CSC Section 06 41 00

**Architectural Wood Casework**

This guide specification is intended to be used with the Architectural Woodwork Manufacturer’s Association of Canada quality standards manual (current edition at date of tender) - hereinafter referenced as "AWMAC’s STANDARDS (NAAWS)".

Required selections are in brackets and in **[BOLD]**. Notes and comments are in grey text boxes such as this one.

This section incorporates wording for AWMAC's Guarantee and Inspection Service (GIS). In order to ensure that the quality of materials and workmanship of the architectural woodwork specified are in compliance with AWMAC's STANDARDS the AWMAC Guarantee and Inspection Service program (GIS) must be specified and be considered an integral component of the scope of work. Costs for this program are to be borne by the millwork sub-contractor. Go to <http://awmac.com/gis> for details.

This guide specification covers the materials and methods you would want to specify Architectural Wood Casework. It is strongly recommended that you read the appropriate Sections of AWMAC's STANDARDS before using this guide spec. Many of the items you would ordinarily specify are governed by your choice of Grade.

# GENERAL

## SUMMARY

### Section Includes:

#### **[Wood Casework] [Plastic Laminate Casework] [Solid Phenolic Casework]**.

#### **[Wood] [Plastic Laminate] [Solid Surface] [Solid Phenolic] [Epoxy] [Natural/Engineered Stone]** countertops.

#### Hardware typically furnished by casework manufacturer.

#### Shelving.

#### **[Decorative metalwork incorporated into wood casework]**

#### Structural supports incorporated into wood casework.

#### **[Factory finishing]**

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

### Excluding:

#### Metal support brackets and fittings part of building structure.

#### Plumbing, electrical fixtures, and telephone equipment.

### Related Sections:

Include the items below that apply.

#### Rough Carpentry: Wood blocking or grounds inside finished walls or above finished ceilings.

#### Metal Framing: Metal backing inside finished walls or above finished ceilings.

#### Plumbing: Fixtures and fittings installed in countertops.

#### Wood Doors.

#### Finish Carpentry: Standing and running trim and wall paneling.

## REFERENCES

### Work in conformance with the Architectural Woodwork Manufacturer’s Association of Canada quality standards manual (current edition at date of tender).

All of the other standards you would reference are within the AWMAC’s STANDARDS (NAAWS).

#### If there is conflict between plans and/or specifications and AWMAC’s STANDARDS (NAAWS), plans and specifications shall govern.

## SUBMITTALS

### Product Data: Manufacturer’s specifications, data, and installation instructions for each manufactured product specified.

### Shop Drawings:

#### Submit shop drawings conforming to AWMAC’s STANDARDS (NAAWS).

#### Submit two copies, one of which will be returned with reviewed notations. Make corrections noted (if any), and distribute required copies prior to start of work

#### On casework and countertop elevations show location of backing required for attachment within walls.

### Samples:

#### Submit three sample sets of **[finished]** samples of each species and cut of wood to be used. Veneer samples minimum 304 mm x 304 mm. Each sample set of three to represent range of color and grain expected.

#### **[Submit three additional samples of each material for use of paint trade.]**

Samples may not be necessary for painted or HPDL covered doors.

### **[Mockups]:**

Mockups shouldn’t be necessary for most projects. Include this item if full sized samples are desired.

#### **Provide mockups of one base cabinet, one wall hung cabinet, and one countertop. Base cabinet to have minimum one drawer. Mockup of material and finish to be provided. Approved mockup may be incorporated in the project.**

## QUALITY ASSURANCE

### Work in accordance with Grade or Grades specified in AWMAC’s STANDARDS (NAAWS).

### **[Guarantee and Inspection Service:]**

#### Architectural woodwork shall be manufactured **[and/or]** installed to the current AWMAC’s STANDARDS (NAAWS) and shall be subject to an inspection at the factory and/or site by an appointed AWMAC Certified Inspector. Inspection costs shall be included in the tender price for this project. (Contact your local AWMAC Chapter for details of inspection costs). Shop drawings submitted to the AWMAC Chapter office for review before work commences. Work that does not meet the AWMAC’s STANDARDS (NAAWS), as specified, shall be replaced, reworked and/or refinished by the architectural woodwork contractor, to the approval of AWMAC, at no additional cost to the Owner.

