
NAVFAC IGS-06200 (MAY 2002)

Preparing Activity: LANTNAVFACENGCOM Use in lieu of UFGS-06200N

ITALIAN GUIDE SPECIFICATIONS

Use for ITALIAN projects only

SECTION 06200

FINISH CARPENTRY

05/02

NOTE: This guide specification is issued by the
Atlantic Division, Naval Facilities Engineering
Command for regional use in Italy.

NOTE: This guide specification covers general
exterior and interior finish carpentry.

NOTE: On the drawings, show:

1. Location, size, type, and thickness of materials;
2. Size and spacing of fasteners;
3. Details of millwork;
4. Color and/or pattern of prefinished material;
5. Profile and size of trim; and
6. Species of any wood that is to be stain,
natural, or transparent finish.

Comments and suggestion on this specification are
welcome and should be directed to the technical
proponent of the specification. A listing of the
technical proponents, including their organization
designation and telephone number, is on the Internet.

Use of electronic communication is encouraged.

Brackets are used in the text to indicate designer
choices or locations where text must be supplied by

the designer.

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

ITALIAN NATIONAL ASSOCIATION FOR UNIFICATION OF STANDARDS (UNI)

NOTE: A UNI Norm is a technical normative recognized as Italian Law, submitted by a private organization "Ente Nazionale Italiano di Unificazione" for Italy and is available only in the Italian language. It is the National Standard.

- | | |
|---------------|---|
| UNI 3253 | Wood tests - Conditioning |
| UNI 3517/7 | (1954) Names, dimensions of wood varieties of national production |
| UNI 6467/4 | (1969) Veneer plywood, block and lamin-Boards - Terms and definitions |
| UNI 9030/FA-1 | (1987/90) Sawing timber - Drying quality |

ITALIAN/EUROPEAN HARMONIZATION STANDARDS (UNI EN)(UNI ENV)(CEI EN)
(UNI EN ISO)(UNI ISO)

NOTE: A UNI EN, UNI ENV, CEI EN, UNI EN ISO or UNI ISO is a European Standard with a coincident Italian National Standard or International Standard. The two standards are identical, with most (but not all) EN's available in the English language and the UNI available only in the Italian language.

- | | |
|--------------|--|
| UNI EN 309 | (1993) Wood particleboards - Definition and classification |
| UNI EN 310 | (1994) Wood-based panels - Determination of modulus of elasticity in bending and of bending strength |
| UNI EN 313-1 | (1997) Plywood - Classification and terminology - Part 1: Classification |

UNI EN 315	(1994) Plywood - Tolerances for dimensions
UNI EN 330	(1994) Wood preservatives - Field test method for determining the relative protective effectiveness of a wood preservative for use under a coating and exposed out of ground contact: L-joint method
UNI EN 335-3	(1998) Durability of wood and wood-based products - Definition of hazard classes of biological attack - Application to wood-based panels
UNI EN 438-1	(1993) Decorative high-pressure laminates (HPL) - Sheets based on thermosetting resins - Part 1: Specifications
UNI EN 622-2	(1998) Fibreboards - Specifications - Part 2: Requirements for hardboards
UNI EN 635-2	(1996) Plywood - Classification by surface appearance - Part 2: Hardwood
UNI EN 635-3	(1996) Plywood - Classification by surface appearance - Part 3: Softwood
UNI EN 636-2	(1997) Plywood - Specifications - Part 2: Requirements for plywood for use in humid conditions
UNI EN 636-3	(1997) Plywood - Specifications - Part 3: Requirements for plywood for use in exterior conditions
UNI ENV 1099	(1999) Plywood - Biological durability - guidance for the assessment of plywood for use in different hazard classes
UNI ENV 1156	(2000) Wood-based panels - Determination of duration of load and creep factors
UNI ISO 3131	(1985) Wood - Determination of density for physical and mechanical tests

1.2 SUBMITTALS

NOTE: Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item is required.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Recommended codes for Army projects are "RE" for Resident Engineer approval, "ED" for Engineering approval, and "AE" for Architect-Engineer approval. Codes following the "G" typically are not used for Navy projects.

Submittal items not designated with a "G" are considered as being for information only for Army projects and for Contractor Quality Control approval for Navy projects.

