

This section includes sliding glass doors of light commercial quality; wood reinforced extruded plastic (PVC) construction, exterior coloured aluminum brickmould, glass and glazing, operating hardware, head flashing and perimeter air seal. Sealants are referenced to Section [07900] [07 92 00]. Air barrier and vapour retarder continuity from door frames to adjacent construction is critical to successful building air tightness; specify compatible materials in conjunction with Sections [07260] [07 26 00] and [07270] [07 27 00]. This section includes performance, proprietary, and descriptive type specifications. Edit to avoid conflicting requirements.

1. General

1.1. SECTION INCLUDES

1. Sliding doors and frames of PVC construction.
2. Wood reinforced frame; steel reinforced stiles and rails.
3. Glass and glazing; factory glazed.
4. Insect screens.
5. Aluminum Brick mould trim for exterior finishing.
6. Operating hardware.

1.2. RELATED SECTIONS

- | | | |
|-----|---|------------------|
| 1. | Metal Fabrications: Steel lintels.
05 50 00 | Section |
| 2. | Prepared opening. | Section [_____] |
| | [OR] | |
| 3. | Wood Framing: Framed openings. | Section 06 11 00 |
| | [OR] | |
| 4. | Wood Blocking And Curbing: Rough wood perimeter blocking. | Section 06 10 53 |
| 5. | Vapour Retarders. Perimeter vapour seal between window frame and adjacent construction. | Section 07 26 00 |
| 6. | Air Barriers: Perimeter air seal between window frame and adjacent construction. | Section 07 27 00 |
| 7. | Blanket Insulation: Fibrous stuffing insulation at door frame perimeter. | Section 07 21 16 |
| | [OR] | |
| 8. | Foamed-in-place Insulation: Foam insulation at sliding door frame perimeter. | Section 07 21 19 |
| 9. | Joint Sealing: Perimeter sealant and back-up materials. | Section 07 92 00 |
| 10. | Glazing. | Section 08 80 00 |
| 11. | Door Hardware - General: Cylinder locks. | Section 08 71 00 |

1.3. REFERENCES

List reference standards that are included within the text of this section. Edit the following as required for project conditions.

1. AAMA (American Architectural Manufacturers Association – Installation Masters Certification Program.

2. Aluminum Association (AA), Designation System for Aluminum Finishes (2000)
3. ASTM A653/A653M - Specification for Sheet Steel, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process
4. ASTM E283 - 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 Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
6. ASTM E331 - Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
7. AWWAC (Architectural Woodwork Manufacturers Association of Canada) - Quality Standards.
8. CAN/CGSB-12.3 - Flat, Clear Float Glass.
9. CAN/CGSB-12.8 – Insulating Glass Units
10. CSA-A440-2000 - Windows
11. CSA-G164 - Hot Dip Galvanizing of Irregularly Shaped Articles

1.4. SYSTEM DESCRIPTION

Use this article carefully; restrict statements to describe the combined result of the components used to assemble the system. Do not repeat statements made in the Section Includes article.

1. Sliding Doors: Extruded plastic sections, factory fabricated, vision glass, threshold, related flashings, reinforcing, anchorage and attachment devices.

Edit the handing of door units; either in the following paragraph or in a schedule at the end of this section or on drawings. Transom is optional.

2. Configuration: Horizontal sliding unit and one fixed, [one right] [and] [one left] hand unit, [and transom].

1.5. PERFORMANCE REQUIREMENTS

The following paragraphs represent a suggested listing of performance criteria. If more stringent criteria is being considered, refer to ASTM test methods and associated documents for guidance.

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 sliding door [as calculated in accordance with [] code] [to a design pressure of [] kPa ([] psf) and a suction of [] kPa ([] psf)] [and] [as measured in accordance with ASTM E330].
2. Member Deflection: Limit member deflection to [flexure limit of glass] [1/200] [] 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.
6. Forced Entry Rating: CAN/CSAA440, category F2.

1.6. SUBMITTALS FOR REVIEW

Do not request submittals if drawings sufficiently describe the products of this section or if proprietary specifying techniques are used. The review of submittals increases the possibility of unintended

variations to drawings, thereby increasing the specifier's liability. The following submittals are intended for review and approval or other action by the Consultant.

1. Submission procedures Section 01 33 00
2. Product Data: Provide component dimensions, fastener types, glass, internal drainage details, cuts of hardware and accessories, and [_____].
3. Shop Drawings:
 1. Submit shop drawings in form of [paper] [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, and [_____].

Include the following paragraph for submission of physical samples for selection of finish, colour, texture, etc.

4. Samples: Submit [two] [_____] samples, [____x____] mm ([____x____] inch) in size illustrating typical sliding door panel corner construction, door frame corner construction, screen and frame, threshold profile, and finishes.
5. Submit [two] [____] samples of operating hardware.

1.7. SUBMITTALS FOR INFORMATION

The following submittals are informational; responsive action by the Consultant is not required.

