This guide specification is intended to be used with the *North American Architectural Woodwork Standards* (NAAWS), published by Woodwork Institute and the Architectural Woodwork Manufacturers Association of Canada.

This is a narrow scope specification covering architectural wood doors.

In this guide spec choices are in **[bold text, in brackets.]** Comments are in grey text boxes. In some cases, we may not have been able to list all choices. It is strongly recommended that you read the Wood Doors section of the NAAWS before using this specification. Many of the requirements you would otherwise specify are governed by your choice of Custom or Premium Grade. You can download the NAAWS at no cost from <https://naaws.com/get-naaws-4-0/>

This section incorporates the Woodwork Institute quality assurance programs (listed in blue). Users are asked to choose between the Certified Compliance and Monitored Compliance programs. The Certified Compliance program allows Woodwork Institute Accredited Millwork Companies (AMC) to inspect and certify its own work. (Woodwork Institute inspectors will re-inspect an AMCs work only if requested). It is, however, open to all bidders regardless of Woodwork Institute affiliation. The Monitored Compliance Program requires all work to be inspected at various stages of fabrication and installation by Woodwork Institute inspectors, (no AMC self-certification is allowed) with inspection reports issued to all parties after each inspection. Costs for these programs are borne by the millwork subcontractor. Visit [www.woodworkinstitute.com](http://www.woodworkinstitute.com) for details.

We have not included language for sustainable building programs such as LEED. While careful material selections may contribute to several LEED credits, we are not qualified to provide the specification language. Please consult a qualified authority if green certification is a goal.

1. GENERAL
	1. SUMMARY
		1. Section Includes

Select the applicable items from the list below.

* + - 1. **[Flush Wood Doors [and Transom Panels]]**
			2. **[Stile and Rail Wood Doors]**
			3. **[Fire Rated Wood Doors]**
			4. **[Wood Doors with HPDL faces]**
			5. **[Sound Rated Wood Doors including gaskets and automatic door bottoms.]**
			6. **[X-ray resistant Wood Doors]**
			7. **[Bullet resistant Wood Doors]**
			8. **[Wood Louvers, Glass Stops, and Astragals]**
			9. **[Glazing]**

Factory finishing is strongly recommended. It is extremely difficult to get a quality finish under job site conditions.

If glazing is included here, delete it below. If it is not included here, show it under “Excluding”.

* + - 1. **[Factory finishing]**
		1. Excluding
			1. Cabinet doors.
			2. Metal or Vinyl doors with wood cores.
			3. Garage, Metal, and Fiberglass doors.
			4. Metal grills or Louvers
			5. **[Glazing]**
		2. Related Sections
			1. Rough Carpentry: Wood blocking or grounds inside finished walls or above finished ceilings.
			2. Door Hardware
			3. Door Frames
	1. REFERENCES
		1. *North American Architectural Woodwork Standards (NAAWS),* latest edition, published jointly by the Woodwork Institute and the Architectural Woodwork Manufacturer’s Association of Canada.

Other standards you would reference are themselves referenced within the *NAAWS*

* 1. SUBMITTALS
		1. Shop Drawings
			1. Submit shop drawings in conformance with the requirements of the *North America Architectural Woodwork Standards*
				1. **[Furnish a Woodwork Institute Certified Compliance Shop Drawing Label on the first page of the shop drawings.]**

Use this item if the Woodwork Institute Certified Compliance or the Woodwork Institute Monitored Compliance program is to be used.

* + - 1. Submit two copies, one of which will be returned with reviewed notations. Make corrections noted (if any) and distribute required copies prior to the start of work.
		1. Samples
			1. Submit four **[finished]** samples of each species and cut of wood to be used. Lumber samples to be a minimum of 6 inches by 12 inches, veneer samples to be minimum 12 inches by 12 inches. Samples shall represent the range of color and grain expected to be provided.
			2. **[Submit four additional samples of each material for the use of the paint trade.]**
	1. QUALITY ASSURANCE
		1. Work shall be in accordance with Grade or Grades Specified of the *North American Architectural Woodwork Standards*.
		2. **[Certified Compliance**

Woodwork Institute Certified Compliance provides a pre-qualification for the sub-contractor. Bidders will either be Woodwork Institute Affiliates, or they will understand that their work will be inspected by a Woodwork Institute staff member. Architects, owners and inspectors may request an inspection of Certified Compliance work at any point in the construction process.

