

# Window Product Summary Chart

Model	Type	Description	AAMA Rating	Frame Depth	I.G. Glass Thickness	Screen Option	Extrusion: Sash & Frame	Extrusion: Sill
8000T	Dual Action	Dual Action	AW70/HC70	4 1/2"	1"	Full	0.125	0.125
8000NT	Dual Action	Dual Action	AW70/HC70	2 7/8"	1"	Full	0.125	0.125
4100	Casement/ Projected/Fixed	Projected Outswing	C90	2 1/2"	1"	Wicket or Flat	0.078	0.078
4200	Casement/ Projected/Fixed	Projected Inswing	C90	2 1/2"	1"	Wicket or Flat	0.078	0.078
4300	Casement/ Projected/Fixed	Casement Outswing	C90	2 1/2"	1"	Wicket or Flat	0.078	0.078
4400	Casement/ Projected/Fixed	Casement Inswing	C90	2 1/2"	1"	Wicket or Flat	0.078	0.078
4710	Casement/ Projected/Fixed	Fixed (w/ 4000 Series)	C90	2 1/2"	1"	~	0.078	0.078
5100	Casement/ Projected/Fixed	Projected Outswing	AW120/HC100	2 1/2"	1"	Wicket or Flat	0.078	0.125
5200	Casement/ Projected/Fixed	Projected Inswing	AW110/HC100	2 1/2"	1"	Wicket or Flat	0.078	0.125
5300	Casement/ Projected/Fixed	Casement Outswing	AW85/HC85	2 1/2"	1"	Wicket or Flat	0.078	0.125
5400	Casement/ Projected/Fixed	Casement Inswing	AW120/HC100	2 1/2"	1"	Wicket or Flat	0.078	0.125
5710	Casement/ Projected/Fixed	Fixed (w/ 5000 Series)	AW80	2 1/2"	1"	~	0.07	0.125
5145	Casement/ Projected/Fixed	Projected Outswing (Window Wall)	AW120/HC100	4 1/2"	1"	Wicket or Flat	0.078	0.125
5245	Casement/ Projected/Fixed	Projected Inswing (Window Wall)	AW110/HC100	4 1/2"	1"	Wicket or Flat	0.078	0.125
5345	Casement/ Projected/Fixed	Casement Outswing (Window Wall)	AW85/HC85	4 1/2"	1"	Wicket or Flat	0.078	0.125
5445	Casement/ Projected/Fixed	Casement Inswing (Window Wall)	AW120/HC100	4 1/2"	1"	Wicket or Flat	0.078	0.125
5745	Casement/ Projected/Fixed	Fixed (w/ 5045 Series)	AW80	4 1/2"	1"	~	0.07	0.125
8000	Casement/ Projected/Fixed	Casement Inswing (Window Wall)	AW70/HC70	4 1/2"	1"	Full	0.125	0.125
8010	Casement/ Projected/Fixed	Fixed (w/ 8000 Series)	AW110/HC100	4 1/2"	1"	~	0.125	0.125
8000N	Casement/ Projected/Fixed	Casement Inswing (Window Wall)	AW70/HC70	2 7/8"	1"	Full	0.125	0.125
8010N	Casement/ Projected/Fixed	Fixed (w/ 8000N Series)	AW110/HC100	2 7/8"	1"	~	0.125	0.125
1000	Double Hung/ Fixed	Sideload Double Hung	C65	3 1/4"	7/8"	1/2 or Full	0.062	0.078
2400	Double Hung/ Fixed	Tilt Double Hung	C35	3 1/4"	7/8"	1/2 or Full	0.05	0.05
2500	Double Hung/ Fixed	Tilt Double Hung	C45	3 1/4"	7/8"	1/2 or Full	0.062	0.078
2510	Double Hung/ Fixed	Fixed (w/ 1000-2500)	HC100	3 1/4"	7/8"	~	0.062	0.078
6200	Double Hung/ Fixed	Dual-Glazed Tilt Double Hung	Pending	4 1/8"	1"	1/2 or Full	0.07	0.125
6500	Double Hung/ Fixed	Tilt Double Hung	AW55	4 1/8"	1"	1/2 or Full	0.07	0.125
6800	Double Hung/ Fixed	Sideload Double Hung	AW50	4 1/8"	1"	1/2 or Full	0.07	0.125
6510	Double Hung/ Fixed	Fixed (w/ 6000 Series)	AW85	4 1/8"	1"	~	0.07	0.125
9000	Double Hung/ Fixed	Tilt Double Hung	C70/HC45	3 1/4"	7/8"	1/2 or Full	0.062	0.078
9500	Double Hung/ Fixed	Tilt Double Hung	HC50/AW50	3 1/4"	7/8"	1/2 or Full	0.078	0.078
9510	Double Hung/ Fixed	Fixed (w/ 9000 Series)	HC70	3 1/4"	7/8"	~	0.062	0.078
2000	Sliding/Fixed	Sliding Window	C55	3 1/4"	7/8"	1/2 or Full	0.062	0.078
7500	Sliding/Fixed	Sliding Window	AW65	4 1/8"	1"	1/2 or Full	0.08	0.125
7510	Sliding/Fixed	Fixed (w/ 7500 Series)	AW75	4 1/8"	1"	~	0.07	0.125
400	Terrace/Sliding Door	Box Frame Terrace Door	AW75	4 1/2"	1"	~	0.125	0.125
500	Terrace/Sliding Door	Flange Frame Terrace Door	AW60	2"	1"	~	0.125	0.125
1200	Terrace/Sliding Door	Sliding	C40/HC40/ HC45/HC50	4 1/2"	1"	Full	0.62	0.078



### Champion Window and Door History

Over fifty years ago two brothers, Nat and Tom Arcati, entered into a new venture. From a garage in Brooklyn, NY, and equipped only with a high school education, they worked long hours and traveled extensively to manufacture a quality storm window and door. At the time that they started their business they were thinking about the next week or month, but in actuality they were planning for their families' future. The founders were honest, hard-working men who learned how to deal successfully with many people, research new products, be loyal to employees and customers, and expand as necessary. Their decisions were always carefully weighed and thoroughly evaluated.

In response to growth in its business and customer base, in 1968 Champion Window and Door moved to its current location in Syosset, NY. This building was the headquarters for their manufacturing of storm windows and doors until 1983, when they made the decision to begin focusing on replacement windows with the sole production of the 2500 double hung tilt window.

Due to the large increase in sales resulting from the success of its newly introduced 2500 window, Champion expanded its facility in 1984 from 30,000 sq. feet to 50,000 sq. feet. As Champion began introducing more products, the need for increased amounts of space became elevated. In 1997, Champion purchased its neighboring building in order to provide 30,000 additional square feet for production.

Throughout the years, Champion has been driven by its devotion to teamwork and utilizing every employee and customer to expand and create ideas. The company has achieved growth throughout its existence because of the quality of its products and service, and the integrity that has remained prevalent in all areas of the organization. The company's success can be seen through the tens of millions of windows that Champion currently has installed in the eastern United States.

As demands today continue to lead to greater expansion, Champion still ensures that each window and door that it manufactures lives up to the standards of quality and integrity set forth by Nat and Tom over 55 years ago. Although the fine men who started Champion are missed, they and the characteristics that they instilled upon the company will never be forgotten.



## AAMA's Certification Program

### **Certification**

The American National Standards Institute (ANSI) defines certified as “attested by the manufacturer/vendor under the procedures of a certification program as satisfying the requirements of the reference standard(s).” Certification has two main purposes: to identify a product as meeting the specific standard and to provide a mechanism for a quality assurance program to assure that the product conforms, and continues to conform to the requirements of the standards.

### **How AAMA's Program Works**

The American Architectural Manufacturers Association (AAMA) Certification is a third-party certification. The third party, which is an outside organization which is not under the control or influence of AAMA, is responsible for the validation and administrative functions of the program.

AAMA accredits independent laboratories that test the performance of the manufacturer's products. The program creates a license in which the manufacturer becomes the licensee by contract to use the AAMA Certification label. When a manufacturer participates in AAMA's program, it assures that the products carrying the certification labels meet certain requirements that are set forth by the standards. The third-party organization (in AAMA's program being Associated Laboratories, Inc.) assures through inspections of the manufacturer's facilities that the products or services bearing the labels conform to the standards. This program essentially acts as a reliable third-party extension of the manufacturer's quality assurance programs. The AAMA Certification Label signifies that the products on which the labels are placed conform to generally accepted product material and performance standards in each product's class.

The American Architectural Manufacturers Association's Certification Program is a well-documented and proven program that meets all ANSI's criteria for effective certification. AAMA holds ANSI's Certification of Accreditation #1, issued in 1972, and continues to remain the most widely used certification program for windows and doors with such accreditation.

# 8000T Series

## 8000T Dual Action



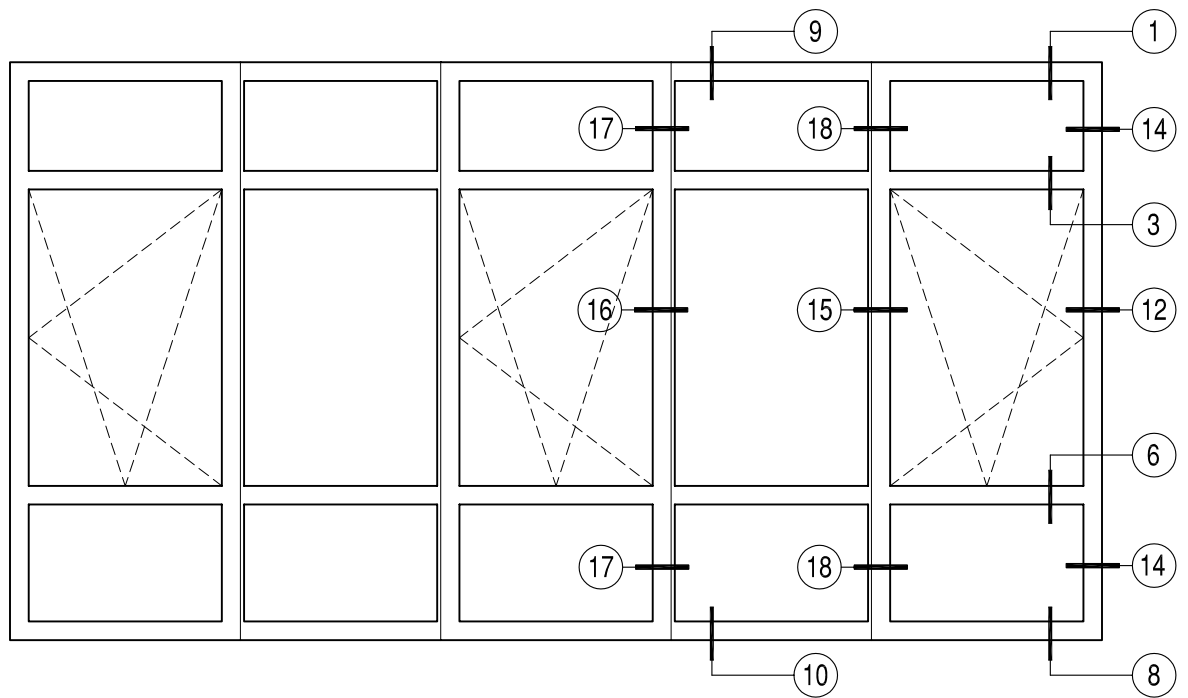
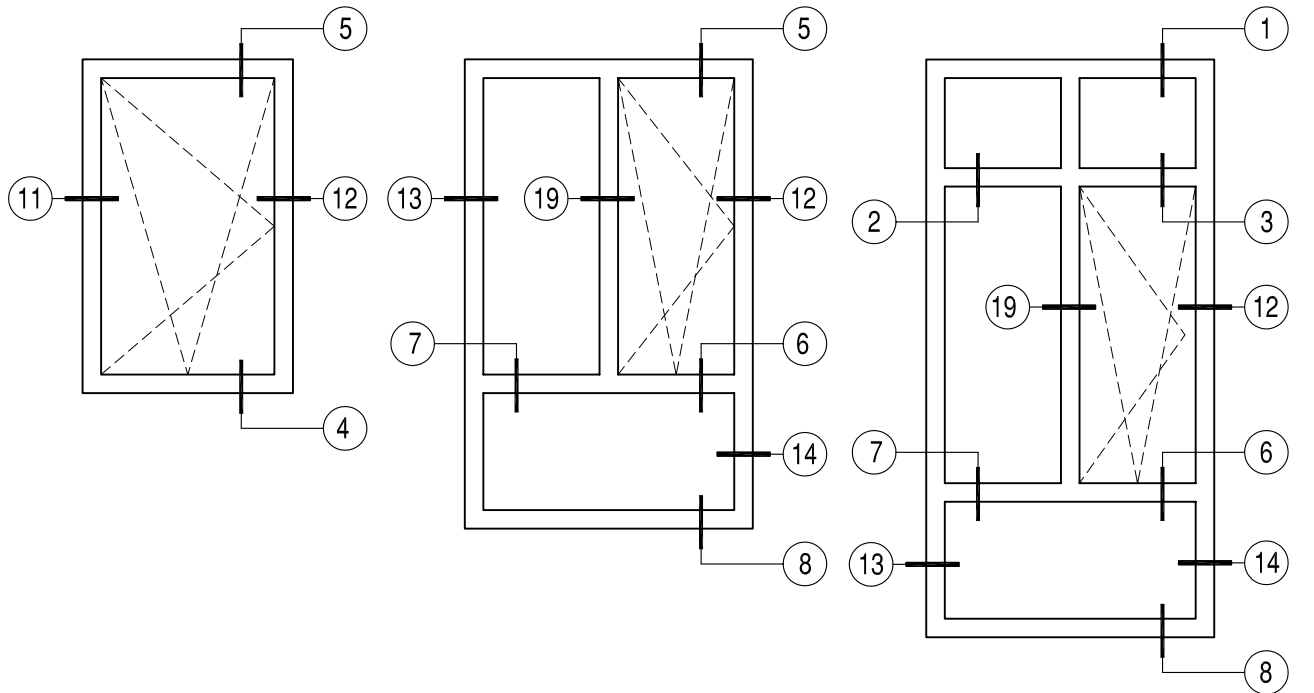
<u>Product By Operation:</u>	4-1/2" Dual Action
<u>Model By Family:</u>	8000
<u>Product Description:</u>	Dual Action
<u>Frame Depth:</u>	4-1/2"
<u>Flange Frame Head Options:</u>	~
<u>Flange Frame Jamb Options:</u>	~
<u>Flange Frame Sill Options:</u>	~
<u>101/I.S.2/A440-05 Rating:</u>	DAW-AW70
<u>AAMA Test Size:</u>	36" x 120"
<u>101/I.S.2/A440-05 Optional:</u>	DAW-HC70
<u>Optional Test Size:</u>	36" x 120"
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins
<u>Optional Glazing:</u>	~



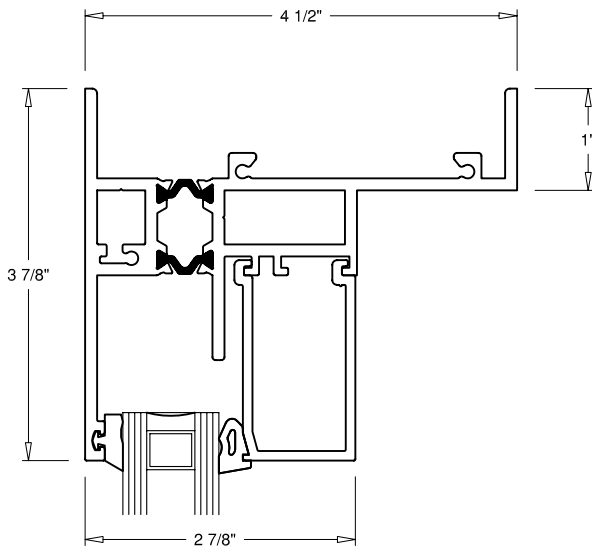
### Performance Data



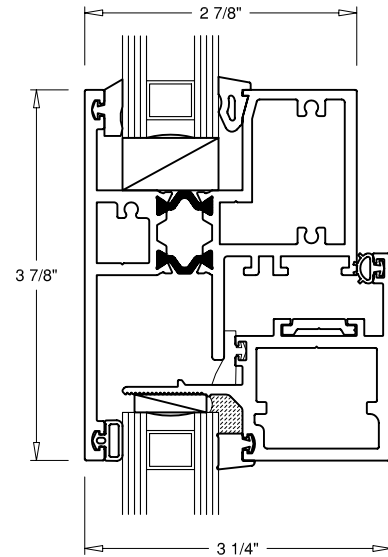
AAMA RATING:	DAW-AW70
AIR INFILTRATION @ 50 mph	0.08 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	105.33 PSF
DESIGN PRESSURE	70.22 PSF



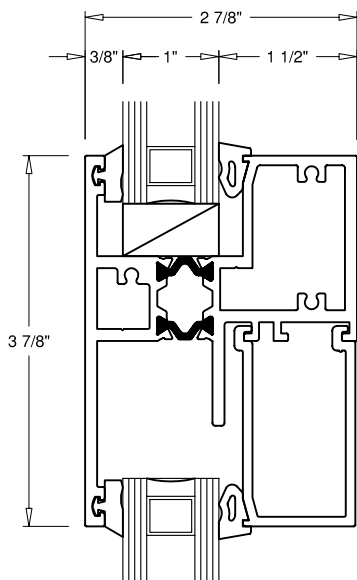
WINDOW WALL CONFIGURATION



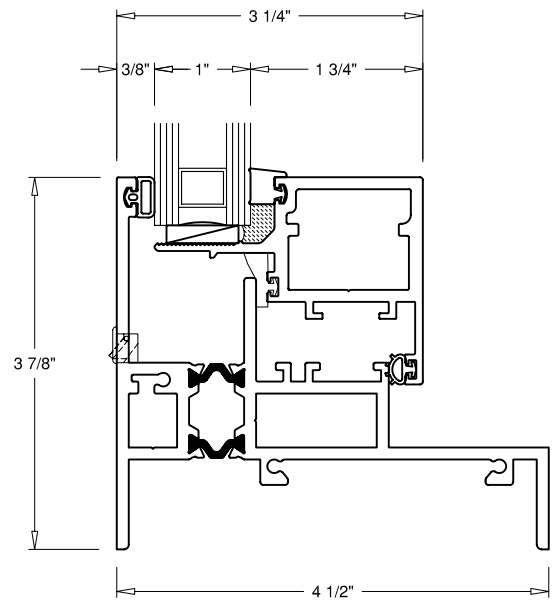
① HEAD  
FIXED



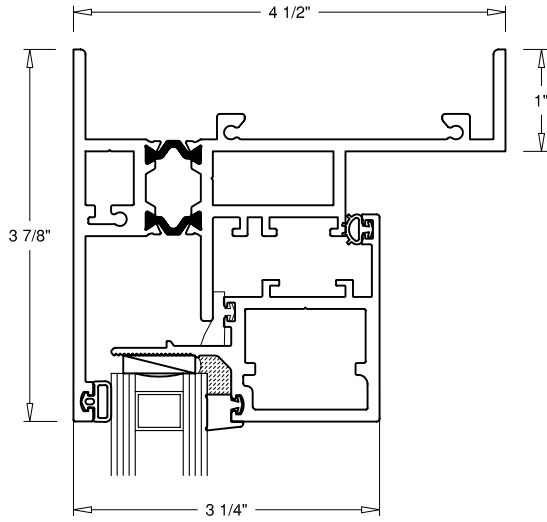
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FIXED OVER OPERABLE



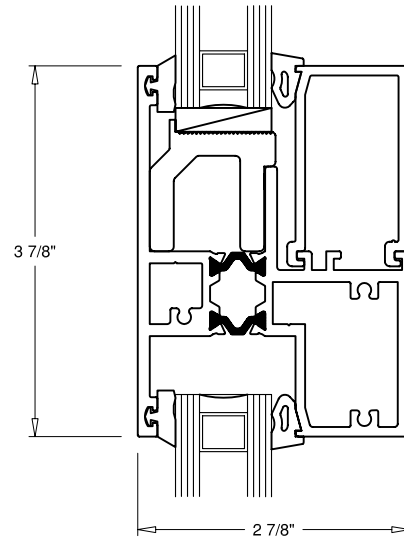
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FIXED OVER FIXED



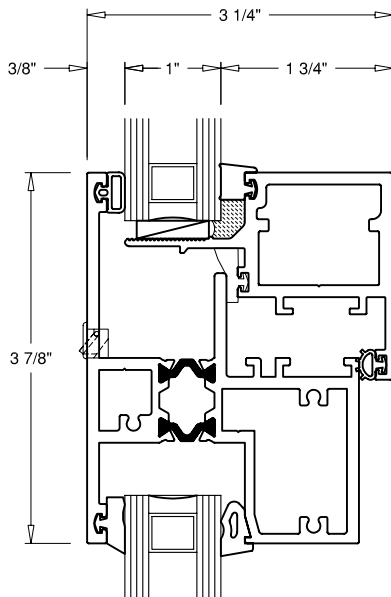
④ SILL  
OPERABLE



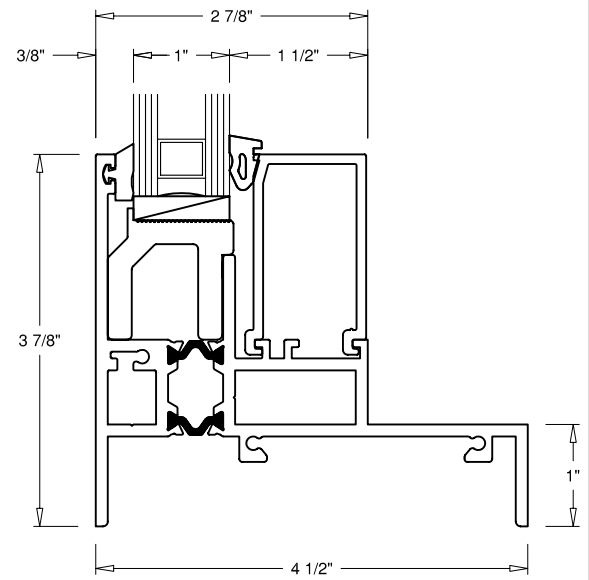
**5** HEAD  
OPERABLE



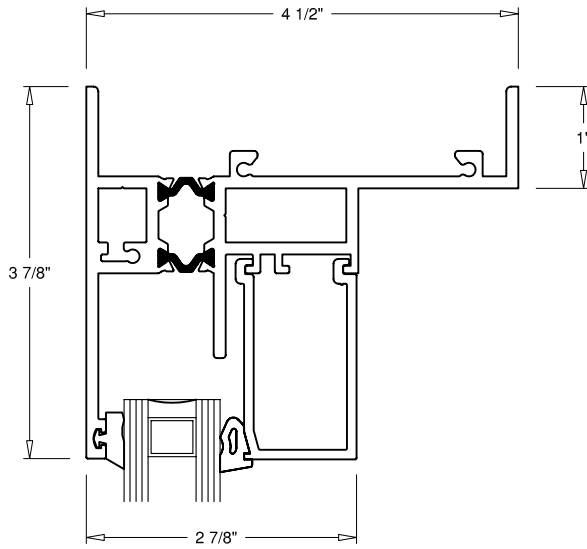
**7** INT. MULLION  
FIXED OVER FIXED



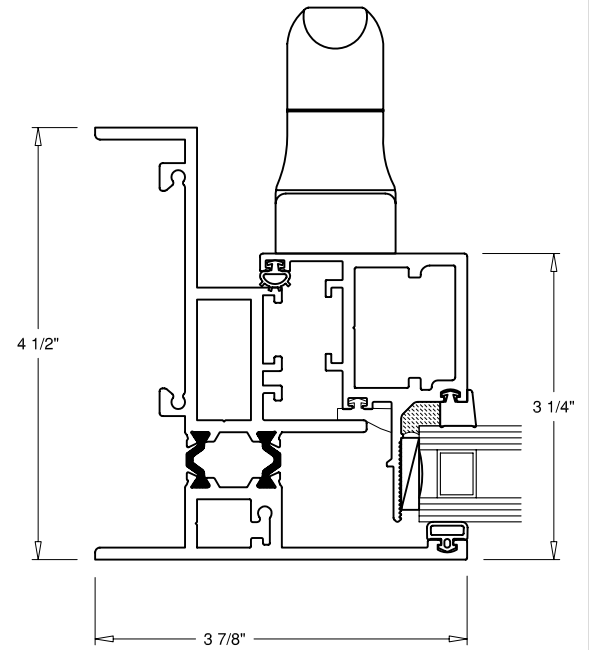
**6** INT. MULLION  
OPERABLE OVER FIXED



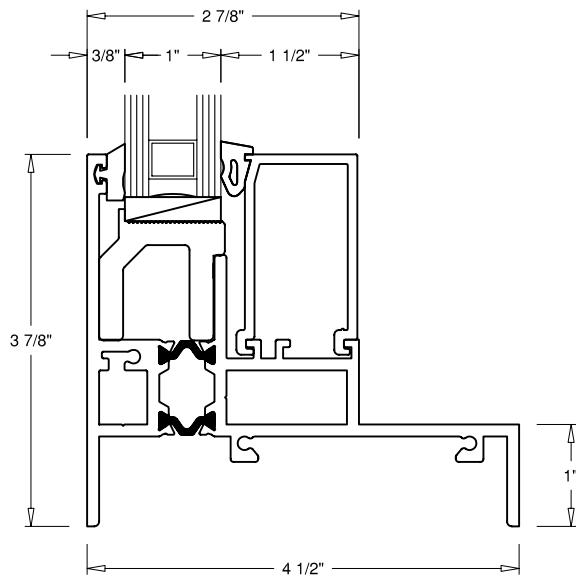
**8** SILL  
FIXED



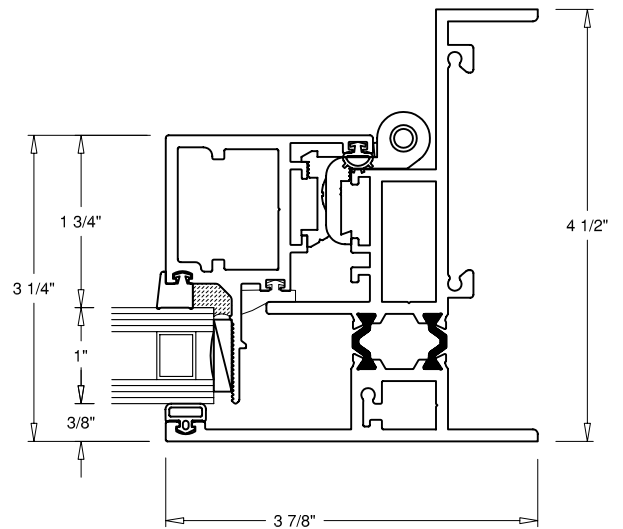
9 HEAD  
FIXED (THIN-LINE)



11 JAMB  
OPERABLE (HANDLE SIDE)

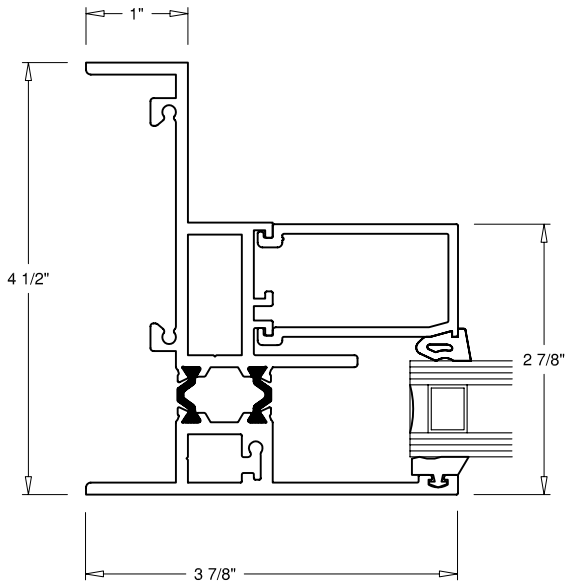


10 SILL  
FIXED (THIN-LINE)

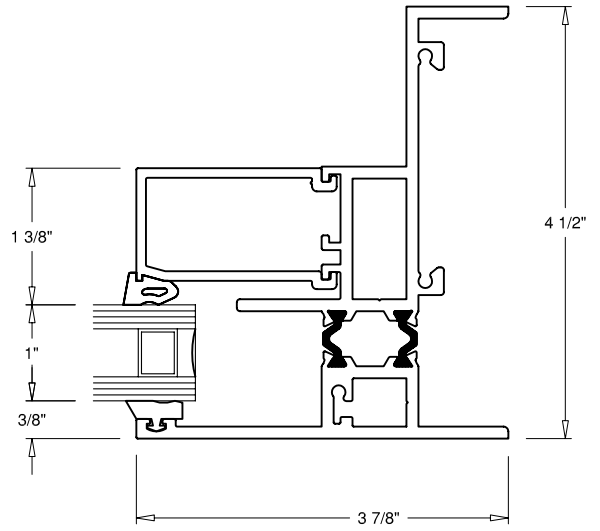


12 JAMB  
OPERABLE (HINGE SIDE)

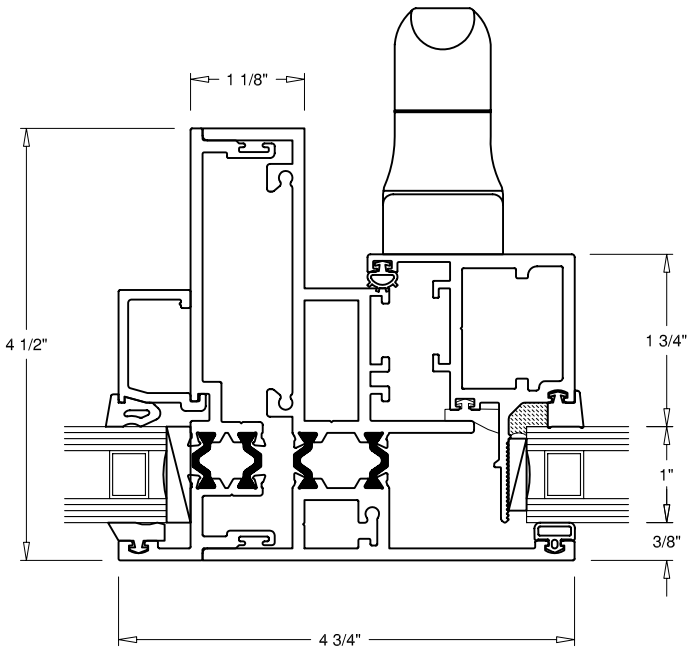




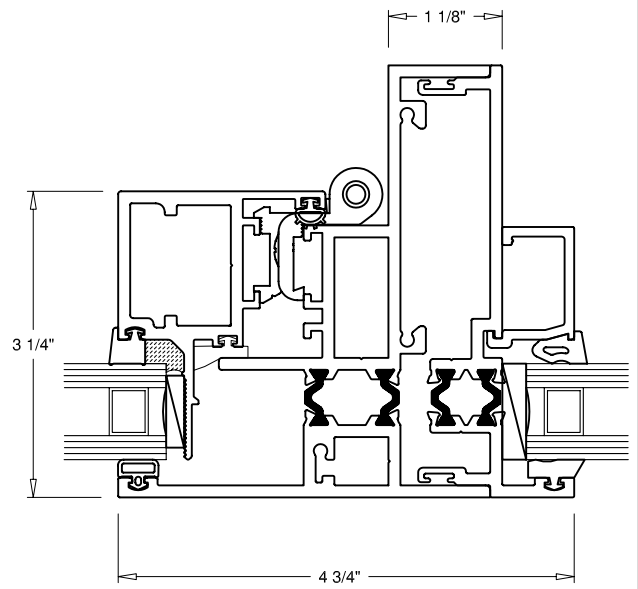
13 JAMB  
FIXED



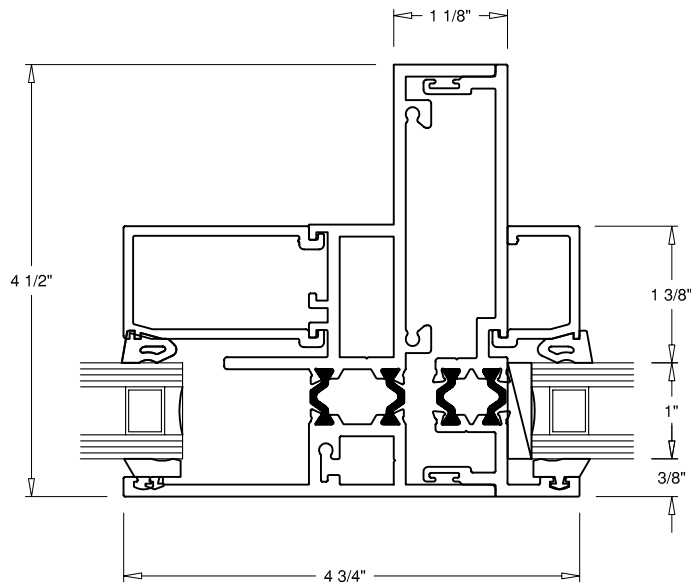
14 JAMB  
FIXED



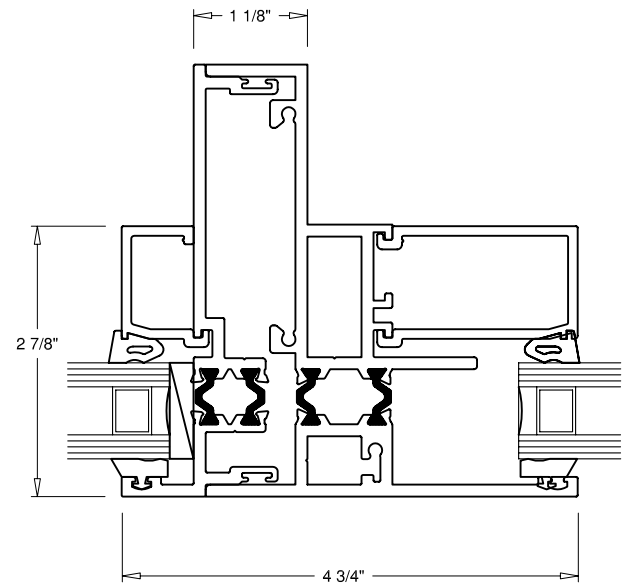
15 MULLION  
FIXED TO OPERABLE



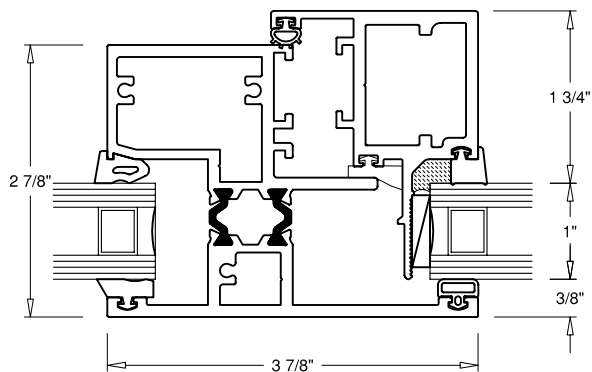
16 MULLION  
OPERABLE TO FIXED



①7 **MULLION**  
FIXED TO FIXED



①8 **MULLION**  
FIXED TO FIXED



①9 **INT. MULLION**  
FIXED TO OPERABLE



## Series 800T DAW-AW70/HC70 Dual Action Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.



## Series 8000T DAW-AW70/HC70 Dual Action Window

### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: DAW-HC70 and DAW-AW70.
- B. Dual Action Windows are 4 1/2" frame depth; extruded aluminum with integral structural "insulbar" thermal break; equal-leg frame; factory-assembled.
- C. Configuration: Dual Action in combination with fixed panels. **(Any configuration within one master frame including a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: Sash - 1" insulating glass with structurally glazed silicone interior perimeter sealant and silicone spacer gasket; factory-glazed. Fixed - 1" insulating glass with EPDM gasket in exterior and interior. **[Optional: Dual glazing with 1" insulating glass on the exterior and ¼" glass on an access panel]** See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. **[Optional: Different interior and exterior finishes]** See Paragraph 2.06 for finish options.

### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **DAW-AW70** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.08 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 70 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 105.33 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to **DAW-HC70** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.07 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 70 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 105.33 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 8000NT Dual Action Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 4.5 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: Provide lever handle mounted to sash interior without exposed screws. Handle shall activate a concealed slide bar connected to multiple locking points on the frame as required by window size. Lever handle to allow operation of the sash to tilt with approx. 6" opening at top for ventilation, and to open as inswing casement for cleaning purposes. **[Optional: Window units shall be equipped with a limit**



### Series 800T DAW-AW70/HC70 Dual Action Window

device to prevent the window from opening more than a specified clear opening.] Provide butt hinges with stainless steel pins, minimum 0.250" in diameter. Attachment of hinges to the sash and main frame shall be by means of stainless steel machine screws.

- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All main frame vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames shall be thermally broken by the "insulbar" method. The thermal barrier material shall be of "insulbar" with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The vent shall have a continuous 1/4" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads on the vents are not permitted. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" **Optional: (3/16" or 1/8" may be used, however structural performance will be limited to the capability of the glass).**
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Annealed **Optional: (Heat Strengthened, Tempered)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #2 surface)**
- C. Interior glass lite
  - 1. Thickness: 1/4" **Optional: (3/16" or 1/8" may be used, however structural performance will be limited to the capability of the glass).**
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Annealed **Optional: (Heat Strengthened, Tempered)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #3 surface)**
- D. **Optional: Dual Glazing (Non-Sealed glass)**
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be **(Select from glass choices above and include here).**
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. **[Optional: Other panel, Spandrel Glass, etc.]**

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. **[Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]**
- C. Quality standard: conforming to AAMA 2603. **[Optional: 2604, 2605]**
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils **[Optional: 1.4 mil Acrynar, 1.2 mils Duranar]** on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. **[Optional: custom color to be selected.]**

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. **[Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]**



## Series 800T DAW-AW70/HC70 Dual Action Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 8000NT Series

## 8000NT Dual Action



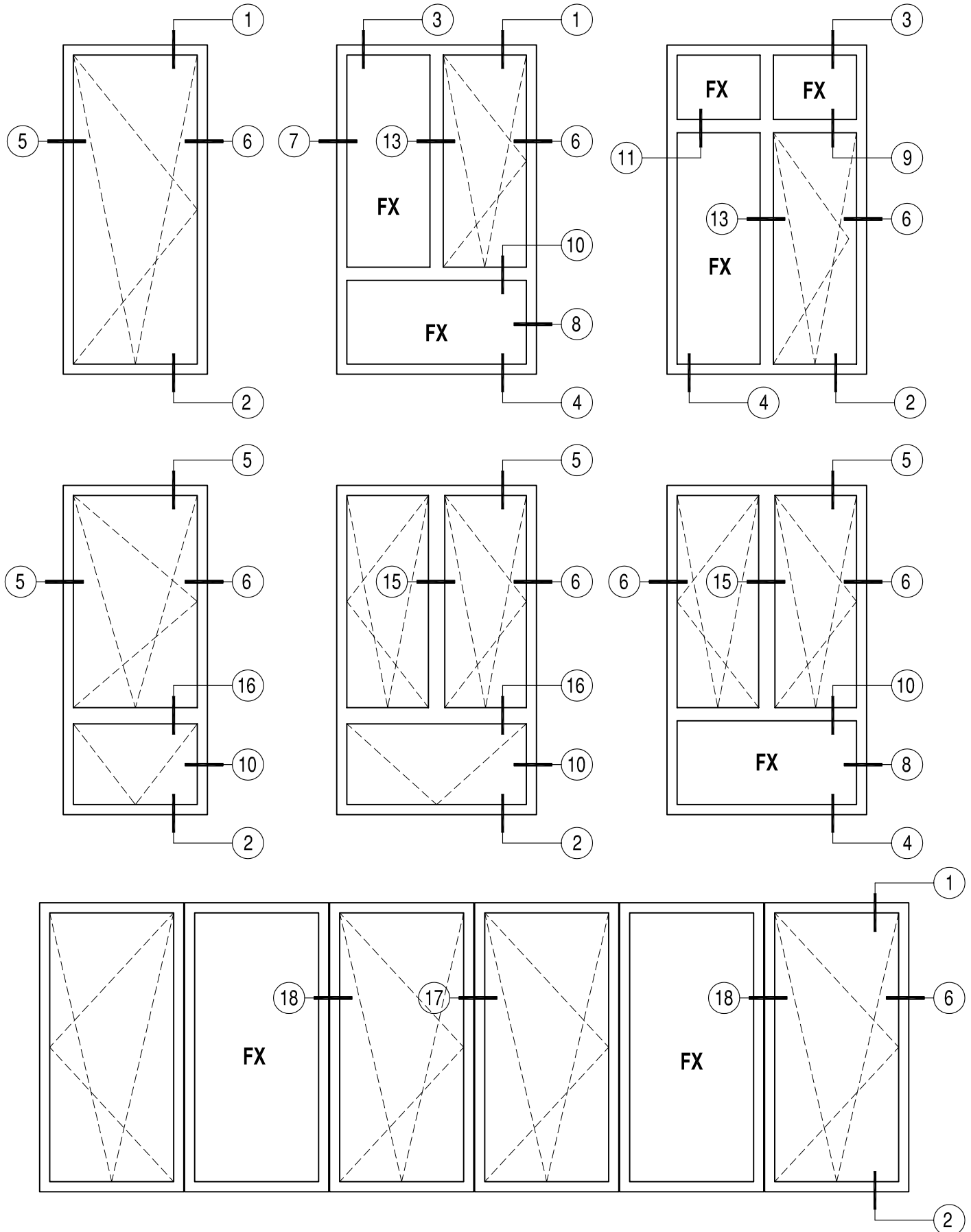
<u>Product By Operation:</u>	2-7/8" Dual Action
<u>Model By Family:</u>	8000N
<u>Product Description:</u>	Dual Action
<u>Frame Depth:</u>	2-7/8"
<u>Flange Frame Head Options:</u>	~
<u>Flange Frame Jamb Options:</u>	~
<u>Flange Frame Sill Options:</u>	~
<u>101/I.S.2/A440-05 Rating:</u>	DAW-AW70
<u>AAMA Test Size:</u>	36" x 120"
<u>101/I.S.2/A440-05 Optional:</u>	DAW-HC70
<u>Optional Test Size:</u>	36" x 120"
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins
<u>Optional Glazing:</u>	~



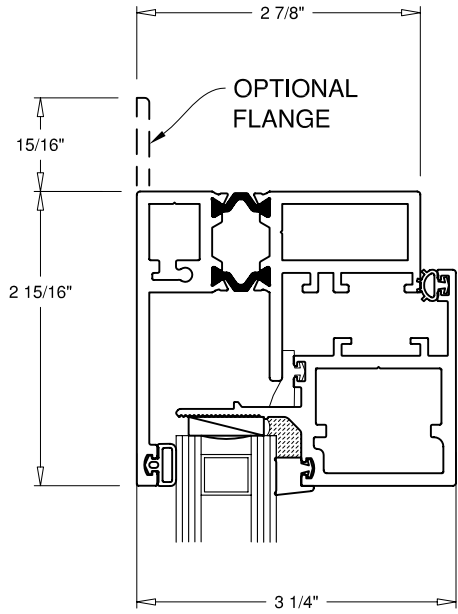
### Performance Data

AAMA RATING:	DAW-AW70
AIR INFILTRATION @ 50 mph	0.08 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	105.33 PSF
DESIGN PRESSURE	70.22 PSF

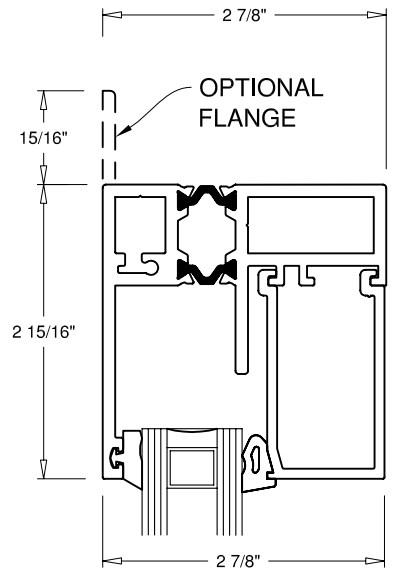




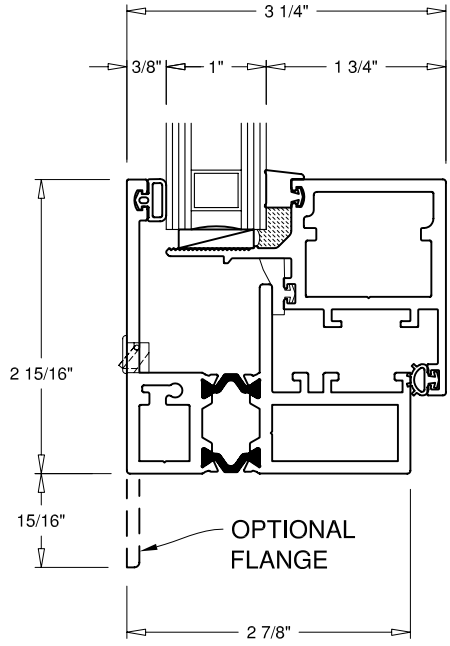




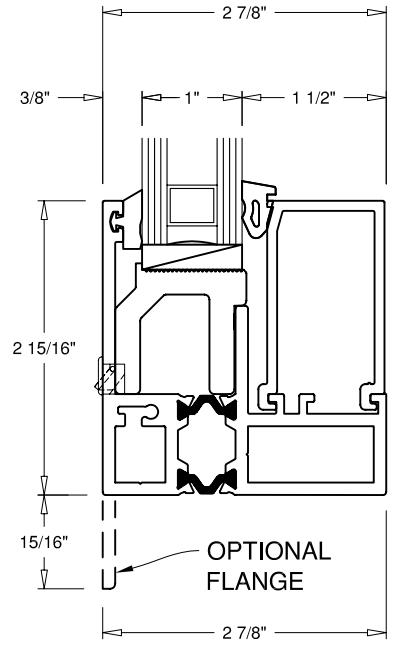
① **HEAD OPERABLE**



③ **HEAD FIXED**

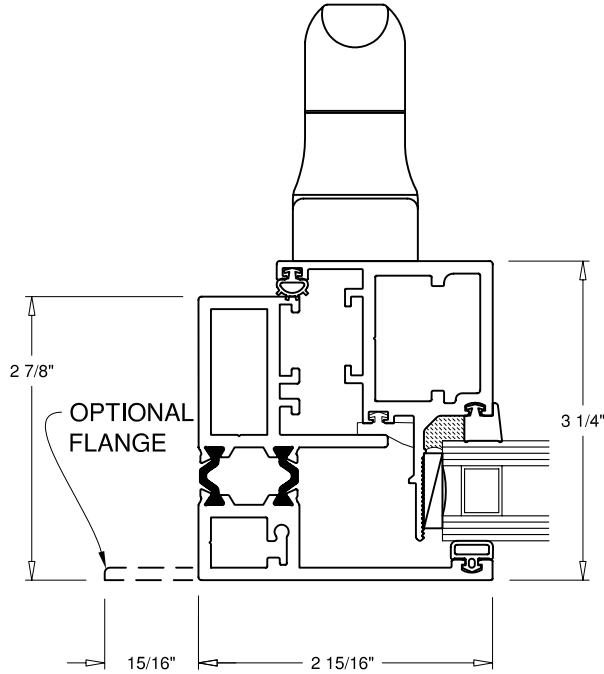


② **SILL OPERABLE**

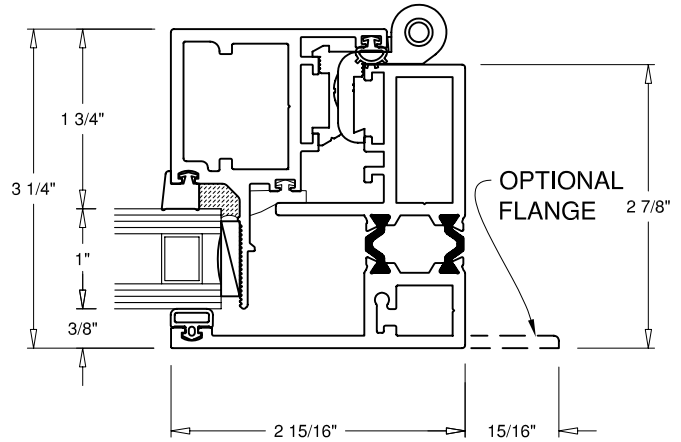


④ **SILL FIXED**

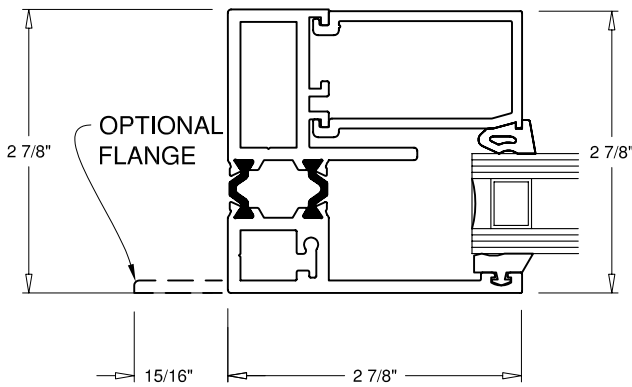
Z:\ENGINEERING\LIBRARY\WINDOW WALL\8000\CATALOG\8000nt.dwg, 6/15/2009 11:46:42 AM, Lethbr, 11.91804



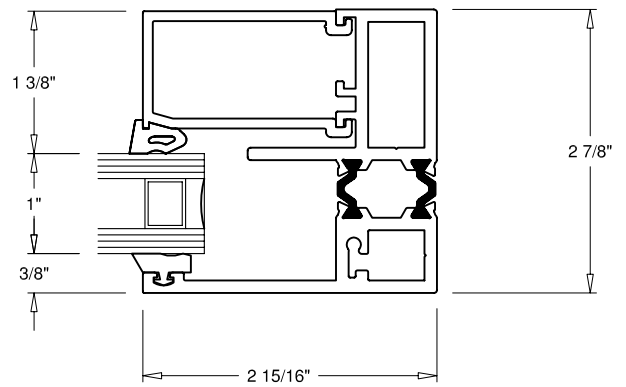
5 JAMB  
OPERABLE (HANDLE SIDE)



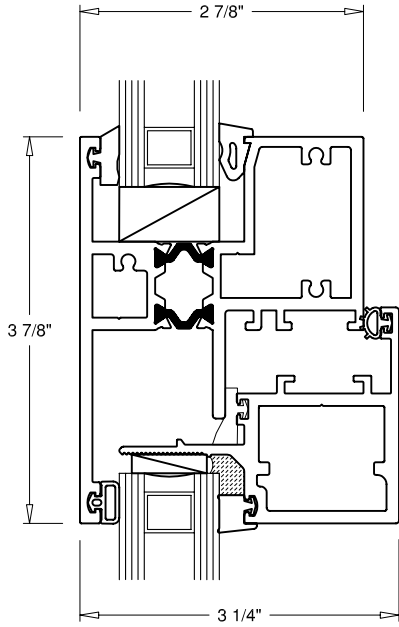
6 JAMB  
OPERABLE (HINGE SIDE)



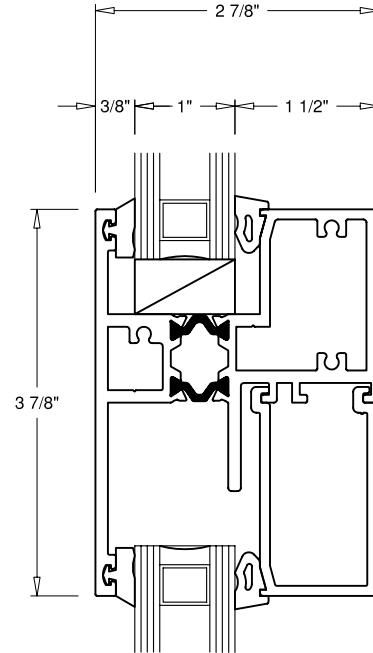
7 JAMB  
FIXED



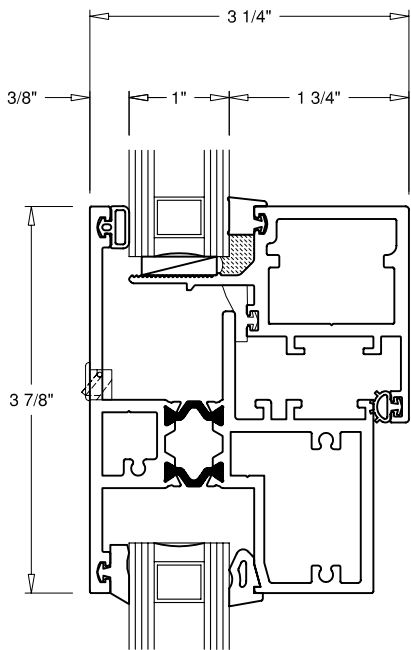
8 JAMB  
FIXED



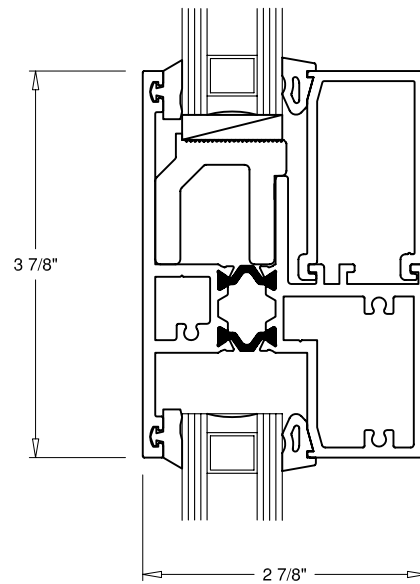
9 INT. MULLION  
FIXED OVER OPERABLE



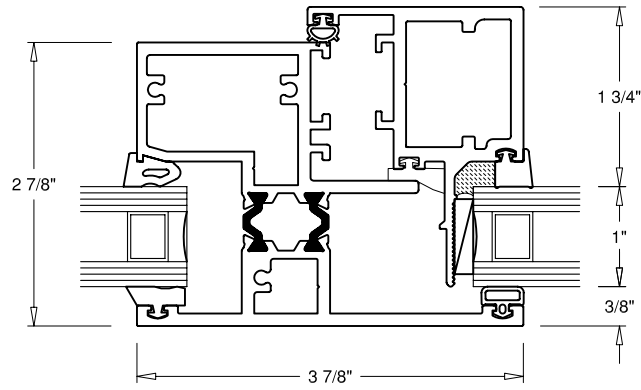
11 INT. MULLION  
FIXED OVER FIXED



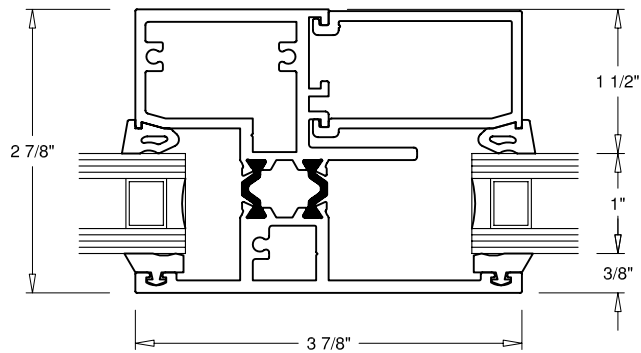
10 INT. MULLION  
OPERABLE OVER FIXED



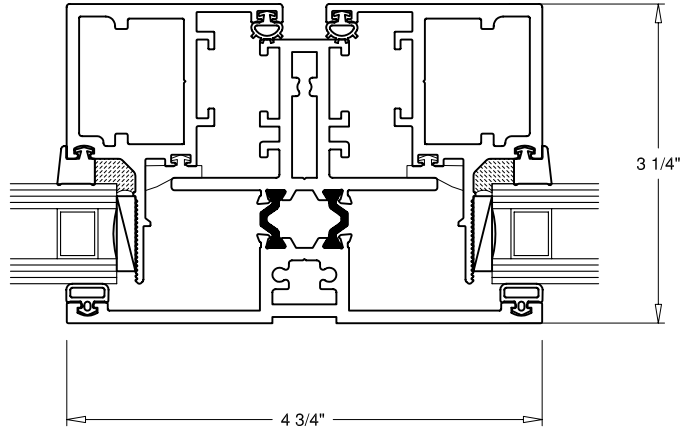
12 INT. MULLION  
FIXED OVER FIXED



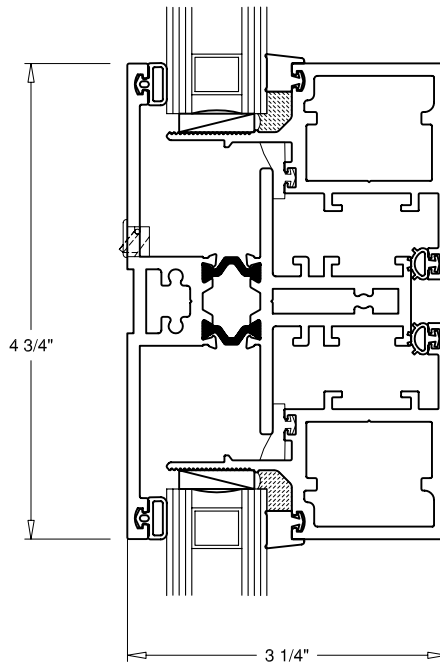
13 IMPOST  
FIXED TO OPERABLE



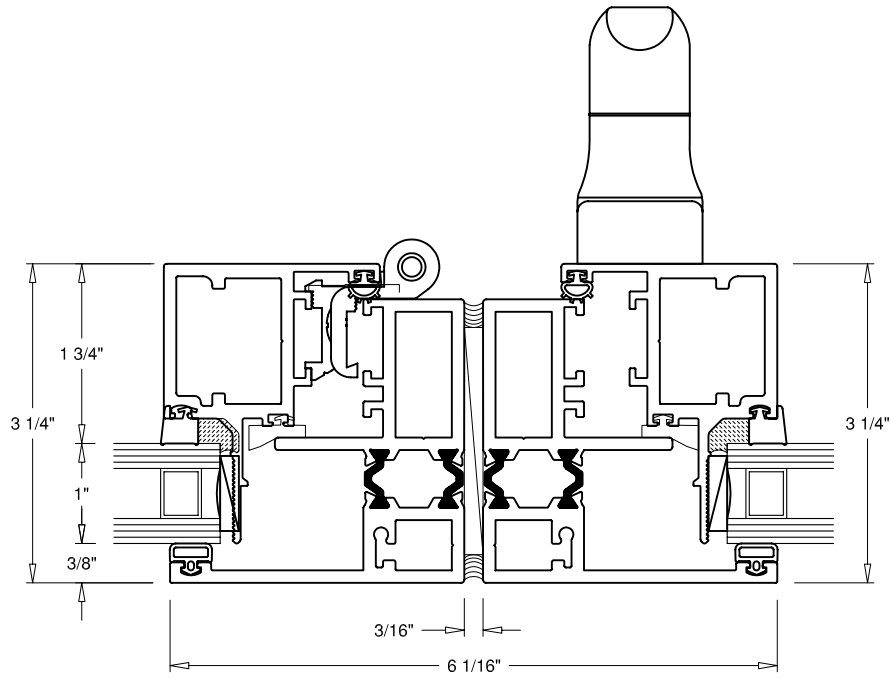
14 IMPOST  
FIXED TO FIXED



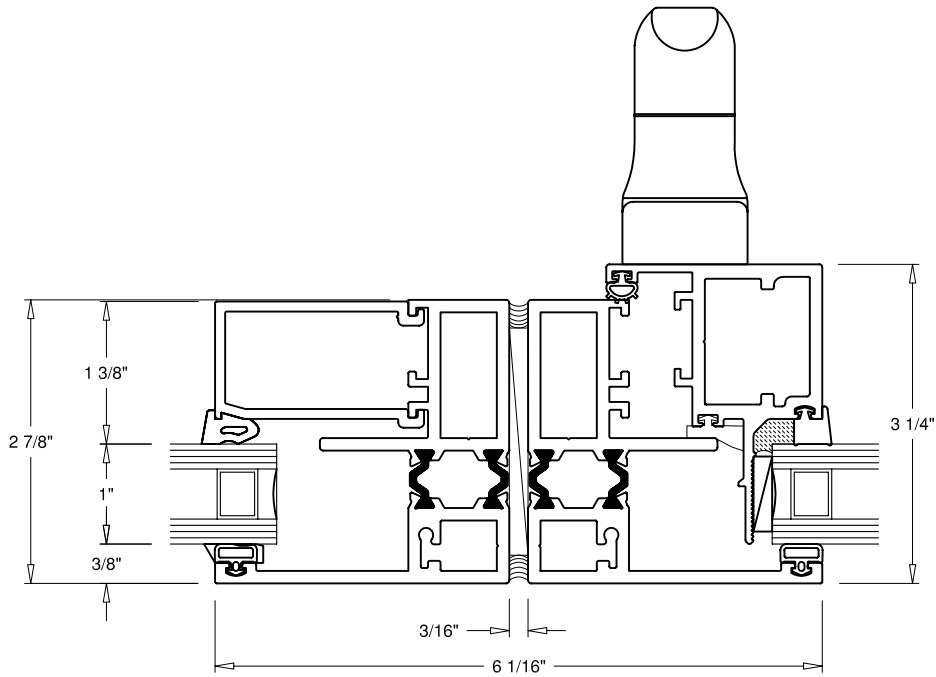
15 IMPOST (VERTICAL)  
OPERABLE TO OPERABLE



16 IMPOST (HORIZONTAL)  
OPERABLE TO OPERABLE



17 **MULLION**  
OPERABLE (HINGE SIDE)



18 **MULLION**  
FIXED TO OPERABLE



## Series 8000NT DAW-AW70/HC70 Dual Action Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.



## Series 8000NT DAW-AW70/HC70 Dual Action Window

### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: DAW-HC70 and DAW-AW70.
- B. Dual Action Windows are 2 7/8" frame depth; extruded aluminum with integral structural "insulbar" thermal break; equal-leg frame; factory-assembled.
- C. Configuration: Dual Action in combination with fixed panels. **(Any configuration within one master frame including a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: Sash - 1" insulating glass with structurally glazed silicone interior perimeter sealant and silicone spacer gasket; factory-glazed. Fixed - 1" insulating glass with EPDM gasket in exterior and interior. **[Optional: Dual glazing with 1" insulating glass on the exterior and ¼" glass on an access panel]** See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. **[Optional: Different interior and exterior finishes]** See Paragraph 2.06 for finish options.

### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **DAW-AW70** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.08 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 70 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 105.33 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to **DAW-HC70** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.07 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 70 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 105.33 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 8000NT Dual Action Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 2.832 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: Provide lever handle mounted to sash interior without exposed screws. Handle shall activate a concealed slide bar connected to multiple locking points on the frame as required by window size. Lever handle to allow operation of the sash to tilt with approx. 6" opening at top for ventilation, and to open as inswing casement for cleaning purposes. **[Optional: Window units shall be equipped with a limit**





### Series 8000NT DAW-AW70/HC70 Dual Action Window

device to prevent the window from opening more than a specified clear opening.] Provide butt hinges with stainless steel pins, minimum 0.250" in diameter. Attachment of hinges to the sash and main frame shall be by means of stainless steel machine screws.

- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All main frame vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames shall be thermally broken by the "insulbar" method. The thermal barrier material shall be of "insulbar" with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The vent shall have a continuous 1/4" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads on the vents are not permitted. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" **Optional: (3/16" or 1/8" may be used, however structural performance will be limited to the capability of the glass).**
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Annealed **Optional: (Heat Strengthened, Tempered)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #2 surface)**
- C. Interior glass lite
  - 1. Thickness: 1/4" **Optional: (3/16" or 1/8" may be used, however structural performance will be limited to the capability of the glass).**
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Annealed **Optional: (Heat Strengthened, Tempered)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #3 surface)**
- D. **Optional: Dual Glazing (Non-Sealed glass)**
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be **(Select from glass choices above and include here).**
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. **[Optional: Other panel, Spandrel Glass, etc.]**

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. **[Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]**
- C. Quality standard: conforming to AAMA 2603. **[Optional: 2604, 2605]**
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils **[Optional: 1.4 mil Acrynar, 1.2 mils Duranar]** on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. **[Optional: custom color to be selected.]**

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. **[Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]**



## Series 8000NT DAW-AW70/HC70 Dual Action Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 4000 Series

## 4100 Projected



<u>Product By Operation:</u>	2-1/2" Awning
<u>Model By Family:</u>	4000
<u>Product Description:</u>	Projected Outswing
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-05 Rating:</u>	AP-C90
<u>AAMA Test Size:</u>	48 x 32
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind

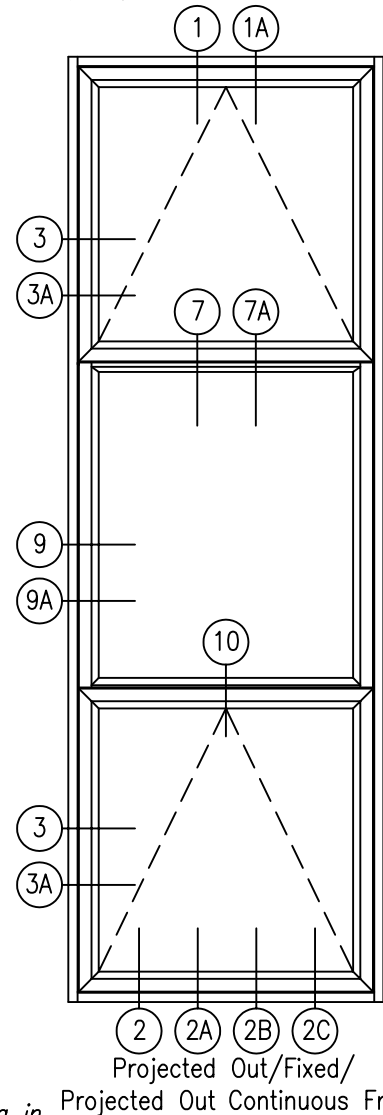
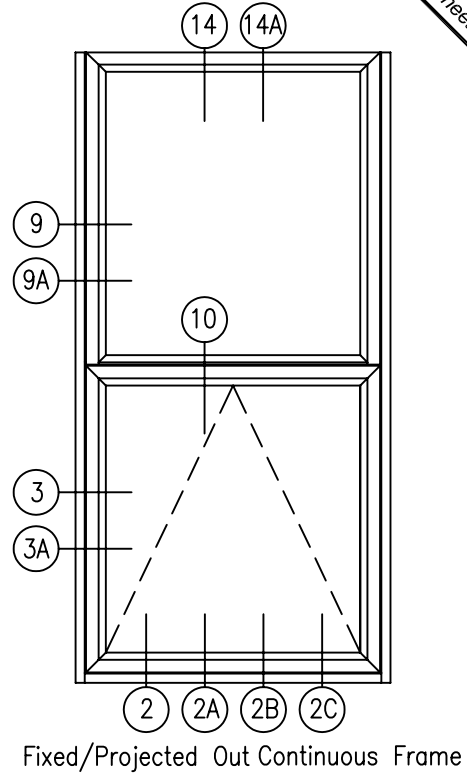
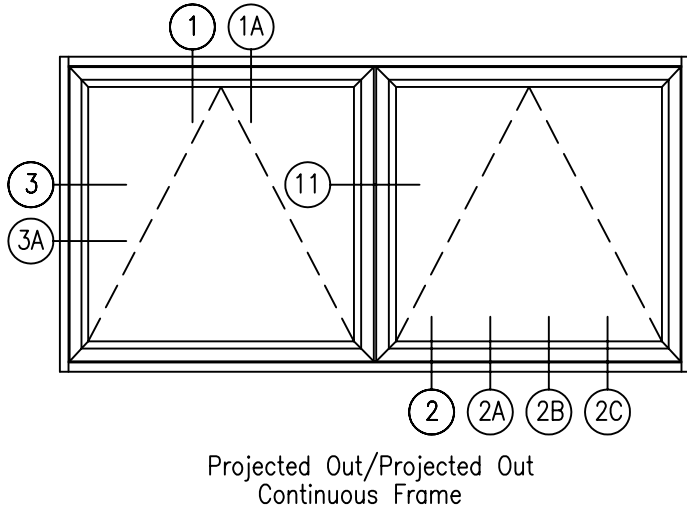
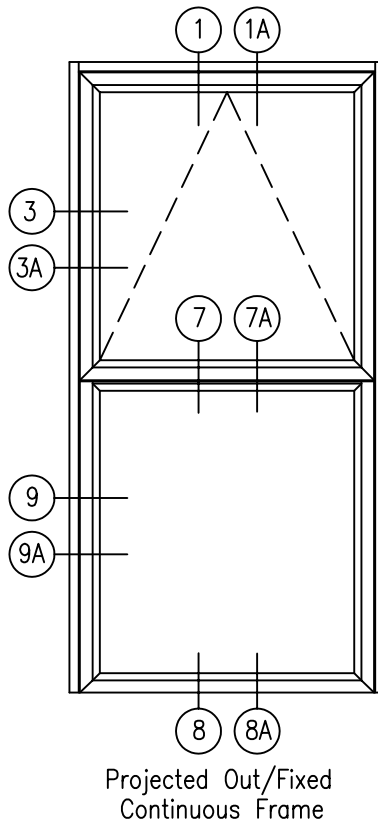
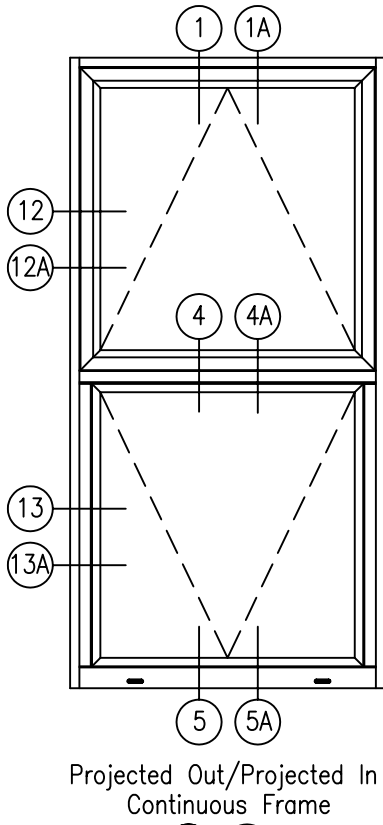
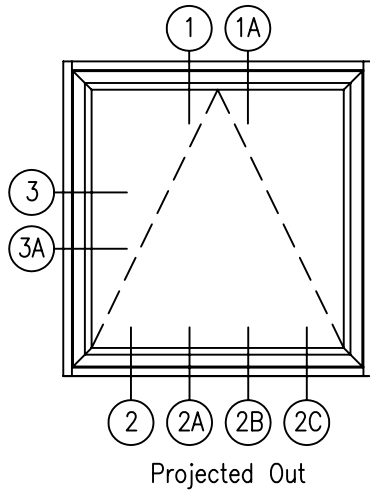


### Performance Data



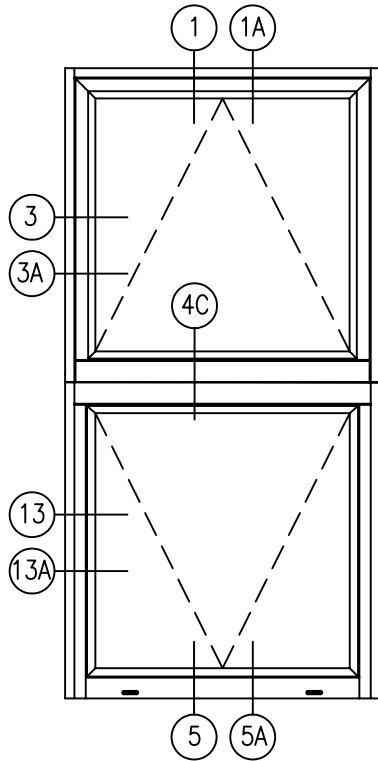
AAMA RATING:	AP-C90
AIR INFILTRATION @ 25 mph	0.01 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	188.09 PSF
DESIGN PRESSURE	105.33 PSF

SCALE: NONE

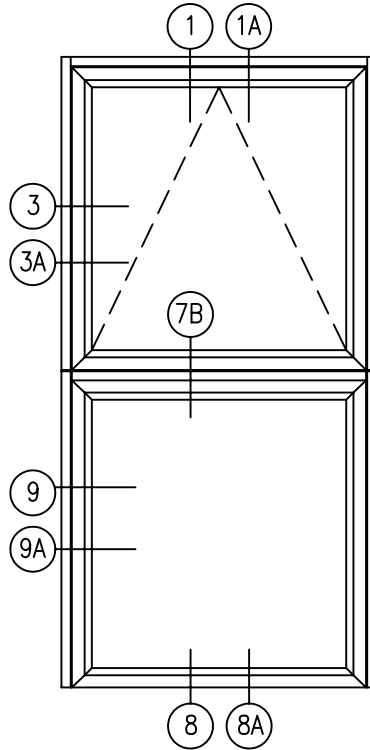


All Elevations are viewed outside looking in.

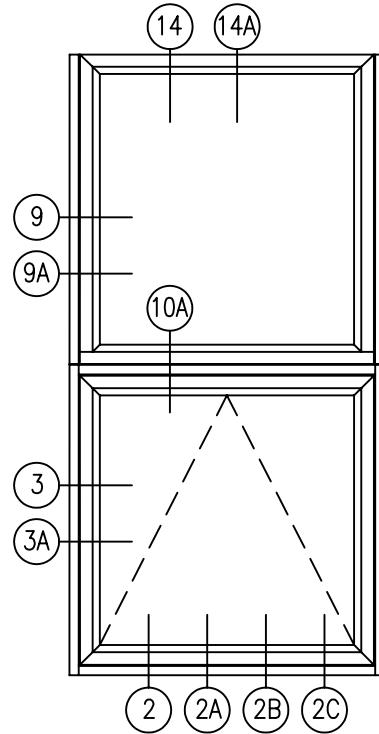
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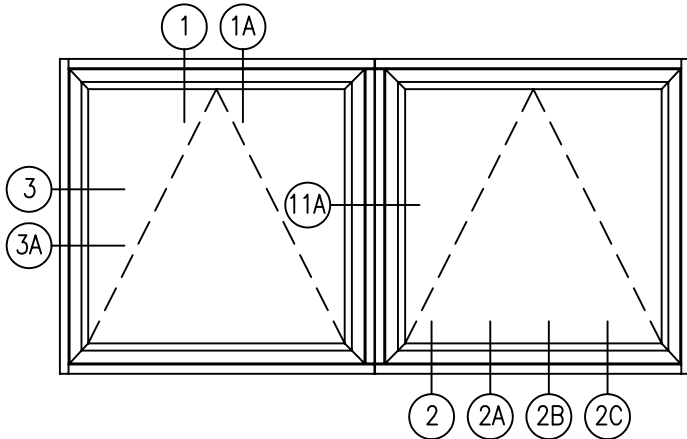
Projected Out/Projected In  
w/ H Mullion



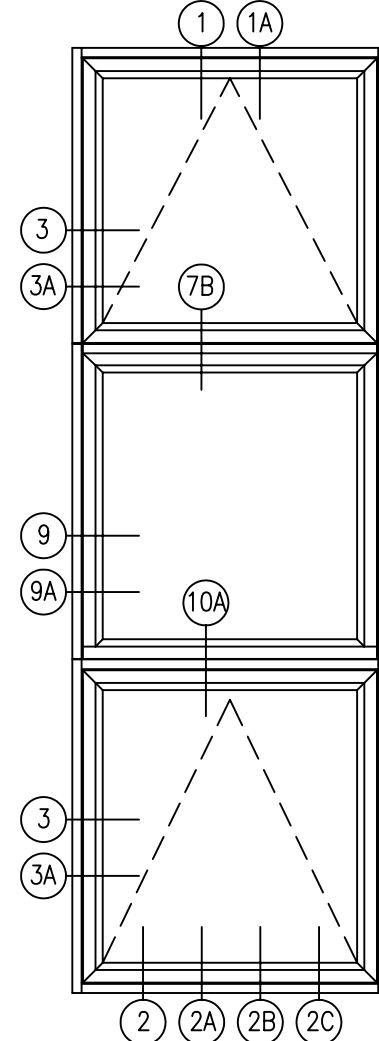
Projected Out/Fixed  
w/ H Mullion



Fixed/Projected Out w/ H Mullion



Projected Out/Projected Out  
w/ H Mullion



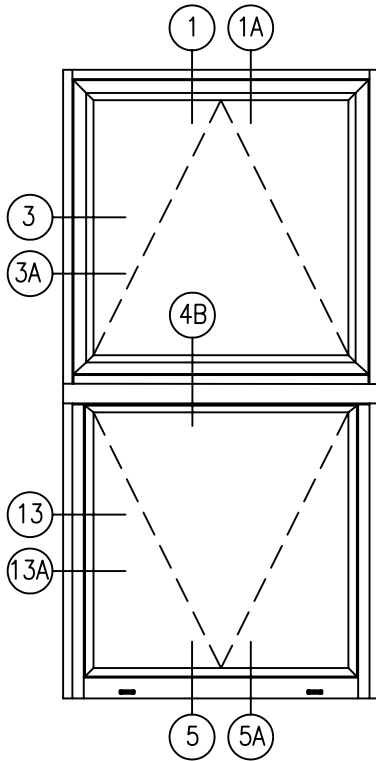
Projected Out/Fixed/Projected Out  
w/ H Mullion

All Elevations are viewed outside looking in.

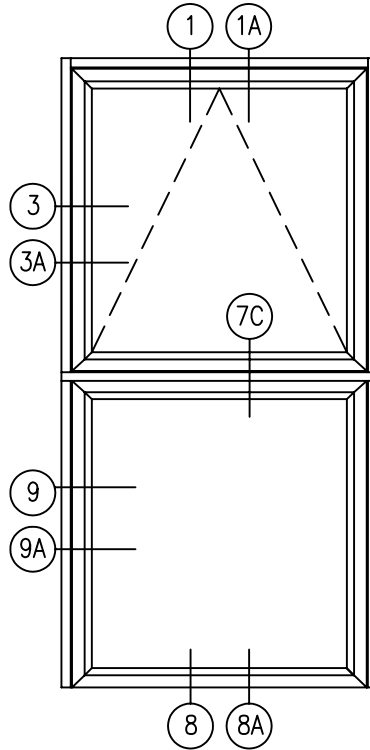
# Champion Series 4100

Sheet 3 of 11

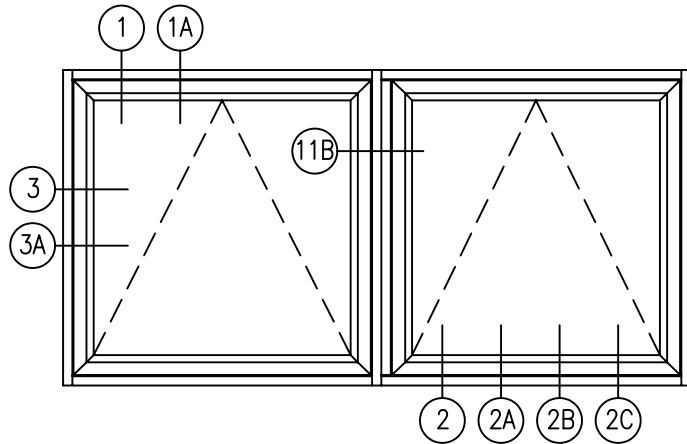
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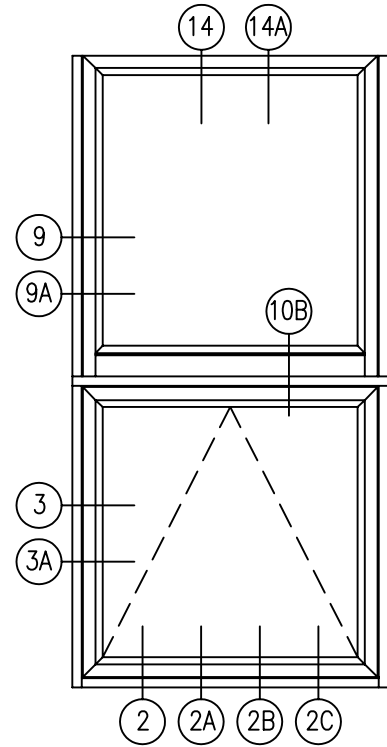
Projected Out/Projected In  
w/ Male-Female Mullion



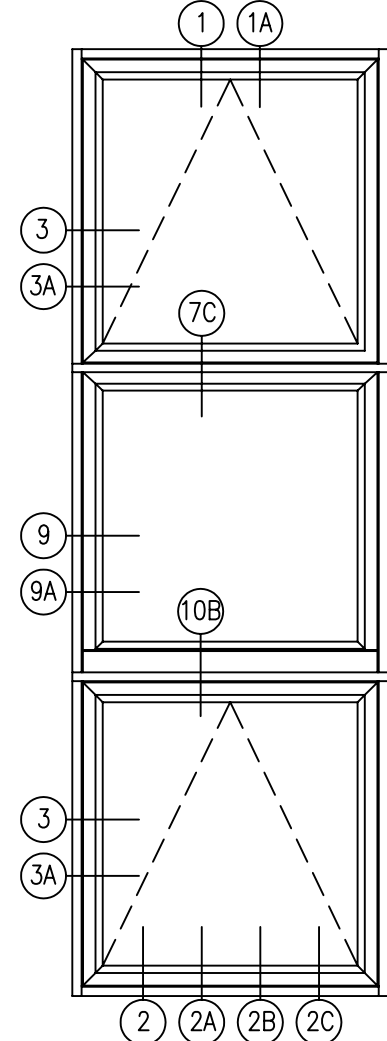
Projected Out/Fixed  
w/ Male-Female Mullion



Projected Out/Projected Out  
w/ Male-Female Mullion



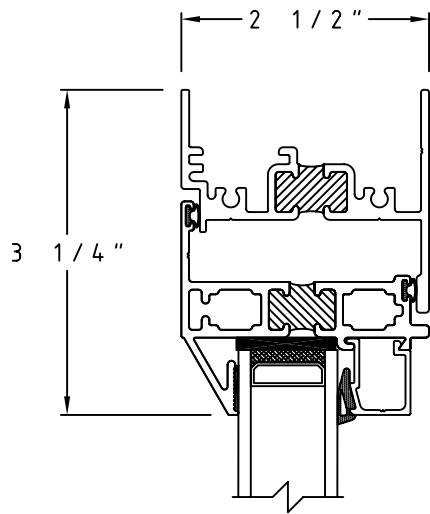
Fixed/Projected Out w/ Male-Female Mullion



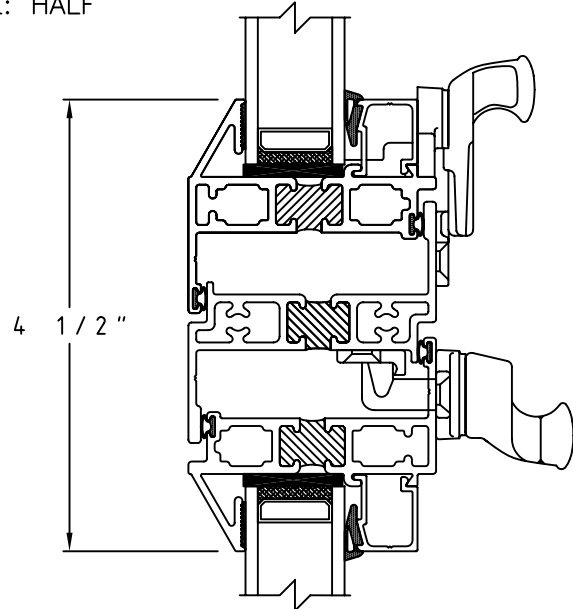
Projected Out/Fixed/Projected Out  
w/ Male-Female Mullion

Champion Series 4100

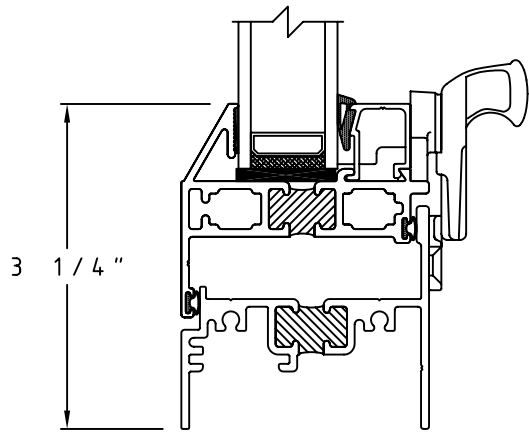
SCALE: HALF



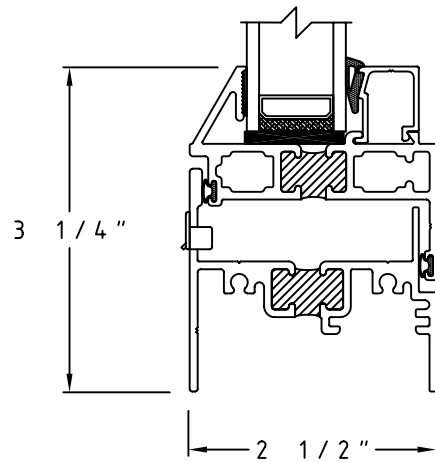
① Head Detail



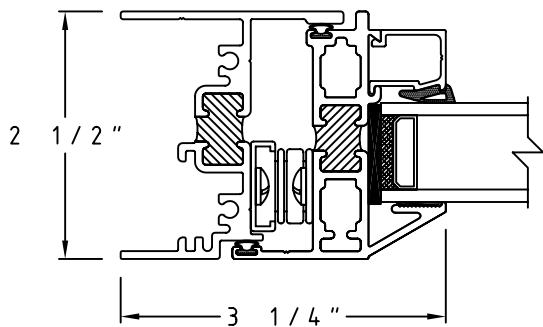
④ Projected Out/Projected In Mullion Detail



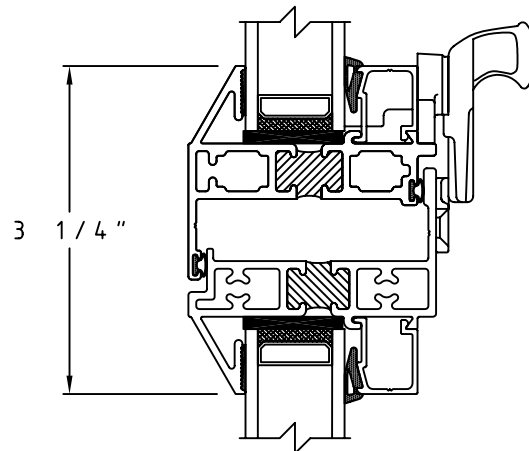
② Sill Detail



⑤ Projected In Sill Detail

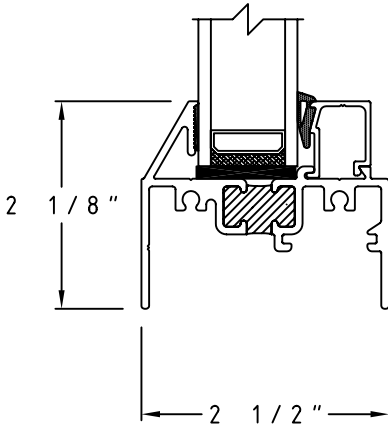


③ Jamb Detail

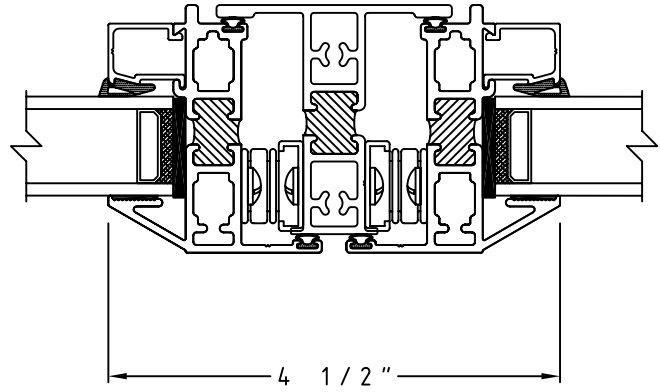


⑦ Projected Out/Fix Detail

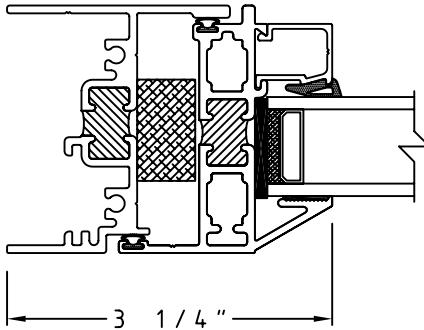
SCALE: HALF



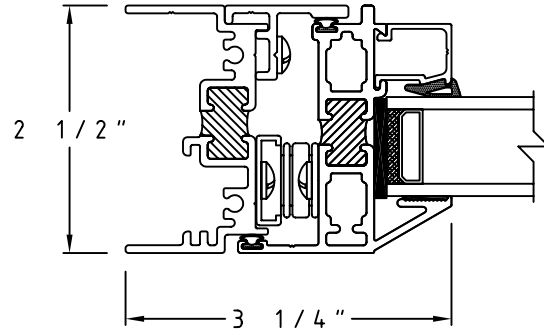
8 Fixed Sill Detail



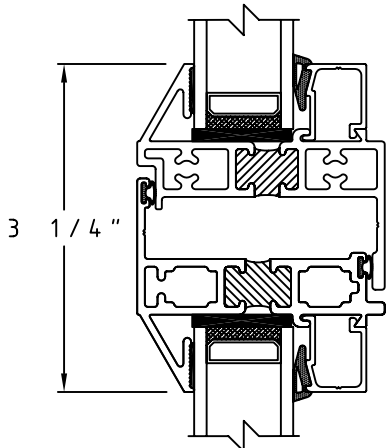
11 Projected Out/Projected Out Mullion Detail



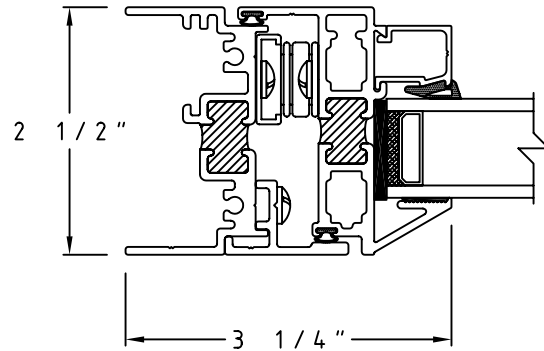
9 Fixed Jamb Detail



12 Projected Out Jamb Detail



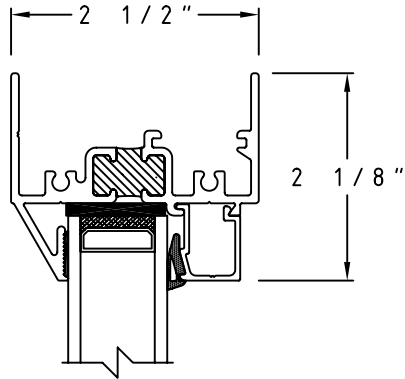
10 Fixed/Projected Out Mullion Detail



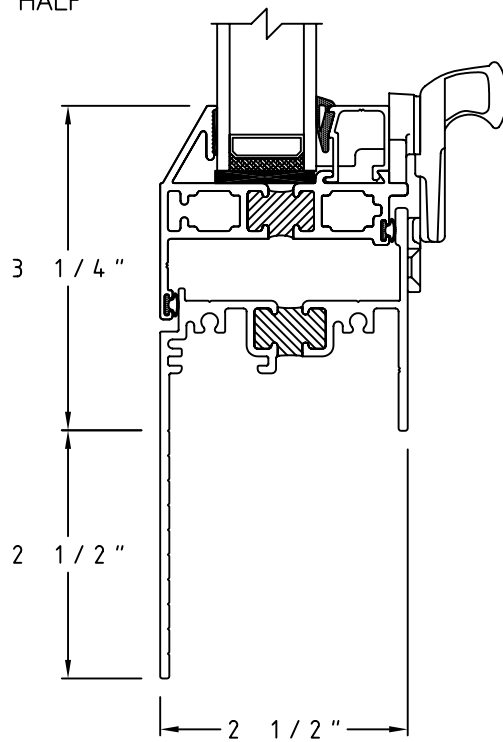
13 Projected In Jamb Detail



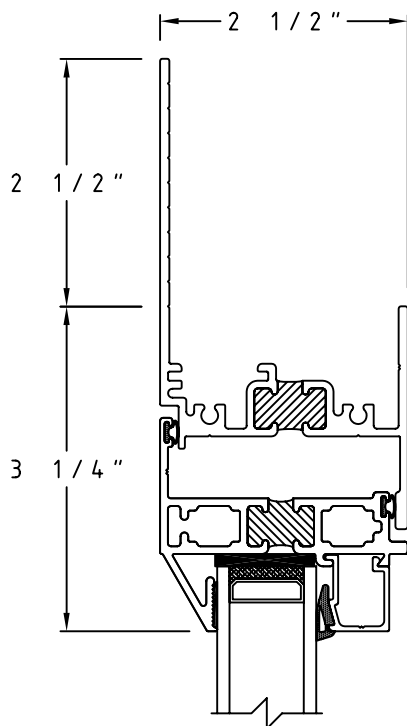
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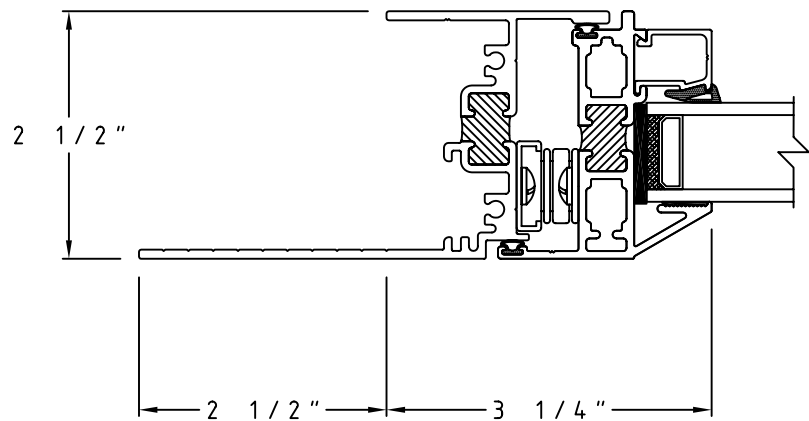
⑭ Fixed Head



