JOURNAL OF THE WOODWORK INSTITUTE

SPRING/SUMMER 2014

ARCHETYPE

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The Woodwork Institute Would Like to Thank the Three Outgoing Board of Directors

On behalf of the Woodwork Institute, we would like to thank the three outgoing Directors for their service on the Board. We appreciate all of their hardwork and years of dedication to the Woodwork Institute.

Denny Milsten
Westmark Products, Inc.

Valarie Harris
Stanley Security Solutions

Ray Cerulli
Plastic Tops

****

Please Welcome Our Three New Board of Directors

Wayne Alexander
Fremont Millwork Company, Inc.

Dave Ghiglieri
Interior Wood Systems

Mark Ramsey
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WOODWORK INSTITUTE

Vision

Assurance through Certification

Mission

To provide the leading standards and quality control programs for the architectural millwork industry through *Architectural Woodwork Standards*, our exclusive supplemental text *The Programs and Services Manual*, Certified Compliance, Monitored Compliance, and Certified Seismic Installation Programs.

To promote to the architectural design community, its suppliers and contractors, the development and dissemination of information relative to uses, advantages, and utility of millwork products.

To be the premier, industry-driven, equal opportunity, nonprofit trade association resource provider for our industry.

inside this issue

ON THE COVER
Winner of the 2013
Bernard B. Barber Jr.
Award for Excellence

Long Valley Residential Property

MILLWORK FABRICATOR
Dennis Reeves, Inc.

BUILDER/DESIGNER
H2H Estate

GENERAL CONTRACTOR
H2H Estate

See Full Story on page 4

Feature

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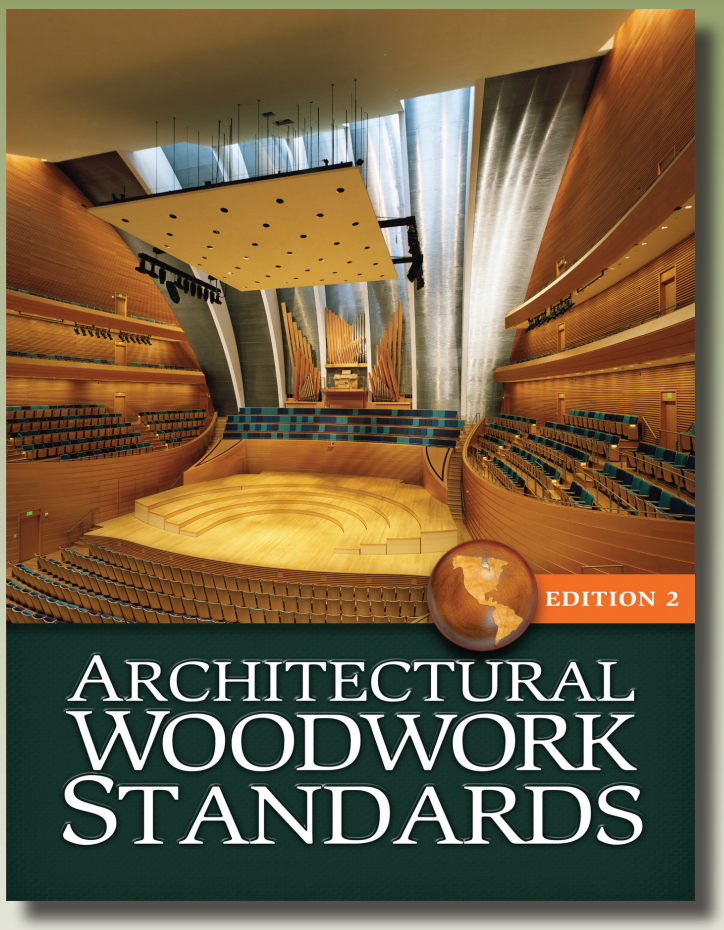
The New 2nd Edition AWS is Now Available!



We are delighted to announce the release of the *2nd Edition Architectural Woodwork Standards* (AWS), and hope that you find it helpful in specifying all of your millwork designs.

This new edition represents three years of collaborative work between the Woodwork Institute (WI), the Architectural Woodwork Manufacturers Association of Canada (AWMAC), and the Architectural Woodwork Institute (AWI).

Please visit our publication website at www.awspublications.com

Best of the Best 2013

Bernard B. Barber Jr. Award for Excellence

The Woodwork Institute's most prestigious award, the Bernard B. Barber Jr. Award for Excellence is given to examples of outstanding architectural millwork. The award is named in honor of Mr. Bernard Barber, who has dedicated more than 40 years to the Woodwork Institute. Since the first Bernard B. Barber Jr. Award for Excellence was presented in 1965, more than 100 projects have received this recognition.

Bernard B. Barber Jr. Award for Excellence nominees may be submitted by any design professional or Woodwork Institute member who was contractually tied to the project. Specifications must require Certified or Monitored Compliance to be eligible. In 2013, the top honors went to Dennis Reeves, Inc. for their work on the Long Valley Residential Property in Hidden Hills, CA.

Long Valley Residential Property

JOB DESCRIPTION
The project consisted of the construction of a new 21,000 sf residential property.

BUILDER/DESIGNER
H2H Estate

GENERAL CONTRACTOR
H2H Estate

MILLWORK FABRICATOR
Dennis Reeves, Inc.

The kitchen walls and largest island are fumed-glazed oak with the two smaller islands a matte light-gray conversion varnish (as shown on pages 4 and 5).

This library walls and ceiling are white oak with a fumed-glazed finish. The theater is matte light-gray conversion varnish. The pool house is slightly antiqued, light-brown glaze with matching finish on the open beams and exposed ceiling. The entire project totaled approximately 2,750 man hours of design, fabrication, finishing, and installation over an eight-month time period (see pages 6 and 7).

The master closet is fumed oak with a slightly darker glaze than the library. Her master closet is white conversion varnish. The furniture-style island was also fabricated and finished by us. The master bath vanity and make-up area are white conversion varnish.

FOUNDATION

The C.E. Bernhauer, Jr. Scholarship Award Winners

Each year the Woodwork Institute awards scholarships to young adults who show great promise in becoming valuable additions to the architectural and/or woodwork industry. This year we've awarded three recipients.

Mitchell Donald Beaverson

Mitchell graduated from Elmwood High School in Bloomdale, Ohio. He has won numerous honors such as the 4-H Achiever Award, the Top Woodworker Award, an Excellence in FFA Award, and a Student Council Award. All throughout high school he was an active member of the student council and FFA. He is a member of the Northwest Ohio Woodworkers Guild. He plans to attend Bowling Green State University and major in the Construction Management Program. This program will provide him with the neccessary business skills needed to become an entrepeneur. He would like to eventually own and operate his own woodworking shop while continuing to work on the family farm. He plans on converting their hog barn into a woodshop for custom cabinets and trim work. Mitchell sees the need for custom millwork in the Northwest Ohio area.

Elena I. Moldovan

Elena moved here from Romania in December of 2011, and attended Wakefield High School in Arlington, Virginia. She held leadership roles in the Wakefield Interact and French Clubs. She has a 4.02 GPA and was ranked 11th in her class of 299. Elena was a member of the National Honor Society, a school Ambassador and an Upstander. She was the 1st place winner in the National Building Museum Teen Design Competition in 2013. Elena was the National Building Museum Teen Design Council co-chair in 2013-2014. Architecture has been her passion since fifth grade. Her realization that an architect is not just about designing a building, but rather creating an intimate place where people feel secure and happy. Being accepted into the University of Miami's School of Architecture is an important step in fulfilling her dream in becoming a successful architect.