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-02 Shop Drawings

Prefabricated millwork; G

SD-04 Samples

Laminated plastic

Stain color

Casework

SD-07 Certificates

Certificates of grade

Certificates of compliance

1.3 DRAWINGS

Submit drawings showing prefabricated millwork. Include details and erection data associated with work of other trades; materials and species; arrangements; profiles of moldings; thicknesses; sizes of parts; construction; fastenings; and clearances.

1.4 CERTIFICATES

Provide certificates of grade from an independent testing agency on graded but unmarked lumber or plywood attesting that materials meet the grade requirements specified herein.

Provide certificates of compliance unless materials bear certification markings or statements.

1.5 SAMPLES

1.5.1 Laminated Plastic

Submit a minimum of 3 color selection samples for selection. [Submit color samples representing conformance with scheduled colors.]

1.5.2 Stain Color

Submit a minimum of 3 stain color selection samples on same type wood being used for cabinets.

1.5.3 Casework

Submit one full size representative sample of each type casework required, sufficient to represent joinery and fabrication quality of the casework.

1.6 DEFINITIONS

**NOTE: The following definitions were derived from
AWI Standards nomenclature. Revise and add
additional definitions to adequately describe
quality characteristics of casework.**

1.6.1 Exposed Parts

Surfaces visible when:

- a. Drawer fronts and doors are closed;
- b. Cabinets and shelving are open-type or behind clear glass doors;
- c. Bottoms of cabinets are seen 1000 mm or more above finished floor;
- d. Tops of cabinets are seen below 2000 mm above finish floor, or are visible from an upper floor or staircase after installation;
- e. Portions of cabinets are visible after fixed appliances are installed; or
- f. Front edges of cabinet body members are visible or seen through a gap of greater than 3 mm with doors and drawers closed.

1.6.2 Semi-Exposed Parts

Surfaces visible when:

- a. Drawers/doors are in the open position;
- b. Bottoms of cabinets are between 800 mm and up to 1000 mm above finish floor; or
- c. All front edges of shelving behind doors.

1.6.3 Concealed Surfaces

Surfaces are concealed when:

- a. Surfaces are not visible after installation;
- b. Bottoms of cabinets are less than 800 mm above finish floor;
- c. Tops of cabinets are over 2000 mm above finish floor and are not visible from an upper level; or
- d. Stretchers, blocking and/or components are concealed by drawers.

1.7 DELIVERY, STORAGE, AND HANDLING

Deliver lumber, plywood, trim, and millwork to job site in an undamaged condition. Stack materials to ensure ventilation and drainage. Protect against dampness before and after delivery. Store materials under cover in a well-ventilated enclosure and protect against extreme changes in temperature and humidity. Do not store products in building until wet trade materials are dry.

1.8 QUALITY ASSURANCE

1.8.1 Lumber

NOTE: The Federlegno-Arredo (National Association of Finish Carpentry) provides an overview of standardized practices for both rough carpentry and finish carpentry.

Identify each piece or each bundle of lumber, millwork, and trim by the grade mark of a recognized association or independent inspection agency. Such association or agency shall be certified by The Federlegno-Arredo, to grade the species used.

1.8.2 Plywood

Each sheet of plywood shall bear the mark of a recognized association or independent inspection agency that maintains continuing control over quality of the plywood. Mark shall identify plywood by species group, nominal thickness, exposure durability classification, and grade.

1.8.3 Hardboard and Particleboard

Materials shall bear a marking or statement identifying the producer and the applicable standard.

1.8.4 Pressure-Treated Lumber and Plywood

UNI EN 330. Materials shall bear a marking or statement identifying the producer and the applicable standard.

1.8.5 Nonpressure-Treated Woodwork and Millwork

Materials shall bear a marking or statement identifying the producer and the applicable standard.

1.8.6 Fire-Retardant Treated Lumber

Each piece of lumber shall be marked with the label of a nationally recognized independent testing laboratory, except pieces that are to be natural or transparent finished.

PART 2 PRODUCTS

2.1 SOURCE MANUFACTURERS

2.1.1 Plastic Laminates

The following manufacturers have products that generally comply with these specifications:

Abet Laminati S.p.A.
Viale Industria 19
12042 Bra (Cuneo)
Tx 210278 Printi

Formica Italia S.r.l.
Via Marche 40
20090 Pieve Emanuele (MI)
Tel. 02/90400601

Arpa Industriale S.p.A.
12042 Bra (Cuneo), Italia
Via Piumati, 91
Tel: (0172) 4361
Fax: (0172) 431151

2.2 WOOD

NOTE: Species of wood listed herein are those most generally used in Italy. Many other woods are available but must be imported. Verify cost and availability of woods specified.

