

**PART - 1 GENERAL**

**1.1 SUMMARY**

- .1 Section Includes: Labour, Products, equipment and services necessary to complete the work of this Section.

**1.2 REFERENCES**

- .1 Abbreviations and Acronyms:
  - .1 AWMAC: Architectural Woodwork Manufacturers Association of Canada; [www.awmac.com](http://www.awmac.com).
  - .2 GIS: Guarantee and Inspection Service; an inspection program to ensure quality in woodwork as administered by AWMAC.
  - .3 NAAWS: North American Architectural Woodwork Standards – 3.1, 2017, including all errata and supplements, a jointly sponsored by Architectural Woodwork Manufacturers Association of Canada (AWMAC) and the Woodwork Institute (WI).

**1.3 DEFINITIONS**

- .1 Exposed Surfaces: Surfaces exposed to view. Surfaces visible when doors and drawers are closed, backs of hinged doors and edges of hinged doors exposed when opened.
- .2 Semi-Exposed Surfaces: Surfaces that become visible when drawers and doors are opened.
- .3 Concealed Surfaces: Surfaces not visible after installation.

**1.4 SUBMITTALS**

- .1 Woodwork quality standard compliance certificates: submit AWMAC GIS program certificates as follows:
  - .1 Manufacturer/Installer Letter of Accreditation: Submit a copy of the AWMAC letter of accreditation for the Manufacturer/Installer that they are currently accredited to label as “Premium Grade” for compliance with all sections of the Quality Standards, including finishing.
  - .2 Project Certifications: submit a copy of the letter of acceptance from AWMAC to the Manufacturer/installer for the project listing the project as eligible for inspection and labelling under the AWMAC GIS program.
- .2 Product Data, Samples and Shop Drawings will not be reviewed until AWI GIS program letter of accreditation has been submitted.
- .3 Product Data: Manufacturer's specifications, data, and installation instructions for each manufactured product specified, including fire-retardant-treated materials, hardware, accessories and finishing materials.
  - .1 Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.
- .4 Shop Drawings: Submit shop drawings for architectural woodwork which meet the architectural intent and are indicative of the architectural woodwork shown on Drawings.
  - .1 Detail architectural woodwork construction at large scale not less than one-quarter (1/4) full size;
  - .2 Show location of each item, dimensioned plans and elevations joints, sections and connections to adjacent work;

- .3 Show construction details of all woodwork, general arrangements, locations of all service outlets; typical and special installation conditions; material being supplied and all connections, attachments, hardware, anchorage and location of exposed fastenings, and sizes of veneer and plastic laminate sheets;
- .4 Show locations and details of framing, blocking and furring and co-ordination for interface work at substrates: details and layout of cutouts for finish hardware, cabinet hardware, audio/visual, mechanical and electrical services;
- .5 On casework and countertop elevations show location of backing required for attachment within walls:
- .6 For panelling veneered in fabrication shop, show veneer leaves with dimensions, grain direction, exposed face, and identification numbers, indicating flitches and sequence within the flitch for each leaf.
- .7 For panelling produced from pre-manufactured sets, show finished panel sizes, set numbers, sequence numbers within sets, and method of cutting panels to produce indicated sizes;
- .5 Samples: Submit three (3) samples in each specified finish and material.
  - .1 Wood veneers: 300 mm x 300 mm veneer leaves representative of and selected from flitches to be used.
  - .2 Solid lumber members, standing and running trim: 460 mm long x full width x full depth sections of each type of frames and trims for each required profile and finish.
  - .3 Submit 300 mm x 300 mm samples of laminated plastic for colour selection.
  - .4 Submit samples of laminated plastic joints, edging, cutouts and postformed profiles.
  - .5 Panelling: 460 mm square x full depth corner samples with typical perforations for each required profile and finish.
  - .6 Flush doors: 460 mm square x full depth corner samples.
  - .7 Factory finish samples: Submit sample sets showing full range of grain, colour, texture and finish expected in completed work. Sample sets shall consist of minimum three samples in each set to indicate high, middle and low range of colour and finish for each type of species.
  - .8 Samples will not be reviewed until AWMAC GIS program letter of accreditation has been submitted.
- .6 Control Samples: Provide 460 mm x 460 mm control sample of factory finish on plywood backing board for approval. Adjust finish and resubmit control samples to approval of Consultant. After approval is obtained, carefully cut control sample into four equally sized panels and submit one panel each to Owner, Consultant, Site and this Section. Finish of work of this Section shall match approved control sample.
- .7 Test reports: Duplicate copies of flame spread classification test reports by independent testing agency to requirements of CAN/ULC S102.
- .8 Maintenance Data and Operating Instructions: Supply 3 copies of detailed instructions for maintaining, preserving and keeping work of this Section clean and give adequate warning of maintenance practices or materials detrimental to the factory finished work.

