History was made on Nov. 3, 2007, when part of the new Providence River Bridge, or IWay bridge, was open to traffic. The bridge was a major component of the IWay project — the most expensive highway project in the history of Rhode Island.

As pictured on the front cover, getting the bridge in place was no easy feat. On Aug. 27, 2006, two barges and several tugboats moved the 4.9 million pound bridge 12 miles up Narragansett Bay, from the Davisville Pier at Quonset Point, where it had been assembled.

The trip took three hours, which was two hours less than expected, thanks to calm seas. The company responsible for moving the bridge was Mammoet Corp. of the Netherlands, which specializes in moving very large, heavy objects such as offshore oil-drilling rigs.

The bridge’s dramatic delivery earned the project some well-deserved recognition.

The huge undertaking was the subject of a History Channel documentary series seen by millions called “Mega Movers.”

The Northeast Association of State Transportation Officials (NASTO) awarded the Rhode Island Department of Transportation (RIDOT) first prize for “Innovative Management.”

The association represents all six New England states, Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania and the Canadian provinces of Ontario and Quebec.

The competition celebrates excellence in transportation projects throughout the country in the categories of On Time, On Budget and Innovative Management.

The latter of these, for which RIDOT was lauded, “recognizes new policies or procedures and creative transportation solutions that enhance the effective movement of people, goods and services; increase transportation efficiency and choices; improve safety, accessibility and aid traffic management; and enhance community life.”

Photos of the IWay bridge were provided by the Rhode Island Department of Transportation.
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Two students work on their model bridge in the Summer Transportation Institute.
The URI Transportation Center was established in 1999 to conduct multidisciplinary education, research, technology transfer and outreach for surface transportation systems and advanced transportation infrastructure.

The Center is one of 66 national centers supported by the U.S. Department of Transportation through the University Transportation Centers Program.

An Executive Director manages the overall operations of the Center, an Outreach Director directs all technology transfer activities and the assistant director oversees the research process. The Center has an Executive Board, chaired by the URI Vice President for Administration, whose members represent all of the Center’s stakeholder groups.

**Theme**
“Surface Intermodal Transportation Systems and Advanced Transportation Infrastructure with Special Reference to the Marine Environment.

**Mission**
“To advance U.S. technology and expertise in the many disciplines composing transportation through the mechanisms of education, research, and technology transfer at a university-based center of excellence.”

**National UTC Goals**

**Education:** a multidisciplinary program of course work and experiential learning that reinforces the transportation theme of the Center.

**Human Resources:** an increased number of students, faculty and staff who are attracted to and substantively involved in the undergraduate, graduate, and professional programs of the Center.

**Diversity:** students, faculty, and staff who reflect the growing diversity of the U.S. workforce and are substantively involved in the undergraduate, graduate, and professional programs of the Center.

**Research Selection:** an objective process for selecting and reviewing research that balances multiple objectives of the program.

**Research Performance:** an ongoing program of basic and applied research, the products of which are judged by peers or other experts in the field to advance the body of knowledge in transportation.

**Technology Transfer:** availability of research results to potential users in a form that can be directly implemented, utilized, or otherwise applied.
The URI Transportation Center continued its multifaceted agenda in 2007 focusing on education, research and outreach/technology transfer. Activities in 2007 opened up opportunities for our researchers, educators and industry partners to take their collaborations to new heights.

Outreach and technology transfer continue to include managing National Highway Institute training courses and the Local Training Assistance Program. The URI Transportation Center (URI) has expanded its workforce development initiatives through a partnership with the Rhode Island Department of Transportation (RIDOT) and the University of Rhode Island Guaranteed Admissions Program (GAP). Through after school programming in middle and high schools, we have been able to introduce a “Special Program in Transportation Advancement.” This program introduces the students to the wide range of career options in the transportation sector.

Educational initiatives involved multiple audiences. The College of Business Administration’s major in supply chain management was officially launched in 2007. The overall program focuses on the movement of goods and services in a global economy which, of course, means that transportation is a major component of the program. Two new courses specifically dealing with transportation issues are core requirements for supply chain undergraduates. Both of these highlights are specifically addressed in this report in more detail. For the College of Engineering, the URI Transportation Center collaborated with the RIDOT and the Rhode Island Consulting Engineers organization to hold the first Engineering Career Day on the URI campus. Students from 11 high schools came to the URI campus to learn about transportation engineering careers through hands-on “Learning Laboratories” in traffic management, environmental engineering, multi-modal planning, surveying, etc.

On the research front, the URI Transportation Center reached out to faculty in Architecture and Landscape Planning making it possible for students and faculty to participate in a research project that investigated transportation infrastructure for our capital city, Providence.

