

**Part 1 General****1.1 RELATED REQUIREMENTS**

- .1 Section 06 10 00 – Rough Carpentry.
- .2 Section 08 44 13 – Glazed Aluminum Curtain Walls
- .3 Section 09 21 16 – Gypsum Board Assemblies.
- .4 Section 09 22 16 – Non-structural Metal Framing.
- .5 Section 09 58 00 – Integrated ceiling assemblies.

**1.2 REFERENCES**

- .1 ASTM International
  - .1 ASTM D1784-11, Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
  - .2 ASTM E2180 – 07(2012), Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) In Polymeric or Hydrophobic Materials
- .2 National Fire Protection Association
  - .1 NFPA 701- 2015 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's printed product literature and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
  - .1 Indicate dimensions in relation to window jambs, operator details, top rail, conditions between adjacent blinds, corner conditions anchorage details, hardware and accessories details, electrical operating mechanisms, connections.
- .4 Samples:
  - .1 Submit one representative working sample of each type of blinds.
  - .2 Submit duplicate samples of manufacturer's standard colours, patterns and textures of specified vane and rail materials for selection by Ministerial Representative.
- .5 Work samples
  - .1 Submit a representative and manoeuvrable sample of each suggested type of blind.
  - .2 Submit two (2) samples of standard colours offered by manufacturer for selection by Departmental Representative.

**1.4 QUALITY ASSURANCE**

- .1 Mock-ups: Construct mock-ups in accordance with Section 01 45 00 - Quality Control.
  - .1 Produce a work sample in dimensions coordinated with those of work sample specified in Section 08 44 13 – Glazed Aluminum Curtain Wall.
  - .2 Samples will be used for following purposes:
    - .1 To assess performance of material, reflectivity, sunlight transmission level and visual aspect of fabric.
  - .3 Locate mock-up where indicated.
  - .4 Allow the persons in charge of examining samples 24 hours before starting work.
  - .5 When accepted, mock-up will demonstrate minimum standard of quality and materials for work of this Section.
  - .6 Mock-up may not remain as part of finished work.
- .2 Qualifications of installer: Installer must be certified by manufacturer and have minimum of five (5) years' experience in installation of roller shades.

**1.5 EXTENDED WARRANTY**

- .1 For Work of this Section 12 21 19 – Roller Blinds, the 12-month warranty period is extended to 60 months for roller shade parts, 120 months for fabrics, lifetime for mechanisms.
- .2 Provide a written document jointly prepared and signed by the manufacturer and the installer and issued in the name of Canada, ensuring the work against defects in materials, workmanship and installation for the period specified above.

**1.6 DELIVERY, STORAGE AND HANDLING**

- .1 Packing, shipping, handling and unloading:
  - .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .3 Store materials to prevent damage or contamination by water, freezing, foreign matter or other causes. Store cementitious materials in dry location, above ground or pavement.

**Part 2 Products****2.1 DESIGN REQUIREMENTS**

- .1 Design roller blinds to following requirements:
  - .1 Allow replacement of wear susceptible parts by user or manufacturer.
  - .2 Guarantee of at least five-years of available replacement parts following discontinued products by manufacture.
  - .3 Provide instructions for replacing or repairing worn parts, including inventory numbers for parts and procedures for ordering replacement parts.
  - .4 Program allowing for refurbishing or return of used vertical louvre blinds.

- .5 Permit disassembly of components for recycling of materials where recycling markets exist.
- .6 Include stamps on major plastic components indicating composition code to facilitate recycling efforts.

## 2.2 MATERIALS, EQUIPMENT AND FABRICATION

- .1 At bays of curtain-wall on axis C9: motorized roller blind.
  - .1 Sunscreen blind:
    - .1 Fabric:
      - .1 Fibreglass and vinyl fibreglass screen fabric, 10% opening, certified NFPA 701 for fire resistance, certified ASTM E 2180 for bacteriological and fungal resistance.
      - .2 Colour and finish: Ministerial Representative's choice from manufacturer's standard range.
    - .2 Installation: joint coupling with connector.
    - .3 Operation of mechanism:
      - .1 Motorized system for six panels at same time.
    - .4 Dimensions of blinds:
      - .1 One shade per bay window.
      - .2 Width: centre-to-centre dimensions of vertical mullions.
      - .3 Height: outer dimensions of horizontal mullions.
  - .2 Accessories:
    - .1 Guiderails and curtain thresholds: extruded aluminum, profile as indicated, clear anodized finish, with concealed border strips and fasteners. Provide clear anodized aluminum closing plate as indicated.
    - .2 Fasteners and anchors: corrosion-resistant metal, compatible with fastening materials.
  - .2 General hardware for operation:
    - .1 Hardware must allow for removal of drum from supports without removing hardware from drum opening or supports.
    - .2 Hardware must allow for removal and reinstallation of curtain on site without removing drum, hardware for operation or drum supports.
    - .3 Chain hoist: stainless steel ball chain with tensile strength of 90 lbs., with capacity for multiple curtains to be operated with single chain.

## 2.3 FABRICATION

- .1 Assemble and finish units in shop.
- .2 Fabricate components thick enough to support their own weight plus imposed loads without sagging.
- .3 Fabricate blinds to overlap with frame's width. Unless indicated otherwise, joints between two blinds to be present at centre line of curtain wall mullion.
- .4 Hot-seal cut edges to fall straight with no curling or fraying.

- .5 Strengthen curtain fabric with stainless steel fins when width and height ratios prevent proper functioning of curtains.
- .6 Use fasteners to be concealed in final assembly.

### **Part 3 Execution**

#### **3.1 EXAMINATION**

- .1 Check existing conditions: before installing roller blinds, ensure that condition of previously installed surfaces and supports under other sections or contracts are acceptable and allow for work in accordance with manufacturer's instructions.
  - .1 Conduct visual inspection of surfaces and supports in presence of Ministerial Representative.
  - .2 Inform Ministerial Representative immediately of any unacceptable condition detected.
  - .3 Begin installation work only after correcting unacceptable conditions.

#### **3.2 LOCATION**

- .1 Except for bay windows adjacent to door, install one roller blind for each bay window:
  - .1 On east and west façades, except between axes 5 - 5.5 and 12a - 13;
  - .2 On south façade, except between D - E and M - N;
  - .3 On north façade, between axes A - B and Q - R.

#### **3.3 INSTALLATION**

- .1 Install blinds square, plumb and aligned.
- .2 Adjust control chains and mechanism to ensure smooth, uniform operation.
- .3 Install blinds with fasteners and anchors that will be concealed in final assembly.
- .4 Ensure that blinds are securely attached, with no movement or play when handled.

#### **3.4 ADJUSTMENT**

- .1 Adjust roller blinds and components so that they function properly, in accordance with manufacturer's written instructions.
- .2 Adjust moving parts precisely and lubricate them so that they run smoothly.
- .3 Fabric must fall straight and roll up plumb and square.

#### **3.5 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

#### **3.6 PROTECTION**

- .1 Protect installed units against damage during construction work.

## ROLLER BLINDS

- .2 Repair damage to adjacent materials and equipment caused by roller blind installation work.

**END OF SECTION**