Claire Olson

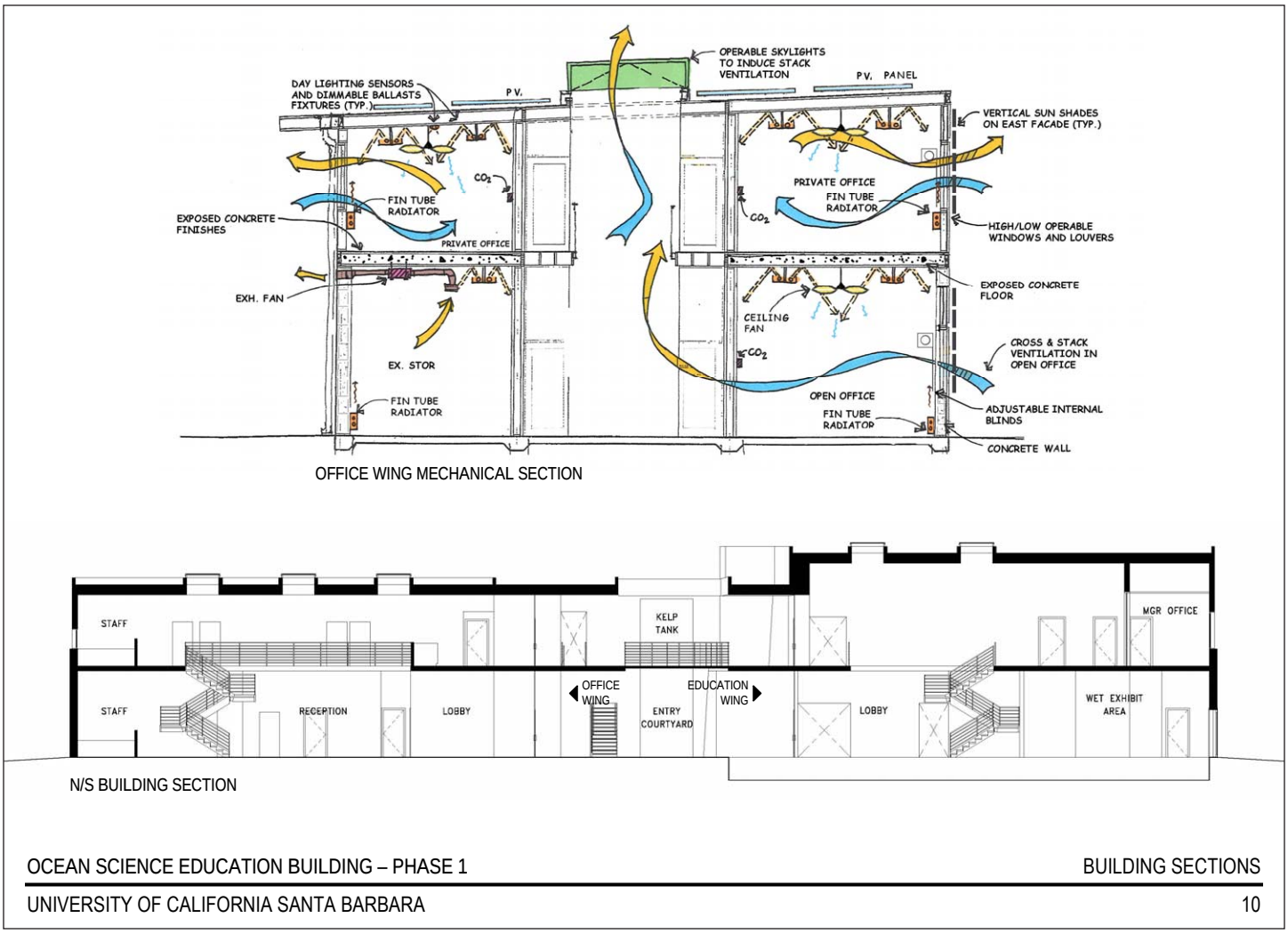
Claire is a Junior at the University of Wisconsin in Milwaukee in the School of Architecture and Urban Planning. She maintains a 3.5 GPA in the architecture program that is nationally ranked and boasts a competitive curriculum. Claire enjoys the puzzle in formatting a building and given program to green-building techniques, and solving the problem of human intereaction in the environment. She is a member of UWM Chapter of AIAS and an officer with UWM's Habitat for Humanity. Through H4H, she has become involved with the Urban Ecology Center in Washington Park and frequently volunteers to work on the grounds or in the office. They teach members how to engage with the land they want to protect and use it safely and conservatively, bringing people into contact with the environment around them. Her future career goal is to not only design buildings with as close to zero-percent carbon footprint, but also design for human interaction with their environment in an innovative way.

Building Climatization and Millwork

By Mitch Taylor

Back when energy was relatively cheap, and when schools and public buildings had decent funding, it was typical for standard HVAC systems to be in pretty much every building out there, and they usually ran 24/7. Some buildings, like the Los Angeles Department of Water and Power building, even kept all of the lights on 24/7 as a part of the building's climatization. Now, however, things are different. Buildings are being designed to be energy and cost efficient in their construction. For further efficiency, the operation of the building climatization takes the occupancy schedule into account after construction. This has led to several design and operation strategies that fundamentally change conditions in the buildings for millwork construction and installation.

The most obvious change is in the operation of the building systems. Buildings that aren't occupied 24/7 are having the HVAC systems either cut back severely or turned off altogether during the off hours and days. On a typical workweek schedule, as in an office building or a school that's in session, this causes temperature swings during the workdays which normally aren't too severe.



