



## Program Progress Performance Report for University Transportation Center at Portland State University

Submitted to: U.S. Department of Transportation  
Research and Innovative Technology Administration (RITA)

Grant Number: DTRT12-G-UTC15

Project Title: University Transportation Center  
National Institute for Transportation and Communities (NITC)

*Consortium members: Portland State University (PSU),  
University of Oregon (UO), Oregon Institute of Technology (OIT),  
University of Utah (UU)*

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Submitting Official: same as above

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DUNS: 05-222-6800

Recipient Organization: Portland State University  
PO Box 751  
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Grant Period: January 2, 2012 – January 31, 2016

Reporting Period End Date: June 30, 2015

Report Term: Semi-annual

Signature:

A handwritten signature in black ink, appearing to read 'Jennifer Dill'.

## 1. ACCOMPLISHMENTS: What was done? What was learned?

The information provided in this section allows the RITA grants official to assess whether satisfactory progress has been made during the reporting period.

### What are the major goals of the program?

The major goals for NITC as described in our application fall into five categories:

#### *Research*

- **Competitive, peer-review project selection process.** NITC projects are to be selected through an open RFP process. All faculty at the member campuses, as well as approved Faculty Associates, will be eligible to submit research, education and technology transfer project proposals responsive to our theme. The proposal evaluation process will emphasize external peer review and draw on the expertise of practitioners and researchers nationally.
- **Transportation for Livable Communities Pooled-fund research.** To help maximize implementation of U.S. DOT's commitment to livable communities, NITC's Transportation for Livable Communities Pooled-Fund Research program will provide regional and local agencies, such as metropolitan planning organizations and municipalities, more opportunity to be invested in research
- **Transportation Data for Livable Communities.** This initiative aims to create a model for data collection, management and dissemination that will foster the wider, national use of data resources collected on a local level.
- **Engaging Citizen Leaders.** This initiative will expand NITC's scope of work to reach a wide range of current and future transportation leaders. We will accomplish this in two ways. First, our competitive RFP process will include a score for community engagement; this will result in projects that achieve the first two goals. Second, we will set aside \$70,000 for projects that specifically target creating community leaders among the general public (not university students) and where community leadership is the *primary* objective, not a secondary or complementary objective to a larger research project.

#### *Leadership*

- **Shape national & international conversations on transportation research and education.** NITC faculty are well regarded nationally and internationally as leaders in their fields. They will continue to demonstrate this leadership through publishing in the top journals and presenting their work at conferences. NITC will take the concept of leadership far beyond academic circles, as evidenced by the wide

dissemination of research results in professional, technical and general publications and other media.

- **Serve on national committees and panels.** NITC faculty help address national transportation problems through volunteer leadership on TRB committees and in other positions, including journal editorial boards, national and international conference organizing committees, NSF panels, and other advisory boards. To continue and reinforce this practice, NITC will mentor our new, junior faculty to apply for committee and panel membership and recognize the activities of all faculty members.
- **Respond to needs of practitioners and policymakers.** NITC researchers have a long history of conducting research that is useful in solving the problems practitioners and decision-makers face every day. Our theme and project selection process will ensure that our research continues to address our nation's transportation problems. NITC's Director and staff will serve as points of contact for agency leaders and policymakers both regionally, statewide and nationally. When we identify needs that match the expertise of our researchers, we will make a connection. We will work with key staff at the DOT administrations (FHWA, FTA, etc.), both in Washington, D.C., and within the region, whose work relates to our theme to determine the most effective way for our researchers to learn from and inform agency activities.

#### *Education and Workforce*

- **Offer degrees and courses in multiple disciplines.** NITC will continue to offer a rich array of degrees that serve the transportation profession.
- **Provide experiential learning.** A key component of our education strategy is experiential learning, which will help attract and retain students. Our campuses will continue to provide these opportunities, and NITC will seek ways to expand them.
- **Attract and support undergraduate students.** NITC will build upon existing and effective mechanisms to expose K-12 students to transportation, attract and retain new undergraduate students to our degree programs, and involve undergraduates in our research.
- **Attract and support graduate students.** NITC will support graduate students directly through the following: Research assistantships working on projects; Dissertation fellowships for students to carry out research on surface transportation topics that fit under the NITC theme; Funds for scholarships at each campus to recruit new and retain existing high-performing students; and Funds for transportation student group activities.

