

**Part 1            General**

**1.1                REFERENCES**

- .1        Underwriters Laboratories of Canada (ULC)
  - .1        CAN/ULC-S102-88(R2000), Surface Burning Characteristics of Building Materials.

**1.2                DESIGN REQUIREMENTS**

- .1        Design roller shades to following requirements:
  - .1        Be designed in a manner that allows wear susceptible parts to be replaceable by either the user or the manufacturer.
  - .2        A guarantee of at least five years of available replacement parts following discontinue of the products manufacture.
  - .3        Be accompanied by instructions for replacing or repairing worn parts, including inventory numbers for parts and procedures for ordering replacement parts.
  - .4        A program that allows for the refurbishing or return of used roller shades.
  - .5        Be designed in a manner that permits effective disassembly of components in order to permit recycling of materials for which recycling markets exist.

**1.3                SUBMITTALS**

- .1        Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
  - .1        Indicate dimensions in relation to window jambs, operator details, head and sill anchorage details, hardware and accessories details.
- .2        Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
  - .1        Submit duplicate samples of manufacturer's standard colours for selection by Departmental Representative.
  - .2        After approval samples will be returned for incorporation into the Work.
- .3        Closeout submittals:
  - .1        Submit operation and maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.
  - .2        Submit maintenance data: Include maintenance procedures, recommendations for maintenance materials and equipment.

**1.4                WASTE MANAGEMENT AND DISPOSAL**

- .1        Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal, and with Waste Reduction Workplan.
- .2        Collect and separate plastic, paper, packaging and corrugated cardboard in accordance with Waste Management Plan

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**1.5 ENVIRONMENTAL REQUIREMENTS**

- .1 Do not install until all dust-generating activities have been completed.

**Part 2 Products**

**2.1 MANUAL FABRIC SHADE SYSTEM**

- .1 Operation:
  - .1 Chain operation with infinite positioning.
- .2 Assembly:
  - .1 Fully factory assembled shade unit consisting of 2 end brackets, shade tube, extruded aluminum fascia, hem bar and fabric specified.
  - .2 Mounting type: between jamb
  - .3 End bracket: Nominal 75x95 mm two-piece moulded ABS construction with 64mm diameter nylon drive sprocket. Bracket colour shall coordinate with fascia colour.
  - .4 Side channels: 0.5mm minimum aluminum or sheet steel, u-shaped, with legs not less than 45 mm long for 50 mm<sup>2</sup> blinds or 20 mm long for 25 mm<sup>2</sup> blinds. Round or bead edges in contact with blinds. Finish inside surfaces of side channels in a dull gray or black colour.
  - .5 Shade tube: 38 mm extruded aluminum shade tube, 1.52 mm minimum thickness. Three internal continuous reinforcing fins.
  - .6 Fascia: 1.7 mm minimum thickness, complete with three continuous screw flute, Painted finish – colour to be selected by Departmental Representative from standard colours.
  - .7 Drive assembly: factory set for size and travel of shades, capable of field adjustment without having to dis-assemble the hardware. Provide built-in shock absorber system to prevent chain breakage under normal usage conditions.
  - .8 Drive chain: No. 10 stainless steel bead chain formed in a continuous loop. Chain shall have 90 lbs. Test strength.
  - .9 Exterior hembar: extruded aluminum with plastic end finials.
- .3 Fabric:
  - .1 Shade fabric: 35% fibreglass and 65% vinyl on fibreglass, mesh weight 403 g/m<sup>2</sup>, yarn diameter (inches) .011, fabric thickness 0.43 mm, openness factor 5%, UV blockage approximately 95%, breaking strength (lb) 250 warp and 235 fill. Colour to be selected from manufacturer's standard range.
  - .2 Acceptable product/manufacturer:
    - .1 Phifer SheerWeave style 2360.
    - .2 MechoShade 1300 Series.
    - .3 Solarfective SolarImage.
    - .4 Approved alternate.