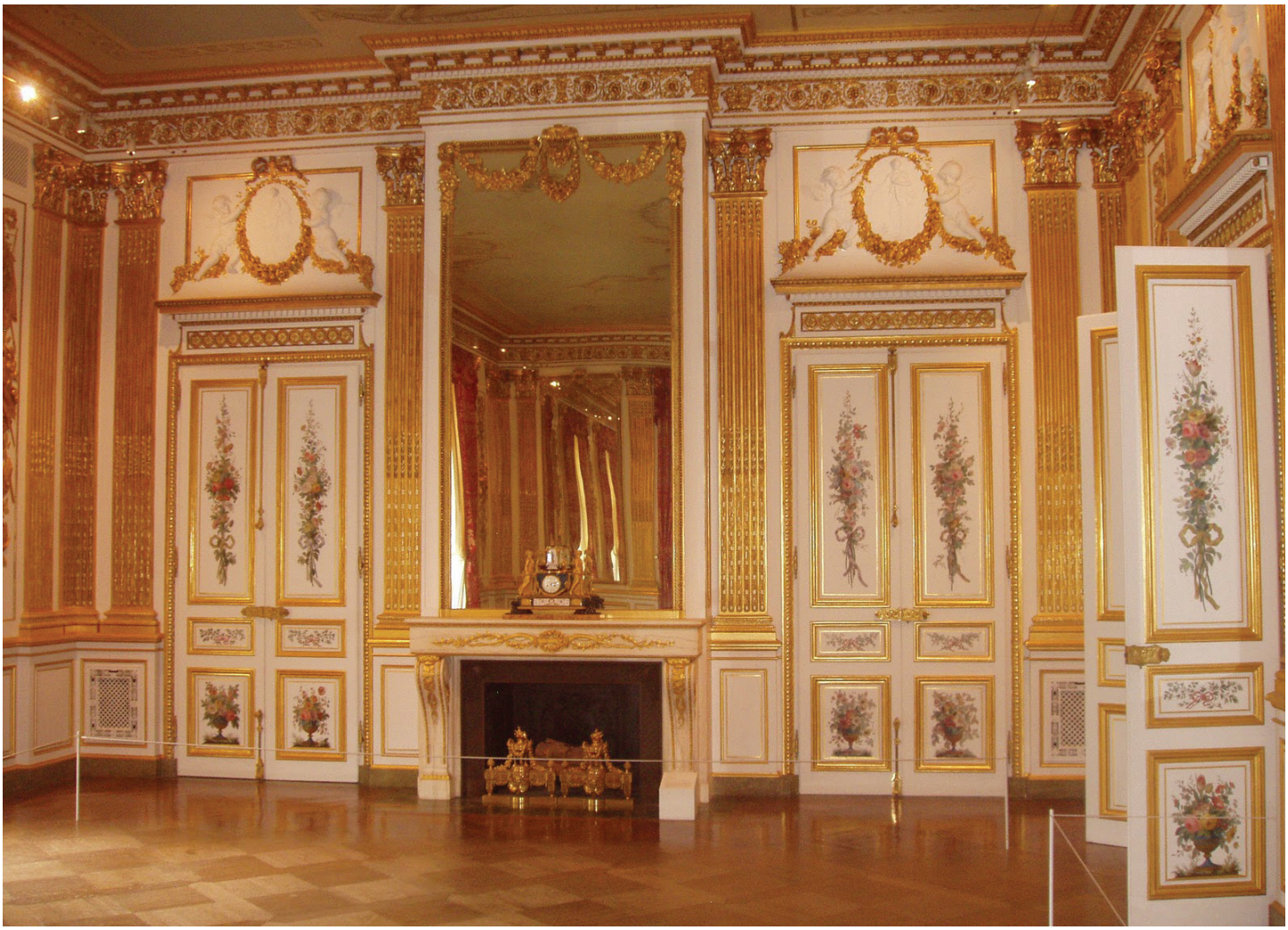
An illustration of the Ocean Science Education Building courtesy of the University of California Santa Barbara.

However, on the weekends there are larger swings, along with relative humidity changes. This probably won't have a large effect on the millwork, but may cause minor movement of joints or scribes.

For school buildings there can be more serious effects when the climate control is either turned off or dialed way back during school breaks. These periods are long enough for the conditions in the building to go through larger changes, and for the millwork to have noticeable movement. Scribe joints can open, and the caulking in those joints can dry up and fall out, exacerbating the gaps. Long trim members or shelves can shrink (or grow) in length, again causing open joints in the case of shrinkage, or buckling from expansion. Paneling has similar issues, and casework doors can warp.

The other change in buildings that has similar effects is the use of ambient climate conditions rather than closed

Courtesy of the University of California Santa Barbara.



Palace at Versailles

system HVAC in building design. Many projects in areas with temperate conditions are forgoing the use of HVAC systems altogether, or only as assistance to natural air flow. Some buildings simply use large operable windows to control the interior temperature, and allow the humidity to vary with the exterior conditions. The issues with the millwork are the same as those mentioned above for extended shutdown of HVAC systems.

The *Architectural Woodwork Standards* (AWS) calls for specific ranges of temperature and humidity to be established in the building before the installation of millwork, along with an operational HVAC system. This works for most buildings, but in the case of a building which uses outside air instead of HVAC, this may not be practical or even possible. In this case, it would be advisable for the project specifications to be written to take this into account. In addition, some consideration of temperature and humidity variations should be taken in the millwork design, to allow for the wider range of interior conditions.

Millwork and casework have been around since well before the advent of air conditioning or central heating. One needs only to look at showcases like the Palace at Versailles to see fine millwork in an environment that encompassed a wide range of temperature and humidity. Traditional millwork designs and methods allowed for natural wood movement to occur without causing visible artifacts. With the advent of buildings with continuous climate control, design and execution have gotten sloppy. Very few architects or shops remember

USC Ronald Tutor Student Center

how to design and fabricate work for environments where the temperature and, more important, humidity may vary beyond a narrow range.

The most important thing in design for varying conditions is allowing room for the millwork to move, and providing a space for the movement to occur that won't be obvious. In paneling, reveals and quirks work in flush designs; typical stile-and-rail designs usually have moldings or stickings that provide a place for movement. It's important to keep in mind that panels move both across the grain and with the grain, so both need to be accounted for. Running trim, like base or crown mold, is another item that can cause problems. Shorter runs probably aren't too much of an issue, but long runs may need a break at some point.

Casework has its own set of considerations. Where the finished end of a cabinet is scribed to the wall, there shouldn't be problems, but a scribe filler between the side of a cabinet and a wall or ceiling may shrink and leave a gap. At long scribe fillers with j;oints, for example between the top of a long run of cabinets and the ceiling, the joints may open up. The use of an overlapping joint with a reveal at a running joint would conceal the movement.

For the architect, working closely with the millwork fabricator is advisable in these situations. They may have concerns about specific areas, or have suggestions for details that minimize the effects. The design professionals should also utilize their local Woodwork Institute representative as a valuable resource.

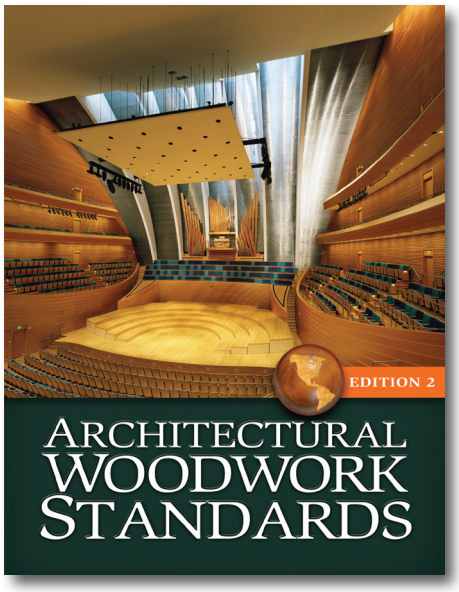
As buildings and systems evolve to meet the changing needs of conservation, regulation and efficiency, it's important to make sure that the interiors are kept in sync with those changes. The millwork industry has recognized this issue, and will be working on solutions to keep providing the quality and longevity clients have come to expect.

Mitch Taylor's family has been in the woodworking business since 1929. Mitch started working at Taylor Millwork and Stair Co., as a teenager in Junior High. He went to work full-time in 1974 after attending Cal State Dominguez Hills.

In 1983, Steve Taylor, Ross Taylor and Mitch started Taylor Brothers Stair Co. Mitch continued to run the cabinet and millwork department for several years before the business shifted almost entirely to stairs in 1990. Taylor Brothers worked on many high-end residential and commercial projects in the Southern California area, with some larger projects in Oregon, Washington, Texas and Hawaii. Mitch was involved in all aspects of the business, from sales and estimating to design and fabrication. The most interesting part was the design and engineering, particularly on projects requiring unique solutions to difficult situations and design parameters. It was a source of pride to be known for doing projects no one else was willing or able to take on.

