



Site Conditions: Preparations for Installing Architectural Woodwork/Casework

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The installation of custom architectural woodwork/casework generally includes labor, tools, equipment, adhesives/fasteners, common blocking, furring and hanging devices for the support or attachment of the woodwork/casework. Large, detailed tables and in-depth information on proper installation methods are explained in the current Architectural Woodwork Institute (AWI) *Architectural Woodwork Standards (AWS)*.

INSTALLER RESPONSIBILITIES

When compliance with AWI's *AWS* current edition is specified in the contract documents, the installation contractor is responsible for – but not limited to:

- Receiving and distributing woodwork/casework to the proper location;
- Installation of finish hardware not furnished by the manufacturer;
- Installation of adjustable shelves, standards and brackets on building walls, and shelf clips or pins in cabinets, cabinet standards and/or in-line boring done by manufacturer;
- Filling of nail holes and touch up on all pre-finished woodwork/casework after installation to achieve best color blend.

There are also a variety of things which are specifically excluded from the scope of the installation contractor's work by the AWI. These, of course, can be specified in the contract documents, and then would be included. Unless required by the specifications, the installer shall not be responsible to:

- Provide structural grounds or blocking inside partitions or above finished ceiling or below finished floor;
- Supply exposed materials other than wood, solid surfacing or plastic laminate;
- Apply factory or site-applied finish to unfinished or primed woodwork/casework;
- Fill nail or screw holes in unfinished or primed woodwork/casework;
- Caulk to fill between woodwork/casework and any wall, floor and/or ceiling imperfections;
- Prepare wall, floor or ceiling to accept the woodwork/casework;
- Install electrical, telephone, plumbing, computer or mechanical equipment to include grommets and wire management;
- Supply electrical power, water, hoisting, sanitary or waste disposal services;
- Supply fastening devices unrelated to the architectural woodwork/casework being installed;
- Provide "buildups" to level floor or walls in excess of 12.5 mm [1/2"] at any one point; or
- Seal edges, tops and/or bottoms of wood doors.

GENERAL CONTRACTOR RESPONSIBILITIES

It is the responsibility of the general contractor to ensure the establishment and maintenance of proper site conditions. These conditions are required if the installed work is to meet the AWI *Architectural Woodwork Standards (AWS)*.

Architectural woodwork/casework is a "finish trade," and should be installed after ceilings, plumbing, flooring, etc. The fabricator of the work shall not be held responsible for any damage that might develop by not adhering to the following procedures.

Walls, ceilings, floors and openings must be level, plumb, straight, in-line and/or square. We've all seen examples of a project on which the concrete floors are poured wildly out of level, and the woodwork/casework installation is required to be level and scribed to the floor. The result can be paneling with a baseboard which runs from 3 inches to 1/2 inch on a 60 foot wall. See current AWI *AWS* for more details.



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As indicated throughout the AWS, "Architectural woodwork/casework shall not be subjected to extremes of temperature and humidity. The relative humidity during the time of installation should remain within the range to be maintained during occupancy."

Areas to receive architectural woodwork/casework must be fully enclosed with windows installed and glazed, exterior doors in place, HVAC systems operational and temporary openings closed. All plaster, drywall, wet grinding and concrete work shall be fully dry.

Of all the installation guidelines, these are the most often violated. In the rush to get the job done, contractors often fail to coordinate the delivery and installation of fine woodwork/casework with conditions which will serve to protect the client's investment.

A secure storage area must be provided within the building that is flat and level, clean, dry, well ventilated and protected from direct sunlight, with HVAC system in stable control of humidity and temperature.

For most areas of the country, the ambient relative humidity at the site, including both the storage and the installation areas, should be maintained between 25% and 55% prior to delivery and through the life of the installation.

In any event, the range of relative humidity change should not exceed 30 percentage points. Relative humidity below 20% and above 80% is particularly harmful to wood and wood products, not to mention fabrics, ceiling materials and floor and wall coverings.

All preparatory work done by others shall be subject to inspection by the architectural woodwork/casework installer, and may be accepted or rejected prior to installation.

