

# NETC

## NEW ENGLAND TRANSPORTATION CONSORTIUM

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CONNECTICUT  
MAINE  
MASSACHUSETTS  
NEW HAMPSHIRE  
RHODE ISLAND  
VERMONT  
US DOT - FHWA

April 25, 2014

Dear NETC Policy Committee Member,

The New England Transportation Consortium Advisory Committee, at its April 15<sup>th</sup>, 2014 meeting, selected the following projects for the 2014 Research Program:

- **NETC 14-1: Measuring the Effectiveness of Competency Models for Job-Specific Professional Development of Engineers & Engineering Technicians**  
This project would develop a process for implementing competency models (CM) for engineering staff, aligning the CMs with Agency Strategic Plans, and measuring the return on investment (ROI) of the implementation. One of the positive results of competency models is that they can become “two way streets”, and encourage shared career paths that are owned by the employee but also align with the agency performance measures and therefore would have agency commitment and support. (Estimated \$100,000 Budget)
- **NETC 14-2: Investigation of Northern Long-Eared Bat Roosting Sites on Bridges**  
This project would investigate bat utilization of a population of New England bridges, to determine if any are being used by the Northern Long-Eared Bat and other bat species potentially proposed for listing under the ESA. It would survey a subset of candidate structures during non-hibernation periods. State bridge databases would be used to create the survey sample. Field investigations would be conducted. The presence of any bat species discovered during the field investigations would potentially be indicative of utilization by protected species of bats. Based upon the field investigations, a screening tool and decision tree would be created. (Estimated \$75,000 Budget)
- **NETC 14-3: Bridge Expansion Joint Deterioration and Repair**  
Deterioration of bridge deck joints is problematic throughout New England. Leakage through these joints results in corrosion damage to the superstructure and substructure. This problem is exacerbated by the use of deicing salts. While the preference is to design jointless bridges, bridge deck joints are still common in many existing bridges. Assessing the condition, performance, maintenance and repair/replacement practices of deck joints throughout New England and proposal of a uniform protocol for reporting these criteria is proposed in this research statement. The development of a regional protocol and full understanding and documentation of regional concerns will be a proactive step for

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participating in the development of National reporting protocols that will be developed by the FHWA Long Term Bridge Performance Program beginning in 2016. (Estimated \$100,000 Budget)

– **NETC 14-4: Optimizing future work zones in New England for safety**

Work zones are increasingly becoming an integral part of highway maintenance routines. However, they impact safety and mobility of travelers and workers, thus various questions regarding their layout optimization and impact mitigation strategies need to be answered. The objective of this project is to develop detailed plans on optimal layouts and speed reduction policies for future work zones in New England based on minimizing the crash risk and maintaining a reasonable flow of traffic. Systems engineering methods that are capable of modeling drivers' behavior and physics of motion will be used. (Estimated \$200,000 Budget)

The total budgeted amount for the 2014 NETC Research Program is \$475,000.

As a Policy Committee member, your primary functions shall be to define globally the research, development, and implementation needs to be addressed by the Consortium; approve the annual program developed in conjunction with the Advisory and Technical Committees; and acquire/provide funding to carry out the Program.

Sincerely,

Amanda Hanaway-Corrente, PE, MBA  
New England Transportation Consortium Coordinator

CC: William Ahearn, Vermont Agency of Transportation

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### **POLICY COMMITTEE RECIPIENTS:**

David B. Bernhardt, Commissioner  
Maine DOT

Christopher Clement, Commissioner  
New Hampshire Department of Transportation

James P. Redeker, Commissioner  
Connecticut Department of Transportation

Richard Davey, Secretary of Transportation and Chief Executive Officer  
Massachusetts Highway Department

Michael P. Lewis, Director of Transportation  
Rhode Island Department of Transportation

Matthew Hake, Division Administrator  
Federal Highway Administration Vermont

Brian Searles, Secretary of Transportation  
Vermont Agency of Transportation

### **NETC ADVISORY COMMITTEE MEMBERS:**

VERMONT: William Ahearn, Materials & Research Engineer

CONNECTICUT: James Fallon, Manager of Design Services

MAINE: Dale Peabody, Director of Transportation Research

RHODE ISLAND: Colin A. Franco, Associate Chief Engineer, Research & Technology Development

NEW HAMPSHIRE: Glenn Roberts, Chief of Research

MASSACHUSETTS: Stephen Pepin, Manager of Research

FEDERAL HIGHWAY ADMINISTRATION: Christopher Jolly, Planning & Programming Engineer

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### NETC POLICY COMMITTEE BALLOT

#### 2014 Research Program

#### BALLOT QUESTION:

To approve the 2014 Research Program, which includes the following projects:

- NETC 14-1: Measuring the Effectiveness of Competency Models for Job-Specific Professional Development of Engineers & Engineering Technicians (Estimated \$100,000 Budget)
- NETC 14-2: Investigation of Northern Long-Eared Bat Roosting Sites on Bridges (Estimated \$75,000 Budget)
- NETC 14-3: Bridge Expansion Joint Deterioration and Repair (Estimated \$100,000 Budget)
- NETC 14-4: Optimizing future work zones in New England for safety (Estimated \$200,000 Budget)

\_\_\_\_\_ **In Favor**

\_\_\_\_\_ **Opposed**

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NAME:  
AGENCY:  
DATE:

**PLEASE COMPLETE THE ABOVE BALLOT AND  
RETURN IT BY EMAIL OR FAX by June 30th, 2014 TO:  
Amanda Hanaway-Corrente, NETC Coordinator  
E-MAIL: [ahanaway@uvm.edu](mailto:ahanaway@uvm.edu)  
FAX: 802.656.9892**