In research for 2007, 89 previously funded projects are complete with final reports available on the URI Transportation Center website and 11 projects are on-going. The completed and on-going research efforts resulted in numerous presentations and publications, and requests for URI Transportation Center researchers to serve as experts on transportation topics. As an adjunct to our research programs, the student exchange program with the University of Puerto Rico-Mayaguez, in its fourth year, once again brought together students and URI transportation researchers with the support of the D.D. Eisenhower Transportation Fellowship Program. This exchange program broadens all of our horizons.

Some other exciting “firsts” for the URI Transportation Center in 2007 was an Iraqi Technical visit, a technology and research exchange with the Czech Republic, and a very successful series of activities during Transportation Week. These and other accomplishments of the URI Transportation Center for the period January 1 to December 31, 2007 are discussed in the following report.
**Executive Board**

The URITC Executive Board is composed of the principal University and public sector stakeholders. The group provides advice to the President of the University of Rhode Island and to the URITC Executive Director in terms of the goals and overall objectives of the Center’s programs.

**Robert Weygand, Chair**  
URI Vice President, Administration

**Jerome Williams**  
Director, RI Department of Transportation

**Lucy Garliauskas**  
Division Administrator, Rhode Island Division, Federal Highway Administration (FHWA)

**Mark M. Higgins**  
Associate Dean, URI College of Business Administration

**Phillip Kydd**  
Assistant Director, Rhode Island Department of Transportation (RIDOT)

**Bahram Nassersharif**  
Dean, URI College of Engineering

**Jared Rhodes**  
Chief, Rhode Island Statewide Planning Program

**Peter Alfonso**  
URI Vice President, Research and Economic Development

**Kevin Smith**  
CVS Senior Vice President of Supply Chain and Logistics

**URITC Staff**

**Deborah Rosen**  
Executive Director

**Jerri Paquin**  
Assistant Director

**Jeff Cathcart**  
Director, Transportation Technical Assistance and Outreach

**Nancy Murphy**  
Fiscal Management Officer

**Tory Perrotta**  
Senior Wordprocessing Typist

**John S. Peterson**  
Senior Information Technologist
Highlights
National Transportation Week Breakfast

As part of National Transportation Week, the URITC sponsored the 7th annual National Transportation Week breakfast on May 16 at the Radisson Airport Hotel in Warwick. The topic of the breakfast was “A Nation on the Move.”

This year’s event attracted more than 140 members of the Rhode Island transportation community including leaders from the federal and state transportation agencies and transportation practitioners and engineers from private industries.

URI President, Dr. Robert Carothers, welcomed the group. Phillip Kydd, Assistant Director of the Rhode Island Department of Transportation (RIDOT), made the opening remarks, highlighting the “state of transportation” in Rhode Island. Deborah Rosen, Executive Director of the URI Transportation Center, gave the audience an update on URITC research and outreach conducted during the year.

Lucy Garliauskas, FHWA’s Rhode Island Division Administrator, introduced the keynote speaker, Peter “Jack” Basso, Director of Management and Business Development and formally of AASHTO, Washington D.C. Mr. Basso spoke on the transportation system in America, entitled “A Nation on the Move.”

The event concluded with the presentation of the 2006 FHWA Awards. Below is a list of winners.

Highway Safety Award
Colonel Steven M. Pare

Excellence Award
Rhode Island Consulting Engineers (RICE)

Pioneering Award
Cardi Corporation, Mammoet Transport

Innovators Award
Cashman Equipment Corp.

Quality
D’Ambra Construction

This photo followed the presentation of the Pioneering Award. Pictured from left, Richard Zondag, Director of Operations for Mammoet Transport; RIDOT Assistant Director Phillip Kydd, a presenter; Antonio Cardi, President of Cardi Construction; Stephen Cardi II, Executive Vice President of Cardi Construction; RIDOT Chief Engineer Edmund T. Parker, a presenter; and Berend Schuring, Project Manager for Mammoet Transport.

Rhode Island State Police Colonel Steven M. Paré (center) received the Highway Safety Award from RIDOT Assistant Director Phillip Kydd (left) and RIDOT Chief Engineer Edmund T. Parker (right).
As part of National Transportation Week, middle school students were made aware of the importance of transportation and the career options available in transportation through a robotics competition and poster contest.

Robots were built by teams of middle school students throughout Rhode Island. The groups programmed their robots to perform transportation functions, such as moving disabled vehicles, plowing snow on an airstrip, crossing railroad tracks and unloading cargo. The teams were awarded points based on how well their robot completed each task within the time limit. Students also competed in a poster contest in which they had to create a transportation-related poster.