- **Sponsor a student conference.** NITC will host a national student conference focusing on our theme.
- **Educate professionals.** NITC will maintain a vibrant program of seminars, workshops, professional courses and other training opportunities that provide transportation practitioners with the latest tools and techniques.

### *Technology Transfer*

- **Move research into practice.** Moving research into practice first requires research findings that are relevant to practice. Our competitive project selection process will help ensure that we select projects that have direct implications for practitioners in the short- or long-term. In addition, we will use practitioners to help inform projects after selection and review final products. Additional efforts will include short workshops to share research results, one-page research briefs, presenting work at conferences aimed at practitioners, holding one-day conferences, funding technology transfer projects, and encouraging the commercial application of research results when possible.
- **Inform researchers.** The quality of scientific inquiry depends upon researchers sharing their findings with other researchers through the peer-review publication processes. Fellow researchers are important targets for our technology transfer program. We will accomplish this through two primary activities. First, NITC's faculty will continue to publish extensively in peer-reviewed journals. Second, TREC will support our faculty in presenting their work at nationally recognized academic conferences by including travel funds for each project.
- **Use innovative technologies to communicate research results.** NITC will embark on an ambitious program of sharing information through traditional and new media.

### *Collaboration*

- **Collaborating within our consortium.** NITC's governance structure is cooperative and leadership is distributed. The Executive Committee includes one faculty member from each campus. The Executive Committee provides overall direction for the Center, makes project funding decisions, and selects Center award recipients, including student of the year. They will meet in person at least twice a year, rotating the location between campuses, and hold regular conference calls. Each Executive Committee member will be responsible for representing and supporting their respective campus

- **External collaboration.** In addition to the partnerships that occur through individual projects and the pooled-fund program, NITC will foster collaboration with a range of “end-users” of our work through an External Advisory Board.

## **What was accomplished under these goals?**

### *Research*

- **Competitive, peer-review project selection process.**

The first round of NITC funds were awarded in the fall of 2012. Nineteen projects were selected through the competitive, peer-review process each of which is between 12 and 18 months in duration. As of June 30<sup>th</sup>, 2015, the 19 projects are on average, 96% complete. Ten final reports have been reviewed and published. Three draft reports are either in the editing or peer review process.

The second round of NITC funds were selected in the fall of 2013 and awarded in the winter of 2014. Ten projects were selected through a competitive, peer review process. Each project from the second round is also between 12 and 18 months in duration. As of June 30<sup>th</sup>, 2015, the 10 projects are on average, 75% complete. One draft report is in the peer review process.

We awarded a round of NITC small starts funds in the fall of 2013. These project awards are for preliminary research and to help PIs further develop their research idea so they can be more competitive in future NITC RFPs. The six projects selected for funding are, on average 98% complete as of June 30<sup>th</sup>, 2015. Three final reports have been reviewed and published. Two draft reports are either in the editing or peer review process.

The third round of NITC funds were selected in the June of 2014 and awarded by August 2014. Eight projects were selected through a competitive, peer review process totaling \$800,000. Each project from the third round of funding is between 12 and 18 months in duration. As of June 30<sup>th</sup>, 2014, the 10 projects are on average, 54% complete.

- **Transportation for Livable Communities Pooled-fund research.**

The pooled-fund research project, Online Non-motorized Traffic Count Archive, was awarded in the spring of 2014. Dr. Krista Nordback and Dr. Kristin Tufte are the PI and Co-PI, respectively, and both are from Portland State University. Funding partners on the project include the Oregon Department of Transportation, FHWA, City of Boulder, Lane Council of Governments, Metro, City of Eugene, City of Austin, City of Bend and the Bend MPO.

The goal of the project is to create a national non-motorized count archive where agencies can add data, counts are checked for quality, and data can be exported and visualized through mapping and basic graphic functions.

The anticipated impacts include jurisdictions more easily able to share and access data, data can be exported in a standard format and thus easier to manipulate and data can be incorporated into other national databases.

