#### Part 1 General

# Section Includes

## Elevate® Casement and Casement Picture complete with hardware, glazing, weather strip, insect screen, grilles-between-the-glass, simulated divided lite, jamb extension, and standard or specified anchors, trim and attachments.

## Elevate® Casement Bay or Bow complete with hardware, glazing, weather strip, insect screen, grilles-between-the-glass, simulated divided lite, jamb extension, head/seat board, and standard or specified anchors, trim and attachments.

## Elevate® Awning complete with hardware, glazing weather strip, insect screen, grilles-between-the-glass, simulated divided lite, jamb extension, and standard or specified anchors, trim and attachments.

# Construction Specification Institute (CSI) MasterFormat Numbers and Titles

1. Section 01 33 00 – Submittal Procedures: Shop Drawings, Product Data, and Samples
2. Section 01 62 00 – Product Options
3. Section 01 25 15 – Product Substitution Procedures
4. Section 01 65 00 – Product Delivery
5. Section 01 66 00 – Product Storage and Handling Requirements
6. Section 01 71 00 – Examination and Preparation
7. Section 01 73 00 - Execution
8. Section 01 74 00 – Cleaning and Waste Management
9. Section 01 75 00 – Starting and Adjusting
10. Section 01 76 00 – Protecting Installed Construction
11. Section 06 22 00 – Millwork: Wood trim other than furnished by door and frame manufacturer
12. Section 07 92 00 – Joint Sealants: Sill sealant and perimeter caulking
13. Section 08 71 00 – Door Hardware: Hardware other than furnished by door and frame manufacturer
14. Section 09 90 00 – Paints and Coatings: Paint and stain other than finish
    1. **References**
15. 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

## Air leakage shall not exceed the following when tested at 1.57 psf according to ASTM E283: 0.30 cfm per square foot of frame.

## No water penetration when tested at the following pressure according to ASTM E547:9.75 psf

## Assembly shall with stand a positive or negative uniform static air pressure difference of psf without damage when tested according to ASTM E330.

## Impact and Cycling per ASTME1996 and E1886 with passing results for Missile Level D and Pressure Cycling of +55/-55 psf.

# Submittals

## Shop Drawings: Submit shop drawings under provision of CSI MasterFormat Section 01 33 00.

## Product Data: Submit product data for certified options under provision of CSI MasterFormat Section 01 33 00. Product performance rating information may be provided via quote, performance rating summary (NFRC Data), or certified performance grade summary (WDMA Hallmark data.

## Samples:

### Submit corner section under provision of CSI MasterFormat Section 01 33 00.

### Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 00.

# 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 CSI MasterFormat 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 that is available at http://www.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 from ten (10) years from the original date of purchase.

## Hardware and other 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: Elevate® Casement operating exterior swinging windows (and related stationary or picture units) as manufactured by Marvin Windows & Doors, West Fargo, North Dakota.

## Description: Elevate® Casement Bay or Bow unit (and related stationary or picture units) as manufactured by Marvin Windows and Doors, Fargo, North Dakota.

## Description: Elevate® Awning unit (and related stationary or picture units) 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 reinforce Ultrex®, 0.080” (2mm) thick

## Composite frame thickness: 1 5/16” (33mm).

## Frame depth: 4 9/16” (116mm).

# Sash/Panel Description

## Interior: pine

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

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

## Exterior: fiberglass reinforced Ultrex®, 0.080” (2mm) thick

## Composite sash thickness: 1 9/16” (40mm) – standard glass; 1 31/32” (50mm) – Tri-pane.

# Glazing

## Select quality complying with ASTMC1036. Insulating glass SIGMA/IGCC certified to performance level CBA when tested in accordance with ASTM E2190.

## Glazing Method: 11/16” (17mm) insulating glass.

## Glass fill: Air with capillary tubes, Argon

## Glass Type: Low E1, E2, E3, E3/ERS

## Glass Type Option: Obscure or California Fire Glass (Annealed exterior and tempered interior glazing configuration), Rain Glass, Glue Chip, Narrow Reed, Reed, Frost, Bronze Tint, Gray Tint, Green Tint.

## Glazing Seal: Silicone bead at interior and exterior.

## Glazing option: STC/OITC upgrade.

## Impact Zone 3 for windows up to 140 miles per hour. Glass is laminated insulated Low E2or Low E3 Argon, consisting of annealed or tempered glass to the exterior and laminated glass to the interior. The laminated glass is made up of two pieces of glass with either SGP or PVB laminate layer between. The interior and exterior glazing compound is silicone, in a sandwich style glazing.

