Iway Progress

Work continued on the Rhode Island Department of Transportation (RIDOT) Iway project in 2008.

- On April 4, RIDOT announced a number of changes scheduled for the coming year, including the planned opening of a new ramp from I-95 South to I-195 East. This exit ramp will shift from the left to the right, which should reduce congestion from weaving traffic. The ramp will arch up and over the highway, meeting the section of the Iway that was opened in 2007.

- On May 22, RIDOT closed Exit 3 (Gano Street) from I-195 East and opened a new Exit 2, which leads to India Street. At the end of the ramp, motorists can turn left toward Gano Street. Later in the summer, RIDOT planned to open India Street to allow a right turn at the ramp and access to South Water Street.

- On Dec. 6, RIDOT opened up a right-hand I-95 southbound to Interstate 195 eastbound ramp to replace the older more dangerous left-hand exit. This effectively closed the old I-195 right of way from the 195-95 interchange to Exit 2.

Upcoming Changes

The next ramp changes are scheduled for Summer 2009, when a ramp from I-195 West to I-95 South will open, along with a new ramp from I-195 West to Eddy St. and the hospital campus in Providence.

Awards

On June 9, RIDOT announced that the Iway was nominated for a national award for the Iway bridge float. The competition, America’s Transportation Award, is sponsored by the American Association of State Highway Transportation Officials (AASHTO), the U.S. Chamber of Commerce and AAA. The contest recognizes transportation projects completed on time, on budget, or those that demonstrate innovative management. RIDOT’s nomination was for the latter category.

On August 13, AASHTO announced that the Iway bridge float was one of 10 finalists for the national award. The Iway bridge received an Innovative Management award in the large project category.

On June 11, RIDOT was informed that it was the recipient of a “Bell Ringer” award from the Publicity Club of New England. The award was for the Iway logo with its three arches and the tag line “Yours. Mine. Ours.” The award is the highest achievement given by the annual competition, which is the region’s premier public relations and communications event.

About the Photographer

Dr. Jeff Rizzolo, Jr. developed an interest in photography and darkroom techniques in high school. After retiring from dentistry in 2005, Rizzolo dedicated more time to photography. Working with film and digital, images of nature, mountain landscapes and waterfalls have been the subject of many of his photos.

Through his oldest son David, an architect and creative photographer, Rizzolo has for the past few years been involved with long exposure night photography, primarily of industrial and construction sites, using the full moon as the primary source of illumination. Rizzolo tries to make the viewer feel like they are standing there with him when he exposes the image. At the same time, Rizzolo attempts to apply an abstract quality to the images. The Iway bridge construction site was a perfect “studio” for this type of work. Rizzolo has photographed the bridge numerous times during the Iway project construction.

Rizzolo’s work was exhibited at DarknessDarkness, An Exhibit of Contemporary American Night Photographers, at The Three Columns Gallery, Harvard University in 2008.

Rizzolo lives in Pawtucket, R.I. and Glen, N.H. He can be reached at jeffrizzolo@verizon.net

All of Dr. Jeff Rizzolo, Jr.’s images are copyrighted and he reserves the rights for their use.
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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.
With the help of all the University of Rhode Island Transportation Center partners, our 2008 activities continue to span our three objectives: research, education, and outreach. Research continues to drive our agenda but our educational and outreach activities also thrived in 2008.

We continue to push for a broad base of research activities and have successfully attracted some of the top researchers at URI to develop an interest in transportation issues. The eight projects funded in the 2008 research round included faculty new to URITC funded transportation research from Landscape Architecture, Accounting, and Supply Chain Management as well as a continued presence from outstanding researchers in Civil and Industrial Engineering, Psychology, Communication Studies and the URI Coastal Institute. Two previous winners of the Student-of-the-Year award, Aaron Clark (2007) and Amy Thompson (2008), have gone on to exciting and challenging positions in academics and industry and we know their URITC sponsored research efforts have contributed to their success.

As a part of the 2008 research cycle, we were able to also fund a new concept, learning laboratories. This funding opportunity offered faculty a means of purchasing equipment that would assist them in their research, teaching, and outreach. Three projects were selected for awards: a mobile learning lab for Supply Chain and Industrial Engineering, a driver and traffic condition monitoring lab and a driving simulator. Each of these projects involved substantial long-term research opportunities for a variety of faculty and educational options that span not only university courses but options for K-12 as well. In addition, these projects had strong advocates in industry who gave both financial support and links to future research agendas.

