



NCTR

NATIONAL CENTER for
TRANSIT RESEARCH

**Program Progress Performance Report
for University Transportation Centers
National Center for Transit Research (NCTR)
University of South Florida
a Tier I Transit Focused University Transportation Center**

Grant Number DTRT12-G-UTC22

DUNS and EIN #: DUNS 06-968-7242, EIN 59-3102112 -F5 (Tampa Campus)

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Research and Innovative Technology Administration
U.S. Department of Transportation
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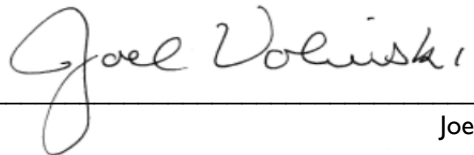
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Submitted on: July 31, 2013

Grant Period: January 1, 2012–January 31, 2014

Reporting Period: January 1, 2013–June 30, 2013, Third 6-Month Progress Report

Signature of Submitting Official: _____



Joel Volinski, NCTR Program Director

Accomplishments

What are the major goals and objectives of the program?

The major goals of the National Center for Transit Research are:

- To select and conduct research intended to make public transit and alternative means of transportation safe, efficient, effective, desirable, and secure. This will be done by receiving input from the Federal Transit Administration, the Florida Department of Transportation, the Illinois Department of Transportation, the North Dakota Department of Transportation, and transit professionals from throughout Florida and the nation. Research will be subject to peer review.
- To contribute to the education and preparation of the next generation of transportation professionals and to workforce development initiatives that will help attract, retain, and train employees in the fields of public transportation in particular.
- To disseminate the results of research as broadly as possible to fulfill the goal of making public transportation and alternative forms of transportation safe, efficient, effective, desirable, and secure. In addition, NCTR will continue to invest in projects that result in new patents and licenses that advance the quality of transportation services while creating new technology and employment opportunities.

What was accomplished under these goals?

It is important to note that while the National Center for Transit Research was notified of its grant award in January 2012, NCTR is one of the relatively few UTCs that began its grant cycle almost a year later than the majority of UTCs. Hence, NCTR is just now finishing projects from its previous grant. In addition, NCTR cooperated with the Federal Transit Administration in identifying research projects to undertake with its federal funds. Those projects were not approved and put under contract until the latter half of 2012. None of the FTA-suggested projects are complete at this time, though some will be reported as complete in the next six month progress report.

During the third six month reporting period (January 1, 2013 – June 30, 2013) all consortium partners have identified all of the research projects they will lead or participate in. Research projects to be undertaken with the \$3,493,000 in federal funding for the first year of the grant are in various stages of completion:

1. Evaluating the State of Mobility Management and Human Service Transportation Coordination – NDSU as the lead with assistance from USF and UIC (based on FTA proposal)
2. Improving Veteran Mobility in Small Urban & Rural Areas – NDSU
3. Intercity Transit Services Demand in North Dakota – NDSU
4. 2013 Rural Transit Fact Book - NDSU
5. Cost-Benefit Analysis of Rural and Small Urban Transit – NDSU
6. National Transit Network Level of Service Data and Analysis – USF as lead with assistance from UIC (based on FTA proposal)
7. Texas Transportation Institute Annual Congestion Study: Measuring Transit's Impact – USF

8. Transit Safety Research and Technical Assistance Center – USF
9. Alternative Fuels Clearinghouse – USF
10. Transportation Demand Management and Telework Clearinghouse – USF
11. GIS in Transit Clearinghouse - USF
12. Development of Training Manuals for Transit Planning and Scheduling – FIU
13. Transit Service Reliability: Analyzing Automatic Vehicle Location (AVL) Data for On Time Performance and to Identify Conditions Leading to Service Degradation – FIU as the lead with assistance from USF (based on FTA proposal)
14. The challenges to Creating Transit Value Capture by linking Transit Investment, Station Area Planning, Attraction of Appropriate Development, and the Application of Effective Value Capture Tools – UIC
15. Adapting Transit to Climate Change Impacts – UIC as the lead with assistance from USF (based on FTA proposal)

As noted earlier, the process of selecting projects to be undertaken with both federal and state matching funds was delayed due to NCTR’s desire to receive input and ideas on research projects of interest to the Federal Transit Administration. Research projects are scheduled to be completed by March 2014, while the Clearinghouse activities will be ongoing throughout the term of the grant. In addition, FTA only recently identified projects they would like to see the consortium pursue with the second year of the grant. PIs are just starting to scope those projects which we expect to be in place by the end of calendar 2013.