Currently the project is 65% complete. The anticipated completion date is November of 2015. Thus far the project has resulted in one paper titled *Creating a National Non-Motorized Traffic Count Archive: Process and Progress* that will be published in a forthcoming issue of Transportation Research Record (TRR). Three presentations have been given on the project to approximately 110 people.

- **Transportation Data for Livable Communities.**

- Eighteen of the 44 projects funded through either the general research or small starts grant programs create a model for data collection, management or dissemination. The results of this research will foster the wider, national use of data resources collected at the local level.
- Five projects selected in the third round of NITC funding focus on data:
  - Trip and Parking Generation by Transit-Oriented Developments, Reid Ewing, University of Utah
  - Exploiting New Data Sources to Quantify Arterial Congestion and Performance Measures, Miguel Figliozzi and Robert Bertini, Portland State University
  - Evaluation of an Eco-driving Intervention: Changing Knowledge, Attitudes, and Behavior by Means of Supervisor Support, Donald Truxillo, Leslie Hammer, John MacArthur, Talya Bauer, Portland State University
  - Modeling, Analysis and Implementation of Pedestrian Priority at Signalized Intersections, Chris Monsere and Sirisha Kothuri (Portland State University) and Ed Smaglik (Northern Arizona University)
  - Understanding Cyclist-Vehicle Interaction via Analysis of Ego-centric Video, Feng Liu, Wu-chi Feng, Miguel Figliozzi, Portland State University

- **Engaging Citizen Leaders.**

We funded one proposal in the first round of NITC funding called Transportation Leadership Education . This project develops a case study and national model of the Portland Bureau of Transportation's Traffic and Transportation Course. Over 1,300

citizens have taken this 10-week course to learn how to engage in transportation issues in their community. The research informed a course curriculum and implementation handbook for a “Citizen Transportation Academy” which seeks to replicate the Portland Traffic and Transportation course model in other U.S. cities. Congressman Blumenauer has expressed interest in implementing the course as a national model. Interviews and surveys have confirmed that the Portland Traffic and Transportation Course presents a unique approach to educating interested citizens about transportation. Currently, the project is 90% complete.

A case study of the Portland Traffic and Transportation course has been completed. The case study found that course participants received a good understanding of factors that influence the transportation landscape, and of the fiscal and policy constraints and available tools for transportation agencies. Participants were also much more involved in local transportation activities after taking the course. Of 102 participants surveyed, 68 students proposed a specific solution to an observed transportation problem, 28 of which were implemented, and 22 were attributable at least in part to the student’s actions. Once of the case study and curriculum materials are finalized, they will be distributed and shared with various constituencies. Currently, funding is being sought to launch demonstration courses in 2-3 additional U.S. cities in the next 2 years.

The project Disseminating the Sustainable City Year Program (SCYP) Educational was selected in the third round of general research funding. This project expands upon the success of the SCYP by supporting universities across the country to implement the program. The SCYP educates local politicians, citizens and agency staff on the components and benefits of livable communities. Thus far three national webinars and a national conference have reached a total of 275 people. The webinars have led to numerous inquiries from universities and two site visits to assist university development of a SCYP programs. A communications organization was hired to assist in web podcast module development. The podcasts are complete and available on our website. Currently, an explanatory video is being developed to assist schools and cities in understanding the SCYP model.

- Our programmatic scoring criteria gives higher points to projects that actively engage external partners and addressed equity and diversity issues. Partly as a result, one project from our second round focus on equity: Is HUD Affordable Housing Really Affordable?
- Three of our round one funded projects focus on equity: (1) Understanding the Transit-Dependent Population; (2) Assessing Transit Fare Equity in Utah Using a

Geographic Information System; and (3) Latino Immigrant Communities and Equity in Transit Oriented Development.

