final project product, a guidebook that addresses key factors in the planning and implementation of guideway transit and intermodalism facilities, will be produced in 1997.
Transit Program

Researchers in CUTR's Transit Research Program provide technical support and planning research for transit systems, state departments of transportation, local governments, school boards, and metropolitan planning organizations in the areas of:

- customer satisfaction and on-board surveys
- school transportation planning and student safety issues
- transit system safety and security
- long range transportation plans
- advanced public transportation systems
- civil rights, triennial reviews, other federal regulations
- customer service and complaints
- program monitoring and evaluation
- transit system performance and peer analyses
- transit development plans
- operations planning

CUTR served as a subcontractor to Tindale-Oliver in developing a transit operations plan for bus service in the Spring Hill area of Hernando County. This included the development of the bus route, headway, and financial plans for project implementation.

Spring Hill Transit Operations Plan
D. Hinebaugh
Sponsor: Hernando County MPO

Under contract with Lee County, CUTR assisted the LeeTran bus system in developing its bus schedules and driver runs for implementation in the fall of 1997.

Lee County Route Assignments
D. Hinebaugh
Sponsor: LeeTran

Transportation Accessibility Measurement
X. Chiu
Sponsor: FDOT

In cooperation with Tindale-Oliver and Associates, Inc., CUTR reviewed and coordinated plans for the proposed transit shuttle services from the Grinnell/Caroline parking facility to the Old Town area. This review included refining operating costs for the proposed shuttle service and assuring coordination of its service and fares with existing Key West DOT routes and between the DOT and private operators. Additionally, operational considerations were reassessed to enhance the attractiveness of the system to residents, employees, and tourists.

Key West Park-n-Ride Project
D. Hinebaugh
Sponsor: City of Key West

CUTR assessed the perceptions of citizens that do not use the public transportation services offered by Space Coast Area Transit in Brevard County. Focus groups were conducted to gain information regarding young people's perceptions and awareness of the public transportation services available, and to elicit information that will help SCAT market current and future services more effectively. A discussion group was also conducted with citizens of the South Mainland area.

SCAT Focus Group Services
J. Hardin
Sponsor: SCAT

In an effort to produce the most cost-effective transit service to the elderly and disabled, Hillsborough Area Regional Transit (HART) asked CUTR to develop a bus stop inventory database file containing information for use in determining whether a particular para-transit trip can be made using a fully accessible fixed route service in lieu of para-transit service. The database will assist in responding to customer inquiries as to the amenities and configuration of a particular bus stop.

HART Bus Stop Inventory
D. Hinebaugh
Sponsor: HART
Gainesville Interlocal Agreement

W. Morris
Sponsor: City of Gainesville

In 1997, CUTR established a long term interlocal agreement with the City of Gainesville to support the Gainesville Regional Transit System (RTS). The three-year agreement is a mechanism to create flexibility for CUTR to provide technical assistance and planning services to the City of Gainesville on a task order basis including developing seasonal schedules, identifying service alternatives for less efficient routes, and the preparation of a five-year plan enabling the system to meet FDOT requirements.

Transit Customer Satisfaction Index

F. Cleland
Sponsor: FDOT

This FDOT Research Idea applies a concept developed as a TCRP Idea project to transit systems in Florida. Using on-board customer satisfaction surveys in six Florida cities, CUTR will develop a satisfaction index that will enable comparison of customer attitudes between systems and will allow for the tracking of transit customer satisfaction over time.

LYNX APC

M. Baltes
Sponsor: LYNX

Under contract with the Central Florida Regional Transportation Authority (LYNX), CUTR is conducting a two-phase pilot project to test different automated passenger counting (APC) technologies for possible implementation on a number of LYNX's fixed-route transit buses.

PSTA System-Wide Ride Check

D. Hinebaugh
Sponsor: Parsons Brinckerhoff

As part of the Pinellas Suncoast Transit Authority (PSTA's) Five-Year Plan Update, CUTR collected ridership and schedule information for PSTA's fixed route system and tabulated it for inclusion in a comprehensive report. This information included passenger activity, actual arrival time at each time point, scheduled arrival time at each time point, difference between scheduled and actual arrival times with notation of location, and reason for delay.

PSTA General Planning

D. Hinebaugh
Sponsor: PSTA

CUTR is performing general planning tasks related to Pinellas County Census data, specifically, the graphical representation of this data. This entails route analysis using Census data, bus stop inventory data collection, input and retrieval of data, and other planning tasks as requested by PSTA.

LYNX On-Board Survey

J. Rey
Sponsor: Central Florida Regional Transportation Authority

This research effort implemented and analyzed the results of the on-board survey of Central Florida Regional Transportation Authority (LYNX) passengers to ascertain demographics, travel behavior, and the satisfaction of the users with the service. Identification of these characteristics of passengers will contribute to existing and future planning efforts of the system. A final report detailing the methodology and findings of the survey effort was produced.

![Reasons for Riding Lynx](image_url)
CUTR has produced many transit development plans (TDPs), including those for LeeTran, the transit division of the Lee County Department of Public Services; Space Coast Area Transit in Brevard County; the Tri-County Commuter Rail Authority in Ft. Lauderdale; the Winter Haven Urbanized Area; and the Florida counties of Manatee, Okaloosa, Hernando, Volusia, Bay, and Charlotte. Each plan focused on demographic and economic data; perceptions of the transit system held by key local officials, riders, and non-users; transit-related goals and objectives; an evaluation of existing services; an assessment of demand for transit and mobility needs within the community; identification and evaluation of future alternatives for the transit system; and a prioritized list of recommendations.

Transit Development Plans
D. Hinebaugh
Sponsors: Lee County; Brevard County; Tri-County Commuter Rail Authority; Manatee County; Okaloosa County; Hernando County; Volusia County; Bay County; Charlotte County; City of Winter Haven

This program is providing public transportation agencies with technical assistance and guidelines for vehicle procurement and providing public transportation agencies with an opportunity to procure transit vehicles at lower prices. Goals include organization and administration of statewide group procurement of certain transit vehicles, assisting in development of vehicle specifications for all types of transit vehicles, and providing technical assistance to individual transit agencies throughout the procurement process.

Florida Vehicle Procurement Program
M. Crittenden
Sponsor: FDOT

This study described the results of a statewide survey of licensed drivers designed to gauge their level of comprehension of the various aspects of Florida’s school bus stop law and various school bus signalizations. Results were reported and recommendations were made to increase driver knowledge of the school bus stop law and various signalizations used on school buses.

Motorist Knowledge of School Bus Stop Law
M. Baltes
Sponsor: Florida Legislature

CUTR identified existing conditions in Brevard County related to the safety of students ages 5 to 18 years during the commute to and from school and while waiting at school bus stops. A final report was produced that included recommendations of various means to improve safety.

School Access Project
M. Baltes
Sponsor: Brevard County Board of County Commissioners

In 1991, CUTR and FDOT entered into a joint participation agreement to provide maintenance training resources to public transit agencies throughout Florida. Now in its sixth year, the project includes brokering the delivery of classroom and laboratory maintenance training for transit mechanics; maintaining a resource center; conducting advisory committee meetings; producing and distributing a quarterly newsletter, Transit Training; and supervising and evaluating training sessions.

