



**National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230**

NSF 10-071

Dear Colleague Letter on Plans for the Future of Earthquake Engineering Research Infrastructure Support beyond 2014

The George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) will complete ten years of National Science Foundation (NSF) support for operations and research at the end of fiscal year (FY) 2014. Through NSF support, NEES was constructed as a Major Research Equipment and Facilities Construction (MREFC) project during 2000-2004. Upon completion of construction, NEES opened as a multi-user research infrastructure, for a planned ten-year period of NSF-supported research and operations, on October 1, 2004. NEES currently consists of 14 earthquake engineering experimental facilities located at universities around the U.S., with supporting cyberinfrastructure. More information about the NEES infrastructure is available at <http://www.nees.org>. To assist with future planning of earthquake engineering research infrastructure beyond 2014, NSF has provided support for two studies that will assess future research and research infrastructure needs for earthquake engineering. This letter is to inform you of the plans for these two studies and to encourage community input and participation in these studies.

First, to develop the next-generation earthquake engineering research agenda and research infrastructure needs beyond 2014, NSF is providing support to the National Academy of Sciences, under award CMMI-1047519, to convene a National Research Council (NRC) committee, under the NRC's Division on Earth and Life Studies, Board on Earth Sciences and Resources, to organize a community workshop on the Grand Challenges for earthquake engineering research. This workshop will bring together experts to identify: (1) the high-priority Grand Challenges in basic earthquake engineering research that require a network of earthquake engineering experimental facilities and cyberinfrastructure, and (2) the networked earthquake engineering experimental capabilities and cyberinfrastructure tools required to address these Grand Challenges. Workshop attendees will be asked to describe the experimental infrastructure capabilities and cyberinfrastructure tools in terms of requirements, rather than by reference to any existing or anticipated specific facilities. The workshop will be held in fall 2010 at the National Academies Beckman Center in Irvine, CA. The NRC committee will prepare a workshop report summarizing the Grand Challenges and the requirements for networked facilities and cyberinfrastructure. The workshop report will be completed in early 2011.

The second study, to be conducted by the Science and Technology Policy Institute (STPI), a NSF Federally Funded Research and Development Center, will build upon and complement the National Academies study described above. STPI was created to serve the White House Office of Science and Technology Policy, as well as the broader federal scientific enterprise, including the NSF. The NSF Directorate for Engineering has tasked STPI to identify potential scenarios for the future of NSF-supported earthquake engineering facilities (NSF Contract AST-1045173). As part of this study, STPI will solicit input from the earthquake engineering community to identify the priorities for integrated experimental and cyber facilities that are most critical to address the Grand Challenges in basic earthquake engineering research. This second study will be completed in spring 2012. The web site (<https://collab.ida.org/eeforum>) is currently under construction, as the forum is scheduled to occur in Fall 2010. If you would like to be notified when the site becomes active, please email STPI at EEForum@ida.org.

After careful consideration of the recommendations from these two studies during 2012, NSF intends to inform the earthquake engineering community in fall 2012 of its plans beyond 2014 for future multi-user earthquake engineering research infrastructure.

Questions or comments should be directed to Joy Pauschke, NEES Program Director, 703-292-7024, jpauschk@nsf.gov.

Sincerely,

Steven H. McKnight
Director, Division of Civil, Mechanical, and Manufacturing Innovation