In 2003, Taylor Brothers closed. Mitch went to work with SMI Millwork, where Bob Stolo decided to keep the stair business going and started Taylor Stair Co. as a new company. Mitch set up a new shop, keeping the same standards and tradition of quality set by Taylor Millwork and Taylor Brothers. He ran the shop at Taylor Stair up until 2011, and supervised the construction of many fine residential and commercial projects, including stairs, paneling and millwork.

Mitch has enjoyed the transition to working for Woodwork Institute, and continues it's efforts to further the high quality standards set by the institute through the AWS. The Taylor family has a tradition of service with Woodwork Institute dating back to the 1950s and the first Manual of Millwork, and he intends the carry on in that spirit.



A New and Improved *Architectural Woodwork Standards*

By Steve Taylor

When the first edition of *Architectural Woodwork Standards* (AWS) was published in 2009 it represented an amalgamation of two very different documents. The *Manual of Millwork* (MM), published by Woodwork Institute (WI, formerly Woodwork Institute of California), was always intended as a quality standard, with rules and grades. *Quality Standards Illustrated* (QSI) published by Architectural Woodwork Institute and the Architectural Woodwork Manufacturers Association (AWMAC) of Canada has principally been an educational document, educating design professionals and woodworkers alike about woodwork techniques and best practices.

Because *Architectural Woodwork Standards* would become the basis of the quality assurance programs of all three associations, the grade rules were the focus of the Joint Standards Committee (JSC) when the first edition was prepared. Much of the educational content of *Quality Standards Illustrated* was dumped into the appendix. In the AWS second edition, the Joint Standards Committee has worked to take the educational content out of the appendix and integrate it into the product sections. Each Section of the second edition of *Architectural Woodwork Standards* is now divided into two principal parts: **Introductory Information** and **Compliance Requirements**. Much of the educational content of the QSI is now found in the Introductory Information portion of the appropriate AWS Section.

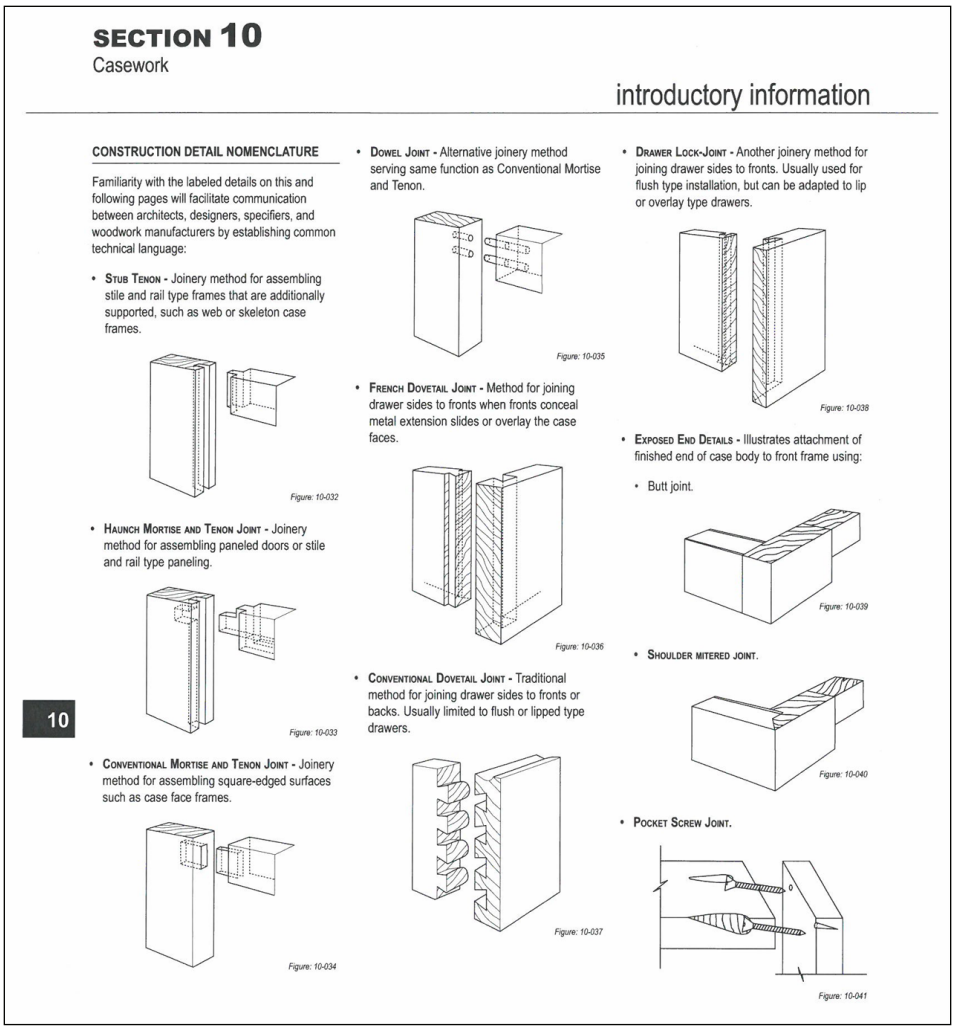
This is an improvement over the first edition. The **Introductory Information** (as shown in Figure 1) now provides the science and the vocabulary that is the basis for many of the grade rules. As a result the new format provides a valuable resource for designers, specifiers, and woodworkers alike. However, it comes with an awkward caveat: The **Introductory Information** part of each section is "…not part of the AWS for compliance purposes." There was a concern within the Joint Standards Committee that some of the items within this new information might be misunderstood as requirements. Another concern was that there might be conflicts between the introductory information and the grade rules. An unfortunate consequence of this decision is redundancy. Because the Introductory Information is "not part of the AWS for compliance purposes" a certain amount of the content must be repeated in the grade rules. I hope that this is a temporary state of affairs; I see no reason that this information shouldn't eventually be folded into the General portion of each of the AWS sections. I think both of the arguments for segregating this content can be overcome with careful editing.

The most noticeable change in the new AWS is the changed page formats. Those portions of the book which are

"not part of the AWS for compliance purposes" are three columns to a page and in prose format; the **Compliance Requirements** pages (as shown in Figure 2) have two columns, and are in outline format. There are also some changes in the outline system, which I believe are for the better, but will take some time to get used to.

An important improvement to the second edition is the revised adjustable shelf span data. The AWS adjustable shelf requirements are based on a maximum shelf deflection of 1/4" under the rated load. A 40 lb/sf load rating is the minimum, with a 50 lb/sf rating required for schools, hospitals, libraries, and book shelves. The AWS, like the other standards before it, does not, however, require the manufacturer to meet the deflection requirements. Instead it requires that shelves be manufactured according to prescribed methods and materials depending on the span. For many years this information had been copied from one edition of the *Manual of Millwork* to the next, then to *Architectural Woodwork Standards*.

For this edition of the AWS, rather than copy the outdated information, the technical committee had all the shelf types included in the shelf table tested. The allowable spans for each method of construction now reflect the current methods and materials. An unintended result of this testing is that Tempered Glass and Solid Phenolic Core (SPC) have been deleted from the table. The



SECTION 10
Casework

introductory information

CONSTRUCTION DETAIL NOMENCLATURE

Familiarity with the labeled details on this and following pages will facilitate communication between architects, designers, specifiers, and woodwork manufacturers by establishing common technical language:

- **Stub Tenon** - Joinery method for assembling stile and rail type frames that are additionally supported, such as web or skeleton case frames.

Figure: 10-032

- **Haunch Mortise and Tenon Joint** - Joinery method for assembling paneled doors or stile and rail type paneling.