Provided below is a list of the projects funded by the Florida Department of Transportation (FDOT) that will be undertaken at USF as match to the first year of the grant:

1. Florida Transportation Demand Management Clearinghouse - \$143,325
2. Improved Traffic Control Measures to Prevent Incorrect Turns at Highway-Rail Grade Crossings and Pilot Testing - \$99,033.88
3. Impacts Of Dialysis Transportation On Florida's Coordinated Public Transportation Programs - \$115,100
4. Analysis of Transit Contracting Models and Proper Incentives for Long-term Success - \$137,074
5. Bus Operator Safety Critical Issues Examination and Model Practices - \$242,005
6. Best Practices in Enhancing Transit in Multimodal Transportation Elements - \$174,871
7. Evaluation of Rear-end Bus Collisions and Identifying Possible Solutions and Assessing the Effectiveness of Bus Pull-out Bays in Reducing Collisions - \$150,000
8. Investigation, Quantification, and Recommendations - Performance of Alternatively-fueled Buses - \$140,000
9. Florida Transit Operator Trainer Training Program - \$186,900

The projects listed above total \$1,388,308.00 which is being provided as a cash match from the Florida Department of Transportation for the first year of the grant. Between these projects and others that will be identified in the near future, the local match for the portion of the grant conducted by USF (\$1,743,000) for the first year of the grant will be more than covered. All projects are underway and

under contract with FDOT. Most projects are 15 to 18 months in length and most are expected to be completed by March of 2014. A new list of projects has been tentatively approved by FDOT for the second year of the grant, but potential PIs are determining the feasibility of each project at this time.

The following projects are being undertaken by UIC with matching funds from the Illinois DOT. These projects provide a full 100% cash match to the portion of the federal grant that is being implemented by UIC:

	Project title	Sponsor Name	Budget \$	Period
1	Igo Car Sharing: Feasibility of Charging Stations for Hybrid Cars	IL Dept. of Transportation	\$49,116	10/31/12 to 8/31/14
2	Study of Integrated Corridor Management in Greater Chicago area	IL Dept. of Transportation	\$268,784	10/31/12 to 8/31/14
3	Mobility Case Studies: Where Integrated Corridor Management has Worked and Why	IL Dept. of Transportation	\$59,193	10/31/12 to 8/31/14
4	Modeling of Transit Mode Choice in greater Chicago	IL Dept. of Transportation	\$95,662	10/31/12 to 8/31/14
5	Ranking Northeast Illinois New Starts Transit Potential Expansion Projects for Metra and CTA	IL Dept. of Transportation	\$103,947	10/31/12 to 8/31/14
6	Administration	IL Dept. of Transportation	\$123,298	10/31/12 to 8/31/14
	Total		\$700,000	

The following projects are being undertaken by Florida International University with funding made available from the Florida DOT:

- Analysis of Movable Bus Stops Boarding and Alighting Area - \$110,677
- Guidelines for Bus Transit Stops in Highway Construction Work Zones - \$122,600

These projects provide a 66% cash match for the portion of the first year grant being implemented by FIU. Additional projects to be identified in the near future and other university sources will provide the full match for FIU's portion of the first year of the grant.

The following project is being undertaken by North Dakota State University with funding made available from the North Dakota Department of Transportation:

- Regional Transit Coordination Pilot Project - \$150,000

This project being funded with North Dakota's DOT with SPR funds, and other general funds from the state government, have provided \$260,207 as cash match to date. North Dakota State University has provided \$228,167 for a total of \$488,374 in local match toward the \$700,000 federal funding being utilized by NDSU in the first year of the grant.

What opportunities for training and professional development has the program provided?

- Dr. Jill Hough of NDSU and Dr. Steve Polzin of USF continued to develop modules that will be incorporated into a national transit course that will be able to be delivered by any transportation faculty at universities around the country.
- NDSU continued preparations for delivering training to small urban and rural transit professionals throughout the country through the federal funds they will receive.
- USF continued to prepare for its GIS in Transit Conference that will be held in October 2013 at the Keck Center in Washington DC. The conference is now a joint partnership with the Transportation Research Board and is expected to be well attended.
- The scopes for virtually every research project listed above incorporate student research assistants.
- The NCTR Scholars program was approved by the USF College of Engineering. This program will provide students who have career aspirations in public transportation to obtain a Masters degree in Civil Engineering with an emphasis on public transportation. These students will also be programmed to serve as graduate research assistants on projects funded by NCTR and other transit-related projects undertaken at USF. Internship opportunities with local transit agencies will also be made available to the students, as well as extensive mentoring, and support to attend professional transportation conferences. Two students were recently selected to receive the scholarships and will begin their program in August 2013.
- USF conducted 11 free webcasts in its bi-weekly series to share the results of transportation research with transportation professionals from all over the nation and the world.
- Faculty of USF prepared and managed the Mid-year Professional Development Workshop of the Florida Public Transportation Association held in Tampa in June, 2013 which was attended by over 200 public transit agency managers.