* + - 1. **Before delivery to the jobsite the woodwork supplier shall provide a Woodwork Institute Certified Compliance Certificate indicating the millwork products being supplied and certifying that these products fully meet the requirements of the Grade or Grades specified.**
			2. **At completion of installation the woodwork installer shall provide a Woodwork Institute Certified Compliance Certificate indicating the products installed and certifying that the installation of these products fully meets the requirements of the Grade or Grades specified.**
			3. **All fees charged by the Woodwork Institute for their Certified Compliance program are the responsibility of the millwork manufacturer and/or installer and shall be included in their bid.]**
		1. **[Monitored Compliance**

Monitored Compliance requires that work be inspected by Woodwork Institute staff. Inspections are performed of the shop drawings, at the beginning of fabrication, at the beginning of installation, and at completion. Select either Certified Compliance or Monitored Compliance.

* + - 1. **All millwork and the installation thereof for this project shall be monitored for compliance to the contract documents by a Woodwork Institute Architectural Services Representative.**
				1. **Details of the Woodwork Institute Monitored Compliance Program may be found at the Institute website at** [**www.woodworkinstitute.com**](http://www.woodworkinstitute.com) **or by calling the administrative office at 916-372-9943.**
			2. **Millwork and/or installation found to be noncompliant (and not corrected) will be rejected.**
			3. **Issuance of a Monitored Compliance Certificate is a prerequisite of acceptance.**
			4. **All fees charged by the Woodwork Institute for their Monitored Compliance program are the responsibility of the millwork manufacturer and/or installer and shall be included in their bid.]**
		1. Qualification
			1. Firm (woodwork manufacturer) with not less than 5 years of production experience similar to this Project, whose qualifications indicate the ability to comply with the requirements of this Section.
			2. The woodwork manufacturer must have at least one project in the past 5 years where the value of the woodwork was within 20 percent of the cost of woodwork for this Project.
		2. Single Source Responsibility: A single manufacturer shall provide and install the work of this section.
	1. DELIVERY STORAGE AND HANDLING
		1. Deliver materials only when the project is ready for installation and the general contractor has provided a clean storage area.
			1. Delivery of architectural millwork shall be made only when the area of operation is enclosed, all plaster and concrete work is dry and the area broom clean.
			2. Maintain indoor temperature and humidity within the range to be expected after occupancy.
	2. SCHEDULING
		1. Coordinate fabrication, delivery, and installation with the general contractor and other applicable trades.
1. PRODUCTS
	1. COMPONENTS

Select below the types of doors that are required.

* + 1. Flush Wood Doors
			1. **[Doors shall meet the requirements of ANSI/WDMA Extra Heavy Duty performance level.]**
			2. Faces of wood veneered doors intended for transparent finish shall be **[species], [cut]**, with **[book] [slip]** veneer match.

The species is the species of tree, such as red oak, walnut, or cherry. If the species is maple, birch, or ash, you may want to specify all sapwood or all heartwood, as there is a big difference in color between the two. White birch, white maple, and white ash indicate all heartwood; red birch and brown maple indicate all heartwood. All heart maple is generally not used.

Veneer may be plain sliced, quarter sliced, rift or rotary cut. The match is the system of matching veneer leaves on the panel. Book matched is the most common system; slip match is also frequently used. Rotary cut veneers may be wide enough to make single leaf faces.

* + - 1. Faces at Plastic Laminate faced doors shall be **[manufacturer], [pattern].**
			2. Faces at doors for opaque finish shall be **[closed grain hardwood –OR- MDO –OR- MDF]**
			3. Core shall be **[hollow grid] [particle board] [staved lumber] [structural composite lumber] [per door schedule].**

Particleboard or SCL are recommended as core materials.

* + 1. Stile and Rail Doors
			1. **[Doors shall meet the requirements of ANSI/WDMA Extra Heavy Duty performance standard.]**

The NAAWS requires ANSI/WDMA Heavy Duty performance level for all doors. Require Extra Heavy Duty for doors that will see frequent and heavy use such as classrooms, patient rooms, and public restrooms.

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* + - 1. Lumber shall be **[species, cut] [closed grain hardwood].**

Select closed grain hardwood if doors receive an opaque finish.

* + - 1. Core material for panels shall be **[MDF] [water resistant MDF] [SCL] [exterior grade hardwood plywood]**

Custom grade allows solid lumber panels. Include this item if Premium Grade is specified and you prefer one core material over another.

