

## **PART 1 - GENERAL**

### 1.1 Reference Standards

- .1 Use the most current edition of any standard referenced in this specification.
- .2 AAMA/WDMA/CSA 101/I.S.2/A440, NAFS – North American Fenestration Standard/Specification for Windows, Doors & Skylights (Harmonized Standard).
- .3 CSA A440S1-17, Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440 NAFS- North American Fenestration Standard/Specification for Windows, Doors & Skylights.
- .4 Windows shall be CSA Certified and Energy Star qualified.

### 1.2 Requirements

- .1 Windows supplied to site for construction must include a manufacturer supplied label demonstrating conformance with the bid submission and this specification.
- .2 Windows not in compliance with the bid and/or specification will be removed and replaced with compliant windows at the expense of the contractor.

### 1.4 Warranty and Maintenance

- .1 The manufacturer shall warrant and guarantee the window and its assembled parts in accordance with the terms and conditions set out below. All warranties shall be non-prorated.
- .2 The vinyl window and frame shall be free from manufacturing defects resulting in peeling, blistering, flaking, corroding or rotting for a lifetime period;
- .3 The insulated glass component of the window shall remain free from material obstruction of vision because of dust or film formation on the interior glass surface due to failure of the seal resulting from manufacturing defects for a minimum period of thirty (30) years from the date of purchase;
- .4 All component mechanical parts and hardware of the window shall be free of manufacturing defects which result in failure of the part to operate properly for a minimum period of twenty (20) years from the date of purchase;
- .5 All glazing shall remain free of stress cracks resulting from manufacturing defects for a minimum period of one (1) year from the date of installation.

- .6 In the event that defects become evident within five (5) years of the date of installation, the manufacturer shall supply labor and material necessary to affect the complete repair or replacement to the satisfaction, and at no cost to, the Housing Authority. After the five-year period, the manufacturer shall supply, at no cost to the Housing Authority, the necessary replacement parts required to repair the window as a complete unit except where parts are covered by warranty.
- .7 Contractor to provide Project Manager with manufacturer maintenance, care guides, and warranty at end of installation.

## **PART 2 - PRODUCTS**

### **2.1 Materials**

- .1 Rigid vinyl frame extrusion
- .2 Exterior Accessories:  
.1 Snap-in or integrated brick mould with nailing flange large profile;  
.2 Integrated minimum 45/64“(18mm) J-trim as provided by manufacturer.  
Coordinate with dimension with cladding
- .4 Balances adjusted at factory.
- .5 Locking Mechanisms:  
.1 Casement and Awning: Multi-lock devices required;  
.2 Horizontal Slider: 2 required at vertical meeting rail (Cam Type) for windows 30” and higher;  
.3 Vertical Slider: 2 required at horizontal meeting rail (Cam Type) for windows 30” and wider.
- .6 Stainless Steel 304 Hinges; Powder Coated Snubbers, Locking Bars, Casement and Awning Operators, Pivot Bars, and Exposed Fasteners.
- .7 Screens: Roll formed aluminium, white enamel finish, with 18x16 fibreglass screening.

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## 2.2 Type and Performance

- .1 Types: Casement, Awning, Horizontal Slider, Vertical Slider, and Fixed.
- .2 Performance Requirement, per Fenestration Canada calculator <http://www.fenestrationcanada.ca/calculator/a44os1-17> for project location):
  - .1 Minimum Performance Class Rating \_\_\_\_\_
  - .2 Minimum Positive Design Pressure \_\_\_\_\_ Pa
  - .3 Minimum Negative Design Pressure \_\_\_\_\_ Pa
  - .4 Minimum Water Penetration Resistance Test Pressure \_\_\_\_\_ Pa
  - .5 Minimum Canadian Air Infiltration/Exfiltration \_\_\_\_\_
- .3 Energy Star Rating: **Min. ER 34**

## **PART 3 - EXECUTION**

### 3.1 Removal of Existing Window(s) when required

- .1 Remove existing window(s) and dispose off-site, in accordance with authorities having jurisdiction.
- .2 Examine building sheathing and framing, and report rot or deficiencies to Project Manager before starting work.

### 3.2 Installation

- .1 Install in accordance with the Reference Standards aforementioned and window manufacturer's instructions, and applicable codes/regulations.
- .2 In absence of HNS installation drawings and details, and in conjunction with 3.2.1, install as follows:
  - .1 Ensure window is closed and locked prior to installation;
  - .2 **Do not** remove nailing flanges;
  - .3 Install windows plumb, level and square. Shim sill to level as follows: At vertical elevation, shim jamb at top, bottom and at meeting mullion of window, on both sides; shim sill directly under the vertical jambs and at centre; do not shim top of window;
  - .4 Attach window to building as instructed by the Project Manager and as follows: With nailing flange; if using screws do not over torque; do not use staples.
  - .5 Seal, tape and apply materials around window as required to maintain continuity of interior vapour barrier and exterior weather resistant barrier (air barrier or building paper);

- .6 Install new flashing at window openings as per the latest National Building Code including sill pan with approved materials;
- .7 Between rough opening and frame, fill voids with low expansion closed cell spray foam.

**3.4 Reinstatement when Existing Windows are Replacements**

- .1 Reinstatement disturbed areas including drywall, siding, caulking, membranes, casing, sills and related finishes with compatible materials if matching are no longer available. Supply and install new interior window trim, match existing trim in quality, material and dimensions. If existing trim type is not readily available, submit alternatives to Project Manager for review. Approval in writing from Project Manager is required before any other trim type is used on the project.

**3.5 Clean-up and Disposal**

- .1 Leave site clean and dispose of rubbish off site daily;
- .2 Remove labels from windows and clean interior and exterior surfaces including glass by washing with water and detergent, followed by clean water rinse;
- .3 Separate and recycle waste materials in accordance with applicable regulations;
- .4 Remove from site and dispose of packaging materials at appropriate recycling facilities;
- .5 Divert unused or damaged wood materials from landfill to an approved facility;
- .6 Divert unused metal materials from landfill to an approved metal recycling facility; divert unused caulking material from landfill to an AHJ hazardous material collections site;
- .7 Plastic caulking tubes must not be diverted for recycling with other plastic materials.

**Window Schedule (augment as required)**

<b>Window Schedule</b>		
<b>Quantity</b>	<b>Size (Contractor shall verify size on site, and also confirm that bedroom windows meet egress requirements. Contractor to notify Project Manager of any window size issues no less than 3 days prior to tender close.)</b>	
	<b>RSO Width by Height</b>	<b>Exterior extremities of window trim</b>

END OF SECTION