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## 1.0 GENERAL

### 1.2 References

- .1 Comply with all standards mentioned in this specification, unless more stringent requirements are given herein.
- .3 UL-Underwriters' Laboratories/ULC-Underwriters' Laboratories of Canada (UL/ULC)
  - .1 CAN/ULC-S109-03- EN, Flame Tests of Flame Resistant Fabrics and Films

### 1.3 Action and Informational Submittals

- .1 Provide submittals in accordance with **Section 01 33 00**.
- .2 **Technical data:** submit manufacturer's printed product literature, specifications and data sheets and include product characteristics, performance criteria, finish and limitations.
- .3 **Shop drawings:** Clearly indicate dimensions, construction details, assembly, fastening and other related details.
- .4 **Product samples:** submit samples 300 x 300 mm of each type of window shade fabric in the selected colour.
- .5 **Extra materials and spare parts:** provide 2 complete sets of tools necessary to install, maintain and adjust window shades and 10 extra drive chains.

### 1.4 Waste Management

- .1 Separate waste materials for disposal, re-use and recycling in accordance with **Section 01 74 19**.

## 2.0 PRODUCTS

### 2.1 Shading Systems, Manual

- .1 **System:** chain and sprocket, simple or dual shading systems, wall mounted with fascia cover plates concealing the entire shade assembly, with the following characteristics:
  - .1 Type 1 - With solar shading fabric.
  - .2 Type 2 - With solar shading and black out fabrics (dual vertical system). Double shade bracket system for vertical installation of the two tubes one above the other for a minimum horizontal projection.
  - .3 Type 3 - With black out fabric.
- .2 **Operation:** chain operated, with infinite positioning; left or right hand operation, as required – See drawings.
- .3 Basic metal materials and finishes: see **Section 05 50 00**.
- .4 **Assembly:**
  - .1 Fully factory assembled wall mounted window shade unit consisting of 2 end brackets, shade tubes, extruded aluminium fascia (with back fascia), end caps, hembar, wall mount angle, drive chain and fabric specified.
  - .2 Factory set drive assembly, self lubricating, capable of being adjusted from the exterior of the shade unit without having to disassemble the hardware; provided with a built-in shock

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- absorber system to prevent chain breakage under normal usage conditions.
  - .2 Fascia : concealing the entire shade assembly, snap-in fascia removable without the disassembly of the shade units, extruded aluminum 1.7 mm thick, provide end caps at both ends, complete with three continuous screw flutes, white finish applied in factory.
    - .1 For type 1 and 3, maximum overall fascia dimensions of 100mm high X 82 mm deep.
    - .2 For type 2 : maximum overall fascia dimensions of 200 mm high X 161mm deep.
  - .7 End bracket, coordinated with the fascia colour :
    - .1 For type 1 and 3 : 77 mm x 96 mm two piece moulded ABS construction with a 64 mm diameter nylon drive sprocket.
    - .2 For type 2 : double shade brackets for solar shading and black out fabrics on one compact bracket
  - .5 Shade tube : extruded aluminum 1.52 mm thick with three internal continuous fins 4.82 mm high, for strength and drive capabilities when attached to the nylon sprocket. Fins spaced 120 degrees apart.
  - .9 Hembar : extruded aluminum exterior hembar, with plastic end finials, white finish.
  - .8 Drive chain : No.10 stainless steel bead drive chain formed in a continuous loop, having passed a #90 test.
  - .10 Location and types as indicated on **Architecture drawings**.
  - .5 **Fabric:**
    - .1 Shade fabrics woven of .018 opaque, vinyl coated polyester yarn consisting of approximately 79% vinyl and 21% 500 denier polyester core yarn.
    - .2 Fabric tensioned in the finishing range prior to heat settling to keep the warp ends straight and minimize or eliminate weave distortion to keep the fabric flat.
    - .3 Fabric to be dimensionally stable.
    - .4 Colour to be as selected by the Departmental Representative from manufacturer's standard range.
    - .5 Percentage of openness: 3% (solar shading) with thickness of 0.38 mm and 0% (black out) with thickness of 0.30 mm.
  - .6 **Performance:** the fabric shall hang flat, without buckling or distortion. The edge, when trimmed, shall hang straight without ravelling. An unguided roller shade cloth shall roll true and straight, without shifting sideways more than 3 mm in either direction due to warp distortion, or weave design.
  - .7 **Flame retardance:** fabric shall be certified by an independent laboratory to pass the Small Scale Vertical Burn Requirements test as per CAN/ULC-S109.