### *Leadership*

- **Shape national & international conversations on transportation research and education.**
  - NITC staff is helping to shape a new TRB training initiative headed by the recently-formed Task Force ABG05T, *Ahead of the Curve: Mastering the Management of Transportation Research*. The mission of the Task Force is to develop a TRB training program that enhances the knowledge, skills, and abilities of those who manage transportation research programs and innovation activities.
  - Thirty NITC faculty and staff serve on editorial, policy and other advisory boards.
  - NITC staff are active in the AASHTO-RAC liaison group.
  - NITC faculty are part of the team (led by ICF International) developing FHWA's Strategic Agenda for Pedestrian and Bicycle Transportation.
  - NITC's Director, Jennifer Dill, was elected to the Executive Committee of the Council of University Transportation Centers (CUTC).
  - NITC's Director, Jennifer Dill, is serving on a special TRB policy committee on Innovative Mobility Services. The committee was established at the request of the TRB Executive Committee. A final report is expected in late 2015.
  - NITC's Director, Jennifer Dill, served on the organizing committee for a two-day conference jointly sponsored by TRB and the American College of Sports Medicine, *Moving Active Transportation to Higher Ground: Opportunities for Accelerating the Assessment of Health Impacts*. The committee will be producing an article for *TR News* with recommendations on future research directions that move the research to practice.

- **Serve on national committees and panels.**

Faculty members and students at the four NITC member campuses currently serve on 35 TRB committees/task forces and 7 NCHRP/SHRP2/NCFRP/TRB panels.

- **Respond to needs of practitioners and policymakers.**

During the reporting period, NITC sponsored in-person trainings through the Initiative for Bicycle and Pedestrian Innovation (IBPI). NITC researchers and partners taught a two-day course called *Integrating Bicycle and Pedestrian Topics into University Transportation Courses* to ten university faculty. The workshop was hosted on the Portland State University Campus.

NITC was involved with and sponsored the Oregon Active Transportation Summit on March 30<sup>th</sup> and 31<sup>st</sup>, 2015. The Summit was two days, the first being a conference and

the second being trainings and tours. During the conference, NITC provided a total of 7.5 AICP credits for five of the sessions. A total of 210 people attended these five NITC-sponsored sessions. NITC staff hosted a training in partnership with the National Association of City Transportation Officials (NATCO). The NACTO trainings were the Urban Bikeway Design and the Urban Street Design. Fifty practitioners attended the trainings and NITC provided 6 AICP, ASLA, and ITE credits for each training.

NITC hosted 6 webinars in February, March, April, May and June. The 6 webinars were attended by 439 people and 6 hours of AICP credits were offered.

### *Education and Workforce*

- **Offer degrees and courses in multiple disciplines.**

The four NITC campuses continue to offer 16 degrees in transportation and closely related fields.

- **Provide experiential learning.**

Our campuses continue to incorporate access to community partners and employment opportunities in a number of ways. Examples during this reporting period include the following:

The University of Utah student group, Point B, in partnership with the local Women's Transportation Seminar (WTS) chapter, co-hosted the annual WTS gala held on the University of Utah campus in April. Students showcased their research through a poster session at the event. Nearly 40% of the gala attendees were students while the rest were practitioners. The student group also participated in the spring WTS Transportation YOU program with middle school girls in the Sale Lake City area.

The University of Oregon student group, LiveMove sent a number of students to various conferences around the Pacific Northwest including the Oregon Active Transportation Summit and the American Planning Association (APA) Conference. Students presented 7 posters at the APA conference. One poster highlighting LiveMove's project "Downtown to Campus Connections in Eugene, Oregon: Student Inspired Change," won a conference award.

Every year LiveMove takes on an applied project, as part of LiveMove ByDesign. This year, LiveMovers completed last year's traffic garden project. A traffic garden is essentially a "safety town" where kids can learn the how to bike in various types of situations, such as sharrows, cycle tracks, and multi-use paths. The report is now finished and will be posted on LiveMove's website, as well as distributed to various Safe Routes to Schools and the 4J School District in Eugene, Oregon. LiveMove also worked on a bicycle friendly business district (BFBD) project. LiveMove conducting case study research on successful BFBD programs across the country. Members contacted

advocacy groups, chambers of commerce, and other local champions in each district to schedule interviews. The result, is a report with case studies, best practices, and recommendations that the City of Eugene can utilize in creating their own BFBD.

The Oregon Institute of Technology (OIT) continues to engage students through a focus on the ITE Traffic Bowl. The staff from Kittelson & Associates help tutor students on the event. Also, students from OIT's ITE chapter supported the local medical center with the Klamath Falls Bike to Work Day on May 15<sup>th</sup>. In addition, NITC funds were also used to support an OIT student's travel and registration to the WTS Conference in Chicago.

