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THE INFRASTRUCTURE INFORMER  
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\*\*\*\*\* July 2003 Issue \*\*\*\*\*

The Electronic Newsletter of the Institute for Civil Infrastructure Systems (ICIS) at New York University's Robert F. Wagner School of Public Service  
(<http://www.icisnyu.org/>)

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INFRASTRUCTURE NEWS  
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TRANSPORTATION

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"Study: Bad Roadways Big Factor in Traffic Deaths"  
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"A new study finds roadways -- not driver error or faulty vehicles -- to be a significant factor in crashes that claimed more than 24,000 lives between 1998 and 2001. The analysis of National Highway Traffic Safety Administration crash data by Reader's Digest Magazine found more than one-third of the deaths occurred at intersections, where confusing lanes, blind spots and inadequate signage can be frequent problems." (CNN.com)

Source: <http://edition.cnn.com/2003/US/06/23/dangerous.roads/index.html>

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"28% of US Highway Bridges Deficient"  
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"More than a quarter of all US highway bridges are considered deficient, a high number but a marked improvement after a decade of increased government spending. The number of bridges considered deficient -- that need repairs, cannot adequately handle traffic loads, or do not meet safety standards -- declined about 18 percent from 1992 to 2002, from 199,090 to 163,010, according to an Associated Press computer analysis of Federal Highway Administration data. That new total still amounts to 28 percent of bridges." (Boston Globe)

Source:  
[http://www.boston.com/dailyglobe2/189/nation/28\\_of\\_US\\_highway\\_bridges\\_deficient+.shtml](http://www.boston.com/dailyglobe2/189/nation/28_of_US_highway_bridges_deficient+.shtml)

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"Highway Researchers See Big Future with Science of the Tiny"  
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"A future in which cracked bridges and potholes repair themselves, guardrails realign automatically after impact, bridges adjust their shapes to control movement caused by winds, and metal structures self-clean to avoid corrosion is envisioned in a forecast of advances in highway technology by scientists from the Federal Highway Administration's Turner-Fairbank Highway Research Center." (Transportation Research Board)

Source: [http://gulliver.trb.org/news/blurb\\_detail.asp?id=1541](http://gulliver.trb.org/news/blurb_detail.asp?id=1541)

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"Despite Billions for Alternatives, Car Remains King"  
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"Around the nation, states and municipalities plagued by traffic backups and the spiraling costs of building new roads are promoting biking, van- and carpools and mass transit as alternatives to the single-occupancy car commute that is the norm in America. These programs, which cost taxpayers over \$8 billion annually, are popular with environmental groups and state and local governments. But current data suggest that despite state and federal efforts, these programs are making little difference in the car-centered culture of America. According to Census 2000 data, 75 percent of people still drive to work alone in cars, trucks or vans. Only 4.7 percent use public transportation, and a mere 0.38 percent commute by bicycle." (MSNBC News)

Source: <http://www.msnbc.com/news/925324.asp>

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"Lesser-Known Maglev Gets Pennsylvania Push"  
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"Low-speed maglev, which doesn't get the attention of its faster, bigger sibling high-speed maglev, is moving forward in western Pennsylvania, says U.S. Rep. John Murtha. The Johnstown Democrat said Thursday that an \$800,000 prototype of the so-called urban maglev chassis has been shipped to the West Coast, where it will undergo testing on a 400-foot test track now under construction. The testing over a 12-month period will prove the system's guidance, propulsion and levitation capabilities. The chassis was constructed locally by Ellwood City-based Hall Industries Inc." (Pittsburgh Tribune-Review)

Source: [http://www.pittsburghlive.com/x/tribune-review/business/s\\_143152.html](http://www.pittsburghlive.com/x/tribune-review/business/s_143152.html)

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"Despite Tunnel, Some Find Commute Still Slow"  
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"There were speeches, ribbon cuttings, a festive walk-through for the people of Boston, and finally on March 30, an inaugural motorcade. But the opening of the 1 1/2-mile Big Dig tunnel appears to have done little to shorten drive times for commuters south of the city. Data collected by Smart Route Systems, an independent company with a state contract to monitor commuting time, indicate that the morning rush hour commute from Braintree to Boston has been shortened from 25 to 22 minutes since the tunnel opened." (Boston Globe)

