Part 1 General

1.1 DESCRIPTION

.1 This specification shall cover the fabrication and installation of the garbage bin enclosure, C.I.P. concrete and timber bench, and cedar wood deck.

1.2 RELATED SECTIONS

.1 Section 05 50 00 - Exterior Metal Fabrications

1.3 REFERENCES

.1 American Wood-Preservers' Association (AWPA)

- .1 AWPA M2, Standard for Inspection of Treated Wood Products.
- .2 AWPA M4, Standard for the Care of Preservative-Treated Wood Products.

.2 American Society for Testing and Materials International, (ASTM)

- .1 ASTM A53/A53M, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Steamless.
- .2 ASTM A269, Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
- .3 ASTM A307, Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.

.3 Canadian Standards Association (CSA International)

- .1 CSA B111, Wire Nails, Spikes and Staples.
- .2 CSA O141 Softwood Lumber.
- .3 CSA O80, Wood Preservation.
- .4 CSA O80.20, fire-retardant treatment of lumber by pressure processes.
- .5 CAN/CSA-G40.20/G40.21, General Requirements for Rolled or Welded Structural Quality Steel.
- .6 CAN/CSA-G164, Hot Dip Galvanizing of Irregularly Shaped Articles.
- .7 CAN/CSA-S16.1, Limit States Design of Steel Structures.

1.4 SUBMITTALS

.1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit product data and samples of the following to Contract Administrator: cedar lumber, pressure treated lumber, and stainless steel lag screws locking pins, heavy duty gate latch, wheels etc.

.3 Adjustable top steel screw pile: Submit the following required information by adjustable top steel screw pile supplier: steel screw pile on-staff engineer to review design drawings, confirm loads and to provide a formal letter ensuring the system and piles sizes being used are appropriate for the local condition and the application intended.

.4 Submit shop drawings for:

.1 Garbage bin enclosure, C.I.P. concrete and timber bench, and cedar wood deck. Indicate dimensions, sizes, assembly, anchorage and installation details. Use construction drawings as reference. Confirm existing conditions on site by taking as-built field measurements to prepare shop drawings. Clearly indicate materials, core thickness, finishes, connections, joints, method of anchorage, number and size of anchors, supports, reinforcement, details and accessories.

1.5 QUALITY ASSURANCE

.1 Carpentry shall be performed by trained and qualified craftspeople with demonstrable experience sourcing and work.

.2 Conduct a pre-installation meeting with Contract Administrator to verify project requirements.

.3 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

.4 For products treated with preservative by pressure impregnation, submit following information certified by authorized signing officer of treatment plant:

.1 Information listed in AWPA.M2 and revisions specified in CAN/CSA-080 Series, Supplementary Requirement to AWPA Standard M2 applicable to specified treatment.

.2 Moisture content after drying following treatment with water-borne preservative.

.5 All wood to be free of defects. Any warped, checked or bent materials will be rejected.

Part 2 Products

2.1 GENERAL

.1 All to be free of defects. Any warped, checked or bent materials will be rejected.

.2 Wood Material source and delivery: wood shall be from one supplier and shipped by rail.

2.2 CEDAR LUMBER

.1 Material: No. 2 western red cedar, mill run grade, rot resistant and colour consistent, FSC certified with a planed texture for decking and bench plank. Average moisture content 19% maximum.

2.3 PRESSURE TREATED WOOD

.1 To be pressure treated lumber, no. 1 grade, colour: brown, moisture content 19% or less in accordance with following standards: CAN/CSA-O141; NLGA Standard Grading Rules for Canadian Lumber; Forest Stewardship Council (FSC) certified.

.2 Preservative: for above ground use: to CSA-O80 Series, ACQ-C treatment, clear finish. Minimum net retention: 4.0 kg/m3.

2.4 HARDWARE

.1 Nails and spikes: to CAS B111, galvanized, for exterior works. Use spiral thread nails.

.2 Bolts nuts, washers, lag screws to be hot dipped galvanized, sizes to suit application.

.3 Lag screws: hot dipped, galvanized, sizes to suit application.

.4 Gate Wheels: 150mm dia. minimum, exterior grade metal.

Part 3 Execution

3.1 PREPARATION

.1 Handle and use material in a manner that will avoid damage or field fabrication causing alteration in original treatment. Verify and confirm all underground services have been installed and accepted prior to commencing site carpentry work.

3.2 INSTALLATION

.1 Construct all work as indicated on the Drawings using adequate fastening methods to ensure solid durable finished work suitable for the purpose intended.

.2 Do all nailing and fastening neatly, evenly and thoroughly. Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity. Install all members true to line, levels and elevations.

.3 Treat surfaces of ACQ treated lumber exposed by field cutting, trimming or boring with liberal application of wood preservative before installation. Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber.

.4 Set plumb and space uniformly. Countersink bolts where necessary to provide clearance for other work.

3.3 CLEANING

.1 Upon completion of installation, remove construction and accumulated dirt, surplus materials, rubbish, tools and equipment barriers in accordance with section 01 74 00 – Cleaning and Waste Processing.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Miscellaneous rough carpentry, including:

.1 Minor rough framing.

.2 Wood blocking and nailers.

.3 Wood furring and grounds.

.2 Fasteners.

.3 Preservative treatment.

