Achieving successful limited access route diversion

The Interstate Highway System and other limited access highways have contributed tremendously to the economic growth and quality of life in the U.S. However, a major highway incident can easily cause serious traffic congestion and significantly reduce mobility. When a major incident occurs, motorists may choose or be forced to take local arterials to avoid severe delays. If alternate routes are not established and the traffic signal timings along the alternate routes are not properly adjusted to handle heavy diverted traffic volumes, serious traffic congestion and significant travel delays are unavoidable.

Previous national studies have indicated that incidents such as traffic accidents, stalled vehicles, construction/maintenance, special events, and adverse weather conditions account for nearly 60 percent of all traffic congestion in the U.S. Several recent national surveys conducted by the Federal Highway Administration (FHWA) consistently suggested that incident management, signal timing, and work zone management were major areas in which the general public strongly demanded improvements to enhance travel quality. A successful route diversion program not only can alleviate serious traffic congestion and reduce potential secondary incidents, but also can meet the general public’s high expectations.

continued on p. 2
CUTR was retained by the Florida Department of Transportation to conduct an evaluation of the effectiveness of the route diversion plans using CORSIM microscopic simulation. The findings from the CORSIM analysis indicated the route diversion plans developed by Sarasota County (Florida) are very effective in terms of traffic operations, reducing overall network delay by an average 21 percent.

Establishing alternate routes

As a result of major incidents, highway traffic may be diverted to local arterials, causing significant traffic congestion and resulting in queues backed up on the local roadway network. Both diverted and local motorists are often frustrated because no alternate routes are established, and the existing signal timing plans are not adequate for the large surge in traffic caused by the diversion.

To alleviate or avoid these problems, the most applicable alternate routes need to be planned and established by the agencies responding to the incident (Highway Patrol, state Department of Transportation, County public works department, emergency operations center, emergency medical service, fire-rescue, sheriff), each of which will bring a unique perspective to route selection. It is a common practice to establish alternate routes through regional Traffic Incident Management (TIM) teams. A detailed signing plan also should be developed to support the operation of alternate routes, which may include the use of fixed dynamic message signs (DMS), portable DMS, blank-out signs (a small and inexpensive dynamic message sign), alternate route markers, and other portable signs.

Signal timing strategies and techniques

For existing coordinated signals, the strategy of optimal signal coordination based on anticipated diverted traffic volumes is generally better than signals with optimal free operation and much better than no signal timing adjustments at all. Different special incident timing plans can be developed in advance based on different scenarios of route diversion. Because the coordinated signals are generally in a closed-loop system (or other computer controlled system), special incident timing plans can be turned on and off from a traffic management center (TMC) to respond to diverted traffic.

For most isolated signals, there are generally no communications between the signals and a TMC. When a route diversion occurs, it will be too late to implement incident timing plans in the field due to traffic congestion. Special incident signal timing plans should be designed and implemented through controller settings in advance to automatically adjust maximum green times based on detected traffic volumes.

Implementing route diversion based on incident levels

It is helpful to responding agencies to classify incidents according to levels of incident severity. The levels might also define different traffic management procedures or imply different lengths of expected incident duration, traffic impact, and resources needed. Generally, the level of impact to a roadway from an incident can be divided to at least three levels as follows:
A route diversion should be considered for a Level 2 incident and should be implemented as soon as possible for a Level 3 incident. When an official route diversion is implemented, agencies should put appropriate signal timing changes and guide signs into effect. Balance between the route diversion and available capacity on the alternate route is crucial for the entire network mobility.

Hence, proper delivery of incident information through dynamic message signs to motorists will help to achieve the desired traffic diversion.

### Route Diversion Operational Timeline

![Route Diversion Operational Timeline Diagram]

After the notification of route diversion, transportation agencies should implement pre-designed incident timing plans, disseminate traveler information, monitor alternate routes, improve diversion efficiency, maintain communication with other responding agencies, and, finally, restore proper signal timing plans after the traffic flow has returned to normal conditions.

