



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: DTRT1-G-UTC27

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

Consortia members: Portland State University (PSU), University of Oregon (UO), University of South Florida (USF), Oregon Institute of Technology (OIT), University of Utah (UU)

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Submitting Official: same as above

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Recipient Organization: Portland State University
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Grant Period: October 1, 2013 – September 30, 2017

Reporting Period End Date: September 30, 2014

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 six categories:

Research

- **Build and extend our current research through Year 1 Projects.** During the first year, we will undertake research projects that build upon and extend our current work, and reflect priorities identified by our external advisory board. All Year 1 project work plans will be peer-reviewed.
- **Competitive, peer-review project selection process in Years 2 and 3.** Our projects in Years 2 and 3 will be selected through an open RFP process to consortium faculty. These funds will be available for projects consistent with our theme.
- **Transportation for Livable Communities Pooled-Fund Research.** We will continue the Transportation for Livable Communities Pooled-Fund Research program. This program provides regional and local agencies, such as metropolitan planning organizations and municipalities, more opportunity to be invested in research.

Leadership

- **High Standing within National and International Arenas of Transportation.** 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 takes 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.

NITC faculty help address national transportation problems through volunteer leadership on TRB committees and in other positions. By serving on these committees, faculty will help set national research agendas and connect with agency leaders and practitioners on pressing research issues. 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.
- **Solving Regional and National Transportation Problems.** NITC researchers have a long history of conducting research that is useful in solving the problems practitioners and decision-makers face every day. NITC's director and staff will serve as points of contact for agency leaders and policymakers 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 modal administrations, both in Washington, D.C., and within our regions to determine the most effective way for our researchers to learn from and inform agency activities.

- **Future Leaders.** We recognize the investment we must make in our young faculty and students by prioritizing research projects that include them. We will support students traveling to conferences to present their work, a key activity in developing the next generation of leaders.
- **Development and Delivery of Programs.** We demonstrate our leadership in innovating transportation education, workforce development, deployment of research results and conducting research.

Education and Workforce Development

- **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.
- **Develop Innovative New Curriculum.** We will develop new, innovative curriculum consistent with transportation and livable communities that can be tested and shared among NITC and other universities.
- **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.
- **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 research assistantships working on projects. We will provide dissertation fellowships for students to research surface transportation topics that fit under the NITC theme. This will be a competitive process open to Ph.D. students at NITC universities.
- **Sponsor a Transportation and Livable Communities Student Competition.** To further attract students to transportation-related professions and to promote

integrated education into transportation and livability issues, NITC will sponsor an annual competition on transportation and livable communities.

Technology Transfer

- **Move Research into Practice.** Each research project will include a well-defined scope of work that identifies the problem the research will solve, how the research will address the problem and how the results will be implemented. We will continue our practice of having every final report peer reviewed by at least one academic and one practitioner with relevant knowledge. We will also identify "implementation champions" the influential decision makers, executives and other top officials who can cut through organizational obstacles to deploy research results. We will provide these champions yearly summaries of our deployment successes as a reminder of the value of our research. Researchers working closely with practitioners and champions throughout the project ensures that our research stays current with the changing needs of practice and delivers research results in the optimal format.
- **Use Innovative Approaches 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 once 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.

Diversity

- **Attract underrepresented students to transportation careers.** We aim to attract underrepresented middle through high school students to transportation as a career through our partnerships with STEM and WTS.
- **Priority funding to research with an equity focus.** We give priority to funding research projects that have an equity focus by awarding them additional points in

the RFP process. In addition, three of our projects selected for the first year directly address equity issues.

What was accomplished under these goals?

Research

- **Build and extend our current research through Year 1 Projects.**

Eight of the twelve Year 1 projects have submitted proposals and undergone an external peer review. Seven of these eight projects have already begun. Four projects have yet to have completed paperwork but will be processed before the end of 2014. The seven projects in progress include the following:

- Encouraging Low-Income Households to Make Location-Efficient Housing Choices, Andree Tremoulet, Portland State University. 50% complete
- Integrating Freight into Livable Communities, Kristine Williams, University of South Florida. 2% complete
- Generalized Adaptation of an Electric-Hydraulic hybrid drive system, James Long and David Culler, Oregon Institute of Technology. Completion data n/a
- Metropolitan Centers: Evaluating local implementation of regional plans and policies, Richard Margerum and Rebecca Lewis, University of Oregon, and Keith Bartholomew, University of Utah. 10% complete
- Developing a model for Transit Oriented Development in Latino Immigrant Communities: A National Study of Equity and TOD, Sandoval, Gerardo. 40% complete
- Do TODs make a Difference? Phase 2, Arthur Nelson and Reid Ewing, University of Utah and Jenny Liu, Portland State University. 90% complete
- Changing attitudes toward sustainable transportation: The impact of meta-arguments, David Sanbonmatsu and David Strayer, University of Utah. 5% complete

- **Competitive, peer-review project selection process in Years 2 and 3.**

No activity during this reporting period.