**2.2 MANUAL BLACKOUT SHADE SYSTEM**

- .1 Operation:

- .1 Manual pull down operation with infinite positioning.
- .2 Assembly:
  - .1 Fully factory assembled shade unit consisting of 2 end brackets, 2 side channels, 1 bottom draw bar, shade tube, extruded aluminum fascia, hem bar and fabric specified.
  - .2 Mounting type: between jamb
  - .3 End bracket: Nominal 75x95 mm two-piece moulded ABS construction with 64mm diameter nylon drive sprocket. Bracket colour shall coordinate with fascia colour.
  - .4 Side channels: 0.5mm minimum aluminum or sheet steel, u-shaped, with legs not less than 45 mm long for 50 mm<sup>2</sup> blinds or 20 mm long for 25 mm<sup>2</sup> blinds. Round or bead edges in contact with blinds. Finish inside surfaces of side channels in a dull gray or black colour.
  - .5 Bottom draw bar: aluminum hembar complete with soft vinyl seal at bottom. Interlock with sill channels by means of heavy duty automatic spring latch.
  - .6 Shade tube: 38 mm extruded aluminum shade tube, 1.52 mm minimum thickness. Three internal continuous reinforcing fins.
  - .7 Fascia: 1.7 mm minimum thickness, complete with three continuous screw flute, Painted finish – colour to be selected by Departmental Representative from standard colours.
  - .8 Drive assembly: factory set for size and travel of shades, capable of field adjustment without having to dis-assemble the hardware. Provide built-in shock absorber system to prevent chain breakage under normal usage conditions.
- .3 Fabric:
  - .1 Shade fabric: 35% fibreglass and 65% vinyl on fibreglass, blackout film, mesh weight 671 g/m<sup>2</sup>, fabric thickness 0.58 mm, openness factor 0% (opaque), UV blockage approximately 95%, breaking strength (lb) 253 warp and 263 fill. Colour to be selected from manufacturer's standard range.
  - .2 Acceptable product/manufacturer:
    - .1 Phifer SheerWeave style 7100.
    - .2 MechoShade 0100 Series.
    - .3 Solarfective SolarStop
    - .4 Approved alternate

### **Part 3 Execution**

#### **3.1 EXAMINATION**

- .1 Confirm all opening dimensions.

#### **3.2 INSTALLATION**

- .1 Install in accordance with manufacturer's printed directions and reviewed shop drawings.
- .2 Install square, plumb, true to line with operable parts adjusted for correct function.
- .3 Include centre brackets where necessary to prevent deflection of headrail.

- .4 Adjust to provide for operation without binding.
- .5 Use non-corrosive metal fasteners for installation, concealed in final assembly.
- .6 Provide decorative valance with matching insert typical at all locations.

**3.3 DEMONSTRATION**

- .1 Brief Departmental Representative and staff representatives regarding operation, adjustments, proper care, cleaning and maintenance.

**3.4 CLEANING**

- .1 Perform cleaning in accordance with Section 01 74 11 – Cleaning.
- .2 Perform cleaning after installation to remove construction and accumulated environmental dirt.

**3.5 PROTECTION**

- .1 Protect new blinds from time of installation until final inspection.

**3.6 SCHEDULE**

- .1 Refer to drawings for location of fabric blinds and black-out blinds.

**END OF SECTION**

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**Part 1            General**

**1.1                REFERENCES**

- .1    American Society for Testing and Materials International, (ASTM).
  - .1        ASTM A36/A36M, Standard Specification for Carbon Structural Steel.
- .2    Health Canada/Workplace Hazardous Materials Information System (WHMIS).
  - .1        Material Safety Data Sheets (MSDS).

**1.2                SUBMITTALS**

- .1    Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2    Submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 02 81 01 - Hazardous Materials. WHMIS MSDS acceptable to Health Canada.
- .3    Supply part numbers of furniture to allow for replacement of worn or damaged furniture parts.
- .4    Supply instructions detailing procedures for repairing or replacing worn furniture parts.
- .5    Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .6    Submit duplicate copies of each sample for all finishes.

**1.3                WASTE MANAGEMENT AND DISPOSAL**

- .1    Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2    Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3    Collect and separate for disposal paper, plastic, polystyrene, and corrugated cardboard packaging material for recycling in accordance with Waste Management Plan.
- .4    Fold up metal banding, flatten and place in designated area for recycling.