## 1.5 **QUALITY ASSURANCE**

- .1 Qualifications: Work of this Section shall be done by manufacturer and tradesmen with experience in successful manufacture and installation of this type of work and of quality as indicated on Drawings and as specified. Submit proof of such experience with list of installations in Ontario upon Consultant's request.
- .2 Fabricator Installer Qualifications:
  - .1 Member in Good Standing of AWMAC.
  - .2 Certified participant in AWMAC GIS program.
  - .3 Minimum 10 years of successful experience in the custom fabrication and installation comparable to this project, whose qualifications indicate ability to comply with requirements of this Section.
- .3 Single Source Manufacturing and Installation responsibility: Engage a qualified manufacturer to assume undivided responsibility for architectural woodwork items specified in this Section, including fabrication, finishing, and installation. The manufacturer shall maintain an organized quality control program and retain facilities with sufficient capacity and quality to produce the required architectural woodwork without causing delay to the project.
- .4 Source Limitations of Veneers:
  - .1 All wood veneer for the interior architectural woodwork, the wall and ceiling panelling, including pre-finished wall panels, Glazed Feature Wall, and the flush wood doors shall be provided by the architectural woodwork subcontractor and be from the same wood veneer source, and from same production run, in sufficient quantities to ensure completion of the entire project.
- .5 Quality of work and materials:
  - .1 Comply with the requirements for Premium Grade in accordance with the NAAWS standards.
  - .2 Provide AWMAC GIS program labels or certificates indicating that woodwork, including installation, complies with requirements of grades specified.
  - .3 Register the project with the AWMAC GIS program.
- .6 Site Quality Control: Provide full-time, factory trained architectural woodwork supervisor to be present at Site at all times during execution of work specified in this Section.
- .7 Veneer Matching: Trial fit three (3) full size panels in the shop for verification of veneer matching between panels for Consultant's approval. Approved panels establish the standard of quality for the Work.
- .8 Finish Matching: Finish for solid wood members shall match wood veneer finish.
- .9 Factory Finish: Apply finish in accordance with the NAAWS standards and to match Control sample at Consultant's office.
- .10 Regulatory requirements: Provide finished wall assemblies flame spread rating of not more than 150 and finished ceiling assemblies flame spread of not more than 25, listed and labelled by an organization accredited by Standards Council of Canada in conformance with CAN/ULC-S104 and CAN/ULC-S105.

## 1.6 **GUARANTEE AND INSPECTION SERVICE**

- .1 AWMAC Guarantee and Inspection Service program is an integral component of the scope of work.

- .2 Architectural woodwork shall be manufactured and installed to NAAWS standards (Premium Grades) and shall be subject to an inspection at the plant and/or site, by an appointed inspector approved by the relevant local AWMAC Chapter. Inspection costs shall be included in the Contract Price for this project.
  - .1 Submit copies of inspection reports to the Consultant within 3 working days upon completion of inspection.
- .3 Submit shop drawings to the AWMAC Chapter office for review before work commences. Work that does not meet Contract Documents and the NAAWS standards, shall be replaced, reworked and/or refinished by the Subcontractor, to the approval of AWMAC, at no additional cost to the Owner and to the satisfaction of the Consultant and the Inspector.
- .4 Where it is deemed necessary by the Consultant, a sample cabinet, consisting of a minimum of 1 drawer and 1 door, or other architectural woodwork items, showing precisely the materials, hardware and the type of construction the manufacturer intends to use, shall be submitted for inspection.
- .5 Provide two (2) year AWMAC Guarantee Certificate. The AWMAC Guarantee shall cover replacing, reworking and/or refinishing deficient architectural woodwork due to faulty workmanship or defective materials supplied and installed by the woodwork Subcontractor, which may appear during two (2) year period following the Substantial Performance of the Project.
  - .1 Defect in materials and workmanship include but not necessary limited to warpage, delamination, staining and discolouration.