1. Submission procedures Section 01 33 00

When manufacturer's instructions for specific installation requirements are referenced in Part 3 Execution, include the following request for submittal of those instructions. Edit the Part 3 statements to avoid conflict with manufacturer's instructions.

2. Certificates: Certify that [Products] [_____] meet or exceed [specified requirements.] [performance criteria tests.] [_____].
3. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention, and [_____].

1.8. QUALITY ASSURANCE

1. Conform to CSA A440.
2. Install components to manufacturer's "Installation Master" requirements.

1.9. DELIVERY, STORAGE, AND PROTECTION

1. Transport, handle, store, and protect products. Section 01 65 00
2. Do not use adhesive papers or sprayed coatings that bond to substrate when exposed to sunlight or weather.

1.10. ENVIRONMENTAL REQUIREMENTS

1. Environmental conditions affecting products on site. Section 01 61 00

If dry glazing methods are utilized, delete this article.

2. Do not install sealants when ambient temperature is less than [5] [____] degrees C ([40] [____] degrees F).
3. Maintain this minimum temperature during and [24] [____] hours after installation of sealants.

1.11. WARRANTY

Improper specifying of warranty and correction period extensions may limit the statutory rights of the Owner and the ability to enforce claims under the Contractor's contractual warranty. Consult legal counsel before editing this article.

1. Warranties. Section 01 78 36

The following paragraph extends the correction period beyond one year. An extended correction period adds to the construction cost and may not be enforceable.

2. Correct defective Work within a [five] [ten] year period after Date of Substantial Completion.
3. Provide twenty (20) year manufacturer's limited warranty for insulated glass units from seal failure, interpane dusting or misting, and replacement of same.
4. Warranty: Include coverage for loss of adhesion, bubbling, cracking, flaking, or chipping.

2. Products

2.1. MANUFACTURERS

In this article, list the manufacturers acceptable for this project. Edit the subsequent descriptive specifications to identify project requirements and to eliminate any conflict with specified manufacturer's products.

1. All Weather Windows – Everest 1000 Sliding Patio Doors. Phone: 1-800-638-5709. Web site: www.allweatherwindows.com E-mail: architectural@allweatherwindows.com.

2.2. MATERIALS

1. Extruded Plastic: Hollow tubular sections of extruded polyvinyl chloride (PVC), with integral ultra-violet resistant colour coating.
2. Extensions: PVC, stain grade hemlock or paint grade, factory primed.
3. Brick Mould: Factory finished extruded aluminum.
4. Fasteners: [Stainless] [Galvanized] steel.

2.3. COMPONENTS

1. Unit Frame:
 1. Profile: []x[] mm ([]x[] inch) size.
 2. Construction: Extruded tubular plastic with welded corner construction and integral attachment flange; full wood reinforced jambs and head.
2. Fixed and Sliding Frame:
 1. Profile: []x[] mm ([]x[] inch) size.
 2. Construction: Extruded tubular plastic with welded corner construction, steel reinforced.
3. Insect Screen Frame: Heavy duty rolled aluminum frame of rectangular sections; fit with adjustable hardware; nominal size similar to operable glazed unit.
4. Insect Screens: glass fibre strands.

Custom jamb extensions are available up to 206 mm (6-1/2").

5. Jamb Extensions: [114] [165] [] mm ([4-1/2] [6-1/2] [] inch) nominal thickness, [PVC] [stain grade wood] [paint grade wood]; fit under sash to project [12] mm ([1/2] inch) beyond interior wall face; one piece full width of opening.
6. Decorative Grilles - Fitted between glass panes.

1. Size: [8 mm (5/16 inch)] [16 mm (5/8 inch)] [25mm (1 inch)] wide.
2. Colour: [Gold] [White] [Patina] [Lead] [Wicker].
3. Profile: [double ladder] [rectangular] [perimeter] [top ladder] [empress].
7. Weather Stripping: Manufacturer's standard, profiled to effect a continuous tight fitting weather seal.
8. Fasteners: [Stainless] [Galvanized] steel.
9. Threshold: Extruded aluminum, wood reinforced; sloped for positive wash; one piece full width of opening.

2.4. GLASS AND GLAZING MATERIALS:

Refer to manufacturer's literature for glazing performance options available.