**1.4                WARRANTY**

- .1    Provide written assurance that replacement parts will be available for minimum of 5 years following discontinuation of product manufacture.
- .2    Ensure warranties provide for repair rather than replacement.

**Part 2            Products**

**2.1                MATERIALS**

- .1    Steel plate: to ASTM A36/A36M.

## 2.2 BUNKS

- .1 Cell bunks size:
  - .1 Single bunk: 2057 mm long by 914 mm wide by 762 mm high
  - .2 Double bunk: 2032 mm long by 762 mm wide by 1664 mm high.
- .2 Front and back composed of an angle measuring 50 by 50 by 6 mm and ends of frame formed by wall brackets made of 0.036 mm steel sheet flanged 50 mm at wall and lower edge. Back angle shall be kept 50 mm from wall.
- .3 Bottom of bunk shall be made of not lighter than 0.06 mm steel sheet with round or square holes with rounded corners, spaced as standard with the manufacturer.
- .4 Join the entire assembly by electrical welding; welds shall be of deep penetration, continuous, and ground smooth.
- .5 Prime bunks with one shop coat of primer.
- .6 Bunks shall be wall and floor mounted.
- .7 Acceptable manufacturer:
  - .1 Single bunk: CORCAN, model #A128-01-8036.
  - .2 Double bunk: CORCAN, model # A411-50.

## 2.3 MATTRESSES

- .1 Material: Long-lasting, fire-resistant medium density foam or fire-retardant bonded cotton/polyester blend solid mattress cores covered with FR or vinyl.
- .2 All mattress styles meet CAL TB 121 fire rating (for use in high risk occupancies).
- .3 Sizing as follows:
  - .1 Single bunk mattress: 1981 mm long by 914 mm wide.
  - .2 Double bunk mattress: 1981 mm long by 762 mm wide.
  - .3 Single bed mattress: 1981 mm long by 990 mm wide.
- .4 Acceptable manufacturer:
  - .1 Single bunk mattress: CORCAN, model # A128-80-78363VFR
  - .2 Double bunk mattress: CORCAN, model # A128-80-78303VFR
  - .3 Single bed mattress: CORCAN, model # A128-80-78393VFR

## 2.4 MIRRORS

- .1 Mirrors shall be 0.8 mm thick sheet steel, highly polished and bright chrome plated.
- .2 Frame shall be 0.06 mm cold-finished steel with 8 mm inner and outer flanges.
- .3 Back mounting plate shall be 0.06 mm steel complete with hidden fasteners.
- .4 Mirror size shall be approximately 200 mm x 250 mm with overall size of approximately 250 mm x 290 mm.

- .5 Mirror size shall be approximately 235 mm x 385 mm with overall size or approximately 285 mm x 440 mm.
- .6 Acceptable manufacturer:
  - .1 Corcan.
  - .2 Norix.
  - .3 Approved alternate.

## **2.5 COLLAPSIBLE CLOTHES HOOKS**

- .1 Size: approximately 457 mm long by 140 mm high x 32 mm deep.
- .2 Provide 6 mm stainless steel ball hook and 0.135 mm stainless steel body safety clothes hook assembly, designed to collapse under a heavy load.
- .3 Provide an adjustable friction ball devise that permits variation of factory setting with us of a simple spanner tool.
- .4 Finish: brush satin stainless steel.
- .5 Provide 6 mm Torx-Registered machine screws to fit widely spaced holes designed to resist abuse.
- .6 Acceptable manufacturer:
  - .1 Corcan.
  - .2 Norix.
  - .3 Approved alternate.