#### 1.7 **PRE-INSTALLATION MEETING**

- .1 Before framing completed hold a meeting with the Contractor, woodwork manufacturer, installer, and framing sub-contractor.
  - .1 Review locations of backing required for woodwork installation as shown on shop drawings.

#### 1.8 **DELIVERY, STORAGE, AND HANDLING**

- .1 Handle all materials and components carefully to prevent damage.
- .2 Deliver materials only when project is ready for installation and clean storage area is provided.
- .3 Do not deliver components until painting and similar operations that could damage woodwork have been completed in installation areas.
- .4 Store work in a temperature and humidity controlled area. If millwork items must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article below.

#### 1.9 **FIELD CONDITIONS**

- .1 Environmental Limitations: Do not deliver or install millwork items until wet work is complete, and HVAC system is operating and maintaining temperature between 16 and 32 deg. C and relative humidity between 25 and 55 percent during the remainder of the construction period.
- .2 Field Measurements: Where millwork items are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work
- .3 Locate concealed framing, blocking, and reinforcements that support millwork items by field measurements before being enclosed, and indicate measurements on Shop Drawings.

- .4 Established Dimensions: Where millwork items are indicated to fit to other construction, establish dimensions for areas where items are to fit. Coordinate construction to ensure that actual dimensions correspond to established dimensions.

#### 1.10 **CO-ORDINATION**

- .1 Verify all dimensions on job site prior to shop fabrication and work on site. Alert Consultant immediately where discrepancies occur.
- .2 Co-ordinate fabrication, delivery, and installation with other Sections whose work affect work of this Section, including finish hardware, audio/visual, mechanical and electrical services.
- .3 It shall be the responsibility of this Section to verify the dimensions and installation details for Owner's supplied equipment and furnishings requiring cut-outs, adaptations and interfacing with woodwork items.

### **PART - 2 PRODUCTS**

#### 2.1 **GENERAL**

- .1 All composite wood and agrifibre products (including core materials) used in the building shall not contain added formaldehyde.
- .2 Adhesives used to fabricate laminated assemblies used in the building that contain composite wood and agrifibre products shall not contain added formaldehyde.
- .3 Adhesives used must meet VOC requirements.

#### 2.2 **MATERIALS**

- .1 Wood veneer (WDV):
  - .1 Refer to Finish Schedule for complete list of wood veneer types, indicating wood species, designations, grain, and finishes.
  - .2 NAAWS Grade AA, to match approved samples, plain sliced, flitches of equal width, uniform, carefully selected for architectural quality with respect to cutting lengths, uniformity of colour, figure grain, character, clean, sound without open defects, patches, plastic repair, minimum 0.80 mm thick after sanding.
  - .3 Wood veneer shall be Book matched, unless noted otherwise, centred and balanced, carefully selected with good even colour, sound with no open defect.
  - .4 Colour and figure of veneer shall be selected by Consultant. Hand select veneer from architectural grade flitches of the specified specie as required to provide uniform grain pattern and colour throughout. Veneer representative of low end architectural grade quality will be unacceptable and will be rejected. Semi-exposed veneers shall be selected to match general grain pattern and colour of exposed surface veneer.
  - .5 Finishes to match Consultant's sample.
- .2 Back Veneer: same thickness and having similar characteristics as face veneer.
- .3 Crossbanding: Hardwood.

#### 2.3 **SOLID WOOD**

- .1 Solid wood, exposed and semi-exposed (WD): Refer to Section 09 06 00, Finish Schedule for wood types, indicating wood species, designations, and finishes.
  - .1 Carefully selected and matched for grain pattern and uniform colour.