1.2 RELATED REQUIREMENTS

.1 Section 05 31 00 - Steel Decking: Metal roof decking to receive wood curbs and parapets

.2 Section 06 16 00 - Sheathing

.3 Section 08 11 13 - Metal Doors and Frames: Door openings to receive wood blocking

1.3 REFERENCES

.1 ASTM International (ASTM)

.1 ASTM A123/A123M-15 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

.2 ASTM A153/A153M-09 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

.3 ASTM A653/A653M-13 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

.4 ASTM F1667-13, Standard Specification for Driven Fasteners: Nails, Spikes, and Staples

.2 Canadian Standards Association (CSA)

.1 CAN/CSA-O80 Series-08 (R2012) - Wood Preservation

.2 CSA-O151-09 - Canadian Softwood Plywood

.3 National Lumber Grades Authority (NLGA)

.1 Standard Grading Rules for Canadian Lumber, 2014 edition

1.4 SUBMITTALS FOR REVIEW

.1 Section 01 33 00: Submission procedures.

.2 Product Data: Provide technical data on wood preservative materials.

1.5 QUALITY ASSURANCE

.1 Perform Work in accordance with the following agencies:

.1 Lumber Grading Agency: Certified by NLGA.

.2 Pressure Preservative Treated Wood: Marked with certification mark authorized by the Canadian Wood Preservers Bureau (CWPB) indicating producer, preservative type, retention and Use Category (UC).

1.6 DELIVERY, STORAGE, AND PROTECTION

.1 Section 01 61 00: Transport, handle, store, and protect products.

.2 Store materials off the ground, covered with weatherproof tarps.

1.7 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials for recycling in accordance with Section 01 74 20 – Waste Management and Disposal.

Part 2 Products

2.1 LUMBER MATERIALS

.1 Dimension Lumber: CSA-O141, softwood lumber unless indicated otherwise, S4S, maximum moisture content 19%; graded to NLGA Standard Grading Rules for Lumber.

.1 Studs - Non-Structural: Grade Standard, species Spruce-Pine-Fir.

.2 Furring, Blocking, Nailing Strips, Grounds and Rough Bucks, Curbs: Grade Standard, species: any species; exterior wood pressure preservative treated.

2.2 FASTENERS AND ANCHORS

.1 General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 38 mm into wood substrate.

.2 Nails, spikes and staples: to ASTM F1667, use common spiral nails and spiral spikes except where indicated otherwise.

.3 Bolts: 12 mm diameter unless indicated otherwise, complete with nuts and washers.

.4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws, recommended for purpose by manufacturer.

.5 Galvanized Coating for Exterior Work: Hot dip galvanized to ASTM A153/A153M.

.6 Galvanized Coating for Treated Wood: Hot dip galvanized to ASTM A153/A153M, Class A or B1 (G185) zinc coating.

2.3 PRESERVATIVE TREATMENT

.1 Pressure-preservative:

.1 Treat material to CAN/CSA-O80 using alkaline copper quaternary (ACQ) Type C.

.2 Materials: dried after treatment to moisture content of 19% or less.

.3 Each piece of treated material shall be identified with a tag or ink mark bearing the Canadian Wood Preservers' Bureau quality mark.

.4 Pressure-preservative treat material as follows:

.1 Wood members in connection with roofing, flashing, and air/vapour barriers.

.2 Wood products in contact with concrete.

.3 Wood products attached directly to the interior of below-grade concrete grade beams.

.4 Wood members that are less than 460 mm above the ground in crawlspaces or unexcavated areas.

.5 Other material as indicated.

.2 Surface-applied wood preservative:

.1 Copper napthenate or pentachlorophenal base water repellent preservative. Use clear for materials exposed in final assembly, coloured elsewhere.

Part 3 Execution

3.1 EXAMINATION

.1 Section 01 70 00: Verify existing conditions before starting work.

.2 Verify that site conditions are ready to receive work.

3.2 PREPARATION

.1 Surface apply wood preservative to heartwood of pressure-preservative treated wood resulting from cutting, trimming or boring, before installation.

.2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum three minute soak on lumber.

.3 Allow preservative to dry prior to erecting members.

3.3 INSTALLATION

.1 Set members level and plumb, in correct position. Place horizontal members, crown side up.

.2 Construct curb members of single pieces.

.3 Place horizontal members, crown side up.

.4 Space furring at 400 mm on centre.

.5 Curb roof openings except where prefabricated curbs are provided. Form corners by alternating lapping side members.

.6 Coordinate curb installation with installation of parapet construction, roofing vapour retarder, and decking and support of deck openings.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Gypsum Sheathing.

.2 Plywood Sheathing.

.3 Fasteners.

1.2 RELATED REQUIREMENTS

.1 Section 05 41 00 - Structural Metal Stud Framing: Exterior steel stud framing

.2 Section 06 10 53 - Miscellaneous Rough Carpentry: Lumber

.3 Section 07 52 00 - Modified Bituminous Membrane Roofing: Roof cover board

.4 Section 08 11 13 - Metal Doors and Frame: Door openings

.5 Section 08 44 30 - Structural Sealant Glazed Assemblies: Curtain wall openings to receive wood blocking

.6 Section 09 77 53 - Vegetated Wall System

1.3 REFERENCES

.1 ASTM International (ASTM)

- .1 ASTM A153/A153M-09 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
- .2 ASTM A653/A653M-13 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- .3 ASTM C1177/C1177M-08, Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
- .4 ASTM C1280-13a - Standard Specification for Application of Gypsum Sheathing
- .5 ASTM F1667-13, Standard Specification for Driven Fasteners: Nails, Spikes, and Staples