Figure: 10-033

- **Conventional Mortise and Tenon Joint** - Joinery method for assembling square-edged surfaces such as case face frames.

Figure: 10-034

- **Dowel Joint** - Alternative joinery method serving same function as Conventional Mortise and Tenon.

Figure: 10-035

- **French Dovetail Joint** - Method for joining drawer sides to fronts when fronts conceal metal extension slides or overlay the case faces.

Figure: 10-036

- **Conventional Dovetail Joint** - Traditional method for joining drawer sides to fronts or backs. Usually limited to flush or lipped type drawers.

Figure: 10-037

- **Drawer Lock-Joint** - Another joinery method for joining drawer sides to fronts. Usually used for flush type installation, but can be adapted to lip or overlay type drawers.

Figure: 10-038

- **Exposed End Details** - Illustrates attachment of finished end of case body to front frame using:
  - Butt joint.

Figure: 10-039

- **Shoulder mitered joint.**

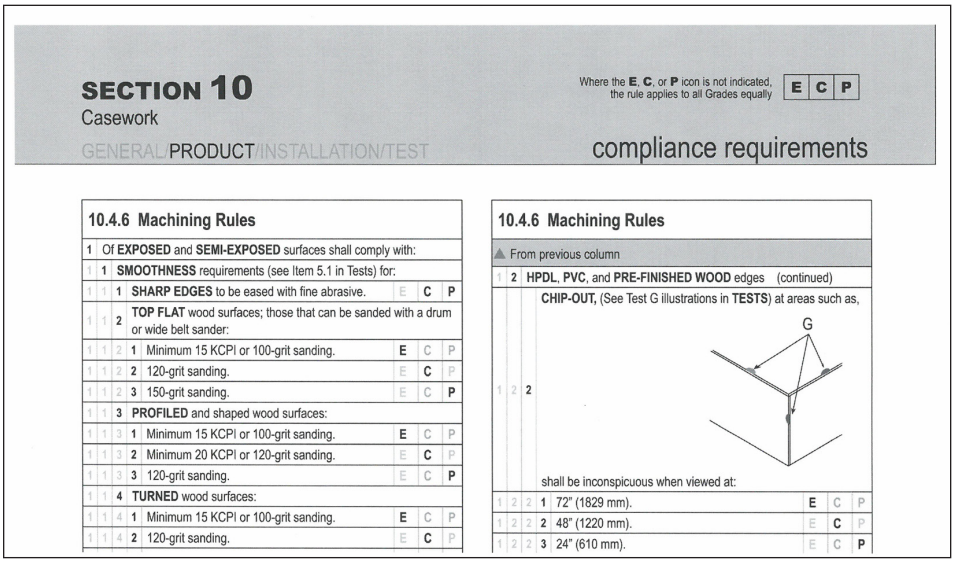
Figure: 10-040

- **Pocket Screw Joint.**

Figure: 10-041

10

Figure 1: The Introductory Information is not part of the grade rules, but contains a wealth of useful knowledge. The header is unshaded, and the text is in three columns.



SECTION 10
Casework

GENERAL/PRODUCT/INSTALLATION/TEST

Where the **E**, **C**, or **P** icon is not indicated, the rule applies to all Grades equally E C P

compliance requirements

10.4.6 Machining Rules

1				Of **EXPOSED** and **SEMI-EXPOSED** surfaces shall comply with:			
1	1			**SMOOTHNESS** requirements (see Item 5.1 in Tests) for:			
1	1	1		**SHARP EDGES** to be eased with fine abrasive.	E	**C**	**P**
1	1	2		**TOP FLAT** wood surfaces; those that can be sanded with a drum or wide belt sander:			
1	1	2	1	Minimum 15 KCPI or 100-grit sanding.	**E**	C	P
1	1	2	2	120-grit sanding.	E	**C**	P
1	1	2	3	150-grit sanding.	E	C	**P**
1	1	3		**PROFILED** and shaped wood surfaces:			
1	1	3	1	Minimum 15 KCPI or 100-grit sanding.	**E**	C	P
1	1	3	2	Minimum 20 KCPI or 120-grit sanding.	E	**C**	P
1	1	3	3	120-grit sanding.	E	C	**P**
1	1	4		**TURNED** wood surfaces:			
1	1	4	1	Minimum 15 KCPI or 100-grit sanding.	**E**	C	P
1	1	4	2	120-grit sanding.	E	**C**	P

10.4.6 Machining Rules

▲ From previous column

1	2			**HPDL**, **PVC**, and **PRE-FINISHED WOOD** edges (continued)			
1	2	2		**CHIP-OUT,** (See Test G illustrations in **TESTS**) at areas such as, shall be inconspicuous when viewed at:			
1	2	2	1	72" (1829 mm).	**E**	C	P
1	2	2	2	48" (1220 mm).	E	**C**	P
1	2	2	3	24" (610 mm).	E	C	**P**

Figure 2: The Compliance Requirements portions of each section are in two column format, and the header is shaded. Note the new system of distinguishing grades is an improvement over the first AWS.

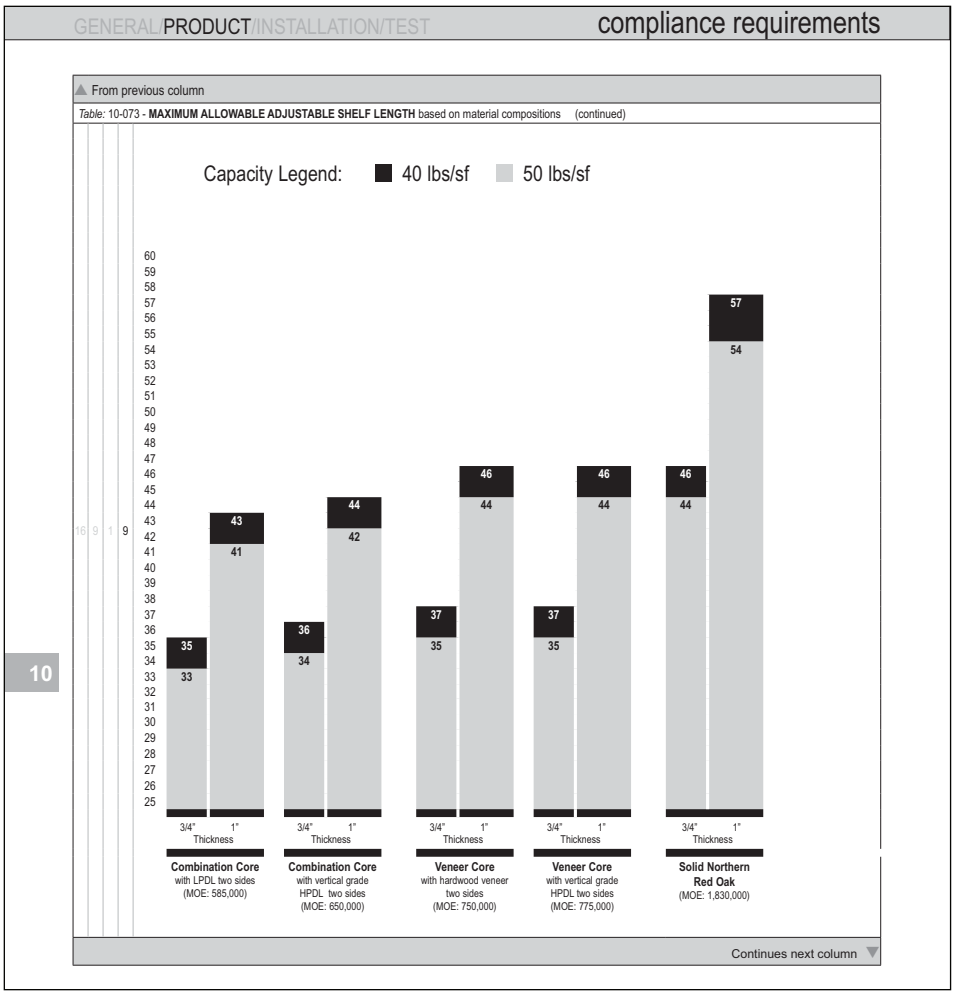
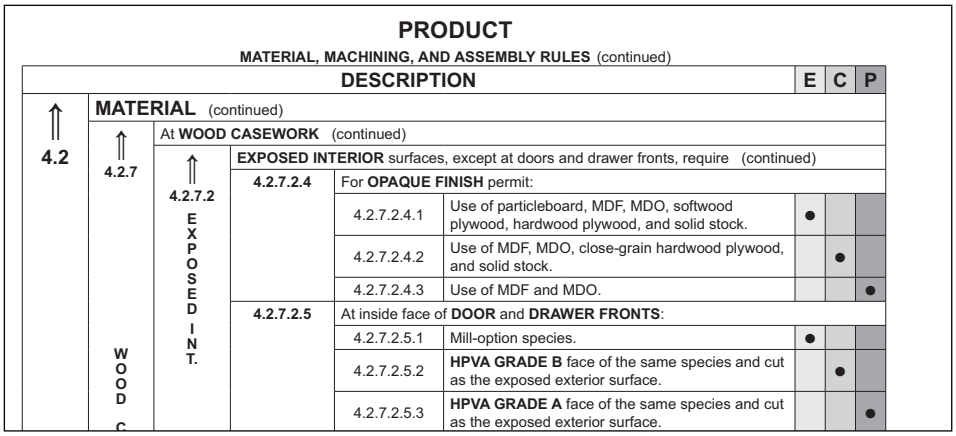