All lumber and wood items to be furnished and installed shall conform to the UNI 3517/7, UNI 3253, and UNI ISO 3131, and shall conform to the type and grade described hereinafter. Wood showing signs of warp, grain deviation, shakes, cracks, mold, stain, rot, insect damage, or other injurious defects will be rejected.

2.2.1 Sizes and Patterns of Wood Products

Yard and board lumber sizes shall conform to UNI 9030/FA-1. Provide shaped lumber and millwork in the patterns indicated and standard patterns of the association covering the species. Size references, unless otherwise specified, are nominal sizes, and actual sizes shall be within manufacturing tolerances allowed by the applicable standard.

2.2.2 Trim, Finish, and Frames

Provide species listed below for materials to be paint finished and transparent finished. Run trim, except window stools and aprons with hollow backs.

2.2.2.1 Wood To Receive Paint Finish

Provide solid wood of [any closed-grain hardwood] [Mediterranean Pine,] [Yellow Pine,] [Scandinavian Fir,] [or] [Beech]. Do not use wood containing defects that require filling prior to painting. Defects and wood grain shall not be visible after painting.

2.2.2.2 Wood To Receive Transparent Finish

**NOTE: The following characteristics are based upon
AWI Lumber Grade I for Hardwood. Designer shall
review project requirements and modify as needed.**

Provide solid wood of [White Oak] [Red Oak] [European Cherry] [Maple] [Walnut] [except as noted otherwise], [plain sawn or sliced] [rift sawn or cut]. Pieces shall be well matched for color and grain and have the following natural characteristics:

- a. Bark pockets: None.
- b. Honeycomb: None.
- c. Patches: Not apparent after finishing beyond 450 mm.
- d. Pitch pockets or pitch streaks: None.
- e. Shakes: None.
- f. Sound knots: Not exceeding 3 mm dia.; loose knots not permitted.

- g. Worm holes: None.
- h. Natural growth variations: None.
- i. Sapwood: [5 percent maximum] [None].
- j. Heartwood: None.

2.2.3 Softwood Plywood

NOTE: Appearance classes III and IV are also available that allow larger number of defects. Designer shall provide additional reference information as required for strength characteristics and stability requirements if needed. If different uses and locations are required, list such following the paragraph.

UNI EN 310, UNI EN 313-1, UNI EN 315, UNI EN 636-2, and UNI EN 636-3, thicknesses as indicated. Plywood shall be a veneer core material constructed of an odd number of veneer plies with face and back veneers or overlays adhered to the core ply. Plywood for interior use may be either of the moisture-resistant or exterior type, except when specifically indicated. Adhesives used in fabrication shall be a moisture resistant type. Face veneer shall be of soft wood and a minimum thickness of panels shall be 10 mm with 3 plies, surface shall be smooth, tight cut, full length of panel and with neatly made repairs. Provide UNI EN 635-3 appearance [class E for high quality surfaces without imperfections or defects] [and] [class I for good quality with only slight irregularities] [and] [class II for utility quality with knots and surface voids filled].

2.2.3.1 Plywood for Shelving

Interior type, UNI EN 635-3, appearance [class E][class I], any species group, surface shall be smooth, tight cut, full length of panel and with neatly made repairs.

2.2.3.2 Plywood for Countertops

Exterior type, UNI EN 635-3, appearance class II, surface shall be smooth, tight cut, full length of panel and with neatly made repairs.

2.2.4 Hardwood Plywood

NOTE: Appearance classes II, III and IV are also available that allow larger number of defects. Designer shall provide additional reference information as required for strength characteristics and stability requirements if needed. If different uses and locations are required, list such following the paragraph.