Florida Maintenance Training Program
R. Mathias, V. Zambito
Sponsor: FDOT
Palm Beach County MPO Transportation Plan Update
D. Hinebaugh
Sponsor: Leftwich Consulting Engineers, Inc.

The primary objective of this project is to identify the transit needs and meet the transit demand of Palm Beach County to prepare and verify various transit goals, strategies, and requirements in the year 2015 with and without financial constraints. This is being coordinated with the MPO’s approved set of goals, objectives, and policies.

Transit Planning Assistance
D. Hinebaugh
Sponsor: Pinellas MPO

As a subcontractor to Tindale-Oliver, CUTFR assisted the Pinellas Suncoast Transit Authority (PSTA) in the development of demographics and GIS-based mapping for the updated 1998-2002 Transit Development Plan. A series of demographic and travel behavior maps was produced that included transit route overlays.

Hillsborough County-Wide Data Collection and Analysis
D. Hinebaugh
Sponsor: Tindale-Oliver and Associates, Inc.

In this research effort, CUTFR acted as a subcontractor in assisting Tindale-Oliver and the Hillsborough County MPO in identifying, collecting, and analyzing data required by federal (ISTEA) and state regulations. This entailed research documentation, data collection on or off the State Highway System, and/or use of existing data, including automated traffic counts, vehicle classification counts, vehicle accident records, and transportation surveys and questionnaires, as well as roadway and transit characteristics.

Lessons Learned in Transit Efficiencies
J. Volinski
Sponsor: Florida Legislature

This project identified the methods transit agencies in North America are using to reduce costs and generate new revenues without losing customers. This information is increasingly important during these times of federal cutbacks and resistance to new taxes. A final report was produced that was distributed to transit agencies and other organizations throughout the U.S.

Performance Evaluation of Florida’s Transit Systems
J. Key
Sponsor: FDOT

Florida legislation requires that FDOT and each transit system report on transit system performance. CUTFR has conducted performance evaluations of Florida’s transit systems for the past seven years. These studies consist of a trend analysis, in which indicators and measures for the previous years were reviewed to determine how individual systems and the state performed, and a peer analysis, in which performance measures of Florida’s transit systems were compared with similar systems across the country.
Specialized Transportation Program

With an emphasis on developing innovative, practical solutions, CUTR’s Specialized Transportation Program provides research and technical assistance relating to transportation needs of senior citizens, persons with disabilities, children and others who cannot purchase transportation services. Specialties include:

- Implementation of the Americans with Disabilities Act (ADA)
- AVL/ITS applications for paratransit services
- Welfare reform and public transportation
- Planning, operations and policy analysis
- Training and technical assistance

This research effort will develop a simulation capability for use as an evaluation tool for paratransit service delivery characteristics and policies. This involves developing a multi-step process using an urban land use and transportation network model as a starting point to determine demand levels. This demand model then will be coupled with a service delivery model. The performance of the system will be evaluated.

CUTR provides technical assistance to state and local transportation entities needing information in areas related to the ADA. This project included development of an ADA Resource Packet for distribution to community transportation coordinators and transit agencies in the state. The information includes recommendations for developing an ongoing public involvement process and information on ways to resolve conflicts among consumers, advocates, service providers, and public officials.

The primary focus of this project was the collection and analysis of background information pertaining to the use of golf carts by senior citizens. The final report describes the conditions under which these vehicles are operated. The analysis included a thorough review of relevant laws, ordinances, and policies governing the use of golf carts and other neighborhood electric vehicles (NEVs) on public rights-of-way.

For this project, CUTR has been collecting information relating to compliance with the provisions of the Americans with Disabilities Act of 1990 (ADA) by public transit systems in Florida. All fixed-route systems were required to be in compliance with the ADA complementary paratransit requirements by January 1997, and CUTR is investigating how transit properties are documenting their compliance with ADA trip capacity constraint requirements.

CUTR was responsible for preparation of several elements of the Hillsborough County Transportation Disadvantaged Service Plan (TDSP), required by the Florida Commission for the Transportation Disadvantaged. CUTR completed descriptions of current and future land use, population composition, employment, and major trip generators/attractors. CUTR also prepared a forecast of the future transportation disadvantaged population and projected supply of and demand for trips, conducted a series of public workshops, and wrote the transportation improvement plan element of the TDSP.

Paratransit Productivity Enhancement Through Service Simulation
S. Polzin
Sponsor: FDOT

Americans with Disabilities Act (ADA) Technical Services
R. Mathias
Sponsor: Multisystems, Inc.

Use of Golf Carts by Seniors Who Are Unable to Drive
R. Mathias
Sponsor: USF Institute on Aging

Impact of ADA on Florida Public Transit Systems
R. Mathias
Sponsor: Florida Legislature, National Urban Transit Institute

Hillsborough County MPO General Planning Consultant
R. Mathias
Sponsor: Dames and Moore
Evaluation of Transportation Safety Needs of Special Populations

J. Lu
Sponsor: Southeastern Transportation Consortium

CUTR, along with the Department of Civil and Environmental Engineering at USF, is evaluating the transportation safety needs of special populations. The project will identify special population groups that represent particular concerns for transportation safety. Population groups to be evaluated will include older drivers, young drivers, school-age children, international tourists, people with disabilities, and new immigrants. The project will then identify and evaluate critical issues for each population group that can result in design and/or policy changes.

Polk County Three-Year Plan Technical Assistance

J. Hardin
Sponsor: Polk County Social Services Division

Under contract with the Polk County Social Services Division, CUTR provided technical assistance in developing a three-year plan for the Polk County Transportation System (PCTS), which is the designated community transportation coordinator in Polk County. The plan was completed by a PCTS quality initiative team. CUTR participated as a member of the team as a technical advisor and helped to provide direction for the team and make recommendations based on existing expertise and experience with similar systems.

ADA Paratransit Eligibility and Travel Training

J. Hardin
Sponsor: Volusia County

CUTR worked closely with Volusia County Transit (VOTRAN) to review the Americans with Disabilities Act, Transportation Disadvantaged, and Medicaid paratransit eligibility processes and identify elements requiring modification. New eligibility determination procedures and application forms were developed for each paratransit program to ensure compliance with state and federal regulations and to manage the demand for scarce resources. A review of options for establishing a travel training program at VOTRAN was completed and recommendations were offered pertaining to implementing a program locally.

Hillsborough County MPO TD Service Plan

R. Mathias
Sponsor: Hillsborough County MPO

CUTR prepared portions of the Hillsborough County Transportation Disadvantaged Service Plan, including the service area profile and demographic analysis, service analysis, and a three-year implementation plan. Three public workshops were held to solicit input during development of the plan.