Figure 3: A simple list of materials and allowable spans would be an improvement over the graphic, but the information is now up to date.



PRODUCT

MATERIAL, MACHINING, AND ASSEMBLY RULES (continued)

				DESCRIPTION		E	C	P
4.2				**MATERIAL** (continued)				
	4.2.7			At **WOOD CASEWORK** (continued)				
		4.2.7.2 EXPOSED INT.		**EXPOSED INTERIOR** surfaces, except at doors and drawer fronts, require (continued)				
			4.2.7.2.4	For **OPAQUE FINISH** permit:				
				4.2.7.2.4.1	Use of particleboard, MDF, MDO, softwood plywood, hardwood plywood, and solid stock.	●		
				4.2.7.2.4.2	Use of MDF, MDO, close-grain hardwood plywood, and solid stock.		●	
				4.2.7.2.4.3	Use of MDF and MDO.			●
			4.2.7.2.5	At inside face of **DOOR** and **DRAWER FRONTS**:				
				4.2.7.2.5.1	Mill-option species.	●		
				4.2.7.2.5.2	**HPVA GRADE B** face of the same species and cut as the exposed exterior surface.		●	
				4.2.7.2.5.3	**HPVA GRADE A** face of the same species and cut as the exposed exterior surface.			●

WOOD C

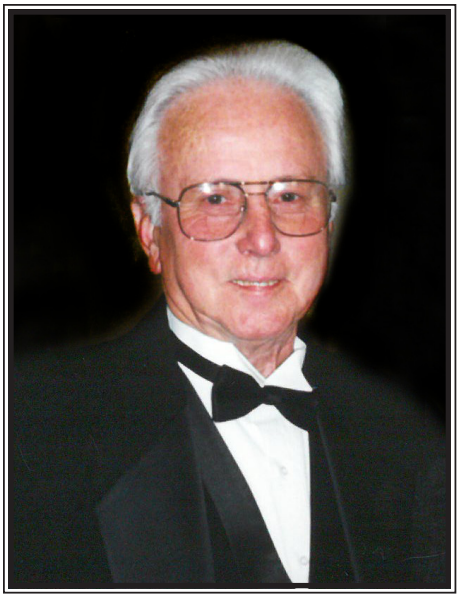
Figure 4: The AWS first edition has a single column layout, and a somewhat cryptic system of grade designation.

SPC was deleted because there is a great deal of variation in the product from manufacturer to manufacturer. Tempered glass was deleted because while it is very strong, it fails catastrophically. The AWS formula for determining the allowable span is not suited to tempered glass.

While the update of the adjustable shelf data is an unalloyed success, the new graphic presentation is not (see Figure 3). While the new graphic is certainly an improvement over the dreadful presentation in AWS-1, it remains inferior to the format used in the *Manual of Millwork*.

This edition is a marked improvement over the first edition AWS, and sets the stage for an even better third edition when the time comes. I would like to summarize those changes in the grade rules that are substantive, but I was unable to identify any. My careful reading of Section 10, Casework didn't turn up any obvious changes, although I'm sure there are many minor tweaks. The addition of the **Introductory Information** and a certain amount of re-ordering of the **Compliance Requirements** makes it difficult to be sure what is new even with the documents side by side. I hope that as the Directors of Architectural Services become familiar with the new standard, they will call attention to changed requirements in this publication and in *Details*.

Steve Taylor can be contacted at taylorspecificationservices@gmail.com.



September 3, 1930 – June 30, 2014

Clayton "Jim" Miller, 84, Woodwork Institute Director of Architectural Services from 1982 - 2000

He was born on September 3, 1930 in Los Angeles, California. Son of Clayton and Louisa Miller. Jim grew up in Los Angeles, California. He was a good student and had a great love of baseball. After high school he married Claudette Wheeler on January 27, 1951. He played professional minor league baseball for the Chicago White Sox and was soon drafted into the Korean war. He served for just over one year and then was seriously wounded on the battlefield. He was medically retired from the United States Army and was awarded the Purple Heart medal. Jim then scouted for the Pittsburg Pirates and began a career in the woodworking industry that lasted 48 years. He retired at the age of 70. Jim and his wife, Claudette, moved to San Clemente seven years ago to enjoy time with each other and their family.

He is survived by wife, Claudette of 63-1/2 years, 4 children, Mike (Michele), Linda (Rick Surkin), Laura (Nick Maule) and Tom (Andrea), 14 grandchildren and 11 great-grandchildren, siblings Jean Lillard, Terry Cutter (Phyllis) and Kathy Cutter. He is preceded in death by sister Evelyn Falcon and grandson Ryan Epperson.