.2 Canadian Plywood Association (CANPLY)

- .1 Canadian Plywood Handbook

.3 Canadian Standards Association (CSA)

- .1 CAN/CSA-O80 Series-15 - Wood Preservation
- .2 CSA-O121-08(R2013) - Douglas Fir Plywood
- .3 CSA-O151-09 - Canadian Softwood Plywood
- .4 CSA-O325-07 (R2012) - Construction Sheathing

.4 Underwriters' Laboratories of Canada (ULC)

- .1 CAN/UCL-S102-11 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies (CAN/ULC S102)
- .2 CAN/ULC-S135, Standard Method of Test for Determination of Degrees of Combustibility of Building Materials Using an Oxygen Consumption Calorimeter (Cone Calorimeter)

1.4 SUBMITTALS FOR REVIEW

.1 Section 01 33 00: Submission procedures.

.2 Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

.1 Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Indicate type of preservative used and net amount of preservative retained.

.2 Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Include physical properties of treated materials.

.3 For fire-retardant treatments, include physical properties of treated plywood both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency.

1.5 QUALITY ASSURANCE

.1 Perform Work in accordance with the following agencies:

.1 Plywood Grading Agency: Certified by CANPLY.

.2 Wood Based Panel Products: Marked with a recognized, visible grade stamp showing Grade or span rating as required.

.2 Pressure Preservative Treated Wood: Marked with certification mark authorized by the Canadian Wood Preservers Bureau (CWPB) indicating producer, preservative type, retention and Use Category (UC).

.3 Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.6 DELIVERY, STORAGE, AND PROTECTION

.1 Section 01 61 00: Transport, handle, store, and protect products.

.2 Store plywood panels flat and level.

.3 Keep finish faces inward and cover stacks to protect from bumping and abrasion.

.4 Protect tongue and groove plywood panel edges and corners.

.5 Protect panels from sunlight, water or excessive humidity.

.6 Store materials off the ground, covered with weatherproof tarps.

1.7 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials for recycling in accordance with Section 01 74 20 – Waste Management and Disposal.

Part 2 Products

2.1 PANEL MATERIALS

.1 Plywood: to CSA-O151, CANPLY certified and graded, meeting the requirements of CSA-O325, no added urea-formaldehyde.

.2 Fire Retardant Plywood: Douglas Fir plywood to CSA O121, treated to CSA O80.1, chemically treated and pressure impregnated; capable of providing a maximum flame spread rating of 25 to CAN/ULC-S104 and tested to CAN/ULC-S135.

.3 Glass-Mat Faced Gypsum Sheathing (referred to as "exterior gypsum sheathing" in exterior wall types): ASTM C1177/C1177M, glass-mat faced with water-resistant core; nominal width 1220 mm, maximum length in place; square edges; thickness indicated.

.1 Manufacturer/Product:

.1 CertainTeed; GlasRoc Sheathing

.2 Georgia-Pacific; Gypsum DensGlass Gold

.3 National Gypsum; Gold Bond, e(2)XP

.4 USG; Securock Glass Mat Sheathing.

2.2 FASTENERS AND ANCHORS

.1 General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 38 mm into wood substrate.

.2 Nails, spikes and staples: to ASTM F1667, use common spiral nails and spiral spikes except where indicated otherwise.

.3 Bolts: 12 mm diameter unless indicated otherwise, complete with nuts and washers.

.4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws, recommended for purpose by manufacturer.

.5 Galvanized Coating for Exterior Work, and Vegetated Wall System Backing Panel: Hot dip galvanized to ASTM A153/A153M.

.6 Galvanized Coating for Treated Wood: Hot dip galvanized to ASTM A153/A153M, Class A or B1 (G185) zinc coating.

2.3 PRESERVATIVE TREATMENT

.1 Pressure-preservative:

.1 Treat material to CAN/CSA-O80 using alkaline copper quaternary (ACQ) Type C.

.2 Materials: dried after treatment to moisture content of 19% or less.

.3 Each piece of treated material shall be identified with a tag or ink mark bearing the Canadian Wood Preservers' Bureau quality mark.

.4 Pressure-preservative treat material as follows:

.1 Wood members in connection with roofing, flashing, and air/vapour barriers.

.2 Wood products in contact with concrete.

.3 Wood products attached directly to the interior of below-grade concrete grade beams.

.4 Wood members that are less than 460 mm above the ground in crawlspaces or unexcavated areas.

.5 Other material as indicated.

.2 Surface-applied wood preservative:

.1 Copper napthenate or pentachlorophenal base water repellent preservative. Use clear for materials exposed in final assembly, coloured elsewhere.

2.4 FIRE-RETARDANT-TREATED PLYWOOD

.1 General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

.2 Fire-Retardant-Treated Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to CAN/ULC S102, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 3.2 m beyond the centerline of the burners at any time during the test.

.1 Use treatment that does not promote corrosion of metal fasteners.

.2 Treated materials shall have a moisture content of 28 percent or less.

.3 Kiln-dry material after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material.

.4 Identify fire-retardant-treated plywood with appropriate classification marking of qualified testing agency.

Part 3 Execution

3.1 EXAMINATION

.1 Section 01 70 00: Verify existing conditions before starting work.

.2 Verify that site conditions are ready to receive work.

3.2 PREPARATION

.1 Surface apply wood preservative to heartwood of pressure-preservative treated wood resulting from cutting, trimming or boring, before installation.

