

A History of Assurance: An Introduction to the *Manual of Millwork*

excerpted from the 2003 Manual of Millwork published
by the Woodwork Institute

The Woodwork Institute,
founded in 1951, is a
self-regulating, non-profit
organization dedicated to
providing the leading
standards and quality assurance
programs for the
architectural millwork industry
in the western U.S.

The *Manual of Millwork*, celebrating its 50th anniversary this year, is now in its 11th edition. In 1953, the book was developed to fill a need for architectural millwork standards that could be easily specified by the design community. Since then, the *Manual* has evolved into a publication that provides a wealth of technical information on species of wood, finished lumber sizes, moisture content, exterior and interior finishes, preservative treatments, and more. Unrivaled in the architectural millwork industry, the *Manual of Millwork* provides assurance that your projects will meet your expectations.

The Woodwork Institute, founded in 1951, is a self-regulating, non-profit organization dedicated to providing the leading standards and quality assurance programs for the architectural millwork industry in the western U.S. The Institute serves more than 450 members throughout Arizona, California, Nevada, and Oregon.

The organization was originally named the Wood Window Institute of Northern California with the intent of promoting wood windows to the architectural community, which was beginning to favor metal windows. Shortly after its founding, the organization was renamed the Woodwork Institute of California (WIC) and its focus was broadened to include the development of standards for architectural millwork. The founding board of directors agreed the organization should support all woodworkers, not just those that produce windows.

In 2003, “of California” was dropped from the name to reflect the expanding marketplace the organization serves. Today, the Woodwork Institute still has the same vision it had in the 1950s — “assurance through certification.”

First printed in 1953, the *Manual of Millwork* provides an established set of material, fabrication, workmanship, and installation standards for more than 7,000 architects, specifiers, and

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A product show display from the 1960s.



Will Johnston, a CSI fellow and Woodwork Institute Director of Architectural Services for 21 years. The Wilbur L. Johnston Award for Excellence, named in his honor, is given to specification writers and architectural firms that have written outstanding millwork specifications utilizing Woodwork Institute standards.

design professionals. The Institute’s Certified Compliance and Monitored Compliance programs are established quality control and assurance tools for millwork projects used in conjunction with the standards contained within the *Manual of Millwork*. Over 1,300 projects were certified in 2002, and an estimated 2,000 projects will be certified in 2003.

The Institute has made an effort to promulgate the *Manual of Millwork* for the benefit of the public based on

a thorough review of available industry information, testing, and accepted practices. The *Manual* is not intended to override local building codes and may conflict with certain ‘localized’ and/or individual firm’s practices.

These architectural millwork standards will afford the user an assurance of quality materials, fabrication, workmanship, finishing, and installation consistent with the economic utilization of resources for the Grade selected as outlined below:

ECONOMY GRADE meets the requirements of lower-cost residential and commercial construction wherein economy is the principal factor; also for use in storage room and utility areas.

CUSTOM GRADE includes all the requisites of high quality millwork suitable for use in high grade construction, such as quality residential, school, and commercial buildings. Custom Grade is also the default grade level for the *Manual of Millwork*, if not specified otherwise.

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PREMIUM GRADE provides for a superior quality of materials and craftsmanship with a corresponding increase in cost. It is intended primarily for the best of hardwood construction, but any species of wood may be specified.

LABORATORY GRADE, only applicable to Sections 14, 15, 16, and 18, is intended for use in casework and countertops where chemical resistance is of concern.

From its initial printing, the *Manual of Millwork* has been and continues to be provided free of cost to all architects, specifiers, and design professionals with the invitation to reference it as a minimum quality assurance option within their specifications. It should be noted that architects/specifiers/design professionals may modify any and all Grade requirements within their drawings and specifications; and such modifications shall govern and take precedence over the Grade rules. It should also be noted that the Institute does not guarantee or assure the safety or performance of any manufactured products, components, or installation thereof performed in accordance with these standards.

AN IMPORTANT ANNOUNCEMENT

The Woodwork Institute of California (statewide), a non-profit organization, is now in operation. Its objectives, as set forth in the By-Laws, are quoted as follows:

"The particular purposes of this Institute are for the development and dissemination of information relative to uses, advantages and functional utility of wood products in all types of building construction.

And to carry out a sound promotional program, the effects of which will increase public acceptance and greater use of wood products."