How have the results been disseminated? If so, in what ways?

Since the research projects were not completed by June 30, 2013, there is nothing to report in terms of dissemination of research results. However, all Principal Investigators were given instructions to consider how the results of their research will be shared even as they prepared their scopes for the projects. They have established peer reviewers who are most likely to be interested in the results and in a position to implement findings. PIs have also been instructed to identify opportunities to share results of research through webinars, conferences, and direct notification to lists of professionals that have been identified in advance of conducting the research. USF's webcasts are free to all participants and can be viewed in real time, or viewed as a recording at the viewer's convenience. An average of approximately 50 people view each webcast on a live basis, with many more watching the webinars on a recorded basis at a time convenient for them.

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

During the next six months the majority of the projects identified and established in the first year of the grant will be nearly completed (most will be completed by March of 2014). NCTR will energetically share the results of the research projects with sponsors and with all other parties that can benefit from the findings through every technology transfer avenue available. Webinars (as described above) featuring results from these projects will be held every two weeks, and opportunities to present findings at professional transportation conferences will also be pursued. Scopes for new research projects will be peer reviewed. Planning for the training to be provided by NDSU to small urban and rural transit agencies will be finalized, while preparations for the GIS in Transit conference to be held in October 2013 will be completed. The development of training modules for the national public transit course will continue. The search for new student candidates as NCTR Scholars will be aggressively pursued. The NCTR website will be expanded to include the scopes for all projects being undertaken by all four consortium members, while all projects completed by consortium members will be posted.

Products

Due to NCTR's desire to be responsive and helpful to the Federal Transit Administration and delaying the identification of research projects until it received their input, no research has been completed and there are no final research project products to report at this time. The information provided above describes the status of activities undertaken to date. While NCTR researchers have made various presentations during this six month period, their presentations describe research results generated from the prior grant which will be closed soon. The Clearinghouses for TDM and GIS have been particularly active with communications among the more than 2,000 members. The Safety and Alternative Fuels clearinghouses are just getting started.

Publications

Two editions of the Journal of Public Transportation were produced during this progress report period featuring a total of 16 papers. NDSU's Rural Transit Fact Book was completed, but will be published in the next six month reporting period.

Websites

The website for NCTR (www.nctr.usf.edu) has been in place since 1999 and remains very active. It is rated the number one site for "transit research" results on Google, and is number two on Bing and Yahoo search engines. It includes information on the center's history, key personnel, research activities, links to all reports and webinars, the various programs and clearinghouses hosted by NCTR, all volumes of the Journal of Public Transportation, and a section on career opportunities in transit. It has been updated to include the contact information for the directors of the research centers at NDSU, FIU, and UIC. The links to their websites (<http://www.surtc.org/>; <http://lctr.eng.fiu.edu/>; <http://www.utc.uic.edu/>) have also been included. Those websites also include information on key personnel, active research, downloadable reports, student participation in their programs, and webinars that can be viewed. The NCTR website will continue to be updated to include all projects completed by consortium members and the projects yet to be undertaken through the federal grant and matching funds.

Technologies or Techniques – Nothing to report.

Inventions, Patent Applications, and/or Licenses – while there have been licenses and patents applied for during this six month period, all this activity was due to research conducted under the previous grant.

Other Products – As is the case with almost all other subjects for this reporting period, all products that have been produced during this six month period have been conducted under previous grant funds, and not with this new grant. Virtually everything done under the new grant is in various stages of completion.

Participants and Collaborating Organizations

What organizations have been involved as partners?

The National Center for Transit Research (NCTR) is a consortium of four universities as follows:

- University of South Florida located in Tampa, Florida, featuring the National Center for Transit Research (NCTR), a Tier I UTC at the Center for Urban Transportation Research, contributing to the program financial support and collaborative research.
- North Dakota State University located in Fargo, North Dakota, featuring the Small Urban & Rural Transit Center (SURTC), a Title III UTC, contributing to the program financial support and collaborative research.
- University of Illinois at Chicago located in Chicago, Illinois, featuring the Urban Transportation Center (UTC) in the College of Urban Planning and Public Affairs, contributing to the program collaborative research.
- Florida International University located in Miami, Florida, featuring the Lehman Center for Transportation Research (LCTR), contributing to the program collaborative research.