#### If the woodwork contractor is an AWMAC manufacturer member in good standing, a two (2) year AWMAC Guarantee Certificate will be issued. The AWMAC Guarantee shall cover replacing, reworking and/or refinishing deficient architectural woodwork due to faulty workmanship or defective materials supplied **[and/or]** installed by the woodwork contractor, which may appear during two (2) year period following the date of issuance.

#### If the woodwork contractor is not an AWMAC Manufacturer member they shall provide the owner with a two (2) year maintenance bond, in lieu of the AWMAC Guarantee Certificate, to the full value of architectural woodwork contract.

For more information about AWMAC and the GIS Program visit our website at [www.awmac.com](http://www.awmac.com) and contact your local AWMAC Chapter office.

### Woodwork Manufacturer Qualifications:

#### Member in Good Standing of AWMAC.

#### Minimum 5 years of production experience similar to this project, whose qualifications indicate ability to comply with requirements of this Section.

#### Minimum one project in past 5 years where value of woodwork within 20 percent of cost of woodwork for this Project.

## PRE-INSTALLATION MEETING

### Before framing completed hold a meeting with the contractor, casework manufacturer, casework installer, and framing sub-contractor.

#### Review locations of backing required for casework installation as shown on casework shop drawings.

#### Review method of attachment for backing to wall system as shown on architectural drawings.

## DELIVERY STORAGE AND HANDLING

### Deliver materials only when project ready for installation and clean storage area provided.

#### Delivery of architectural millwork made only when area of operation enclosed, plaster and concrete work dry and area broom clean.

#### Maintain indoor temperature and humidity within range recommended by AWMAC’s STANDARDS (NAAWS) for location of project.

## SCHEDULING

### Coordinate fabrication, delivery, and installation with contractor and other applicable trades.

# PRODUCTS

## COMPONENTS

### Lumber: In accordance with AWMAC’s STANDARDS (NAAWS) Grade specified for product being fabricated.

### Veneers: As required by AWMAC’s STANDARDS (NAAWS) for its use and Grade specified.

### Core:

#### **[MDF] [Particleboard]** meeting requirements of AWMAC’s STANDARDS (NAAWS).

#### Veneer core plywood: hardwood with a non telegraphing grain manufactured with exterior glue meeting requirements of AWMAC’s STANDARDS (NAAWS).

### Veneer core plywood: hardwood with a non telegraphing grain manufactured with exterior glue.

### Plastic Laminate:

#### Of NEMA LD-3 Grade required by AWMAC’s STANDARDS (NAAWS) for its use.

#### **[Cabinet Liner: type CLS.]**

Include this item if you intend to use cabinet liner for semi-exposed surfaces.

### Edgeband

#### For wood veneer casework: Veneer of same species and cut as exposed surfaces.

#### For Plastic Laminate Casework: **[PVC] [ABS] [High Pressure Decorative Laminate (HPDL)]**.

PVC and ABS edgeband are available to match most laminate patterns. PVC is more durable than laminate and it is less subject to failure. PVC is available in 3mm, 2mm, 1mm and 0.5mm thicknesses. 0.5mm is generally used at case bodies, and 3mm may be used at doors, drawer fronts, and false fronts. ABS is a new product that claims to have the positive qualities of PVC without the environmental down side.

### Adhesives **[Type I] [Type II].**

Type I glue is waterproof, Type II is water resistant. Type II is satisfactory except in a very wet environment.

### Hardware:

#### Unless otherwise specified: Meeting requirements of AWMAC’s STANDARDS (NAAWS) for grade specified

#### Finish:

##### Exposed hardware: **[\_\_\_\_\_\_\_\_]**

##### Semi exposed hardware: Manufacturer’s standard finish.

#### Pulls: **[\_\_\_\_\_\_\_\_\_]**.

#### Drawer Guides: **[¾ extension]** [**full extension] [over extension]** meeting requirements of AWMAC’s STANDARDS (NAAWS) for type and size of drawer.

If you specify brand and model of drawer guides, specify for pencil drawers, box drawers, file drawers, and lateral file drawers, as applicable. Over extension is necessary where file drawer box hanging system do not clear the cabinet face.