.2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum one minute soak on plywood.

.3 Allow preservative to dry prior to erecting members.

3.3 WOOD PANEL INSTALLATION

.1 Secure wall sheathing to wall studs, with ends over firm bearing.

.2 Curbs, parapets, and fascia backing:

.1 Install plywood at fascia backing, parapets, curbs and other wood supports as required and secure using galvanized steel fasteners.

.2 Use pressure treated wood, except for wood that comes in contact with roofing membrane.

.3 On roof deck provide strips of roofing vapour retarder sheet under curbs, nailers and sleepers installed directly onto roof deck. Extend vapour retarder minimum 300 mm onto roof deck both sides of curbs or sleeper to allow for overlap and sealing to roofing vapour retarder. Apply as continuous strips, with 200 mm overlap at joints. Seal joints. Use same material used for roofing vapour retarder. Coordinate with roofing work.

.4 Locate fastening within 300 mm from ends, and uniformly spaced between. Space bolts at 1200 mm on centre and nails at 600 mm on centre except where indicated otherwise.

3.4 GYPSUM SHEATHING INSTALLATION

.1 Install components to ASTM C1280.

.2 Coordinate location of openings and through-wall components with other work.

.3 Erect gypsum sheathing vertically, with edges butted tight and ends occurring over firm bearing.

.4 Use screws when fastening gypsum board to furring or framing.

.5 Place gypsum soffit board perpendicular to supports, with staggered end joints over supports.

.6 Treat cut edges and holes in sheathing with sealant.

3.5 SCHEDULE

.1 Roof Parapet, Fascia, Roof Outriggers, and Curb Sheathing: Sheathing grade, thickness as indicated, square edges.

.2 Telephone and Electrical Panel Back Boards: fire-retardant treated plywood, 19 mm thick, S1S, tongue and groove edges.

.3 Backing Panel for Vegetated Wall System, and Irrigation Control Unit: Plywood, 19 mm thick, select-tight face, tongue and groove edges, bonded with exterior glues.

.4 Exterior Wall Assemblies: Glass-mat faced gypsum sheathing.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Wood cabinets.

.2 Plastic-laminate cabinets.

.3 Cabinet hardware.

.4 Solid surfacing washroom vanities, countertops, and transaction surfaces.

.5 Wood ceiling panels.

.6 Metal clad plywood ceiling panels.

.7 Interior window trim.

.8 Slatwall and accessories.

.9 Shop finishing of interior woodwork.

1.2 RELATED REQUIREMENTS

.1 Section 05 50 00 - Metal Fabrications: Countertop supports and miscellaneous supports

.2 Section 06 10 00 - Rough Carpentry: Grounds and support framing.

.3 Section 07 92 00 - Joint Sealants

.4 Sections in Division 22 - Plumbing: for plumbing fixtures and trim

1.3 DEFINITIONS

.1 Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

1.4 REFERENCES

.1 ASTM International (ASTM)

.1 ASTM F1667-13, Standard Specification for Driven Fasteners: Nails, Spikes and Staples

.2 Architectural Woodwork Institute (AWI)/Architectural Woodwork Manufacturers Association of Canada (AWMAC)/Woodwork Institute (WI)

.1 Architectural Woodwork Standards (AWS) – Edition 2, 2014

.3 Canadian Standards Association (CSA)

.1 CAN/CSA O141-05(R2009), Softwood Lumber

.2 CSA O151-09, Softwood Plywood

.3 CSA O153, Poplar Plywood

.4 National Electrical Manufacturers Association (NEMA)

.1 ANSI/NEMA LD-3-2005, High-Pressure Decorative Laminates

.5 National Panel Association (NPA)

.1 NPA A208.2-2009 - Medium Density Fibreboard (MDF) for Interior Applications

.6 South Coast Air Quality Management District (SCAQMD)

.1 SCAQMD Rule 1168, Adhesives and Sealants Applications Amended January 7, 2005; Rules in affect July 1 2005

1.5 ADMINISTRATIVE REQUIREMENTS

.1 Section 01 31 19: Project Meetings

.2 Coordination:

.1 Coordinate Work to permit installation of adjacent affected plumbing and electrical rough-ins.

.2 Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

1.6 SUBMITTALS FOR REVIEW

.1 Section 01 33 00: Submission procedures.

.2 Product Data:

.1 Provide product data for solid surfacing, hardware, and shop applied finishes.

.3 Shop Drawings:

.1 Indicate materials and material thickness, component profiles and elevations, assembly methods, joint details, fastening methods, accessory listings, hardware location, and schedule of finishes.

.2 Show locations and sizes of cutouts and holes for electrical outlets, plumbing fixtures, grommets, and other items installed in architectural woodwork.

.3 Indicate seaming of solid surfacing countertops.

.4 Indicate colours and finishes.

.4 Samples:

.1 Veneer-faced panel products with transparent finish, 200 by 250 mm, for each species and cut, and type of finish.

.2 High pressure decorative plastic laminates, 200 by 250 mm, for each type, colour, pattern, and surface finish, applied to core material, and specified edge material applied to one edge.

.3 Thermoset decorative-panels, 200 by 250 mm, for each type, colour, pattern, and surface finish, with edge banding on one edge.

.4 Solid-surfacing materials, 150 mm square, for each colour, pattern, and surface finish, with seam in centre of sample.