UNI EN 310, UNI EN 313-1, UNI EN 315, UNI EN 636-2, and UNI 6467/4.
Provide interior grade hardwood veneer core construction with face veneers of clear [White Oak] [Red Oak] [European Cherry] [_____] for transparent finish. Pieces shall be well matched for color and grain. Provide UNI EN 635-2 appearance [class E for high quality surfaces without imperfections or defects] [and] [class I for good quality with only slight irregularities]

2.2.5 Hardboard

UNI EN 622-2 [type HB general purpose for use in dry conditions] [and] [type HB.H general purpose for use in humid conditions] [and] [type HB.E for general purpose use in exterior conditions] [and] [type HB.LA load-bearing for use in dry conditions] [and] [type HB.HLA1 load-bearing for use in humid conditions] [and] [type HB.HLA2 heavy-duty load-bearing for use in humid conditions].

2.2.6 Particleboard

NOTE: Designer shall indicate sizes of panel material on the drawings or add to this paragraph.

UNI ENV 1156 and UNI EN 309. Mat-formed panel material manufactured under pressure and heat from particles of wood and other lignocellulosic material in particle form with the addition of an adhesive. Particleboard shall have a minimum length and width tolerance of plus or minus 1.6 mm, a minimum hardness of 226 kg, minimum face screw holding of 100 kg, and minimum edge screw holding of 90 kg.

2.2.7 Shoe Mold

NOTE: Verify availability and cost of wood species used.

[Red Oak] [White Oak] [European Cherry], 13 by 16 mm unless otherwise indicated.

2.2.8 Wood Bumpers

NOTE: Verify availability and cost of wood species used.

[Red Oak] [White Oak] [European Cherry] [_____] , dressed to size indicated and with outer edges beveled.

2.3 LAMINATED PLASTIC

NOTE: Laminate classes listed below are for usual types of construction. Verify classification and performance categories of laminates from Table 1 of UNI EN 438-1 and insert other classes based on usage required.

UNI EN 438-1.

2.3.1 Countertop Finish

HDS [HDF] Class, minimum 1.25 mm thickness, satin finish. Color and pattern shall be [_____] [as indicated].

2.3.2 Backing Sheet

VLS Class, minimum 0.5 mm thickness.

2.3.3 Postformed Countertop Finish

HGP Class, minimum 1.0 mm thickness. Color and pattern shall be [_____] [as indicated].

2.4 MOISTURE CONTENT OF WOOD PRODUCTS

Air-dry or kiln-dry lumber. Kiln-dry treated lumber after treatment. Maximum moisture content of wood products at time of delivery to the job site, and when installed, shall be as follows:

NOTE: At the text below, the lower percentages (6 and 8 percent) may be specified for interior woodwork which will be located in spaces which will be dry due to heating and air conditioning.

- a. Interior Paneling: [6] [12] percent.
- b. Interior Finish Lumber, Trim, and Millwork 25 mm or Less in Thickness: [6] [12] percent on 85 percent of the pieces and [8] [15] percent on remainder.
- c. Exterior Treated and Untreated Finish Lumber and Trim 89 mm or Less in Thickness: 19 percent.
- d. Moisture content of other materials shall be in accordance with the applicable standards.

2.5 PRESERVATIVE TREATMENT OF WOOD PRODUCTS

2.5.1 Nonpressure Treatment

Treat woodwork and millwork, such as exterior trim, door trim, and window

trim, nonpressure treatment, with either 2 percent copper naphthenate, 3 percent zinc naphthenate, or 1.8 percent copper-8-quinolinolate. Provide a liberal brush coat of preservative treatment to field cuts and holes.

2.5.2 Pressure Treatment

UNI EN 330, UNI EN 335-3, and UNI ENV 1099. Lumber and plywood used on the exterior of buildings [or in contact with masonry or concrete] shall be treated with water-borne preservative as required to achieve a rating of 0 or 1 as tested in accordance with UNI EN 330. All wood shall be kiln dried or air dried after treatment. Specific treatments shall be verified by the report of an approved independent inspection agency.

2.6 FIRE-RETARDANT TREATMENT

**NOTE: List items to be treated in this paragraph.
If fire-retardant treatment is not required, delete
this paragraph and the following subparagraph.
Specify fire-retardant treated plywood only for
nonstructural applications not subject to elevated
temperatures or high humidity.**

2.6.1 Wood Products

Treat the following items:

- a. [_____].

2.7 HARDWARE

Provide nails, screws, bolts, nuts, lag screws, studs and other anchoring devices of sizes, types, and spacings of manufactured building materials recommended by the product manufacturer except as otherwise indicated or specified. Provide hot-dipped galvanized steel or aluminum nails and fastenings where used on the exterior or exposed to the weather.