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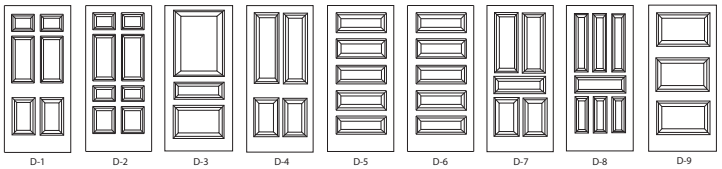
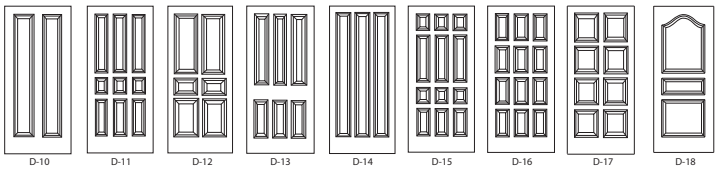
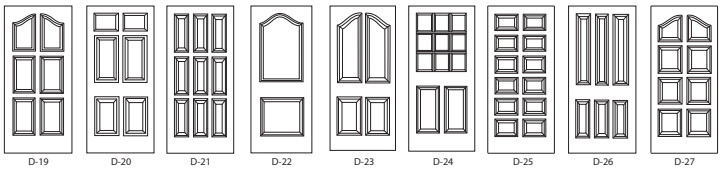
Now available on www.woodworkinstitute.com
AWS CAD drawings in *.dxf format:

- **Door Designs**
- **Molding Designs**

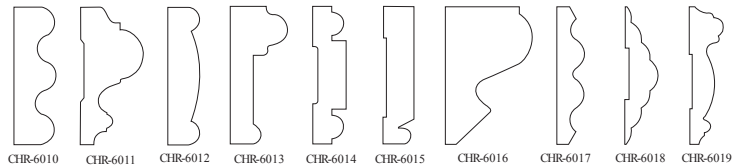
AWS Stile & Rail Door Drawings

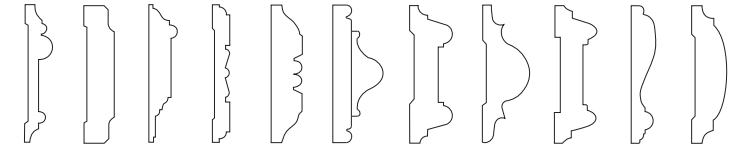




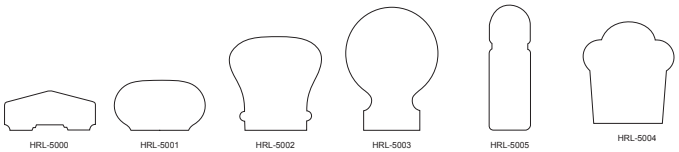


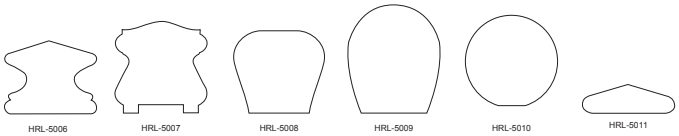
AWS Chair Rail Drawings

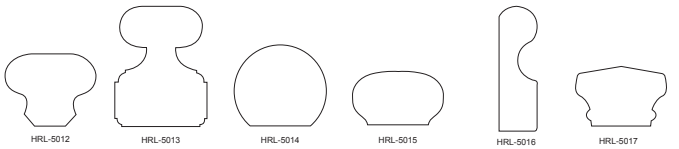




AWS Guard/Handrail Drawings

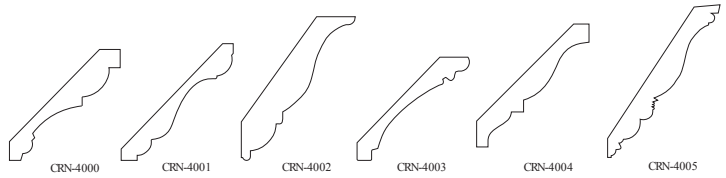


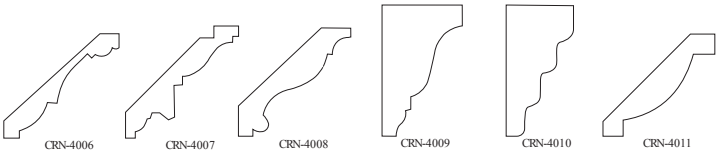


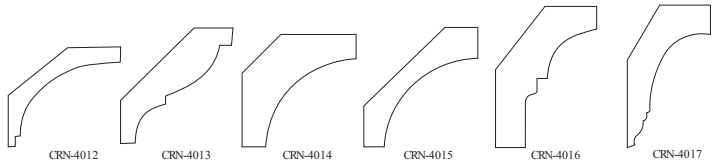


NOTE: Handrails may not be compliant with current building codes. Check with your local AHJ.

AWS Crown Mold Drawings







Examples of some of the Door and Molding drawings (.dxf) above.
For full set of drawings go to www.woodworkinstitute.com.

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Check with your local AHJ.

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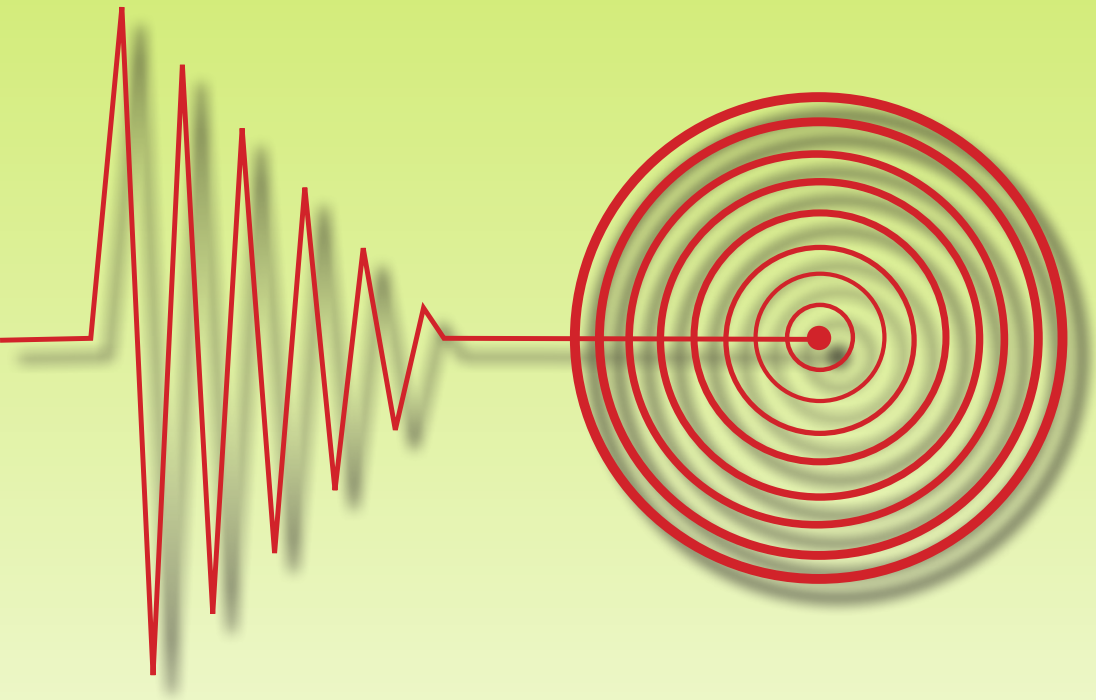
Certified Seismic Installation Program (CSIP)

(OSHPD and DSA Compliant)



May be used on existing projects if acceptable to the Design Professional.
For more information call your WI Director of Architectural Services or our office at (916) 372-9943

Seismic Compliance®
Casework Installation

Certified Seismic

Effective Date: June 1 , 2012

Status:
This program is meant to be either a stand-alone quality control option that can be specified separately or in conjunction with our Certified Compliance or Monitored Compliance programs.