- .2 Premium Grade of uniform grain and colour, free from knots, blemishes and excess mineral marks. Wood having cross grain will not be permitted. The lumber shall be air-dried for at least one year, then kiln-dried in vapour kilns to a moisture content of 3-5%. The materials shall then be tempered to a moisture content of not more than 6%, which shall be maintained throughout production.
- .3 Finish for solid wood members shall match wood veneer finish.
- .2 Blocking, Framing and Furring: Sound, thoroughly-seasoned, well manufactured and free from warp that cannot be corrected in process of bridging or nailing. Use same species for members in any one assembly.
- .3 To prevent telegraphing, inset solid wood edging shall have similar moisture content as panel core, be glued securely and calibrated with panel core thickness prior to being laminated with a veneer on both faces.
- .4 Wood Block Core for Flush Doors: Kiln dried soft wood blocks, relative density not less than 0.30 at 12% moisture content; of random lengths placed vertically or horizontally not exceeding 50 mm wide, staggered joints, laminated by heat and pressure.

## 2.4

### **COMPONENTS**

- .1 Lumber: In accordance with the NAAWS Premium Grade.
- .2 Wood members: Clean, seasoned, straight, square and true on all four sides. Comply with minimum size and tolerances of CSA O141. Grade-mark all wood materials. Kiln dry wood materials for interior use to a moisture content of 4% to 8%, and 7% to 10% for exterior use.
- .3 Medium Density Fibreboard Core (MDF): to ANSI A208.2, Grade 155, manufactured from 100% recycled materials, without the use of added formaldehyde resins, minimum density of 770 kg/m<sup>3</sup> (48 lb./cu.ft.).
  - .1 Where indicated on drawings or required by authorities having jurisdiction, provide industrial grade MDF certified to meet Class 1 surface burning characteristics of ASTM E84, CAN/ULC S-102 and UL 723 (maximum flame spread ≤25, maximum smoke development ≤200).
- .4 Veneer Core (Plywood): Provide exterior grade, veneer core (plywood) conforming to NAAWS.
  - .1 Softwood plywood (concealed locations): Canadian Softwood Plywood (CSP) to CSA O151, standard construction, grade as required, of thickness as indicated, as recommended by NAAWS.
  - .2 Hardwood plywood: CSA O115, Type II (Type I for high humidity conditions), with a non telegraphing grain manufactured with exterior glue meeting requirements of NAAWS. Exposed faces of Good Sequence Matched, selected veneers, and unexposed faces of Sound Grade, So, veneers.
  - .3 Douglas Fir plywood: CSA O121; Western Softwood Plywood: CSA O151. Exposed two sides shall be Grade S2S, and exposed one side shall be Grade S1S. Consider fitment doors exposed on both sides.
  - .4 Birch-faced hardwood plywood: CSA O115, Good Sequence Matched, Select White or Select Red.
- .5 Particleboard Core: 100% pre-consumer recycled wood fiber particleboard, no added formaldehyde, to ANSI/NPA A208.1, Grade R, minimum density of 720 kg/m<sup>3</sup> (45 lb./cu.ft.), sanded both sides with thickness as recommended by NAAWS for specified applications.