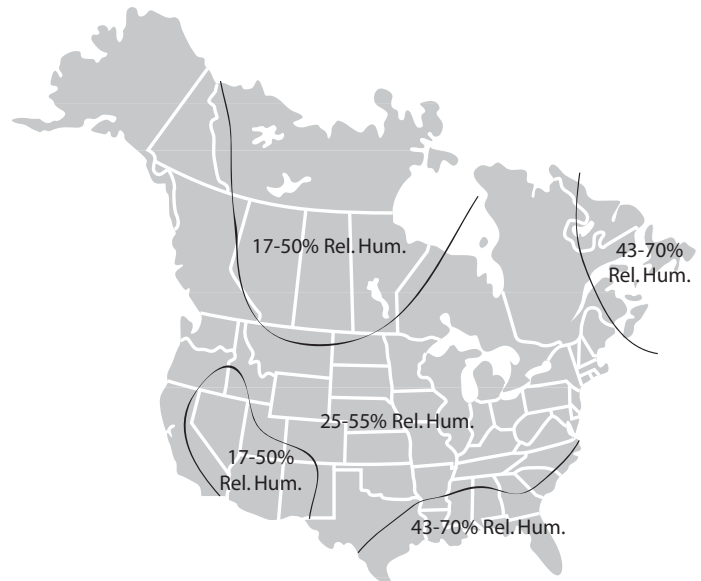
Rough openings which are installed by the general contractor shall be built square, in plane and to the proper dimensions.

Architectural woodwork/casework should be allowed to come to equilibrium on site prior to installation. A minimum of 72 hours shall be allowed for best results. Factory finished woodwork/casework may require a week or more to acclimate.

INSTALLATION STANDARDS

As shown in the AWS, the installation team has significant responsibilities, too. In the absence of details or specifications to the contrary, the AWI Installation Standards apply when referenced in the contract documents.

When required, the installer shall submit evidence of having adequate equipment, including all required safety Personal Protective Equipment (PPE) and experienced workers to complete the installation.





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The installation team must have access to the job site to inspect all preparatory work done by others, and shall accept or reject conditions prior to installation. This provision is not designed to DELAY the work, but helps move the installation along by assuring proper conditions for success.

The installer must also be responsible to receive and distribute woodwork/casework to its proper locations.

Remember, the architectural woodwork/casework should be acclimated to these conditions for a minimum of 72 hours prior to installation. This will usually allow the wood products to come to equilibrium with the environment. **The install contractor should monitor actual relative humidity and temperature prior to and during ongoing installation activities daily.**

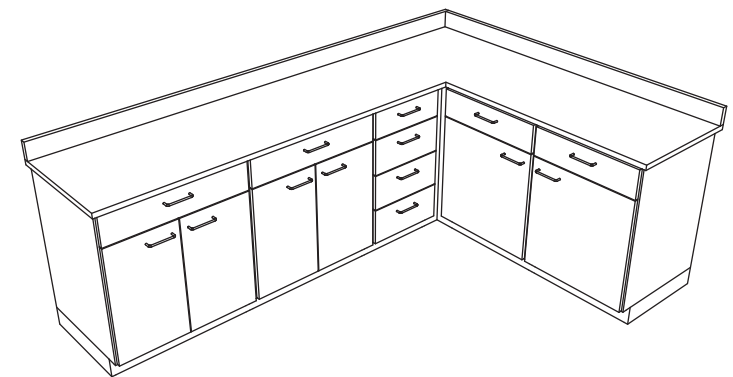
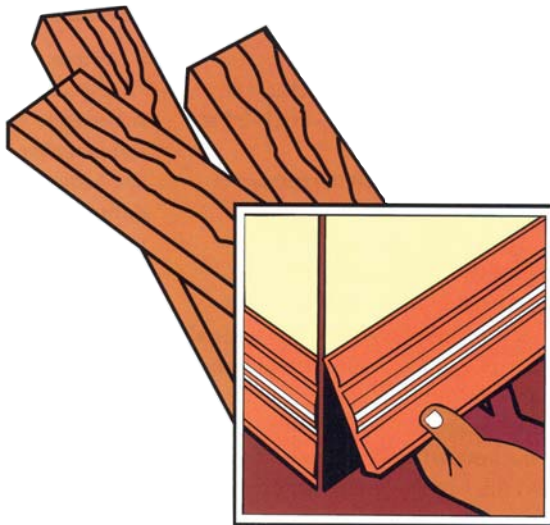
During the site inspection and preparation to receive and distribute the woodwork/casework, a review of the manufacturer's shop drawings is required. The shop drawings and the physical materials must be coordinated with the architectural drawings, the specifications and the job site conditions.