.5 Slatwall panel, 200 by 250 mm, with PVC edge trim and groove insert, with specified shop applied finish.

.6 Submit two samples of hinges, door/drawer pulls. Approved samples will be returned for use in the Work.

1.7 SUBMITTALS FOR INFORMATION

.1 Section 01 33 00: Submission procedures.

.2 Manufacturers qualifications.

.3 Solid surfacing fabricator qualifications.

1.8 CLOSEOUT SUBMITTALS

.1 Section 01 78 10: Submission procedures.

.2 Maintenance Data:

.1 Submit manufacturer's care and maintenance data for solid surfacing, including care, repair and cleaning instructions.

.2 Include instructions for stain removal, surface and gloss restoration.

1.9 QUALITY ASSURANCE

.1 Perform fabrication and installation to AWMAC, Custom grade.

.2 Manufacturers Qualifications: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience and a member in good standing with AWMAC or AWI.

.3 Installer Qualifications: Manufacturer of architectural woodwork.

.4 Solid Surfacing Fabricators Qualifications: trained and approved by solid surfacing manufacturer.

.5 Mock-up: Build full size mock-up of wood ceiling panel to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

.1 Approved mock-up may become part of the completed Work if undisturbed at time of Substantial Completion.

1.10 DELIVERY, STORAGE, AND PROTECTION

.1 Section 01 61 00: Transport, handle, store, and protect products.

.2 Protect architectural woodwork against dampness and damage during and after delivery.

.3 Store architectural woodwork in ventilated areas, protected from extreme changes of temperature or humidity.

.4 Transport and store solid surfacing materials in near-vertical position with finished face towards finished face.

.5 Deliver architectural woodwork and interior finish carpentry materials only when environmental conditions meet requirements specified for installation areas. If architectural woodwork and interior finish carpentry materials must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

1.11 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials for recycling in accordance with Section 01 74 20 – Waste Management and Disposal.

1.12 PROJECT CONDITIONS

.1 Ambient Conditions:

.1 Do not deliver or install architectural woodwork until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

.2 Field Measurements: Where woodwork is 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.

.1 Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.

1.13 WARRANTY

.1 Fabricator's Warranty: Plastic laminate work will not warp, twist, or delaminate for three years from date of Substantial Performance.

.2 Manufacturer's Warranty: Solid surfacing will be free from material defects for ten years from date of Substantial Performance.

Part 2 Products

2.1 MATERIALS

.1 General: Provide materials that comply with requirements of AWMAC's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.

.2 Softwood Lumber: to CAN/CSA-O141, maximum moisture content of 9%, lumber grades as required for grade specified.

.3 Hardwood Lumber: Species: Birch, select White. Cut: quarter.

.4 Wood Panel Products:

.1 Canadian Softwood Plywood (CSP): to CSA O151, veneer core, thickness indicated, solid two sides. No added urea-formaldehyde.

.2 Medium Density Fibreboard (MDF): to ANSI A208.2, Grade M-3, thickness indicated, density 769 kg/m^3. No added urea-formaldehyde.

.3 Veneer-Faced Hardwood Plywood: to HPVA HP-1, made with adhesive containing no urea formaldehyde. Species: Baltic Birch. Cut: Quarter. Match: book. Grade B/BB. Finished edges.

.5 Slatwall: 19 mm thick industrial grade MDF panels to ANSI A208.2, pre-engineered and machined with T-grooves for use with retail display hardware. No added urea-formaldehyde. Provide slatwall in single panel cut to required size for direct fastening to substrate.

.1 Finish: Primed ready for shop finishing.

.2 Grooves: 76 mm oc spacing by nominal 13 mm deep.

.3 Groove insert: vinyl strip, colour selected by Contract Administrator from manufacturer's standard colour range.

.4 Edge Trim: PVC at top and bottom edges.

.5 Manufacturers/Products:

.1 Marlite; Slatwall 2000 series, with Vinyl ColorSnaps.

.6 High Pressure Decorative Laminate (HPDL): to NEMA LD3, and as follows:

.1 For general purpose work: VGP grade, 0.7 mm thick; with textured finish. Allow for one woodgrain selected by Contract Administrator.

.2 Backing sheet: same thickness and colour as face laminate, except for concealed surfaces.

.3 Acceptable Manufacturers: Arborite, Formica, Nevamar, Pionite, Wilsonart.

.7 Thermoset Decorative Panels (Melamine or LPDL): particleboard or MDF core, finished on both faces with high wear-resistant thermally fused, melamine-impregnated decorative paper complying with NEMA LD 3, made with adhesive containing no urea formaldehyde. Allow for one woodgrain and one solid colour selected by Contract Administrator.

.1 Acceptable Manufacturers: Panolam, Flakeboard, Uniboard, Tafisa Tafilam, Roseburg Skyblend Duramine.

.8 Solid Surfacing Material: Comprised of crushed quartz aggregate combined with resins and pigments and fabricated into solid sheets.

.1 Size: Slabs not less than 1440 by 3050 mm to minimize number of joints in installation

.2 Thickness: 19 mm.

.3 Colours: allow for two colours selected by Contract Administrator based on Caesarstone Supernatural Collection.

.4 Colour Matching: sheets from same batch, with consecutive numbers.

.5 Finish: polished.

.6 Exposed Edges and Corners:

.1 Square profile eased edge

.2 Outside Corners: Square.

.7 Manufacturers/Products:

.1 Caesarstone USA Inc.; Caesarstone.