**Case study**

A tanker truck explosion on I-75 in Sarasota County (Florida) illustrates a successful route diversion. At approximately 6:45 a.m. on a February 2004 morning, a tanker truck crashed and exploded on the southbound bridge of I-75 just north of Exit 182 in North Port, resulting in the closure of southbound I-75 for four days due to severe bridge damage and forcing all southbound I-75 traffic to divert to alternate routes until a median crossover could be constructed. During the diversion period, most signals along the alternate routes automatically adjusted their maximum green times between the existing maximum green and a user-input upper limit of maximum green setting to respond to the dramatic increase in traffic volumes once motorists started to divert to alternate routes. Fine-tuning of the upper limit of maximum green times by traffic engineers and technicians also was essential, especially for the critical signalized intersections along alternate routes. To increase southbound left-turn capacity for diverted traffic at the US41 and
River Road intersection, the southbound through and right-turn shared lane were reassigned to a southbound left-turn, through and right-turn shared lane (see map). Significant alleviation of traffic congestion on alternate routes was achieved through advance planning, quick incident response, established alternate routes, effective signal timing strategies and techniques, close monitoring of diverted traffic flow, and improvements to traffic operations during the interstate route diversion.

**Lessons learned**

There were a number of lessons to be learned in from the Sarasota case study:

- Communication, coordination, and cooperation among responding agencies are required.
- Statewide and regional Traffic Incident Management (TIM) teams are essential.
- Effective dissemination of incident information is critical.
- Pre-designed incident timing plans on alternate routes can provide effective initial responses.
- Monitoring diverted traffic and adjusting signal timing plans during traffic diversion is critical.
- For isolated signals, setting up signal controllers that automatically adjust the maximum green times based on the detected diverted traffic on the alternate routes was extremely effective.
- Transportation agencies should prepare other potential alternate routes used by motorists.
- Efficiency of alternate routes can be improved by lane reassignment and signal operation.
- Adequate left-turn bays at major signalized intersections on alternate routes should be considered during a roadway planning stage to handle the interstate route diversion.

For further information, please contact CUTR Senior Researcher Pei-Sung Lin at (813) 974-4910, lin@cutr.usf.edu, or ITS, Traffic Operations & Safety Program Director Larry Hagen at (813) 974-9815, hagen@cutr.usf.edu.
Economic impacts of Tampa International Airport

Users and observers agree—Tampa International Airport (TPA) is one of the world’s premier aviation facilities. In 2003, readers of Condé Nast Traveler rated TPA among the best airports in North America, and the International Air Transport Association’s 2003 survey rated TPA as the best in the United States.

In 2004, more than 17 million passengers utilized TPA, an increase of 12 percent from 2003. For the first four months of 2005, passenger traffic at TPA increased 11 percent from 2004 levels. The ongoing growth in passenger traffic at TPA is a function of the quality of facilities and services offered by both the airport and airlines and has many positive economic implications for the airport, its tenants, and the greater Tampa Bay region.

To ensure TPA remains a premier facility in the future, the Hillsborough County Aviation Authority retained Ricondo & Associates in 2004 to prepare a Master Plan Update for TPA. As part of the Master Plan Study, CUTR was retained to estimate the direct, indirect, and induced economic impacts associated with the activities and operations of TPA.

“We wanted to partner with CUTR on this initiative because of their expertise and outstanding reputation,” said Principal Pete Ricondo. “CUTR’s efforts were designed to help us demonstrate the airport’s contribution to the level of economic activity in the Tampa Bay region and facilitate a comparison of the airport’s economic impact prior and subsequent to September 11, 2001.”

To accomplish this task, CUTR researchers designed a project that complemented and expanded on previous work conducted in 1997 on behalf of TPA by Dr. Joseph DeSalvo of the University of South Florida.

“We were very satisfied with the work performed by USF in 1997,” said TPA Executive Director Louis Miller. “For this project we needed a research team with expertise in economic impact studies and an appreciation for the unique issues and challenges facing the aviation industry—that’s why we wanted CUTR to conduct the research.”

Methodology and results

The research approach was based on input/output (I/O) modeling techniques. This methodology allows estimating changes in total local economic activity caused by some economic change or activity in the area of interest. In this context, the activities associated with TPA represent a direct impact in the aggregate demand of the local economy. The activities of TPA require the local purchase of goods and services. These purchases cause changes in the overall economic activity of the area. This buying continues until leakages from the region (imports and value added) stop the cycle. I/O models provide estimates of this level of overall economic activity.

Economic impacts relate to the change in economic activity in the local economy resulting from changes in spending brought about by the airport. Thus, the direct impact of TPA is defined as the initial change in output,
measured by gross sales or expenditures that would have occurred in the impact area if the airport had not operated during a particular year. To be considered an impact, the change must occur within the boundaries of the impact area and solely because of the existence of the airport.