At Portland State University, the College of Urban and Public Affairs continues to offer the Pedestrian and Bicycle Planning Lab. The source provides the opportunity to participate in a workshop-based planning process and is taught by top professionals in the field of bicycle and pedestrian planning and design. NITC funds were used to support a two PSU students' travel and registration to the WTS Conference in Chicago

- **Attract and support undergraduate and graduate students.**

Since the fall of 2012, NITC has awarded 61 scholarships to student support for research projects. Each student who receives a NITC scholarship develops a research product (such as a thesis or conference paper) that fits within the NITC themes.

During the reporting period we solicited proposals for dissertation fellowships. We awarded three fellowships to the following PhD candidates:

- Steve Gerhke - Civil and Environmental Engineering, Portland State University
- Christine Kendrick - Environmental Science and Management, Portland State University
- Nicholas Perdue - Geography, University of Oregon

- **Sponsor a student conference.**

Representatives from NITC sponsored student groups are coordinating with the Region X UTC regarding their student conference in October 2015. We plan to host a NITC-specific student event in 2016.

- **Educate professionals.**

NITC was involved with and sponsored the Oregon Active Transportation Summit on March 30<sup>th</sup> and 31<sup>st</sup>, 2015. NITC staff supported a NACTO training for 50 practitioners on March 31<sup>st</sup>. These courses are discussed in detail in the *Leadership: Respond to needs of practitioners and policymakers* section.

NITC kicked off a 2015 professional development schedule with 6 webinars on NITC funded research this spring. 439 people attended the webinars. The webinar subjects included the following:

- Exploring Pedestrian Responsive Traffic Signal Timing Strategies in Urban Areas
- Is Accessibility Planning Feasible in U.S. Shrinking Cities?
- A Comprehensive Evaluation of Protected Cycling Facilities: Lessons from Five Cities
- Impacts of Roadway and Traffic Characteristics on Air Pollution Risks for Bicyclists
- How Affordable Is HUD Affordable Housing?
- Understanding the Socio-Psychological Factors Affecting Active Travel to School

Each Friday during the quarter, Portland State University holds a Friday Transportation Seminar that is open to the public. We do a live webcast of the event. The winter and spring seminar had 962 and 752, respectively, non-student participants (primarily professionals) at either the in-person event or live webcast.

### *Technology Transfer*

- **Move research into practice.**

Over 12 practitioners scored 23 NITC round 3 proposals. When practitioners are engaged in the proposal and final report review stages of the NITC process, a stronger understanding of NITC's work and research priorities is developed among transportation professionals.

The NITC round 1 project, Making Streets into Complete Streets: An Evidence Based Design Manual is a technology transfer project. The design manual, called Rethinking Streets: An Evidence-Based Guide to 25 Complete Street Transformations, has been completed and draws upon research from previous OTREC projects, as well as other research. The design manual is available on the NITC website and <http://rethinkingstreets.com/>. Over 5,000 copies of the pdf have been downloaded.

NITC launched a Technology Transfer Pool program in the Spring of 2015 which allows the opportunity to apply for grants to support implementation or translation of research results. Grants are limited to disseminating results stemming from previously funded and completed research funded by OTREC or NITC. The purpose of these awards is to turn research into products that can be used by practitioners and/or researchers to further advance implementation. The following projects are in the process to receive funding:

- Adding Value to GPS Travel Data with New Open-Source Processing Software for Everyone, Jennifer Dill (Portland State University)
- Tools for Assisting Low Income Households With Finding Location-Efficient Housing, Andree Tremoulet (Portland State University)

- **Inform researchers.**

NITC encourages PIs to present on their research at conferences all over the world. Over the course of the grant, researchers reported 97 presentations on NITC projects with 5,949 people in attendance. In addition, NITC sponsored research has resulted in over 28 peer-reviewed articles.

- **Use innovative technologies to communicate research results.**

We launched a new NITC website in the fall of 2014. The site contains an updated look, functionality and improved interface for users such as PIs. Our content management system is integrated into the new system continue to work on our website. PIs are able to upload research products and profile information for public access.