### 2.3 Fabrication

- .1 Fabricate components in accordance with manufacturer's standards.
  - .2 Heat-seal trimmed edges to hang straight without curling or ravelling.
  - .3 Adjust bottom of shades to the inclined window sill, giving a matching sloping hem.
  - .4 Reinforce the fabric with stainless steel battens when the width-to-height ratios do not allow proper tracking and uniform rolling of the shades.
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### 3.0 EXECUTION

#### 3.1 Installation

- .1 Install the shades and blinds at the head or jambs of the openings as indicated, in accordance with manufacturer's instructions, and in accordance with approved shop drawings.
- .2 Secure aluminum components with non-corrosive metal fasteners for installation, concealed in final assembly.
- .3 Install shades and blinds square, plumb, true to line with operable parts adjusted for correct function. Adjust vane height after installation and stop positions are completed.
- .4 Any joint between two fabric pieces shall occur only at center line of an intermediate mullion.
- .5 Design brake to stop and hold shades in any position.
- .6 Adjust operable parts for correct function.
- .7 Adjust the mechanism to ensure a smooth operation.
- .8 Install the shades with non-corrosive metal fasteners, concealed in final assembly.
- .9 The fabric of the shades shall wind up or down in a perpendicular straight line.
- .10 Ensure the correct operation of the shades.
- .11 Install cords and bead chains out of children's reach: attach the cord retainer at a height of 1500 mm and adjust bead chains length accordingly.

#### 3.2 Field Quality Control

- .1 Verify proper installation and operation of motorized shades in the presence of the Departmental Representative.
- .2 Ensure proper operation of all equipment.

#### 3.3 Cleaning

- .1 Perform cleaning as per **Section 01 74 11**.

**End of Section**

## 1.0 GENERAL

### 1.1 References

- .1 Comply with all standards mentioned in this specification, unless more stringent requirements are given herein.
- .2 The Aluminium Association (AA).
  - .1 DAF 45-R03, Designation System for Aluminum Finishes - 9th Edition.
- .3 American Society for Testing and Materials International, (ASTM).
  - .1 ASTM A53/A53M-02, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
  - .2 ASTM A480/A480M-03b, Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.
  - .3 ASTM B241/B241M-02, Standard Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube.
  - .4 ASTM B117-11, Standard Practice for Operating Salt Spray (Fog) Apparatus

### 1.2 Design Criteria

- .1 Foot grilles shall withstand a force of 2.260 kN, at a maximum span of 610 mm, with a deflection not exceeding 1/190th of the span.
- .2 Assembly to successfully pass salt fog test at 999.99 hours as per ASTM B117.

### 1.3 Submittals

- .1 Provide submittals in accordance with **Section 01 33 00**.
  - .1 Extra materials, special tools and spare parts: provide 2 complete sets of tools necessary to install, maintain, and adjust foot grille assemblies.

### 1.4 Waste Management

- .1 Separate waste materials for disposal, re-use and recycling in accordance with **Section 01 74 19**.

## 2.0 PRODUCTS

### 2.1 Materials and Finishes

- .1 Basic metal materials and finishes: see **Section 05 50 00**.

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## 2.2 Aluminum Foot Grilles, Two-Directional Pattern

- .1 Aluminum Foot Grille: Complies with ASTM B117, self-cleaning and slip resistant, designed for multi-directional circulation, 6061-T6 aluminum components brushed satin finish, 9.5 x 3 x 25mm T-shaped blades .
  - .1 Designed to accept 2260N uniform load applied on a surface of 100mm square so as not to exceed a deflection of 1/180 " for a range of 610mm.
  - .2 Perimeter frame: 'L' shaped extrusion, see details on plans, with sound gaskets, factory installed.
  - .3 Basin: frames will be provided with a basin, 22 gauge stainless steel basin, no drain, 25mm deep (for a total depth of 50mm including grid), with 2 coats of bituminous paint on all surfaces in contact with concrete, refer to plan details.
  - .4 Dimensions: as plans.
  - .5 Provide neoprene noise pads, as specified by the manufacturer, between the metal members in direct contact.
  - .6 Provide plates and screws, installed by the manufacturer of the foot grille on each corner of grille, they must be attached to the frame by the General Contractor with screws supplied by the manufacturer and verified by the Departmental Representative before approval.

## 3.0 EXECUTION

### 3.1 Inspection

- .1 Make sure that the substrate is in good condition, smooth, dry, clean and well finished.