2.7.1 Adjustable Shelf Standards

**NOTE: Use below for built-in shelving and bookcase
applications.**

1.0 mm steel with zinc finish, surface or mortise mounted, vertical standards with horizontal slots for shelf adjustment, with open type shelf rests of matching zinc coated steel.

2.7.2 Vertical Slotted Shelf Standards

**NOTE: Use below for wall surface type shelving
applications.**

1.5 mm steel with [electroplated chrome] [brass look] finish, surface mounted, vertical standards with vertical slots for shelf adjustment, with interlocking projecting shelf brackets. Provide shelf brackets of length as required by shelf depth.

2.7.3 Closet Hanger Rods

Chromium-plated steel rods, not less than 25 mm diameter by 1.3 mm thick. Rods may be adjustable with integral mounting brackets if smaller tube is 25 mm by 1.3 mm thick. Provide intermediate support bracket for rods more than 1200 mm long.

2.7.4 Cabinet Hinges

Concealed European style, automatic closing, wrought steel, heavy duty size as required by door size and weight. Finish shall be dull plated chrome or nickel plated. Hinges shall have a 3-dimensional adjustment system and shall open to a minimum of 2.88 radians.

2.7.5 Pulls for Cabinet Doors and Drawers

- a. Stainless Steel Wire Pulls: 100 mm long, 8 mm diameter, back mounted, fine directional polish finish.
- b. Stainless Steel Recessed Pulls: 100 mm long, flush mounted plate with recessed pull handle similar to wire pulls, fine directional polish finish.

2.7.6 Cabinet Drawer Slides

Side mounted, full-extension, self-closing, zinc-plated steel drawer slides with steel ball bearings, and rated for the following loads. Provide 2 slides each drawer.

- a. Box drawer slides: 330 N.
- b. File drawer slides: 670 N.
- c. Pencil drawer slides: 200 N.

2.7.7 Cabinet Shelf Supports

- a. Glass Shelf Supports: 5 mm galvanized steel dowel type with clear plastic cap.
- b. Wood Shelf Supports: Recessed shelf fastener with galvanized steel pin insert and moulded plastic plug, white color.

[2.7.8 Sliding Glass Door Assembly

Provide glass panel sliding doors complete with premanufactured upper and lower bypass tracks and locking mechanism.

- a. Glass Panels: 6 mm clear [double strength] [fully tempered] glass.
- b. Double Guide Track: Extruded aluminum, silver anodized finish.
- c. Runner Housing: Extruded aluminum, silver anodized finish.
Provide with rubber strip for snug glass fit.
- d. Double Supporting Track: Extruded aluminum without screw holes,
silver anodized finish.
- e. Runners: Steel construction, for installation in runner housing
profile, nylon bearings and wheel. Provide end caps of nickel
plated steel.
- f. Cylinder Lock: End cap push button cylinder lock for 2 door system.

2.8 FABRICATION

2.8.1 Minimum Quality Standards

NOTE: There are few Italian quality standards available for reference - quality is generally determined by negotiation and sample review. The minimum standards listed herein are based upon AWI "Custom Grade". Modify requirements and add further detail to drawings and specification to suit actual project conditions and requirements.

Unless otherwise indicated on drawings or specified herein, fabricated millwork with the following minimum requirements.

2.8.1.1 Minimum Thickness of Material for Cabinet Components

Provide the following minimum nominal thicknesses for material:

Cabinet Components	Min. Nominal Thickness
Body Members (Ends, Divisions, Bottom, Tops)	19 mm
Face Frames, Rails	19 mm
Lumber Shelves	19 mm for spans to 900 mm 27 mm for spans to 1200 mm
Plywood/MD Particleboard	19 mm for spans to 900 mm 25 mm for spans to 1200 mm
Backs	6 mm
Mounting/Hanger Strips	12 mm
Drawer Sides, Backs, and Subfronts	12 mm
Drawer Bottoms	6 mm
Drawer Fronts	19 mm
Glass Door Frames	19 mm
Door Fronts	19 mm up to 760 mm 28 mm up to 1800 mm

2.8.1.2 Fitting Tolerances of Doors and Drawers

**NOTE: Tolerances are subject to component size,
hardware choices, allowable warp, installation
variations, etc. Edit gap and flushness dimensions
as required for actual project conditions.**

Gap and flushness between component faces shall meet the following:

- a. Gap between doors, drawers, panels, and frames: 3 mm +/- 1 mm.
- b. Flushness of adjacent door and drawer faces: 3 mm maximum.

