

## PROJECTS SUPPORTED BY THE ATC ENDOWMENT FUND

The purpose of the Applied Technology Council (ATC) Endowment Fund is to support projects of critical interest to the structural engineering profession, but for which funds are not available from traditional funding sources. The Fund is used to provide financial support for projects in the following categories:

**1. Small Research Projects.** To qualify for funding as a small research project, the research must yield results that are useful to a significant segment of the structural engineering profession and must be accomplished with funding not to exceed \$10,000 (1995 dollars). Research topics are solicited from Structural Engineers Associations nationwide and are approved by the ATC Executive and Endowment Committees. Guidance and overview are provided by advisory Project Engineering Panels, consisting of leading specialists from the structural engineering profession and from the academic community. A portion of the proceeds from the sale of small research project reports is returned to the ATC Endowment Fund. To date, ATC has completed one Small Research Project:

- **ATC-R-1, *Cyclic Testing of Narrow Plywood Shear Walls*** (published 1995, 64 pages). This small research project, conducted at the University of California at Irvine, consisted of a series of static and dynamic tests of narrow plywood wall panels. The ATC-R-1 report describes the testing program and summarizes the results, including comparisons of drift ratios found during testing with those specified in the then-current seismic provisions of the 1991 *Uniform Building Code*. The report served as a catalyst for changes in code-specified aspect ratios for narrow plywood wall panels and for new

thinking in the design of hold-down devices.

**2. ATC Design Guides.** ATC Design Guides are a series of reports that present succinct, state-of-the-art information on important design issues for the practicing structural engineering profession. The documents are developed by leading specialists in specific areas of concern, working under the review and guidance of an advisory Project Engineering Panel. Topics are selected by the ATC Board of Directors, based on recommendations from ATC staff. A portion of the proceeds from the sale of ATC Design Guides is returned to the ATC Endowment Fund. To date, ATC has published two ATC Design Guides:

- **ATC Design Guide 1, *Minimizing Floor Vibration*** (published 1999, 64 pages). This first ATC Design Guide provides guidance on design and retrofit of floor structures to limit transient vibrations to acceptable levels. The document includes guidance for estimating floor vibration properties and includes example calculations for a variety of currently used floor types and designs. The criteria for acceptable levels of floor vibration are based on human sensitivity to the vibration, whether it is caused by human behavior or machinery in the structure.
- **ATC Design Guide 2, *Basic Wind Engineering for Low Rise Buildings*** (published 2009, 114 pages). This second ATC Design Guide provides background information and guidance on wind engineering provisions for low-rise buildings contained in ASCE 7 -05, *Minimum Design Loads for Buildings and Other Structures*, and the 2009 *International Building Code (IBC)*. Treatment is limited to common building types and buildings under 60 feet in

height. ATC Design Guide 2, *Second Edition*, which provides guidance on the ASCE 7-10 and the 2012 IBC wind engineering provisions for low-rise buildings, is currently under development.

- 3. Selected Engineering Applications for Mitigating the Effects of Natural and Man-Made Hazards.** The ATC Endowment Fund provides partial support, sometimes in the form of seed money, to develop selected engineering applications for mitigating the effects of natural and man-made hazards. Such activities are supported by the Fund when (1) funds cannot be obtained from traditional government agency funding sources in a timely manner and (2) the Endowment Committee believes the project is of critical importance in meeting the goals of ATC. Recommendations for projects in this category are initiated by the ATC Executive Director and require approval of the ATC Endowment Committee. A portion of the proceeds from the sale of such engineering applications is returned to the ATC Endowment Fund. To date, the Fund has supported the development of two engineering applications:
- **ATC-45, *Field Manual: Safety Evaluation of Buildings After Windstorms and Floods*** (published 2004, 132 pages). The ATC-45 *Field Manual* provides procedures applicable to all building types and includes extensive criteria for posting buildings with red (UNSAFE), yellow (RESTRICTED USE) and green (INSPECTED) placards as well as example applications of the procedures. Funding for the ATC-45 project was also provided by the Applied Technology Council and the Institute for Business and Home Safety.

