#### Part 1 General

# Section Includes

1. Elevate® Inswing door and frame complete with hardware, glazing, weather strip, screen, grilles-between-the-glass, simulated divided lites, jamb extension, and standard or specified anchors, trim and attachments

# Construction Specification Institute (CSI) MasterFormat Numbers and Titles

## Section 01 33 23 – Submittal Procedures: Shop Drawings, Product Data, and Samples

1. Section 01 62 00 – Product Options
2. Section 01 25 15 – Product Substitution Procedures
3. Section 01 65 00 – Product Delivery
4. Section 01 66 00 – Product Storage and Handling Requirements
5. Section 01 71 00 – Examination and Preparation
6. Section 01 73 00 - Execution
7. Section 01 74 00 – Cleaning and Waste Management
8. Section 01 75 00 – Starting and Adjusting
9. Section 01 76 00 – Protecting Installed Construction
10. Section 06 22 00 – Millwork: Wood trim other than furnished by door and frame manufacturer
11. Section 07 92 00 – Joint Sealants: Sill sealant and perimeter caulking
12. Section 08 71 00 – Door Hardware: Hardware other than furnished by door and frame manufacturer
13. Section 09 90 00 – Paints and Coatings: Paint and stain other than finish
    1. **References**

## ASTM, International:

### E283: Standard Test Method for Determining Rate of Air Leakage through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

### E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference

### E547: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls, by Cyclic Air Pressure Difference

### E2190: Standard Specification for Insulating Glass Unit Performance and Evaluation

### C1036: Standard Specification for Flat Glass

### E2112: Standard Practice for Installation of Exterior Windows, Doors, and Skylights

1. North American Fenestration Standard (NAFS) - American Architectural Manufacturer’s Association/Window and Door Manufacturer’s Association/Canadian Standards Association (AAMA/WDMA/CSA 101/I.S.2/A440):

### AAMA/WDMA/CSA 101/I.S.2/A440-17: NAFS: North American Fenestration, Standard/Specification for windows, doors, and skylights

1. Window and Door Manufacturers Association (WDMA)
2. WDMA I.S.4: Industry Standard for Water Repellent Preservative Treatment for Millwork
3. WDMA I.S.2: Hallmark Certification Program
4. Insulating Glass Certification Council (IGCC) and Fenestration Glazing Industry Alliance (FGIA) Glass Products Council (GPC)
5. Fenestration Glazing Industry Alliance (FGIA) – note: AAMA combined with IGMA and formed FGIA as of 08/01/2019
6. AAMA 2605: Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels
7. National Fenestration Rating Council (NFRC):

### NFRC 101: Procedure for Determining Fenestration Product Thermal Properties

1. NFRC 200: Procedure for Determining Solar Heat Gain Coefficients at Normal Incidence
2. Window Covering

### WCMA A100.0: American National Standard for Safety of Window Covering Products

# System Description

## Design and Performance Requirements

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Product | Air Tested to psf | Water Tested  to psf | Design Pressure (DP) | Certification Rating | Max  Overall Width | Max Overall Height |
| Elevate Inswing  French Door  (OX / XO) | 1.57 | 4.50 | 30 | LC-PG30-SHD | 71 | 95.5 |
| Elevate Inswing  French Door  (XX) | 1.57 | 4.50 | 30 | LC-PG30-SHD | 71 | 95.5 |
| Elevate Inswing  French Door  (X) | 1.57 | 4.50 | 30 | LC-PG30-SHD | 36.319 | 95.5 |
| Elevate Inswing  French Door  (O) | 1.57 | 4.50 | 30 | LC-PG30-SHD | 36.319 | 95.5 |
| Elevate Inswing  French Door  (OX / XO) HP | 1.57 | 7.50 | 50 | LC-PG50-SHD | 71 | 95.5 |
| Elevate Inswing  French Door  (XX) HP | 1.57 | 7.50 | 50 | LC-PG50-SHD | 71 | 95.5 |
| Elevate Inswing  French Door  (X) HP | 1.57 | 7.50 | 50 | LC-PG50-SHD | 36.319 | 95.5 |
| Elevate Inswing  French Door  (O) HP | 1.57 | 7.50 | 50 | LC-PG50-SHD | 36.319 | 95.5 |
| Elevate Inswing  French Door  (OX / XO) Impact | 1.57 | 8.35 | +55/-55 | LC-PG55-SHD | 71 | 95.5 |
| Elevate Inswing  French Door  (XX) Impact | 1.57 | 8.35 | +55/-55 | LC-PG55-SHD | 71 | 95.5 |
| Elevate Inswing  French Door  (X) Impact | 1.57 | 8.35 | +55/-65 | LC-PG55-SHD | 36.319 | 95.5 |
| Elevate Inswing  French Door  (O) Impact | 1.57 | 8.35 | +55/-65 | LC-PG55-SHD | 36.319 | 95.5 |

