

# A Framework to Update the Plan to Coordinate NEHRP Post-Earthquake Investigations

NEHRP Consultants Joint Venture A partnership of the Applied Technology Council and the Consortium of Universities for Research in Earthquake Engineering





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Cover image – Damage in the San Francisco Marina district after the 1989 Loma Prieta earthquake (courtesy of J.K. Nakata, U.S. Geological Survey).

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Prepared for U.S. Department of Commerce National Institute of Standards and Technology Engineering Laboratory Gaithersburg, MD 20899

By

NEHRP Consultants Joint Venture A partnership of the Applied Technology Council and the Consortium of Universities for Research in Earthquake Engineering

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# Preface

Four agencies are included in the National Earthquake Hazards Reduction Program (NEHRP): the Federal Emergency Management Agency (FEMA), the National Institute of Standards and Technology (NIST), the National Science Foundation (NSF), and the U.S. Geological Survey (USGS). The agencies have complementary but unique roles in NEHRP that extend to their activities in performing field investigations following earthquakes. In 2002, with support from NSF, the Earthquake Engineering Research Institute (EERI) conducted a workshop that examined many of the key post-earthquake investigation issues relevant to NEHRP. The result was the publication of USGS Circular 1242, *The Plan to Coordinate NEHRP Post-Earthquake Investigations* (USGS, 2003), which outlines interactions that were envisioned for the NEHRP agencies to employ in investigating earthquakes.

In 2007, the National Institute of Standards and Technology (NIST) awarded a National Earthquake Hazards Reduction Program (NEHRP) "Earthquake Structural and Engineering Research" contract (SB1341-07-CQ-0019) to the NEHRP Consultants Joint Venture, a partnership between the Applied Technology Council (ATC) and the Consortium of Universities for Research in Earthquake Engineering (CUREE), to conduct a variety of tasks, including Task Order 12-478 entitled, "Development of Updated NEHRP Post-Earthquake Investigations Strategy: Phase I." The objective of this project was to develop a framework that could be used to update the plan to coordinate NEHRP post-earthquake investigations, currently presented in USGS Circular 1242. The result is a series of issues, documented in this report, ranging from how and when the plan should be updated to the content and detail of specific elements that should be included in the plan. The issues, along with their recommended solutions, form a framework that may be used in the development of an updated plan.

The NEHRP Consultants Joint Venture is indebted to the leadership of Bill Holmes, Project Director, and to the members of the Project Technical Committee, consisting of Jon Bray, Tom Holzer, Laurie Johnson, Jack Moehle, and Sharon Wood, for their contributions in developing this report and the resulting recommendations. The Project Review Panel, consisting of Greg Anderson, Michael Blanpied, Sergio Breña, Michel Bruneau, John Filson, David Frost, Marjorie Greene, Eric Letvin, Mike Mahoney, Joy Pauschke, Santiago Pujol, and Kathleen Tierney, provided critical review and commentary at key developmental stages of the report. The names and affiliations of all who contributed to this report are provided in the list of Project Participants.

The NEHRP Consultants Joint Venture also gratefully acknowledges Jack Hayes (NEHRP Director) and Steve McCabe (NEHRP Deputy Director) for their input and guidance in the preparation of this report, Laura Dwelley Samant for ATC Project Management services, and Ayse Hortacsu and Amber Houchen for ATC report production services.

Jon A. Heintz Program Manager

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