Participating schools included:
Barrington Middle School
Birchwood Middle School
Broad Rock Middle School
Cole Middle School
Knotty Oak Middle School
Martin Middle School
Our Lady of Mercy School
Park View Middle School (2 teams)
Perry Middle School
Ricci Middle School
Riverside Middle School (2 teams)
Westerly Middle School
Winman Jr. High
The purpose of the first annual Engineering Career Day, held on May 15, 2007, was to expose high school freshmen, sophomores and juniors to the field of transportation engineering and to develop interest both in the choice of engineering as a field of study at the college level and, more specifically, in the choice of transportation engineering as a career path.

Safe and efficient transportation systems are vital to all societies throughout the world and are key elements in any successful economy. Transportation engineering is the exciting field within civil engineering that deals with the planning, design and construction of new transportation facilities and improvements to existing facilities for all modes of transportation.

The event welcomed over 100 students from 11 Rhode Island high schools, including students from the Guaranteed Admissions Program/Talent Development program. The program for Engineering Career Day included presentations and hands-on activities in the many disciplines that comprise transportation engineering, all provided by professionals in the field from 10 of Rhode Island’s top engineering firms.

Engineering Career Day was sponsored by the Rhode Island Department of Transportation (RIDOT), the Rhode Island Consulting Engineers (RICE), the University of Rhode Island Transportation Center (URITC), the University of Rhode Island's College of Engineering, and the Federal Highway Administration (FHWA).

The first annual Engineering Career Day was a huge success. The URITC hopes to continue to generate an increased interest in the many rewarding careers the engineering profession has to offer.
For two days during National Transportation Week in mid-May, the Rhode Island Department of Transportation’s (RIDOT) Coventry facility was once again home to the RIDOT and Federal Highway Administration sponsored program, known as Construction Career Days (CCD).

The seventh annual event welcomed more than 1,040 students from 47 Rhode Island high schools. Upon arrival, the students were given a duffle bag with a CCD t-shirt, hardhat, work gloves, safety glasses and career information. They were then able to operate a wide range of construction equipment such as backhoes, excavators, pavers and bucket trucks. Inside the facility, there were a variety of booths and tables to showcase welding, plumbing, electrical, landscaping and other disciplines.

The purpose of Construction Career Days is to expose high school students to the transportation trades industry, with the hope of attracting them to jobs in the field. Annually, there is a national need to fill 250,000 job openings in the construction industry.

CCD events started in Texas, in 1999, when the Texas Department of Transportation had trouble getting bids on jobs because of a shortage of skilled workers.
In 2007, a record number of Construction Career Day (CCD) events (49) were held in a record number of states (30). A reported 49,064 students representing 1,354 schools attended the events. Both figures shattered the previous high marks from 2006.

CCD events are known for their ability to highlight exciting construction careers to high school students. As the success and popularity of CCDs have increased, the Federal Highway Administration recognized the need to have a centralized source of support and information.

In partnership with the Rhode Island Department of Transportation (RIDOT), the University of Rhode Island Transportation Center (URI TC), the center will provide an advisory group, on-call technical assistance, a national website, a newsletter, a national workshop, and a database to store the collective outputs of individual CCD sites.

The national center is helping continued growth of events across the United States by acting as a clearing house of ideas. The Center also tracks individual CCD events, keeping totals and other statistics. “How to” guides and other marketing materials are also produced and shared by the individual CCD sites.

Pennsylvania held its first Career Day event in 2007. It drew 520 students from 32 schools.

Pictured above: Massachusetts has been holding CCD events since 2003. Their event on April 26, 2007 attracted 1,366 students from 105 schools, which is their greatest turnout to date.

Pictured right: Hawaii held its first CCD event on October 25-26, 2007 at Honolulu Community College. More than 700 Oahu high school students from 23 different schools were introduced to the construction industry and the many job opportunities available. The students experienced three areas: educational exhibits, construction trades and heavy equipment.
In March, the URITC sponsored the Transportation Engineering Challenge for middle school SMILE (Science and Math Investigative Learning Experiences) students.

The students were given the task of designing, building and testing a scale model of an International Space Station (ISS) module and design and construct a cooling system that will maintain a temperature of 18 to 24 degrees celsius.

URI students from engineering and other majors guided SMILE students in this engineering task. Dr. Faye Boudreaux-Bartels, electrical engineering, and Dr. Yan Sun, biomedical engineering, gave advice to the SMILE students. Each SMILE team was divided into subgroups to tackle the different tasks involved in the challenge.