Through the URITC educational efforts we have been able to infuse transportation in a variety of courses across the university curricula. For example, a URITC grant supported a project in a junior level Landscape Architect design studio course in which the students focused on urban design and sustainable transportation. The URITC also supported case writing efforts on the human dimensions of global change to provide educators with real world transportation cases across a variety of curricula.

In outreach we continue to max out our NHI and LTAP classes providing state-of-the art training. We also hosted the Regional Conference LTAP in 2008 continuing our prominent presence in the region. Our outreach activities continue to evolve with the support of our partners at Federal Highway Administration and Rhode Island Department of Transportation.

Through new programs offered in 2008, we have greatly enhanced our educational and workforce development efforts. We introduced three new summer camps, a Construction Academy, Business Academy and Engineering Academy, all of which were designed to acquaint the students to the work world of transportation. Though it is often difficult keeping up with all the middle and high school students who participate in our programs, we were excited to learn that a student who had participated in our Summer Transportation Institute as a middle school student and our first Engineering Career Day while in high school, enrolled as an Engineering Student at URI. This clearly demonstrates that our educational efforts are delivering the desired outcomes.

The Board of Directors for the URITC continues to provide support and guidance for the URITC broad agenda. Through our semi-annual meetings we have continued to refine our strategic focus and broaden our constituency in ways that enhance the impact which the URITC makes on transportation issues. With their input in formulating our new strategic plan, the URITC is better able to respond to the transportation challenges we face.

In the coming year the URITC’s focus on sustainable transportation systems will greatly enhance our ability to influence transportation issues that are of global importance. By working together on research, teaching, and outreach we have the potential to identify and test solutions and lead the way in implementing the changes necessary for a viable transportation system that meets the needs of the future.
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

**Michael Lewis**  
Director, R.I. Department of Transportation (RIDOT)

**Peter Osborn**  
Division Administrator, Rhode Island Division, Federal Highway Administration (FHWA)

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

**Phillip Kydd**  
Assistant Director, RIDOT

**Raymond Wright**  
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

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**Deborah Rosen**  
Executive Director

**Jerri Paquin**  
Assistant Director

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

**Nancy Murphy**  
Fiscal Management Officer

**Neil Nachbar**  
Writer

**Tory Perrotta**  
Senior Wordprocessing Typist

**John S. Peterson**  
Senior Information Technologist

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**USDOT**

**RITA**

**Board of Advisors**

**University Level Vice Presidents**

**URITC Director**

**Assistant Director**

**Director of T² and Outreach**

**Fiscal Management Officer**

**Writer**

**Senior Wordprocessing Typist**

**Senior Information Technologist**
Highlights
As part of National Transportation Week, the URITC sponsored the 8th annual National Transportation Week breakfast. The event was held on May 15 at the Radisson Airport Hotel in Warwick. The topic of the breakfast was “Commuting in America – Transportation Matters”.

The event attracted more than 125 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, updated the audience on research and outreach made during the year.

Peter Osborn, Director of the Rhode Island Federal Highway Administration, introduced the keynote speaker, Alan Pisarski. Mr. Pisarski has been involved in the national transportation policy scene for almost 40 years, working for the U.S. DOT. He has authored Commuting in America, Commuting in America II and Commuting in America III. Mr. Pisarski spoke about the challenges America will face with regards to commuting to work as our population and traffic flow increases, especially in urban areas. Among the challenges, according to the guest speaker, will be maintaining and repairing aging highways and bridges.

The breakfast concluded with Phillip Kydd presenting the 4th Annual RIDOT Quality Awards in Transportation Pioneering, Highway Safety, Transportation Excellence and Transportation Innovation.

Below is a list of winners.

**Highway Safety Award**
Providence Police Colonel (Retired) Richard Sullivan

**Excellence Award**
William Campos of FHWA-RI

**Pioneering Award**
Aetna Bridge Company and RIDOT engineers Rhamat Noorparvar, Lambri Zerva and William Carcieri Jr.

**Innovators Award**
RIDOT Landscape Architect Barbara Petrarca
On May 12, 15 teams from 12 Rhode Island middle schools competed in the 4th annual Robotics Challenge at URI, sponsored by the Rhode Island Department of Transportation (RIDOT), the Federal Highway Administration and the URITC.

Robots built by the student teams completed a challenge course consisting of commuting-themed transportation missions, such as moving disabled vehicles to a garage, delivering food to an airplane and picking up passengers at a bus stop. Teams were also required to enter a poster contest, in which they depicted transportation-related careers.

