

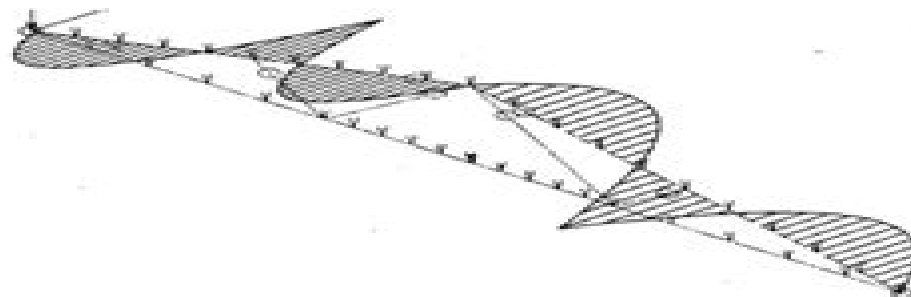


US Army Corps
of Engineers
Construction Engineering
Research Laboratories

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Structural Evaluation Procedures for Heavy Wood Truss Structures

by
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Army Regulation 420-70, *Buildings and Structures*, requires the inspection of trusses, roof framing, and other structural items every 2 to 5 years. In some cases, detailed evaluations of heavy wood structures are needed as subsequent steps of inspection to check structural integrity under design loads specified by current building codes. An evaluation procedure for wood structures differs from conventional methods used in steel, concrete, and masonry structures because, in wood construction, the allowable stresses used in design may not represent the actual strength of members in existing structures.

This study documented comprehensive procedures for the structural evaluation of heavy wood truss structures and identified commercially available nondestructive tests that can be used to determine the mechanical properties of existing members. Also investigated were issues related to modeling of wood structures necessary to create models that can reproduce the behavior of the prototypes.

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Evaluation And Upgrading Of Wood Structures

JA Banks



Evaluation And Upgrading Of Wood Structures:

Evaluation, Maintenance and Upgrading of Wood Structures Alan D'Yarmett Freas, 1982-01-01 Prepared by the Subcommittee on Evaluation Maintenance and Upgrading of Timber Structures of the Committee on Wood of the Structural Division of ASCE This report presents information on technical aspects of inspection evaluation reinforcement repair and rehabilitation of timber structures Any structure regardless of the material from which it is made may be subject to a review of its ability to perform a specific function or functions This report reviews factors that influence the serviceability of wood structures including loadings duration of loads temperature moisture and weathering Effects of chemicals and fire as well as insects fungi and other organisms that attack wood are also covered Designing to avoid problems caused by these factors is discussed Inspection techniques and equipment are described along with guidelines on where to look and what to look for A section of evaluation of wood structures includes criteria such as structural analysis determination of loads and estimating load carrying capacity *General Technical Report FPL*, 1978 **Evaluation and Upgrading of Wood Structures** Vijay K. A. Gopu, 1986 Offers a collection of papers which deal with a variety of case studies to serve as a reference for practicing structural engineers Cases involving the restoration of hangars upgrading of wood trusses epoxy repair of timber beams nondestructive testing of piles and structural elements and decay in wood structures are covered **Timber Bridges** Michael A. Ritter, 1990 **National Conference on Wood Transportation Structures**, 1996 *General Technical Report Forest Products Laboratory*, 1978 **Research for Tomorrow's Forests**, 1984 **Forest Service Research Accomplishments**, 1981 NEHRP Commentary on the Guidelines for the Seismic Rehabilitation of Buildings Eugene Zeller, 2000-06 This document from the National Earthquake Hazards Reduction Program NEHRP was prepared for the Building Seismic Safety Council BSSC with funding from the Federal Emergency Management Agency FEMA It provides commentary on the NEHRP Guidelines for the Seismic Rehabilitation of Buildings It contains systematic guidance enabling design professionals to formulate effective reliable rehabilitation approaches that will limit the expected earthquake damage to a specified range for a specified level of ground shaking This kind of guidance applicable to all types of existing buildings in all parts of the country has never existed before Illustrated *Guidelines to Restoring Structural Integrity of Covered Bridge Members* Ronald W. Anthony, 2018-04-02 These guidelines are designed for decision makers selection country commissioners city planners preservation officers contractors rehabilitation engineers etc to understand the components that are used to make effective decisions about how and when to repair a covered bridge such as structural integrity engineering analyses condition assessments how to support the bridge during repairs and more There are numerous types of covered bridges and ensuring public safety during repairs is a paramount issue for future generations to enjoy Related products Find more Renovation Historic Preservation resources here <https://bookstore.gpo.gov/catalog/renovation-historic-preservation> Bridges Tunnels resources collection here <https://bookstore.gpo.gov/catalog/bridges-tunnels> Other products published by the

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Improved Forest and Range Land Productivity Through Research ,1983 *Building Performance* Gerald Davis,1986 Historical Considerations in Evaluating Timber Structures R. L. Tuomi,Russell Charles Moody,1978

Twentieth-Century Building Materials Thomas C. Jester,2014-08-01 Over the concluding decades of the twentieth century the historic preservation community increasingly turned its attention to modern buildings including bungalows from the 1930s gas stations and diners from the 1940s and office buildings and architectural homes from the 1950s Conservation efforts however were often hampered by a lack of technical information about the products used in these structures and to fill this gap *Twentieth Century Building Materials* was developed by the U S Department of the Interior s National Park Service and first published in 1995 Now this invaluable guide is being reissued with a new preface by the book s original editor With more than 250 illustrations including a full color photographic essay the volume remains an indispensable reference on the history and conservation of modern building materials Thirty seven essays written by leading experts offer insights into the history manufacturing processes and uses of a wide range of materials including glass block aluminum plywood linoleum and gypsum board Readers will also learn about how these materials perform over time and discover valuable conservation and repair techniques Bibliographies and sources for further research complete the volume The book is intended for a wide range of conservation professionals including architects engineers conservators and material scientists engaged in the conservation of modern buildings as well as scholars in related disciplines *List of Publications* Forest Products Laboratory (U.S.),1973 **Wood and Timber Condition Assessment Manual** Robert J. Ross,Robert H. White,2004

Whispering the Secrets of Language: An Psychological Quest through **Evaluation And Upgrading Of Wood Structures**

In a digitally-driven world wherever displays reign great and instant transmission drowns out the subtleties of language, the profound secrets and mental nuances hidden within words usually go unheard. Yet, situated within the pages of **Evaluation And Upgrading Of Wood Structures** a fascinating literary treasure pulsing with natural feelings, lies a fantastic quest waiting to be undertaken. Penned by a skilled wordsmith, this marvelous opus attracts viewers on an introspective journey, lightly unraveling the veiled truths and profound affect resonating within ab muscles fabric of every word. Within the mental depths of this poignant review, we shall embark upon a genuine exploration of the book is primary subjects, dissect their interesting writing design, and fail to the effective resonance it evokes serious within the recesses of readers hearts.

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