### 3.2 Installation of Foot Grilles

- .1 Install as per the manufacturer's instructions and details on **drawings**.
- .2 Supply and install frames and other items to be embedded in concrete.
- .3 Install level and flush with the adjacent flooring.
- .4 Install pan ensuring a continuous and uniform contact with the concrete surface, filling the space between the pan sides and the concrete with a finishing mortar, if necessary. See **Section 09 65 00**.
- .5 Install foot grilles set at right angle and levelled with the finished floor as to allow easy manipulation of all sections. All frame sections and intermediate support should be levelled and firmly supported along their entire length so as to avoid any deflection in the long term. Once the grille is in place, patch the concrete around it using a non-shrink grout.

.6 All sections to be rigidly supported to avoid any permanent deflection.

.7 Grilles shall be installed only when all surrounding work is completed.

### 3.3 Protection

.1 Install temporary plywood boards, flush with the flooring, until grilles are installed, to temporarily fill floor irregularities.

.2 Protect grilles adequately against wear and tear during construction. Grilles shall be installed at the end of the work, in order to protect them from damage. All frames and pans shall be cleaned before placing the grille sections. Level of the finished grill sections shall not exceed the level of finished floor. All anti-noise cushions damaged during construction shall be replaced before final inspection. Install the hinges and notches onto the frames.

### 3.4 Cleaning

.1 Perform cleaning as per **Section 01 74 11**.

.2 Remove all debris and clean the frames and the depression before installing the grilles.

**End of Section**

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## 1.0 GENERAL

### 1.1 References

- .1 American National Standards Institute (ANSI).
  - .1 ANSI A208.1-99, Standard for Particleboard.
- .2 American National Standards Institute (ANSI) / Business and International Furniture Manufacturers Association (BIFMA) International.
  - .1 ANSI / BIFMA X5.1-2002, American National Standard for Office Furnishings, General Purpose Office Chairs - Tests.
  - .2 ANSI / BIFMA X5.6-2003, American National Standard for Office Furnishings - Panel Systems.
- .3 Canadian General Standards Board (CGSB).
  - .1 CAN / CGSB 44.227-2000, Freestanding Office Furniture and Components.
  - .2 CAN / CGSB-44.232-2002, Office Chairs for Screen Terminals.
- .4 Health Canada - Workplace Hazardous Materials Information System (WHMIS).
  - .1 Material Safety Data Sheets (MSDS).
- .5 Public Works and Government Services Canada (PWGSC) - Industrial and Commercial Products and Standards Services Sector - Government Purchase Description (AGS).
  - .1 PWGSC-DAG-6-February 1999, Metal Frame Chairs.
- .6 The Master Painters Institute (MPI).
  - .1 Architectural Painting Specification Manual - March 1998 (R2002).
- .7 Underwriters Laboratories of Canada (ULC).
  - .1 CAN / ULC-S102-1988 (C2000), Standard Test Method, Combustion Characteristics of Construction Materials and Assemblies.
- .8 Underwriters' Laboratories (UL).
  - .1 UL 1286 Edition 4-1999, Standard for Office Furnishings.

### 1.2 Action and Informational Submittals

- .1 Provide submittals in accordance with **Section 01 33 00** and the following requirements:
  - .1 **Shop drawings:** submit a schedule of all furniture and equipment with shop drawings. Provide manufacturer's printed product literature and data sheets and include product characteristics, performance criteria, physical size, finish and limitations. Provide part numbers for each piece of furniture and equipment to facilitate replacement of worn or damaged parts.
  - .2 Submit manufacturer's instructions for repair or replacement of used parts in accordance with **Section 01 33 00 - Submittal Procedures**.

### 1.3 Waste Management

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.1 Separate waste materials for disposal, re-use and recycling in accordance with **Section 01 74 19**.

#### 1.4 Coordination

.1 Coordinate the work of this Section with the other trades concerned as to dimensions, concealed supports, scheduling, etc.

#### 2.0 PRODUCTS

##### 2.1 Equipment

.1 Refer to **architecture drawings** for quantity and location, unless otherwise noted.