- .6 Plastic laminate (PLAM): ANSI/NEMA LD-3, High Pressure, Paper Base, Decorative Laminates. Unless otherwise specified, use the following:
  - .1 Horizontal postform work: Grade HGP, minimum 1 mm (0.040") thick.
  - .2 Horizontal flat work: Grade HGS, minimum 1.2 mm (0.048") thick.
  - .3 Vertical postform work: Grade VGP, minimum 0.7 mm (0.028") thick.
  - .4 Vertical flat work: Grade VGS minimum 0.7 mm (0.028") thick.
  - .5 Casework Liner (for semi-exposed surfaces): type CLS.
  - .6 Backing sheet: BK, same thickness as facing sheets, sanded one face and manufactured by the same manufacturer as the facing sheet.
  - .7 Test for acceptable VOC emissions in accordance with ASTM D2369 and ASTM D2832.
  - .8 Plastic Laminate Types: Refer to Section 00 01 30, List of Materials for complete list of plastic laminate types, indicating designations, suppliers, textures and finishes.
- .7 Fire retardant treated wood: Pressure treated, flame spread classification of not more than 25 as tested to CAN/ULC S102.
  - .1 Concealed lumber and plywood framing, blocking, furring, and strapping: FirePro FRTW by Osmose, or Dricon FRT or other acceptable equivalents.
  - .2 Particleboard: Duraflake FR by Flakeboard or other acceptable equivalents.
  - .3 Medium density fiberboard: Premier FR (Fire Rated) MDF by Flakeboard or other acceptable equivalents.
- .8 Douglas Fir plywood: CSA O121; Western Softwood Plywood: CSA O151. Exposed two sides shall be Grade S2S, and exposed one side shall be Grade S1S. Consider fitment doors exposed on both sides.
- .9 Birch-faced hardwood plywood: CSA O115, Good Sequence Matched, Select White or Select Red.
- .10 Concealed Framing: NLGA, S-Dry No. 1 grade Ontario White Pine or Douglas Fir, comply with BCLMA Construction grade.
- .11 Exposed Framing, Solid Members and Trim: of species indicated, quarter sawn, architectural grade, matched for compatibility of grain and colour.
- .12 Sealer: Water-repellant, clear, colourless, penetrating wood preservative, LePage's Wood Preservative by LePage's Ltd., Super Solignum by Solignum Inc., Pentox by Osmose-Pentox Inc., or other acceptable equivalents.
- .13 Hardboard: CAN/CGSB 11.3, impregnated, pressed wood with a tempering compound and polymerized by baking.
- .14 Glue for wood assemblies: CSA O112 Series, polyvinyl adhesive.
- .15 Melamine board: Melamine resin impregnated paper, thermally fused to particle board or MDF core, furniture finish in solid colour to be selected by Consultant from manufacturer's standard range.
- .16 Fasteners: Size and type to suit application.
- .17 Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; nickel plated finish in concealed locations and stainless steel finish in exposed locations.

2.5 **SOLID SURFACING**

- .1 Homogeneous filled acrylic sheets; not coated, laminated, or of composite construction; superficial damage to a depth of 0.25 mm shall be repairable by sanding and polishing.
  - .1 Refer to Section 00 01 30 List of Materials for product, manufacturer, thickness, pattern, texture, and colour.
- .2 Joint adhesive, solid surfacing: Manufacturer's standard two-part adhesive kit to create inconspicuous, non-porous joints, with a chemical bond.
- .3 Panel adhesive, solid surfacing: Manufacturer's standard neoprene-based panel adhesive.
- .4 Sealant, solid surfacing: Manufacturer's standard mildew-resistant silicone sealant colour formulated to match sheets.

2.6 **MILLWORK HARDWARE**

- .1 Concealed Hinges: Nickel plated, soft-close European Hinge with 110° pivot point; CLIP top Blumotion by Blum or other acceptable equivalents.
- .2 Pulls: types as indicated on the drawings.
- .3 Shelf Supports: Nickel plated steel, for 5 mm drill holes, 80 kg load bearing capacity; Item #282.04.711 by Hafele America Co., or other acceptable equivalents.
- .4 Drawer Slides: Electro-plated zinc screw mounted, heavy duty, full extension type with captive profile to eliminate side movement, soft close, positive in and out stops and, load capacity to suit drawer size with minimum static load rating of 27 kg for drawers 150 mm and less, and 40 kg for drawers over 150 mm in depth, lengths to suit application, side-mounted type.
- .5 Silencer: Round vinyl, self-adhered, provide 2 per door.
- .6 Magnetic catch: Cast aluminum; 918 by Knappe & Vogt or other acceptable equivalents.

2.7 **FABRICATION - GENERAL**

- .1 As far as practical, shop assemble work for delivery to site ready for installation and in size easily handled and to ensure passage through building openings. Leave ample allowance for fitting and scribing on the job.
- .2 Fabricate work square and to the required lines. Recess and conceal fasteners and anchor heads. Fill with matching wood plugs.
- .3 Make each unit rigid and self-supporting, suitable for individual removal.
- .4 Provide wood members free from bruises, blemishes, mineral marks, knots, shake and other defects and select for colour, grain and texture. Machine and hand sand surfaces exposed in the finished work to an even, smooth surface free from defects detrimental to appearance.
- .5 Finish exposed edges and curves smooth. Keep contrast in colour and grain in adjoining materials to a minimum.
- .6 Provide running members in the maximum lengths obtainable. Provide thickness of members in maximum dressed size of standard lumber. Where thickness or width indicated is not available in hardwoods, use glue laminations to obtain sizes required.
- .7 Spline or key solid boards 150 mm and wider and glue under pressure. Unless otherwise specified or indicated, book-match veneered faces, using selected and approved veneers. Provide unexposed backs of veneers having the same physical characteristics as the face veneer.