②A 2 1/2" Flange Sill Detail

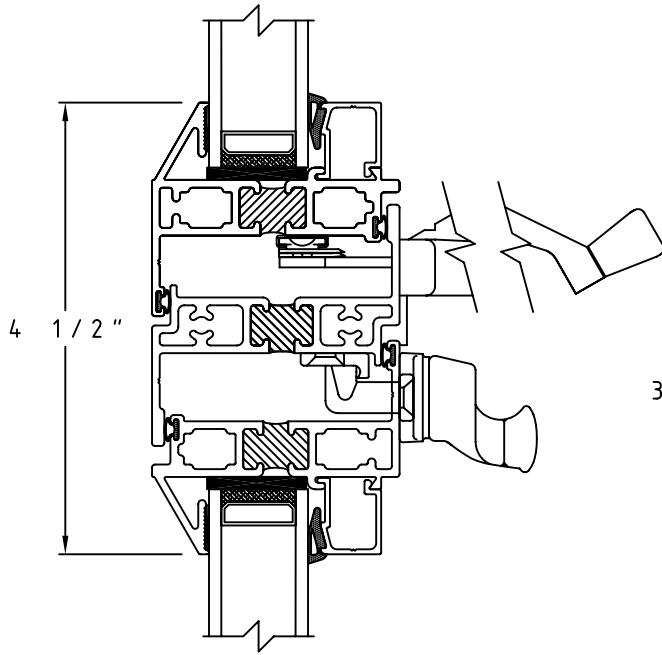


①A 2 1/2" Flange Head Detail

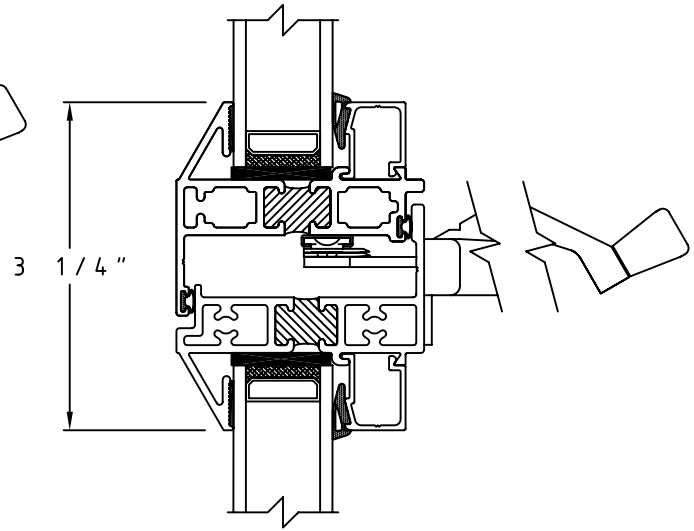


③A 2 1/2" Flange Jamb Detail

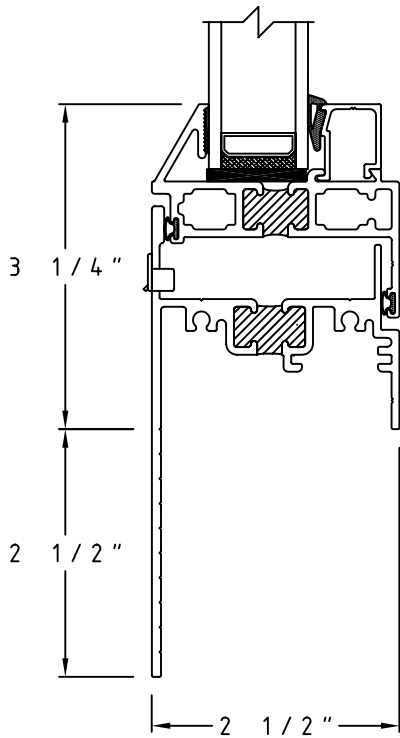
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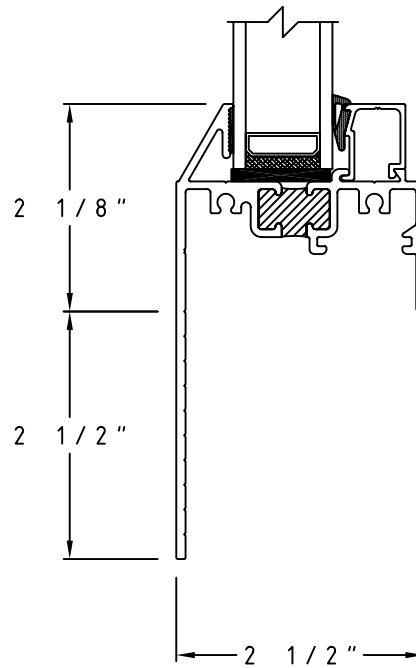
④A Projected Out/Projected In with Scissor Crank Detail



⑦A Projected Out/Fixed with Scissor Crank Detail

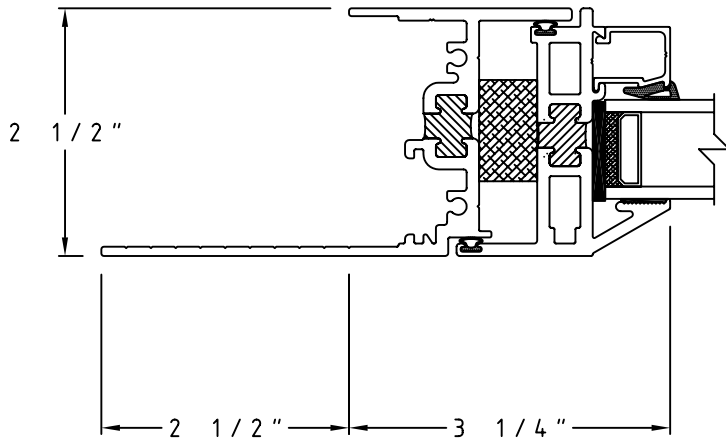


⑤A 2 1/2" Flange Sill Projected In Detail

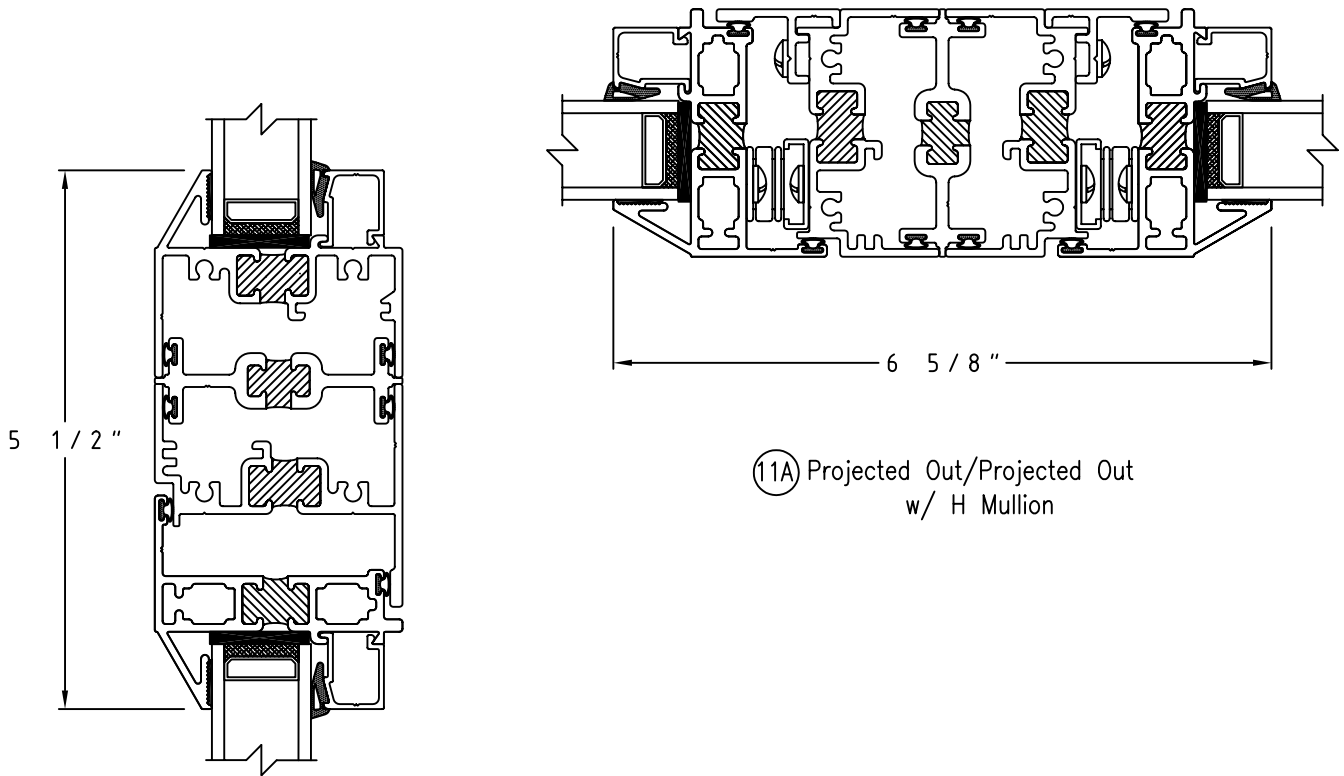


⑧A 2 1/2" Flange Fixed Sill Detail

SCALE: HALF



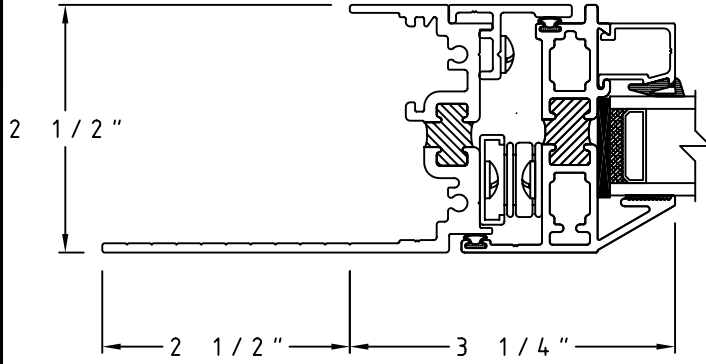
9A 2 1/2" Flange Fixed Jamb Detail



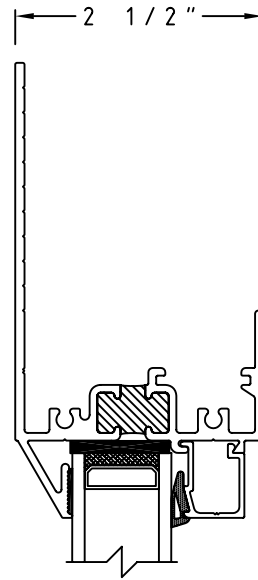
10A Fixed/Projected Out  
w/ H Mullion

11A Projected Out/Projected Out  
w/ H Mullion

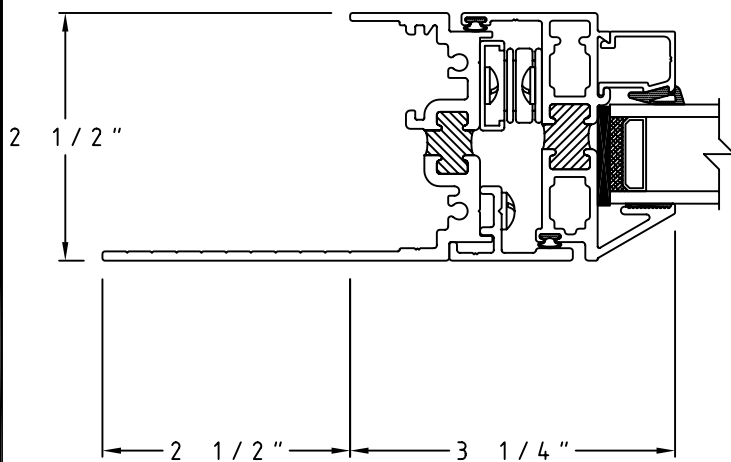
SCALE: HALF



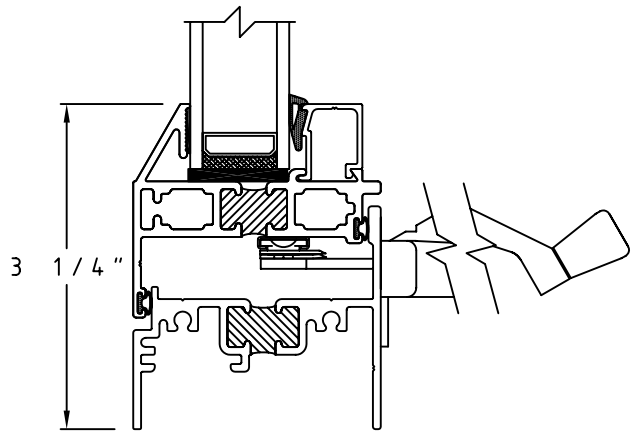
12A 2 1/2" Projected Out Flange Jamb Detail



14A 2 1/2" Fixed Flange Head

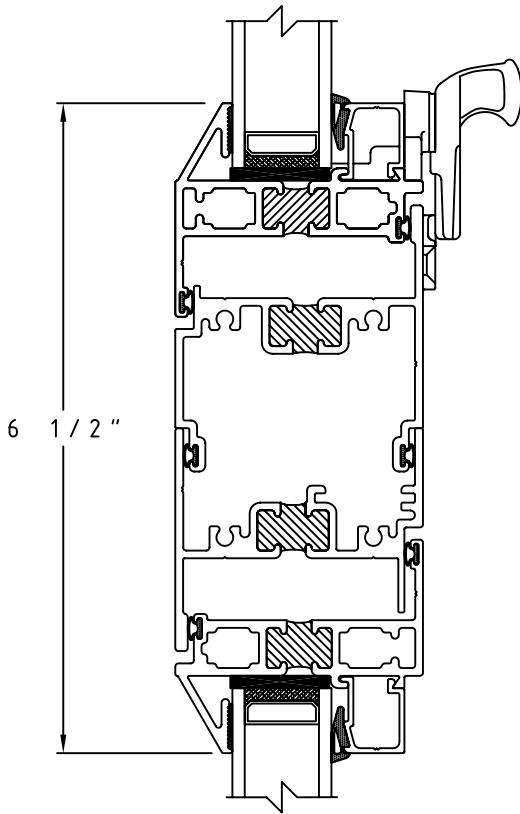


13A 2 1/2" Projected In Flange Jamb Detail

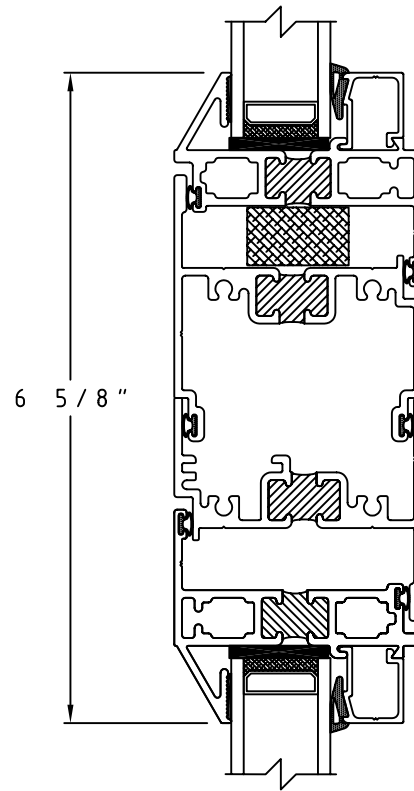


2B Sill with Scissor Crank Detail

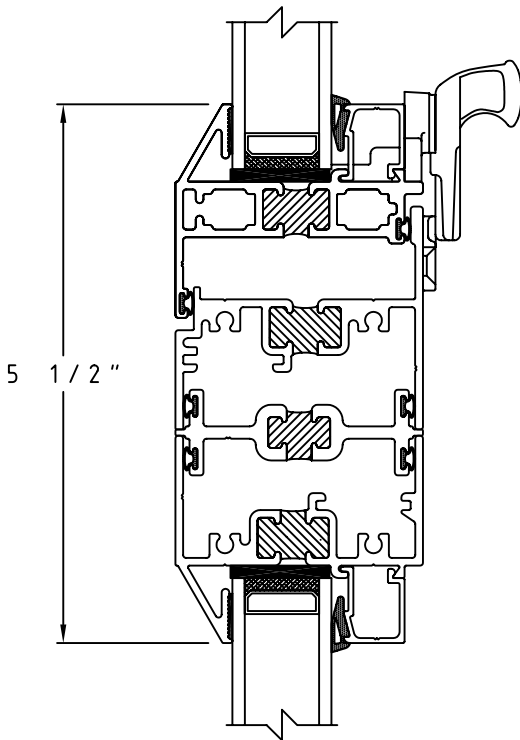
SCALE: HALF



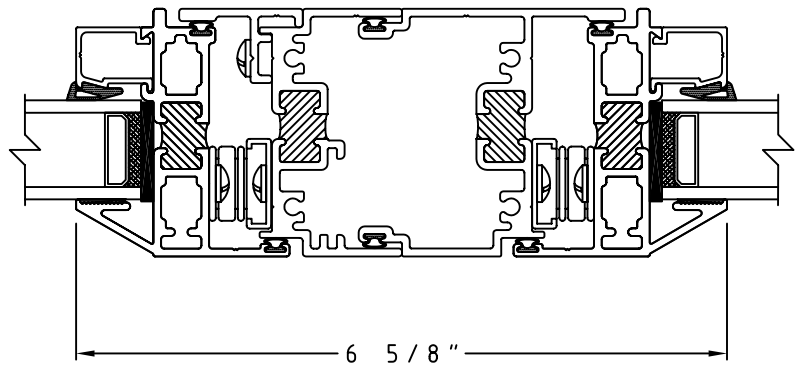
④B Projected Out/Projected In w/ Male-Female Mullion



⑩B Fixed/Projected Out w/ Male-Female Mullion

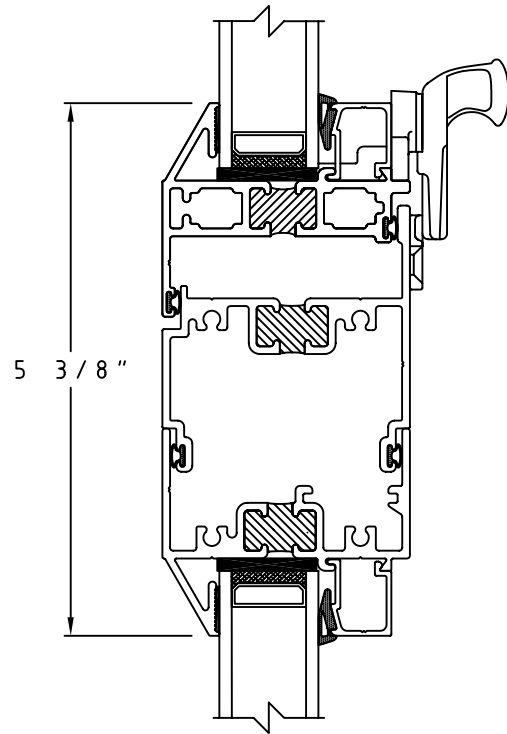
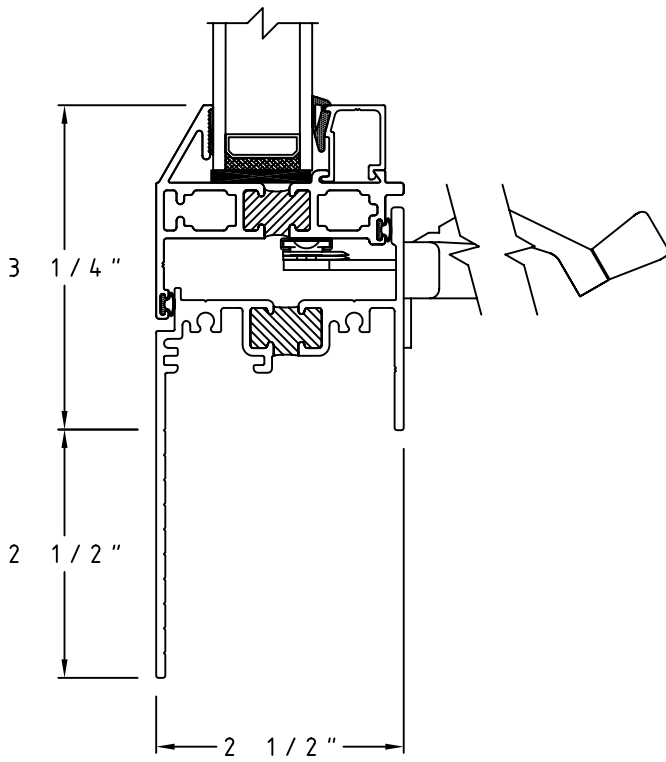


⑦B Projected Out/Fixed w/ H Mullion



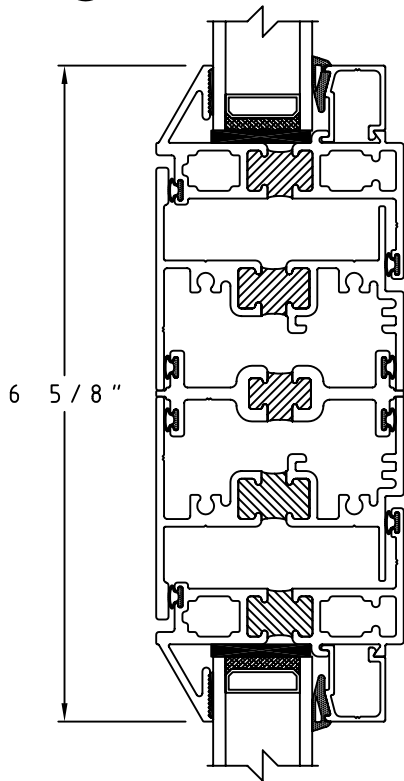
⑪B Projected Out/Projected Out with Male Female Mullion

SCALE: HALF



2C 2 1/2" Flange Sill with Scissor Crank Detail

7C Projected Out/Fixed w/ Male-Female Mullion



4C Projected Out/Projected In w/ H Mullion



## Series 4100 AP-C90 Project Out Awning Window.

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



### Series 4100 AP-C90 Project Out Awning Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: AP-C90.
- B. Awning Projected Out Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: project out/awning; single vent per frame. (Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to AP-C90 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 48" x 32" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 1.6 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 105.33 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 188.09 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURERS

Champion 4100 Projected Out Awning Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .078". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .078".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges when used with scissor crank] hinges conforming to AAMA 904 to rotate vent outward on horizontal axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: single point lock on both sides of the vent] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.





### Series 4100 AP-C90 Project Out Awning Window.

- G. Screens: Full screens with wickets to access handles held in place with stainless steel clips with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced used only with the scissor crank option]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
1. Provide non-hermetically sealed lites of glass.
  2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]



## Series 4100 AP-C90 Project Out Awning Window.

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 4000 Series

## 4200 Projected



<u>Product By Operation:</u>	2-1/2" Hopper
<u>Model By Family:</u>	4000
<u>Product Description:</u>	Projected Inswing
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-05 Rating:</u>	AP-C90
<u>AAMA Test Size:</u>	48 x 32
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind



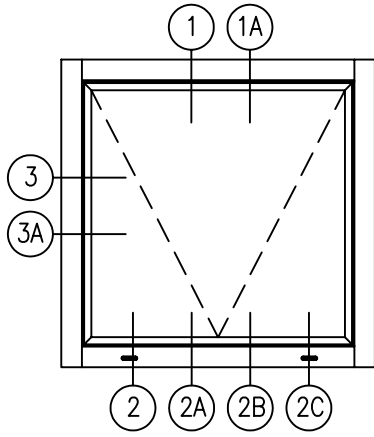
### Performance Data



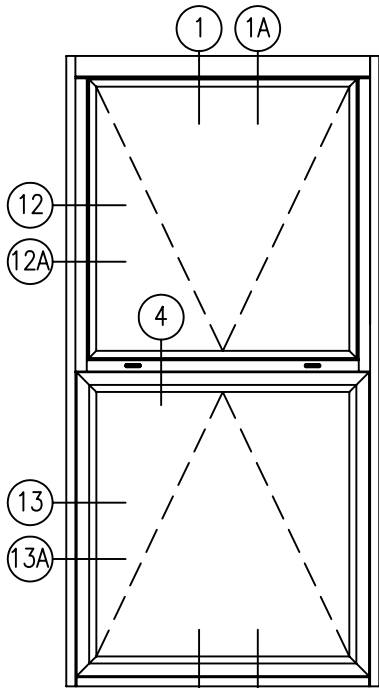
AAMA RATING:	AP-C90
AIR INFILTRATION @ 25 mph	0.01 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	188.09 PSF
DESIGN PRESSURE	105.33 PSF

SCALE: NONE

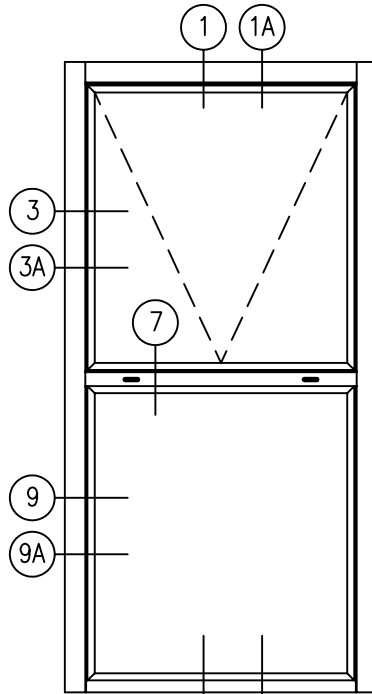
*Other combinations available at request.*



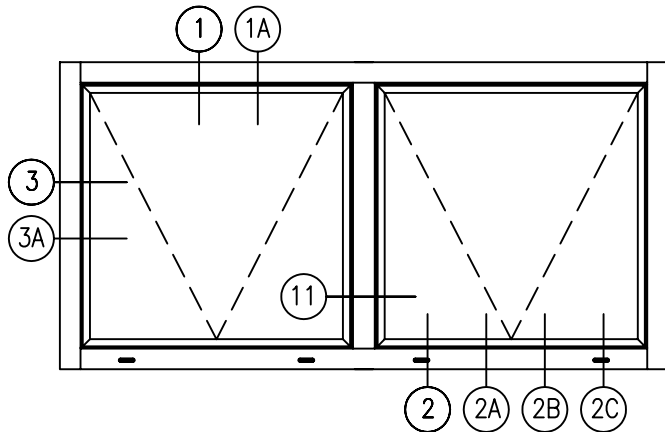
Projected In



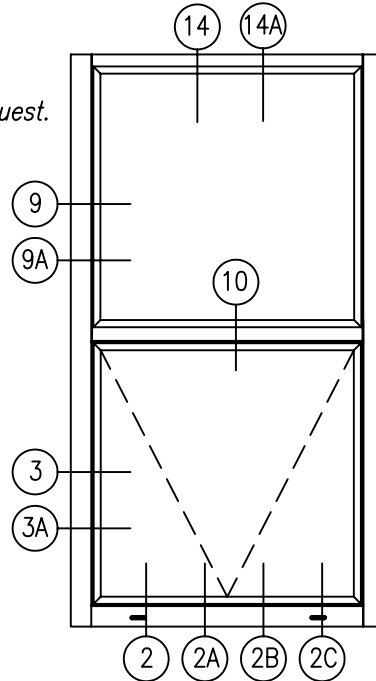
Projected In/Projected Out Continuous Frame



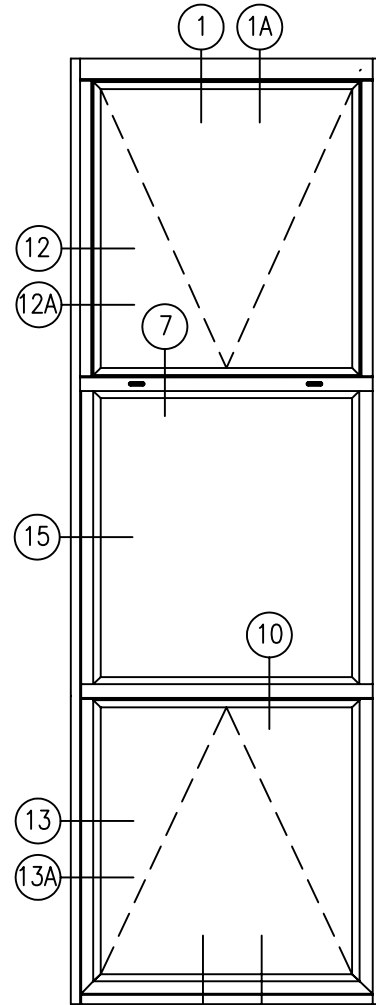
Projected In/Fixed Continuous Frame



Projected In/Projected In Continuous Frame



Fixed/Projected In Continuous Frame



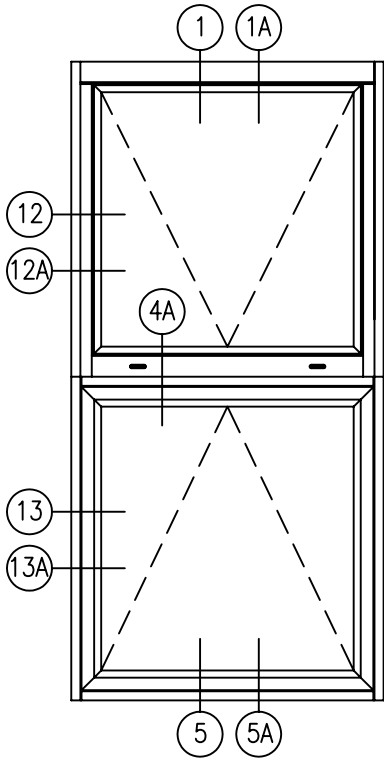
Projected In/Fixed/Projected Out Continuous Frame

*All Elevations are viewed outside looking in.*

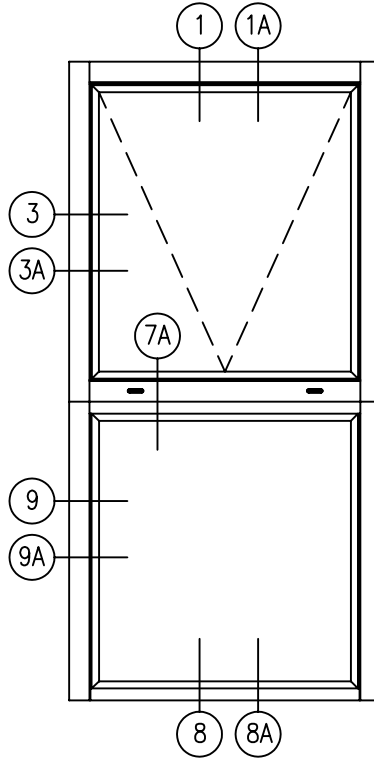
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Sheet 2 of 10

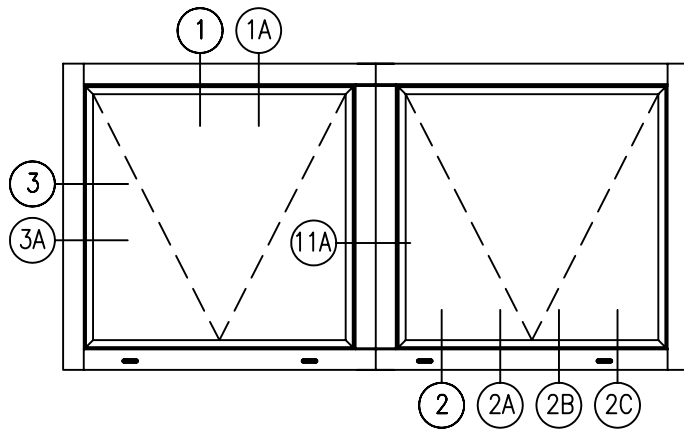
*Other combinations available at request.*



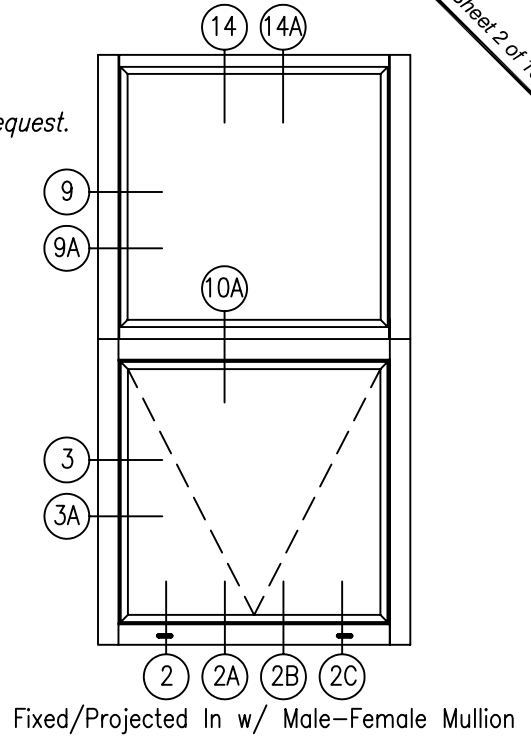
Projected In/Projected Out  
w/ Male-Female Mullion



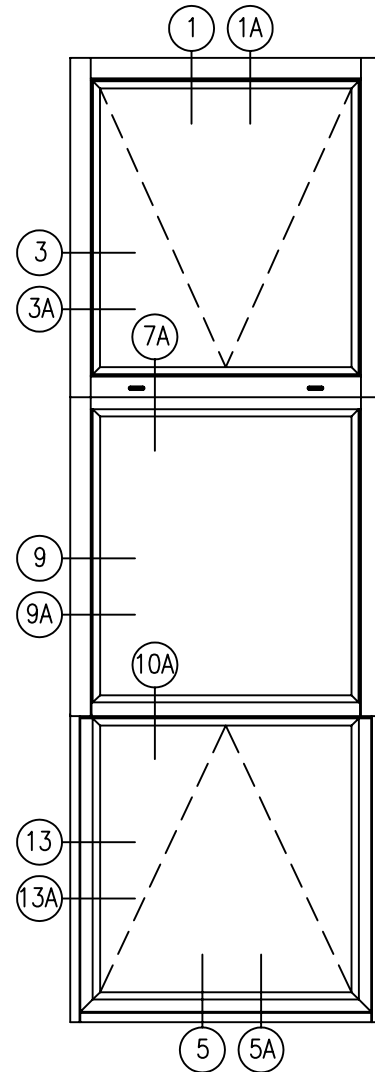
Projected In/Fixed  
w/ Male-Female Mullion



