ROLLER SHADES

1. GENERAL

1.1 Submittals

- .1 Shop Drawings: Show shade arrangements, layout, location within window framing, controls, fixing devices and method of installation.
- .2 Sample: Duplicate 300 mm x 300 mm sample of each type of shade fabric.

2. PRODUCTS

2.1 Manual Roller Shades

- .1 Operation: Manual chain and roller operated system, incorporating an adjustable slip clutch to control rate of fall.
- .2 Chain: Continuous loop of stainless steel beads, capable of resisting 400 N pull.
- .3 Bracket Operating Assembly: 3 mm steel bracket and injection moulded delrin components assembled on 11 mm diameter welded steel shaft. Provide wall, jamb or ceiling mounting and centre brackets as required. Reversible for left-hand or right-hand operation.
- .4 Shade Roller: Extruded 6063 T6 aluminium tube, sized to suit operating system with asymmetrically shaped mounting channels to which a matching snap-in vinyl spline can be mounted.
- .5 Shade Spline: Extruded vinyl with asymmetrical insertion locking channels and embossed shade guide.
- .6 Tube and plug-and-pin assembly shall be tapered to assure alignment and shade edge protection.
- 7 Fascia: 1.6 mm extruded aluminium, designed to snap on to shade mounting bracket assembly with concealed fastening devices. Provide removable fascia filler to bridge window mullions where indicated.

2.2 Shade Fabric

- .1 Sun Control Fabric: Heat seal, non-ravelling, 0.76 mm single thickness vinyl fabric woven from 0.46 mm diameter extruded vinyl yarn of 21% polyester and 79% reinforced vinyl, 3% open bi-directional, colour to be selected from manufacturer's standard offering.
- .2 Fabrication: Square with shade spline for fastening directly to shade roller. Seal single length mill finished aluminium flat hembar within hem. Reinforce fabric with heat sealed spring tempered stainless steel batten stiffeners at 900 mm centers.

ROLLER SHADES

2.3 Finishes

- .1 Finish exposed to view aluminium and steel components in baked-on enamel, white colour.
- .2 Finish exposed to view aluminium components in clear anodized coating.

3. EXECUTION

3.1 Installation

- .1 Securely install work, accurately aligned and free of sag.
- .2 Coordinate installation and fastenings with window and ceiling trades, and trades providing adjacent finishes.
- 3 Provide, as part of work of this Section, custom trim components including gypsum board and tee bar trim items to accommodate adjacent ceiling systems and finishes to approval of Contract Administrator.
- .4 Install shades in accordance with Manufacturer's instructions and as indicated, in true, flat planes.

3.2 Adjustment and Cleaning

- .1 Adjust shades for smooth operation and correct alignment. Clean shades and remove finger marks and smudges from shades and adjacent surfaces. Leave shades in raised position at completion of work of this Section.
- .2 Clean and make good surfaces soiled or otherwise damaged in connection with work of this Section. Pay cost of replacing finishes or components that cannot be satisfactorily cleaned.

END OF SECTION

1. GENERAL

1.1 Quality Assurance

- .1 Execute the Work of this Section by fully equipped, expert craftsmen, highly skilled in millwork fabrication.
- 2 Quality of work and materials: Unless otherwise specified, comply with the requirements for Premium Grade in accordance with the 2005 AWI/AWMAC Architectural Woodwork Quality Standards Illustrated Eighth Edition Version 2 (AWI/AWMAC QSI).
- .3 Finish matching: Finish for solid wood members shall match wood veneer finish.

1.2 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 when opened.
- .2 Semi-Exposed Surfaces: Surfaces that become visible when drawers and doors are opened.
- .3 Concealed Surfaces: Surfaces not visible after installation.

1.3 Delivery, Storage and Handling

- .1 Store work in a temperature and humidity controlled area.
- .2 Protect fire-retardant materials against high humidity and moisture.
- .3 Provide protective coverings of suitable material; take special precautions at corners.
- .4 Provide dry storage areas. Stack materials with 150 mm (6") clearance off the floor.

1.4 Submittals

- .1 Shop Drawings: Show large scale details of construction. Indicate profiles of members, jointing, fastening, strapping, cut-outs for mechanical and electrical services and related items.
- .2 Samples: Duplicate 150 x 150 mm (6" x 6") samples of wood veneers for review, show colours and details of edging, forming and construction.