We use our social media resources such as Twitter and Facebook to bring awareness to the release of a report or highlighted produce. We continue to edit our new database management system to streamline the process for proposal submission, reviews, awards, progress reports and final report submission. As noted above, we have offered six webinars and several live and archived webcasts of seminars.

### *Collaboration*

- **Collaborating within our consortium.**

The Executive Committee of NITC via conference call and in-person during the reporting period. NITC staff hosted calls on January 7<sup>th</sup> and May 6<sup>th</sup>, 2015 and an in-person project selection meeting on June 10<sup>th</sup>, 2015.

- **External collaboration.**

The pooled-fund project referenced in *Research* section demonstrate strong partnerships with a number of agencies in Oregon, Austin, Texas and Boulder, Colorado.

The following people and organizations have agreed to be members of the NITC Advisory Board:

Michael Baltes, Federal Transit Administration  
Michael Bufalino, Oregon Department of Transportation  
City of Portland  
James Christian, FHWA-Utah Division  
Tyler Deke, Bend MPO  
Kevin Desmond, King County Metro Transit  
Susan Handy, University of California at Davis  
Matthew Hardy, AASHTO  
Susan Herbel, Cambridge Systematics  
Craig Honeyman, League of Oregon Cities

Robin Hutcheson, Salt Lake City  
Cameron Kergaye, Utah DOT  
Wayne Kittelson, Kittelson & Associates, Inc.  
Ted Knowlton, Wasatch Front MPO  
Alan Lehto, TriMet  
Jana Lynott, AARP  
Charles Pattison, 1000 Friends of Florida  
Paula Reeves, WSDOT  
Gabe Rousseau, FHWA  
Brian Saelens, Seattle Children's Researcher Institute  
Tom Schwetz, Lane Transit District  
Ted Trepanier, Inrix  
Yinhai Wang, PacTrans

The NITC Advisory Board will meet for a day-long meeting at the Portland State University campus on September 16<sup>th</sup>, 2015 in conjunction with the Transportation and Communities Summit. NITC staff incorporated the Advisory Board funding priority for research that evaluates the economic impact of livable communities as part of the Round 2 RFP.

- How have the results been disseminated?

The NITC communications director works with each of the PIs to create a plan on reporting dissemination. Thus far 13 final reports have been published including 8 general research, 1 education, 1 technology transfer and 3 from the small starts program. These reports are available for download on the project page on the NITC site. We regularly use e-newsletters and social media (Twitter, Facebook) to promote completed research.

### **What do you plan to do during the next reporting period to accomplish the goals?**

Expected highlights for the next 6 month reporting period include:

- Publish and promote all NITC final reports through social media, webinars and the 2015 Transportation and Communities Summit.
- Plan and host the 2015 Transportation and Communities Summit.
- Plan and host the NITC Advisory Board meeting.
- Host at least four webinars on NITC research.
- Distribute remaining Technology Transfer Pool funds.

## 2. PRODUCTS: What has the program produced?

### Publications, conference papers, and presentations

Researchers from the NITC projects reported 97 presentations about those projects at conferences and events. NITC researchers also reported that 5,949 people were in attendance for these presentations. In addition, NITC sponsored research has resulted in over 28 peer-reviewed articles.

Thirty-six projects were funded through NITC round one, two, three and the small starts program. As of the end of this reporting period, 13 final reports have been published and 7 draft reports are currently undergoing review and editing. The 13 final reports are listed below:

- Assessing Transit Fare Equity in Utah Using a Geographic Information System, Steven Farber, University of Utah
- Combined Traction and Energy Recovery Motor for EVs, James Long, Oregon Institute of Technology
- Continuous Data Integration for Land Use Transportation Planning and Modeling, Liming Wang, Portland State University
- Effect of Light-Rail Transit on Traffic in a Travel Corridor, Reid Ewing, University of Utah
- Latino Immigrant Communities and Equity in Transit Oriented Development, Gerardo Sandoval, University of Oregon
- Lessons from the Green Lane: A Comprehensive Evaluation of Protected Cycling Facilities, Chris Monsere and Jennifer Dill, Portland State University
- Mobility versus Accessibility: Applications for Shrinking Cities, Joanna Ganning, University of Utah
- Modeling and Analyzing the Impact of Advanced Technologies on Livability and Multimodal Transportation Performance Measures in Arterial Corridors, Miguel Figliozzi, Portland State University
- Racial Bias in Driver Yielding Behavior at Crosswalks, Kimberly Kahn, Portland State University
- Rethinking Streets: An Evidence-Based Guide to 25 Complete Street Transformations, Marc Schlossberg, University of Oregon
- Street Portals: Urban User Interface "Test Bed" Prototype for Bike Shares, Jason Germany, University of Oregon
- Sustainable Transportation Class for OLIS, Vicki Elmer, University of Oregon
- Understanding Market Segments for Current and Future Residential Location and Travel Choices, Kelly Clifton, Portland State University