Because labor is the primary input to the production process, the county of residence of TPA employees was used as the basis for identifying the study impact area. Since more than 95 percent of TPA employees reside in either Hillsborough, Pinellas, or Pasco counties, this study sought to estimate the net economic impact of TPA on this three-county area.

Once the study area was defined, results from an airport tenant survey, airport passenger surveys, airport air cargo studies, and operating and capital expenditure data were used as inputs to an economic Input/Output model. Five fundamental impacts resulting from economic activities directly dependent upon TPA presence and operation in the area were identified:

- airport and airline operations
- on-airport activities
- visitors expenditures
- import/export activities
- capital improvement program expenditures

CUTR’s analysis estimated that direct impacts of these activities generated a total annual economic impact of $2.54 billion to the three-county area in FY 2003 (July 1, 2002-June 30, 2003). The total economic impact is comprised of direct, indirect, and induced impacts. The impact of TPA is equivalent to 1.8 percent of the production of goods and services for the three-county area.

TPA contributes 24,157 (1.6%) of the jobs in three-county impact area, including 4,995 workers directly employed at the airport facilities, with a ratio of 1,579 jobs per 1 million passengers served. The impact on labor income is estimated at about $853 million or 1.1 percent of the area’s total labor income.

The annual impact on output brought about by the Capital Improvement Program is approximately $287 million,

*continued on p.14*
Factors contributing to successful local transit circulators

Many communities throughout the country have either implemented or are considering implementing local transit circulator services in suburban areas. In 2004, the National Center for Transit Research at CUTR conducted a study of local transit circulator services provided in eight communities in Broward County (Florida) to learn what factors were most prominent in determining the success of a community shuttle system, as defined by the number of passengers per hour. Of the eight cities studied—Lauderhill, Dania Beach, Miramar, Cooper City, Coral Springs, Ft. Lauderdale, Margate, and Plantation—operational productivity varied from 6 to 23 passengers per hour.

Data were collected in the eight cities through site visits and interviews with passengers, bus operators, and local service managers, and Broward County Transit staff to learn as much as possible about the services offered and the nature of the communities being served. GIS analysis was conducted to create quarter-mile buffer zones with corresponding census block data for each route including demographic attributes such as income levels, population composition, vehicle ownership, renter and owner occupied units, and population density. Other subjects reviewed included the fare structure, how the service was promoted, how it was managed, connections with other transit services, trip attractors, and other nuances that might affect the passengers per hour performance.

The eight local circulator systems reviewed carried an average of 14.2 passengers per hour. In comparison, Broward County Transit carries approximately 35 passengers per hour on its regional transit system. However, local circulators are not expected to carry as many passengers per hour as regional transit systems since they use smaller buses that are more neighborhood-friendly and can

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<th>City</th>
<th>Population Density</th>
<th>Household Income</th>
<th>Owner without Car</th>
<th>Renter without Car</th>
<th>Service Frequency</th>
<th>Fare</th>
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<th>Days of Service</th>
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maneuver more easily in shopping centers and smaller streets. In terms of cost efficiency, the average cost per passenger on the local circulators was $2.18 compared to BCT’s average cost per passenger of $1.90, a remarkably competitive rate, particularly when considering paratransit costs approximately $17 per passenger.

The research indicates that density, income, and car ownership remain as significant to the success of local circulators as they do in larger regional fixed route transit systems, with density trumping all other factors. Connections with regional transit service also are very beneficial to increased passenger per hour performance, though it does not guarantee success if other factors are not prominent.

**Passengers**

A surprising finding is that the percentage of senior passengers using local circulators is, in almost all cases, far lower than what might have been originally expected. While many elderly residents do use these services, local circulators have actually become more used by commuting employees and by students. The free or low-cost service has been very helpful to service employees, while students who live within two miles of a school and are denied regular school bus service can now ride to school. The behavior of the students on the buses, particularly when they travel in large clusters, has proven to be problematic for the cities, but they have used a variety of techniques to minimize such challenges.

It does not appear that providing local circulator services in-house or through contracted services makes a great deal of difference in the success of the services. While there are pros and cons to both methods, the results in passengers per hour appear to be negligible.