Projected In/Projected In  
w/ Male-Female Mullion



Fixed/Projected In w/ Male-Female Mullion

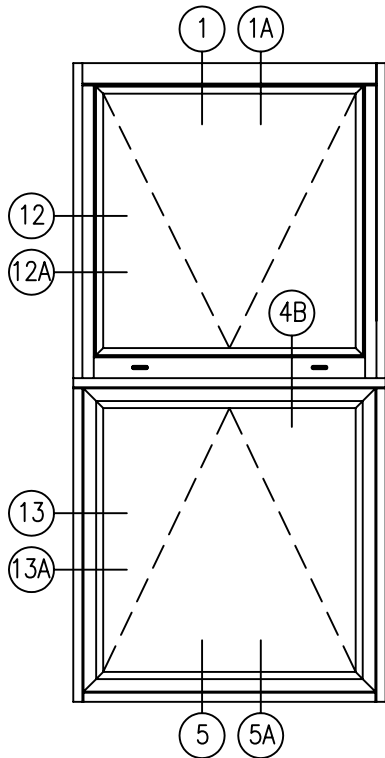


Projected In/Fixed/Project Out  
w/ Male-Female Mullion

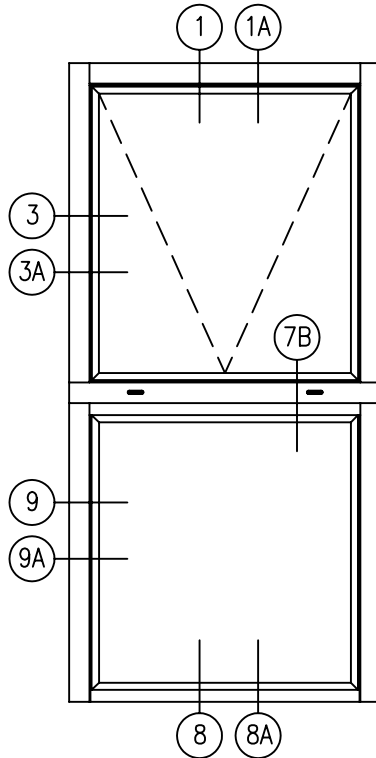
*All Elevations are viewed outside looking in.*

SCALE: NONE

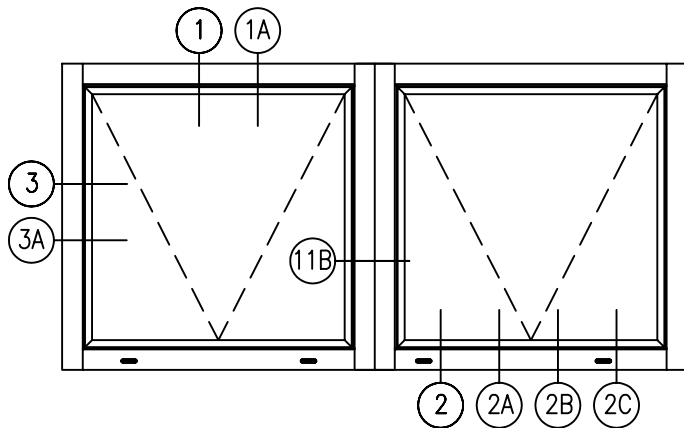
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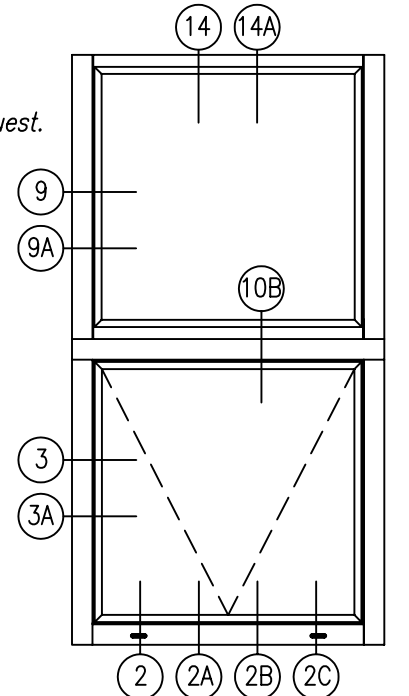
Projected In/Projected Out  
w/ H Mullion



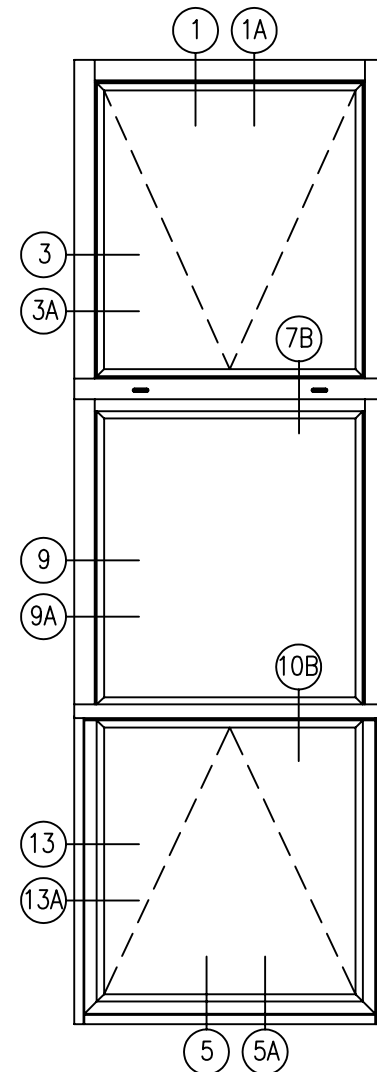
Projected In/Fixed  
w/ H Mullion



Projected In/Projected In  
w/ H Mullion



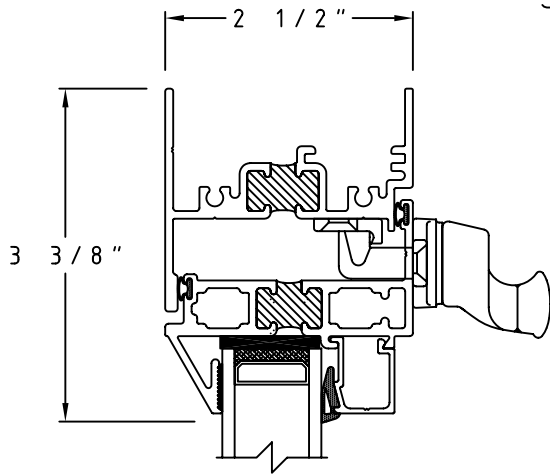
Fixed/Projected In w/ H Mullion



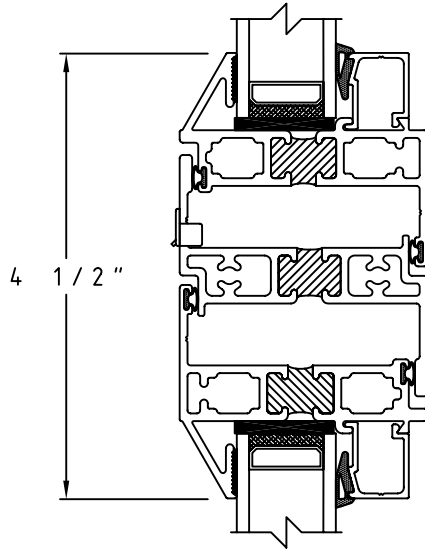
Projected In/Fixed/  
Projected Out w/ H Mullion

All Elevations are viewed outside looking in.

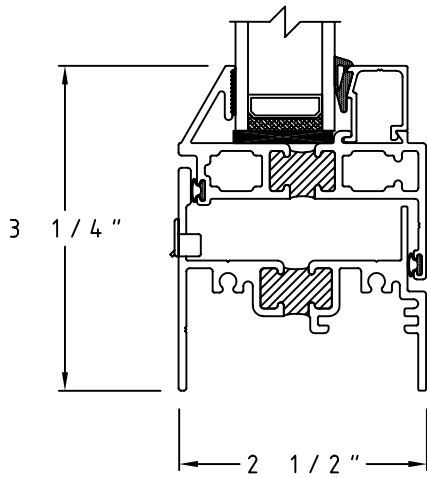
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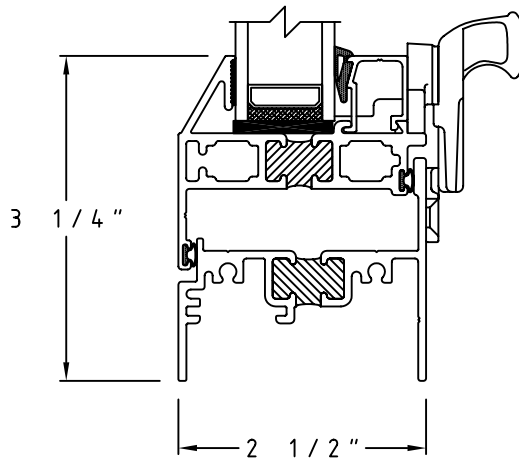
① Head Detail



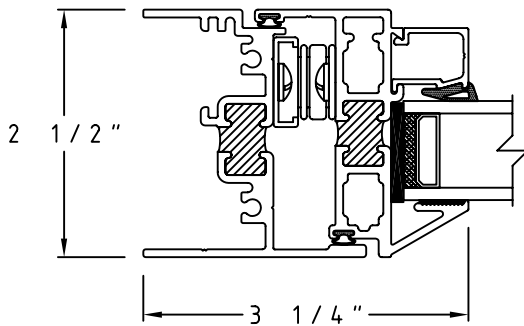
④ Projected In/Projected Out Mullion Detail



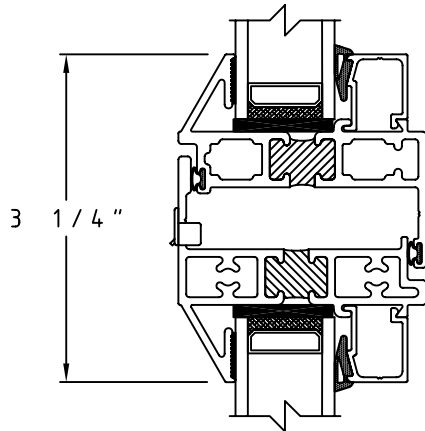
② Sill Detail



⑤ Projected Out Sill Detail

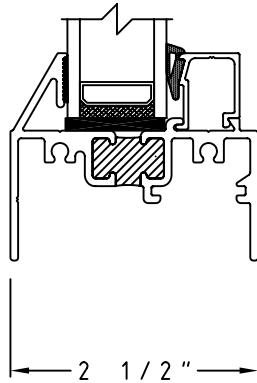


③ Jamb Detail

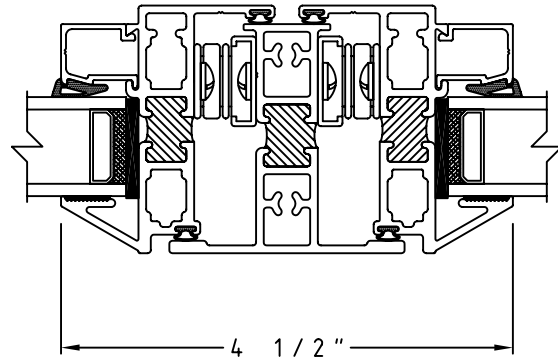


⑦ Projected In/Fixed Mullion Detail

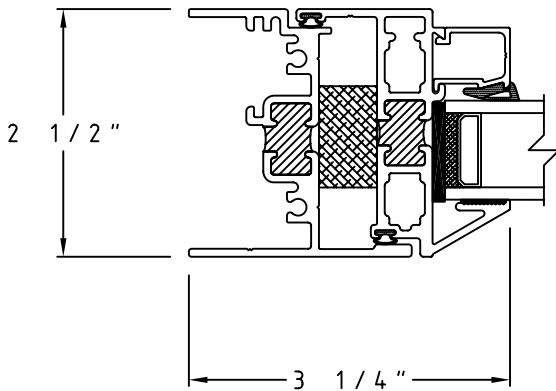
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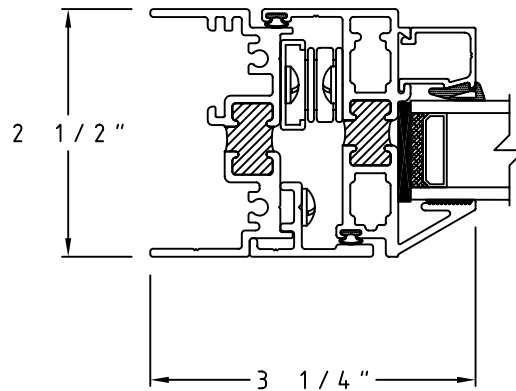
8 Fixed Sill Detail



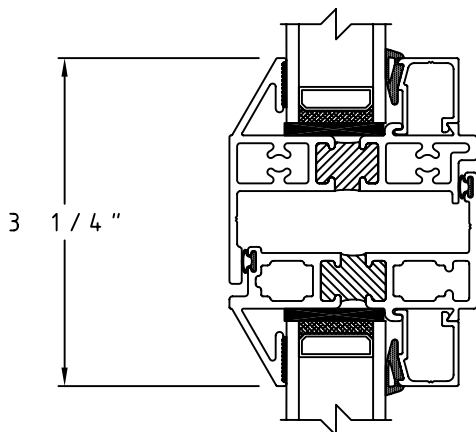
11 Projected In/Projected In Mullion Detail



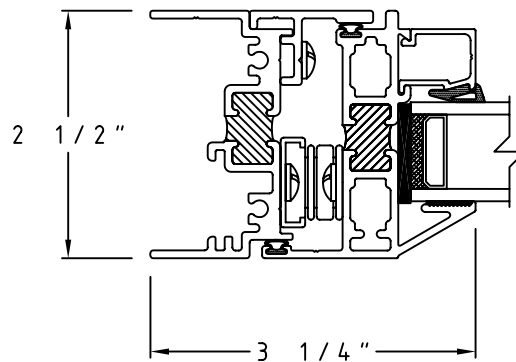
9 Fixed Jamb Detail



12 Projected In Jamb Detail



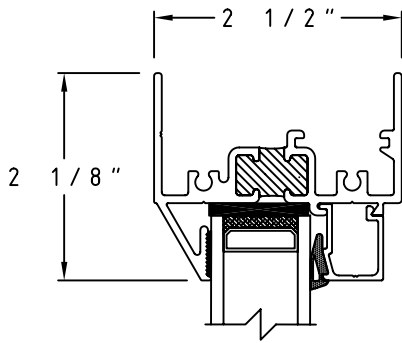
10 Fixed/Projected In Mullion Detail



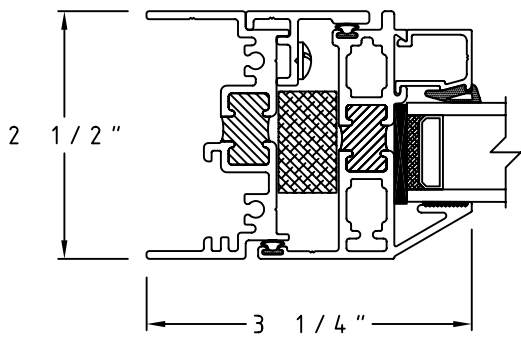
13 Projected Out Jamb Detail



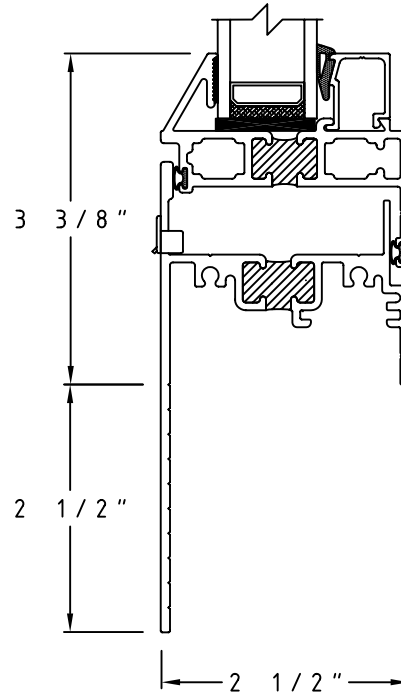
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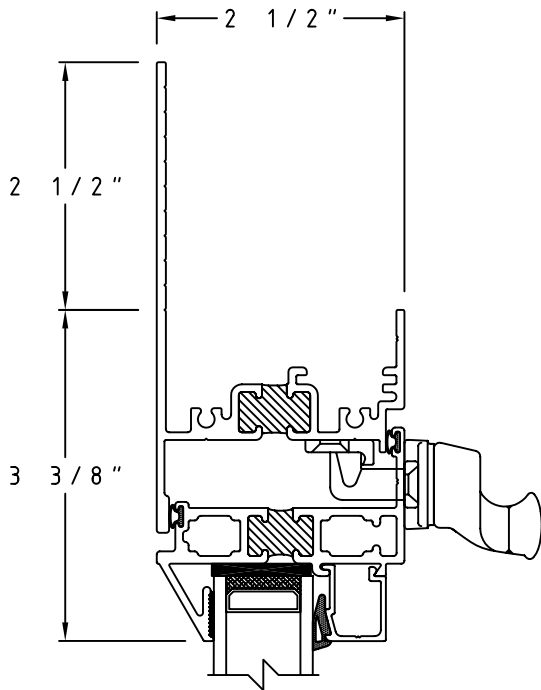
⑭ Fixed Sill Detail



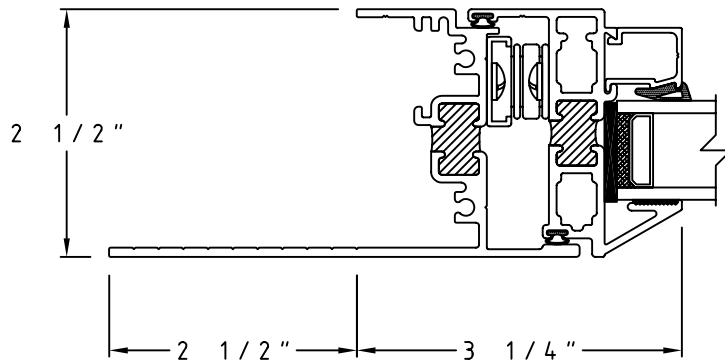
⑮ Fixed Jamb Detail



②A 2 1/2" Flange Sill Detail

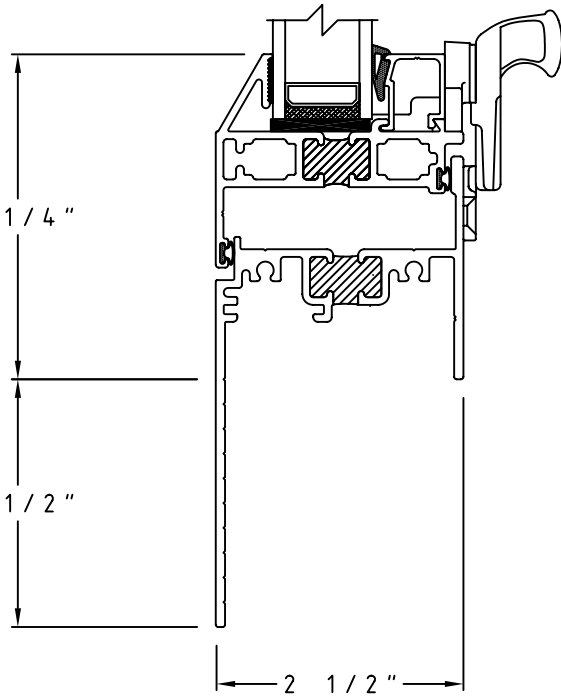


①A 2 1/2" Flange Head Detail

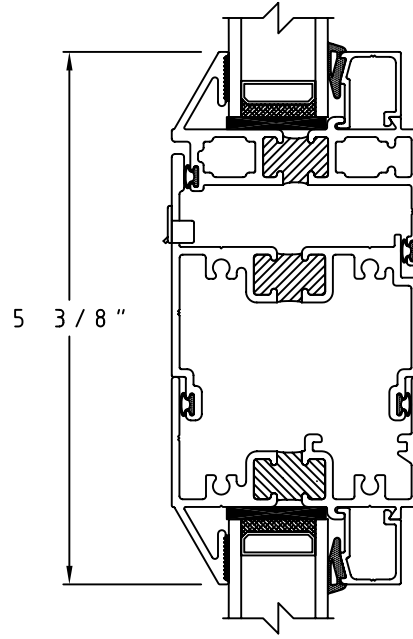


③A 2 1/2" Flange Jamb Detail

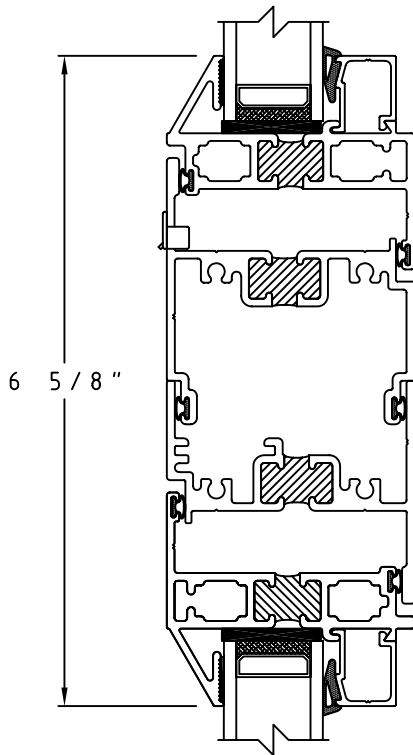
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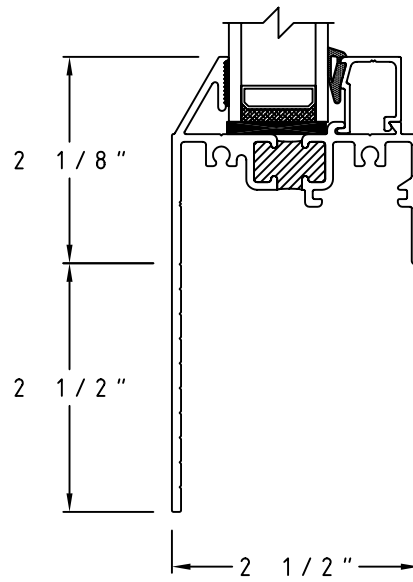
5A) 2 1/2" Flange Sill Projected Out Detail



7A) Projected In/Fixed with Male-Female Mullion

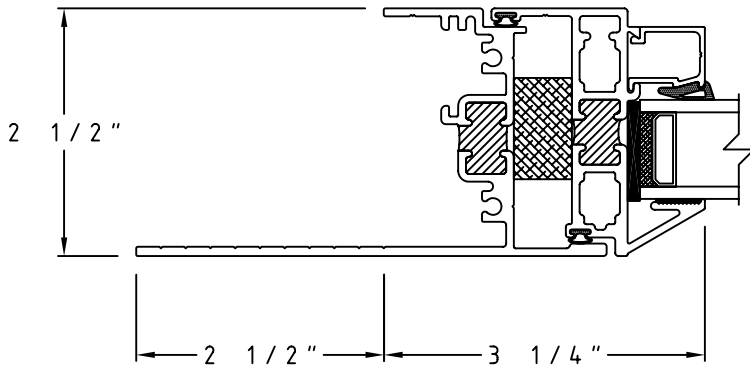


4A) Projected In/Projected Out Male-Female Mullion

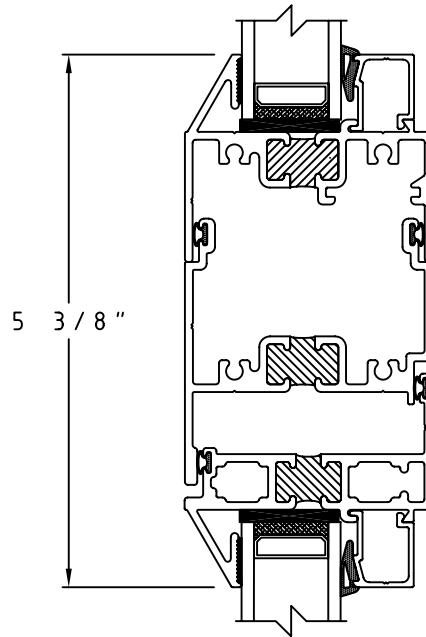


8A) 2 1/2" Flange Fixed Sill Detail

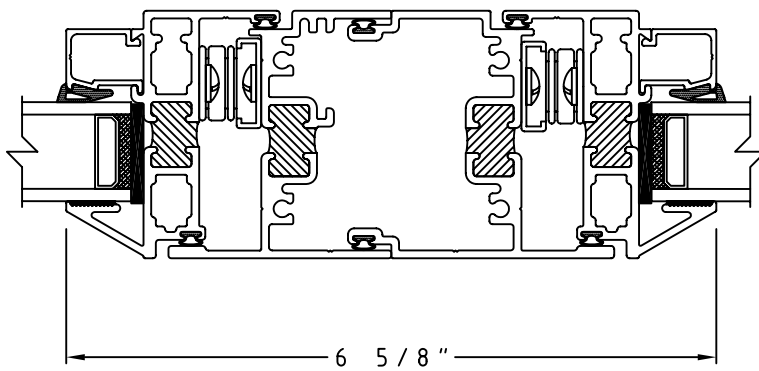
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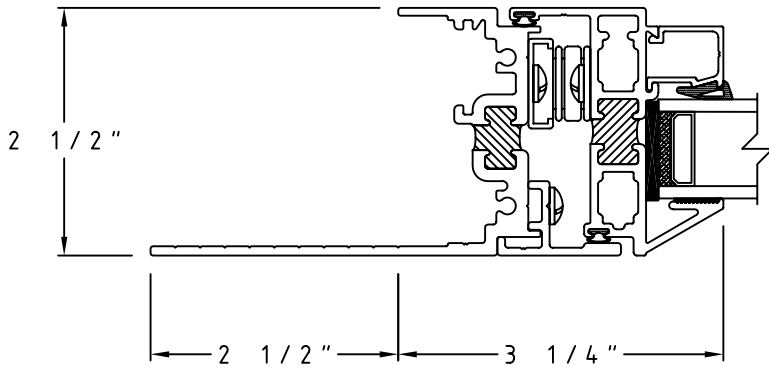
9A 2 1/2" Flange Fixed Jamb Detail



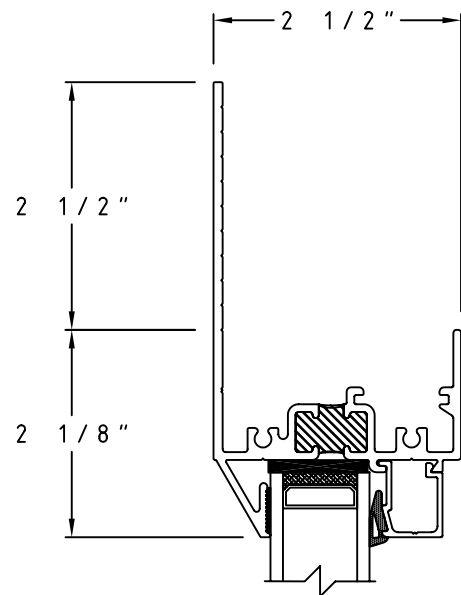
10A Fixed/Projected In with Male-Female Mullion



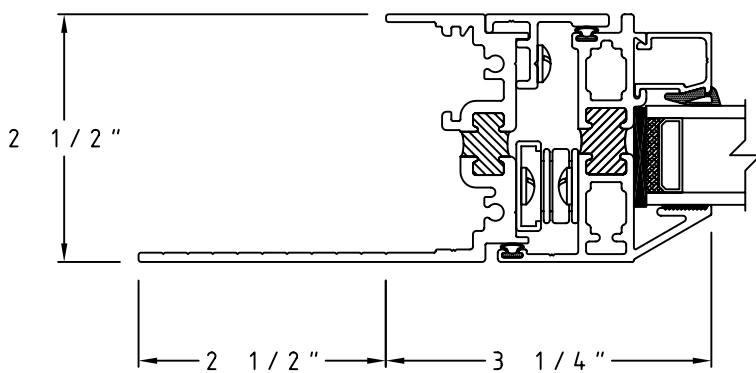
11A Projected In/Projected In with Male-Female Mullion



(12A) 2 1/2" Projected In Flange Jamb Detail

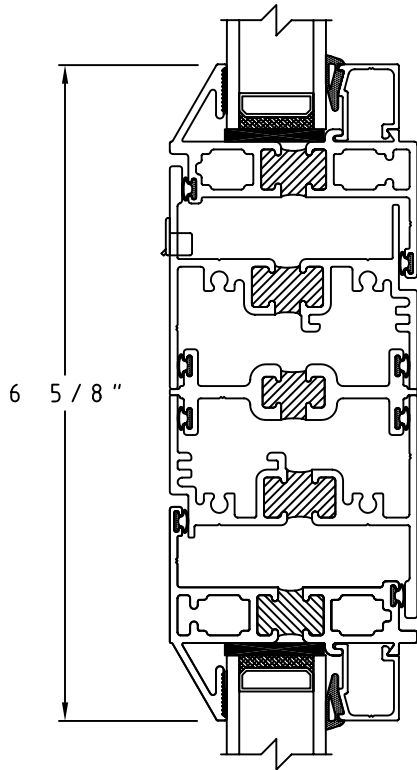


(14A) 2 1/2" Flange Head Detail

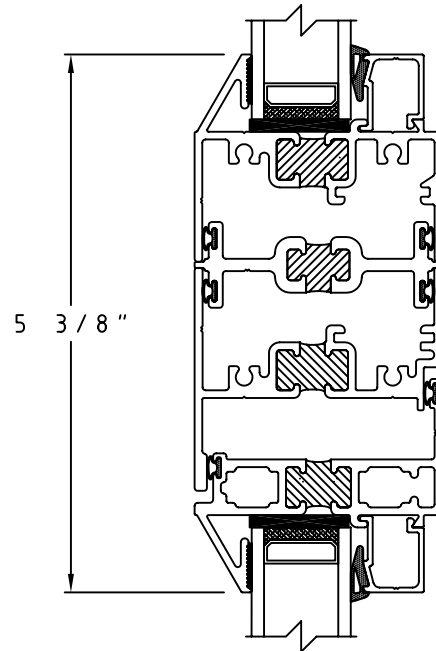


(13A) 2 1/2" Projected Out Flange Jamb Detail

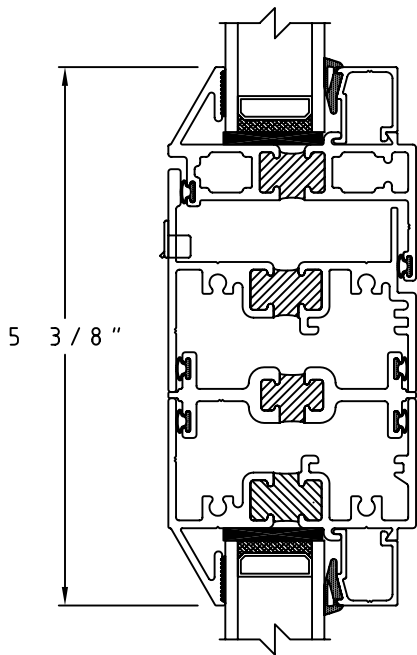
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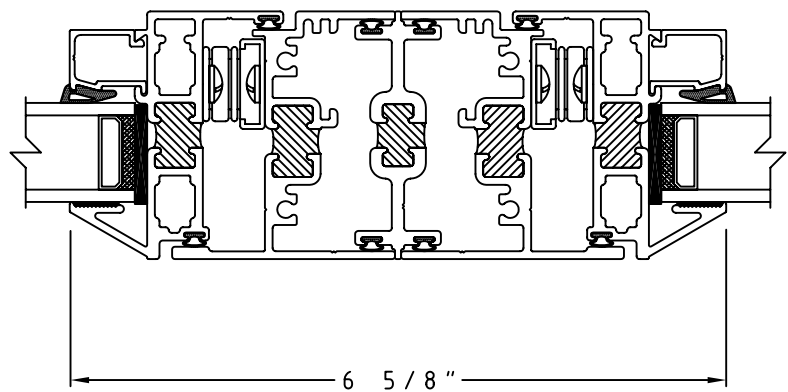
④B Projected In/Projected Out with H Mullion



⑩B Fixed/Projected In with "H" Mullion



⑦B Projected In/Fixed with H Mullion



⑪B Projected In/Projected In with "H" Mullion



## Series 4200 AP-C90 Project Inswing Window.

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



### Series 4200 AP-C90 Project Inswing Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: AP-C90.
- B. Projected In Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: project in; single vent per frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to AP-C90 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 48" x 32" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 1.6 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 105.33 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 188.09 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURERS

Champion 4200 Projected Inswing Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .078". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .078".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges when used with scissor crank] hinges conforming to AAMA 904 to rotate vent outward on horizontal axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: single point lock on both sides of the vent] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.