### Website(s) or other Internet site(s)

The NITC website is located here: <http://nitc.trec.pdx.edu/>.

### Technologies or techniques

Nothing to report for this period.

### Inventions, patent applications, and/or licenses

Nothing to report for this period.

### Other products

Nothing to report for this period.

## 3. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS: Who has been involved?

### What organizations have been involved as partners?

The members of the consortium include Portland State University, University of Oregon, Oregon Institute of Technology, and University of Utah. Each NITC funded project is required to have 100% match. The organizations providing match appear in Table 1

**Table 1: Partner Organizations**

Match Partner	Type	Financial/ Cash	In-Kind
1000 Friends of Oregon	Non-profit/Foundation		X
Bend, OR MPO	Regional government	X	
Bike Belong	Non-profit/Foundation	X	
City of Austin, TX	Local government	X	
City of Bend, OR	Local government	X	
City of Boulder, CO	Local government	X	
City of Flagstaff, AZ	Local government		X
City of Meza, AZ	Local government		X
City of Portland, OR	Local government		X
City of Salem, OR	Local government	X	
Conscious Commuter	Private industry		X
Drive Oregon	Non-profit/Foundation	X	
ESRI, Inc	Private industry		X
Federal Highway Administration	Federal agency	X	
Intel	Private industry		X
KersTech Vehicle Systems	Private industry		X
King County Metro	Regional government	X	

<b>Match Partner</b>	<b>Type</b>	<b>Financial/ Cash</b>	<b>In-Kind</b>
Lane County MPO	Regional government	X	
Lane Transit District	Transit agency	X	
Metro	Regional government	X	X
Mountainlands Association of Governments	Regional government		X
National Association of Realtors	Non-profit/Foundation	X	
Northern Arizona University	University		X
Oregon Department of Land Use and Conservation	State government		X
Oregon Department of Transportation	State DOT	X	X
Oregon Environmental Council	Non-profit/Foundation		X
Oregon Institute of Technology	University		X
Oregon Leadership in Sustainability (UO)	University	X	
Portland State University	University	X	X
Provo City	Local government	X	
Regional Transportation Commission of Southern Nevada	Regional government	X	
Regional Transportation Commission of Washoe County	Regional government	X	
Rensselaer Polytechnic Institute	University		X
Robert Wood Johnson Foundation	Non-profit/Foundation		X
Rowell Brokaw Architects	Private industry	X	X
Salt Lake County	Local government	X	
SFMTA   Municipal Transportation Agency	Local government		X
Sustainable Cities Initiative (UO)	University	X	
Toole Design	Private industry		X
Transportation for America	Non-profit/Foundation	X	
TriMet	Transit agency	X	X
University of Minnesota	University	X	
University of North Carolina, Chapel Hill	University		X
University of Oregon (UO)	University	X	X
University of Utah	University	X	X
Utah Transit Authority	Transit agency	X	X
Wasatch Front Regional Council	Regional government	X	X
Washington Department of Transportation	State DOT	X	
Washington Metropolitan Area Transit Authority	Transit agency	X	

### **Have other collaborators or contacts been involved?**

During the Pooled-Fund process, NITC staff communicated and collaborated with numerous agency representatives across the country regarding data management issues and needs. These agency representatives include the Minnesota and Colorado departments of Transportation, Boulder County, and City of Austin.

The role of the NITC Advisory Board is described and the members are listed in the *Exertional Collaboration* section above.