**Promotions/advertising**

Most of the cities used the same methods of promoting their services, including direct mail notification to households, local newspaper advertisements, placing bus route maps and schedules at all city facilities, placing local circulator information on city websites, meeting with community groups, placing brochures and maps in major grocery stores, press releases and newspaper articles, and advertisements on cable television and public access cable channels.

Due to lack of funds for serious advertising, the cities take advantage of as many free opportunities as possible to promote the availability of their service. The community bus program’s greater opportunity for face-to-face meetings is a valuable way of creating a greater sense of relationship and partnership with various groups within the city. One city noted the importance of consistent branding of the service through vehicle design and all promotional materials. Another cited their belief that good customer relations, achieved through careful bus operator selection and thorough training processes, was key to their success.

**Service frequency**

Service frequency was very similar among the various cities studied. The effect of service span on ridership is difficult to analyze. Most cities that offer service at least 10 hours a day enjoy double-digit passengers per hour. All cities that offer less than 10 hours of service a day carry fewer than 10 passengers per hour. However, it would appear that the cities that have the better transit demographics would still outperform the other cities even if their hours were more limited.

**Fares**

Two of the eight local circulators charged a $.25 fare. The literature reflects that even small fares can have surprisingly dramatic effects on ridership. One city recently instituted a fare-free experiment, and it will be interesting to see if ridership increases substantially. Some of the cities might also wish to consider charging a fare if capacity becomes a critical issue for them.

For a complete description of all the findings of this research, visit the NCTR website at www.nctr.usf.edu. For further information on this project, contact NCTR Director Joel Volinski at (813) 974-9847, volinski@cutr.usf.edu.
Study examines impact of Bikes-on-Bus programs

Since their development in the mid-1980s, bikes-on-bus (BOB) programs have become a valuable service provided by transit agencies. By integrating transit with bicycles, agencies can expand their service area, attract new patrons, and stimulate more frequent use of transit services with relatively small investment and minimal administration.

The central feature of BOB programs is a rack to carry bicycles mounted to the front of buses. Nearly 40,000 buses at more than 300 transit agencies in the U.S. are equipped with bike racks, and an estimated 670,000 bikes-on-transit trips are provided each month.

Through a grant from the Florida Department of Transportation, CUTR recently examined this issue to help transit agencies by suggesting actions that can be implemented to maintain and improve the benefits of investments in BOB programs.

Eighteen agencies were invited to participate in a survey to collect data on the history and characteristics of each BOB program, program costs, policies and key issues, and program benefits. In addition, a random sample of BOB users was drawn from permit-holder databases provided by three Florida transit agencies. The 220 respondents provided data on the use of BOB, travel behavior, and demographics. These combined methodologies produced a number of important findings.

The primary investment that transit agencies make implementing BOB programs is the purchase of bicycle racks that are mounted on the front of buses at a cost of approximately $500 per rack. Transit agencies also must repair and replace damaged and worn racks, and small investments in administering and marketing BOB programs also must be made. Transit agencies have received good returns on their investments in integrating bicycling and transit.

Survey results
Survey results indicated that BOB programs provide a long-term and sustainable form of transportation for patrons, particularly patrons with low incomes and limited access to auto-

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*Estimated Monthly BOB Boardings, Selected Florida Agencies*
mobiles. BOB users are regular users of transit, with 65 percent using it four days or more and 40 percent making more than 10 trips per week on average. Nearly 75 percent of survey respondents use BOB to commute to work, and 60 percent of these commuters bicycle more than 1 mile to access transit, providing a clear validation of how BOB programs can expand the transit service area.

Nearly 22 percent of BOB users revealed that they would be willing to park their bicycles at bus stops if the bus racks were full. Transfer centers, major bus stations, and park-in-ride lots should be equipped with bike racks and lockers to encourage bikes-to-transit trips. Transit agencies that invest in bicycle parking and provide a large supply of quality racks and lockers that are placed in the right locations could see bike-to-transit trips eclipse bikes-on-bus boardings.

Overall, the investment by transit agencies in their BOB programs is very small compared to the returns they receive. However, it was evident from the survey that some key policies and issues need to be addressed:

**Limited rack capacities**—Approximately 26 percent of BOB users indicated that buses arriving at stops with full racks was a problem. Transit agencies are responding to this issue by installing three-bike capacity racks on buses along the most popular routes or by allowing patrons to bring their bicycles on board when the racks are full and the wheelchair area is vacant.