Assisting Passengers Traveling with Service Animals

R. Mathias
Sponsor: Project ACTION/National Easter Seals Society

A training module and a report were developed on providing assistance to passengers with disabilities who are traveling with service animals, such as guide dogs. The project included a final report addressing the use of service animals and access rights under the Americans with Disabilities Act. The training module includes 20 slides and a trainers' script. Workshops on this topic were presented at workshops in Phoenix, Orlando, Denver, and Pittsburgh.
**ITS Program**

Researchers in CUTR’s Intelligent Transportation Systems Program participate in innovative projects in which new concepts and technologies are being applied to solve real-world problems. Specialties include the evaluation, cost-effectiveness, and implementation feasibility of applying ITS technologies to existing transportation systems in the areas of:
- Advanced traffic management systems
- Advanced traveler information systems
- Advanced crash avoidance systems
- Automatic vehicle location
- Automated traffic data collection
- Electronic toll and traffic management systems
- Regionalized comprehensive transportation master plans
- Weather monitoring systems

The primary objective of this project was to develop an ITS Comprehensive Plan for the Metro-Dade MPO that coordinates and integrates short-term and long-term ITS activities conducted by state and local agencies. The MPO’s purpose for developing an ITS Comprehensive Plan is to provide general policy planning in the area of ITS, act as Dade County’s leading public agency in this regard, and, most importantly, create a means for education and accountability for ITS investment to the general public.

**Metro-Dade County Intelligent Transportation System Comprehensive Plan**

*Author: M. Pietrzyk*

*Sponsor: Metro-Dade MPO*

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**CUTR performed an economic analysis of the role that toll facilities have played and will continue to play in assuring the continued economic prosperity of the greater Orlando area.**

**CUTR determined the savings to the public generated by the expressway system, actual and potential property values, employment and tax base generated by development in service areas, and the importance of the expressway system to the Orlando regional transportation system, in particular the Interstate-4 Master Plan.**

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**Economic Impact of the Orlando-Orange County Expressway System**

*Author: M. Pietrzyk*

*Sponsor: OOCEA*

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**As part of an FHWA Congestion Pricing Pilot Program grant awarded to Lee County, CUTR is assisting the County in development of an area wide “value pricing” program consisting of off-peak discounts at three area toll bridges. CUTR’s role includes independent review and assessment of pricing scenarios and preparation of a concept plan and lane configuration for installation of an electronic toll collection system for the three bridges and perhaps other non-tolled facilities.**

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**Lee County Congestion Pricing Program, Phase I**

*Author: M. Pietrzyk*

*Sponsor: Lee County DOT*

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**In Phase I of this project, CUTR assessed alternative pricing scenarios, conducted focus group interviews, and prepared a concept lane configuration plan for each bridge. In Phase II, ongoing technical services regarding simulation modeling, Web site development, field performance evaluation, and congestion monitoring studies will be provided over a two-year period.**

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**Lee County Congestion Pricing Program, Phase II**

*Author: M. Pietrzyk*

*Sponsor: Lee County DOT/Lee County Board of County Commissioners*
Fuel Intake Monitoring System
M. Pietrzyk
Sponsor: USF Technology Deployment Center

In partnership with Lockheed-Martin Specialty Components and USF's Technology Deployment Center, CUTR will assist in developing an inductive coupling system prototype to automatically control and monitor fuel consumption at individual pump islands for Shell Europe. CUTR's primary role, with the aid of the USF Department of Electrical Engineering, is to review technical reports produced by Lockheed-Martin.

Electronic Toll and Traffic Management Retainer Services
M. Pietrzyk
Sponsor: Florida Turnpike District-Office of Toll Operations

CUTR has been retained on a task order basis to conduct independent reviews and assessments of various technologies and/or particular devices related to the operation of SunPass, FDOT's electronic toll collection system. Three task orders were issued in 1997, including evaluations of automatic vehicle classification systems, an automatic pop-up programmable delineator, and the traffic 2000 piezo-electric treadle. Reports on all three were produced and distributed.

I-95/Florida Turnpike Truck Monitoring Pilot Program
M. Pietrzyk
Sponsor: Florida Turnpike District

In an effort to reduce heavy truck traffic and congestion on Interstate-95 within a five-county area in southeast Florida, tolls for heavy trucks were reduced for a one-year pilot period. CUTR provided a supplemental assessment on the impact of this toll reduction. The movement of heavy trucks, using a video-based technique to capture and match license plates, was monitored along five east-west corridors between I-95 and the Turnpike, and a video-based calibration of FDOT's 14 newly-installed telemetered traffic monitoring sites within this corridor was conducted.

Interactive Transportation Information Systems
M. Pietrzyk
Sponsor: Metro-Dade MPO

Under contract with the Metro-Dade Metropolitan Planning Organization, CUTR is developing a performance specification (for a procurement and installation RFP) for kiosk stations at seaport, airport, and tourist destinations. These kiosks will be suitable for receiving resident and tourist input on existing and planned transportation improvements in the greater Miami area. Fixed and real-time travel information will be provided.

Evaluation of Motorist Warning Systems for Fog-Related Incidents in the Tampa Bay Area
M. Pietrzyk
Sponsor: FDOT District VII

CUTR conducted an investigation to determine the extent of unique and recurring patterns of fog and fog-related incidents within Hillsborough and Pinellas counties. Historical climatic and fog-related crash report data were gathered and summarized. Visibility detection and motorist warning systems from 12 other states were documented. Based on these findings, suitable area-wide countermeasures to detect and warn motorists of fog conditions, including driver education and awareness, were recommended.

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<td>6,323</td>
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This study will document the effects of transportation plan development on minority and impoverished communities in the Miami Urbanized Area that traditionally have not been represented in the decision-making process. Institutional mechanisms will be developed to anticipate and assuage potential detriments to ethnic and minority neighborhoods resulting from the construction of additional transportation facilities. A final report will be prepared and distributed.

As a supplement to CUTF's previously prepared Alternative Fuels Implementation Plan for the Pinellas Suncoast Transit Authority, an 18-month field performance evaluation for PSTA's demonstration electric bus is being conducted in conjunction with the USF Electrical Engineering Department's Clean Energy and Vehicle Research Center. Data collection and analysis are being done to determine operating performance of the bus, the battery, and the comfort conditioning system.

CUTF was responsible for assembling and facilitating a peer review panel comprised of national experts in travel demand modeling to review the travel forecasting elements of the Tampa-Hillsborough-Lakeland-Polk Alternatives for Mobility Enhancement the Major Investment Study. A two-day peer review panel was convened at CUTF, resulting in a series of recommendations related to the demand modeling element of this important major investment study.

In 1994, CUTF established the Alternative Fuels Center to bridge the knowledge gap regarding alternative fuel vehicles (AFVs)—those using propane, compressed natural gas (CNG), liquefied natural gas (LNG), methanol, ethanol, and electricity. The Center provides technical assistance, answers questions regarding AFVs, hosts workshops, maintains a library of AFV-related information, and publishes a quarterly newsletter, Clean Fuels Florida.

At the request of the Florida Energy Office, CUTF assembled and continues to provide technical support for a Clean Cities Coalition for the Suncoast area of West Central Florida. The purpose of the Coalition is to expand and accelerate the use of alternative fuel vehicles in urban areas. Tasks included recruiting members from among government representatives, fuel suppliers, conversion companies, local businesses, fleet operators, and elected representatives; organizing planning meetings; recruiting work group members; developing coalition documents such as a program plan; investigating funding opportunities; and preparing grant applications.