2.8.1.3 Flatness of Cabinet Doors

Measured diagonally after installation is completed, faces of doors and panels shall have a maximum deviation from flat of 0.9 mm in 300 mm.

2.8.1.4 Flushness of Shop Assembled Joints

Flushness of joints made in factory and shop shall not exceed 0.1 mm as measured with a feeler gauge.

2.8.1.5 Gap Tolerances of Joints

Maximum gaps of joints between adjacent finished units shall not exceed the following:

- a. Gap between fixed Exposed components: 0.8 mm wide by 130 mm long maximum.
- b. Gap between fixed Semi-exposed components: 1.6 mm wide by 200 mm long maximum.
- c. Gap between each end of adjustable shelf and case side: 1.6 mm maximum.

2.8.2 Countertops

**NOTE: Use a plastic laminate backing sheet for
counters exposed to excessive moisture.**

Fabricate with lumber and a core of exterior plywood, glued and screwed to form an integral unit. Bond laminated plastic under pressure to exposed surfaces, using type of glue recommended by plastic manufacturer [, and bond a backing sheet under pressure to underside of countertop]. Countertop unit shall be post-formed plastic laminated type with no-drip nose, cove moulding. Back splash shall be not less than 90 mm nor more

than 115 mm high.

2.8.3 Wood Finish Cabinets

Wall and base cabinets [and vanity cabinets] shall be of the same construction and appearances. Fabricate with solid ends and frame fronts, or with frames all around. Frames shall be solid hardwood not less than 19 by 38 mm. Ends, bottom, back, partitions, and doors shall be hardwood plywood. Mortise and tenon, dovetail, or dowel and glue joints to produce a rigid unit. Cover exposed edges of plywood with hardwood strips. Doors, frames, and solid exposed ends shall be 19 mm thick; bottom, partitions, and framed ends 13 mm minimum; shelves 16 mm minimum; back 6 mm minimum.

2.8.3.1 Finish

Provide a natural factory finish on wood surfaces after fabrication. Finish shall be fabricator's standard natural finish, except that it shall be equivalent to one coat of sealer and one coat of spar varnish on all surfaces and a second coat of spar varnish on surfaces exposed to view. Sand lightly and wipe clean between coats.

2.8.4 Work Benches

Fabricate as indicated. Dovetail and glue drawer corners. Fasten frames with suitable wood screws or bolts. Sand exposed surfaces smooth, and ease exposed edges. Provide two side-mounted, metal, ball-bearing drawer slides with 800 N capacity for each drawer, and at least two surface-mounted heavy duty butt hinges, and a magnetic catch for each door.

2.8.5 Casework With Transparent Finish (CTF)

2.8.5.1 Construction (CTF)

Details shall conform to [reveal overlay] [flush overlay] [exposed face frame] design.

2.8.5.2 Exposed Parts

[_____] specie, [_____] cut.

2.8.5.3 Semi-Exposed Parts

Same species as for exposed parts, cut or slicing at option of fabricator.

2.8.6 Casework With High Pressure Laminate Finish (CHPL)

2.8.6.1 Construction (CHPL)

Details shall conform to [reveal overlay] [flush overlay] [exposed face frame] design.

2.8.6.2 Exposed Surfaces

High pressure plastic laminate, color and pattern as scheduled on drawings.

2.8.6.3 Semi-Exposed Surfaces

High pressure plastic laminate [Light duty standard laminate] [Melamine], [white color] [neutral color] [color as scheduled on drawings].

PART 3 EXECUTION

3.1 FINISH WORK

Provide sizes, materials, and designs as indicated and as specified. Apply primer to finish work before installing. Where practicable, shop assemble and finish items of built-up millwork. Joints shall be tight and constructed in a manner to conceal shrinkage. Miter trim and moldings at exterior angles and cope at interior angles and at returns. Material shall show no warp after installation. Install millwork and trim in maximum practical lengths. Fasten finish work with finish nails. Provide blind nailing where practicable. Set face nails for putty stopping.