1. Glass and Glazing Materials:
 1. Float glass: to CAN/CGSB-12.3, Glazing quality, [] mm thick:

2.5. SEALED INSULATING GLASS

1. Insulating Glass Units: CAN/CGSB-12.8, double unit, [21] mm ([7/8] inch) overall thickness.
2. Glass: CAN/CGSB-12.3.
 1. Glass Thickness: [] mm each light. [] mm () outer light.]
 2. Inter-space Thickness: 12 mm ([1/2]inch) between lights with low conductivity spacers.
 3. Glass Coating: [Low E.] [SunStop.]
 4. Gas Fill at Space Between Lights: [Air.] [Inert Argon.]
3. Performance:

Glazing Performance Chart										
	Code	Description	Imperial		Metric			Solar Heat Gain Coefficient	Ultraviolet Light Blockage	Visible Light Trans.
			U-Value Btu/hft ² F	R-Value (1/U)	U-Value W/m ² C	RSI (1/U)	K-Value Kcal/m ² C			
Clear	Dual	Dual Clear	0.5	2.02	2.81	0.36	2.41	0.76	42%	81%
Low E	HS1	Dual 1-LowE	0.35	2.88	1.97	0.51	1.7	0.72	56%	76%
	HS1 A	Dual 1-LowE Argon	0.3	3.33	1.73	0.58	1.49	0.73	56%	76%
Sun Stop	HS4	Dual 1-SunStop	0.29	3.44	1.67	0.6	1.44	0.39	70%	62%
	HS4 A	Dual 1-SunStop Argon	0.24	4.17	1.39	0.72	1.2	0.39	70%	62%
Performance data is C.O.G. (Center of Glass) ratings based on Vision v4.0 simulations. C.O.G. (Center of Glass) U and R-values are based on ASHREA Winter Conditions. K-Values shown are based on approximate conversion from Imperial measure R-Values (K=1(R/4.88))										

2.6. ACCESSORIES

1. Four sided wood jamb with PVC wrapped interior and aluminum brickmould exterior
2. Anchors: [Galvanized] [Corrosion resistant] steel.
3. Reinforcing Steel: Galvanized steel.

2.7. SEALING MATERIALS

Incorporate sealant materials by direct reference to Section 07 92 00. The following paragraphs only describe sealant type; coordinate with schedule in Section 07 92 00. Sealants used for glazing are specified in Section 08 80 50.

1. Sealant and Backing Materials: As specified in Section 07 92 00 of Types described below.
 1. Perimeter Sealant: Type [_____].
 2. Sealant Used Within System (Not Used for Glazing): Type [_____].

2.8. HARDWARE

1. Pull Handles: Manufacturer's standard type, [lockable].
2. Threshold: Extruded PVC, wood reinforced, sloped to exterior.
3. Sliding Panel Bottom Rollers: Nylon, stainless steel ball bearings, adjustable from interior.
4. Limit Stops: PVC blocks
5. Cylinder Locks: To manufacturer's standard.

2.9. 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. Form sills and stools in one piece. Slope sills for wash.
4. Assemble insect screen frames with mesh set into frame and secured. Fit frames with adjustable roller hardware.
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.
8. Install glass in fixed and sliding units in accordance with manufacturer's standard method

2.10. FINISHES

1. Interior Jamb Extensions: Factory finished in matching colour.
2. Brick Mould: Finish [natural White PVC.] [enamel to [White] [Architectural Brown] [Forest Green] [Sable] [Slate Grey] [Wicker][Chocolate Brown] colour.
3. Screens: Black colour mesh.
4. Pull Handles and Locks: To manufacturer's standard.

3. Execution

3.1. EXAMINATION

1. Verification of existing conditions before starting work. Section 01 71 00
2. Verify that openings are ready to receive work and opening dimensions and clearances are as indicated on [shop drawings.] [Drawings.]

3.2. PREPARATION

1. Prepare opening to permit correct installation of door unit in conjunction with air and vapour seal.

3.3. 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 26 00.] [07 27 00.] [_____].
5. Coordinate installation of [loose fibrous] [foamed] thermal insulation at shim spaces at frame perimeter as specified in Section [07 21 16.] [07 21 19.]
6. Place threshold in bed of [butyl] [_____] sealant.

The following paragraph indicates installation of perimeter sealant materials as part of this section. Edit accordingly, or delete and retain in Section 07 92 00.

7. Install perimeter sealant [to method required to achieve performance criteria.] [Type [____], backing materials, and installation criteria in accordance with Section 07 92 00.]
8. Install perimeter trim and [interior closures] [stools] [_____].

3.4. ERECTION TOLERANCES

1. Tolerances. Section 01 43 00
2. Maintain dimensional tolerances and alignment with adjacent work.
3. Maximum Variation from Plumb: [1.5] [____] mm ([1/16] [____] inch).
4. Maximum Variation from Level: [1.5] [____] mm ([1/16] [____] inch).
5. Longitudinal or Diagonal Warp: Plus or minus [3] [____] mm ([1/8] [____] inch) from 3 m (10 foot) straight edge.

3.5. ADJUSTING

1. Adjusting installed work. Section 01 75
13
2. Adjust hardware for smooth operation.

3.6. CLEANING

1. Cleaning installed work. Section 01 74
23
2. Remove protective material from factory finished surfaces.
3. Remove labels and visible markings.

4. Wash surfaces by method recommended and acceptable to sealant and window manufacturer; rinse and wipe surfaces clean.
5. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant manufacturer.

3.7. PROTECTION OF FINISHED WORK

1. Protecting installed work. Section 01 73 00
2. Do not permit continuing construction activities near unprotected finish surfaces.

END OF SECTION