**BOB permit limitations**—Approximately one in four transit agencies require patrons to obtain a special permit that must be shown to the bus operator to use the BOB program. While BOB permits can limit liability and provide a means to educate patrons, permit requirements also restrict access to transit service. Nationally, the trend is to moving toward abandoning permits.

**Lack of secure bicycle parking**—the need for secure racks and lockers limits the ability of transit agencies to improve bicycle access to their services. While most agencies have a process to deal with abandoned bicycles, they do not have a proactive policy to prevent bicycle abandonment in the first place. Also, transfer centers, major bus stations, and park-in-ride lots should be equipped with bike racks and lockers to encourage bikes-to-transit trips.

**Recommendations**

The findings from this study allow for a number of recommendations on how transit agencies can improve the return on their investment in BOB programs.

- Collect BOB boarding data and track performance measures to determine program success.
- Increase rack capacity to allow more BOB users.
- Periodically survey BOB patrons for innovative ways of improving the service and identifying modifications.
- Experiment with a bikes-in-bus policy that allows patrons to bring their bicycle on board if the front-mounted racks are full and the wheelchair area is free.
- Provide secure bicycle parking and promote the bike-to-bus (BTB) strategy common in European nations that encourages patrons to bicycle to their bus stop but leave their bicycle parked at the stop or transfer center.

The total impact of BOB programs is far-reaching and has the potential for substantial societal benefits in terms of health, traffic congestion, and improving air quality. The recommendations from this study should help transit agencies facilitate the implementation and maintenance of successful BOB programs.

“The CUTR study is useful on several fronts,” said Ed Crawford of HARTline in Tampa. “We were leaning toward eliminating BOB permits, and the study confirmed that we were actually part of a national trend of permit elimination. Concerns expressed by our risk management department and operators regarding possible problems [resulting from eliminating permits] were largely put to rest by information from other transit properties.” HARTline also is interested in shifting more of its BOB users to a bike-to-bus strategy and found the report’s information useful in the agency’s discussions.

For further information or a copy of the final report, contact CUTR Research Associate Christopher Hagelin at (813) 974-2977, hagelin@cutr.usf.edu.
Workshop stresses transit emergency preparedness

The 4th Annual FDOT/FPTA/CUTR Professional Development Workshop was held June 7-9, 2005, at the Embassy Suites Hotel at the University of South Florida in Tampa. This year’s workshop successfully combined structured training courses with project/program specific presentations, as well as roundtable discussions and presentations in the areas of marketing, planning, operations, and transit maintenance.

The high point of the workshop was a well-timed general session that addressed emergency preparedness, utilizing a lesson learned format based on the 2004 hurricane season.

FDOT and CUTR staff discussed the role of public transportation is disaster preparedness and response activities. CUTR staff presented the results of an emergency planning questionnaire that surveyed Florida’s transit agencies, highlighting the issues the agencies faced and their methods of responding to those issues. Recommendations were made addressing public transportation’s role in pre-event, event, post-event, and long-term recovery and the lessons learned through their experiences. FDOT staff discussed their response efforts and the importance of close communication and coordination throughout the emergency preparedness and response modes. Participants in the session were encouraged to present their own experiences and knowledge gained during the 2004 Hurricane Season.

Based on the lessons learned, the following general recommendations were made:

- **Communication**—Limited pre-planning for communication exists among transit agencies, community transportation coordinators, and FDOT, including lack of up-to-date personal contact information and the inability to access computer databases due to lack of electricity. To be prepared for emergencies, hard copies of contact lists should be available and shared with individuals outside the agencies who will be participating in disaster response and recovery.

- **Coordination**—Systems were not in place to coordinate information among transit agency personnel, community transportation coordinators, the Commission for Transportation Disadvantaged, and FDOT. To address this, roles should be defined and a “communication tree” should be established to aid in preparation, provision of operation status reports, resource identification and mobilization, reconnaissance, inspection, and damage assessments.
Education—Involvement in and understanding of the Emergency Operation Centers’ (EOC) processes was inconsistent. Event responders often do not understand the locally-established EOC processes, Emergency Service Functions (ESF), and Incident Command Structures. The quality and availability of emergency plans is highly variable, the expectation and responsibilities of emergency responders is generally not well defined. As such, more pre- and post-event planning, coupled with effective training and mock drills, is critical.

Specialized Needs—Transit agencies have a unique role in dealing with people who have special needs. Improved coordination needs to occur to effectively identify and address those needs. Plans should be in effect for the resumption of critical health care functions, such as dialysis, and post-event coordination and management of persons with special needs in shelters is important.