3.1.1 Exterior Finish Work

Machine-sand exposed flat members and square edges. Machine-finish semi-exposed surfaces. Construct joints to exclude water. In addition to nailing, glue joints of built-up items with waterproof glue as necessary for weather-resistant construction. Provide well distributed end joints in built-up members. Provide shoulder joints in flat work. Hold backs of wide-faced miters together with metal rings and waterproof glue. Fascias and other flat members, unless otherwise indicated, shall be 19 mm thick. Provide door and window trim in single lengths. Provide braced, blocked, and rigidly anchored cornices for support and protection of vertical joints. Install soffits in largest practical size. Joints of plywood shall occur over center lines of supports. Fasten soffits with aluminum or stainless steel nails. Back prime all concealed surfaces of exterior trim.

3.1.2 Interior Finish Work

After installation, sand exposed surfaces smooth. Provide window and door trim in single lengths.

3.1.3 Door Frames

Set plumb and square. Provide solid blocking at not more than 400 mm o.c. for each jamb. Position blocking to occur behind hinges and lock strikes. Double wedge frames and fasten with finishing nails. Set nails for putty stopping.

3.1.4 Thresholds

Provide thresholds [shaped as indicated] [16 mm thick by 70 mm wide with beveled sides] and cut to fit at jambs. Fasten thresholds with casing nails. Set nails for putty stopping.

3.1.5 Window Stools and Aprons

Provide stools with rabbet over window sill. Provide aprons with returns cut accurately to profile of member.

3.1.6 Bases

Flat member with a molded top [and oak shoe mold]. Fasten base to framing or to grounds. [Nail shoe mold to the base.] Set [shoe mold] [one-piece wood base] after finish flooring is in place.

3.2 SHELVING

19 mm thick wood shelf material or 19 or 20 mm thick plywood shelf material supported substantially with end and intermediate supports and arranged to prevent buckling and sagging. [Hook strips shall be 19 by 89 mm and cleats 19 by 38 mm.] Provide cleats except where hook strips are specified or indicated. [Where adjustable shelving is indicated, provide standards and brackets or shelf rests for each shelf.] [Anchor standards to wall at not more than 600 mm o.c.]

3.2.1 Linen Closets

Unless indicated otherwise, linen closets shall have a counter shelf 500 mm wide located 900 mm above the floor, a lower shelf approximately 450 mm wide and 450 mm above the floor, and three upper shelves 285 mm wide located 350 mm above the counter shelf and 350 mm apart.

3.2.2 Storage Rooms

Provide storage rooms with shelves [of size and arrangement as indicated] [285 mm wide, bottom shelf 450 mm above the floor, top shelf 450 mm below the ceiling, and intermediate shelves approximately 450 mm apart].

3.2.3 Room Closets

Provide two shelves 285 mm wide. Support lower shelf by hook strips at back and ends, and provide full-length wood or metal clothes hanger rods unless indicated otherwise.

3.2.4 Cleaning-Gear Closets

Provide [shelves of size and arrangement indicated] [two shelves 350 mm wide].

3.3 CLOTHES HANGER RODS

Provide clothes hanger rods where indicated and in closets having hook strips. Set rods parallel with front edges of shelves and support by sockets at each end and by intermediate brackets spaced not more than 1200 mm o.c.

3.4 MISCELLANEOUS

3.4.1 Counters

Construct as indicated. Conceal fastenings where practicable, fit counter neatly, install in a rigid and substantial manner, and scribe to adjoining surfaces. Provide counter sections in longest lengths practicable; keep joints in tops to a minimum; and where joints are necessary, provide tight hairline joints drawn up with concealed-type heavy pull-up bolts. Glue joints with water-resistant glue and, in addition, make rigid and substantial with screws, bolts, or other approved fastenings.

3.4.2 Cabinets

Install level, plumb, and tight against adjacent walls. Secure cabinets to walls with concealed toggle bolts, and secure top to cabinet with concealed screws. [Make cut-outs for fixtures to templates supplied by fixture manufacturer. Carefully locate cut-outs for pipes so that edges of holes will be covered by escutcheons.]

3.4.3 Work Benches

Construct as indicated. Install level, plumb, and tight against adjacent construction. Fasten to walls with screws or toggle bolts and to floors with expansion bolts.

3.4.4 Wood Bumpers

Bore, countersink, and bolt in place where indicated.

-- End of Section --