### Series 4200 AP-C90 Project Inswing Window.

- G. Screens: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full screens with wickets to access handles held in place with stainless steel clips]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 1. Tint: clear. Optional: (Grey, Bronze, Green)
  - 2. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 3. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]





### Series 4200 AP-C90 Project Inswing Window.

#### PART 3 – EXECUTION

##### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

##### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

##### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

##### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

##### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

##### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

##### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 4000 Series

## 4300 Casement



<u>Product By Operation:</u>	2-1/2" Casement
<u>Model By Family:</u>	4000
<u>Product Description:</u>	Casement Outswing
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-05 Rating:</u>	C-C90
<u>AAMA Test Size:</u>	32 x 60
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind

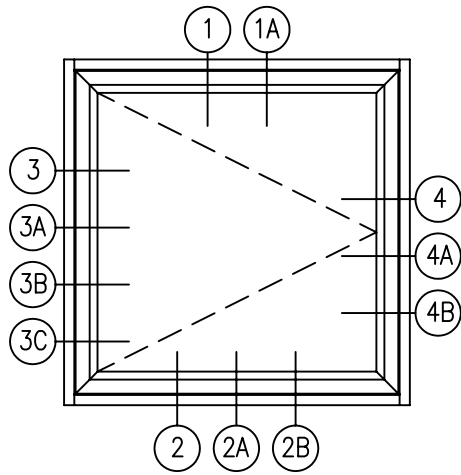


### Performance Data

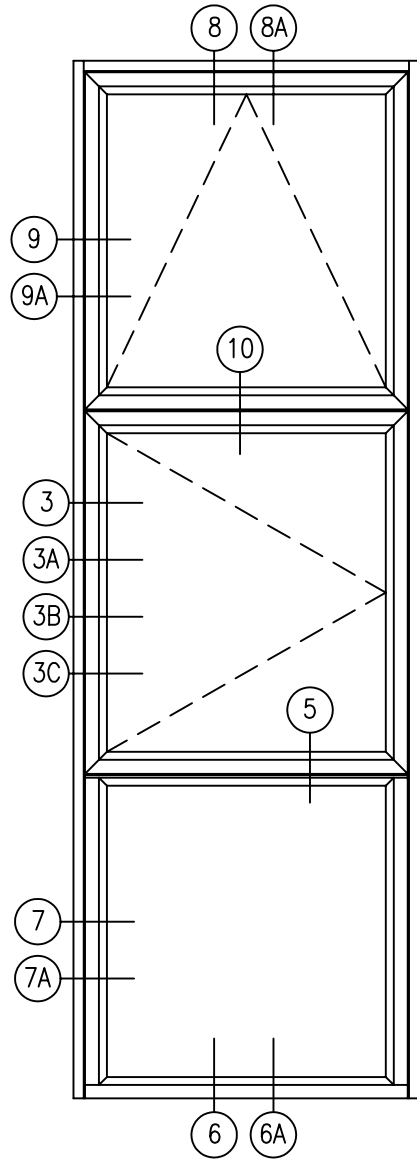


AAMA RATING:	C-C90
AIR INFILTRATION @ 25 mph	0.01 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	180.57 PSF
DESIGN PRESSURE	120.38 PSF

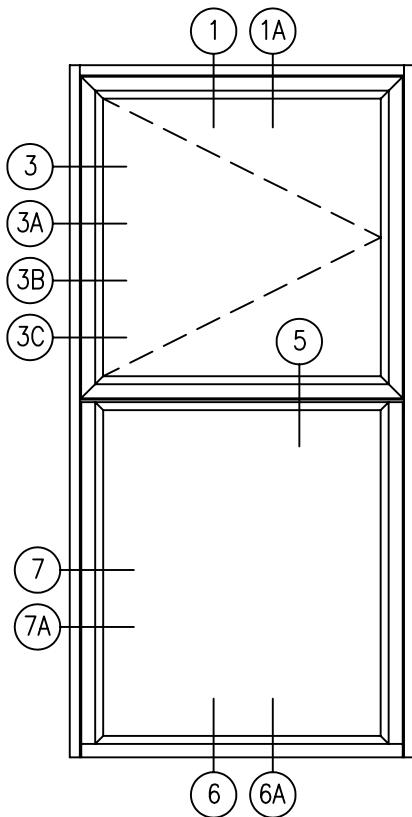
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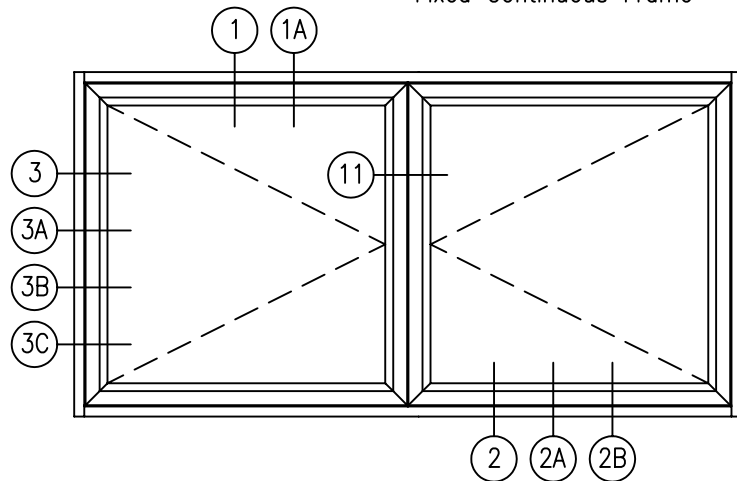
Casement Out  
Continuous Frame



Projected Out/Casement Out/  
Fixed Continuous Frame

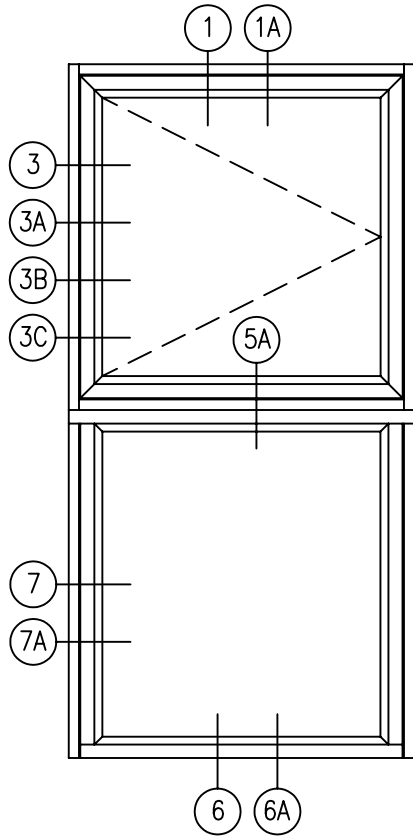


Casement Out/Fixed  
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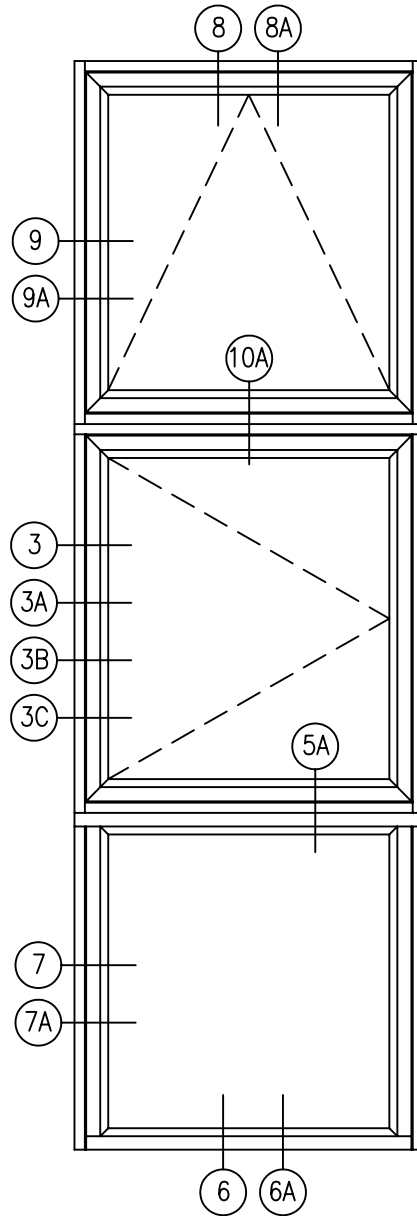


Casement Out/Casement Out  
Continuous Frame

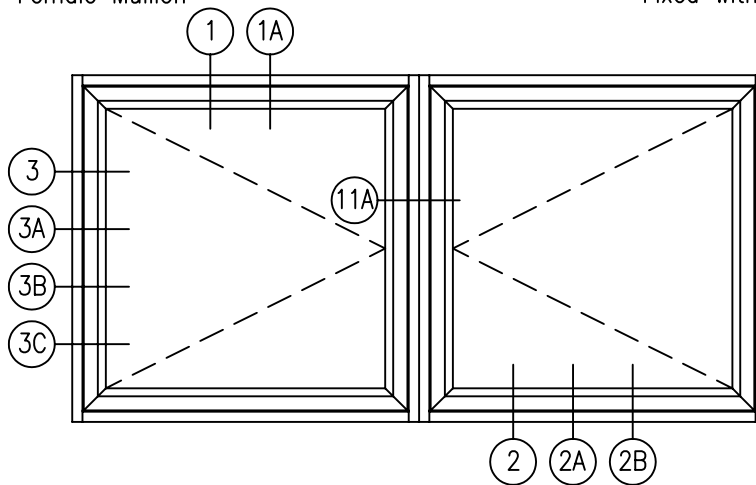
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Casement Out/Fixed with Male-Female Mullion

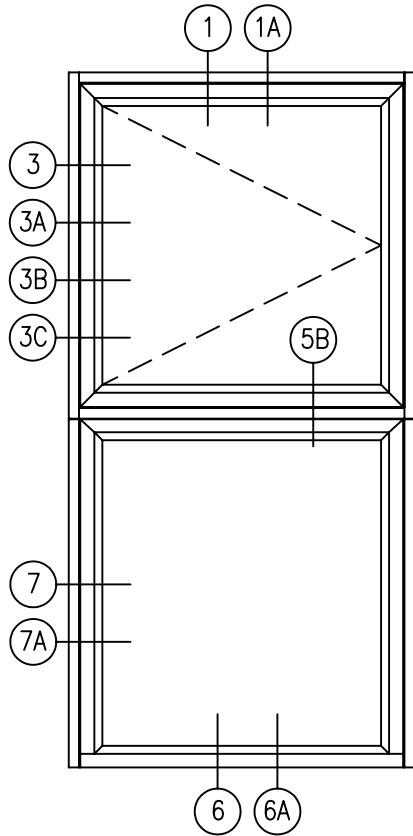


Projected Out/Casement Out/Fixed with Male-Female Mullion

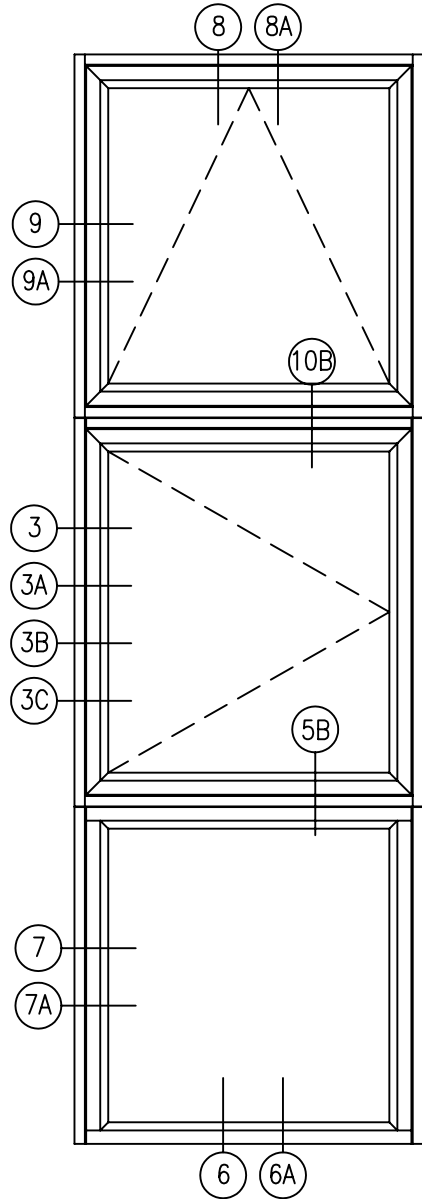


Casement Out/Casement Out with Male-Female Mullion

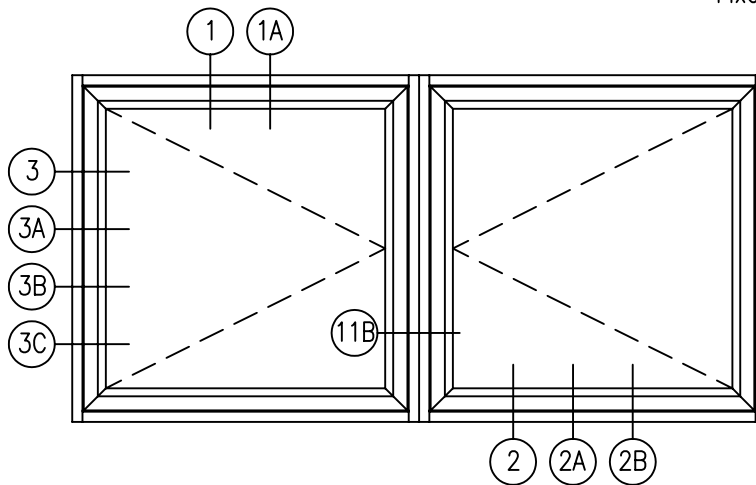
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Casement Out/Fixed  
with H Mullion



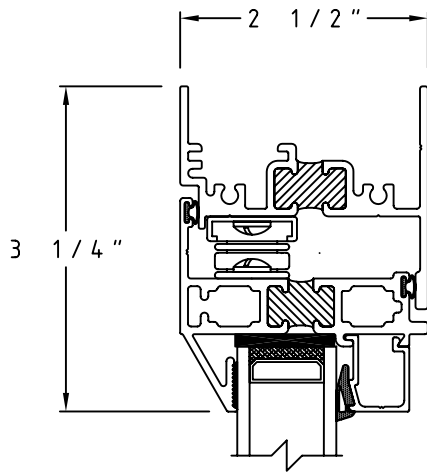
Projected Out/Casement Out/  
Fixed with H Mullion



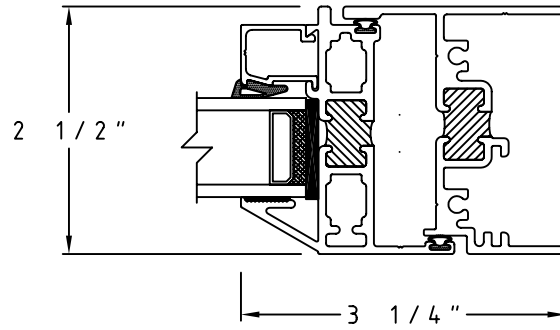
Casement Out/Casement Out  
with H Mullion

All Elevations are viewed outside looking in.

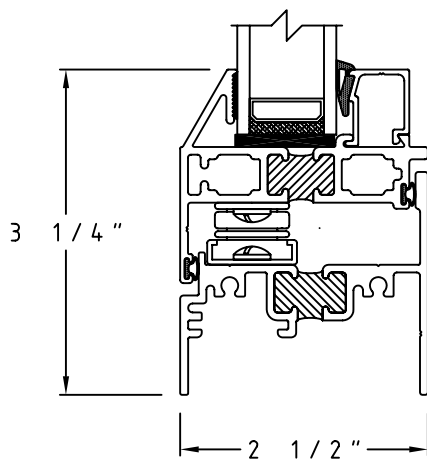
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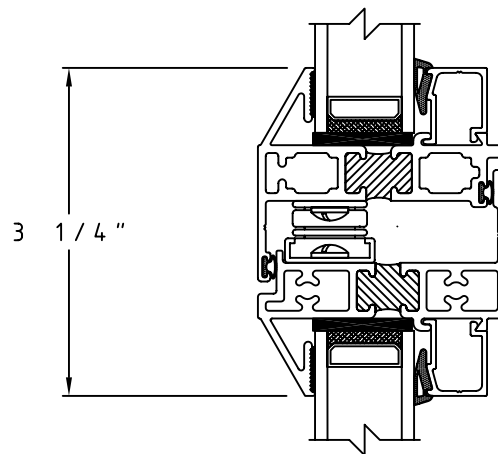
① Head Detail



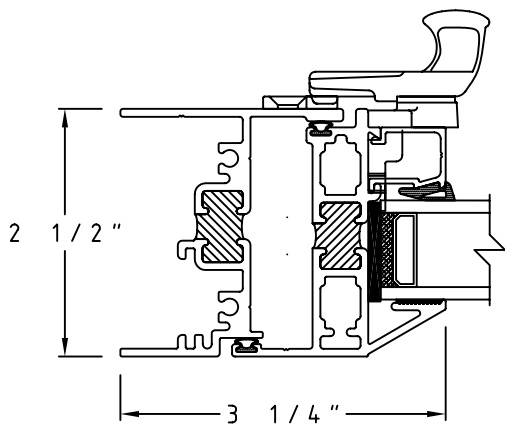
④ Casement Out Jamb Detail



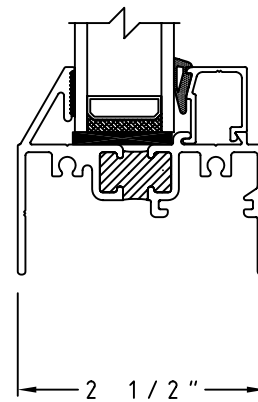
② Sill Detail



⑤ Casement Out/ Fixed Mullion Detail

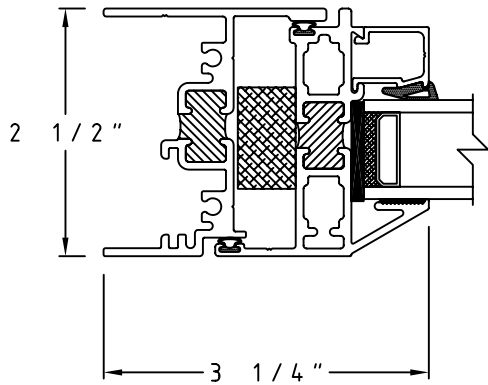


③ Jamb Detail

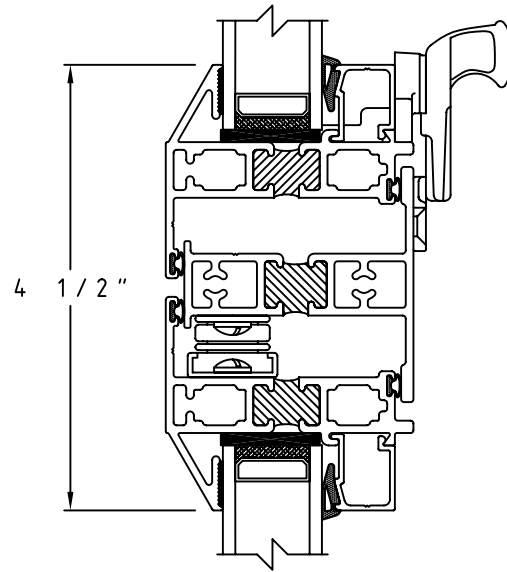


⑥ Fixed Sill Detail

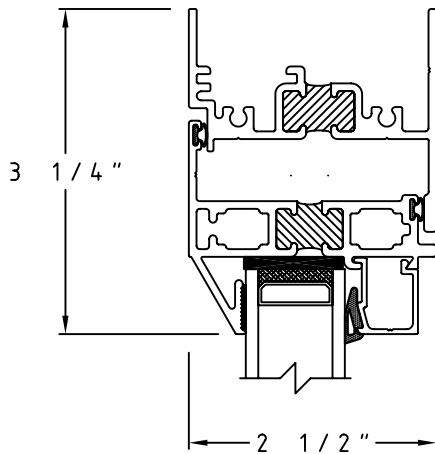
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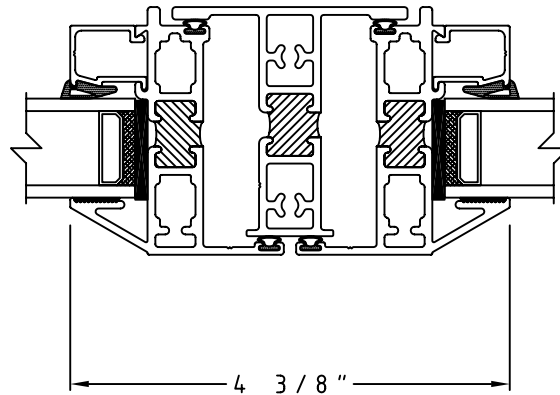
⑦ Fixed Jamb Detail



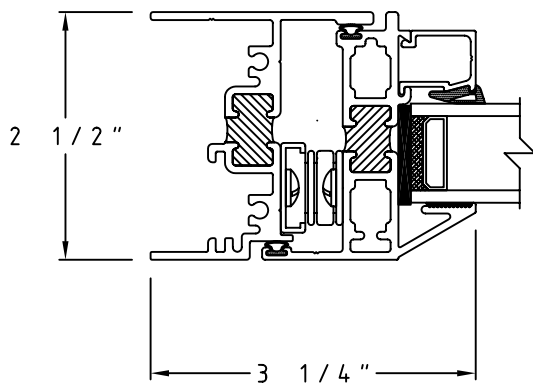
⑩ Projected Out/Casement Out Mullion Detail



⑧ Projected Out Head Detail

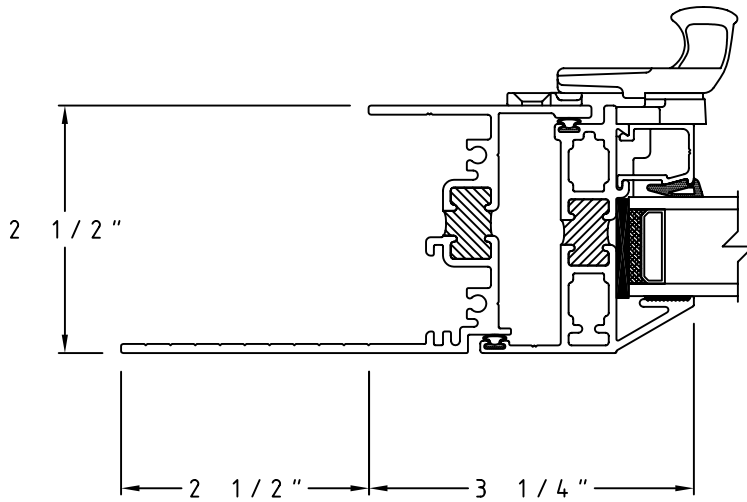
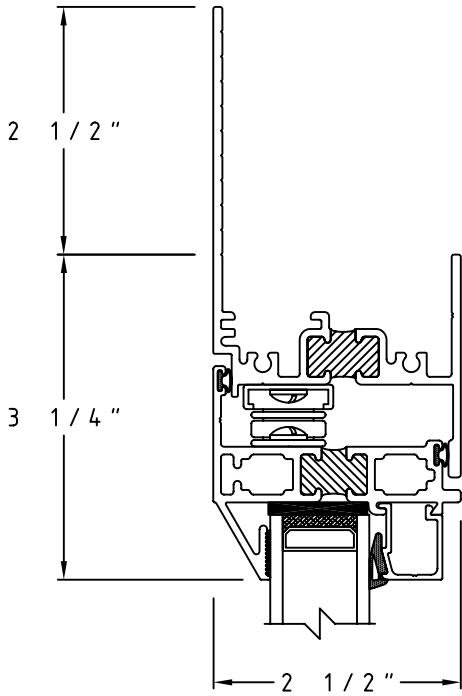


⑪ Casement Out/Casement Out Mullion Detail



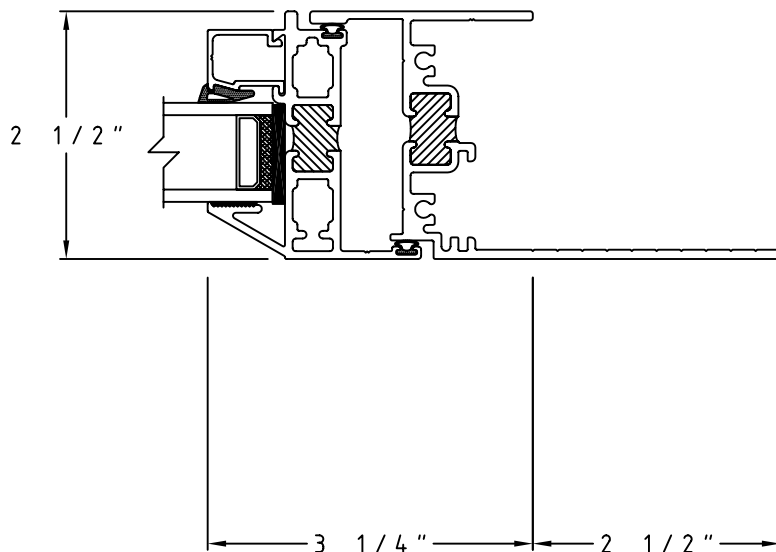
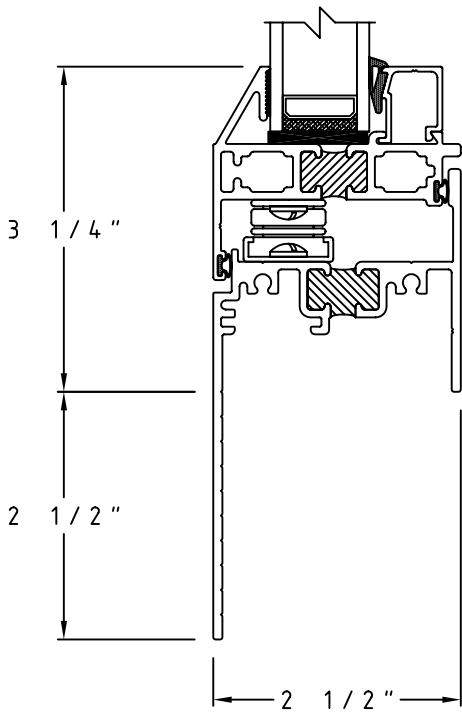
⑨ Projected Out Jamb Detail

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①A 2 1/2" Flange Casement Out Head Detail

③A 2 1/2" Flange Casement Out Jamb Detail

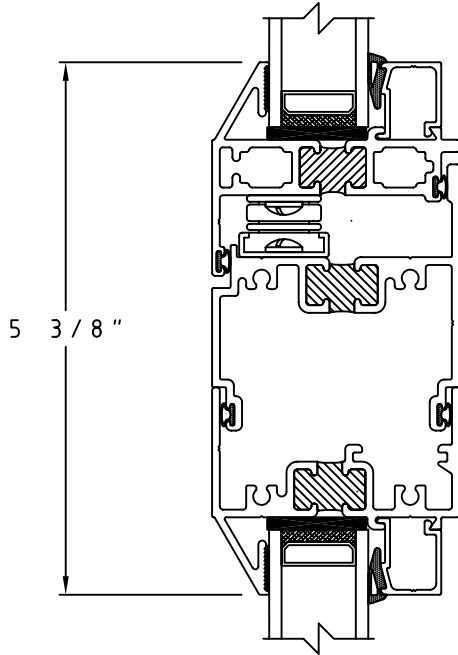


②A 2 1/2" Flange Casement Out Sill Detail

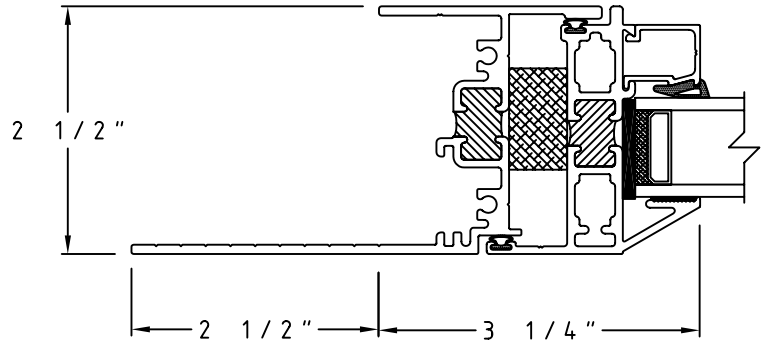
④A 2 1/2" Flange Casement Out/Fixed Jamb Detail



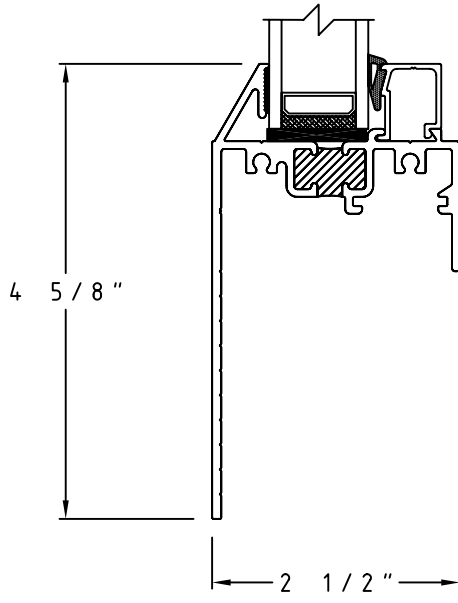
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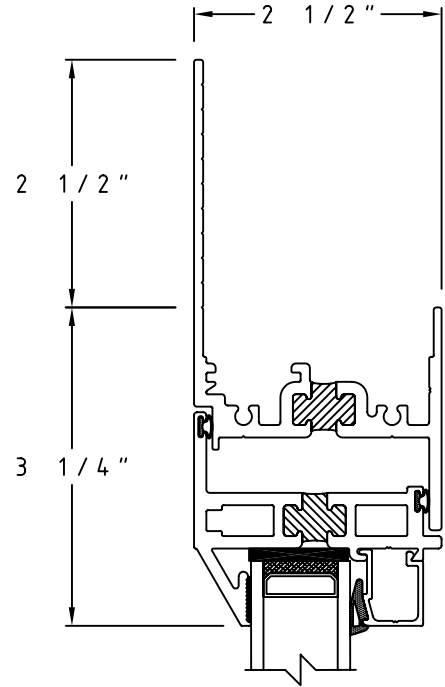
5A Casement Out/Fixed with Male-Female Mullion