Electrical System students created the circuit for powering the fan with an external switch, and designed a motor mount to hold the motor while connecting to the fan. For circulation, students explored fan design by viewing examples. They used their previous knowledge of how air moves by convection and what makes air flow more easily. They also created duct work and housing to hold the fan, and worked with the electrical team to place the motor holder.

The Equipment Design subgroup created the cold water/ice storage. Students used their knowledge of conduction to increase surface area, and they worked with the electrical and the circulation team members to meet their storage needs. After testing their cooling system several times, each group made a report that included the initial heating test graph and data sheet, cooling test graph and data sheet, sketches of possible designs, and final design sheet. Also, based on a given orbit cycle graph of the ISS, students developed a time control system that regulates the activation of the cooling system.

Another component of the Challenge was the transportation logistics of a heating and cooling system assembly for the ISS. SMILE students needed to optimize the total transportation path and cost by choosing an optimal NASA assembly center. They made use of information technology tools, such as Google Earth. Cost and distances were aggregated on an Excel spreadsheet. In the scenario, the final test was done at the Kennedy Space Center at Cape Canaveral.

Components for the pilot model of the real space station cooling system would be supplied by different companies around the nation. Like in other manufacturing tasks, components are shipped from suppliers to a central assembly point before being shipped to the final user. NASA has various centers around the nation where assembly of the pilot scale system could be built.

The transportation logistics challenge began prior to coming to the Transportation Engineering Challenge. Students selected one of the NASA centers as the optimal assembly point from a transportation point of view. Students had to determine if it was more cost-effective to transport all components to Cape Canaveral and assemble them there for the final test or assemble the components in a more central location and then transport the model to Cape Canaveral.

After a break, students completed their testing. By comparing temperature changes in each of the team modules, the most efficient cooling system was determined. Students did a “walk about” admiring the efforts of the other teams.
As part of a collaborative effort between the Dwight David Eisenhower Transportation Fellowship Program, the University of Puerto Rico-Mayagüez (UPRM) and the URITC, four students participated in summer internships at the University of Rhode Island. The students were selected through a competitive process and received Dwight David Eisenhower Transportation Fellowships.

Three of the fellows were from UPRM: Elizabeth Negron Diaz, Irene Cordero and Peter Morales Nieves. One of the students, Barbara Givens-Williams, was from Bennett College in North Carolina. The students lived on the URI campus and worked directly for URI faculty members conducting URITC sponsored research. The internships allowed the students to gain meaningful experience in ongoing transportation research programs and in RIDOT projects. The students also met federal and state transportation professionals.

Input from faculty, project advisors and from students indicated that this was a productive and enriching experience for all involved.

As part of the exchange program, two students from URI spent their summer studying at UPRM, Cory DiPietro and Adrienne Mundorf.

Mundorf, an Electrical Engineering and German major, did her internship on using satellite images to monitor a coral reef. According to Mundorf, a computer program will eventually be used to identify each part of the reef (live coral, dead coral, mangrove, sea grass, and other parts) using the wavelengths reflected by each material.

DiPietro, a Civil/Environmental Engineering and Spanish major, did his project on finding alternative methods of disposal of fly ash from coal-fired power plants, specifically the use of prepared fly ash and aggregate as an alternative daily cover in municipal solid waste landfills.

Each student gave a Power Point presentation of their transportation-related project at the conclusion of their internship.
Central European Technical Tour

On Sept. 6-14, 2007, the Federal Highway Administration Rhode Island Division Office (FHWA-RI), Federal Highway Administration Resource Center Safety Office (FHWA-RC), Virginia Transportation Research Council (VTRC), Rhode Island Local Technical Assistance Program (RI-LTAP) and the Texas Transportation Institute (TTI) participated in the Central European T2 Meeting and round table discussions held in the Czech Republic.

The group met with Czech Republic Ministry of Transport officials in Prague; toured the privatized CDV research facilities in Brno and Tisnov; and toured several locations of roundabouts, bridges, tunnels and different types of asphalt and concrete pavements.

FHWA has a cooperative program with three Central European countries, the Slovak Republic, Hungary and the Czech Republic. The goal of FHWA’s cooperation is to improve its access to road transportation technology, including institutional and program building activities, which can facilitate conditions for sustainable development, technology transfer, and enhance the flow of goods and information among countries for international trade and technology.

The primary purpose of the visit was to continue T2 support and offer the team the opportunity to learn about technology transfer activities in the Central European T2 Group. The secondary objective included the opportunity to meet with officials to discuss potential joint venture partnerships. Some of the benefits include a discussion of “road safety and roundabouts,” workforce development and an International Summer Institute, Asphalt Testing Lab cooperation with TTI, Hungarian bridge work, and a proposal for VTRC to work cooperatively in nanotechnology of concrete analysis.

