Program Progress Performance Report for University
Transportation Centers

Submitted to: Office of the Assistant Secretary for Research and Technology
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Federal Grant Number: DTRT13-G-UTC49

Project Title: Tier 1 University Transportation Center for
Environmentally Sustainable Transportation in Cold
Climates (CESTiCC)

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Recipient Organization: University of Alaska Fairbanks
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Project Grant Period: September 30, 2013- September 30, 2017

Reporting Period End Date: March 31, 2014

Report Term: Semi-annual PPPR #1

Signature: 

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1. Accomplishments

- What are the major goals and objectives of the program?

The major goals and objectives of CESTiCC program are to systematically engineer environmentally sustainable transportation infrastructures in cold climates, considering the entire life cycle of transportation planning, design, materials selection, construction, maintenance and operations, preservation, and recycling through the collaboration of academia, industry and other stakeholders by cross-disciplinary research, education, and technology transfer activities.

- What was accomplished under these goals?

During the first six months of the project:

- The CESTiCC website (ine.uaf.edu/cesticc) has been set up with the key personnel working on the project. News and other links on the website have been updated regularly. The Center website is currently under redesign associated with the update of the entire college website, which will be completed for the next reporting period.

- CESTiCC leadership established the advisory board to advise the Center’s Director and Associate Directors on management and activities of the Center and to contribute to the Center core mission.

- CESTiCC participated in several activities on outreach, technology transfer and other activities to publicize the new Center, including:
  - Supporting the Imagine Tomorrow High School Competition held annually in Pullman, WA in which 9th through 12th graders seek new ways to support the transition to alternative energy sources and solve other energy issues.
  - Sponsoring a fun, interactive activity for kids called the "RC Road Rally" during the Annual Engineering Open House at the University of Alaska Fairbanks.
  - Co-sponsoring the 2nd International Symposium on Winter Road Maintenance to be held on August 19-22, 2014 in Harbin, China.
  - Giving presentations at professional meetings and institutions (see details in ‘Products’).

- Full proposals of “early winner” projects proposed by the CESTiCC are currently under a peer-review process involving the CESTiCC directors, the Advisory Board, and external reviewers. Projects are expected to be selected and launched in early May of 2014.

- What opportunities for training and professional development has the program provided?
Nothing to report at this time.

- How have the results been disseminated? If so, in what way? (Please provide links or examples for website use.)

Nothing to report at this time.

- What do you plan to do during the next reporting period to accomplish the goals and objectives?
  - Research projects
    During the early of next reporting period, projects will be selected and launched. Research project descriptions will be submitted to the Transportation Research Board (TRB)’s Research in Progress (RiP) database and uploaded to the Center website. Technical advisory committees will be established for each research project, and teleconference calls or GoTo meetings between PIs and technical advisory committees will be regularly held to keep the projects in good progress.
  - Website redesign
    The CESTiCC website will be completely redesigned, to better publicize the Consortium’s research projects and other activities. Updates on the research projects will be posted as well.
  - Development of an E-newsletter
  - Monthly seminar series
    Starting this fall, CESTiCC PIs and invited internationally recognized researchers will deliver speeches on topics on Environmentally Sustainable Transportation in Cold Climates at the CESTiCC monthly seminar series. The seminar series will be open to all transportation professionals and presentations will be posted on the Center website after the seminar.
  - Meetings with state agencies, industry, private sectors, and other institutions to discuss ideas and collaborations on research, education, workforce development, and outreach activities for the 2nd incremental fund.

2. Products

- Publications, conference papers, and presentations
  - Presentations
    - “Working with Transportation Infrastructure in Cold Climates” by Dr. Jenny Liu, Annual Engineering Open House, University of Alaska Fairbanks, February 22, 2014.
- “Research Enabling Durable and Sustainable Concrete Infrastructure” by Dr. Xianming Shi, invited talk at Virginia Tech, February 14, 2014.
- “Recent Advances in Environmentally Sustainable Concrete Materials” by Dr. Xianming Shi, invited talk at Wuhan Polytechnic University, Wuhan, China, March 2014.

- Websites
  - CESTiCC website: http://ine.uaf.edu/cesticc/

3. Participants & Collaborating Organizations

- What organizations have been involved as partners?
  - Collaborative research and financial support
    - Alaska Department of Transportation and Public Facilities
    - Minnesota Department of Transportation
    - Nevada Department of Transportation
    - Washington State Department of Ecology
    - Clear Roads Pooled Fund
    - TenCate Geosynthetics
    - Midwest Industrial Supply, Inc., Canton, OH
    - Apun LLC, Anchorage, AK
    - Alaskans for Litter Prevention and Recycling (ALPAR)

- Have other collaborators or contacts been involved?
  - Environmental UTCs Network with National Center for Sustainable Transportation, Marine Engine Testing and Emissions Laboratory, and Electric Vehicle Transportation Center: Directors’ meetings for potential collaborations and exchanges.
  - Virginia Tech: Technology transfer and potential collaboration discussion.
  - Wuhan Polytechnic University, Wuhan, China: Technology transfer and potential collaboration discussion.

4. Impact

- Workforce development

- Society beyond science and technology
  - On January 24, 2014, Dr. Xianming Shi was interviewed and quoted in an online article for Discovery magazine: “Shovel or Sprinkle: Are Ice-Melt Chemicals
Safe?"  http://news.discovery.com/earth/weather-extreme-events/are-ice-melt-chemicals-safe-for-sidewalk-use-140124.htm

On Feb. 6, 2014, Dr. Xianming Shi was cited by Los Angeles Times: http://www.latimes.com/nation/nationnow/la-na-nn-salt-shortages-winter-storm-icy-roads-20140205,0,5159796.story#ixzz2sZ1WUSFI (see Page 2 of the story).

5. Changes

Nothing to report at this time.