## Design and Performance Requirements for Inswing French Door Impact Zone 3:

### Units shall be designed to comply with 101/AAMA/WDMA/CSA 101/I.S.2/A440-11 and AAMA/WDMA/CSA 101/I.S.2/A440-08 (-LC-PG +55/-65 X and O; LC-PG +55/-55 XX and XO/OX rating.

### Air leakage shall not exceed 0.30 cfm per linear foot of sash crack when tested at 1.57 psf according to ASMT E283

### No water penetration when tested at 8.25 psf according to ASTM E547

### Units shall be designed to comply with ASTM E330 for structural performance when tested at the following pressures: (+82.5/-97.5 psf)

### Forced Entry Resistance complies with AAMA 1304-02

### Vertical Load Resistance complies with AAMA 925-03

### Operating Cycling, complies with AAMA 920-03

### Missile Impact at Missile Level D, complying with ASTM E1886-05, ASMT E1996-09

### Impact Pressure Cycling at +55/-65 psf (X and O) and +55/-55 (XX and XO/OX), complies with ASTM E-1886-05, ASTM E1996-09

# Submittals

## Shop Drawings: Submit shop drawings under provision of CSI MasterFormat Section 01 33 23.

## Protect Data: Submit catalog data under provision of CSI MasterFormat Section 01 33 23.

## Samples:

### Submit corner section under provision of CSI MasterFormat Section 01 33 23.

### Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 23.

## Quality Control Submittals: Certificates: submit manufacturer’s certification indicating compliance with specified performance and design requirement under provision of CSI MasterFormat Section 01 33 23.

# Quality Assurance

## Requirements: consult local code for IBC [International Building Code] and IRC [International Residential Code] adoption year and pertinent revisions for information on:

### Egress, emergency escape and rescue requirements

### Basement window requirements

### Windows fall prevention and/or window opening control device requirements.

# Delivery

## Comply with provisions of cSI MasterFormat Section 01 65 00

## Deliver in original and protect from weather

# Storage and Handling

## Prime and seal wood surfaces, including to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation.

## Store window units in an upright position in a clean and dry storage area above ground to protect from weather under provision of Section 01660.

# Warranty

#### **The following limited warranty is subject to conditions and exclusions. There are certain conditions or applications over which Marvin has no control. Defect or problems as a result of such conditions or applications are not the responsibility of Marvin. For a more complete description of the Marvin limited warranty, refer to the complete and current warranty information available at marvin.com/support/warranty.**

## Clear insulating glass with stainless steel spacers is warranted against seal failure caused by manufacturing defects and resulting in visible obstruction through the glass for twenty (20) years from the original date of purchase. Glass is warranted against stress cracks caused by manufacturing defects for ten (10) years from the original date of purchase.

## Hardware another non-glass components are warranted to be free from manufacturing defects for ten (10) years from the original date of purchase.

#### Part 2 Products

# Manufactured Units

## Description: Factory assembled Ultrex® Inswing Door, as manufactured by Marvin Windows and Doors, West Fargo, North Dakota

# Frame Description

## Interior: Clear pine exposed surfaces

### Kiln-dried to moisture content no greater than twelve (12) percent at the time of fabrication

### Water repellant, preservative treated in accordance with ANSI/NWWDA I.S.4.

## Exterior: Fiberglass reinforced Ultrex® - 0.080 inch (2mm) thick

## Composite frame thickness: 1-11/16 inches (47mm)

## Frame width: 4 9/16 inches (116mm) or 6 9/16 inches (167mm).

### Ultrex sill, beige or bronze in color

### Oak or Cellular PVC sill liner is positioned to the interior and shipped loose

# Panel Description

## Interior: Finger jointed with clear pine veneers

### Kiln dried to moisture content no greater than twelve (12) percent at the time of fabrication

### Water repellant preservative treated in accordance with ANSI/NWWDA I.S.4.

## Core material: Finger jointed pine

## Exterior: Fiberglass reinforced Ultrex® - 0.110 inch (2.8mm) thick

## Composite panel thickness: 1 ¾ inches (44mm)

## Rail height dimension: top rail 3 5/8 inches (92mm), bottom rail 6 inches (152mm)

# Glazing

## Select quality complying with ASTM C1036. Insulating glass is manufactured and tested level ASTM E2190 and is IGCC certified. STC and OITC ratings are certified to the level in accordance with ASTM E90-09