Active and Associate Memberships are open to manufacturers, millwork operators, wholesalers, jobbers, retailers and component parts, in California, who deal in wood products.

For further information please contact
RUSSELL BJORN, MANAGER-DIRECTOR
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Telephone Exbrook 2-8696

Woodwork Institute of California

In Southern California, contact Orrie Hamilton
111 West Seventh, Los Angeles
Telephone TUCKER 6108



The first annual membership meeting, held in January 1952 at the San Francisco Yacht Club.

Advertisement announcing the Institute's beginning, which appeared in the May 1951 issue of California Lumber Merchant.



11th Edition

Manual of Millwork,

effective May 1, 2003



For ease of use, the *Manual* is divided into sections, of which Sections 1 and 2 cover General Information/Policies and Procedures, Sections 3 and 4 cover lumber/plywood requirements, Section 5 outlines factory finishing, Sections 6 through 8 cover exterior millwork, and Sections 9 through 20 cover interior millwork. Additionally, there is an appendix, glossary and two casework supplements covering typical fabrication details and our casework design series. The sections are edge-marked with a black strip and keyed to the index on the back cover for quick reference. Each section is individually page-numbered by section and the entire book is page-numbered as a single document.

Each section is laid out in the Construction Specifications Institute (CSI) three-part format with PART 1 - GENERAL covering general information, scope, default stipulations, shop drawings, and care/storage requirements. PART 2 - PRODUCT covers the Grade Rules and PART 3 - EXECUTION covers preparation and installation. Additionally, some sections have supplemental illustrations to assist in design considerations.

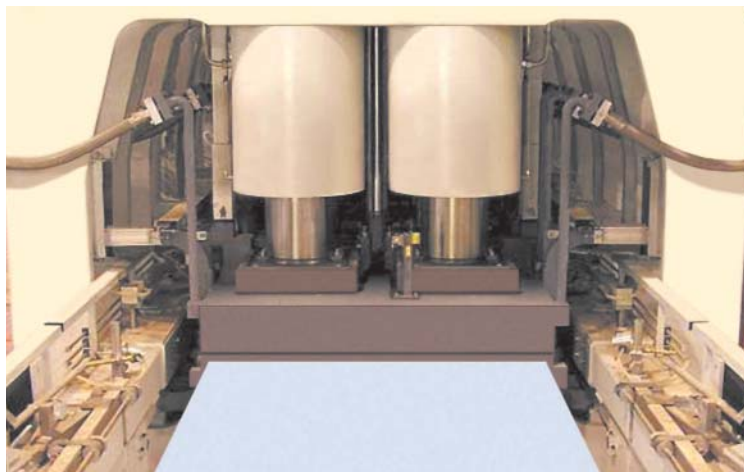
The Table of Contents is expanded to list each individual heading, table, guideline, etc. It's a good place to start in familiarizing yourself with the *Manual* and what it has to offer.

It's recommended that to establish the minimum level of quality, project specifications should include the language outlined in Section 2. This language establishes a contractual obligation to comply with the *Manual of Millwork* requirements as modified by the plans and specifications and assures a definitive level of quality that all must conform to.

The *Manual of Millwork* is an ongoing work in progress. Known errors and significant industry changes are kept current through the Institute's website at www.woodworkinstitute.com/manual.asp. It is the responsibility of all users of the *Manual of Millwork* to be aware of and comply with the requirements of any and all corrections or updates published on the Woodwork Institute website prior to the bid date of a project.

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HISTORY OF THE WOODWORK INSTITUTE LOGO



2003 & beyond

The new Woodwork Institute logo represents the organization's renewed commitment to providing unparalleled service and assurance to the millwork and design communities.



1953-2003

For 50 years, the framed logo stood for the leading standards and quality assurance programs in the western U.S.



1951-1953

Just as the original logo indicated, the Woodwork Institute was founded on the principles of assuring measured quality to its members and customers.

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Certification

The *Manual of Millwork* also provides for two additional quality assurance tools in our Certified or Monitored Compliance Programs as outlined in Section 1. The Certified Compliance Program provides quality assurance by advising the fabricator/installer of the concerns for quality and verification as to the compliance of the specified requirements. Typical non-licensee cost for certification of shop drawings, fabricated/finished product, and its installation is \$1,500 — a small price to pay for the added assurance. If the work is performed by a licensee, there is a typical cost of \$10 in addition to their annual dues. The success of the Certified Compliance Program is dependent on your persistence and follow-through — waiting until the end of the project may prove too late.