##### File drawers require full extension guides.

#### Hinges: **[five knuckle Grade 1 hinges] [concealed European style Grade II hinges minimum [120º] [170˚] opening].**

Select one of the above. AWMAC’s STANDARDS (NAAWS) requires Grade 1 hinges for schools, hospitals, public safety facilities, and other high usage applications.

#### Door Catches: **[\_\_\_\_\_\_\_\_\_]**

If self-closing hinges are selected, catches will not be required.

#### Shelf Supports: **[Brand, Catalog #] [Bored hole system] [recessed metal shelf standard and compatible supports]**.

Select one of the above. Bored hole shelf support systems and metal shelf pilasters have both been determined to provide satisfactory support.

#### **[Locks]**

Locks will not be provided unless they are either specified for all locations, or shown on the elevations.

##### **[Provide Locks at all cabinet doors and drawers.][Provide locks as shown on elevations.]**

##### **Door locks: [\_\_\_\_\_\_\_\_\_\_].**

##### **Drawer locks: [\_\_\_\_\_\_\_\_\_\_].**

##### **Glass door locks: [\_\_\_\_\_\_\_\_\_].**

##### **[All locks keyed alike.][Each room keyed alike.][Keyed per schedule.]**

###### **Provide [\_\_\_] keys per lock.**

###### **Provide [\_\_\_] master keys.**

##### **Elbow Catches: [\_\_\_\_\_\_\_\_\_\_\_].]**

Elbow catches will only be necessary on the inactive leaf of locking pairs of doors. If no door locks are required elbow catches won’t be necessary.

#### Sliding glass door hardware: **[\_\_\_\_\_\_\_]**

Sliding glass doors that are more than 1 ½ times as tall as they are wide should be installed using top hung hardware. Tall, thin glass doors on bottom roller systems may tip and bind.

Other hardware items may include wire grommets, keyboard trays, and other specialty items.

## FABRICATION

### General:

#### Materials and methods of construction to meet requirements of AWMAC’s STANDARDS (NAAWS) for grade or grades specified.

##### If there is conflict between plans and/or specifications and AWMAC’s STANDARDS (NAAWS), plans and specifications shall govern.

### Wood Casework

#### Grade: AWMAC’s STANDARDS (NAAWS) **[Economy Grade]** **[Custom Grade] [Premium Grade] [Grades shown on plans] [Per schedule]**.

Select one. AWMAC’s STANDARDS (NAAWS) allows the use of Economy Grade for custodian’s closets and utility rooms regardless of the Grade specified for the project as a whole (unless otherwise specified). This is usually the only application for Economy Grade.

#### Construction Type: AWMAC's STANDARDS construction type **[frameless] [face frame]**.

#### Cabinet and door interface: **[flush overlay] [reveal overlay] [lipped] [flush inset]**.

Select One. Typically lipped and flush inset doors go with face frame construction, while flush doors go with frameless.

#### Exposed Surfaces **[[species], [cut]], [[book][slip] matched] [material suitable for opaque finish]]** meeting requirements of AWMAC’s STANDARDS (NAAWS) for Grade specified.

Specify wood to be used below. The species is the species of tree, such as Oak or Maple. The cut is the angle of the face of the board/veneer to the growth rings. Flat sawn or plain sliced is the most common cut. Quarter sawn or Rift (to limit medullary ray in oak) cut lumber is cut with the face at an angle to the growth rings, giving a vertical grain appearance. Match refers to the way veneer leaves are matched within a panel. Book match is the most common. If Maple, Birch, or Ash are chosen for transparent finish specify either sapwood: Select White, or specify heartwood: Select Red Birch, Select Brown Ash. Maple heartwood is not generally specified.

##### **[Blueprint Match: veneers at room(s) [\_\_\_\_\_\_\_\_\_\_] blueprint matched.**

Blueprint matching is uncommon and is only necessary if there is an area where veneers need to be sequence matched on doors, paneling, and cabinets. Similar language must be inserted in the Sections specifying wood paneling, wood trim, and wood doors.

###### **Work in this/these area(s) AWMAC’s STANDARDS (NAAWS)** **Premium Grade.**

###### **Casework, paneling, doors and wood trim provided by same manufacturer.**

###### **[Veneer cut and figure to match Design Professional’s sample] or [Veneer log and/or flitch specified by Design Professional]**.

