

# UNIVERSITY OF VERMONT TRANSPORTATION CENTER



***ANNUAL REPORT***  
***2006 - 2007***

## MESSAGE FROM THE DIRECTOR: DR. LISA AULTMAN-HALL



I am grateful to the many Vermonters, as well as out of state advisors, who worked with me this year to share the vision of what a transportation center could offer Vermont and UVM. The community support for this UTC has exceeded my expectations. With the founding of the UTC in 2005 Vermont gained an important addition to its transportation system. Having a university-based transportation center focused on research and education will provide Vermont with a new hub to advance the sustainability of transport and mobility.

I have had the privilege of working with four outstanding transportation centers: two regional centers funded by the U.S. DOT (established in the 1980s) and two state-based centers funded within individual states (one founded in the 1960s and the other in the 1970s). It is indeed an exciting opportunity to be the founding director to start from scratch and build a relevant 21st century university-based center. Our transportation problems now require an interdisciplinary approach. Transportation issues relate to energy, environment, economic development, technology and finance, and they demand diverse teams to come together in new ways. In my role as facilitator over the past year, I have shared my experience at other transportation centers, but also encouraged stakeholders to think anew and create a shared vision of the research projects and educational programs that would address current and future transportation problems. The UVM Transportation Center must be uniquely ours and focused on the most critical current problems. The Signature Research Projects and other programs we have started leverage UVM faculty expertise towards interdisciplinary transportation solutions.

The year 2006-2007 was predominantly a planning year. Proposals were developed; extraordinary staff hired; networks formed including the foundation for a strong partnership with VTrans. 2007-2008 will be a year of action. In the coming year, we will use the generous funding of the U.S. DOT to create a solid foundation of expertise from which to grow a diverse and sustainably funded center that is valued within UVM and the community as a hub for transportation research and education. I look forward to continuing our partnerships.

## MESSAGE FROM THE PROVOST: DR. JOHN M. HUGHES

The University of Vermont (UVM) is at an exciting time in its history where both education and research are growing to realize our vision to be the premier small public research university. The generous funding from the United States Department of Transportation through the UTC program will allow the UVM Transportation Center to be one of the key motivators for growth in both research and education at UVM. In my first year at UVM, I have witnessed the programs initiated during the 2006-2007 academic year by the new center spark interest and ideas from diverse faculty members across all colleges and schools. This interdisciplinary focus was deliberately designed and reflects the UVM campus belief that 21st century problems must be designed through integrative solutions of all stakeholders.

I am strongly supportive of the outstanding work conducted by the UVM Transportation Center, and look forward to a bright future for transportation across our university and with private and public partners throughout the nation and Canada.



## UVM TRANSPORTATION CENTER - A U.S. DOT NATIONAL UTC

The center theme of *Sustainable Systems and Advanced Technologies for Northern Communities* allows the UTC to leverage the existing expertise of UVM faculty and the State of Vermont while contributing to issues which are critical to national and regional transportation systems. The placement of the center in the Office of the Provost is a key to ensuring interdisciplinary research projects and educational programs.

UVM was designated as a National University Transportation Center in August of 2005. As a National University Transportation Center, the University of Vermont is authorized to receive a \$16 million research grant from the U.S. Department of Transportation (U.S. DOT) over the next five years. This grant funding is overseen by the **Research and Innovative Technology Administration (RITA) of the U.S. DOT**. RITA is charged with coordinating research programs and advancing the deployment of cross-cutting technologies to improve our transportation system.

## RESEARCH

An extensive advisory process was undertaken in 2006-2007 aimed at selecting the best research project foci to serve as the 'foundation stones' for the new center. One of the ways the UTC at UVM will achieve distinction is by awarding the majority of research project funds to a limited number of Signature Research Projects. Roundtables for faculty discussions of the Signature Research Project concept were held in September 2006. By October 1, 2006, the UTC had received 35 pre-proposals from PIs in six different colleges. The pre-proposals were reviewed by an interdisciplinary committee of five individuals. In November and December 2006, the topics and tasks in the remaining 20 pre-proposals were presented at four external advisory committee meetings. Four Signature Research Project topics were announced in January 2007. The interdisciplinary teams met over the spring semester to develop final workplans. The following three signature projects have been approved by the Provost based on external peer review and advisory committee input:



- Integrated Transportation and Land Use Models: Complex Systems Approaches and Advanced Policy Applications;
- Emissions and Performance of Alternative Vehicles in Northern Climates; and
- Sustainable Transportation for Tourism.

In spring 2006 the following one-year small grants were awarded to individual faculty:

- Road Network Robustness
- School Transportation
- Demand for Walking/Biking to Work
- Electric Car Battery Technology
- Refugee Populations and Transportation
- Plug-in Hybrids (joint with Green Mountain College and CVPS, GMP, and BED)

## NEW PARTNERSHIPS

In January 2007, the UTC was designated as the host of the **Vermont Clean Cities Coalition** which supports, promotes and helps coordinate Vermont efforts related to fuel efficient and alternative fueled vehicles, transportation alternatives to the automobile, anti-idling campaigns, and funding opportunities and pro-



UVM's CNG Bus

grams that address the Clean Cities mission. The Clean Cities program is a national program sponsored by the U.S. Department of Energy. The designation of the UTC as host of the Vermont Clean Cities Coalition was effective on July 1, 2007. Karen Glitman serves as the Program Director.