The Monitored Compliance Program provides quality affirmation, ensuring the fabricated product, prefinishing, and/or installation comply with the project specifications by our monitored involvement during the planning, fabrication, finishing, and installation processes — eliminating any last-minute surprises. However, there is an increased cost, a minimum of \$2,300 or a sliding percentage of the contract value, as outlined in Section 2.

Implementation of either of these quality assurance programs requires the contractual specification for such within the contract documents. Further details can be found in Section 2.

Within Section 1, you will find recommended GUIDE SPECIFICATIONS for CSI Sections: 06200 Finish Carpentry, 06400 Architectural Millwork, 06900 Wood and Plastic Restoration and Cleaning, and 08200 Wood and Plastic Doors. We recommend that these guide specifications are reviewed, as applicable, and incorporated within the project specifications, as appropriate.

Guidelines for architectural drawings of millwork products and shop drawings requirements can be found within Section 1.



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The job-site environmental conditions during the storage and installation and/or useful life of architectural millwork are very important and need to be properly maintained. The *Manual of Millwork* specifically details within each of its product sections the required environmental conditions that must be complied with to provide the proper environment for architectural millwork. We recommend these requirements be strictly enforced. You might want to review the article “Moisture and Architectural Millwork” within Section 1.

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Bernard B. Barber, Jr. and his wife Elaine. Bernie was Chief Executive Officer and Secretary of the Woodwork Institute for 39 years. Named in honor of Bernie, the Bernard B. Barber, Jr. Awards for Excellence are given to design professionals annually to recognize excellence in the woodworking and architectural

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Seismic Compliant Fabrication and Installation is another area of concern, especially within California, and is a contractual requirement on all projects requiring compliance to UBC - Title 24. We have several DSA-approved methods of casework fabrication and OSHPD-compliant casework installation pre-approvals for use by the industry. See the Appendix for further details. Specifying use of our casework installation approvals can save money by eliminating the need to individually engineer each project's casework installation requirements.

For Chemical Environments, the Institute adopted the time-proven practices and standards of SEFA (Scientific Equipment and Fixture Association) and developed the Laboratory Grade applicable to Sections 14, 15, 16 and 18 - Casework and Countertops. For specific chemical resistance of horizontal/vertical surfaces in both exposed and semi-exposed areas, we have again adopted SEFA's requirements.

The *Manual of Millwork* is a working document and subject to improvement



The Institute recognizes the existence of the AWI/AWMAC Architectural

Woodwork Quality Standards and recommends its use in those

areas outside of our four-state service area of

Arizona, California, Nevada, and Oregon.



and change. We encourage and appreciate your comments and suggestions for improvements to the *Manual* and have furnished a form in the Appendix for providing such. Between publication of updated editions, known errata are kept current on our website at www.woodworkinstitute.com (see Services, *Manual of Millwork*, Errata List). A number of our sister organizations and their standards are referenced within the *Manual* and used as a basis on which we build the *Manual of Millwork* requirements. A listing of these and other related organizations can be found within the Appendix.

As additional related service, we review and acknowledge approval of products found to be compliant to the *Manual of Millwork* standards and lists such within the 'Services' area of our website (www.woodworkinstitute.com) by product category. This does not necessarily mean that products not listed are not compliant; only that we have reviewed the products listed and confirmed their compliance. This approved products listing provides you with a means of verifying compliance of products to the *Manual of Millwork* minimum requirements.

The Institute recognizes the existence of the AWI/AWMAC Architectural Woodwork Quality Standards and recommends its use in those areas outside of our four-state service area of Arizona, California, Nevada, and Oregon. For years, our organizations have worked towards a commonality of our standards; and other than the difference of our *manual* formats and the quality assurance options we have to offer, the requirements of our standards are very similar. There are a few exceptions, such as: Our requirement for the self-edge on Custom Grade HPL countertops to be applied after the horizontal deck laminate vs. their requirement for it to be applied before; our inclusion of a laboratory grade for casework and countertops in chemical environments; our inclusion of seismic fabrication/installation standards to meet California's needs; our acknowledged approval of products meeting our minimum requirements; and our inclusion of a guide specification and standards section on historic millwork.