- .8 Design and fabricate work to allow for expansion and contraction of the materials. Unless otherwise specified, work shall be glued, and blind screwed or nailed. Properly frame material with tight, hairline joints and hold rigidly in place. Use glue blocks where necessary.
- .9 Conceal joints and connections wherever possible. Locate prominent joints where directed. Glue and pin mortise and tenon joints. Intermediate joints between supports will not be permitted. Set and fill surface nails. Prevent opening-up of glue lines in the finished work.
- .10 Comply with glue manufacturer's recommendations for lumber moisture content, glue shelf life, pot life, working life, mixing, spreading, assembly time, time under pressure and ambient temperature.
- .11 Provide exposed end grain of solid members and edges of exposed plywood with matching solid edging at least 6 mm thick.
- .12 Seal finish carpentry wood items before they leave the fabricating shop. For surfaces to receive a natural or stain finish ensure that the sealer is compatible with the final finish. Co-operate with Section 09 91 00 Painting and obtain written approval of proposed sealer.
- .13 Fit shelf, door, drawer, gable and cabinet edges and other edges with 12 mm hardwood edging prior to application of laminated plastic edging or subsequent finishing.
- .14 Set nails and screws, apply wood filler to indentations, sand smooth and prepare to receive finish. Clean, ensure surfaces are free of dust.

## 2.8

### **FABRICATION - CABINETS**

- .1 Framing: Solid stock framing assembled with machined dovetailed, mortised tennoned or blind dado joints adequately glued and secured with screws.
- .2 Countertops: 19 mm nominal thickness plywood, or particleboard. Provide cut-outs for services as required.
- .3 Gables: 19 mm particle board or plywood. Attach gables to framing with tongue and groove. Reinforce connections with supplementary metal angles. Route gables to receive shelf standards and fixed shelvings. Provide plastic laminate finished wood cleats for closet shelving and coat rod installation.
- .4 Backs: 6 mm thick plywood. Conceal joints behind framing, rout backs into end gables.
- .5 Bottoms: 19 mm plywood attached to front rails with tongue and groove.
- .6 Doors: 19 mm thick particle board.
- .7 Drawers: Birch or Maple solid stock, 19 mm thick fronts, 12 mm backs, 6 mm drawer dividers and 15 mm sides. Fasten sides to fronts with dovetail joints, and grooved joints for backs. Bottoms of 6 mm thick Birch plywood grooved into front and sides and glued.
- .8 Shelving: 19 mm plywood. Apply plastic laminate to visible edges, except that adjustable shelves shall be edged on front and back.
- .9 Base: Solid stock of height equal to base in room.

## 2.9

### **FABRICATION - PLASTIC LAMINATE FACED WORK**

- .1 Factory apply plastic laminate to interiors of all cabinetwork except drawers, but including drawer fronts and shelves, including underside of cabinets.
- .2 Edge band doors, drawers, gables and all visible edges of plywood and particle board components with plastic laminate to match faces, strips same width as plywood or particle board.

- .3 Apply backing sheet to laminated flatwork. Apply uniform coating of sealer on exposed edges. Provide backing sheet of sufficient thickness to compensate stresses caused by the facing sheet.
- .4 Self-edge straight-line-edging with 1.2 mm standard material and radius corners with post-forming material; apply with same adhesive as facing sheet. Chamfer edges uniformly at approximately 20 degrees using machine router.
- .5 Locate joints at 2400 mm to 3000 mm o.c. At L-shaped corners mitre plastic laminate, to the outside corner. Accurately fit members together to provide tight and flush butt joints, in true planes. Provide 6 mm blind spline and approved type draw bolts; one draw bolt for widths up to 150 mm at maximum 450 mm centres for widths exceeding 150 mm. Colour-match adjoining units.
- .6 Provide cut-outs as required for inserts, fixtures and fittings. Use radiused corners and chamfer edges around cut-outs to avoid chipping laminate.
- .7 Post-form laminate work to details indicated. Provide same core and laminate profiles to provide continuous support and bond for the entire surface.
- .8 Assemble work, true and square. Arrange adjacent parts of continuous laminate work to match in colour and pattern.