Source:  
[http://www.boston.com/dailyglobe2/181/metro/Despite\\_tunnel\\_some\\_find\\_commute\\_still\\_slow+.shtml](http://www.boston.com/dailyglobe2/181/metro/Despite_tunnel_some_find_commute_still_slow+.shtml)

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"Moving To Equity: Addressing Inequitable  
Effects of Transportation Policies on Minorities"  
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"Americans are increasingly mobile and ever more reliant on automobiles for meeting their travel needs. These and other transportation policies have had inequitable effects on minority and low-income populations, often restricting their ability to access social and economic opportunities, including job opportunities, education, health care services, places of worship, and other places such as grocery stores. This report identifies surface transportation policies' inequitable effects. It examines existing research in the area and highlights the critical need for more research and data collection related to the impact of transportation policies on minority and low-income communities. It also makes recommendations to address the racial injustices created by transportation policies." (Harvard University)

Source: [http://gulliver.trb.org/news/blurb\\_detail.asp?id=1556](http://gulliver.trb.org/news/blurb_detail.asp?id=1556)

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"Expected Flood Damages to Transportation Infrastructure as a  
Proportion of Total Event Costs: A Methodological Exploration"  
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"The Tennessee Valley Authority (TVA) operates a variety of facilities throughout the whole of the Tennessee River watershed through which it affects the flows of both navigable and non-navigable waterways. These flows are influenced in support of a number of activities including, commercial navigation, flood risk mitigation, hydroelectric generation, municipal water supply, recreation, and water quality control. Experience, however, suggests that the proportion of total event damages attributable to transportation infrastructure destruction may vary significantly based on the characteristics of individual floods." (Rahall Appalachian Transportation Institute)

Source: <http://www.marshall.edu/ati/research/trp00-04.pdf>

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"State Deploys Decommissioned Subway Cars in Artificial Reefs"  
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"The New Jersey Department of Environmental Protection (DEP) dropped a third round of 50 subway cars today at the Atlantic City Reef Site for use in the state's artificial reef program. The decommissioned subway cars are part of 250 acquired from the New York Transit Authority (NYTA). 'These subway cars are an environmental and economic boon for New Jersey,' said DEP Commissioner Bradley M. Campbell. 'New fishing and diving opportunities will enhance our shore economy, while our marine ecosystems will gain new habitat.'" (NJDEP)

Source: [http://www.nj.gov/dep/newsrel/releases/03\\_0102.htm](http://www.nj.gov/dep/newsrel/releases/03_0102.htm)

ENERGY

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"GAO Recommendations on Evaluating Pipeline Safety Research and Development"  
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"A General Accounting Office (GAO) report recommends that the U.S. Department of Transportation's Office of Pipeline Safety develop a systematic process for evaluating research and development program outcomes in order to better determine program effectiveness." (Transportation Research Board)

Source: [http://gulliver.trb.org/news/blurb\\_detail.asp?id=1558](http://gulliver.trb.org/news/blurb_detail.asp?id=1558)

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"Fuel Efficiency Trumps Fuel Cells"  
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"Two U.S. energy experts cast more doubt Friday on a push to develop hydrogen-powered cars as a means to cut air pollution and reduce oil imports. Cheaper and faster ways already exist to achieve the same effect, including raising fuel efficiency and toughening environmental standards, David Keith and Alexander Farrell wrote in Friday's issue of the journal Science. 'Hydrogen cars are a poor short-term strategy, and it's not even clear that they are a good idea in the long term,' Farrell, assistant professor of energy and resources at the University of California, Berkeley, said in a statement."

(Wired News)

Source: <http://www.wired.com/news/autotech/0,2554,59687,00.html>

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"Wind Powers Brit Energy and Jobs"  
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"Britain is pushing ahead with a huge expansion of offshore wind farms which could supply green power to more than 3 million households and create 20,000 new jobs, the government said Monday. The government is inviting companies to bid to build new farms, some of which are likely to be 10 times the size of the first scheme under construction in Wales, Patricia Hewitt, Secretary of State for Trade and Industry said." (Wired News)

Source: <http://www.wired.com/news/technology/0,1282,59621,00.html>

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"U.S. Energy Scenarios for the 21st Century"  
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"The question of how U.S. energy supply and use—which account for over 80 percent of U.S. greenhouse gas emissions—will evolve over the next several decades is critical to developing sound U.S. climate policy. To answer this question, the Pew Center convened two workshops, including members of its Business Environmental Leadership Council and independent experts, to envision and analyze future energy scenarios for the United States, and to assess the implications of these scenarios for U.S. carbon emissions." (Pew Center on Global Climate Change)