Effects of Transportation Plan Development on Communities
B. Ward
Sponsor: Metro-Dade MPO

Solar-Recharged Electric Bus Performance Evaluation
M. Pietrzyk
Sponsor: Pinellas MPO

Major Investment Study Travel Demand and Modeling Peer Review
E. Mierzejewski
Sponsor: Hillsborough County MPO

Alternative Fuels Information and Training Center
J. Bradley
Sponsor: Florida Legislature

Florida Suncoast Clean Cities Coalition
J. Bradley
Sponsor: Florida Department of Community Affairs-Florida Energy Office
Financial Shortfalls of Florida MPO Long Range Transportation Plans

E. Mierzejewski
Sponsor: Florida MPOAC

CUTR performed a review of the long range transportation plans of Florida’s 25 Metropolitan Planning Organizations. Comparisons were made of the costs associated with the 20-year transportation needs plans and the projected available revenues. Based on the 25 plans, the cumulative financial shortfall of Florida’s 25 MPOs was estimated at $22.3 billion through the year 2020. CUTR also developed recommendations for consistent reporting of financial information on the part of MPOs.

Driver Population Factors in Freeway Capacity

E. Mierzejewski
Sponsor: FDOT

CUTR performed an analysis of the impact of non-local drivers on freeway capacity. The project made use of FDOT’s permanent count traffic data, together with information about the seasonal variations in out-of-state visitors. It was possible to derive a statistically valid estimate of the impact of these local drivers on freeway flow characteristics, which will be reflected in future editions of the Transportation Research Board’s Highway Capacity Manual.

Hurricane Evacuation Traffic Analysis and Operational Measures

E. Mierzejewski
Sponsor: FDOT

In Phase 1 of this project, CUTR performed an analysis of traffic data during hurricanes Opal and Bertha, both of which resulted in evacuation orders being issued in coastal areas of Florida. Phase 1 also included a preliminary analysis of various traffic information data sources that could be used by emergency management officials during an evacuation. Phase 2 of the project is examining traffic surveillance cameras throughout the state that could be used to better manage hurricane evacuation. It will also examine methods of distributing traffic data over the World Wide Web.

Managing Incidents and Accidents on Surface Streets

K. Williams
Sponsor: FHWA

This project supports preliminary work to begin development of a comprehensive access management manual. It involves assembling relevant literature, establishing an access management library, and preparing an annotated bibliography of references. Other tasks include development of a preliminary table of contents, sample formats, and a work plan for manual development. In addition, CUTR will provide support to the TRB Committee on Access Management and its subcommittees that have been formed to facilitate development of the access management manual.

Access Management Advisory and Training Services 1996-1997

K. Williams
Sponsor: FDOT

CUTR was retained by FDOT to provide expert advice on access management standards and policies on a task order basis. Services include technical assistance on application of access management standards, advice on access cases going to administrative hearing, and review of access permit denials for complex cases. CUTR has also prepared a short course and technical guidebook on medians, as well as a statewide procedure for managing requests for deviations from median opening standards. A “Public Involvement Handbook for Median Projects” was also prepared to assist planners and engineers in developing a public involvement strategy for controversial access management issues. Current efforts include technical assistance to FDOT on the Krome Avenue corridor improvement project and ongoing training and technical assistance to planners and engineers on right-of-way preservation and access management.
CUTR developed a narrative overview of the issues and policies contained in the 25 MPO Long Range Transportation Plans. These were contrasted with the major goals and objectives with the Florida Transportation Plan. Based on the review of the long range plans, CUTR developed a number of recommendations to improve future MPO long range transportation plans.

This study examined six distinct combinations of emission inspection technology and policy options. Cost-effectiveness analysis considered the cost of the inspection, state oversight, vehicle operating costs, operator time costs, and repairs costs. Effectiveness was measured in terms of the reduction in oxides of nitrogen and volatile organic compounds. Results included a recommendation for implementation of a new (Acceleration Simulation Mode) technology, which would allow for biennial inspections, exempting the most recent model years.

Through its partnership with the FCOPC, CUTR has worked to strengthen economic opportunities in disadvantaged minority neighborhoods through technical assistance and outreach on transportation and development planning issues. CUTR spearheaded the development of a neighborhood plan for the Union Academy neighborhood in Tarpon Springs. Early establishment of a residents planning committee and a continuing commitment by CUTR has helped unite and empower the residents to devise solutions to neighborhood problems.

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 has shaped transportation planning and expenditures for the last six years. This landmark legislation will soon be changed and reauthorized. This project allowed CUTR staff to keep abreast of the latest changes and, through the rebroadcast of national teleconferences, helped inform local stakeholders of significant events.

CUTR presented symposia on African-American Mobility issues in 1994, 1995, 1996, and 1997 in Tampa to examine the problems and issues related to mobility needs in African-American communities. Each symposium featured speakers and experts from across the United States. Emphasized was the importance of including the unique socioeconomic and cultural experiences of the African-American community in the shaping of transportation policy.

Review of Long Range Transportation Plans of Florida's MPOs
E. Mierejewski
Sponsor: Florida Legislature

Florida’s Motor Vehicle Emission Inspection Program
E. Mierejewski
Sponsor: Florida Legislature

Florida Community Opportunity Partnership Center (FCOPC)
K. Williams
Sponsor: U.S. Department of Housing and Urban Development

ISTEA Reauthorization Teleconferences
M. Burris
Sponsor: Florida Legislature

African-American Mobility Symposium
B. Ward
Sponsors: Florida Legislature, FTA, FHWA, Project ACTION

"Forging the Dream"
A Symposium on AFRICAN-AMERICAN MOBILITY ISSUES
April 30-May 2, 1997 Wyndham Harbour Island Hotel Tampa, Florida

African-American community in the shaping of transportation policy.
**North Dade Greenways Plan**
*S. Hendricks*  
*Sponsor: Metro-Dade MPO*

The purpose of this project is to conduct a systematic process for the development of a greenway network plan for North Dade County, resulting in a proposal for the location, design, use, and maintenance of the system, including phasing recommendations and budget estimates. Working in conjunction with Florida International University, CUTR has provided recommendations for the development of a public participation process.

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**TDM Program**

*CUTR's multidisciplinary transportation demand management (TDM) team is unique in its integrations of technical skills and TDM knowledge, blending transportation and land use planning education, analytical applies its knowledge to address local or regional TDM needs, including operations, policies and procedures. Specialties include:*  
- TDM strategic planning  
- carpool/vanpool program design  
- high occupancy vehicle facilities teleworking  
- TDM program evaluation  
- transportation management associations/organizations  
- TDM training

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**Strategic Planning for North Carolina TDM Program**
*P. Winters*  
*Sponsor: North Carolina DOT*

In 1996, the North Carolina Department of Transportation sponsored a one-day brainstorming session on the current status and future role of transportation demand management (TDM) in North Carolina. CUTR facilitated the meeting and used the nominal group technique to accomplish the objective. The workshop participants identified more than 40 barriers to TDM in North Carolina. Using a prioritizing process, the participants developed action plans to address the major barriers identified by the group.

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**Transportation Demand Management Clearinghouse**
*D. Rudge*  
*Sponsor: FDOT*

FDOT and the Florida Energy Office contracted with CUTR in 1991 to establish the TDM Clearinghouse, a service that fosters the development of effective transportation demand management programs around the state. Now in its fifth year, activities include maintenance of a resource center of TDM materials; production of a national newsletter, the *TMA Clearinghouse Quarterly,* and provision of technical and educational assistance to a variety of agencies.