- **Transportation for Livable Communities Pooled-Fund Research.**

We have drafted an RFP for the 2015 Pooled-Fund project. We will solicit feedback on the RFP from the NITC National Advisory Committee.

Leadership

- **High Standing within National and International Arenas of Transportation**

- NITC staff are active in the AASHTO-RAC liaison group.
- Two NITC staff attended the annual CUTC meeting in Lincoln, NE in June of 2014.

- Faculty members and students at the five NITC member campuses currently serve on 39 TRB committees/task forces and one NCHRP/SHRP2/NCFRP/TRB panels.
- **Solving Regional and National Transportation Problems.**
NITC Director Jennifer Dill and PSU Professor Chris Monsere attended an invitation only meeting at OST-R in September to discuss bicycle and pedestrian safety issues. They presented a draft white paper that was a direct request from Assistant Secretary Winfree during his Portland visit in June of 2014.
- **Future Leaders.**
PSU and the Portland WTS Chapter worked together to form a WTS a WTS-PSU student chapter that was announced at the May 2014 WTS International Conference. The WTS-PSU student chapter held its first election for officers in the fall of 2014.

The University of South Florida has received student group funds. They have identified two student leaders to help form a student transportation group affiliated with their planning program. They anticipate official recognition by the university in the spring of 2015.

- **Development and Delivery of Programs.**
No activity during this reporting period.

Education and Workforce Development

- **Offer Degrees and Courses in Multiple Disciplines.**
The five-university consortium offers 27 degrees in transportation, closely related fields, and many dual degree options.
- **Provide Experiential Learning.**
Given the start date of the grant, we will start tracking performance related to university courses in fall 2014.
- **Develop Innovative New Curriculum.**
We are in the process of developing education projects for each of the five campuses to create new curriculum modules for the spring of 2015.
- **Educate Professionals.**
No activity during this reporting period. All seminars, workshops, professional courses and other training opportunities continue to be funded through the NITC Tier 1 grant and will be reported as such.
- **Attract and Support Undergraduate Students.**
NITC staff along with our partners at WTS, Rutgers University and the US Department of Transportation developed a challenge activity curriculum for the

Transportation YOU DC's Youth Summit that took place in June of 2014. The challenge activity was a multi-day activity where the high-school girls collaborate and re-design a target intersection in a low-income DC neighborhood based on livable community principals.

- **Attract and Support Graduate Students.**

The University of South Florida is the only university of the five to receive student scholarship funds. In the fall of 2014, the awarded a grant to a graduate research assistant to develop a research project that fits within the NITC themes. The other four universities are currently using NITC Tier 1 funds for their scholarship program.

- **Sponsor a Transportation and Livable Communities Student Competition.**

No activity during this reporting period.

Technology Transfer

- **Move Research into Practice.**

No activity during this reporting period.

- **Use Innovative Approaches to Communicate Research Results.**

No activity during this reporting period.

Collaboration

- **Collaborating within our consortium.**

The Executive Committee met in person on June 17th on the Oregon Tech campus.

We developed a Memorandum of Understanding between all five campuses regarding the operation of NITC and a master contract between PSU and each campus to facilitate the transfer of funds between the campuses. Many of the first year research projects include PIs from multiple campuses.

- **External collaboration.**

We continue the process of developing an advisory board that will expand upon the relationships developed with the NITC Tier 1 funding. This advisory board will be key in identifying key partners for external collaboration. The board will meet in person at Portland State University on December, 16th, 2014.

Diversity

- **Attract underrepresented students to transportation careers.**

Many of the participants at the WTS TransportationYou Summit were young women of color. Our participation in this event helped expose young women to transportation careers.

- **Priority funding to research with an equity focus.**

Three of our Year 1 projects address equity issues. The research project Encouraging Low-Income Households to Make Location-Efficient Housing Choices and Developing a model for Transit Oriented Development in Latino Immigrant Communities are in progress. The other two equity focused projects will begin in the following reporting period.

How have the results been disseminated?

Nothing to report for this period.

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

Expected highlights for the next reporting period include:

- All Year 1 projects research will have started.
- A new advisory committee will be formed.
- Preliminary results from Year 1 projects will be presented at TRB.
- Pooled-fund RFP released
- General research RFP released

2. PRODUCTS: What has the program produced?

Publications, conference papers, and presentations

Nothing to report for this period.

Website(s) or other Internet site(s)

We have created a new website for NITC located here: <http://nitc.us>

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, University of Utah, and the University of South Florida. Each NITC-funded project is required to have 120% match. Match partners for current Year 1 projects include the following:

- American Automobile Association
- Florida DOT
- Oregon DOT
- Vancouver Housing Authority

Have other collaborators or contacts been involved?

Nothing to Report for this period.

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?

Nothing to Report for this period.

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

Nothing to Report for this period.

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?

Nothing to Report for this period.

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.