“This competition gets young minds thinking about math, science and engineering,” RIDOT Director Michael Lewis said. “Opportunities for hands-on learning are incredibly valuable.”

Students were required to belong to an after-school robotics club. They used robotic kits based on Lego building bricks.

Participating robotics teams included:
- Alan Shawn Feinstein Middle School of Coventry;
- Archie Cole Middle School and our Lady of Mercy School, East Greenwich;
- Barrington Middle School, Barrington;
- Birchwood Middle School and Ricci Middle School, North Providence;
- John F. Deering Middle School, West Warwick;
- Martin Middle School and Riverside Middle School, East Providence;
- Parkview Middle School and Bain Middle School, Cranston;
- Perry Middle School, Providence; and
- Winman Junior High School, Warwick

A team of students make some adjustments to the computer program which controls their robot’s movements.

Students watch their robot move a couple of vehicles.
University of Rhode Island’s College of Engineering hosted the second annual Engineering Career Day held on May 13. The purpose of the event was to develop an interest in high school freshmen and sophomores in engineering as a field of study at the college level and transportation engineering as a career path.

The event welcomed over 110 students from several Rhode Island high school programs, including:
- Cranston East High School
- Central Falls High School
- East Bay Met School
- E-Cubed Academy High School
- GAP Program/Talent Development
- The College Crusade of Rhode Island
- The Met Center
- Times 2 Academy

Fifteen teachers accompanied the students.

Students listened to presentations and participated in hands-on activities conducted by URI professors and industry professionals, representing 10 of Rhode Island’s top engineering firms.

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.

Engineering Career Day was sponsored by the URITC, the Rhode Island Department of Transportation (RIDOT), the Rhode Island Consulting Engineers (RICE), University of Rhode Island, College of Engineering and the Federal Highway Administration (FHWA).
On May 14 and 15, the Rhode Island Construction Career Days (CCD) event was held at the Rhode Island Department of Transportation’s (RIDOT) Coventry facility.

More than 730 students from 45 Rhode Island high schools attended the eighth annual event. After receiving a duffle bag with a CCD t-shirt, hardhat, work gloves, safety glasses and career information, students took turns operating more than 30 pieces of construction equipment, including backhoes, excavators, pavers, jackhammers and bucket trucks.

Inside the RIDOT facility, more than 70 industry and DOT professionals shared career information on welding, plumbing, electrical, landscaping, carpentry and other disciplines. Students had an opportunity to operate a backhoe simulator, build a wooden toolbox and design a bridge on a computer.

CCD is sponsored by RIDOT and the Federal Highway Administration. Rhode Island’s event was one of 56 such events held in 32 states throughout the country in 2008.
The Construction Career Day (CCD) program continued to grow in 2008, breaking several records in the process. For the third consecutive year, a record number of schools (1,742) were represented at events and a record number states (32) hosted events. For the second year in a row, there were a record number of events held (56) and a record number of students who attended events (more than 57,000).

Four states held CCD events for the first time in 2008: Alaska, Arkansas, Michigan and Nevada.

The University of Rhode Island Transportation Center (URITC) became the home of the National Construction Career Days Center (NCCDC) in 2005 when the Federal Highway Administration entered into an agreement with the Rhode Island Department of Transportation and the URITC.

A student at Michigan’s CCD event learns how operate a backhoe. The two-day event attracted 2,000 students.

While the NCCDC has always tracked statistical data of events and served as a clearinghouse of information on best practices and how to start an event, it now provides more resources than ever to help local organizers initiate or improve events.

In addition to workshops delivered by the NCCDC and newsletters produced, there were many improvements made to the Center’s website (www.constructioncareerdays.us) in 2008. Pages were added for links, photos, videos and publications from local events, providing a forum for organizers to share information and discover new ways to promote or plan events.

According to the U.S. Bureau of Labor Statistics and the Occupational Outlook Handbook, the average age of workers in the skilled trades is 47 and construction occupations are projected to grow 11 percent through the year 2016.

Judging by the growing popularity and success of the CCD events in recent years, the CCD program will play an important role in developing tomorrow’s construction workforce.

Students at Connecticut’s CCD event bolt flanges together, as a pipefitter or plumber would. Close to 900 students attended the two-day event from 52 schools.

Secured to a harness and rope, a student at the CCD event in Rochester, N.Y. gets hoisted in the air, just as someone would to cut hard-to-reach tree branches.
Middle school students involved in the Science and Math Investigative Learning Experiences (SMILE) program from Central Falls, East Providence, South Kingstown, West Warwick and Woonsocket came to the URI campus in March to compete in SMILE’s annual Engineering Challenge.