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**An Assessment of the Charlotte (NC) Metropolitan Area Ridesharing Program**
*P. Winters*  
*Sponsor: City of Charlotte*

Under contract to 2Plus, Inc., CUTR is reviewing various existing transportation plans, assessing current goals and objectives, and examining operational procedures and marketing efforts relative to other TDM programs in the country. The purpose of the assessment is to develop strategies to offer an innovative, customer-oriented approach to meeting the challenges ahead. This project is a collaborative effort with representatives from the City of Charlotte, the transit agency, and the business community.

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**University North Transportation Initiative**
*S. Hendricks*  
*Sponsors: FDOT, City of Tampa, Hillsborough County, USF*

To address air quality, growth management, traffic congestion, and safety issues in the rapidly developing area in Tampa known as University North, a public/private partnership called University North Transportation Initiative (UNTI) has been developed. UNTI is identifying transportation problems in the area and has developed a forum for public/private dialogue among community and business representatives. Strategies considered for increasing area mobility include improved transit service to the USF campus and other area destinations, telecommuting, staggered work and class hours, ridesharing, and safer environments for biking and walking.
The objective of this FDOT Research Idea project is to determine whether trip reduction programs will have similar or significantly different impacts in different areas. To answer this question, CUTR will use a discrete-choice stated preference survey with randomly selected commuters in three different metropolitan areas in Florida.

This program provides intensive training in TDM to state and local decision-makers, employers, developers, and others to facilitate the implementation of TDM across the state. CUTR researched existing TDM training programs throughout the U.S., developed an intensive curriculum and training materials, and offered the course at locations across the state.

To assist Florida’s commuter assistance program, CUTR is developing an evaluation manual. Included are a literature review, interviews with representatives from other states, reviews of available policy and implementation options, and definitions of quantitative and qualitative measures of effectiveness in CAP programs.

CUTR has established the University North Commuter Center to promote the use of transportation alternatives as a means to enhance mobility, improve air quality, and reduce traffic congestion. Located at the largest retail shopping mall in Tampa, adjacent to the University of South Florida, the Center provides personalized assistance to identify commute alternatives that meet customers’ specific transportation needs. Options include public transit service, vanpooling, carpooling, bicycling and walking.

This project offers training to individuals in the public and private sectors who are responsible for implementing TDM and/or telecommuting projects. This will be achieved through the development and presentation of two courses: a three-day course that focuses on the development, design, operation, and evaluation of TDM programs for the public and private sectors; and a one-day course that focuses on the development and implementation of a telecommuting plan on a worksite basis as an employer/employee program.

This project applies research to develop neural network technology to streamline the development of Congestion Management Systems (CMS) plans and trip reduction plans for MPOs, employers, and developers and provides a basis for consistent review by the regulating agencies. This application is expected to improve cost-effectiveness of trip reduction programs and reduce administrative costs.

A Market-Based Approach to Trip Reduction Programs
F. Cleland
Sponsor: Florida DOT

TDM Certification
P. Winters
Sponsor: FDOT

P. Winters
Sponsor: FDOT

University North Commuter Center
S. Hendricks
Sponsor: FDOT

Design and Application of TDM Techniques
P. Winters
Sponsors: National Highway Institute, FHWA

Neural Network Technology Application for Employer Trip Reduction
P. Winters
Sponsor: FDOT
This project encompasses the further development of a computer Decision Support System (DSS) to prioritize highway projects and to draw maps. CUTR is using Geographic Information Systems (GIS) technology to determine and code geographic locations and enhance this system to allow operation on lower-powered computer systems while adding the capability of managing encapsulated plotting data as it makes other calculations. CUTR will also install the system, prepare revised versions of all DSS documentation, and provide training in each of the FDOT District Offices.

Transportation Costs Documentation
R. Stasiak
Sponsor: FDOT

CUTR will update and document the process by which the annual “Transportation Costs” report is updated and published. This report is a compilation of unit cost information associated with the construction, operation, and maintenance of highway and public transportation facilities. The project involves the improvement and documentation of data collection, data update, and publication techniques.

Transportation Economics Consultant
R. Stasiak
Sponsor: FDOT

CUTR is performing a variety of task work orders related to the economic factors involved in the planning and programming of transportation improve-ments. Recent work orders include development of additional documentation for the update of the “Transportation Costs” report and the performance of quarterly updates of data related to inflation factors associated with highway construction.

Hillsborough County Impact Fee Study
F. R. Jones
Sponsor: Hillsborough County

This two-phase study consists of examining the values used for construction costs and other variables in Hillsborough County’s current transportation impact fee formula and evaluating and recommending changes in the impact fee methodology and the procedures used to determine impact fee credits.

Study of Expressway Authorities
F. R. Jones
Sponsor: Florida Legislature

CUTR performed a review of the current functions of the state’s expressway and transportation authorities. The resulting report discusses the status and future plans of each authority and the planning process used. Also discussed are the advantages and disadvantages of using independent authorities to provide transportation services.

Economic Impact of Bridge Realignment
F. R. Jones
Sponsor: HDR Engineering, Inc.

This study calculated the economic impacts that would be experienced by businesses in Clearwater if traffic were diverted in such a way as to bypass the downtown area. Traffic data and travel patterns were analyzed. Shoppers and pedestrians in the central business district were surveyed, and civic leaders and merchants were interviewed. Estimates of the expected loss of customers were developed for 17 types of businesses.
This analysis quantifies the economic benefits that both users and non-users of transit receive from investments in Florida’s urban transit systems. The study uses economic modeling to measure the value of transit user benefits, freed-up highway capacity, savings in the state’s transportation disadvantaged program, and new federal funding. Other economic benefits also are described.

Information and/or assistance was provided on an as-requested basis throughout the year to agencies and organizations including the following:
- Bechtel Corporation
- Belgian State Prime Minister’s Services
- Bermillo, Ajamil and Partners
- Camp Dresser McKee
- Carr Smith & Associates
- City of Lakeland
- Commission for the Transportation Disadvantaged
- Florida Department of Environmental Protection
- Executive Service Corp. of Tampa
- Florida Aquarium
- Florida Center for Community Design and Research
- Florida Department of Transportation Safety Office
- Florida Engineering Society
- Florida Legal Services
- Florida Planning & Zoning Association
- Florida State University
- Florida Urban Rail Conference Planning Committee
- Floridians for Better Transportation
- Hillsborough Area Regional Transit
- Hillsborough County
- Hillsborough County Community Traffic Safety Office
- Hillsborough County Metropolitan Planning Organization
- Hillsborough County Planning Department
- Hillsborough River Greenways Task Force
- Institute of Transportation Engineers, Florida Chapter
- Manatee County Area Transit
- Metro-Dade County
- Metropolitan Dade Transit Authority
- National Highway Transportation Safety Administration
- National Transportation Consortium of States
- Nationwide Insurance
- New York State Department of Transportation
- Pinellas County Community Development Agency
- Pinellas County MPO
- City of Pinellas Park
- Pompano Beach Neighborhood Association
- St. Petersburg Times
- Tampa & Ybor City Street Railway Society
- Tampa Chamber of Commerce
- Tampa Bay Partnership
- Tampa Union Station Preservation & Rehabilitation Corp.
- Tindale-Oliver, Inc.
- Transportation Research Board
- Union Academy
- Neighborhood Planning Committee
- University of Florida
- Vandenberg Airport
- Votran
- West Florida Air Quality Coordinating Committee
- West Florida RPC

An Analysis of the Impacts of Florida High Speed Rail
S. Polzin
Sponsor: Florida State University

CUTR and FSU investigated traveler benefits and economic impacts of Florida High Speed Rail, carried out for FDOT and Florida. Overland eXpress (FOX), the franchisee for implementing the Florida high speed rail system. The study quantified the impacts expected with implementation of this major infrastructure investment. Analyzed were impacts on travelers shifting from air and highway travel to the high speed rail on time savings, safety, energy consumption, and air quality. Economic impacts analyzed included changes in employment, wages and salaries, and overall economic activities resulting from the construction, operations, and reinvestment of surplus revenues.