The Czech Republic has considered having high school students use driver simulators (such as the one shown) to meet the required hours of behind-the-wheel driving for the road test. Rhode Island indicated an interest in purchasing the $10,000 simulator to evaluate its use in Rhode Island schools.

The Central European market offers many partnering opportunities. For example, the Organization for Economic Cooperation and Development recently published a report on speed management. The parties believe that shared effort in examining the “toolbox” in this document and in potential trial applications would be valuable.

Each team member that participated in the trip has identified market opportunities within their disciplines and developed a working relationship with a Central European contact. Some of the issues identified may take several years to develop. Other issues, such as sharing information and newsletters, can be implemented immediately.

The complete report from the Czech Republic trip can be found online at www.uritc.edu/t2center/. The report is titled Czech Republic FHWA Study Team Report.
Iraqi Technical Tour

In July of 2007, technology exchange officials from Iraq and the United States were brought together for a technical tour by the Federal Highway Administration (FHWA) Office of International Programs (OIP) with coordination from the Rhode Island Division Office and the Rhode Island Department of Transportation.

The goals of the conference were to:
1. Exchange information on leading edge technologies and best practices, and to promote multilateral twinning relationships between the United States and Iraq.
2. Discuss specific themes of interest, including safety, congestion, maintenance and private public partnerships.

FHWA, through the OIP, facilitates cooperative “twinning” partnerships between the U.S. and partners abroad.

The itinerary of the Iraqi visitors covered four states and many meetings, workshops and discussions over a three week period.

**Week One**
- July 9 Arrival in Washington D.C.
- July 10 Arrive at FHWA Headquarters for meeting with FHWA personnel
- July 11 Meeting with NHI personnel
- July 12 Tour of Turner Fairbank Facilities
- July 13 Meetings with Federal Lands Reps
- July 14 Rest Day
- July 15 Travel to Florida

**Week Two**
- July 16 Meetings with Florida LTAP Personnel
- July 17 Florida LTAP meetings continue
- July 18 Travel to Rhode Island
- July 19 Meetings with R.I. LTAP Personnel
- July 20 R.I. LTAP University Meetings continue
- July 21 Travel to Chicago for 2007 Annual LTAP Conference
- July 22 Rest Day

**Week Three**
- July 23 LTAP/TTAP Conference
- July 24 LTAP/TTAP Conference
- July 25 LTAP/TTAP Conference
- July 26 LTAP/TTAP Conference
- July 27 Depart for Amman and return to Baghdad

Visiting from Iraq were Hamid AbdulZahra Khalaf Al-Darraji, a civil engineer; Madiha Elwy Obaid Al Shammry, a civil highway engineer; Majeed Hameed Jasim Mamoori, Director of Information Technology Center/Ministry of Construction and Housing; Ayam Ali Qassim Niyazi, Director of Training Center in IT Center/MoCh; and Horah Fadhil Raoof Al-Talabani, Director of Building – Ministry of Housing and Construction.
Amy Thompson, a Ph.D. candidate in the University of Rhode Island’s Department of Industrial and Systems Engineering, was named URITC’s “Student of the Year” for 2007.

Each year at the annual winter meeting of the Transportation Research Board, the U.S. Department of Transportation honors the most outstanding student from each participating University Transportation Center for her/his achievements and promise for future contributions to the transportation field.

Students of the year are selected based on their accomplishments in such areas as technical merit and research, academic performance, professionalism and leadership.

With the honor comes a trip to the Transportation Research Board (TRB) meeting in Washington for an awards presentation and dinner and a $1,000 cash award.

Thompson, who is from Guilford, Conn., completed her Bachelor’s degree from URI in Industrial Engineering and her Master’s degree from URI in Manufacturing Engineering. Her undergraduate GPA was 3.47, earning graduation honors status. Her graduate GPA was 3.68.

During her academic career at URI, Thompson began looking at transportation and supply chain issues. While serving as an instructor for an undergraduate operations research class, the opportunity arose to address some of their parking lot design issues at the local Electric Boat (EB) facility. Although not trained as a transportation engineer, Thompson conducted a literature review of the major topics associated with this project, and presented them to a team of undergraduates in the class. Those students proceeded to visit the company with Thompson and collect data about employee arrival and departure rates, traffic behavior, and intersection signal control. The student team developed a new parking lot design recommendation and built a simulation model of the proposed traffic flows.