7A 2 1/2" Flange Fixed Jamb Detail

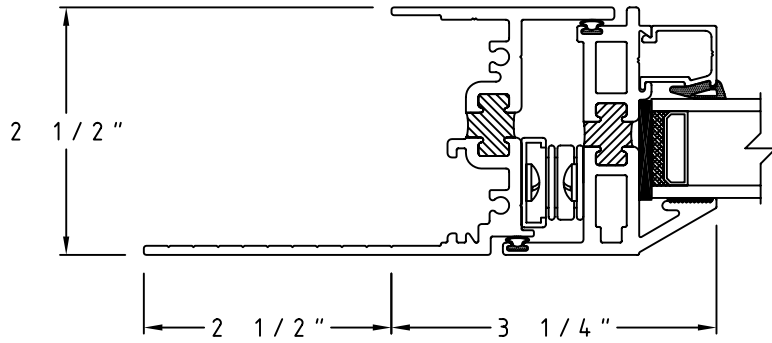


6A 2 1/2" Flange Fixed Sill Detail

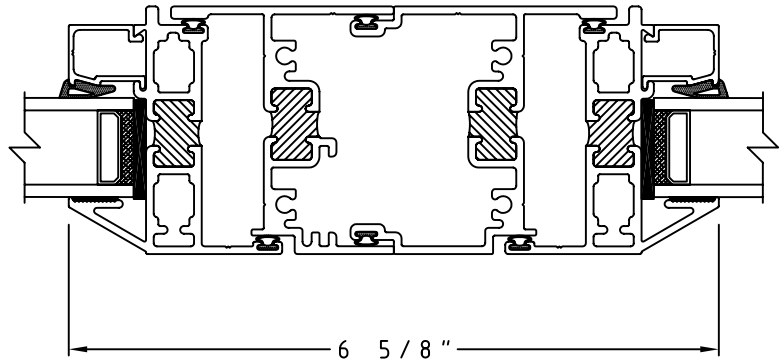


8A 2 1/2" Flange Projected Out Head Detail

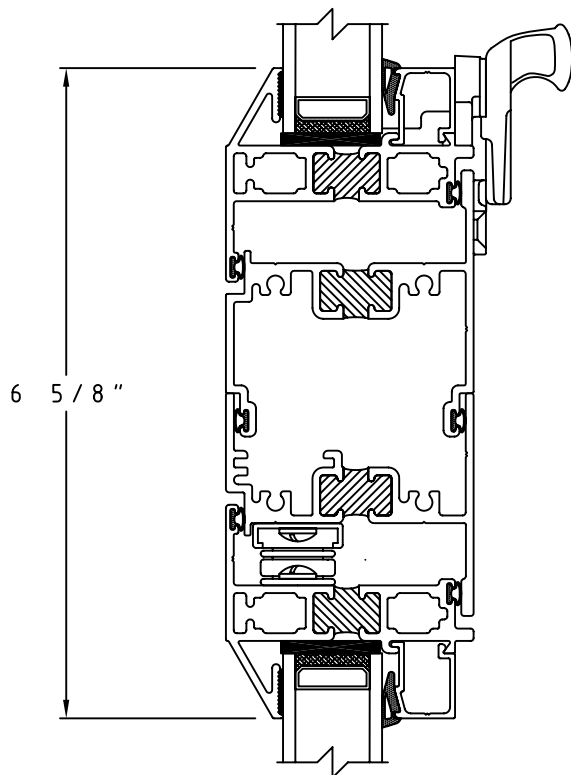
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9A) 2 1/2" Flange Projected Out Jamb Detail

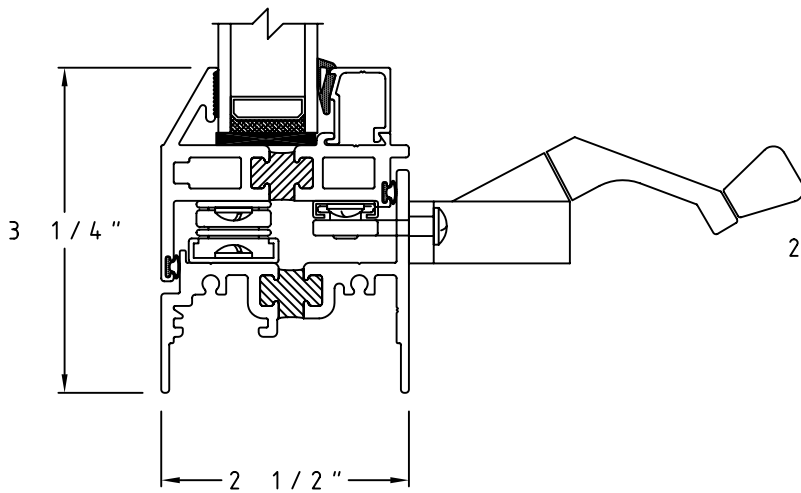


11A) Casement Out/Casement Out with Male-Female Mullion

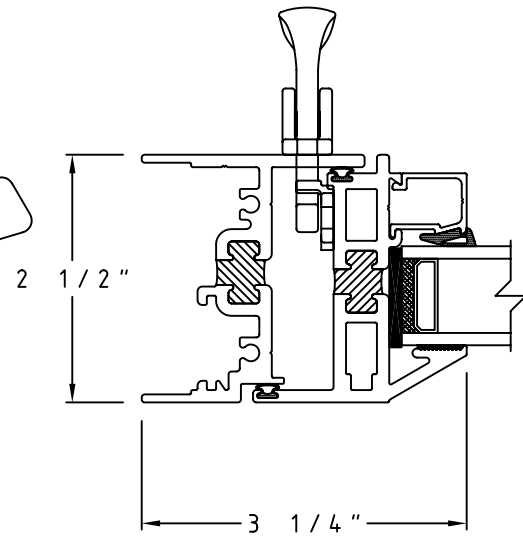


10A) Projected Out/Casement Out with Male-Female Mullion

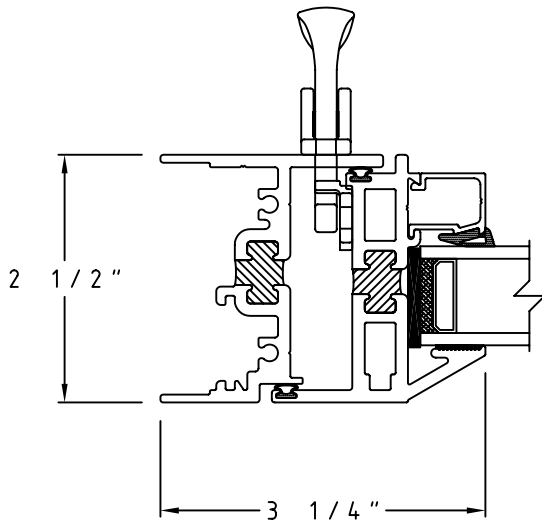
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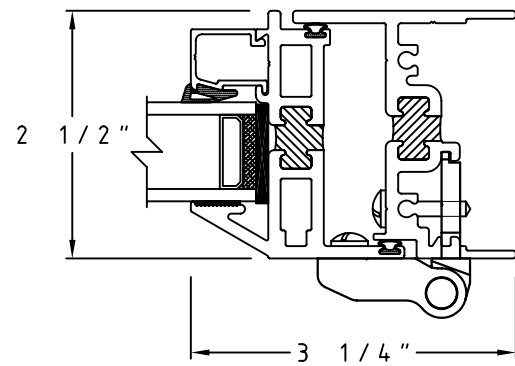
2B Sill with Roto Crank Detail



3C Jamb with Single Point lock Detail

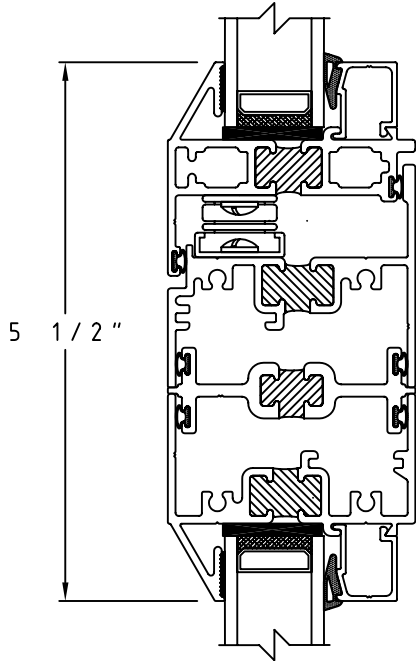


3B Jamb with Multi-Point Lock Detail

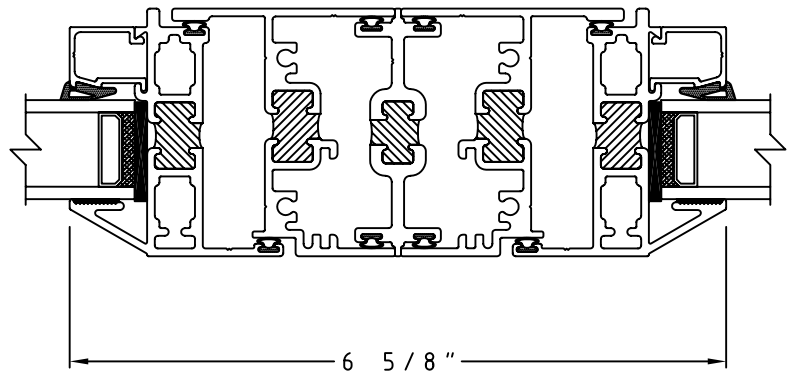


4B Jamb Butt Hinges Detail

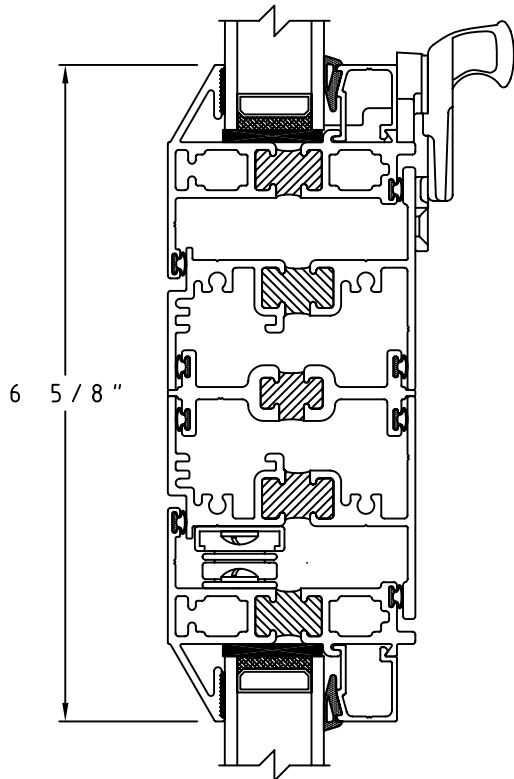
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5B Casement Out/Fixed with H Mullion



11B Casement Out/Casement Out with H Mullion



10B Projected Out/Casement Out with H Mullion



## Series 4300 C-C90 Casement Out Swing Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



### Series 4300 C-C90 Casement Out Swing Window

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: AP-C90.
- B. Casement outswing Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: casement outswing; single vent per frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to C-C90 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 32" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 1.6 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 180.57 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURERS

Champion 4300 Casement Out Swing Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .078". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .078".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges] hinges conforming to AAMA 904-96 to rotate vent outward on vertical axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: multi-point lock] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.



### Series 4300 C-C90 Casement Out Swing Window

- G. Screens: Full screens with wickets to access handles held in place with stainless steel clips with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced used only with the scissor crank option]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 3/16" [Optional: 1/8", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 3/16" [Optional: 1/8", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]



## Series 4300 C-C90 Casement Out Swing Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113



# 4000 Series

## 4400 Casement



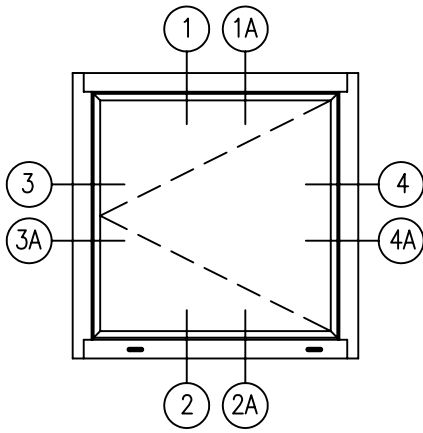
<u>Product By Operation:</u>	2-1/2" Casement
<u>Model By Family:</u>	4000
<u>Product Description:</u>	Casement Inswing
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-05 Rating:</u>	C-C90
<u>AAMA Test Size:</u>	32 x 60
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind



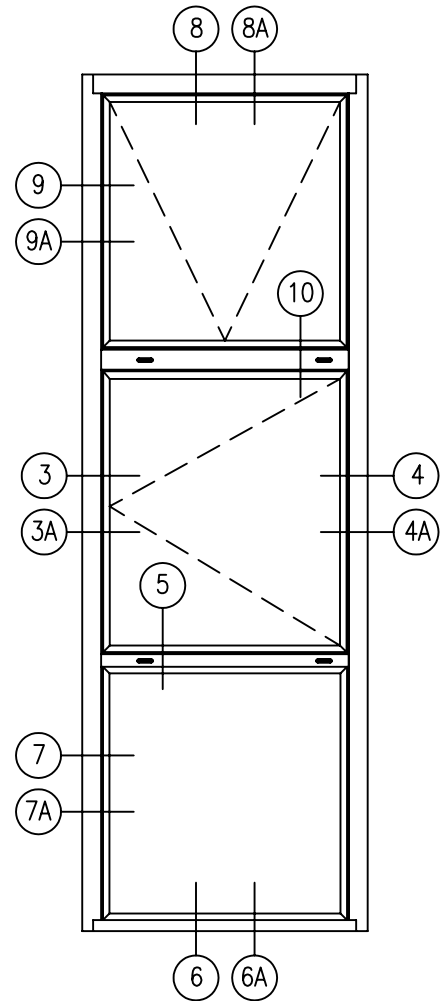
### Performance Data

AAMA RATING:	C-C90
AIR INFILTRATION @ 25 mph	0.01 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	150.47 PSF
DESIGN PRESSURE	105.33 PSF

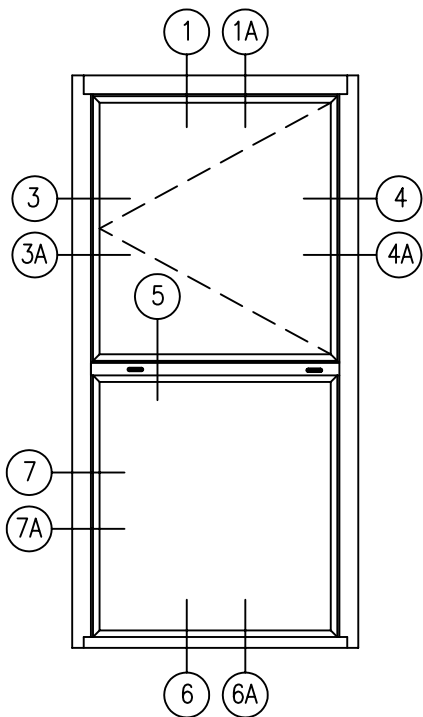




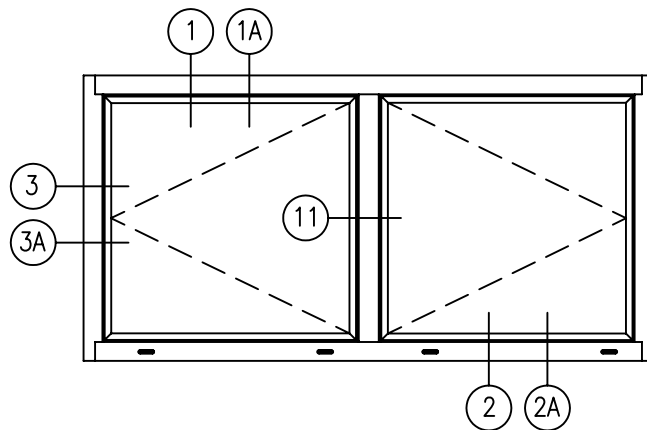
Casement In



Projected In/Casement In/  
Fixed Continuous Frame

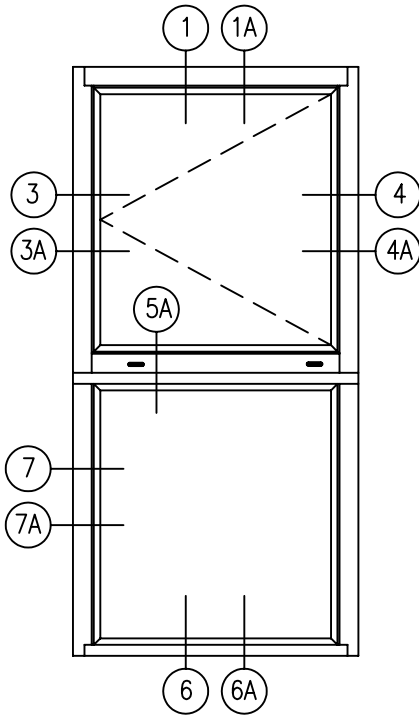


Casement In/Fixed  
Continuous Frame

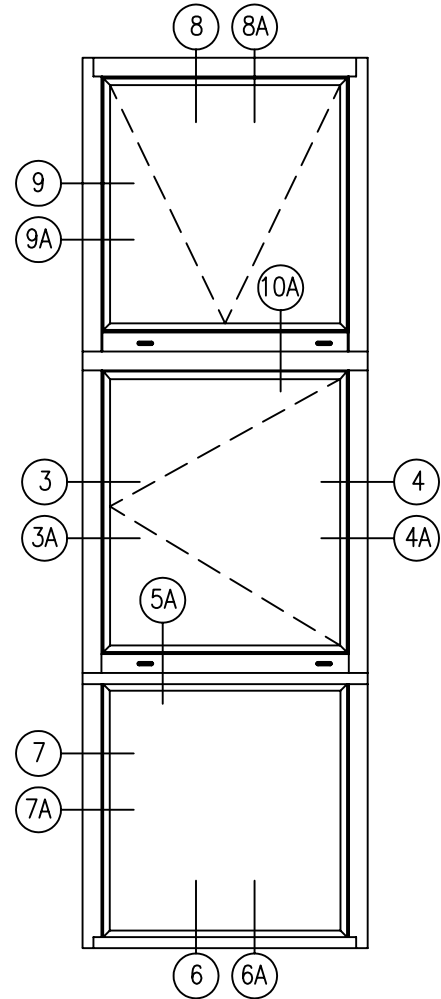


Casement In/Casement In  
Continuous Frame

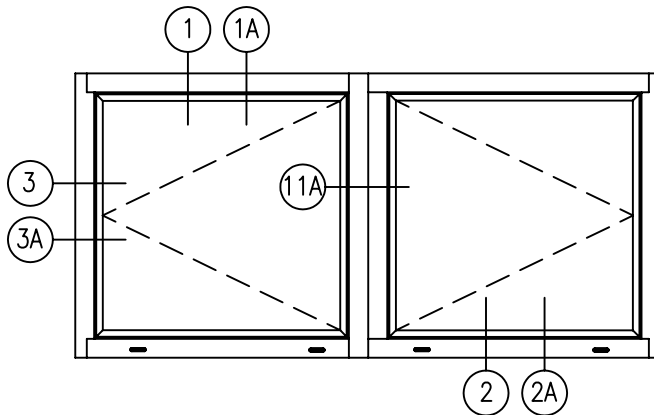
All Elevations are viewed outside looking in.



Casement In/Fixed  
with Male-Female Mullion

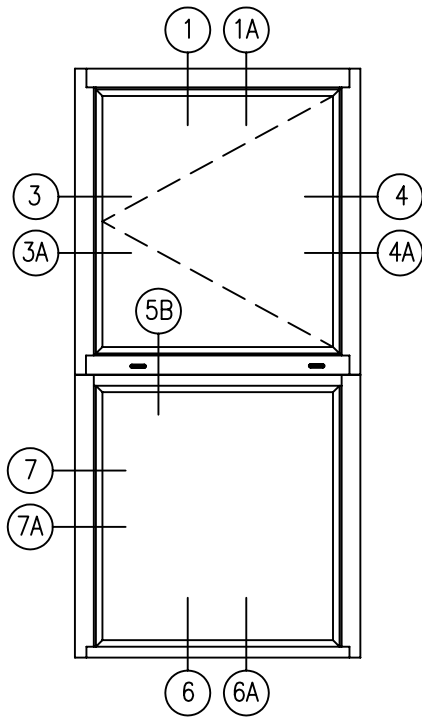


Projected In/Casement In/Fixed  
with Male-Female Mullion

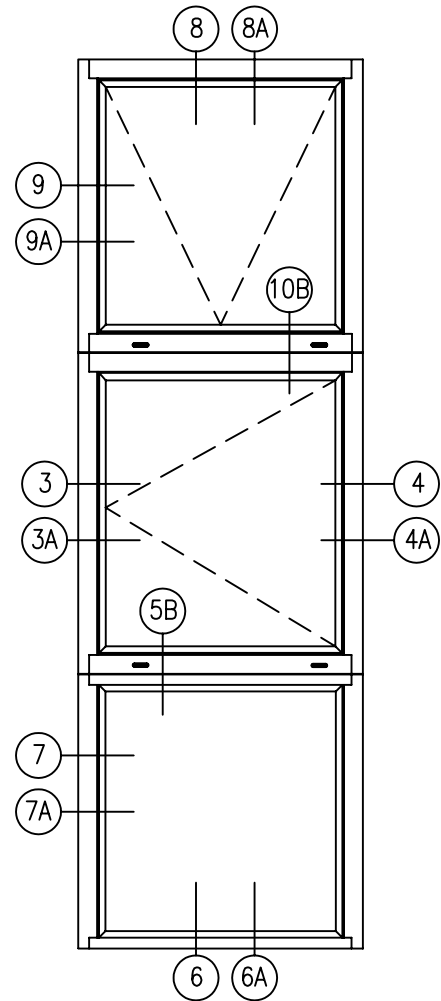


Casement In/Casement In  
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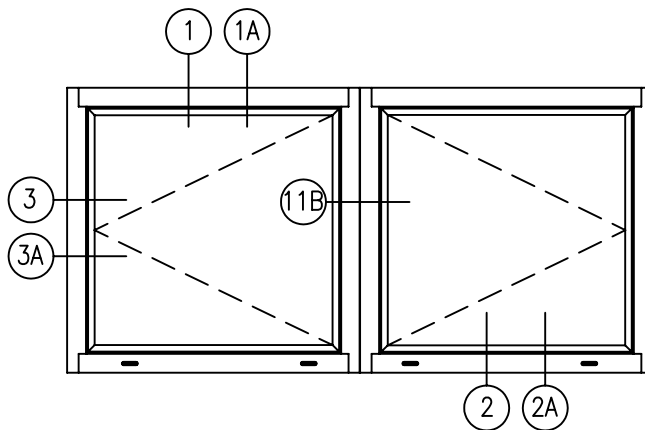
All Elevations are viewed outside looking in.



Casement In/Fixed with H Mullion



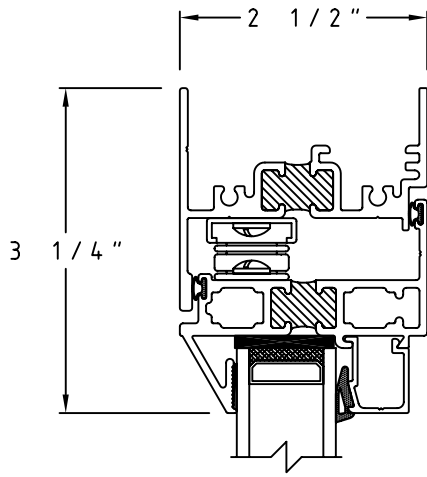
Projected In/Casement In/Fixed with H Mullion



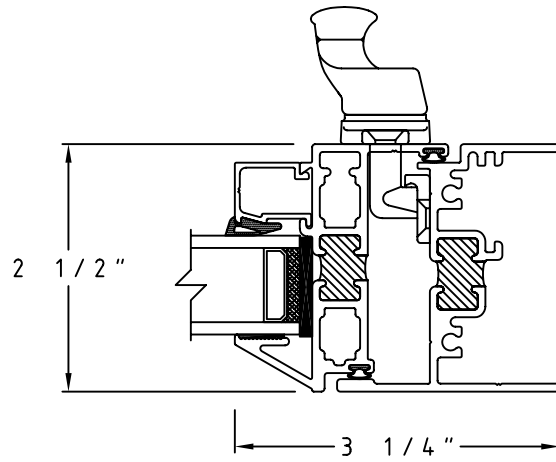
Casement In/Casement In with H Mullion

All Elevations are viewed outside looking in.

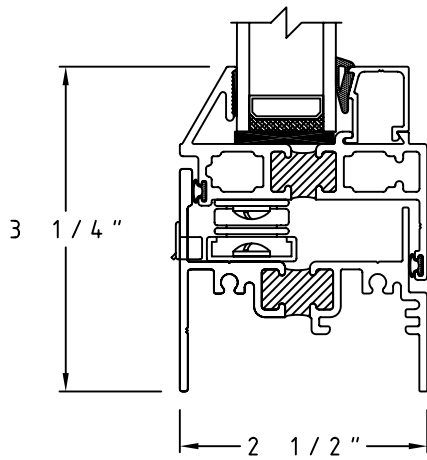
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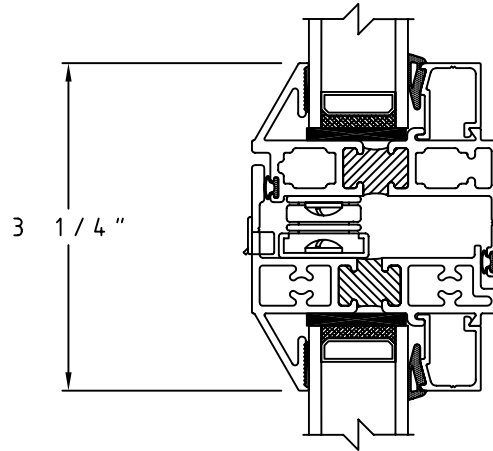
① Head Detail



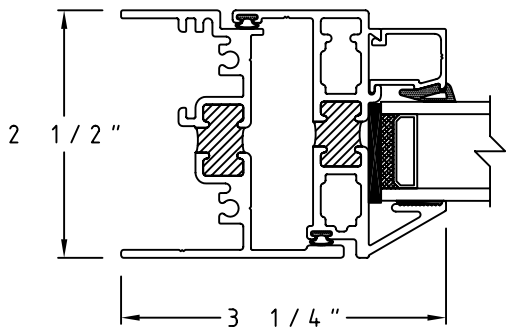
④ Casement In Jamb Detail



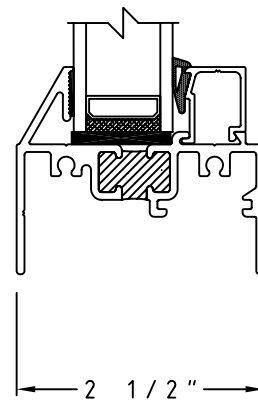
② Sill Detail



⑤ Casement In/Fixed Mullion Detail

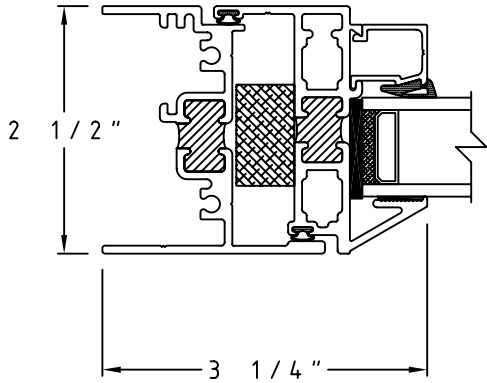


③ Jamb Detail

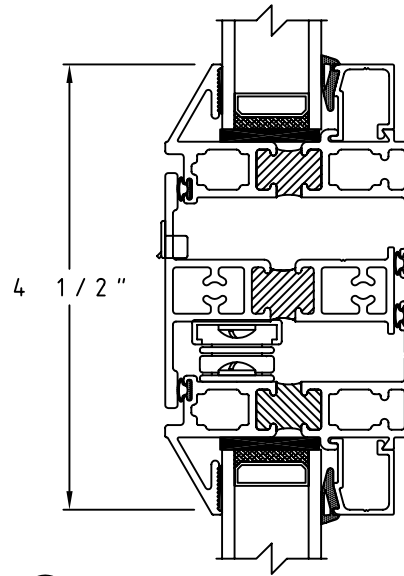


⑥ Fixed Sill Detail

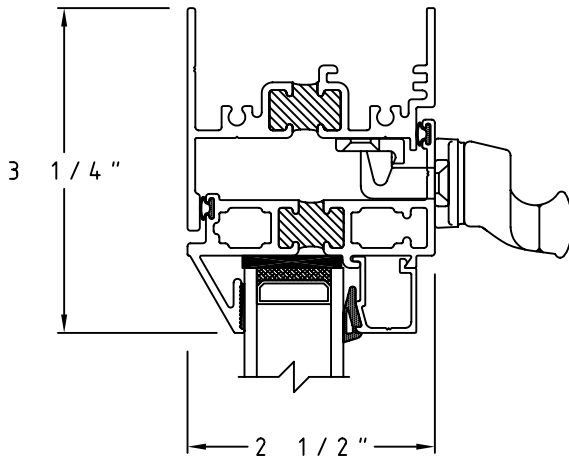
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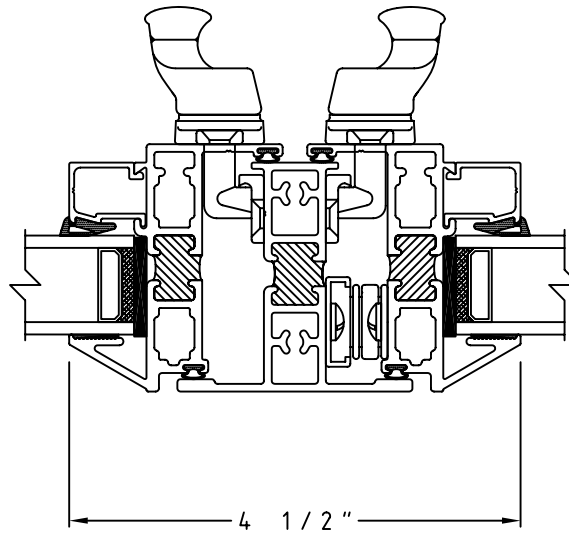
⑦ Fixed Jamb Detail



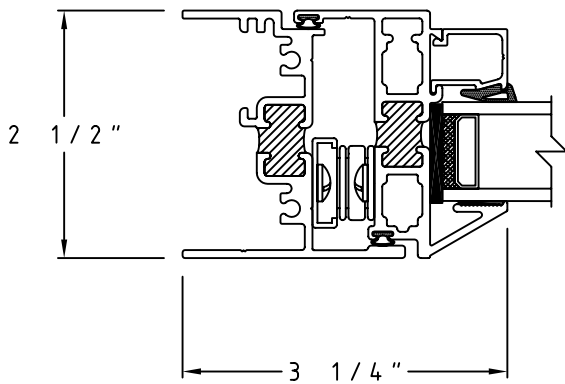
⑩ Projected In/Casement In Mullion Detail



⑧ Projected In Head Detail

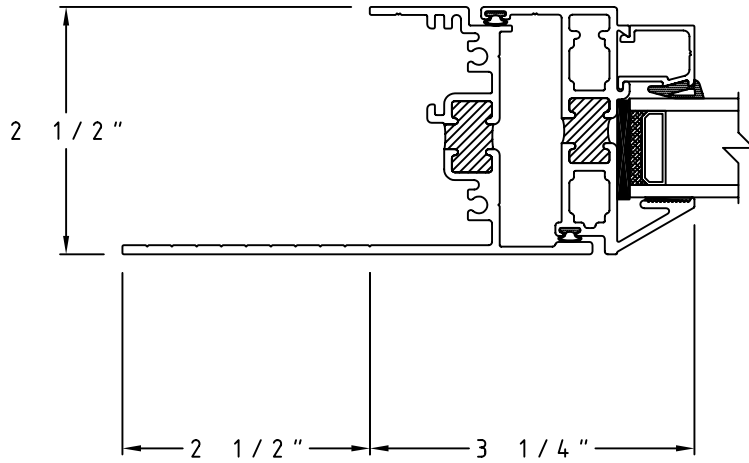
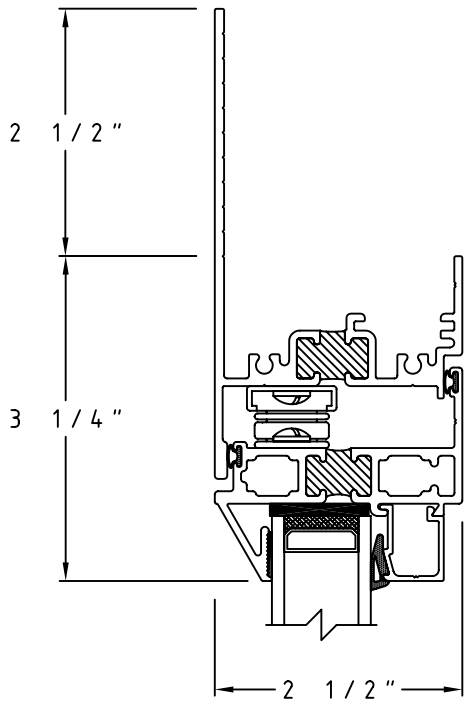