Source: [http://www.pewclimate.org/projects/energy\\_scenarios.pdf](http://www.pewclimate.org/projects/energy_scenarios.pdf)

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"German Researchers Achieve Tenfold Increase in Bacterial Fuel Cell Power"  
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"Researchers in Germany are now able to generate ten times as much electricity using microbial fuel cells compared with previous designs, thanks to the use of a newly designed anode and help from the bacteria themselves. A team from the Ernst Moritz Arndt University in Greifswald have designed an experimental fuel cell that generates electricity when bacteria, in this case Escherichia coli (E. coli), feed on sugar. The resulting output is enough to power a medical ventilator or similar appliance." (CORDIS News)

Source:

[http://dbs.cordis.lu/cgi-bin/srchidadb?CALLER=NHP\\_EN\\_NEWS&ACTION=D&SESSION=&RCN=EN\\_RCN\\_ID:20537](http://dbs.cordis.lu/cgi-bin/srchidadb?CALLER=NHP_EN_NEWS&ACTION=D&SESSION=&RCN=EN_RCN_ID:20537)

## TELECOMMUNICATIONS

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"Verizon's Gutsy Bet"  
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"Verizon plans to roll out fiber-optic connections to every home and business in its 29-state territory over the next 10 to 15 years, a project that might reasonably be compared with the construction of the Roman aqueducts. It will cost \$20 billion to \$40 billion, depending on how fast equipment prices fall, and allow the lightning-fast transmission of everything from regular old phone service to high-definition TV. No competitor yet dares follow suit, fearing it could be their financial Waterloo." (Business Week)

Source: [http://www.businessweek.com/magazine/content/03\\_31/b3844001\\_mz001.htm](http://www.businessweek.com/magazine/content/03_31/b3844001_mz001.htm)

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"Final Report of ITS Center Project: Cellphone Probes as an ATMS Tool"  
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"The foundation of traffic operations and management is the ability to monitor traffic conditions. One approach to traffic monitoring is to sample conditions by 'tracking' a limited number of probe vehicles as they traverse a network. An emerging technology known as wireless location technology (WLT) has been developed to allow for the geolocation of mobile wireless devices (the most common of which are cellular telephones). Over the past decade, a number of research studies and operational tests have attempted to develop probe traffic monitoring systems based on WLT. However, there still exists significant confusion and misperceptions concerning WLT-based traffic monitoring. To address this

problem, this paper seeks to provide a comprehensive assessment of WLT-based traffic monitoring." (National ITS Implementation Research Center)

Source: <http://www.gmupolicy.net/its/july03reports/CellPhoneProbes%20-%20final.pdf>

WATER

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"Westchester County to Provide Matching Funds for Army Corps Study"  
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"The Westchester County Legislature has agreed to provide matching funds for the Army Corps of Engineers Study on the Bronx River Basin. This is the last approval needed to move the project to go, since NYC DEP and the ACOE have both signed the agreement to move forward. On July 14 the Westchester County Board of Legislators approved 'the adoption of the proposed Bond Act and the Act authorizing an Agreement with the Corps and the NYCDEP for cost sharing of the Bronx River Basin Ecosystem Restoration Feasibility Study.' This project is funded with \$864,153 from the County, \$1,380,846 from the NYCDEP and \$2,244,998 from the Corps, for a total estimated project cost of \$4,489,996. The project will study the entire River watershed to enable development of plans for riverbank stabilization, wetland protection and restoration, pond dredging and rehabilitation including disposal of contaminated silt, resulting in a basin wide watershed management plan for the River to reduce stormwater flows into the river and to improve water quality." (Bronx River Alliance Biweekly)

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"Inland Waterways Research Project"  
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"The Inland Waterways Research Project is your gateway to the most comprehensive source of inland waterway information available in the United States today. This centralized repository contains the most currently available information on the inland waterway system, including published studies, reports, and ongoing research results by leading experts." (US DOT, Maritime Administration)

Source: [http://www.marad.dot.gov/iwrp/index\\_main.html](http://www.marad.dot.gov/iwrp/index_main.html)