Accounting and Record Keeping—Fiscally-responsible accounting procedures and record keeping must be in place. Mutual aid agreements should be established among responding entities; service and resource requests should be registered with the State and local EOC system; and timely reimbursements to private for-profit and non-profit agencies providing emergency services are a necessity.

Resource Planning and Deployment—At a minimum, agencies need to address communication devices, fuel, power supplies, parts and supplies for vehicles and other equipment, human resources (such as backup staff), extra buses and repair vehicles, and portable command centers.

Overall, the workshop provided a number of well-delivered training courses and breakout sessions. The workshop was attended by 177 people, and 26 of Florida’s transit agencies participated in the workshop, including representatives from the Florida Department of Transportation, the Florida Commission for Transportation Disadvantaged, and metropolitan planning organizations.

For more information on the hurricane study and the questionnaire discussed at the session, please contact CUTR Senior Research Associate Jay Goodwill, (813) 974-8755, jaygoodwill@cutr.usf.edu.

The quality and availability of emergency plans is highly variable, and the expectation and responsibilities of emergency responders is generally not well defined. As such, more pre- and post-event planning, coupled with effective training and mock drills, is critical.
2005/2006 USF transportation classes

CUTR and the USF Department of Civil & Environmental Engineering are pleased to announce the following transportation class schedule for the 2005/2006 academic year.

Fall 2005 Classes

- Transportation Engineering I (TTE4004), Monday/Wednesday, 2:00-3:15pm, Dr. Pendyala
- Transportation Engineering I (TTE4004), Tuesday/Thursday, 2:00-3:15pm, Mr. Hagen
- Transportation Systems Analysis (CGN6933), Tuesday/Thursday, 2:00-3:15pm, Dr. Chang
- Traffic System Engineering (TTE 5205), Tuesday, 5:00-7:50pm, Dr. Lu
- Transportation Planning & Economics (TTE 5501), Monday/Wednesday, 4:00-5:15pm, Dr. Pendyala
- Intelligent Transportation Systems (TTE 6270), Monday, 6:00-8:50pm, Dr. Lu
- Land Use & Transportation (TTE 6655), Wednesday, 5:00-7:50pm, Dr. Polzin
- Graduate Transportation Seminar (TTE6930), Monday, 11:00am – 12:00noon, Dr. Lu

Spring 2006 Classes

- Transportation Engineering II (TTE4005), Monday/Wednesday, 2:00-3:15pm, Dr. Lu
- Transportation & Society (CGN4933), Monday/Wednesday, 4:00-5:15pm, CUTR faculty
- Capstone Geotech/Transportation Design (CEG4850), Thursday, 6:00-8:50pm, Dr. Gunaratne
- Transportation Network Assignment (CGN6933), Tuesday/Thursday, 2:00-3:15pm, Dr. Chang
- Transportation Safety (TTE 6315), Tuesday, 5:00-7:50pm, Dr. Lu
- Access Management (TTE 5501), Thursday, 5:00-7:50pm, Ms. Williams
- Discrete Choice Models (TTE 6505), Monday/Wednesday, 3:00-4:15pm, Dr. Pendyala
- Computer Applications in Traffic Engineering (CGN6933), Wednesday, 5:00-7:50pm, Dr. Zhou
- Graduate Transportation Seminar (TTE6930), Monday, 11:00-11:50am, Dr. Lu

For further information, contact the USF Department of Civil & Environmental Engineering at (813) 974-2275.

2005 CUTR Transportation Achievement Award Dinner

Wednesday, October 26, 2005
Museum of Science & Industry, Tampa

Honoring U.S. Congressman John L. Mica

Featuring Special Guest Speaker
Denver Stutler, FDOT Secretary

Table sponsorships available.
For further information, contact CUTR
(813) 974-3120, pbball@cutr.usf.edu

U.S. Congressman John L. Mica
including indirect and induced effects. CIP average annual outlays generate a ratio of 19.8 jobs per $1 million of CIP expenditures.

TPA’s economic significance in promoting growth is represented by its contribution to the inbound and outbound movement of freight goods. In FY 2003, each 1,000 tons of goods imported by way of TPA contributed $4.1 million in total output, $1.3 million in labor income, and an additional 33 jobs. Each 1,000 tons of exports of locally produced goods contributed $6.1 million in total output, $2.2 million in labor income, and 39 additional jobs.