Thompson later revised and improved the undergraduates’ model, presented it to the company, and received high accolades from the engineers there. A poster presentation at the regional American Society for Engineering Education conference regarding this project received an honorable mention and small monetary award.

For her dissertation research, Thompson has been working on a new extension of the Analytic Hierarchy Process, and applying this methodology to global supply chain and transportation flexibility problems. Thompson worked extensively on the URITC project, “Global Transportation Network and Supply Chain Management.” She worked onsite with a major corporation and collected data regarding supply chain factors that she intends to integrate into her dissertation.

“Amy excels at research tasks, is able to transform real world problems into appropriate and accurate mathematical models, and is then able to present solutions and recommendations to a wide variety of audiences,” said URI professor Valerie Maier-Speredelozzi, who nominated Thompson for the award.

The URITC is proud to name Amy Thompson this year’s “Student of the Year.”
The 2007 University of Rhode Island (URI) Summer Transportation Institute (STI) focused on creating interest in the transportation field among middle school students. The goal was to provide opportunities that fostered awareness and knowledge of transportation careers and the respective education and training requirements.

Through two 2-week nonresidential sessions held on the URI campus, that may have been achieved. A diverse student population was provided with an introduction to the numerous careers in the field of transportation and the various modes of transportation in Rhode Island.

The fourth annual STI program provided numerous educational activities and allowed the students to interact with transportation professionals. Classroom instruction, guest speakers, field trips and hands-on projects were key components of the academic program.

Activities included:
- Introduction to bridges by a R.I. Department of Transportation bridge engineer
- Introduction to engineering careers by a City of Providence and a RIDOT engineer
- Computer bridge building contest
- Balsa wood bridge building contest
- Safety sessions at the Historic Kingston Railway Station
- Writing in daily journals
- Work zone safety sessions
- Tour of T.F. Green Airfield
- Hands-on activities at the New England Laborer’s Training Center
- Tour of Narragansett Bay, including the Jamestown Bridge and Plum Point Lighthouse
- Photograph activities with a digital camera

As part of the enhancement program, the participants experienced a multi-modal trip including riding a commuter rail, a subway, a van and walking. Students were also introduced to university life at URI. They visited dorms, classrooms and sports facilities, met staff and ate in a dining hall. Students also had the opportunity to experience the facilities at the New England Laborers’ Training Center.

Despite the busy schedule, there was still time for students to build friendships, participate in sports and have fun. Participants enjoyed swimming in the pool at the Laborer’s Training Center, playing frisbee, baseball, basketball and flying wooden airplanes. They also had time for fun at the beach.

A total of 29 students, representing a multitude of ethnic backgrounds, from urban and suburban communities, participated. All participants expressed that their experience at the URI STI was educational, meaningful and fun.

Students in the STI measured the weight of their model bridges right before the bridges were put to the strength test.
AslA Award for “Transit Alternatives”

Sponsored by the URITC, URI Professor Richard Sheridan and students from his Landscape Architecture Junior Design Studio developed a plan in spring 2007 to introduce an environmentally responsible regional transit alternative, which would have the potential to strengthen communities and stimulate economic growth in the Providence, R.I. area.

The study, titled “Transit Alternatives for Southeast New England,” won the 2007 Student Award for Planning and Analysis from the Rhode Island chapter of the American Society of Landscape Architects. One of the judges commented, “This project is a good example of how student work can be used to help a community think about alternatives.”

The students researched three topics: current planning in Rhode Island and its municipalities, transit modes and their physical requirements, and key information about major U.S. metro areas. Garry Bliss, Director of Policy and Legislative Affairs for the Mayor of Providence, spoke with the students about the Transit 2020 Working Group, which was drafting its report at that time. Multiple visits to Providence were made to examine key corridors, to analyze Station Park, and to identify “hot spots,” which could become urban redevelopment or open-space design opportunities. Groups were formed to develop proposals for light rail, streetcars, streetscape design and station design.

The environmental impact made by a new transit system was a major consideration of the study. The student’s research concluded that the new transit system would have a positive effect on local air and water quality. In addition, it would be a component of Rhode Island’s efforts to combat global climate change and adapt to a post-oil era. These larger impacts would result from the changes in settlement patterns that rail stations provoke.

Professor Sheridan and his students collaborated on this research project with Jason Hellendrung, of the Boston-based architecture firm Sasaki Associates. They also had the cooperation of the United States Department of Transportation.

In August 2007, the professor and some of his students presented their proposal at the North Atlantic Transportation Planning Officials (NATPO) annual national conference, held in Providence, R.I. They are scheduled to give another presentation to the Council of Educators in Landscape Architecture (CELA) in January 2009.