.2 C-01 – Office chair - BY OTHER

.3 C-02 – Guest / staff chair - BY OTHER

.4 C-03 – Child chair (18mo-2yrs) - BY OTHER

.5 D-01 – Office desk with mobile drawer unit, side credenza - BY OTHER

.6 D-02 – Table - BY OTHER

.7 F-01 – Filing cabinet (4 drawers) - BY OTHER

.8 CA-01 – Sleeping mat - BY OTHER

.9 CA-02 – Changing pad - BY OTHER

.10 CA-03 – Toy / storage bin - BY OTHER

.11 CA-04 – Crib - BY OTHER

.12 CA-05 – Child's bin - BY OTHER

.13 CA-06 – Cot - BY OTHER

.14 E-01 – Microwave - BY OTHER

.15 E-02 – Bar fridge - BY OTHER

.16 E-03 – Fridge with freezer - BY OTHER

.17 E-04 – Double door fridge - BY OTHER

.18 E-05 – Dishwasher - BY OTHER

.19 E-06 – Washer - BY OTHER

.20 E-07 – Dryer - BY OTHER



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- .21 E-08 – Freezer - BY OTHER
  - .22 E-09 – High chair (wall mounted)
    - .1 Wall mountable chair. Soft surface tray that is easy to clean, install and remove. Strap with buckle to secure the child and removable for cleaning. Provide all required hardware for installation in stainless steel. Chair : natural wood, varnished. Tray: grey robust plastic.
    - .2 Dimensions
      - .1 Chair : 337 x 287 x 535mm.
      - .2 Tray : 456 X 280mm
  - .23 E-10A – Fold-down table with seating (wall mounted)
    - .1 Robust, durable and ergonomic table. Anti-weight mechanism with floor and wall anchoring, safe and easy to use, lightweight (less than 500 grams of resistance), equipped with a shelf for the educator which folds when not in use.
    - .2 Materials: table and bench constructed of 25mm plywood finished with 1.6mm plastic laminate (color at departmental representative choice) with flexible finishing edges in T, metal legs with cooked paint, anchoring pilaster covered with very resistant vinyl membrane.
    - .3 Provide locking mechanism when table is in upright position.
    - .4 Dimensions:
      - .1 Anchoring pilaster : 114 depth X 356 width X 560mm height
      - .2 Table : 813mm width X 1803 length X 560mm height
      - .3 Overall width including benches 1220mm.
      - .4 Overall height when folded up : 2413mm
  - .24 E-10B – Fold-down table with no seating (wall mounted)
    - .1 Robust, durable and ergonomic table. Anti-weight mechanism with floor and wall anchoring, safe and easy to use, lightweight (less than 500 grams of resistance).
    - .2 Materials: table constructed of 25mm plywood finished with 1.6mm plastic laminate (color at departmental representative choice) with flexible finishing edges in T, metal legs with cooked paint, anchoring pilaster covered with very resistant vinyl membrane.
    - .3 Provide locking mechanism when table is in upright position.
    - .4 Dimensions:
      - .1 Anchoring pilaster : 114 depth X 356 width X 560mm height
      - .2 Table : 762mm width X 1803 length X 560mm height
      - .3 Overall height when folded up : 2413mm
  - .25 E-11 – Oven - BY OTHER
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- .26    **E-12 – Lockable metal cabinet (wall mounted)**
- .1            Clear-view wall-mount cabinet, all welded steel, locking door, shelves adjusting in 500mm increments, 150 lbs shelf capacity, mounting hardware included.
- .2            Dimensions : 762 width X 356mm depth, X 686mm height
- .3            Colour : Light Gray
- .27    **E-13 – Cutting boards for country food - BY OTHER**
- .28    **E-14 – Boot tray - BY OTHER**
- .29    **E-15 – Entrance carpet**
- .1            High traffic area carpet, holds approximately 7 litres of water per square yard, 1750 grams / sq.m. face weight, backing made of eco-di-back natural, carpet made of dyed polypropylene fibres, mold and mildew resistant
- .2            Color: Color chart must offer at least 10 choices. Color at Departmental Representative's choice.
- .3            Installation with water resistant double sided tape, provide flexible nosing on three sides. Product chart for nosing must contain at least 2 colors.
- .4            Dimensions : approximately 1760 X 7890mm to be coordinated on site prior to fabrication.
- .5            Fabricate in 2 sections, joint location to coordinate on site, seal joint underside with double-sided tape.
- .30    **E-16 – Magnetic / white boards**
- .1            Magnetic board, Heavy duty, steel construction coated with chip and scratch resistant finish, 18 ga steel with polyester powder coating, seamless edges allowing grouping.
- .2            Ensure plumb and level installation as per details on drawings
- .3            Dimensions : 355 width x 762 height x 11 thickness
- .4            Group of 4 boards per room as per details on drawings
- .5            Accessories : Each board includes 6 magnets, 100 X150mm dry erase board and dry erase pen.
- .6            Color: Color chart must offer at least 3 choices. Color at Departmental Representative's choice.
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**.31 EXT-01 – Play equipment type 1 – Exterior psychomotor block station`**