2. PRODUCTS

2.1 Materials

- .1 Wood Members: Clean, seasoned, straight, square and true on all four sides. Comply with minimum size and tolerances of CSA 0141. 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.
- .2 Wood Veneer: AWI/AWMAC QSI Grade AA, species, cut and matching as indicated, equal width, uniform, clean, without open defects, patches, plastic repair, minimum 0.80 mm (¹/₃₂") thick after sanding.
- .3 Plywood: Veneer core plywood.
 - .1 Douglas Fir plywood: CSA 0121; Western Softwood Plywood: CSA 0151. Exposed two sides shall be Grade S2S, and exposed one side shall be Grade S1S.
 - .2 Hardwood Plywood: CSA 0115, Type II (Type I for high humidity conditions). Exposed faces of Good Sequence Matched, selected veneers, and unexposed faces of Sound Grade, So, veneers. Where veneers are scheduled for painting use Good Grade, G veneers.
 - .3 Consider cabinet doors exposed on both sides.
- .4 Particleboard: ANSI A208.1, 720 kg/m² (45 lb/ft³) density, mat formed wood particleboard.
- .5 Medium Density Fibreboard (MDF): ANSI A208.2, density 769 kg/m³ (48 lb/ft³).
- .6 Concealed Framing: NLGA, S-Dry No. 1 grade Ontario White Pine or Douglas Fir, comply with BCLMA Construction grade.
- .7 Exposed Framing, Solid Members and Trim:
 - .1 Stained Finish: As specified or, where not specified, of species indicated on Drawings, quarter sawn, architectural grade, matched or compatibility of grain and colour.
 - .2 Painted Finish: Birch, quarter sawn, good grade.
- .8 Sealer: Water-repellent, low VOC, clear, colourless, penetrating wood sealer, compatible with final finish.
- .9 Adhesives: Recommended by manufacturer for intended use.
- .10 Factory Finish: TR6, AWI/AWMAC QSI Section 1500.
- .11 Hardware: As indicated on drawing.
- .12 Stainless Steel Sheet: ASTM A167, Type 304, shop finish.

- .13 Float Glass: CAN/CGSB-12.3, clear, glazing quality.
- .14 Tempered Safety Glass: CAN/CGSB-12.1 Type 2, Class B, heat treated using the horizontal tong free method. Cut glass clean and free of nicks and damaged edges. Grind smooth and polish exposed glass edges. Do not cut or abrade glass after heat treatment is applied.

2.2 Fabrication - General

- 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 (6") 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.
- Ocnceal 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 and grain of solid members and edges of exposed panels with matching solid edging at least 6 mm (1/4") thick.

- .12 Seal 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 09900 Finish Painting and obtain written approval of proposed sealer.
- .13 Fit door, drawer, gable and other edges with 13 mm ($\frac{1}{2}$ ") hardwood strips prior to application of veneer 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.

2.3 FABRICATION – reception desk

- .1 Framing: Solid stock framing assembled with machined dovetailed, mortised tennoned or blind dado joints adequately glued and secured with screws.
- .2 Countertops: Provide cut-outs for fitments and services as required.
- .3 Gables: Attach gables to framing with tongue and groove. Reinforce connections with supplementary metal angles.
- .4 Backs: Conceal joints behind framing, rout backs into end gables.
- .5 Doors: 19 mm (¾") thick particle board. Flush overlay construction.
- .6 Drawers: Stock fronts, backs, sides, dividers, and plywood bottoms. Joints glued.
- .7 Base: Solid stock of height equal to base in room.

2.4 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.

2.5 Fabrication - Trim

- .1 Trim members shall be of sizes and profiles indicated. Trim members shall be slow-fed work, free from chatter and other machine marks.
- .2 Provide trim over 60 mm (2½") wide with backs ploughed or kerfed. Mitre all joints. Carefully machine drum-sand exposed flat surfaces. Minimize sanding on the job.

2.6 Factory Finish

- .1 Factory finish work scheduled to receive stained and clear finish to match approved control sample. Apply finish in accordance with manufacturer's approved methods using approved equipment to cut outs, exposed and semi-exposed surfaces. Unfinished work will be listed as deficiencies.
- .2 Spray finish work to AWI/AWMAC QSI Section 1500 Conversion Varnish Premium Grade. Apply wash coat. Let dry and sand lightly. Apply first shade coat, let dry and sand. Apply second shade/toner coat, let dry and sand. Apply 1 coat of sealer, let dry and sand. Apply top coat with clear alkyd amino conversion varnish, 45 degree sheen.
- .3 Sand smooth work and clean surfaces free of dust before applying successive coat. Carefully sand with even strokes to provide perfect, scratch-free surface.

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 walls 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 07900 Joint Sealants.
- .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 After installation, adjust operating hardware for proper fit and function.
- .9 Protect finished surfaces by approved means. Do not remove until immediately before Substantial Performance.

END OF SECTION