Applying their knowledge of bridge designs and the compression and tension forces that act on a bridge, the middle school students worked with college students in science and engineering and other majors to construct the strongest and most efficient model bridge they could build.

The students were taught how to use the West Point Bridge Designer software to design and test a truss bridge. Afterwards, they drew a full size template of their bridge, with the correct geometry, component lengths and distance of the joints. Given a budget and cost of materials, students determined the cost of their bridge and modified their design to meet specifications if necessary.

Construction equipment included bamboo chopsticks, glue guns, cardboard, straws and ratchet action pruning shears. They kept track of expenditures for additional supplies and their returns on the inventory list. An accurate account of team expenses was submitted at the end of the Challenge.

Once the model was built, students weighed their bridge and then attached it to a testing mechanism: a bucket connected to a bolt inserted in a wood plank sitting on the road bed. Weights were slowly added to the bucket until the bridge eventually collapsed. The students determined the bridge efficiency, the mathematical ratio of the weight held by the bridge to its own weight. The greatest load a bridge held was 77 pounds.
Three students participated in internships at the University of Rhode Island this summer as part of a collaborative effort between the Dwight David Eisenhower Transportation Fellowship Program, the University of Puerto Rico-Mayagüez (UPRM) and the URITC.

Alvin Nieves, Adilson Alfaro and Juan Balbuena 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.

Nieves’ project was titled, “Studying the Vehicle Headway Issue and Its Impact on the Slowdown Effect.” Alfaro’s report was titled, “Analysis and Evaluation of Weight in Motion Data in Rhode Island.” Balbuena analyzed “Multi-Sensor Vehicle Tracking.”

The students thoroughly enjoyed their internships and their stay in Rhode Island.

“My experience at URI was excellent,” said Nieves. “The people at URI helped us with all the things that we needed. I want to thank all the people that contributed to making our stay at URI a very pleasant and wonderful experience.”

At the conclusion of the internships, the students presented their projects to representatives of the Rhode Island Department of Transportation, Federal Highway Administration, the Dwight David Eisenhower Transportation Fellowship Program, URI and the URITC.

The URI faculty, who served as mentors, were impressed with the work that was done by the UPRM students.

“I found Adilson to be determined, hard-working, and thorough with his work and analysis,” said Mayrai Gindy, Ph.D., assistant professor of Civil and Environmental Engineering. “He grasped the overall concept of the project rather quickly and ran with the project tasks.”
Central European Technical Tour

The Federal Highway Administration (FHWA) has facilitated cooperative “twinning” relationships between transportation agencies in the United States and transportation agencies in developing countries. The partnerships are fostered by the FHWA Office of International Programs and are intended to establish long-term relationships between the “twinned” agencies.

In October, Jeffrey Cathcart, the Director of the Technology Transfer Center at the URITC and John Nickelson, Director of Public Works for the City of Providence (and retired maintenance engineer for the Rhode Island Department of Transportation) visited the Slovak Republic, Rhode Island’s twinned partner. Cathcart, Nickelson and others have participated in information exchanges in Central Europe for several years and have also acted as hosts and coordinators for visits by Central European guests to Rhode Island.

The Slovak Road Association’s (SRA) annual Highway Maintenance meeting held in Košice on Oct. 9-10 was a highlight of the visit. The meeting included presentations by researchers and practitioners, ranging from economic theory to best maintenance practices. Cathcart gave a presentation on workforce development initiatives, including the Summer Transportation Institute (STI), Construction Career Day, Engineering Career Day and the Construction, Engineering and Business Academies offered by the URITC.

This concrete bridge in Slovakia had a weight limit posted of 24 tons due to a partial failure in the pre-stress cable. The bridge, which is approximately 68 meters, has been stabilized and remains open to two lane traffic. Dopp and Dopp Associates of Hudson, N.H. are working with their engineers to propose replacing the concrete structure with a pre-fabricated steel bridge.

The six transportation professionals discussed Mikulik’s plans to hold the first international STI in 2009 near the Czech-Polish border, the SRA’s hopes of establishing a national construction career day in one of the autonomous regions, and other programs of mutual interest.

During the week, the SRA held its fourth annual snowplow rodeo. Fourteen teams competed, including the winner of the Czech Republic’s event. The URITC initiated this event in Central Europe.