From left, students Steven D’Ambrosia, Benjamin Morton and Jennifer Gamble, who assembled the report during the summer, after the studio semester.
Supply Chain Management

Responding to the increasing complexity and importance of the movement of products, the URITC awarded a grant to URI’s College of Business Administration to create a Supply Chain Management major.

Deborah Rosen, who is not only the executive director of the URITC, but a professor of Marketing at URI, was instrumental in establishing the new major.

The College of Business Administration redefined its undergraduate Operations Management major to focus specifically on Supply Chain Management. The shift in focus acknowledges the needs of industry not only in Rhode Island but also around the world.

Supply Chain Management is the process of controlling all movement and storage of raw materials, work-in-process inventory and finished goods from point-of-origin to point-of-consumption. The major encompasses the strategic planning, design, operations, and improvement of all activities involved in the procurement, manufacture, and delivery of goods and services to meet customer requirements.

Among some of the courses are Customer Relationship Management, Supply Chain Network Modeling, Principles of Transportation and International Transportation. Supply Chain Management will also be offered as a specialty in the masters of business administration program.

An advisory council made up of industry experts was established to oversee the new direction for the major. The council has been able to help ensure that the Supply Chain curriculum meets the needs of the industry.

The members of the advisory council are all involved in the industry, including Joseph Estrella, director of transportation and logistics at CVS; Don Schmidt, senior vice president of supply chain operations for Hasbro; and Brett Ryan, president of Newport Storm.

“People involved in the industry will help drive this major,” Rosen said.

In the spring, the council met to discuss the new curriculum and heard from Mike Gray, who has been with Dell Computers for more than 15 years and is considered an expert on Dell’s unique approach to supply chain management.

The advisory council is expected to meet a few times a year, coordinating with other career activities. Rosen is also expecting to start a student organization for the major in the fall. “Demonstrating distinct career paths will make this major popular,” Rosen said. “Great jobs are out there in this field.”
Aimed at Rhode Island department of public works employees and other transportation practitioners, LTAP training provides useful assistance and training in workforce development, best practices, and safety. Between 20-40 public works employees and transportation practitioners attend each workshop.

A few of the workshops offered in 2007 included:

**Construction Inspection for Local Agency Employees**
This one day session covered the major duties and responsibilities of an individual responsible for the quality of a project. It addressed the importance of understanding the plans, the contract, the order of operations, the materials to be used and the various quality control tests used in project inspections. The course dealt with the reality of everyday factors involving contractors and agencies.

**Dig Safe - What You Need to Know**
This workshop covered the importance of public safety and utility damage prevention; operational procedures of the Dig Safe Call Center; the legal responsibilities of both excavators and the member utilities of Dig Safe; the necessary information required to obtain a Dig Safe permit; Rhode Island State law requirements and excavation safety procedures; and proposed Rhode Island ‘Dig Safe’ legislation;

**Computer Training Workshops**
These one-day workshops included the basics of computer programs such as Word I, Excel I & II, and Access I & II.

The RIT2 Center, located at the URI Transportation Center, provided the following 79 LTAP workshops and events in 2007:

<table>
<thead>
<tr>
<th>Date</th>
<th>Workshop Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/04/07</td>
<td>Flagger Certification (Richmond)</td>
</tr>
<tr>
<td>1/08/07</td>
<td>Welding Certification Class (East Greenwich)</td>
</tr>
<tr>
<td>1/17/07</td>
<td>Tenth Annual RIPWA Indoor Expo</td>
</tr>
<tr>
<td>1/18/07</td>
<td>Excel Level I</td>
</tr>
<tr>
<td>1/25/07</td>
<td>Access Level I</td>
</tr>
<tr>
<td>1/26/07</td>
<td>Welding Class (Glocester)</td>
</tr>
<tr>
<td>2/01/07</td>
<td>Word Level I</td>
</tr>
<tr>
<td>2/03/07</td>
<td>Geosynthetics</td>
</tr>
<tr>
<td>2/05/07</td>
<td>Easy Method of Estimating Materials for Roadway Projects</td>
</tr>
<tr>
<td>2/06/07</td>
<td>Construction Inspection for Local Agency Employees</td>
</tr>
<tr>
<td>2/06/07</td>
<td>Preparing to Take the Hoisting Engineers Exam</td>
</tr>
<tr>
<td>2/08/07</td>
<td>Excel Level I</td>
</tr>
<tr>
<td>2/12/07</td>
<td>Flagger Certification (Hopkinton, Richmond, West Greenwich)</td>
</tr>
<tr>
<td>2/12/07</td>
<td>Flagger Certification (So. Kingstown)</td>
</tr>
<tr>
<td>2/13/07</td>
<td>Word Level I</td>
</tr>
<tr>
<td>2/15/07</td>
<td>Access Level I</td>
</tr>
<tr>
<td>2/15/07</td>
<td>Traffic Calming Design Guidelines (webcast)</td>
</tr>
<tr>
<td>2/28/07</td>
<td>All about Chain Saws and Demolition Saws</td>
</tr>
<tr>
<td>3/01/07</td>
<td>Flagger Certification (Bristol)</td>
</tr>
<tr>
<td>3/02-3/03/07</td>
<td>Basic Welding Class (Exeter)</td>
</tr>
<tr>
<td>3/06/07</td>
<td>All about Chain Saws and Demolition Saws</td>
</tr>
<tr>
<td>3/12/07</td>
<td>Forklift Certification (Pawtucket DPW)</td>
</tr>
<tr>
<td>3/13/07</td>
<td>Forklift Certification (Pawtucket DPW)</td>
</tr>
<tr>
<td>3/15/07</td>
<td>Flagger Certification (Jamestown)</td>
</tr>
<tr>
<td>3/15/07</td>
<td>Flagger Certification (Newport)</td>
</tr>
<tr>
<td>3/19/07</td>
<td>Forklift Certification (Pawtucket DPW)</td>
</tr>
</tbody>
</table>
LTAP / RIT2 Workshops