#### 2.10 **FABRICATION – WOOD VENEER WORK**

- .1 Check job dimensions and conditions. Do not proceed until unsatisfactory conditions are corrected.
- .2 As far as practical, assemble work at the shop and deliver to the job ready for installation. Leave ample allowance for fitting and scribing on the job.
- .3 Fabricate work square and to required lines. Recess and conceal fasteners and anchor heads.
- .4 Parallel clip veneer pieces in equal widths and join by tapeless splicer and glue.
- .5 Provide unexposed backs of panels with backing veneer having the same physical characteristics as the face veneer.
- .6 Properly join panels with tight, hairline joints and hold rigidly in place with assembly bolts. Use glue blocks where necessary. Conceal joints and connections. Locate prominent joints where directed. Intermediate joints between supports will not be permitted. Prevent opening-up of glue lines in the finished work.
- .7 Comply with glue manufacturer's recommendations for moisture content, glue shelf life, pot life, working life, mixing, spreading, assembly time, time under pressure and ambient temperature.

#### 2.11 **FABRICATION – SOLID SURFACING**

- .1 Shop fabricate work to greatest extent practical and to sizes and shapes indicated, in accordance with reviewed shop drawings and solid polymer manufacturer requirements.
- .2 Form joints between work using manufacturer's joint adhesive. Make joints inconspicuous in appearance and without voids. Attach 50 mm wide reinforcing strip of solid polymer material under each joint or as recommended by the manufacturer.
- .3 Cut holes and cutouts for items penetrating the work to templates. Reinforce holes and cutouts to manufacturer's requirements.
- .4 Provide edge details indicated. Rout and finish component edges to a smooth, uniform finish. Rout all cutouts, then sand all edges smooth. Repair or reject defective or inaccurate work.

**2.12 FABRICATION - METAL WORK**

- .1 Fabricate the work true to dimensions and square. Accurately fit members with hairline joints. Maintain continuous, unbroken profiles during joining and assembly process.
- .2 Construct finish work free from distortion and defects detrimental to appearance and performance. Work shall have smooth finished surfaces.
- .3 Fabricate metal work complete with all components required for anchoring in a safe and secure manner.
- .4 Countersink exposed fastenings, where such are shown on final reviewed shop drawings and make as inconspicuous as possible.

**PART - 3 EXECUTION**

**3.1 INSTALLATION**

- .1 Set and secure materials and components in place, rigid, straight, level, plumb and square with hairline joints. Scribe neatly to adjoining surfaces; install blocking and fillers required. Secure units using concealed fasteners.
- .2 Provide matching scribing closer strips between units and gypsum wallboard or similar surfaces.
- .3 Provide heavy duty fixture attachments for wall mounted cabinet work.
- .4 Apply sealant between units and adjacent wall and floor surface, around sills, pipes and escutcheon plates and similar areas to seal and finish installation, in accordance with Section 07 92 00.
- .5 Make allowances around perimeter where fixed objects pass through or project into carpentry work to permit normal movement without restriction.
- .6 Touch up cut edges and surfaces with sealer.
- .7 Apply water resistant building paper or bituminous coating over wood framing members in contact with cementitious construction.
- .8 Install handrails and bumpers level and plumb; bracket spacing shall not exceed 900 mm o.c., adjust to suit. .
- .9 After installation, adjust operating hardware for proper fit and function.
- .10 Protect finished surfaces by approved means. Do not remove until immediately before final inspection.

**3.2 INSTALLATION - CABINET HARDWARE**

- .1 Install hardware to fitments in accordance with manufacturer's requirements and templates. Adjust hardware as and when required to provide smooth operation and ensure clearances are maintained. Repair damage to adjacent surfaces resulting from failure to conform with this requirement.
- .2 Provide lubricants required and use in manner to ensure smooth function of hardware consistent with manufacturer's recommendations.
- .3 Ensure fastening components are tightened snugly. Do not burr or otherwise mar the edges of surfaces of hardware components.

3.3            **CLEANING**

- .1            On completion, remove manufacturer's identification markings and clean plastic laminate surfaces.

END OF SECTION