## Glazing Method: ¾ inch (19mm) tempered insulating glass

## Glass type: Low E1, E2, E3, E3/ERS with air or Argon gas, Rain Glass, Glue Chip, Narrow Reed, Reed, Frost, Bronze Tint, Gray Tint, Green Tint.

## Glazing Seal: Silicone bedding, interior and exterior

## Glazing Option: STC/OITC upgrade

## Impact Zone 3 for winds up to 140 miles per hour. Glass is laminated insulated Low E2 or Low E3with Argon, consisting of tempered glass to the exterior and laminated glass to the interior. The laminated glass is made up of two pieces of glass with SGP laminate between. The interior and exterior glazing compound is silicone, in a sandwich style glazing system.

# Certified Mulling for Standard Units

## Directional mull limits: 1 unit wide by 2 units high: Rough Opening not to exceed 72 x 100 ½ (1828mm x 2552mm) inches

## Directional mull limits: 3 units wide by 1 unit high: Rough Opening not to exceed 109 15/16 x 96 (2792mm x 2438mm) inches

# Certified Reinforced Space Mulling for Standard Units

## Directional mull limits (Horizontal ½” Space Mull): 1 unit wide by 2 units high: Rough Opening not to exceed 72 x 100 ½ inches (1828mm x 2552mm)

## Directional mull limits (Horizontal Space Mull): 2 units wide by 2 units high: Rough Opening not to exceed 73 5/8 x 100 ½ inches (1871 mm x 2552 mm)

# Finish

## Exterior: Pultruded Fiberglass. Factory baked on acrylic urethane. Meets AAMA 624-10 requirements.

### Color: Stone White, Pebble Gray, Bronze, Cashmere, Gunmetal, Ebony

## Interior:

### Treated bare pine

### Optional white, clear interior, or designer black interior factory finish

# Hardware

## Hinges: 4 inch butt hinges that contain both horizontal and vertical adjustment feature

### Three hinges on all operator panels

### Finish: Powder coated: Gold Tone, White, Gray, Dark Brown, Almond Frost, Ebony; PVD: Brass, Satin Nickel, Oil Rubbed Bronze

## Handle Set: Lever operated

### Interior and Exterior finishes are selected separately

### Finish: Almond Frost, White, Solid Brass, Satin Nickel, Oil Rubbed Bronze, Matte Black

## Locking System:

### Multi-point locking system

### Top and bottom shoot bolt are operated by the handle set

# Weather Strip

## All units are constructed with weather strip at all panel perimeter joints

## Jambs, Head jamb, astragal, and mull post utilize a dual bulb weather strip

## Sill weather strip to seal against the bottom rail

## Frame weather strip is black in color, sill weather strip is black or beige in color

# Jamb Extension

## Furnish jamb extension: 6 9/16 inch (167mm) or 6 13/16 inch (173mm) factory-installed

1. Optional jamb extension: 4 11/16 inch (119mm), 4 13/16 inch (122mm), or 5 1/16 inch (129mm) – 8 9/16 inch (217mm) shipped loose.
2. Finish: White, Clear Lacquer, Designer Black

# Insect Screen

## Sliding screen for XO/OX

### Extruded aluminum sliding frame 0.045 inch (1.2mm) thick

### Top hung roller assembly with stainless steel ball bearing in nylon wheels, top rollers adjustable up to 3/8 inch (10mm)