## **2.6 DESK AND INTEGRAL SEAT**

- .1 Unified desk with two open shelves, and swing seat are wall and floor bolted, with fully welded mounting plates.
- .2 Size of desk: 914 mm wide by 406 mm deep by 762 mm high with support gussets and 50 mm back flanges.
- .3 Desk fabrication:
  - .1 Surface: 0.105 mm steel with 38 mm flange.
  - .2 Sides and back: 0.135 mm steel.
  - .3 Shelves: 0.135 mm steel.
- .4 Size of seat: 305 mm diameter.
- .5 Seat fabrication:
  - .1 Surface: 0.135 mm steel with 38 mm flange.
  - .2 Support arm: 64 mm diameter, 0.075 mm steel round tube support with mounting plate. Fully welded support, formed upward to fasten to desk with mounting plates.
  - .3 One piece welded assembly, all welds neatly finished

- .4 Powder coated finish, grey colour.
- .6 Acceptable manufacturer:
  - .1 Corcan.
  - .2 Norix.
  - .3 Approved alternate.

## **2.7 DESKS**

- .1 Unified desk with two open shelves, wall and floor bolted, with fully welded mounting plates.
- .2 Size of desk: 914 mm wide by 406 mm deep by 762 mm high with support gussets and 50 mm back flanges
- .3 Desk fabrication:
  - .1 Surface: 0.105 mm steel.
  - .2 Sides and back: 0.135 mm steel.
  - .3 Shelves: 0.135 mm steel
- .4 One piece welded assembly, all welds neatly finished
- .5 Powder coated finish, grey colour.

## **2.8 SEATS**

- .1 Size: 305 mm deep by 457 mm wide, with 50 mm back flanges, seat height 450 mm off floor and back rest height 815 mm of floor.
- .2 Seat fabricated from 0.135 mm steel.
- .3 One piece welded assembly, all welds neatly finished
- .4 Powder coated finish, grey colour.

## **2.9 WARDROBES**

- .1 Type 1-Single full-height locker, Class 1 - One complete locker, floor and wall mounted.
- .2 Size: 381 mm wide by 457 mm deep by 1830 mm high.
- .3 Wardrobe fabrication: 0.075 mm sheet steel, fully welded, flat top.
  - .1 Door: single wall construction; 0.075 mm steel thickness.
  - .2 Accessories: single shelf, three hooks.
  - .3 Finish: Powder coated finish, grey colour.
- .4 Acceptable manufacturer: CORCAN, model #A643-01

## **2.10 COMMON AREA TABLES**

- .1 Unified table with fixed table top, four fixed seats, rectangular design, and floor mounted.



- .2 Size of table top: 1372 mm long by 762 mm wide.
- .3 Table top fabrication:
  - .1 0.105 mm steel with a 38mm drop edge and reinforcing channels. Four threaded inserts for each support leg.
  - .2 Finish: baked on factory applied epoxy powder coated finish, grey colour.
- .4 Size of seats: 305 mm diameter.
- .5 Seat fabrication:
  - .1 Surface: 0.075 mm steel with 38 mm drop edge.
  - .2 Finish: baked on factory applied epoxy powder coated finish, grey colour.
- .6 Base fabrication:
  - .1 76mm diameter, 0.075 mm steel tubing.
  - .2 The curved member that supports the top has a 250 mm radius bend to facilitate easy cleaning beneath the table. This curved piece is fully welded to a vertical steel tube that supports the seat. The top of the curved tubes and top of the seat tubes have fully welded 150 mm x 150 mm x 6.4 mm thick steel plates for mounting top and seats. Bottom of seat tube has a fully welded mounting plate inset. The inset has a hole for the fully enclosed tamper-resistant bolt-down system.
  - .3 Finish: baked on factory applied epoxy powder coated finish, grey colour.
  - .4 One piece welded assembly, all welds neatly finished
- .7 Fasten to floor with concealed concrete expansion anchors.

## **2.11 SINGLE BED**

- .1 Single bed size:
  - .1 2032 mm long by 990 mm wide by 762 mm high.
- .2 Solid core construction, wood veneer finish.
- .3 Acceptable manufacturer: CORCAN, DormaFlex model #A135-BB-8039

## **2.12 DRAWER UNIT**

- .1 Two drawer dresser, solid core construction, wood veneer finish.
- .2 Dresser size:
  - .1 850 mm wide x 535 mm deep x 610 mm high.
- .3 Acceptable manufacturers:
  - .1 CORCAN.
  - .2 Approved alternate.

## **2.13 WOOD FRAMED MIRROR**

- .1 Mirrors shall be 0.8 mm thick sheet steel, highly polished and bright chrome plated.