Choose either veneer sample or specified log

###### **Faces at cabinet doors, drawer fronts and false fronts sequence matched, run and match vertically, and sequence matched with adjacent wall paneling and/or doors.**

###### **Faces at exposed ends of cabinets selected from same flitch, and well matched to adjacent paneling and to cabinet fronts.**

###### **Components including casework, paneling, doors, and trim factory finished at same time in same facility.]**

#### Exposed interior surfaces: Veneer of same species and cut **[and grade]** as exposed exterior surfaces.

This is AWMAC’s STANDARDS (NAAWS) default for exposed interiors. AWMAC’s STANDARDS (NAAWS) allows exposed interiors to be one HPVA grade lower than exposed exteriors. HPVA grade A is allowed for Premium Grade and HPVA Grade B for Custom. If you want the higher grade than AWMAC’s STANDARDS (NAAWS) default on these surfaces (AA for Premium and A for Custom) include the grade requirement above.

#### Semi-exposed surfaces: **[veneer of same species as exposed faces] [low pressure melamine overlay]**.

AWMAC’s STANDARDS (NAAWS) allows wood of the manufacturer’s choice (Custom) or wood of a compatible species (Premium.) Custom grade also allows LPDL (melamine).

### Plastic Laminate Casework:

#### Grade: AWMAC’s STANDARDS (NAAWS) **[Economy] [Custom] [Premium]** Grade **[as shown on plans] [per schedule]**.

Select one. AWMAC’s STANDARDS (NAAWS) allows the use of Economy Grade for custodian’s closets and utility rooms regardless of the Grade specified for the project as a whole (unless otherwise specified). This is usually the only application for Economy Grade.

#### Construction Type: AWMAC’s STANDARDS (NAAWS) construction type, Frameless.

Face frame construction is not recommended for PLAM casework.

#### Cabinet and door interface: **[flush overlay] [reveal overlay]**.

Reveal overlay allows a bigger gap between doors and drawer fronts on adjacent cabinets.

#### Exposed Surfaces **[Low Pressure Decorative Laminate] (LPDL) or [High Pressure Decorative Laminate] (HPDL), color, finish and pattern direction]** meeting requirements of AWMAC’s STANDARDS (NAAWS) for Grade specified.

AWMAC’s STANDARDS (NAAWS) default for Exposed Exterior is: Economy: LPDL (melamine)

Custom/Premium: HPDL (plastic laminate)

#### Exposed interior surfaces: **[LPDL of a color and pattern compatible with exposed surfaces] [HPDL matching exposed surfaces].**

AWMAC’s STANDARDS (NAAWS) default for exposed interiors is either LPDL (melamine) of a compatible color and pattern or matching laminate for Custom Grade, and matching laminate for Premium Grade. You may wish to delete this item rather than choose. If you choose compatible melamine, be sure that such a pattern is available. Most standard HPDL colors and patterns are available in melamine, but many are special order. If you select matching melamine and it’s not available, you will probably see a request for an up charge for PLAM. If you leave it at the manufacturer’s option whichever they use will be included in the bid.

#### Semi-exposed surfaces: **[LPDL] [cabinet liner] [vertical grade laminate] [vertical grade laminate matching exposed surfaces]**.

LPDL (melamine) is permitted by AWMAC’s STANDARDS (NAAWS) at all grades. The other choices are in order of increased cost. Cabinet liner is generally available in white or almond. It is more expensive than melamine.

#### Edgeband: **[HPDL] [PVC] [ABS]**

##### **[Edgeband at doors, drawer fronts, and false fronts: \_\_\_\_mm thick].**

PVC and ABS edgeband are more durable than HPDL. Because the color penetrates the plastic PVC and ABS don’t show the black edge that HPDL does (although the pattern won’t show on the edge of 3mm banding.) PVC and ABS are also less susceptible to glue failure and chipping. PVC and ABS edgeband come in 3mm, 2mm, 1mm and 0.5mm thicknesses. 0.5mm thick PVC is available in the widest range of colours and patterns as well as being the most readily available. 3mm edgeband on doors and drawer fronts is more durable, but the thicker edge will be more noticeable if the laminate is a wood grain or other pattern rather than a solid color.