As Cathcart and Nickelson drove through portions of Austria, Hungary and the Slovak Republic on their trip, they noted roadway details and technologies that might be considered in the United States. For example, they observed that the European Union utilizes pavement markings to identify exit lanes. These markings might be useful to designate the proper traveling lane for motorists utilizing the highway interchange in Providence.

Joseph Mikulik of the Czech Republic and Milan Rezetka, an engineer with the Transport Research Institute (TRI) in Žilina, Slovakia, introduced Cathcart and Nickelson to Ernoe Grieger of Hungary and Monika Kowalska-Sudyka of Poland. Grieger is the head of the North Hungarian Regional Transport Organizing Office of KTI Institute for Transport Sciences, at Miskolc, Hungary and Kowalska-Sudyka represented the Road and Bridge Research Institute of Warsaw, Poland.

Pictured is one of the snowplows driven in the SRA’s fourth annual snowplow rodeo.
The University of Rhode Island Transportation Center named Sam Cheung its 2008 Outstanding Student of the Year in recognition of his research achievements in the area of transportation safety.

Cheung has been pursuing a master’s degree in industrial and systems engineering (ISE) at the University of Rhode Island under the direction of Dr. Jyh-Hone Wang, while serving as a lieutenant in the United States Coast Guard (USCG).

Commuting to URI three days a week from his home in Oakdale, Conn., with a wife and newborn baby at home, Cheung credits the support of those around him for winning the award.

“I feel fortunate to have had the encouragement of Dr. Wang and my family,” said Cheung. “This award is a testament to their support.”

Cheung’s research focused on the slow down effects caused by dynamic message signs (DMS), as well as the tendency of drivers to tailgate.

“By analyzing the traffic data collected by the Rhode Island Department of Transportation through mobility technology units (MTU) used in the Providence area, I was able to determine what effect the signs have on drivers,” explained Cheung.

Statistics indicated that dynamic message signs cause drivers to slow down, the volume of traffic to increase and the vehicles headway distance to decrease.

Cheung received his award at the University Transportation Centers’ 18th annual Outstanding Student of the Year awards banquet, held on Jan. 10, 2009 in Washington, D.C.

“I bumped into several people at the dinner that had connections to the Coast Guard,” recalled Cheung. “I spoke to (former United States Secretary of Transportation) Norman Mineta, who remembered meeting me when he addressed my graduating class at the Coast Guard Academy.”

With four years remaining on his commitment to serve in the Coast Guard, Cheung hopes to find a job teaching math at the Coast Guard Academy.

“I would like to show students how statistics can be applied to real-world situations, just as they were in my research at URI,” stated Cheung.
Summer Transportation Institute

The URITC’s Summer Transportation Institute (STI) was held for two 2-week sessions starting on July 7 and August 4 at URI’s Kingston campus.

During the two sessions, 35 middle school students, representing a multitude of ethnic backgrounds, from urban and suburban communities, learned about transportation careers and the respective education and training requirements.

The fifth 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 on which they rode a commuter rail, a subway, a van and walked. Students were introduced to university life at URI. They visited dorms, classrooms and sports facilities, met staff and ate in a dining hall. The students also toured 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.
The URITC hosted three summer academies for high school students: the Construction Academy, the Engineering Academy and the Business Academy. Students represented a multitude of ethnic backgrounds and resided in both urban and suburban communities. Transportation was made available to and from central pick-up points in Providence.

**Goals of the Summer Academies**
These initiatives were designed to:

- give students first-hand knowledge of transportation work
- provide many opportunities for mentoring by industry role models
- spread the message that the transportation sector offers many rewarding career options
- make students aware of necessary courses early enough in their education to be prepared to move on to a career or college with the right tool kit
- increase diversity in the transportation workforce

**Engineering Academy**
A one-week Engineering Academy for high school freshmen, sophomores and juniors was held from July 28 – August 1. The curriculum included:

- highway design
- bridge design
- traffic engineering
- water resources
- environmental engineering
- geographic information systems
- geotechnical engineering
- reading a scale
- blueprint reading
- preparing an estimate
- surveying and layout

Classroom instruction, guest speakers, field trips, and hands-on training were key components of the academic program. Activities included a tour of URI’s College of Engineering; “How do I become an Engineer?” lead by Professor Chris Hunter; runoff volume and contaminant removal calculations; a tour of the Rhode Island Transportation Management Center; and a tour of Banneker Industries.

Fifteen young adults representing a multitude of ethnic, economic and geographic backgrounds completed the academy.
Summer Academies

Construction Academy
A one-week Construction Academy for 12 high school juniors and seniors took place July 21 – 25.