## EDUCATION EVENTS

In addition to its research projects, the UTC sponsors a number of technology transfer activities that attracted nearly 400 participants in 2006-2007 and included two major conferences:



- Innovative Financing in Transportation Funding, with the CCMPO and Vermont Agency of Transportation.
- Transportation and Historic Preservation: Context Sensitive Solutions in an Era of Budget Constraints, with the UVM Historic Preservation Program and Vermont Agency of Transportation.

## GRADUATE EDUCATION

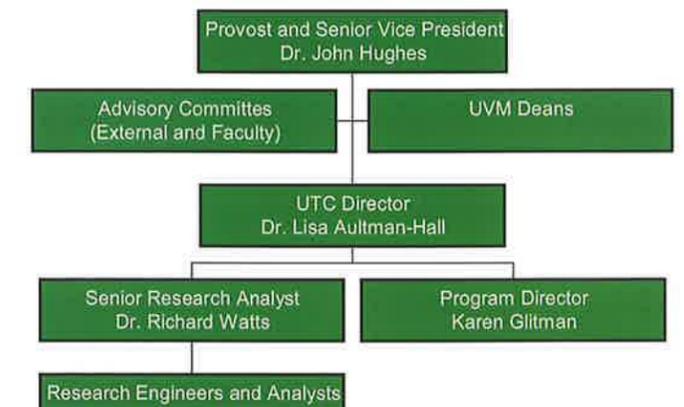


A new course entitled "Critical Issues in Transportation for the 21st Century" was piloted in the Fall of 2006 by Drs. Aultman-Hall and Sadek.

The UTC awarded 8 fellowships to students in engineering, natural resources and public administration.

Dr. Richard Watts co-teaches the new UVM transportation course in fall 2007.

## UTC ORGANIZATION



## External Advisory Committee Members 2006 - 2007

**Teresa Adams**, University of Wisconsin-Madison  
**Thomas Adler**, Resource Systems Group, Inc. (RSG)  
**William Ahearn**, VTrans  
**Ernie Blais**, U.S. DOT FHWA Vermont  
**Dan Brand**, CRA International  
**Cindy Burbank**, Parsons-Brinckerhoff  
**John Collura**, University of Massachusetts - Amherst  
**Katherine Decarreau**, University of Vermont  
**Michael Demetsky**, University of Virginia  
**Lawrence Dwyer**, U.S. DOT FHWA Vermont  
**John Fegan**, FHWA  
**Harold Garabedian**, Vermont Agency of Natural Resources  
**Steve Hackett**, Hackett, Valine, & MacDonald, Inc  
**Susan Handy**, University of California - Davis  
**Leon Hayward**, NYC Department of Transportation  
**Jose Holguin-Veras**, Rensselaer Polytechnic Institute  
**Scott Johnstone**, Chittenden County MPO  
**John Kassel**, Shems Dunkiel Kassel & Saunders PLLC

**Charles Luce**, USDA Forest Service  
**James Mahoney**, University of Connecticut  
**Matt Mann**, Windham RPC  
**Glenn McRae**, Snelling Center for Government  
**Kevin Moore**, Bentley Systems Inc.  
**Elaine Murakami**, FHWA Office of Planning  
**Errol Noel**, Howard University  
**Robert Penniman**, CATMA  
**Peter Plumeau**, Wilbur Smith Associates  
**Kathleen Ross**, LaSalle Bank  
**Brian Searles**, Burlington International Airport  
**Louise Stoll**, Independent Consultant  
**Richard Tetreault**, VTrans  
**Paul Toussaint**, University of Kentucky  
**Judith Van Houten**, Vermont EPSCoR  
**Jennifer Wallace-Brodeur**, AARP  
**Mark Zydel**, McFarland-Johnson, Inc

## Faculty Advisory Committee

**David Novak**, School of Business Administration  
**Austin Troy**, Rubenstein School of Environment and Natural Resources  
**Jane Kolodinsky**, Community Development & Applied Economics  
**Meghan Cope**, Geography Department  
**Adel Sadek**, School of Engineering  
**Robert McCullough**, History Department  
**Christopher Koliba**, Community Development & Applied Economics

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## Mission Statement

The UVM Transportation Center aims to develop integrated interdisciplinary research and education programs that advance the state and regional passenger and freight transportation system such that they promote a sustainable economy, healthy communities, appropriate land use development and re-development, equitable mobility, minimal environmental impacts and efficient energy use.

[www.uvm.edu/transportationcenter](http://www.uvm.edu/transportationcenter)