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**Part 1      General**

**1.1      SYSTEM DESCRIPTION**

- .1      Metal clad wood sections, factory fabricated, vision glass, door hardware, threshold, related flashings, anchorage and attachment devices.

**1.2      REFERENCES**

- .1      AAMA/WDMA/CSA/101/I.S.2/A440-05 - Standard/Specification for Windows, Doors, and Unit Skylights.
- .2      AAMA/WDMA/CSA/101/I.S.2/A440-07 - Canadian Supplement to Standard/Specification for Windows, Doors, and Unit Skylights.
- .3      AAMA 1503-98 - Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections.
- .4      ASTM E283-04 - Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- .5      ASTM E330-02 - Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
- .6      ASTM E331-00 - Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference..
- .7      WDMA I.S.4-07A - Water Repellent Preservative Treatment for Millwork.

**1.3      PERFORMANCE REQUIREMENTS**

- .1      System Design: Design and size components to withstand dead and live loads caused by pressure and suction of wind acting normal to plane of doors as calculated in accordance with NBC code.
- .2      Member Deflection: Limit member deflection to flexure limit of glass in any direction; with full recovery of glazing materials.
- .3      Lintel Deflection: Accommodate deflection of lintel without damage to components, deterioration of seals, or movement between door frame and perimeter framing.
- .4      Air and Vapour Seal: Maintain continuous air barrier and vapour retarder throughout assembly, primarily in line with inside pane of glass and heel bead of glazing compound.
- .5      System Internal Drainage: Drain water entering joints, condensation occurring in glazing channel, or migrating moisture occurring within system to the exterior by a weep drainage network.

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- .6 Air Infiltration: Limit air infiltration through assembly to 0.03 L/s/sq m of wall area, measured at a reference differential pressure across assembly of 75 Pa as measured in accordance with ASTM E283.
- .7 Water Leakage: None, when measured in accordance with ASTM E331 with a test pressure difference of 136.85 Pa.
- .8 Forced Entry Resistance: CSA A440, Category F2.

#### **1.4 SUBMITTALS FOR REVIEW**

- .1 Section 01 33 00: Submission procedures.
- .2 Product Data: Provide component dimensions, fastener types, glass, internal drainage details, cuts of hardware and accessories.
- .3 Shop Drawings:
  - .1 Submit shop drawings in form of electronic - PDF/AutoCAD files.
  - .2 Indicate opening dimensions, elevations of differing units, framed opening tolerances, method for achieving air and vapour barrier seal to adjacent construction, anchorage locations, affected related work, installation requirements].
- .4 Certificates: Certify that Products meet or exceed specified requirements and performance criteria tests.
- .5 Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.

#### **1.5 QUALITY ASSURANCE**

- .1 Conform to CSA A440.
- .2 Manufacturer and Installer: Company specializing in commercial fabrication of metal faced wood doors with five (5) years minimum experience.

#### **1.6 DELIVERY, STORAGE, AND PROTECTION**

- .1 Package, deliver and store doors in manufacturer's packaging.

#### **1.7 WARRANTY**

- .1 Correct defective Work within a five (5) year period after Date of Substantial Completion.
- .2 Warranty:
  - .1 Include coverage for degradation of colour finish, loss of adhesion, bubbling, cracking, flaking, or chipping.
  - .2 Include coverage for delamination or separation of finish cladding from door and frame members

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- .3 Provide ten (10) year manufacturer's limited warranty for insulated glass units from seal failure, inter pane dusting or misting, and replacement of same.

## **Part 2 Products**

### **2.1 COMPONENTS**

- .1 Frames & Sash: Fabricated from clear pine or fir species preservative treated to WDMA I.S.4 of type suitable for transparent or opaque interior finish.
- .2 Metal Cladding (Exterior Surface): Factory finished extruded aluminum, factory fit to profile of wood members, and exterior exposed surfaces.
- .3 Glazing: in accordance with Section 08 80 50.
- .4 Anchors: Galvanized steel.
- .5 Bituminous Paint: Fibred asphaltic type.
- .6 Sealant and Backing Materials: As specified in Section 07 92 00.
- .7 Door Handles, Hinges and Locks: refer to Section 08 71 00.
- .8 Threshold: Extruded aluminum, wood reinforced; sloped for positive wash; one piece full width of opening..
- .9 Glass Stops: Formed of solid wood, same species as door, sloped for wash.
- .10 Weather Stripping: Manufacturer's standard, profiled to effect a continuous tight fitting weather seal.
- .11 Fasteners: Stainless steel.

### **2.2 FABRICATION**

- .1 Size and fabricate door assembly to allow for tolerances of rough framed openings, clearances, shim spacing and shims around perimeter of assemblies.
- .2 Ensure joints and connections are flush, hairline, and waterproof.
- .3 Finger joints not permitted in wood units or trim.
- .4 Form sills and stools in one piece. Slope sills for wash.
- .5 Accurately and rigidly fit joints and corners. Match and align cladding joints for continuity of line and design.
- .6 Match components to ensure continuity of line.
- .7 Provide drainage to exterior for moisture entering joints and glazing spaces and condensation occurring within frame construction.

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- .8 Factory glaze units in accordance with Section 08 80 50.

### **2.3 FINISHES**

- .1 Exterior Metal Cladding: Duranor XL as selected By Departmental Representative.
- .2 Interior Surfaces: Finish with transparent or opaque materials as specified in Section 09 91 10.
- .3 Threshold: Mill finish.
- .4 Apply coat of bituminous paint on concealed aluminum surfaces in contact with cementitious or dissimilar materials.

### **Part 3 Execution**

#### **3.1 EXAMINATION**

- .1 Verify that openings are ready to receive work and opening dimensions and clearances are as indicated on shop drawings.
- .2 Prepare opening to permit correct installation of door unit in conjunction with air and vapour seal.

#### **3.2 INSTALLATION**

- .1 Install door unit assembly, and hardware in accordance with manufacturer's instructions.
- .2 Attach frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.
- .3 Use anchorage devices to securely fasten sliding door assembly to wall construction without distortion or imposed stresses.
- .4 Coordinate installation with placement of air and vapour seals at frame perimeter as specified in Section 07 27 19.
- .5 Coordinate installation of foamed insulation at shim spaces at frame perimeter as specified in Section 07 21 19.
- .6 Place threshold in bed of butyl sealant.
- .7 Install perimeter sealant to method required to achieve performance criteria and installation criteria in accordance with Section 07 92 00.

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**3.3 ERECTION TOLERANCES**

- .1 Maintain dimensional tolerances and alignment with adjacent work.
- .2 Maximum Variation from Plumb: 1.5 mm.
- .3 Maximum Variation from Level: 1.5 mm.
- .4 Longitudinal or Diagonal Warp: Plus or minus 3 from 3 meter straight edge.

**3.4 ADJUSTING**

- .1 Adjust hardware for smooth operation.

**3.5 CLEANING**

- .1 Remove protective material from factory finished surfaces.
- .2 Remove labels and visible markings.
- .3 Wash surfaces by method recommended and acceptable to sealant and window manufacturer; rinse and wipe surfaces clean.
- .4 Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant manufacturer.

**3.6 PROTECTION OF FINISHED WORK**

- .1 Do not permit continuing construction activities near unprotected finish surfaces.

**END OF SECTION**