.2 Dupont; Zodiaq

.3 Wilsonart; Quartz.

.9 Sheet Aluminum: Minimum 1.3 mm thick, to ASTM B221, colour anodized to match curtain wall framing.

2.2 ACCESSORIES

.1 Slatwall Accessories: Clear acrylic brochure, and magazine holders. Confirm compatibility of holders with slatwall panel.

.1 Brochure holders: suitable for tri-fold brochures, 105 wide by 150 high by 32 mm deep with integral bracket for inserting in slatwall groove. Quantity: 6.

.2 Magazine holder: suitable for magazines and letter-size literature; 218 wide by 200 high by 50 mm deep with integral bracket for inserting in slatwall groove. Quantity: 6.

.2 Edge Banding: PVC-free, ABS, thickness specified. Allow for two colours selected by Contract Administrator.

.3 Sealant: mildew-resistant silicone as specified in Section 07 92 00 – Joint Sealants.

.4 Sealer: water-resistant sealer or glue acceptable to laminate manufacturer.

.5 Fasteners:

.1 Nails and Staples: to ASTM F1667, galvanized for interior humid areas and for treated lumber; plain finish elsewhere.

.2 Wood Screws: material, type and size to suit application.

.3 Screw and Washer for Exposed Installation: stainless steel screws, complete with stainless steel cup washer.

.4 Exposed Fasteners: finish to match hardware finish.

.5 Use fasteners compatible with material through which they pass.

.6 Adhesives:

.1 Plastic Laminate Adhesive: Water-resistant, as recommended by manufacturer for high-pressure bonding. No added urea-formaldehyde. VOC Content: Maximum 70 g/L (less water) to SCAQMD Rule 1168.

.2 Construction Adhesive: CAN/CGSB 71-GP-26, and ASTM D 3498, waterproof, high solids content, polyurethane for bonding metal to metal, and metal to wood. VOC Content: Maximum 30 g/L (less water) to SCAQMD Rule 1168.

.3 Mounting Adhesives for Solid Surfacing: structural-grade silicone or epoxy adhesives of type recommended by manufacturer for application and conditions of use. VOC Content: Maximum 70 g/L (less water) to SCAQMD Rule 1168.

.4 Joint Adhesive for Solid Surfacing: epoxy or polyester adhesive of type recommend by manufacturer for application and conditions of use, tinted to match surfacing where exposed. VOC Content: Maximum 70 g/L (less water) to SCAQMD Rule 1168.

2.3 HARDWARE

.1 Hinges: Concealed European type, nickel-plated steel, self-closing, three-way adjustment and adjustable mounting plate, size and type to suit door, 125 degree opening, except 90 degree where doors open against adjacent wall. Provide opening angle stop for use with 90 degree hinges to prevent doors from hitting adjacent wall surface.

.1 Manufacturer/Product: Blum 75 m 5580 hinge, and 175 H7190 plate, or approved equal in accordance with B6.

.2 Drawer Slides: Box type, side mounting, 45 kg load, full extension with over-travel, ball-bearing slide, steel construction, zinc finish.

.1 Manufacturer/Product: Knape and Vogt 8405, Accuride C3017.

.3 Door and Drawer Pulls: standard D pulls, 96 mm c.c., matte nickel finish.

.1 Manufacturer/Product: Hafele 116.09.617, or approved equal in accordance with B6.

.4 Cabinet Shelf Supports: pre-drilled type, shelf support and socket, nickel-finish steel.

.1 Manufacturer/Product: Richelieu #5833-180, Hafele 282.11.752.

.5 Door Bumpers: 9 mm dia. clear, nylon, peel and stick.

.6 Cabinet Locks: Cam type to ANSI/BHMA A156.11, nickel finish, flush mounted, keyed alike per room. Key removable in locked and unlocked position. Provide two keys per lock. Acceptable for use on doors and drawers.

.1 Manufacturer/Product: Ilco 980 series, with N54G keyway, or approved equal in accordance with B6.

.7 Mechanical Catch: steel, bright zinc finish. Where pairs of doors are indicated for locking, provide lock on one door and mechanical catch on other door.

.1 Manufacturer/Product: Amerock 3675, Onward Cluthe 505.

.8 Grommets: Die-cast zinc, one-piece round, 63.5 mm diameter. Coordinate exact location with Contract Administrator, and with electrical equipment. Colour selected by Contract Administrator.

.1 Manufacturer/Product: Hafele Metal Grommet, One-Piece Round 429.94 series, or approved equal in accordance with B6.

.9 Cable Management: Single J, PVC, with self-adhesive tape.

.1 Manufacturer/Product: Hafele 829.15.302, or approved equal in accordance with B6.

.10 Shelf Standards and Brackets:

.1 Standards: Heavy-duty, double slotted wall-mounted steel standards, 2388 mm long, 32 mm vertical slot adjustability; white finish.

.2 Brackets: 1.6 mm thick steel; white finish.

.1 Open Shelving: 610 mm deep. Provide brackets for five full-width shelves.

.2 Shelving Behind Sliding Doors: 318 mm deep. Provide brackets for 10 half-width shelves.

.3 Spacing: Provide standards and brackets at maximum 150 mm from each end of shelf, and at maximum 450 mm oc spacing between.

.4 Location: Library Services Workroom.

.5 Manufacturer/Product: Knape and Vogt, #82 Standard and #182 Bracket, Richelieu Heavy-Duty Double Standard, Series #82 and Heavy-Duty Bracket #182, or approved equal in accordance with B6.

