

**GUIDELINES
FOR THE DESIGN OF
HORIZONTAL WOOD DIAPHRAGMS**

**by
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PREFACE

This document was prepared by Applied Technology Council (ATC) with funding by the National Science Foundation to provide guidelines that summarize current design practices of horizontal wood diaphragms. Twelve examples of varying complexity are included and illustrate current wood diaphragm design practices. A short summary of significant research references and an extensive bibliography are also included and should be useful to engineers who are interested in methods of improving current design practice.

The guidelines were developed for ATC by the project subcontractor, H. J. Brunner Associates with Charles D. De Maria as Principal in charge and Edwin G. Zacher as Project Manager. The project was directed by the ATC Principal Investigator, Ronald L. Mayes, with guidance and assistance by an Advisory Panel of six practicing engineers with expertise in the design of wood diaphragms. The panel was comprised of Noel R. Adams of Adams-Hodson Associates, Inc.; Edward F. Diekmann of GFDS Engineers; Byrne Eggenberger, Consulting Engineer; Ronald L. Mayes, Executive Director of ATC; Roland L. Sharpe, Managing Director of ATC; and Edward J. Teal, Board Representative of ATC.

In conjunction with the development of these guidelines, a workshop was conducted in November 1979. The workshop summarized the current state of practice and established research needs for horizontal wood diaphragms. The proceedings of the workshop contain seven state-of-the-practice papers, two papers on recent research, and the research recommendations developed by the participants. The proceedings are available from ATC as a separate report, "Proceedings of a Workshop on Design of Horizontal Wood Diaphragms" (ATC-7-1).

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