The curriculum included:
• OSHA 10-hour certification
• flag person certification
• work zone safety
• hands-on activities at the Operating Engineers Center

• blueprint reading
• estimating
• construction math
• surveying and layout
• a talk on “Starting your own Construction Business”

Supervision of all activities was lead by the program director, program coordinator, interns and industry professionals.

Students in the Construction Academy took the flagger certification course held at URI's Kingston campus.

The students who participated now have a much better understanding of the many careers in the construction industry, the benefits these careers offer, the steps required to pursue these careers, and an expanded circle of friends. The Construction Academy will build on the success of the first year by continuing the most successful activities and enhancing the others.

Business Academy
The Business Academy, for high school freshmen, sophomores and juniors, took place from July 28 – August 1. The nine participants learned about all aspects of managing a company’s supply chain.

The Business Academy provided various educational activities and allowed the students to interact with transportation professionals. Classroom instruction, guest speakers, field trips and hands-on training were key components of the academic program. Activities included:

• Ropes Confidence Course Team Building Exercise
• Interactive Supply Chain Improvement Group Exercise
• Tour of a CVS Distribution Center
• Tour of the Quonset Point Business Park and Port, including the Port of Davisville
• Develop an Efficient Transportation System for an Actual Product

All instructors and guides emphasized the benefits of the supply chain sector and the role of transportation in their daily work routines.
Aimed at Rhode Island Department of Public Works employees and other transportation practitioners, LTAP workshops provide 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 2008 included:

**Maintenance of Local Roads**
This one-day session was intended for all persons from supervisors to crew workers who actually work on local roads. Topics included a brief overview of an asphalt mix design and concentrated on identifying the cause of a variety of asphalt distresses and the proper maintenance operation to perform. It also covered asphalt laydown procedures and proper chip seal operations.

**First Aid and CPR Workshop**
The Heartsaver First Aid and CPR course taught how to manage illness and injuries in the first few minutes until professional help arrives. Course content included general principles, medical emergencies, injury emergencies and CPR. Optional topics included CPR and AED, and environmental emergencies.

**Providing Quality Public Work Services**
This workshop helped DPW employees understand the role of directors, foremen, managers, administrative assistants and other individuals in providing quality public works services; the role of perception and expectation setting in providing quality public works services; how quality public works services impact different audiences and how that affects success within municipal administrations.

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

The RIT2 Center, located at the URI Transportation Center, provided the following 86 LTAP workshops and events during 2008.

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<td>Burrillville</td>
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<tr>
<td>1/25</td>
<td>All About Chain Saws &amp; Demolition Saws</td>
<td>West Greenwich</td>
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<td>It’s Not Magic, It’s Managing</td>
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<td>MIG &amp; TIG Welding Certification</td>
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<tr>
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<td>All About Chain Saws &amp; Demolition Saws</td>
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<td>2/19</td>
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<td>2/27</td>
<td>Trench &amp; Excavation Safety</td>
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<td>3/10</td>
<td>All About Chain Saws &amp; Demolition Saws</td>
<td>Warwick</td>
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<td>Building a Team and Improving Communication</td>
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<tr>
<td>4/22</td>
<td>Work Zone Traffic Control</td>
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## LTAP / RIT2 Workshops

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<tr>
<th>Date</th>
<th>Workshop</th>
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<tbody>
<tr>
<td>4/23</td>
<td>Excavation and Trench Box Safety</td>
<td>East Greenwich</td>
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<td>4/24</td>
<td>Work Zone Traffic Control</td>
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<td>Preparing to Take the Hoisting</td>
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<td>Engineers Exam-Catch Basin Cleaner</td>
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<td>Safety Features in Roadside Design</td>
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<td>4/25</td>
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<td>Coffee Break</td>
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<td>Construction Inspection for Local Agency Employees</td>
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<td>Truck Driver Simulator</td>
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<td>5/13</td>
<td>Engineering Career Day</td>
<td>South Kingstown</td>
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<td>5/14&amp;15</td>
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<td>All About Asphalt Pavement</td>
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<td>6/4</td>
<td>Equipment Show – 2008</td>
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<td>Westerly</td>
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Geosynthetics workshop on Sept. 30 at URI’s Alton Jones campus in West Greenwich.

Paul Buddock and Don Fascio of the Coventry DPW attempt to knock a tennis ball off a cone with a snowplow in the slalom event of the Rhode Island Snowplow Rhodeo on Oct. 17 at Roger Williams Park in Providence.