2.4 PLASTIC LAMINATE CABINETS

.1 Casework Construction: Meeting AWMAC, Custom grade.

.1 Type: Frameless, flush overlay cabinet and door interface.

.2 Case bodies: tops, ends, divisions, bottoms, gables, supports:

.1 Semi-Exposed: 19 mm thick LPDL.

.2 Exposed: 19 mm thick MDF or particleboard core with HPDL finish.

.3 Edge Banding: 3 mm thick.

.3 Back:

.1 Semi-Exposed: 6 mm thick LPDL.

.2 Exposed: 12 mm thick MDF or particleboard core with HPDL finish.

.4 Toe space:

.1 Core: CSP, SPF species, G1S grade, 19 mm thick.

.2 Finish: rubber base.

.5 Shelving: fixed and adjustable:

.1 Semi-Exposed: 19 mm thick LPDL.

.2 Exposed: 19 mm thick MDF or particleboard core with HPDL finish.

.3 Edge banding: 1 mm thick, on front edge of fixed shelves, and all four edges of adjustable shelves.

.6 Drawers:

.1 Sides, backs, bottom, and sub-fronts:

.1 12 mm thick LPDL.

.2 Edge banding: 1 mm thick, top edge of drawer box only.

.2 Applied drawer fronts:

.1 19 mm thick MDF or particleboard core with HPDL finish; same HPDL on both faces.

.2 Edge banding: 3 mm thick.

.7 Casework Doors:

.1 19 mm thick MDF or particleboard core with HPDL finish; same HPDL on both faces.

.2 Edge banding: 3 mm thick.

2.5 ARCHITECTURAL WOODWORK FOR TRANSPARENT FINISH

.1 Framing: softwood lumber.

.2 Wood Species and Cut for Exposed Surfaces: Baltic Birch, quarter sawn.

.1 Grain Direction: Horizontal.

.2 Matching of Veneer Leaves: Book match.

.3 Edge Banding: Solid Birch.

2.6 SOLID SURFACE COUNTERTOPS

.1 Fabricate components in shop to greatest extent practical, to size and configurations indicated.

.2 Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication, and finishing.

.3 Laminate solid surfacing to substrate in one piece, unless otherwise indicated.

.4 Joints:

.1 Form joints using manufacturer's standard joint adhesive, without voids and inconspicuous in appearance.

.2 Seal joints with joint adhesive.

.3 Locate joints where shown on approved shop drawings.

.4 Provide joint block reinforcement under joints in accordance with manufacturer’s recommendations.

.5 Trim 25 to 50 mm from panel edges before joining as recommended by manufacturer.

.6 Attach reinforcing strip of like material under each joint on horizontal surfaces and unsupported vertical surfaces, minimum of 76 mm wide.

.7 Ease top, bottom, and front edges and corners.

.8 Cutouts:

.1 Drill holes in countertops for fixtures and fittings.

.2 Provide minimum inside corner radius for cutouts, as recommended by manufacturer.

.3 Reinforce inside corners to prevent cracking.

.4 Polish edges of cutouts exposed in finished work.

.5 If remaining material outside cutout is less than 75 mm wide, reinforce area by laminating with strip of solid surfacing.

.9 Backsplash and side splash, minimum 100 mm high or as indicated. Applied to walls adjacent to countertops.

2.7 WOOD CEILING PANELS

.1 Fabricate ceiling panels from Baltic Birch cut into slats.

.2 Shop finish all surfaces of planks before assembling into panels.

.3 Fasten planks to prefinished hat channels with concealed fasteners.

.4 Suspension System: Aircraft cable, adjustable, grip-lock type.

2.8 METAL CLAD CEILING PANELS

.1 Adhere sheet aluminum to plywood backing panels with full spread adhesive.

2.9 ADJUSTABLE WALL MOUNTED/CLOSET SHELVING

.1 Substrate: 19 mm thick MDF.

.2 Finish: HPDL.

.3 Edge Banding: 1 mm thick ABS, all four edges.

.4 Mounting: Adjustable brackets and standards.

2.10 FABRICATION - GENERAL

.1 Casework assembled with RTA (Ready to Assemble) fasteners: Not acceptable.

.2 Set nails and countersink screws, apply wood filler to indentations, sand smooth and leave ready to receive finish.

.3 Shop install cabinet hardware for doors, shelves and drawers.

.4 Shelving in cabinet: adjustable unless otherwise noted.

.5 Predrill cabinet sides and gables at 32 mm on centre for adjustable shelves on support clips, except where indicated otherwise.

.6 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures. Round internal corners, chamfer edges, and seal exposed core.

.7 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings and elevators.

.8 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.

.9 Filler panels:

.1 Vertical at ends of cabinet runs: maximum 50 mm wide typically, equal at both ends.

.10 Provide removable access panels in millwork for servicing, installation and maintenance of mechanical and electrical services concealed behind cabinets, such as valves, traps, and junction boxes.

.11 Blind framing: 19 by 64 mm wood members or 19 mm plywood, G1S with countersunk screws. Sand blind framing used under counters to remove burrs and splinters at locations that may be in contact with clothing.

.12 Drawers with locks: complete with HPDL clad security/dust panel between drawers to prevent access to the locked drawer by removing the drawer above.

.13 Cabinets with pairs of doors: provide lock on one door only, and elbow catch on inside face of adjacent door.