- .1 Exterior psychomotor block, compliant to CAN/CSA-Z614, for age group 18 months to 5 years, capacity of 13 children, overall approximate dimensions of 2.47m length X 1.7m X1,9m height. The block will be anchored by a dormant system buried in the ground made of galvanized steel as per manufacturer's recommendation. Contractor will provide and install all required fasteners and anchoring elements and will coordinate block installation with conditions on site to ensure a compliant installation. The exterior psychomotor block comprises the minimal following play components:

**.1 915mm ladder :**

- .1 Metals Handrails: 1-1 / 2 "(38mm) OD steel tube.
- .2 Hardware: Stainless steel, vandal resistant type.
- .3 Staircase (s): Made of perforated 20 gauge steel plate covered with high quality polyvinyl. Plastisol is amalgamated at the steel plate by soaking to then be baked at 300 degrees
- .4 Paint: The painted metal parts are first shot-blasted, then coated with a primer and Z-coated polyester powder coating, which is extremely resistant to ultraviolet rays and weathering.

.2 Play telescope: steel case, stainless steel, vandal resistant type hardware, tips high-density polyethylene (HDPE) treated against UV rays, black color.

.3 Molded double slide with strong slope: High density polyethylene (HDPE) rotomoulded, colored in the mass and treated against UV rays. Steel base. Hardware: Stainless steel, vandal resistant type. Some fasteners are hot-dip galvanized.

.4 915mm cable net: Thread (s):16 mm diameter wire with steel core galvanized 10 mm diameter (7 strands of 19 wires) sheathed black polyurethane, treated against UV rays, linked by a joint mechanical high density polyethylene (HDPE). Hardware: Stainless steel, vandal resistant type.

.5 Game counter: panel of high density polyethylene (HDPE) sheet colored in the mass and treated against UV rays. All edges are rounded to maximize security. Fastener (s): Hot-dip galvanized steel. Hardware: Stainless steel, vandal resistant type. Engraved drawing on HDPE, graphics will be provided numerically by Departmental Representative.

.6 Psychomotor bloc is surrounded by free play area of 6X7.2m, as per shown on drawings, delimited by treated wood edges 150X150mm with lap joints (See Section 06 20 00) and 900 mm stainless steel anchor rods.

**.32 EXT-02 – Garbage receptacle**

- .1 Prefabricated polyethylene waste bin, with hinged lid placed at the back of the container, on the longest side;

.1 Capacity: 1100 liters.

- .2 Handles: integrated on the lid.
- .3 Lid: without lock, without mechanical pedal opening, with flanged flange rejecting rainwater outside the trash, without drilling for bottles and cans, so rainproof. The lid must not rise in the wind.
- .4 Container: without caster, with built-in bottom drainage but without cap, smooth-walled, with flanged flange and bottom reinforced with integrated dimpled molded structure, incorporating four reinforced bases to receive galvanized steel mounting plates, assembled in the trash with bolts and self-locking washers in stainless steel.
- .5 Dimensions: 1370 x 1100 x 1165mm.
- .6 Steel plates: galvanized steel fasteners 3mm x 127mm x 178mm with five required diameter holes for four bolts insert to attach to each base under the bottom of the trash; and one bolt for fixing each steel plate to the treated wood base placed on the ground.
- .7 Self-locking bolts and washers: stainless steel, in diameter, length and without thread, as required to secure the steel plates to the bottom of the bins.
- .8 Color at Departmental Representative's choice.

## 2.4 Anchoring

- .1 Provide all required steel anchor plates and, bolts, plugs and other fasteners for proper installation of accessories on the substrates.

## 3.0 EXECUTION

### 3.1 Installation

- .1 Obtain Departmental Representative's approval for the typical positioning of all furniture and equipment before making the cut-outs in the walls, installing nailing bases and attaching accessories.
- .2 Install all equipment as per manufacturer's recommendation.
- .3 Deliver inserts and rough-in-frames to job site at appropriate time for building-in. Provide templates, rough-in measurements, details and instructions for building-in anchors as required.
- .4 Install plumb and level, at standard heights, or as shown on drawings, according to the manufacturer's written instructions and best accepted practice of the industry.
- .5 Comply with NBC and CAN/CSA-B651 requirements for barrier-free access where applicable.
- .6 Install and secure fixtures rigidly in place as follows:
  - .1 Stud walls: install galvanised fastening bases to studs prior to drywall finish.
- .7 Use tamper proof theft proof stainless steel screws/bolts for exposed fasteners, and corrosion resistant

type for concealed fasteners.

3.2     **Cleaning**

- .1       Perform cleaning as per **Section 01 74 11**.

**End of Section**