A few minutes invested at this point in the installation pays big dividends.

The installation of standing and running trim is often the first, and sometimes the ONLY, woodwork/casework put down on the site.

Prior to cutting standing and running trim, the AWS requires the installers to inspect all material for its compliance with the specified Standards for grain and color. Consultation with site design representative is highly recommended. Then they must cut and fit the trim so the natural characteristics of the wood shall not exceed those allowed for the Grade of Work specified.

Unless it was in the fabricator's contract, the installer is to provide all cutouts through woodwork/casework necessary to accommodate electrical, telephone, mechanical or plumbing equipment. This requires a high level of workmanship under often trying conditions.



All nails on exposed and semi-exposed surfaces must be countersunk.

Care must be taken to comply with AWI grade specified and avoid open joints, visible machine marks, tears, nicks, chips, scratches and/or sanding cross-scratches greater than tolerances allowed by the current Standards. And, of course, woodwork/casework must be installed level and plumb within specified tolerances.

On all Factory Finished woodwork/casework installations, installers must do all filling of nail holes and touch-up on pre-finished woodwork/casework with blending filler, usually a wax stick. It is important that the installer, which is the woodworking firm in many cases, be aware of setting and



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filling those fasteners. A lot of time can be burned up on the type of labor and requires experienced woodworkers.

Job-finished woodwork/casework is to be filled by the paint finisher.

The installation is not complete until all adhesives are removed from exposed and semi-exposed surfaces.

Due to deviations in existing buildings and lack of clear performance standards for framing and drywall, even in new work, gaps between standing and running trim at building walls and ceilings shall not be the responsibility of the woodwork/casework installer. Please refer to current *AWS* for more details.

POINTS OF SPECIAL CONCERN

At AWI, technical assistance is asked for most often on cracked and warped woodwork/casework than on any other subject. Delivering woodwork/casework to a job site before the site is "dried in" and humidity controlled can cause the wood to lose moisture, or more probably, take on additional moisture and move disproportionately to each other. Other hygroscopic wood-based materials – which take in and give up moisture from the interior air prior to installation and throughout the project life cycle – will also be negatively impacted.

Installing woodwork/casework the same day it is delivered, even in a controlled environment, can cause problems as well. In either case, the woodwork/casework has not come to equilibrium with the environment in which it's destined to live before it is fastened in place.

Bad storage conditions at the site have a similar effect. The most common result of bad storage is warped doors, usually because they've been unprotected on very new concrete or a storage area with temperatures out of control.

Finally, woodwork/casework that's installed too soon will usually suffer from swelling or shrinking. Most often the general contractor forces the delivery and installation of fine woodwork/casework before the building is ready.

We all understand the many hours of labor required to bring the woodwork/casework to the point of installation. In most cases, the woodwork/casework is delivered to the job site in fine condition. Failing to take the time and care needed to do a quality installation degrades the fine woodwork/casework delivered by the manufacturer. Best results are achieved when you don't take shortcuts on installation.

Excerpted from: "Preparations For Installing Architectural Woodwork." *Design Solutions*. Winter, 2006, pp. 44-49.

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TYPICAL STEVENS BASE-WALL SECTION

TYPICAL SECTION DETAILS NOT SPECIFIC TO THIS JOB.
REFER TO JOB DRAWING FOR ALL FINAL DETAILS.