## Triple-pane glazing option: Units are manufactured with 1 1/8” (29mm) TG

## Low E2/E1, Low E3/E1, Low E2/E1/ERS, Low E3/E1/ERS

# Certified Mulling

## For Standard

## Directional mull limits: 7 units wide by 1 unit high: Rough Opening not to exceed 113 x 71 5/8 inches (2870mm x 1819mm)

## Directional mull limits: 1 unit wide by 5 units high; Rough Opening not to exceed 73 x 94 3/4 inches (1854mm x 2406mm)

## Directional mull limits: 4 units by 5 units high: Rough Opening not to exceed 85 x 94 3/4 inches (2159mm x 2406mm)

## For Impact

## Directional mull limits 1H or 1W only. Maximum span for vertical mull is 71 1/8” (1807mm).

## Directional mull limits for 2H or 2W only. Maximum span for horizontal mull is 72” (1829mm).

# Finish

## Exterior:

### Pultruded Fiberglass.

### Factory baked on acrylic urethane.

### Meets AAMA 624-10 requirements.

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

## Interior:

### Bare-treatedted pine.

### Optional white, clear interior, or designer black interior factory finishes.

# Hardware

## Lock: Multipoint locking mechanism is actuated from a single point of operation. The lock mechanism is concealed with only the actuator handle and escutcheon being visible.

## Hinges: Concealed stainless steel track and injection molded shoe.

## Handle: Die cast detachable folding handle.

## Roto Gear Operator: E-Gard™ coated hinge arm and housing mechanism.

## Snubber: Pulls the sash tight to the frame and provides positive engagement to keep the sash in place under structural loads.

## Color: Applies to the handle and locking hardware:

## White, Almond Frost, Brass, Satin Nickel, Oil Rubbed Bronze, or Matte Black.

# 2.8 Optional Hardware

## Coastal hardware is available.

## Casement Window Opening Control Device – Factory applied.

### Minimum frame OSM: 17 27/32” (453mm) x 31 1/8” (791); Maximum frame OSM: 36” (914) x 71 1/8” (1807).

### WOCD locking assembly: Factory installed. Die cast. Color: White, Almond Frost, Matte Black

### WOCD tether assembly: Factory installed. Injection molded nylon. Color: E-Guard™ color match

## Sash Limiter – 3” Travel - Factory or Field applied

### Custodial and Non-Custodial options available

### Coastal Hardware

### Casement min frame OSM: 23” (584mm) x 31 1/8” (791mm)

### Casement max frame OSM: 36” (914mm) x 71 1/8” (1807mm)

### Awning min frame OSM: 24” (610mm) x 23” (584mm)

### Awning max frame OSM: 48” (1219mm) x 47 1/8” (1197mm)

### Units with sash limiters do not meet egress criteria.

## Casement Egress Hinges

### Egress hinges are required on Casement RO sizes between 27 1/8” (689mm) - 39 63/64” (1016mm) including CN29 to meet egress requirements.

# Weather Strip

## Weather stripped at frame and sash perimeter with flexible gaskets.

### Color: Black.

# 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

## Factory Installed

### Screen mesh, 18 by 16: charcoal fiberglass.

### Aluminum frame finish: Almond Frost, White, Ebony or Bare Wood Veneer.

# Simulated Divided Lites (SDL)

## 7/8” (22mm) wide. Available with optional interior spacer bar

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

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

### Pattern:

### Rectangular,

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

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

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

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

### 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” (18mm) wide contoured profile placed between the two panes of glass. On tri-pane configurations, GBG profile is placed between exterior and center glass panes.

### Colors:

### Interior: White, Bronze, Black.

### Exterior: White, Pebble Gray, Bronze, Gunmetal, Cashmere, or Ebony.

### Pattern:

### Rectangular

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

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

### Not available for Impact glazed windows.

# Accessories and Trim

## Exterior Casing:

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

### 2” (51mm) Brick Mould Casing available as a full surround or with sill nosing.

### 3 1/2” (89mm) Flat Casing as a full surround or with sill nosing; also available with 1” (25mm) ranch style header overhang.

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

## Installation Accessories:

### Factory-installed nailing fin at head, sill and side jambs.

### Installation Brackets: Brackets for 4 9/16” (116mm); 6 9/16” (167mm).

### Mullion kit: Mullion kit for field assembly of units – Kit includes: instructions, aluminum pins, filler blocks, wood mullion tie, sealant foam tape, interior mullion trim, mullion insulation and nailing fin connectors.

### Structural mullion kit: structural mullion kit for field assembly of units. Kits includes: instructions, reinforcement member, aluminum pins, wood mullion tie, sealant foam tape, interior mullion trim, #8 x 1 3/4” screws, #7 x 1 5/8” screws, nailing fin connectors and structural brackets.

### Pole operator with adapter for each sash indicated. Mill finish aluminum. Length: (five feet) (eight feet) (eleven feet six inches).

### Installation clips standard with nailing fin on impact glazed windows.

#### 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 on installation confirms acceptance of existing conditions.

# Installation

## Comply with CSI MasterFormat Section 01 73 00.

## Assemble and install window/door unit(s) according to manufacturer’s instruction and reviewed shop drawing.

## Install sealant and related backing materials at perimeter of unit or assembly in accordance with CSI MasterFormat Section 07 92 00 Joint Sealants. Do not use expansive foam sealant.

## Install accessory items as required.

## Use finish nails to apply wood trim and mouldings.

# 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 CSI MasterFormat Section 01 74 00.

# Protecting Installed Construction

## Comply with CSI MasterFormat Section 07 76 00.

## Protecting windows from damage by chemicals, solvents, paint or other construction operations that may cause damage.

End of Section