The Federal Transit Administration – The FTA has been a fully engaged partner not only in its role as the source of federal funds for the program for the two transit-focused UTCs, but as a source of ideas for research projects to be undertaken. FTA established an internal process to solicit, screen, and submit research ideas to the two transit-focused UTCs to be funded through both the first and second year of the federal grant. During this six month period, FTA submitted eight project proposals. Four of them will be undertaken by USF’s consortium, three will be undertaken by the San Jose State consortium, and one will probably not be undertaken at this time, though there are discussions to replace that last project with a different one. NCTR researchers will be drafting scopes for the new federally funded projects during the next six months and getting the projects established at their universities. As in the first year, FTA staff have agreed to serve as peer reviewers of the projects.

The Florida Department of Transportation – FDOT has been a vital partner in the development, selection, and funding of the research that will be conducted by USF and FIU researchers under this grant. FDOT is providing cash match to USF’s and FIU’s portion of the grant. It is also providing project managers for each project to manage and oversee the completion of each project done by USF and FIU. Similar arrangements have been made with the Illinois and North Dakota Departments of Transportation. IDOT is providing a full cash match to UIC’s portion of the grant, while NDDOT is providing approximately one-third cash match.

The Florida Public Transportation Association – FPTA, in conjunction with FDOT, is collaborating on a number of research projects through the engagement of various public transit networks (e.g., Transit Operations Network, Planning Network, Maintenance Network) to serve as advisors and peer reviewers of research projects. Several Florida transit properties will also serve as case studies for some of the research projects.

Many organizations have lent their considerable experience and expertise to NCTR by agreeing to have representatives serve on the NCTR Advisory Board. Included among them are:

Michael Melaniphy, President – American Public Transportation Association

Dale Marsico, President – Community Transportation Association of America

Dr. Mary Leary, Senior Director – Easter Seals Project Action

Kim Adair, Public Transportation Office – North Dakota Department of Transportation

David Spacek, Public Transportation Office – North Dakota Department of Transportation

Tim Garling, Director, Broward County Mass Transit Division – President, Florida Public Transportation Association

Ed Coven, Manager, Public Transportation Office, Florida Department of Transportation

Darryll Dockstader, Manager, Research Office, Florida Department of Transportation

Bill McCloud, Senior Vice President, Veolia Transportation

Donna Vlasak, Senior Program Officer, The National Academies, TRB

Jon Martz, Vice President, Van Pool Services, Inc.

Joe Calabrese, GM/CEO, Greater Cleveland Regional Transit Authority

Michael Baltes, Director – Office of Technology, Federal Transit Administration

Dr. Minnie Fells Johnson, Chair, Projects for Public Spaces

Perry Maull, Director – Indiana University Bus Services

Have other collaborators or contacts been involved?

Most of the significant collaboration has been described in previous sections. It should be emphasized that consortium members will be collaborating on four projects listed in the federal projects to be undertaken after discussions were held with the Mineta Transportation Institute on which UTC was most appropriate to undertake each project. Similar discussions were held between NCTR and MTI for the new projects identified by FTA and arrangements have been made to collaborate with MTI on one of those new projects to be done with funds from the second year of the grant. Most of the research will be conducted by full time research faculty at the four NCTR consortium centers, along with students. However, there will also be interdepartmental/interdisciplinary coordination on a number of projects that will involve tenured faculty from the disciplines of Public Health, Economics, Urban Planning, and Civil Engineering. USF will also seek guidance from tenured faculty in Australia (Dr. Graham Currie) that have extensive background in researching public private partnerships and contracting for transit services.

Impact

Since the research projects are in various stages of completion, there is nothing to report under the new grant in terms of results for any of the categories listed under “Impacts.” However, it is important to state that NCTR has been aggressive in examining the impact of its research and will have all Principal Investigators very aware of the need to not only conduct high quality research, but to also be committed to helping ensure that the research results get into the hands of those most likely to be interested in implementing the results.

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

Nothing to report.

What is the impact on other disciplines?

Nothing to report.

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

Nothing to report.

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

Nothing to report.

What is the impact on technology transfer?

Nothing to report.

What is the impact on society beyond science and technology?

Nothing to report.

Changes/Problems

Nothing to report for now. We look forward to providing more robust performance reports in the future.

Changes in approach and reasons for change

Nothing to report.

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

While it took a little while for FTA to identify the projects it was most interested in, causing a delay in starting some projects, they will all be done within the time frame of the grant.

Changes that have a significant impact on expenditures

Nothing to report.

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

Nothing to report.

Change of primary performance site location from the originally proposed

Nothing to report.

Additional information regarding Products and Impacts

Outputs

Nothing to report

Outcomes

Nothing to report.

Impacts

Nothing to report.

Special Reporting Requirements

Nothing to report.