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"Underwater: The World's Biggest Dam Floods the Past"  
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"On new maps for the city of Wushan, this body of water is called Emerald Drop Lake. But the maps were printed before the lake appeared. In fact, the water is a murky brown, and the lake is actually an inlet of the Yangtze River, which for the past week has been rising behind the Three Gorges Dam... The people knew that the flood was coming, but they did not know that it would come so fast." (The New Yorker)

Source: [http://www.newyorker.com/fact/content/?030707fa\\_fact](http://www.newyorker.com/fact/content/?030707fa_fact)

GENERAL INFRASTRUCTURE

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"The Politics of Happiness" by Enrique Peñalosa  
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"We really have to admit that over the past 100 years we have been building cities much more for mobility than for people's well-being. Every year thousands of children are killed by cars. Isn't it time we build cities that are more child-friendly? Over the last 30 years, we've been able to magnify environmental consciousness all over the world. As a result, we know a lot about the ideal environment for a happy whale or a happy mountain gorilla. We're far less clear about what constitutes an ideal environment for a happy human being. One common measure of how clean a mountain stream is is to look for trout. If you find the trout, the habitat is healthy. It's the same way with children in a city. Children are a kind of indicator species. If we can build a successful city for children, we will have a successful city for all people." (Yes Magazine)

Source: <http://yesmagazine.org/26courage/ives.htm>

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"Enhancing Sustainability Through 'Nature's Services':  
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Recommendations for the Vermont Corridor Station Neighborhood Plan"

"In 2000, the University of Southern California (USC) Sustainable Cities Program secured a two-year grant from The John Randolph Haynes and Dora Haynes Foundation (the Haynes Foundation) to investigate ways in which "nature's services" -- natural systems that mitigate urban pollution and enhance the quality of life -- can offer cost-effective, environmentally sustainable substitutes for conventional urban infrastructure. In providing services required by urban dwellers, today's cities, by and large, have opted for engineering rather than ecologically based systems. For example, in order to deal with increased stormwater runoff, cities typically build more storm drains rather than increase permeable surfaces to enhance groundwater recharge, which would reduce the amount of polluted stormwater discharged into the ocean. The nature's services concept, which explores ecological alternatives to engineering systems, is an emerging new paradigm for planning and retrofitting cities as well as an energy-conserving design approach to construction." (Urban Land Institute Los Angeles)  
Source: <http://www.uli-la.org/publications/item.php?id=61>

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FEATURE SECTION  
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NYC Art Commission Honors 3 Infrastructure Projects  
with 21st Annual Awards for Excellence in Design  
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"Mayor Michael R. Bloomberg today presented awards at the 21st Annual Awards for Excellence in Design. The Design Awards allow the Commission an opportunity to recognize outstanding work, and to encourage City Agencies, designers, artists and architects to strive for artistic excellence. The Art Commission encourages thoughtful projects, both large and small, that will enhance the urban environment. The Design Awards allow the Commission an opportunity to recognize outstanding work, and to encourage City Agencies, designers, artists and architects to strive for artistic excellence. Deputy Mayor for Administration Patricia E. Harris, New York Public Library President Paul LeClerc, Art Commission President Jean Parker Phifer and Art Commission Executive Director Deborah Bershad joined Mayor Bloomberg at the New York Public Library for the ceremony.

'All of these projects demonstrate a commitment to the kind of excellence in design that is part of what makes New York the world's most exciting and beautiful city,' said Mayor Bloomberg. 'In a City like New York, excellence in public design means everything, and the Art Commission helps us accomplish this by reviewing and approving design for art, architecture and landscaping on City property, while also overseeing the preservation of the City's art collection.'

The Art Commission of the City of New York, established in 1898, reviews and approves works of art, architecture, and landscape architecture on City-owned property. The Art Commission is comprised of 11 members who serve pro bono, and three full time staff. Each year the Art Commission reviews several hundred designs for art, architecture, street furniture, landscape architecture, street furniture landscape architecture, parks and playgrounds, distinctive sidewalks, and lighting for aesthetic appropriateness. Design awards are given to those who surpass the Art Commission's high standards for design quality in public works.