##### …

### Drawers:

#### Sides: **[Particle board with melamine surfaces] [Particle board with HPDL surfaces] [MDF with HPDL surfaces] [seven ply hardwood veneer core with no internal voids] [seven ply hardwood veneer core with HPDL surfaces] [solid hardwood lumber].**

The drawer material defaults are: Wood Casework, Custom Grade – LPDL (melamine) or 7-ply hardwood veneer core plywood or solid hardwood, Premium Grade – prefinished Hardwood veneer core plywood or prefinished solid hardwood. PLAM casework, Custom Grade – LPDL (melamine) or HPDL, Premium Grade - 7-ply veneer core with HPDL faces.

#### Bottoms: **[Tempered hardboard] [MDF with melamine surfaces] [Hardwood plywood of same species as drawer sides]**.

Drawer bottoms should match the sides. The hardwood plywood and solid hardwood drawer boxes are superior to particle board or MDF with Melamine. The melamine drawers are, however, serviceable and less expensive.

#### Joinery: Meeting requirements of AWMAC’s STANDARDS (NAAWS) for Grade specified.

Note that specifying joinery may increase cost. Miter fold meets Custom grade requirements. The rest are acceptable for Custom or Premium Grade.

#### Or

##### Sides, front and back: **[Miter fold] [Doweled] [Dowel screwed] [Nailed lock joints] [Biscuit splined] [Multiple dovetailed]**

##### Drawer bottoms **[held in place with drawer hardware to sides and mechanically fastened to back and sub front] [fully housed into sides and sub front and mechanically fastened to back or plowed into back**]

### Laminated Plastic Countertops:

#### Laminate: **[Manufacturer] [Pattern]**.

#### Core material: **[particleboard] [MDF] [exterior grade hardwood plywood with a non-telegraphing grain]**.

##### Wet tops: **[Water resistant particle board] [Water resistant MDF] [Veneer core plywood with type II adhesive].**

AWMAC’s STANDARDS (NAAWS) requires water resistant core for sink tops.

#### Back splashes: **[butt joint] [cove] [per drawings], [\_\_\_\_]** mm high.

If several backsplash details are used, label “per drawing”, and be sure all tops are clearly detailed in the plans

#### Front edges: **[self-edge] [no drip bullnose edge] [waterfall edge] [no drip tilt edge] [3 mm PVC edge] [wood edge] [As shown on plans]**.

If several front edges details are to be used, make sure they are clearly shown or labeled on the plans.

### Solid Surface Countertops:

#### Solid surface: **[brand] [pattern] [color]**.

#### Back splashes: **[butt joint] [cove] [per details]** and [\_\_\_\_] mm high.

If several backsplash details are used, label “per drawing”, and be sure all tops are clearly detailed in the plans

#### Front edges: **[self-edge] [no drip bullnose edge] [waterfall edge] [no drip tilt edge].**

If several front edge details are to be used, make sure they are clearly shown or labeled on the plans.

### Factory Finishing

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.

#### Grade: AWMAC’s STANDARDS (NAAWS) **[Premium Grade] [Custom Grade] [Match grade of product to be finished].**

#### AWMAC’s STANDARDS (NAAWS) finish system: [\_\_\_\_\_]

Finishing system number and name

# EXECUTION

## EXAMINATION

### Verify mechanical, electrical, plumbing, HVAC and other building components, affecting work in this Section are in place and ready.

## INSTALLATION

### Install work in conformance with AWMAC’s STANDARDS (NAAWS).

### Conform to AWMAC’s STANDARDS (NAAWS) Grade(s).

### Secure all work in place, square, plumb, and level.

### Fit and scribe work abutting other building components.

### Countersink mechanical fasteners used at exposed and semi-exposed surfaces, excluding installation attachment screws and those securing cabinets end to end.

### Cut equipment cutouts shown on plans using templates provided.

## ADJUSTING & TOUCH UP

### Adjust all moving and operating parts to function smoothly and correctly.

### Fill and retouch all nicks, chips and scratches. Replace all un-repairable damaged items.

## CLEANUP

### Upon completion of installation, clean installed items of pencil and ink marks and broom clean the area of operation.

**END OF SECTION**