The economic impact of TPA has changed significantly since FY 1996. The airport’s economic impact in FY 1996 was $1.2 billion, compared with $2.54 billion in FY 2003, and growth has occurred in every category. The change in impacts between FY 1996 and FY 2003 represents a compounded annual growth rate of 10.8 percent, which reflects the strong growth in activity and capital development at TPA during this period.

For further information on this study, contact CUTR senior researchers Michael Audino at (813) 974-3275, audino@cutr.usf.edu, or Sisinnio Concas at (813) 974-7760, concas@cutr.usf.edu.

**CUTR welcomes new faculty**

Sachin Rai has joined CUTR’s ITS, Traffic Operations and Safety Program as a Research Associate. Specializing in transit operations, traffic operations, traffic safety, and intelligent transportation systems, he holds master’s and bachelor’s degrees in Civil Engineering from the Institute of Engineering and Technology in India.

**CUTR presents the 3rd National GIS in Transit Conference**

**November 1-3, 2005**
**Renaissance Hotel, Tampa**

For information, contact
Molly Buffington
(813) 974-7810
buffington@cutr.usf.edu
NNTA provides commute-related solutions to local area

The New North Transportation Alliance (NNTA) is a public-private partnership that provides a forum to address the transportation needs of the fast-growing New North area of Tampa. New North is a major destination area in Hillsborough County, containing a high concentration of employment and commercial activity where traffic congestion frequently occurs. Members of the Alliance include area businesses, malls, hospitals, universities, communities and others whose interests are served by addressing congestion and mobility as a group. Housed at the USF Center for Urban Transportation Research, the group is funded by the federal Congestion Mitigation and Air Quality (CMAQ) and the local governments of Hillsborough County and the City of Tampa.

NNTA members meet and work continuously to improve traffic flow on area roadways; develop parking management strategies; promote economic vitality while reducing congestion on roadways; make public transit, bicycling, and walking viable commute options for more people; and make the area more attractive to residents, employers, and commuters. The Alliance encourages community and business involvement with NNTA, and, depending on the extent of their programs, businesses and organizations that offer commuter benefit programs to their employees receive recognition as a Clean Air Partner or as one of the nation’s Best Workplaces for Commuters.

A number of programs and services are offered through NNTA, including:

- serving as liaison to local government agencies and transportation-related organizations
- providing commuter choice business advice
- organizing commuter events
- providing individual commuter planning assistance
- providing access to the regional Emergency Ride Home program
- producing and distributing e-newsletters and travel updates
- conducting employer forums

Among the group’s recent activities is the Bike Racks for Businesses pilot program, in which NNTA provides free bike racks to University-area businesses that agree to install them in convenient locations for bicyclists. Of the 50 racks available, more than half have been distributed. By providing safe bicycle parking for cyclists, the Bike Racks for Businesses program hopes to make bicycling a more viable commute option and also to encourage the more than 800 people that bicycle daily to the USF campus to use their bicycles for off-campus transportation as well.

For more information on NNTA, contact CUTR Senior Research Associate Phil Winters at (813) 974-9811, winters@cutr.usf.edu.

New North Transportation Alliance
2005 CUTR Transportation Achievement Award honors U.S. Congressman Mica

CUTR is pleased to announce that U.S. Congressman John L. Mica has been named recipient of the 2005 CUTR Transportation Achievement Award in recognition of his national and Florida leadership in transportation issues. Currently in his 7th term in Congress, he serves on the Committee on Transportation and Infrastructure, the Government Reform Committee, and the House Administration Committee.

Since 2001, Mica has been the Chair of the Aviation Subcommittee, which has oversight of all matters regarding civil aviation. He spearheaded legislative efforts to improve U.S. infrastructure and to expedite Florida’s highway and interstate expansion and authored the Aviation and Transportation Security Act, which created the Transportation Security Administration to focus on protecting aviation and all modes of transportation from future terrorist attacks.

The 2005 CUTR Transportation Achievement Award Dinner formally recognizing Congressman Mica will be held on Wednesday, October 26, 2005, at the Museum of Science & Industry in Tampa. Invitations for table sponsorship and individual tickets will be mailed in August.

For further information on the event or to become a table sponsor, contact CUTR at (813) 974-3120, pbhall@cutr.usf.edu.