### Frame to have edge-mounted wool pile bug strip

### Screen mesh: Charcoal fiberglass

### Frame finish: White, Pebble Gray, Bronze, Cashmere, Gunmetal, Ebony

### Black nylon handles on both sides of screen – includes latch, pneumatic closure and sweep

## Swinging screen for X and XX

### Extruded aluminum 0.055 inch (1.4mm) thick

### Frame to have edge mounted wool pile bug strip

### Screen mesh: Charcoal fiberglass

### Frame finish: White, Pebble Gray, Bronze, Cashmere, Gunmetal, Ebony

### Black nylon handles on both sides of screen – includes latch, pneumatic closure and sweep

# Simulated Divided Lites (SDL)

## 7/8 inch (22mm) wide. Available with optional spacer bars

### Exterior muntins: Ultrex finished to color match exterior

### Interior muntins: Bare pine wood or optional white, clear interior, or design black interior finish

### Patterns:

### Rectangular

### 9-lite Prairie cut with 4” DLO corners

### 6 lite top or bottom Prairie cut with 4” DLO corners

### 6 lite left or right Prairie cut with 4” DLO corners

### Cottage style up to 2H with specified DLO height (4” min)

* 1. Size limitations may apply to Prairie and Cottage lite cut availability

### Simulated Check rail option: 2 11/32” (60mm). Available with optional spacer bars

# Grilles-Between-the–Glass (GBG)

## Manufactured from aluminum in a 23/32 inch (18mm) wide contoured profile placed between the two panes of glass

## 1. Not available on Impact units

## 2. Colors:

* 1. Interior: White, Bronze, Black
  2. Exterior: White, Pebble Gray, Bronze, Cashmere, Gunmetal, or Ebony

## 3. Patterns:

1. Rectangular
2. 9 lite Prairie cut with 4” DLO corners
3. 6 lite top or bottom Prairie cut with 4” DLO corners
4. 6 lite left or right Prairie cut with 4” DLO corners
5. Cottage style up to 2H with specified DLO height (3” min)
6. Size limitations may apply to Prairie and Cottage lite cut availability

# Accessories and Trim

## Exterior Casing:

### Non-integral to the unit – fastened to the exterior wall with barb and kerf

### 2 inch Brick Mould available as a header and jamb surround

### 3 ½ inch Flat casing as a header and jamb surround – also available with 1inch Ranch Style header overhang

### Color: Stone White, Pebble Gray, Bronze, Cashmere, Gunmetal, Ebony

## Installation Accessories:

### Factory installed nailing fin at head and side jambs

### Installation brackets: 6 3/4 inches (171mm)

### Mullion kit: Mullion kit for field assembly of units. Kits includes: Instructions, aluminum pins, mullion tie, sealant foam tape, masonry clips, mull brackets, #7 x ¾ inch installation bracket screws, #8 x 3/8 inch screws, interior mullion trim, and nailing fin connectors

### ½” Space Mullion kit: Structural mullion kit with ½” spacing for field assembly or related units available in horizontal, and multi-wide, multi high configurations. Kit includes: mulling pins, mull reinforcement, mull support, weatherstrip, plugs, exterior mull cover, interior mull trim, brackets, drip cap and hardware.

### Installation clips standard with nailing fin on impact glazed units

#### Part 3 Execution

# Examination

## Verification of Condition: Before installation, verify openings are plumb, square and of proper dimensions as required in CSI MasterFormat Section 01 71 00. Report frame defects or unsuitable conditions to the General contractor before proceeding.

## Acceptance of Condition: Beginning of installation confirms acceptance of existing conditions.

# Installation

## Comply with CSI MasterFormat Section 01 73 00

## Assemble and install doors and frames according to manufacturer’s instruction and reviewed shop drawing

## Coordinate sealant material for location conditions and where sealant is to be applied, as specified in CSI MasterFormat Section 07 92 00.

## Install frames and panels as required

## Install accessory items as required

## Use finish nails to apply wood trim and mouldings

# Starting and Adjusting

## Adjust door to work freely with hardware functioning properly. Re-adjust at completion of project if directed.

# Field Quality Control

## Remove visible labels and adhesive residue according to manufacturer’s instruction.

## Unless otherwise specified, air leakage resistance tests shall be conducted at a uniform static pressure of 75 Pa (~1.57 psf). The maximum allowable rate of air leakage shall not exceed 2.3 L/sm2 (~0.45 cfm/ft2).

## Unless otherwise specified, water penetration resistance testing shall be conducted per AAMA 502 and ASTM E1105 at 2/3 of the fenestration products design pressure (DP) rating using “Procedure B” – cyclic static air pressure difference. Water penetration shall be defined in accordance with the test method(s) applied.

# Cleaning

## Remove visible labels and adhesive residue according to manufacturer’s instruction.

## Leave windows and glass in a clean condition. Final cleaning as required in Section 01 74 00.

# Protecting Installed Construction

## Comply with CSI MasterFormat Section 07 76 00

## Cover doors and frames during painting or other construction operations that may cause damage

## Protecting sill from damage by chemicals, solvents, paint, or construction traffic

End of Section