* + - 1. Core material for stiles and rails shall be **[MDF] [SCL] [stave core]**
			2. Type I adhesives shall be used at exterior doors
			3. **[Lights shall be [tempered] [laminated] safety glass.**
				1. **Lights at exterior doors shall be [\_\_\_\_\_\_\_\_]]**

Include these items if glazing is included in this section. At exterior doors insert your preferred insulated or low E glazing.

* 1. FABRICATIOn
		1. Slab doors shall be *North America Architectural Woodwork Standards* **[Custom] [Premium]** Grade.

Particleboard or SCL are recommended as core materials.

Premium Grade is the higher standard aesthetically. There are no structural differences between the grades for slab doors. There are some small differences in construction for stile and rail doors.

* + - 1. Doors shall be **[3] [5] [7]** ply construction

Three ply construction is only used for laminate faced doors and MDF faced doors.

* + - 1. Exterior doors shall be assembled with Type 1 glue.
			2. Size of doors; type, size, and location of lights and louvers; astragals, edging, flashing and specialty hardware; X-ray and sound requirements; and transom panels shall be as indicated on the door schedule.
			3. Fire-rated doors shall be of the construction standard of the manufacturer and conform with the requirements of all applicable labeling agencies.
			4. Provide blocking as required for surface mounted hardware to prevent the need for through bolting.
			5. **[Blueprint Match: Work at room(s) [\_\_\_\_\_\_\_\_\_\_] shall be blueprint matched.**

Specify a blueprint match if there is an area where casework doors and panels should all be sequence matched. Similar language must be inserted in the sections specifying wood paneling, wood trim, and casework.

* + - * 1. **All work in this/these area(s) shall be Woodwork Institute Premium Grade.**
				2. **Casework, paneling, doors and wood trim shall be provided by the same manufacturer.**
				3. **Veneers shall be taken from the same flitch, to be selected by the architect.**
				4. **Faces of cabinet doors, drawer fronts and false fronts shall be sequence matched, shall run and match vertically, and shall be sequence matched with adjacent wall paneling and/or doors.**
				5. **Faces at exposed ends of cabinets shall be selected from the same flitch and shall be well matched to the adjacent paneling and to the cabinet fronts.**
				6. **All components including Casework, Paneling, Doors and Trim shall be factory finished at the same time in the same facility.]**
		1. Stile and Rail Doors shall be *North America Architectural Woodwork Standards* **[Custom] [Premium]** Grade.
			1. Panels
				1. Shall be **[1/2] [3/4] [1 3/8] [1 ¾]** inches thick.

Use ½” or ¾” panels for flat panel construction. Use thicker panels for raised panels.

* + - * 1. **[Veneered panels shall be [book] [slip] matched.]**

Use this item if Premium Grade is specified.

* + - 1. Sticking and panel edge details shall be **[per plans] [per manufacturer’s standard details as selected by architect.]**
		1. **[Factory Finishing**

As noted above, Factory Finishing is strongly recommended. In addition to getting a better finish, you are moving the air quality problems off site, where a proper spray booth will protect the environment and the health of the finishers. It is still worthwhile to select a low VOC finishing system, as some touch-up will be required at the job site.

* + - 1. **All products provided in this section shall be factory finished using *North America Architectural Woodwork Standards* finish system [\_\_\_\_\_].**
			2. **Finish shall be Woodwork Institute [Premium –OR- Custom] Grade.]**
1. EXECUTION
	1. EXAMINATION
		1. Verify that frames are set square, plumb and level, and in plane.
			1. Report openings that are not within tolerance to the General Contractor for correction before hanging doors.
	2. INSTALLATION
		1. Install all work in conformance with the *North American Architectural Woodwork Standards*, latest edition.
			1. Installation shall conform to the *NAAWS* Grade of the items being installed.
		2. Doors shall be secured in place square, plumb, and level.
		3. Hardware shall be installed complete and as recommended by the manufacturer
	3. ADJUSTING & TOUCH UP
		1. Before completion of the installation the installer shall adjust all moving and operating parts to function smoothly and correctly
		2. All nicks, chips and scratches in the finish shall be filled and retouched. Damaged items which cannot be repaired shall be replaced.
	4. CLEANUP
		1. Upon completion of installation the installer shall clean all installed items of pencil and ink marks, and broom clean his area of operation, depositing debris in containers provided by the general contractor.

END OF SECTION