3/20/07  Forklift Certification (Pawtucket DPW)
3/20/07  Bucket Truck Safe Operations
3/21/07  Work Zone Safety
3/21-3/22/07  Basic Welding Class (Exeter)
3/22/07  Workzone Traffic Control for Low Volume Roads
3/23/07  Competent Person Training & Excavation Safety
3/28/07  Forklift Certification (Providence)
3/29/07  Forklift Certification (Providence)
4/1/07  Preparing to Take the Hoisting Engineers Exam
4/19/07  Flagger Certification (PWSB)
4/20/07  Flagger Certification (Coventry)
4/24/07  All about Chain Saws and Demolition Saws
4/27/07  Welding Certification (Cranston)
4/27/07  Flagger Certification (Pascoag)
4/27/07  Flagger Certification (No. Smithfield)

The Providence Rhodeo tested the drivers’ skills.

Bucket truck class

5/01/07  Workzone Traffic Control for Low Volume Roads (Carolina)
5/03/07  Workzone Traffic Control for Low Volume Roads
          (N. Smithfield)
5/04/07  Flagger Certification (Glocester)
5/07, 9/07/07  Basic Welding Class (Warwick)
5/08/07  All About Asphalt Pavement
5/14 - 5/15/07  Chain Saw Skills and Safety
5/15/07  Engineering Career Day
5/15/07  Workzone Traffic Control for Low Volume Roads (Coventry)
5/16/07  Workzone Traffic Control for Low Volume Roads (Coventry)
5/16-5/17/07  Construction Career Days
5/22/07  Dig Safe - What You Need to Know
5/31/07  Workzone Traffic Control for Low Volume Roads
          (RIDOT-Providence)
LTAP / RIT2 Workshops

5/31/07 Full-Depth Reclamation of Asphalt Pavement
6/02/07 Flagger Certification (Jamestown)
6/05/07 Equipment Show
6/15/07 Flagger Certification (Glocester)
6/21/07 Tractor Mower Safety Workshop
6/26/07 Flagger Certification (South Kingstown)
8/16/07 Grader Training Workshop (Day One)
8/17/07 Grader Training Workshop (Day Two)
8/21/07 Flagger Certification (Narragansett)
8/28/07 Flagger Certification (Charlestown)
8/30/07 Where and When to Use Traffic Signs, Signals & Markings
9/10-9/14/07 Public Works Academy (Cancelled)
9/26/07 Providence 2007 Snow Plow Rhodeo
9/26/07 3rd Annual Snow Plow Rhodeo (Providence)
10/09/07 Flagger Certification (Pascoag Electric)
10/17/07 13th Annual Snow Plow Rhodeo (Statewide)
10/25/07 Winter Snow & Ice Operation

Welding class in Foster, R.I.

11/06/07 Welding Certification (Foster)
11/07/07 Preparing for Winter
11/08/07 Air Brake Certification
11/20/07 Progressive Discipline and Effective Coaching
11/26, 12/03/07 Introduction to AutoCAD (RIDOT)
11/28/07 Safe Trenching Techniques
12/10, 12/17/07 Introduction to AutoCAD (RIDOT)
12/12/07 Stormwater Management at you PW's Facility
12/13/07 Word 2007 Level I
12/14/07 Excel Level II