

ATC-20

PROCEDURES FOR POSTEARTHQUAKE SAFETY EVALUATION OF BUILDINGS

by
APPLIED TECHNOLOGY COUNCIL
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Preface

In July 1987 the California Governor's Office of Emergency Services (OES), California Office of Statewide Health Planning and Development (OSHPD), and Federal Emergency Management Agency (FEMA), jointly awarded ATC a contract to develop procedures for postearthquake safety evaluation of buildings. The objectives of the project, initially proposed by the Disaster Emergency Services Committee of the Structural Engineers Association of Northern California were: (1) to develop and document qualitative procedures and guidelines for safety evaluation of buildings damaged in earthquakes; and (2) to provide appropriate training and field manuals and materials describing the methodology.

Documented in this ATC-20 report are procedures and guidelines for the postearthquake safety evaluation of buildings. The procedures and guidelines are written specifically for volunteer structural engineers, and building inspectors and structural engineers from city building departments and other regulatory agencies, who would be required to make on-the-spot evaluations and decisions regarding continued use and occupancy of damaged buildings. A companion field manual (ATC-20-1 Report) summarizes the ATC-20 methodology in a brief concise format designed for easy field use.

R. P. Gallagher Associates, Inc., a structural and earthquake engineering firm with experience in the seismic evaluation of buildings, served as the project subcontractor and prepared this report.

The research and engineering work was performed by Ronald P. Gallagher, serving as Principal-in-Charge, and Hope A. Seligson.

Members of the Project Engineering Panel who provided overall review and guidance for the project were: Robert A. Bruce, Ted M. Christiansen, Robert D. Hanson, Christopher Rojahn (Principal Investigator), Arthur E. Ross, Earl Schwartz, Karl V. Steinbrugge, James A. Willis, and T. Leslie Youd. The affiliations of these individuals are provided in Appendix A.

In addition to the valuable input and review comments provided by the Project Engineering Panel, several other individuals reviewed the report and offered valuable suggestions. They include: Laird R. Fort of the Elevator, Ride and Tramway Unit of the California Division of Occupational Safety and Health, Greg Abel of the San Francisco Fire Department, and Joseph Nicoletti of URS/Blume Engineers. Robert Reithemian was a consultant to the project and provided general advice as well as suggestions for illustrations. Rdd Consultants prepared the final manuscript for publication.

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