Benefits To:
Design Professionals and Property Owners:

- Specified use of WI's seismic casework pre-approvals from the Office of Statewide Health Planning and Development (OSHPD), without any additional engineering costs and/or requirements Compliant to both OSHPD and DSA requirements
- Assurance that proper backing was installed in the walls for compliant casework installation
- Assurance that casework was installed in accordance with WI's seismic casework pre-approvals within OSHPD and/or Division of State Architect (DSA) compliance requirements
- Certified acknowledgement that the project's seismic casework installation requirements have been met

Installers:

- A consistent cabinet installation methodology
- Ease of specification compliance
- Discounted pricing through WI Member and/or Member Licensee status

Applicability: (OSHPD and DSA Compliant)
Woodwork Institute's (WI) OSHPD's pre-approvals are adequate for casework installation within the State of California at any height within the building where the SDS is not greater than 1.93 and includes:

- Concrete or concrete masonry unit (CMU) wall construction
- Wood or metal stud wall construction with either continuous 3 x 6 or 16GA in wall blocking respectively
- Casework construction of plywood, particleboard, MDF, or Solid Phenolic Core (SPC) in compliance with the minimum requirements of the Architectural Woodwork Standards (AWS), including:
  - Base cabinets, up to 36″ tall x 24″ body depth x 48″ wide, including peninsula and those with mechanical chase
  - Wall cabinets up to 48″ tall x 18″ body depth x 48″ wide
  - Tall storage cabinets up to 96″ tall x 24″ body depth x 48″ wide
  - Peninsula base cabinets up to 36″ tall x 36″ body depth x 48″ wide
  - Mechanical chase base cabinets up to 42″ tall x 36″ body depth and 48″ wide

DSA Compliance – In accordance with the California Department of General Services (DGS), Division of State Architecture (DSA), Interpretation of Regulation Manual (IR), Section A-5, entitled Acceptance of Products, Materials, and Evaluation Reports (rev 10/05/12, 2007, 2010 CBC) – WI's Office of Statewide Health Planning and Development (OSHPD), OSHPD Pre-approval of Anchorages (OPA), OPA-2649-10 meets the eligibility criteria when used in accordance with IR A-4 (Geologic Hazard Report Requirements, rev 10/11/11, 2007, 2010 CBC).

Copies of DSA's IR A-4 and A-5 may be found at:
www.dgs.ca.gov/dsa/Resources/IRManual.aspx

Cost (Effective January 1, 2014)*:

- Fees are subject to change and are required to be paid in full at time of request, prior to service.
- If not in addition to a projects CCP or MCP certification requirement, Shop Drawing certification is required as part of the basic fee and will be equivalent to a CCP review, plus the additional review requirements of the seismic installation program.
- Any additional fees are required to be paid in full before release of certificate/inspection report.

* For more details about the different fee schedules, please refer to our Cost Sheets that are available on our web site at: **www.woodworkinstitute.com/woodworker/Cost_sheets.asp**

WOODWORK INSTITUTE'S SERVICE AREAS
California, Nevada, and Arizona

The Base Fee includes:

- Review of the shop drawings and installation.
- Up to 3 hours of DAS on site inspection time. Any additional DAS (inspector) time incurred for additional inspection time beyond the basic program allowances or failed inspections is **billed at an hourly rate of $200 in quarter hour increments**.

FEES	Without CCP or MCP	With CCP or MCP
Non-Member	$2,000	$1,700
Member	$1,800	$1,530
Non-Member Licensee	$1,700	$1,445
Member Licensee	$1,500	$1,275

Outside of WI's Service Areas

The Base Fee includes:

- Review of the shop drawings and installation.
- Up to 8 hours of DAS travel/standby time and up to 3 hours of on site review/inspection time. Any additional DAS (inspector) time incurred for additional inspection time beyond the basic program allowances or failed inspections is **billed at an hourly rate of $200 in quarter hour increments**.

Non-Member	$3,000	$2,700
Member	$2,700	$2,430
Non-Member Licensee	$2,550	$2,295
Member Licensee	$2,250	$2,025

Installation Program (CSIP)

Specification Requirement:
Should a Design Professional wish to take advantage of the Woodwork Institute's Certified Seismic Installation Program (CSIP), project specifications shall require conformance to the Architectural Woodwork Standards (AWS) and contain the following wording:

- All wood or metal frame wall construction shall be constructed with continuous in wall blocking of either 3x6 flat Douglas Fir or 16GA x 6″ wide, 50 KSI sheet metal provided in accordance with the location requirements included on the cabinet fabricator/installer's shop drawings. Responsibility for blocking installation shall be that
of the wall fabricator.
- All casework installation shall be certified by the Woodwork Institute in accordance with their Certified Seismic Installation Program (CSIP) and their OSHPD Pre-approvals, including:
    - A CSIP Certificate indicating that all of the casework installation fully meets the requirements of the AWS, CSIP, and WI's OSHPD Pre-approvals.
- It is the responsibility of the installer to include within their bid, any and all costs for WI's CSIP certification. Certification is a prerequisite for final acceptance. For further information, please visit www.woodworkinstitute.com.

Casework Installer Requirements:
The party responsible for installation of casework for any project requiring CSIP certification shall:

- Contact the Woodwork Institute and coordinate CSIP certification with them prior to submittal of shop drawings.
- Ensure that the casework shop drawings:
    - Are in compliance with the AWS's minimum requirements as established in Section 1
    - Include, in accordance with the minimum requirements WI's OSHPD Pre-approvals:
        - Casework Elevations showing the center line height and horizontal locations of all required, continuous, internal wall blocking furnished by others,
        - A casework fastener schedule, clearly showing the type, size, location and maximum spacing.
- At wood or metal stud walls, prior to application of wall surfacing, Casework Installer shall examine, approve and acknowledge blocking compliance to WI's OSHPD Pre-approval requirements, while providing documentation of such through:
    - An inspection report showing rooms/walls inspected type of blocking (wood or metal), confirmation of compliance or statement of non-compliance, inspectors name, date, and signature, with:
        - Photo documentation (referenced by room/wall) of at least 25% of the walls inspected, and inspection report shall identify which walls include photo documentation.
- Contact WI and arrange for final inspection of the casework installation by a WI Director of Architectural Services (DAS), and:
    - If Installation is found compliant, the DAS will authorize issuance of the CSIP Certificate.

Although it is not required, WI recommends, that those fabricators with the appropriate equipment pre-bore their cabinet backs with the proper number, spacing and location of the installation fastener locations in accordance with WI's OSHPD Pre-approvals to avoid field error.

WI License Requirements:
In order to qualify for the WI Licensee fee discount for CSIP certification, WI Licensee shall hold a WI SB-E Type License, which:

- Will be grandfathered to all existing WI Licensees with a Type B-E License, provided they complete the required examination and execute the additional SB-E Licensee Agreement.
- Will be offered to existing WI Licensee firms without a WI-Type B-E License and new WI Licensee applicants under normal application protocols.

CSIP is not applicable to the Institute's WI Licensee Sub-Sub discount.

For more information call your WI Director of Architectural Services or our office at (916) 372-9943.

DISCLAIMER: The Woodwork Institute is an independent inspection service that determines whether work conforms to specific standards or requirements. The Institute does not certify or guarantee the safety or performance of any manufactured products, components, or installation thereof, or any standard or process related thereto, regardless of whether they comply with the *Architectural Woodwork Standards*, the Certified Seismic Installation Program approved OSHPD (OPA-2649-10) drawings and/or contract documents under said Standard/Program. Additionally, the Institute does not guarantee or certify the services, fitness for purpose, advice, materials or products provided by any third party, including contractors, architects, designers and engineers.

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