Regional Impacts of High Speed Rail
*In millions

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<td>Other Regions</td>
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<td>TOTAL FLORIDA</td>
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CUTR’s Education Program

Contributing to the education of future transportation professionals has been a primary goal of CUTR since its establishment. By working closely with student assistants on research projects and student organizations and activities, serving as thesis advisers, assisting students with job placement, teaching transportation and related courses, coordinating USF’s Graduate Interdisciplinary Transportation Program, and participating in the University Transportation Centers Program, CUTR faculty are dedicated to the professional and educational development of students in the College of Engineering and throughout USF. CUTR is committed to assisting the state in training Florida’s brightest students for successful careers in transportation for the benefit of the citizens of Florida and the nation.

In 1996-97, positions as research assistants were awarded to 33 graduate and undergraduate students from a variety of disciplines. Their skills in research, writing, statistical analysis, geographic information systems, management information systems, database management, and graphics are an important contribution to CUTR’s research program. In addition, students are provided with encouragement and assistance in co-authoring papers with CUTR faculty, attending and making presentations at local, state, and national conferences and meetings, and maintaining involvement in professional organizations and societies.

USF’s Graduate Interdisciplinary Transportation Program

The transportation problems that urban areas are facing today require interdisciplinary approaches. The University of South Florida has responded to this need by designing a unique transportation program that brings together graduate students in:

- Economics
- Civil Engineering
- Public Administration

The Graduate Interdisciplinary Transportation Program welcomed its first students in Fall Semester 1995. Students accepted into the program enroll in a common set of core courses that emphasize urban transportation issues. A common body of knowledge is thereby developed among the disciplines and each student acquires expertise in all three disciplines. Students in the program also have opportunities to participate on research project teams with senior transportation faculty at CUTR, gaining hands-on experience with local, state, and national transportation issues.

Job opportunities for graduates of this program are numerous and varied. Students with interdisciplinary skills that can be applied to today’s transportation problems are eagerly sought by consulting firms, research centers, transportation agencies, and all levels of government.

The program is now being offered as a six-course certificate program, in addition to being available to students working toward Master’s degrees. Students with previous coursework in civil engineering, economics, or urban planning may be able to receive credit for those courses and shorten the time required to receive the certificate. The certificate program was developed for early- and mid-career transportation professionals in response to a need expressed by the profession for increased training in interdisciplinary approaches to transportation issues. The possibility of offering the program statewide through USF’s distance learning delivery system is being explored. This would allow participants to take the required courses in their own community through USF’s interactive technology.
This program, part of the USDOT Transportation Centers program, provides education and professional development experiences through a combination of work assignments and coursework for full-time, degree-seeking graduate students who intend to pursue employment in the transportation industry. As a member of the Southeastern Transportation Center (STC) consortium, CUTR provides financial resources to support student assistantships, including travel monies to support student participation in professional forums. Sixteen student research assistantships were funded through this program in 1996-97, and students traveled to national conferences of the Institute of Transportation Engineers, the Transportation Research Board, and STC.

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**University Transportation Centers Program**

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**1996-1997 Student Research Assistants**

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
</tr>
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<tr>
<td>Ramakrishna Apparaju</td>
<td>Civil Engineering</td>
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<td>Chris Billingsley</td>
<td>Geography</td>
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<td>Shannon Bliss</td>
<td>Business</td>
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<td>Martin Catalá</td>
<td>Public Administration</td>
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<td>Issam Chraibi</td>
<td>Statistics</td>
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<td>Sunanda Dissanayake</td>
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<td>Jieyun Feng</td>
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<td>Greg Ferrara</td>
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<td>Electrical Engineering</td>
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<td>David Gillett</td>
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<td>Jesus Gomez</td>
<td>Civil Engineering</td>
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<td>Kelly Hammett</td>
<td>International Studies</td>
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<td>Tonya Hepburn</td>
<td>Economics</td>
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<td>Weimin Huang</td>
<td>Civil Engineering</td>
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<td>Daniela Issa</td>
<td>International Relations</td>
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<td>Stacy Jackson</td>
<td>Civil Engineering</td>
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<tr>
<td>Daniel Johnson</td>
<td>Management and Information Systems</td>
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<td>Conrad Jordan</td>
<td>Electrical Engineering</td>
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<td>Hari Priya Madur</td>
<td>Civil Engineering</td>
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<tr>
<td>Sai Mallena</td>
<td>Civil Engineering</td>
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<td>Mark Mistretta</td>
<td>Regional Planning</td>
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<td>Vikash Palisetti</td>
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<tr>
<td>Brent Stoffle</td>
<td>Applied Anthropology</td>
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<td>Hua Tan</td>
<td>Civil Engineering</td>
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<td>Srinivas Taranikanti</td>
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<td>Thomas Tu</td>
<td>Civil Engineering</td>
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<td>Luis Vega</td>
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<td>Ben Walker</td>
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<td>Sujeeta Weerasuriya</td>
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<td>Steve Westenzweig</td>
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<td>Jason Winoker</td>
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<td>Wardell Wilson</td>
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<td>Yanhu Zhou</td>
<td>Civil Engineering</td>
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</table>

*Back row, from left to right: Winoker, Taranikanti, Stoffle, Hammett, Gomez, Weerasuriya, Vega. Front row, from left to right: Issa, Apparaju, Jackson, Dissanayake, Tan, Zhou, Billingsley.*
Gary L. Brosch  
Director. MS, Economics, Florida State University; BS, Economics, University of South Florida. Specialties: economic analysis, innovative financing, urban mobility, transportation innovations.

Anthony Arenas  
MIS Specialist. BS, Management Information Systems/Finance, University of Tampa. Specialties: management information systems, finance.

Michael R. Baltes  
Research Associate. MPA, Organization Management Theory; BS, Political Science, University of South Florida. Specialties: policy analysis, transportation economics, student transportation, statistical analysis, survey design and analysis, safety.

John Bradley  
Research Associate. MPA, Public Administration; BA, International Studies, University of South Florida. Specialties: advanced transportation technologies, alternative fuel vehicles, organizational management.

John Lott Brown  

Glenn A. Burdick  
Dean Emeritus, USF College of Engineering. PhD, Massachusetts Institute of Technology. Specialties: electrical aspects of transportation, transportation safety, accident reconstruction, electromagnetic field theory.