'This year, the Commission is delighted to recognize outstanding creative work from world-renowned architects and designers, as well as from the design staff within several New York City agencies,' said Art Commission President Phifer." (NYC.gov)

The three recipients for infrastructure projects were:

- \* East River Ferry Landings  
East 34th Street, East 62nd Street, and East 75th Street, Manhattan

A Project of the New York City Economic Development Corporation  
Frano Violich, Kennedy & Violich Architecture, Ltd.  
Ken Smith, Ken Smith Landscape Architect

\* Department of Sanitation Garage for Districts 4/4A/7  
650 West 57th Street and 780-786 Twelfth Avenue, Manhattan  
A Project of the New York City Department of Sanitation  
Joseph R. Contursi, AIA, Iffland Kavanagh Waterbury, PLLC  
Mike Friedlander & Staff, Department of Sanitation

\* East 153rd Street Bridge  
Between Grand Concourse and Park Avenue, Bronx  
A Project of the New York City Department of Transportation  
Alim Baycora and Jeffrey Han, CTE Engineers/Daniel Frankfurt

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UPCOMING EVENTS  
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Wednesday, July 30 through Sunday, October 19

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"Vargas-Suarez Universal: American Virus"

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Jersey City, NJ

"Vargas Suarez's works on mylar explore the techniques and possibilities represented by the planning of architectural space. These works, featuring the plans of four major buildings from around the world, including the Tate Gallery in London and the Kuala Lumpur International Airport, are immortalized in the artist's renderings that incorporate the architectural footprint of the building with his signature, linear renderings that nearly obliterate the original layout of the architecture at the same time as they re-inscribe its forms." (Jersey City Museum)

Location: Jersey City Museum, 350 Montgomery Street at Monmouth  
For information: 201.413.0303  
Web: <http://www.jerseycitymuseum.org/exhibitions/now.html>

Sunday, August 17 through Wednesday, August 20, 2003

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GIS in Addressing: "Street Smart & Address Savvy" Conference

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Providence, RI

"This August, URISA will hold its 5th Annual GIS in Addressing: Street Smart and Address Savvy Conference. This event will bring together people who deal with addressing, street naming, GIS, data modeling, location referencing, and many related fields. A diverse group from local, regional, state, tribal, and federal governments, E9-1-1 operations, utilities, telco's, spatial data providers and vendors, the Census Bureau, the US Postal service, and others will all be present to help show how to work with addressing." (URISA)

Registration & info: e-mail [info@urisa.org](mailto:info@urisa.org)  
Web: [www.urisa.org](http://www.urisa.org)

Saturday, August 23

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"Bronx River Alliance Canoe Trip"

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Bronx, NY

The Bronx River Alliance leads a Saturday afternoon canoe trip from 219th Street to West Farms/River Park.

Time: 11:30 am to 3 pm  
Meet: 219th Street in Bronx Park  
Registration & Info: call Angela Randall, Bronx River Canoe Guide, 718.430.1846

Sunday, August 24 through Friday, August 29, 2003

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"Conference on Ecology and Transportation"  
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Lake Placid, NY

"Conducted every two years, ICOET is designed to address the broad range of ecological issues related to surface transportation development, providing the most current research information and best practices in the areas of wildlife, fisheries, wetlands, water quality, overall ecosystems management, and related policy issues. ICOET is a multi-disciplinary, inter-agency supported event, administered by the Center for Transportation and the Environment." (ICOET)

Contact: Katie McDermott at 919.515.8034

Web: <http://www.itre.ncsu.edu/cte/icoet/>

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The INFRASTRUCTURE INFORMER highlights innovative projects, practices, research and initiatives in the planning, financing, operation, and management of civil infrastructure systems. By focusing on innovation and collaboration among stakeholders, ICIS intends for the newsletter to both inform and connect various individuals and organizations from a range of disciplines and perspectives. It is also used to promote related infrastructure events and activities taking place around the country.

You are receiving this electronic newsletter because you have come into contact with ICIS in some way: virtually, through signing our web site guest book, or physically, through meeting someone connected to ICIS at a workshop or conference.

ICIS was established in January 1998 with funding from the National Science Foundation. Located at New York University, the ICIS consortium includes: NYU, Cornell University, Polytechnic University of New York, and the University of Southern California. We welcome comments or suggestions for future issues and encourage you to forward this newsletter on to colleagues and others who might be interested. If you have trouble accessing the full articles of this edition, please send your correspondence via email to [icis@nyu.edu](mailto:icis@nyu.edu).

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