### ATC Endowment Fund Donation Form

NAME \_\_\_\_\_

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Payment may be made by check or credit card (MasterCard, Visa, American Express). If paying by credit card, please provide: credit card # \_\_\_\_\_ Expiration: \_\_\_\_/\_\_\_\_ Security Code: \_\_\_\_\_

Checks should be made payable to ATC. Please mail your completed order form with the appropriate payment, or fax it, to:  
ATC Endowment Fund, 201 Redwood Shores Pkwy., Suite 240, Redwood City, California 94065 FAX 650/593-2320

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### CONTRIBUTORS

Omar Cardona  
Lawrence Reaveley  
John Theiss  
Function Design, Inc.

\*As of December 31, 2014

- **ATC Windspeed Determination Website.** The purpose of the Windspeed Determination Website is to provide users with site specific wind speeds from ASCE 7-10, *Minimum Design Loads of Buildings and Other Structures*, as well as from several prior versions of that standard. The user simply enters the site location (by address or geographic coordinates) and is immediately provided with a report that specifies 3-second peak gust design wind speeds (in miles per hour) for three ASCE 7-10 building risk categories (with mean return intervals ranging from 300 to 1700 years) and four serviceability design mean return intervals (10, 25, 50, and 100 years); wind speeds based on ASCE 7-05 and ASCE 7-93 are also provided.

### **PARTICIPATION LEVELS**

The ATC Board has established the following participation levels and benefits:

#### **Sponsor: Contributions of \$10,000 or more**

Individuals or organizations are recognized as Sponsors in newly published ATC reports, are listed as donors on ATC's web site, are invited to participate in selection of projects supported by the *ATC Endowment Fund*, and are provided with one copy of all past ATC reports and all future ATC reports (for life, if an individual; for 15 years, if an organization).

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#### **ADDITIONAL INFORMATION**

A list of projects financed by the *ATC Endowment Fund* is provided on the back. Checks should be made payable to "ATC Endowment Fund" and sent to:

Applied Technology Council  
201 Redwood Shores Parkway  
Suite 240  
Redwood City, California 94065

ATC is a nonprofit 501(c)(3) California corporation. Donations may be tax deductible (consult your tax advisor).

For additional information, contact ATC (Phone, (650) 595-1542; Fax, (650) 593-2320; E-mail, [atc@atcouncil.org](mailto:atc@atcouncil.org)).

#### **Henry J. Degenkolb**

A practicing structural engineer in San Francisco for more than 50 years, Henry consulted on most of the major seismic safety issues of his time. He served on the President's Task Force on Earthquake Hazards Reduction, was a consultant to the California Seismic Safety Commission, and was a member of various professional organizations in earthquake and structural engineering. He wrote numerous papers and other publications and received many professional awards and honors, including the American Society of Civil Engineers Ernest E. Howard Award in 1967 for preeminence in earthquake engineering.

Henry Degenkolb died in December 1989 with an international reputation for making buildings structurally safer and public policies and building codes stronger.



## Applied Technology Council Endowment Fund

In 1989 the Applied Technology Council (ATC) established the *ATC Endowment Fund*, which was dedicated to Henry J. Degenkolb, a structural engineer who gave outstanding technical support to the Applied Technology Council and its projects. The purpose of the *Fund* is to support projects of critical importance to structural engineering design practice, for which funds are not available from traditional funding sources. Initially the *Fund* was used to:

- finance small ATC research projects nominated by state Structural Engineers Associations and other engineering organizations nationwide;
- finance short, succinct, ATC design guides that present state-of-the-art information on important design issues for practicing structural engineers; and
- provide seed money for larger ATC projects that are co-funded by state and federal agencies and other organizations.

With time, as the *Fund* has grown, it has also been used to:

- finance major ATC projects to develop engineering resources and applications for use in mitigating the effects of natural and other hazards on the built environment; and
- fund other special ATC projects identified by the ATC Endowment Committee.