ATC-15-1

Proceedings of Second U.S.-Japan Workshop on Improvement of Building Seismic Design and Construction Practices
August 5-7, 1986

Sponsored in Part by:

NATIONAL SCIENCE FOUNDATION
Grant No. CEE-8517114

Prepared by

APPLIED TECHNOLOGY COUNCIL
555 Twin Dolphin Drive, Suite 550
Redwood City, California 94065

CHRISTOPHER ROJAHN
Principal Investigator

ROLAND L. SHARPE
Co-Principal Investigator

PROJECT STEERING COMMITTEE

United States

Chris D. Poland
Christopher Rojahn
Roland L. Sharpe

Japan

Masakazu Ozaki
Toshihiko Kimura
Yoshio Murata

1987

PREFACE

In April 1986 Applied Technology Council was awarded a grant by the National Science Foundation to conduct the second in a series of planned cooperative bi-lateral efforts involving building design professionals from the United States and Japan. The first such effort was held in March 1984, when a group of Japanese and U.S. practitioners and researchers met in Hawaii to review and discuss building design and construction practices in both countries, develop recommendations pertaining to improved requirements and procedures, and identify areas of mutual concern, including topics where there is need for future communication and exchange of information.

The second bi-lateral workshop was held in San Francisco, California, August 5-7, 1986, and was attended by 19 practitioners and researchers from Japan and 20 practitioners and researchers from the United States. The major objectives of the workshop were (1) to assess current building seismic design and construction practices in each country by evaluating actual and comparative designs of several buildings performed by U. S. and Japanese engineers, (2) to evaluate recommendations for improved seismic design and construction requirements and procedures based on current practices in each country, (3) to identify research efforts necessary to develop improved seismic design and construction requirements and procedures, and (4) to further develop the framework for future U. S.-Japan cooperative efforts in this area.

This report contains written versions of the papers presented at the Workshop as well as conclusions and recommendations developed by working groups that met during the closing session. Included are state-of-the-practice papers and case studies of actual building designs, and information on regulatory, contractual and licensing issues. Also included are a list of participants (Appendix A), an overview of new seismic design methods for buildings in Japan (Appendix B), and Applied Technology Council projects and report information (Appendix C).

ATC gratefully acknowledges the financial support for the project provided by the National Science Foundation, Brandow & Johnston Associates, Burkett & Wong Engineers, John Coil Associates, H. J. Degenkolb Associates, Rutherford & Chekene, and the Japanese and U. S. paper authors, all of whom paid their travel expenses to attend the workshop. The cooperation and encouragement provided by William Anderson, NSF Program Manager, are also greatly appreciated.

The material presented in this report is based upon work supported by the National Science Foundation under Grant No. CEE-8517114. Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the authors and do not necessarily reflect the views of the National Science Foundation.

Christopher Rojahn
ATC Executive Director

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT.)

TABLE OF CONTENTS (CONT.)