- .2 Frame shall be solid core, wood veneer finish, half blind mortise and tenon construction, approximately 50 mm wide.
- .3 Back mounting plate shall be 0.06 mm steel complete with hidden fasteners.
- .4 Mirror size shall be approximately 300 mm x 500 mm with overall size of approximately 485 mm x 685 mm.
- .5 Acceptable manufacturer: CORCAN, DormaFlex model #A135-MIR-2028.

#### **2.14 STUDENT DESK**

- .1 Single drawer desk, solid core construction, wood veneer finish.
- .2 Desk size:
  - .1 915 mm wide x 610 mm deep x 762 mm high.
- .3 Acceptable manufacturer: CORCAN, DormaFlex Model #A135-SDDRW-2436.

#### **2.15 STUDENT CHAIR**

- .1 Polypropylene seat and back and metal frame.
- .2 Chair size:
  - .1 485 mm wide x 560 mm deep x 815 mm high.
- .3 Acceptable manufacturer: CORCAN, Model #A180-DAKOTA-PSB-NA-CR.

#### **2.16 FABRICATION**

- .1 Manufacture furniture to allow for dismantling and replacing of worn or defective components and recycling options following first use.
  - .1 Fabricate furniture to allow for remanufacturing or refurbishing of furniture following first use.

### **Part 3 Execution**

#### **3.1 EXAMINATION**

- .1 Examine substrates and condition, with installer present, for compliance with requirements for installation tolerances another conditions affecting performance of decorative metal.
- .2 Proceed with installation only after unsatisfactory conditions have been corrected.

#### **3.2 INSTALALTION**

- .1 Install detention furnishings in accordance with manufacturer's written installation instruction and as indicated on reviewed Shop Drawings.

- .2 Provide anchorage devices and fasteners where needed to secure furnishings to in-place construction.
- .3 Set products accurately in location, alignment, and elevation, measured from established lines and levels.
- .4 Corrosion protection
  - .1 Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

### **3.3 ADJUSTMENT**

- .1 Adjust items and components specified in this section to ensure proper operation.

### **3.4 CLEANING AND PROTECTION**

- .1 Clean metals by washing thoroughly with clean water and soap, rinsing with clean water, and drying with soft cloths.
- .2 Restore finishes damaged during installation and construction period so no evidence remains or correction work. Return items that cannot be refinished in the field to the shop; make alterations and refinish entire unit, or provide new units.

### **3.5 SCHEDULE**

- .1 Single bunk: provide one single bunk in Rooms 343, 344, 345, 346, 347, 368, 369, 370, and 371.
- .2 Double bunk: provide one double bunk in Rooms 342 and 367.
- .3 Single bunk mattress: provide one single bunk mattress in Rooms 341, 343, 344, 345, 346, 347, 366, 368, 369, 370, and 371.
- .4 Double bunk mattress: provide two double bunk mattresses in Rooms 342 and 367.
- .5 Single bed mattress: provide one single bed mattress in Rooms 310 and 311.
- .6 Mirrors: provide one framed mirror over lavatory in Rooms 342, 343, 344, 345, 346, 347, 367, 368, 369, 370, and 371.
- .7 Collapsible clothes hook: provide one collapsible clothes hook in 342, 343, 344, 345, 346, 347, 367, 368, 369, 370, and 371.
- .8 Desk and integral seat: provide one desk and integral seat in Rooms 367, 368, 369, 370, and 371.
- .9 Desk: provide one desk in Rooms 342, 343, 344, 345, 346, and 347.
- .10 Seat: provide one seat in Rooms 342, 343, 344, 345, 346, and 347.
- .11 Wardrobes: provide one wardrobe in Rooms 342, 343, 344, 345, 346, 347, 367, 368, 369, 370, and 371.

- .12 Common area tables: provide one table in Room 335 and two tables in Room 365.
- .13 Single bed: provide one single bed in Rooms 310 and 311.
- .14 Dresser: provide one-four drawer dresser in Rooms 310 and 311.
- .15 Wood framed mirror: provide one wood framed mirror in Rooms 310 and 311.

**END OF SECTION**