Mark Burris  
Research Associate. MSCE, Transportation Engineering, University of New Brunswick, Canada; BSCE, Technical University of Nova Scotia, Canada. Specialties: intelligent transportation systems, computer simulation modeling, crash avoidance systems.

Xuehao Chu  
Research Associate. PhD, MA, Economics, University of California at Irvine; BS, Mathematics, Hangzhou University, China. Specialties: transportation economics, urban and regional economics, discrete choice analysis, quantitative methods.

Francis A. Cleland  
Research Associate. MBA, Rice University; BA, Managerial Studies. Specialties: survey design and analysis, statistical modeling techniques, survey sampling methods, transportation demand management, public transportation.

Mike Crittenden  
Research Associate. BS, Sociology, Alabama State University. Specialties: transportation and logistics management, maintenance management, administrative and human resource management.

Mark Fleeting  
Network Manager/Computer Specialist. BA, Communications, University of South Florida. Specialties: computer network design, administration and management; systems configuration; computer hardware and software support.

Nevine Labib Georggi  
Resource Center Coordinator. BS, Civil Engineering, Cairo University, Egypt. Specialties: database searches, electronic cataloging, mainframe operations, training.
Jennifer A. Hardin
Research Associate. MA, Applied Urban
Anthropology, University of South Florida; BS,
Cultural Anthropology, College of Charleston.
Specialties: paratransit planning, survey research
methods, AVL.

Patricia Henderson
Communications/Human Resources Manager.
BA, Political Science, University of South Florida.
Specialties: communications, publications design
and management, conference coordination,
human resources.

Sara J. Hendricks, AICP
Research Associate. MRP, Land Use Planning,
University of North Carolina-Chapel Hill; BA,
Film, The Pennsylvania State University.
Specialties: land use planning, growth manage-
ment, bicycle/pedestrian planning, commuter
assistance programs.

Jeffrey J. Hess
Communications Specialist. BA, English,
University of South Florida. Specialties: writing,
editing, public relations, media relations, Web
management.

Eric T. Hill
Research Associate. MPP, Public Policy; BS,
Management Science, Rutgers. Specialties: transit
planning, public policy, transit service and opera-
tions planning, intelligent transportation systems.

Dennis P. Hinebaugh
Transit Research Program Director. BS, Political
Science, Michigan State University. Specialties:
transit system planning, rail transit planning, trans-
sitways, short and long range capital and operat-
ing planning, transit fare policy.

F. Ron Jones
Deputy Director, Education. PhD, Urban
Planning/Economics, MIT; MCP, Transportation
Planning, University of California-Berkeley.
Specialties: transportation economics, specialized
transportation, urban and regional economics,
public policy analysis.

Laura C. Lachance
Research Associate. MA, Economics, University of
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“1996 Update of Florida High Speed Rail Intercity Rail and Urban Rail Transit Development,” Transportation Research Board Rail Caucus, Chicago (R. Sheck)

“A Comparison of Attitudes of Enforcement Officers and the General Public,” Association for Commuter Transportation Annual Conference, Denver (F. Cleland)

“Access Management at the Local and Regional Level,” Second National Conference on Access Management, Vail, CO (K. Williams)

“Accessible Rail Services,” 15th National Conference on Accessible Transportation & Mobility, Orlando (R. Sheck)

“Alternative Fuels,” Manatee County Air Quality Summit, Palmetto, FL (J. Bradley)

“An Overview of Light Rail Transit,” Hillsborough Metropolitan Planning Organization, Tampa (R. Sheck)

“Analysis of the Cost-Effectiveness of Motor Vehicle Inspection Programs and Selected Transportation Control Measures for Reducing Air Pollution,” Hillsborough County Metropolitan Planning Organization’s Citizens Advisory Committee, Tampa (E. Mierzewski)

“Are Our Planning Methods Up to the Challenge?,” 6th TRB Conference on the Application of Transportation Planning Methods, Dearborn, MI (S. Polzin)

“Assisting Passengers with Service Animals,” Technology Sharing Program, Orlando (R. Mathias)

“Assessment of Intermodal Transfer Penalties Using Stated-Preference Data,” 76th Annual Transportation Research Board Meeting, Washington, DC (S. Polzin)

“Assisting Passengers Traveling with Service Animals,” CTAA Expo ‘97, Ft. Lauderdale (R. Mathias)

“Automated Passenger Counter Pilot Test Project,” APTA Annual Bus Operations, Technology, and Management Conference, Miami (J. Rey & M. Baltes)

“Automated Passenger Counter Pilot Test Project,” 8th TRB Conference on the Application of Transportation Planning Methods, Dearborn, MI (J. Rey & M. Baltes)

“Automatic Vehicle Location and Paratransit Productivity: Miami Case Study,” 76th Annual Transportation Research Board Meeting, Washington, DC (R. Mathias)

“Charting an ITS Comprehensive Plan for Dade County,” 1996 Florida Section ITE Annual Meeting, Atlantic Beach, Florida (M. Pietrzyk)

“Contemporary Access Management: The State of the Art,” 1996 Ohio Transportation Engineering Conference, Columbus, OH (K. Williams)

“Coordinating Land Use and Transportation Through Access Management,” Sixth Conference on the Application of Transportation Planning Methods, Dearborn, MI (K. Williams)


“Designing Transit Facilities with the Customer in Mind,” Los Angeles County Metropolitan Transportation Authority, Customer First Conference, Los Angeles (R. Sheck)

“Developing an ITS Comprehensive Plan for Dade County,” Third Annual World Congress on Intelligent Transportation Systems, Orlando (M. Pietrzyk)

“Developing Intermodal Transportation Linkages: The Bicycle/Transit Connection,” 66th Annual Meeting of the Institute of Transportation Engineers, Minneapolis (S. Hendricks)

“Development of Expected Value Conflict Tables for Florida-Based Intersections,” 76th Annual Transportation Research Board Meeting, Washington, DC (M. Pietrzyk)

“Effectively Using Volunteers in the Florida TD Program,” Florida Commission for the Transportation Disadvantaged Fourth Annual Conference, Sarasota (J. Hardin)

“Evaluating the Role of the Bus Operations Field Supervisor,” APTA Annual Bus Operations, Technology, and Management Conference, Miami (J. Volinski)


“Financial Shortfalls of Florida MPO Long Range Transportation Plans,” Florida MPO Advisory Council (E. Mierzewski)


“GIS in Transit: Some Practical Applications,” Florida Transit Association’s 22nd Annual Conference and Exposition, Orlando (J. Rey)
"Impediments to Deployment of Sensor Warning Systems in the United States," 1996 ITS World Congress, Orlando (M. Burris)

"Improving Sustainability Through Access Management," ITE 1997 International Conference, Transportation and Sustainable Communities, Tampa (K. Williams)

"Interdisciplinary Transportation Education," ITE Sustainable Communities Conference, Tampa (F. R. Jones)

"Kiosk Case Studies . . . What Works?" ITS America Seventh Annual Meeting, Washington, DC (M. Burris)

"Land Development Regulations that Promote Access Management," TRB Fifth National Conference, Transportation Solutions for Small and Medium Sized Communities, Greensboro, NC (K. Williams)


"Lessons Learned in Transit Efficiencies," APTA Annual Bus Operations, Technology, and Management Conference, Miami (J. Volinski)