### **4. IMPACT: What is the impact of the program? How has it contributed to transportation education, research, and technology transfer?**

#### **What is the impact on the development of the principal discipline(s) of the program?**

We send a survey every three weeks to those that download the final reports from the NITC website. The first survey for NITC reports was distributed at the end of April. Since then we've received 298 responses regarding the final reports. Below are selected results from the survey:

#### **Please indicate which best describes you?**

Student	14%
Faculty/Researcher	18%
Practitioner	49%
Other	19%
Total	100%

#### **What was your purpose for downloading the report? (Choose all that apply)**

Help make decisions about practice	42%
Research project	22%
Other	18%
Inform public input process about a project	17%
Research for a class project, paper, thesis, dissertation, etc.	15%
Refer to a colleague	12%
Research proposal	5%
Thesis/ dissertation proposal	4%
I was involved in this project	3%

## How useful was the report in meeting these purposes?

Very useful for my intended purpose	37%
Somewhat useful for my intended purpose	40%
Not useful for my intended purpose, but may be for other parts of my work	4%
Not what I was looking for	1%
I don't know yet	19%
Not very useful	0%
Total	100%

NITC encourages PIs to present on their research at conferences all over the world. Over the course of the grant, researchers reported 97 presentations on NITC projects with 5,949 people in attendance. In addition, NITC sponsored research has resulted in over 28 peer-reviewed articles.

In the two months following the release of the final report “Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S.” the project's Web page attracted more page views than any other page on our UTC's website, even the home page. 2287 people downloaded the report since the report's release in June of 2014.

The NITC project, Making Streets into Complete Streets: An Evidence Based Design Manual is a technology transfer project. The design manual, called Rethinking Streets: An Evidence-Based Guide to 25 Complete Street Transformations, has been completed and draws upon research from previous OTREC projects, as well as other research. Over 5,000 copies of the pdf have been downloaded from the NITC and Rethinking Streets websites.

The University of Oregon program, Oregon Leadership in Sustainability (OLIS), developed a Transportation Sustainability Class. A core curriculum on sustainable transportation was created. The course emphasized applied interdisciplinary transportation solutions that future community leaders in the sustainability field will need to know to be successful. The pilot class was taught in the fall of 2013 and continues to be part of the core curriculum of the OLIS program and will be offered yearly.

## What is the impact on the development of transportation workforce development?

By supporting students through the funded research projects, scholars program, and the student groups, we are expanding the number of students interested in transportation as a career and exposing them to the interesting and rewarding aspects of how transportation can help create livable communities. Through our reporting process, we are collecting the names and contact information of all students supporting through these programs. Therefore, we will be able to track their experience after graduation.

Highlighted examples of success include:

- 2 PSU and 1 OIT student received scholarships to attend the Annual WTS Conference in Chicago
- PSU Urban Studies PhD candidate hired as outreach and engagement coordinator at a well-respected public involvement agency
- PSU PhD candidate selected to participate in 23<sup>rd</sup> Annual Eno Future Leaders Conference in Washington, DC
- A masters and two PhD students received the PSU Student Achievement awards

**What is the impact on physical, institutional, and information resources at the university or other partner institutions?**

Nothing to Report for this period.

**What is the impact on technology transfer?**

We have implemented a system on our website to track who downloads our reports and survey those users regarding the usefulness and impacts of the research on their work. Since late April, 144 practitioners have taken our final report survey. 68% of these respondents stated that they downloaded the report to help make decisions about practice. 82% of the practitioners who downloaded the report found the reports either very or somewhat useful for their intended purpose of informing decision making.

NITC hosted a total of 6 webinars that highlight NITC sponsored research over the reporting period. 439 people attended the webinars. One AICP credit was offered per webinar.

**What is the impact on society beyond science and technology?**

Nothing to Report for this period.

## **5. CHANGES/PROBLEMS**

**Changes in approach and reasons for change**

Nothing to Report for this period.

**Actual or anticipated problems or delays and actions or plans to resolve them**

Nothing to Report for this period.

**Changes that have a significant impact on expenditures**

Nothing to Report for this period.

**Significant changes in use or care of human subjects, vertebrate animals, and/or biohazards**

Nothing to Report for this period.

**Change of primary performance site location from that originally proposed**

Nothing to Report for this period.

**Additional information regarding Products and Impacts**

Nothing to Report for this period.