.14 Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

2.11 FABRICATION – PLASTIC LAMINATE

.1 Ensure adjacent parts of continuous laminate work match in colour and pattern.

.2 Veneer laminated plastic to core material in accordance with adhesive manufacturer's instructions. Ensure core and laminate profiles coincide to provide continuous support and bond over entire surface.

.3 Do not use aerosol or spray applied sealers or adhesives. Apply sealers and adhesives by brush or roller.

.4 Apply laminate backing sheet to reverse side of core of plastic laminate work.

.5 Grain direction of woodgrain plastic laminates:

.1 Doors: Vertical.

.2 Drawer Fronts: Vertical or horizontal as directed by Contract Administrator.

.6 Offset joints in plastic laminate facing from joints in core materials.

2.12 FABRICATION – INTERIOR WINDOW TRIM

.1 General:

.1 Fabricate wood trim to Custom grade, in longest lengths practical.

.2 Machining and Joinery: Fabricate for specified grade.

.2 Interior Trim: Hardwood lumber, Birch, select white, quarter cut, finger-jointing not permitted. Shop-finished.

2.13 SHOP FINISHING

.1 Grade: Provide finishes of same grades as items to be finished.

.2 General: Finish architectural woodwork at fabrication shop as specified in this Section. Defer only final touch-up, cleaning, and polishing until after installation.

.3 Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.

.4 Transparent Finish:

.1 Ceiling Panels: Intumescent flame-retardant varnish. Flame Control No. 166, with No. 167 topcoat.

.2 Elsewhere: AWMAC/AWI finish system 3 Lacquer, Post-Catalyzed.

.3 Staining: not required.

.4 Sheen: Satin.

.5 Opaque Finish:

.1 Slatwall Panels: AWMAC/AWI finish system 4 Latex Acrylic, Water Based. Colour to match tackboard.

.2 Sheen: Satin.

Part 3 Execution

3.1 EXAMINATION

.1 Section 01 70 00: Verify existing conditions before starting work.

.2 Before installation, condition woodwork to average prevailing humidity conditions in installation areas.

.3 Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

.4 Verify adequacy of backing and support framing.

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

3.2 INSTALLATION

.1 Install Work to AWMAC custom grade.

.2 Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.

.3 Set and secure casework in place; rigid, plumb, and level.

.4 Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

.5 Use fixture attachments in concealed locations for wall mounted components.

.6 Use concealed joint fasteners to align and secure adjoining cabinet units and countertops.

.7 Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 3 mm in 2400 mm.

.8 Carefully scribe casework abutting other components, with maximum gaps of 1 mm. Do not use additional overlay trim for this purpose.

.9 Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.

.10 Scribe and cut as required to fit abutting walls and to fit properly into recesses and to accommodate piping, columns, fixtures, outlets or other projecting, intersecting or penetrating objects.

.11 Make allowances around perimeter where fixed objects pass through or project into plastic laminate work to permit normal movement without restriction.

.12 Apply small bead of silicone sealant at junction of countertop or backsplash and adjacent wall finish.

.13 Apply water-resistant building paper over wood framing members in contact with masonry or cementitious construction.

.14 Fit hardware accurately and securely in accordance with manufacturer's written instructions.

.15 Replace items of architectural woodwork with damage to surfaces

.16 Countertops:

.1 Align adjacent solid-surfacing-material countertops and form seams to comply with manufacturer's written recommendations using adhesive in colour to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

.2 Install countertops with no more than 3 mm in 2400-mm sag, bow, or other variation from a straight line.

.3 Secure backsplashes to walls with adhesive.

.4 Caulk space between backsplash and wall with sealant specified in Division 07 Section "Joint Sealants."

.17 Ceiling Panels:

.1 Handle, store, and install flame-retardant-treated ceiling panels to comply with varnish manufacturer's written instructions. Do not cut finished panels on site.

.2 Attach panels to underside of OWSJ.

.3 Align panels so planks in adjacent panels line up.

.4 Level panels.

.18 Adjustable Wall Mounted/Closet Shelving:

.1 Install shelving on shelf brackets.

.2 Provide standards maximum 150 mm from each end of shelf, and at maximum 450 mm oc between.

.19 Interior Window Trim:

.1 Fastening:

.1 Position window trim accurately, level, plumb, true and fasten securely.

.2 Select fasteners to suit size and nature of components being joined.

.3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round smooth cut hole and plug with wood plug to match material being secured.

.4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.

.2 Fit backs of trim snugly to wall surfaces to eliminate cracks.

.3 Install window trim in single lengths without splicing.

.4 Mitre corners.

.5 Secure trim using concealed fasteners.

.20 Slatwall:

.1 Cut slatwall panel to required dimensions. Sand edges smooth.

.2 Install inserts into grooves before fastening.

.3 Predrill holes through insert and grooves.

.4 Screw fasten panel to substrate with colour-matched screws through panel grooves in accordance with manufacturer’s instructions at maximum 600 mm oc.

3.3 ADJUSTING

.1 Test installed work for rigidity and ability to support loads.

.2 Adjust hardware to function smoothly and correctly.

.3 Fill and retouch nicks, chips and scratches; replace unrepairable damaged items.

3.4 CLEANING

.1 Section 01 74 00: Cleaning installed work.

.2 Clean casework, counters, hardware, fittings, and fixtures of dust, pencil and ink marks and broom clean the area of operation.

END OF SECTION