"Neural Network Application for Predicting Impact of Trip Reduction Strategies," Association for Commuter Transportation Annual Conference, Denver (P. Winters)


"Planning, Designing, and Constructing Transportation to the 21st Century," Annual ASCE (Florida West Coast Branch) Transportation Seminar, Tampa (M. Pietrzyk)

"Planning Lee County’s Variable Pricing Program," 6th TRB Conference on the Application of Transportation Planning Methods, Dearborn, MI (M. Burris with C. Swenson)

"Planning for Intermodal Connections in the Incremental Development of High-Speed Rail Corridors," 76th Annual Transportation Research Board Meeting, Washington, DC (R. Sheck)

"Public Involvement and the Politics of Access Management" Second National Conference on Access Management, Vail, CO (K. Williams)

"Realizing Electric Bus Deployment for Transit Service," 7th Annual Meeting of the ITS of America, Washington, DC (M. Pietrzyk)


"Reflections on Technology and Fare Collection for Public Transit," Fare Technology Workshop, Florida International University, Miami (S. Polzin)

"Review and Assessment of Information Kiosk System," APTA Annual Bus Operations, Technology, and Management Conference, Miami (E. Hill)

"Right of Way Preservation and Growth Management," 1997 Texas Transportation Planning Conference, Corpus Christi, TX (K. Williams)

"Solving Transportation Problems with Artificial Neural Networks," 1997 Texas Transportation Planning Conference, Corpus Christi, TX (M. Pietrzyk)

"Spatial Variation in Rail Transit Access Mode," Annual Meeting of the Association of American Geographers, Ft. Worth, TX (R. Sheck)

"Temporal Changes in Gender-Based Travel on Florida’s Commuter Rail System," Second National Conference on Women’s Travel Issues, Baltimore (J. Rey & M. Baltes)

"The Illegal Passing of Stopped School Buses," 76th Annual Transportation Research Board Meeting, Washington, DC (M. Baltes)

"The Economic Impact of Florida’s High Speed Rail System," High Speed Ground Transportation Association, Las Vegas (S. Polzin)

"Transportation Demand Management and Land Use: The Florida Experience," 1996 Association for Commuter Transportation International Conference, Denver (D. Rudge)

"Use of School Buses by Florida’s Community Transportation Coordinators," Florida Commission for the Transportation Disadvantaged Fourth Annual Conference, Sarasota (R. Mathias)

"Using Focus Groups to Improve Your Service," CTAA Expo ’97, Ft. Lauderdale (J. Hardin, L. Lachance & R. Mathias)

"What is ITS and How Does It Impact Highway Infrastructure Design," Annual ASCE (Florida West Coast Branch) Transportation Seminar, Tampa (M. Pietrzyk)

"What Is ITS and Why Do You Need to Know About It?," Annual Meeting of Florida Chapter American Public Works Association, Daytona Beach (M. Pietrzyk)

"What You Always Wanted to Know About Artificial Neural Networks, But Were Afraid to Ask," 1996 Florida Section ITE Annual Meeting, Atlantic Beach, Florida (M. Pietrzyk)

"Why Evaluate?", TMA Summit, New Orleans (F. Cleland & D. Rudge)


"Working Together—Linking Transportation and Community Development," Genessee Transportation Council and New York State Department of Transportation, Genessee, NY (K. Williams)
“Toward a Common Parking Policy: A Cross-Jurisdictional Matrix Comparison of Municipal Off-Street Parking Regulations in Metropolitan Dade County, Florida,” Transportation Research Record 1564 (J. Bradley)

“Developing Intermodal Transportation Linkages: The Bicycle/Transit Connection,” ITE Annual Compendium of Technical Papers (S. Hedrick)

“Prescribing the Future, Not Predicting the Future: Are We Moving Beyond the Need for Travel Demand Modeling?,” Urban Transportation Monitor, December 6, 1996 (S. Polzin)

“A Study of Successful Intermodal Guideway Transit Systems,” 1995 Compendium of Technical Papers, ITE, (R. Sheck with D. Shen and F. Zhao)

“European Crossings,” InterCity Passenger Rail Update, Transportation Research Board, Fall 1996 (R. Sheck)

“Transit and Quality of Life Goals: The Rail-volution Grows,” Proceedings of the ITE 1997 International Conference, Transportation and Sustainable Communities, Tampa, FL (R. Sheck)

“NCHRP Synthesis of Highway Practice 233: Land Development Regulations that Promote Access Management” (K. Williams)


“1996 Rideshare! Evaluation Survey of Local Area Businesses: Opportunities for New Programs & TDM Model Adjustment Recommendations”

“A Review of the Current Functions of Independent Transportation Authorities in Florida that Own or Operate Roadways or Bridges or Toll Facilities”

“An Assessment of Uncertainty and Bias: Recommended Modifications to the Urban Transportation Planning Process”

“An Analysis of the Economic Impacts of Florida High Speed Rail”

“An Economic Impact Analysis of the Proposed Memorial Causeway Management Realignment on the Central Business District of Clearwater, Florida”

“Analysis of the Cost Effectiveness of Motor Vehicle Inspection Programs and Selected Transportation Control Measures for Reducing Air Pollution”

“Assessing the Economic Energy and Environmental Benefits of Implementing the Electric Vehicle Station Car Program Into the Metro-Dade Transit System”

“Assisting Passengers Traveling With Service Animals: Final Report”

“Automatic Vehicle Location and Paratransit Productivity”

“Development of Expected Value Conflict for Florida-Based Traffic Crashes”


“Driver Population Factors in Freeway Capacity”

“Economic and Mobility Impacts of the Orlando-Orange County Expressway Authority, Final Report”

“Evaluation of Motorist Warning Systems for Fog-Related Incidents in the Tampa Bay Area”

“Evaluation of the Role of the MDTA Metrobus Operations Supervisor”

“Financial Shortfalls of Florida MPO Long Range Transportation Plans”


“Florida Advanced Public Transportation Systems (APTS) Concepts”


“Hurricane Evacuation Traffic Analysis and Operational Measures”

“Ohlleg Passing of Stopped School Buses in Florida”


“Intelligent Transportation System Plan for Dade County”

“Lee County Transit Development Plan 1998-2002”

“Lessons Learned in Transit Efficiencies, Revenue Generation, and Cost Reduction”

“Managing Corridor Development: A Municipal Handbook”

“Managing Our Way Through Congestion: Florida’s Commute Alternatives System Handbook”

“Performance Measures Report for the Rideshare! Agencies of Northeast Ohio”

“Profiles of U.S. Urbanized Areas With Guideway Transit Systems”

“Profiles of U.S. Guideway Transit Systems and Operators”

“Review and Assessment of Information Kiosk Systems”

“School Bus Utilization by Community Transportation Coordinators in Florida”

“Tampa-Hillsborough-Lakeland-Polk Alternatives for Mobility Enhancement Major Investment Study”

“Transportation: An Investment in Florida’s Future”

“Transit Accessibility and Labor Force Participation Rate of At-Risk Groups: Dade County, Final Report”


“Travel Time, Safety, Energy, and Air Quality Impacts of Florida High Speed Rail”

“Winter Haven Urbanized Area Transit Development Plan 1996-2001”