⑪ Casement In/Casement In Mullion Detail



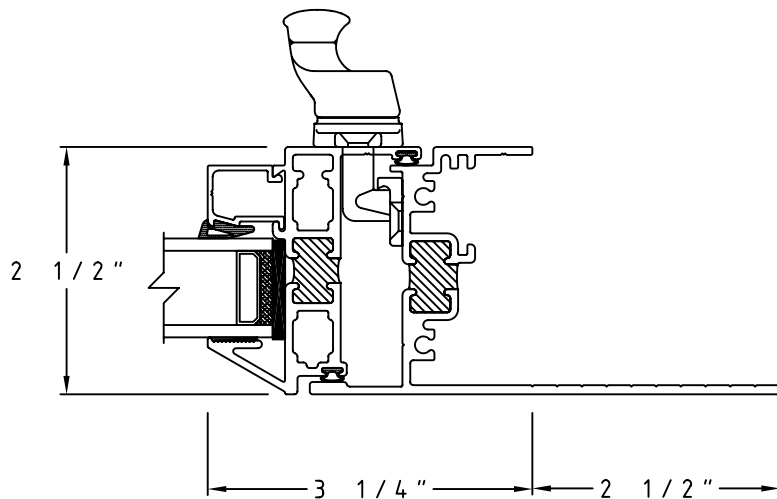
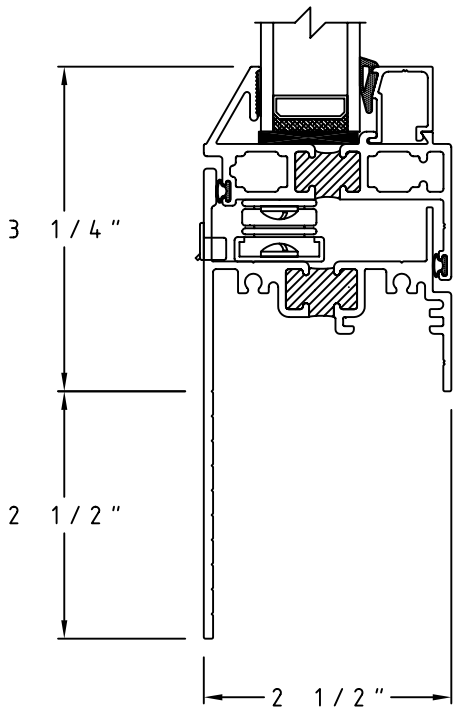
⑨ Projected In Jamb Detail

SCALE: HALF



①A 2 1/2" Flange Casement In Head Detail

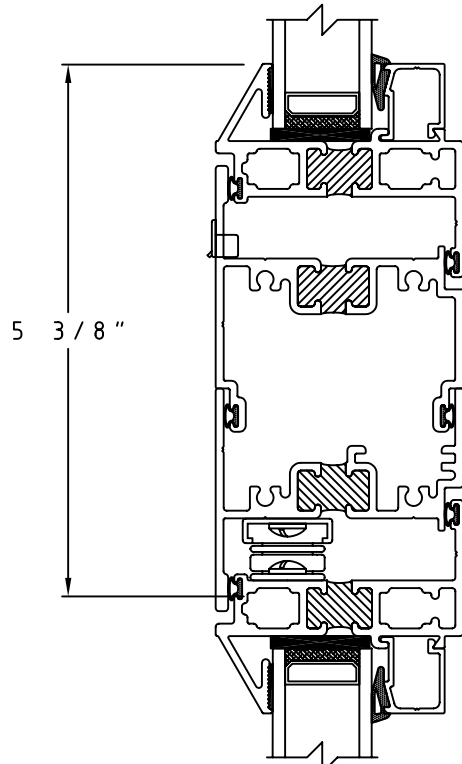
③A 2 1/2" Flange Casement In Jamb Detail



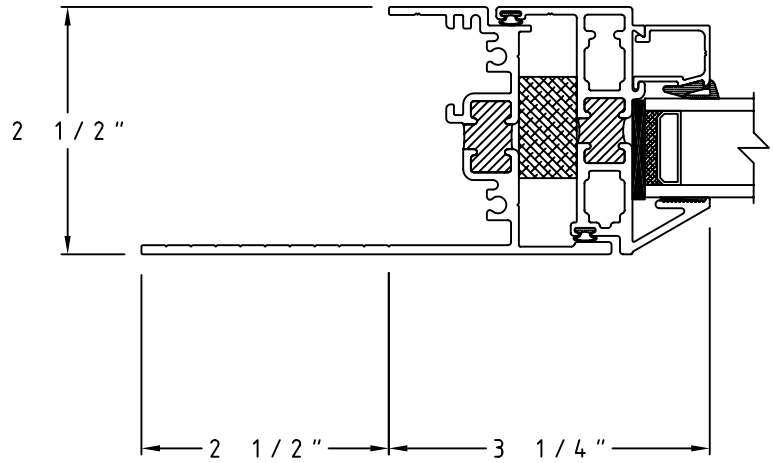
②A 2 1/2" Flange Casement In Sill Detail

④A 2 1/2" Flange Casement In Jamb Detail

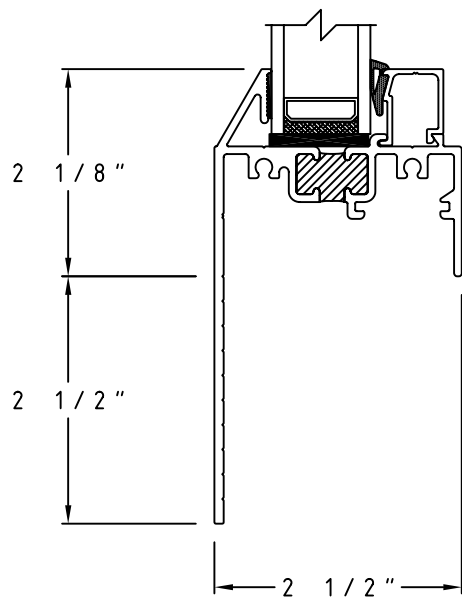
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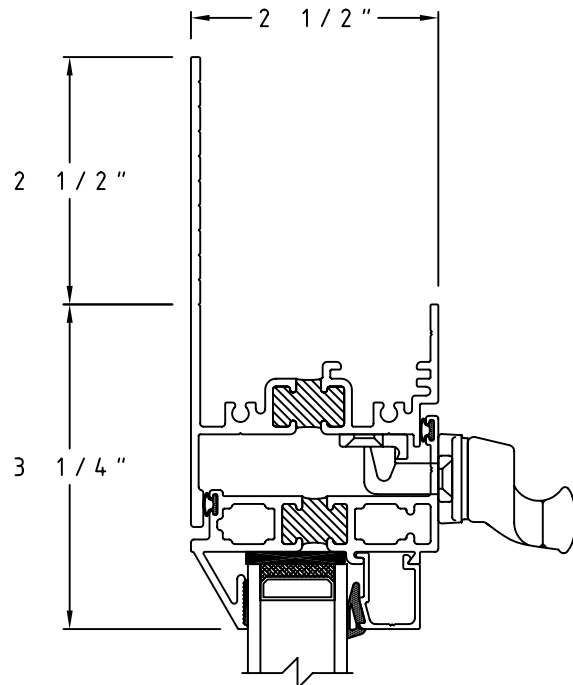
5A Casement In/Fixed with Male-Female Mullion



7A 2 1/2" Flange Fixed Jamb Detail



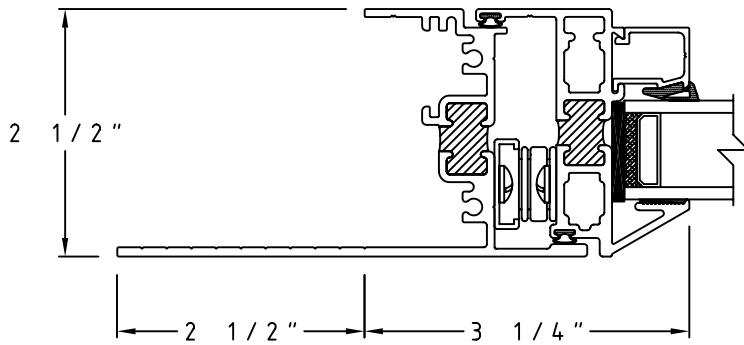
6A 2 1/2" Flange Fixed Sill Detail



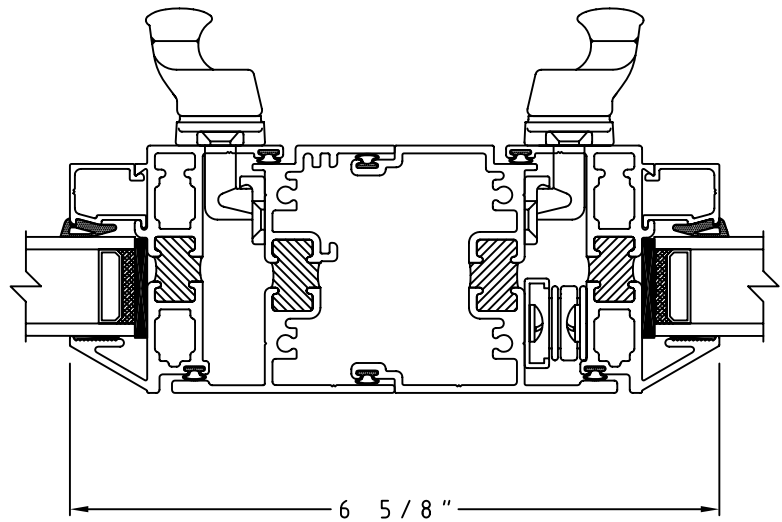
8A 2 1/2" Flange Projected In Head Detail



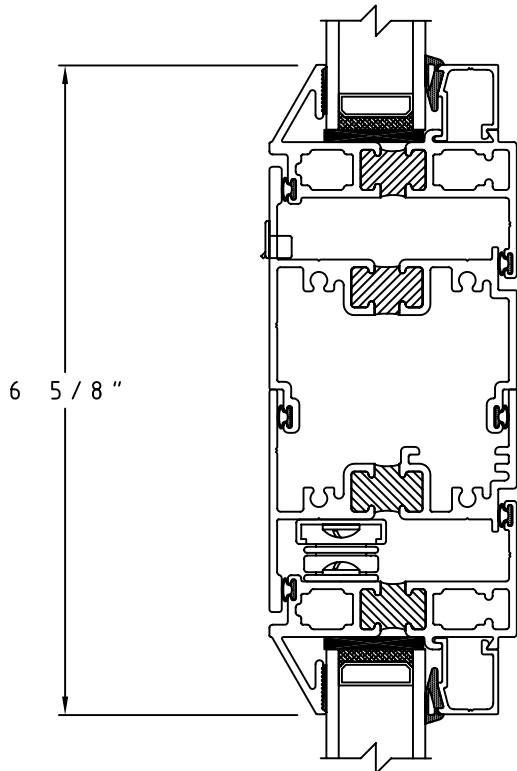
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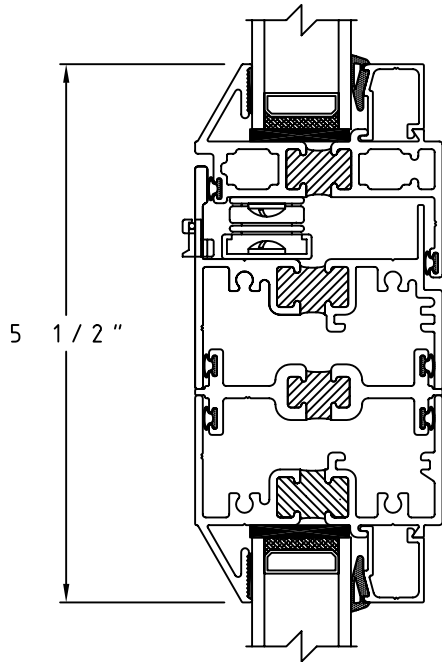
9A 2 1/2" Flange Projected In Jamb Detail



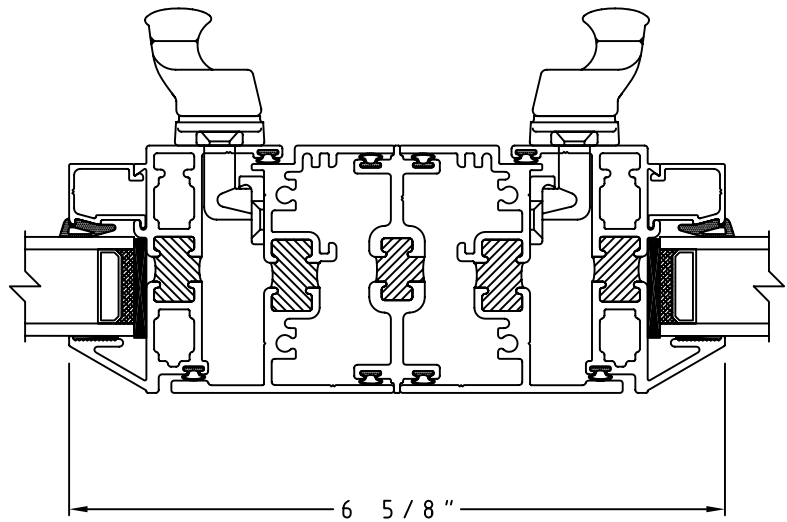
11A Casement In/Casement In with Male-Female Mullion



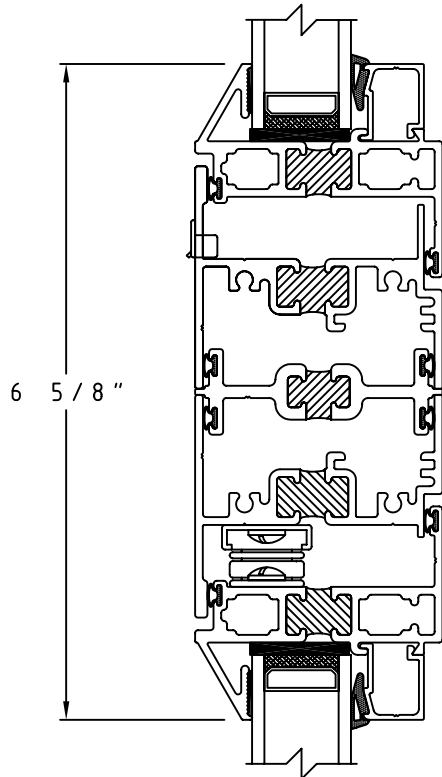
10A Projected In/Casement In with Male-Female Mullion



5B Casement In/Fixed with H Mullion



11B Casement In/Casement In with H Mullion



10B Projected In/Casement In with H Mullion



## Series 4400 C-C90 Casement Inswing Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



### Series 4400 C-C90 Casement Inswing Window

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: AP-C90.
- B. Casement inswing Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: casement inswing; single vent per frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to C-C90 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 32" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 1.6 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 105.33 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 150.47 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 4400 Casement Inswing Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .078". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .078".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges when used with scissor crank] hinges conforming to AAMA 904 to rotate vent outward on horizontal axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: single point lock on both sides of the vent] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.



### Series 4400 C-C90 Casement Inswing Window

- G. Screens: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire ] mesh and PVC spline. [Optional: Full screens with wickets to access handles held in place with stainless steel clips]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
1. Thickness: 3/16" [Optional: 1/8", or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
1. Thickness: 3/16" [Optional: 1/8", or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
1. Provide non-hermetically sealed lites of glass.
  2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]



## Series 4400 C-C90 Casement Inswing Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 4000 Series

## 4710 Fixed Window



<u>Product By Operation:</u>	2-1/2" Fixed
<u>Model By Family:</u>	4000
<u>Product Description:</u>	Fixed Window
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-05 Rating:</u>	FW-C90
<u>AAMA Test Size:</u>	60 x 60
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind

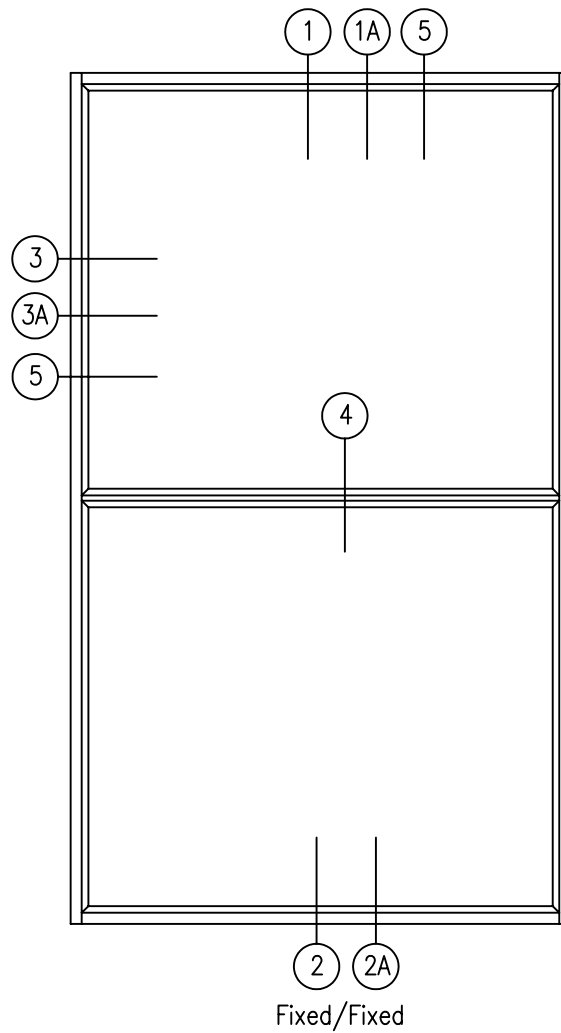
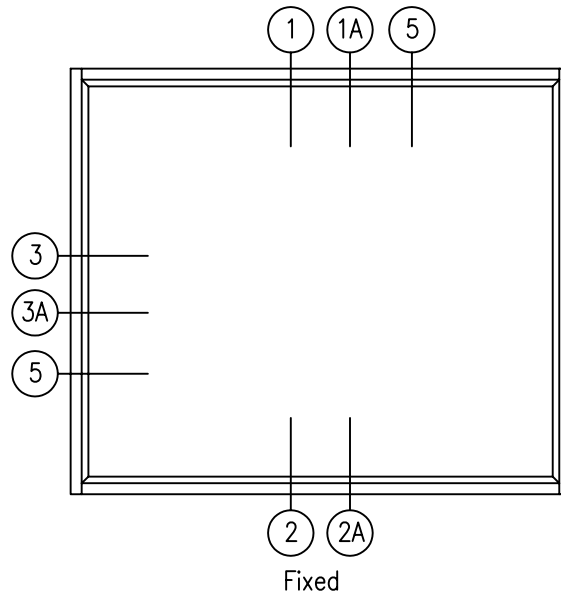


### Performance Data

AAMA RATING:	FW-C90
AIR INFILTRATION @ 25 mph	<0.01 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	135.42 PSF
DESIGN PRESSURE	97.81 PSF



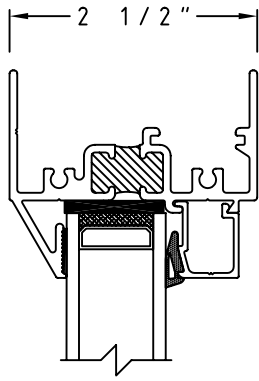
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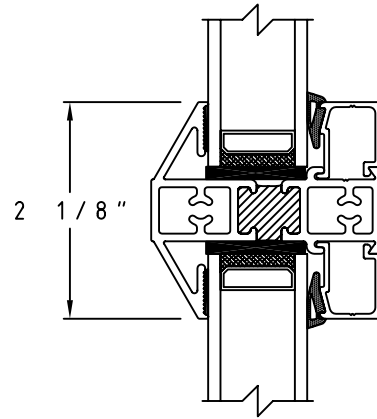
All Elevations are viewed outside looking in.



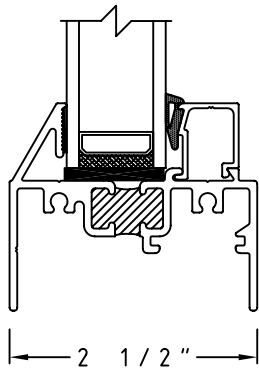
SCALE: HALF



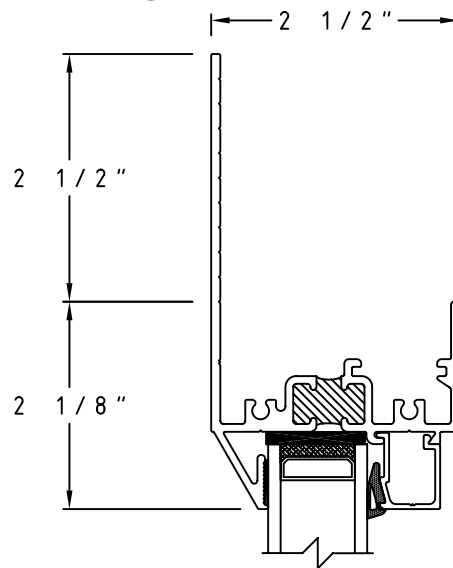
① Head Detail



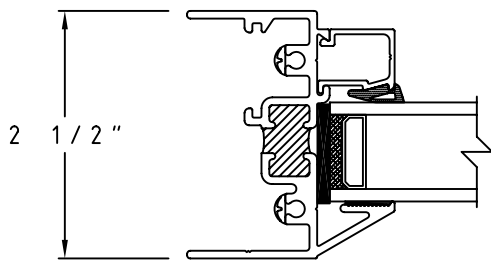
④ Horizontal True Muntin Detail



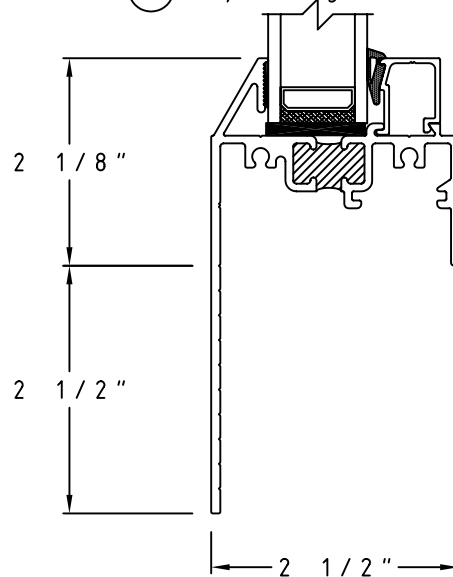
② Sill Detail



①A 2 1/2" Flange Head Detail

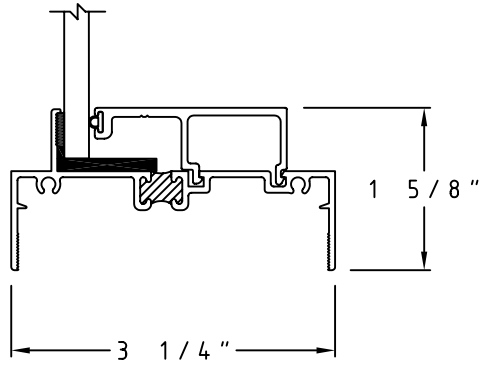


③ Jamb Detail

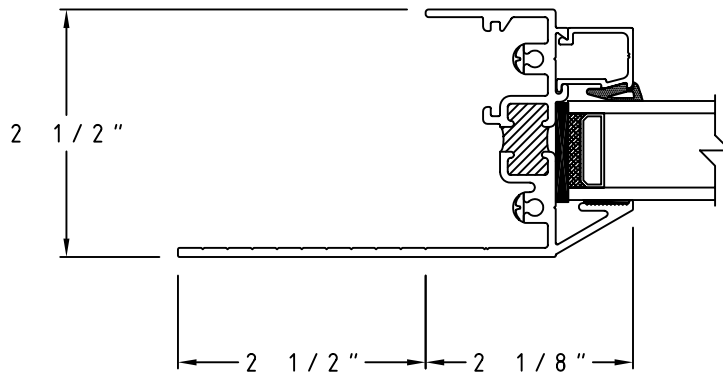


②A 2 1/2" Flange Sill Detail

SCALE: HALF



⑤ Optional 1/4" Glazing



③A 2 1/2" Flange Jamb Detail



## Series 4710 F-C90 Fixed Window.

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



### Series 4710 F-C90 Fixed Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: F-C90.
- B. Fixed Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: Fixed; single frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to FW-C90 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: The window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 1.6 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 97.81 psf.
  - 4. Structural Load Test: The window shall be subjected to an positive and negative structural load test in accordance with ASTM E 330 at 135.42 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type: D; Grade: 40.

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURERS

Champion 4710 Fixed Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .078". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .078".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame



### Series 4710 F-C90 Fixed Window.

creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 3/16" [Optional: 1/8", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 3/16" [Optional: 1/8", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.



### **Series 4710 F-C90 Fixed Window.**

#### **3.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### **3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### **3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### **3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### **3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### **3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

**END OF SECTION 085113**

# 5000 Series

## 5100 Projected



<u>Product By Operation:</u>	2-1/2" Awning
<u>Model By Family:</u>	5000
<u>Product Description:</u>	Projected Outswing
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S. 2/A440-05 Rating:</u>	AP-AW120
<u>AAMA Test Size:</u>	60 x 36
<u>101/I.S. 2/A440-05 Optional:</u>	AP-HC100
<u>Optional Test Size:</u>	60 x 36
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind

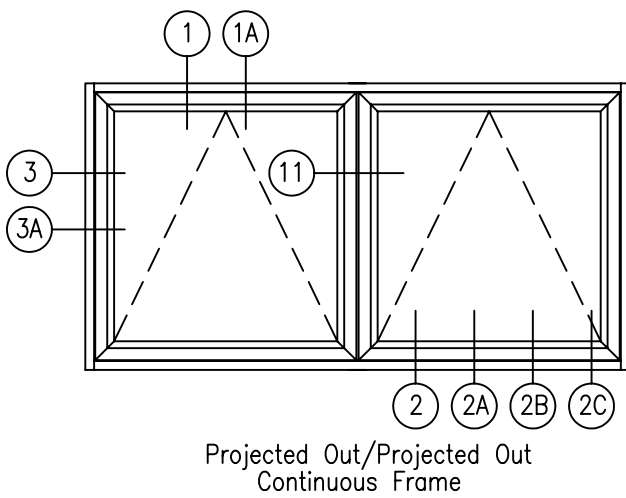
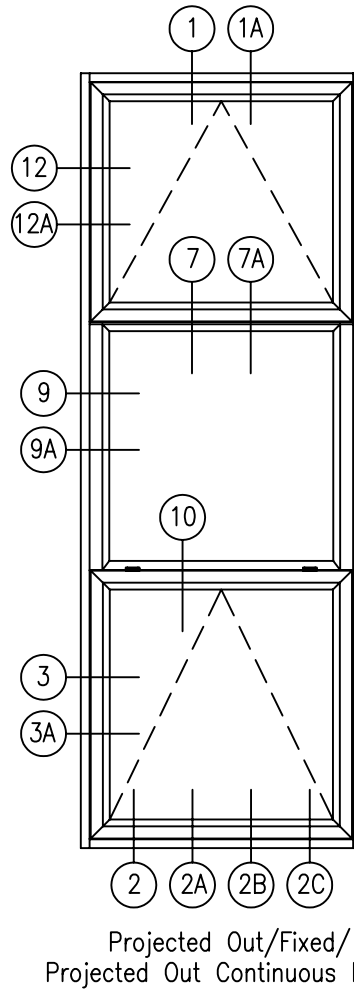
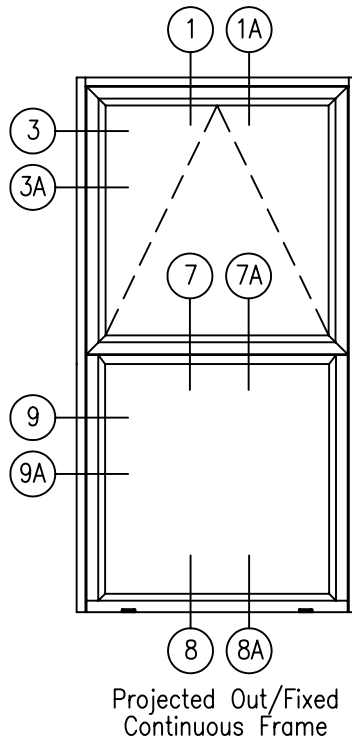
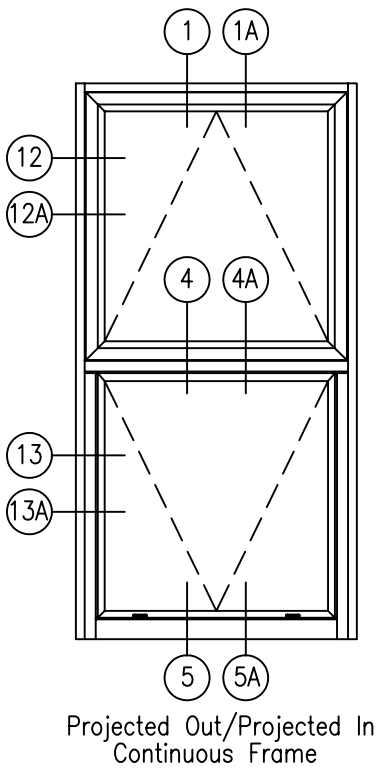
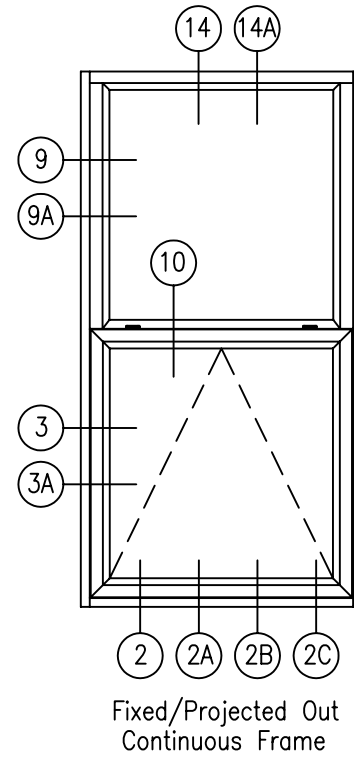
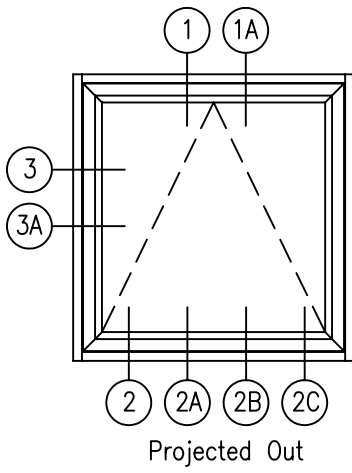


### Performance Data



AAMA RATING:	AP-AW120/HC100
AIR INFILTRATION @ 50 mph	0.03 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	180.56 PSF
DESIGN PRESSURE	120.38 PSF

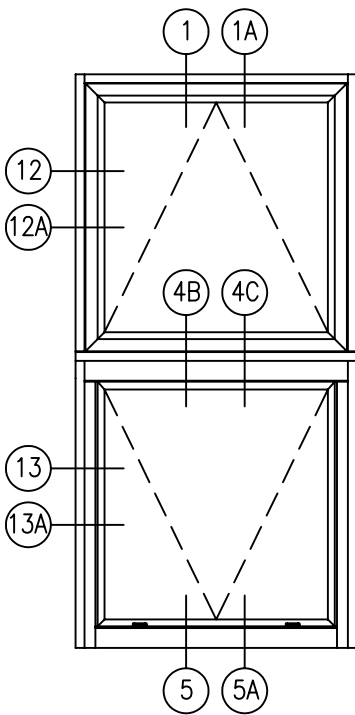
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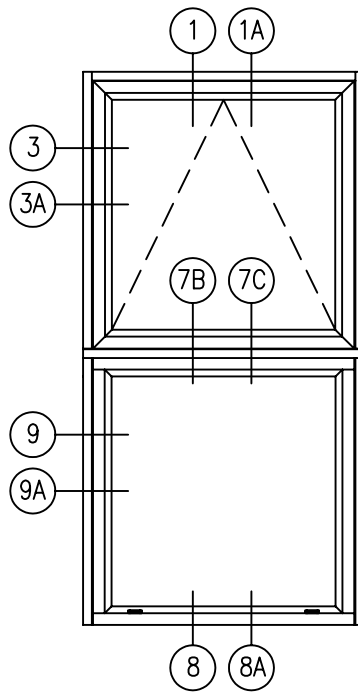
All Elevations are viewed outside looking in.



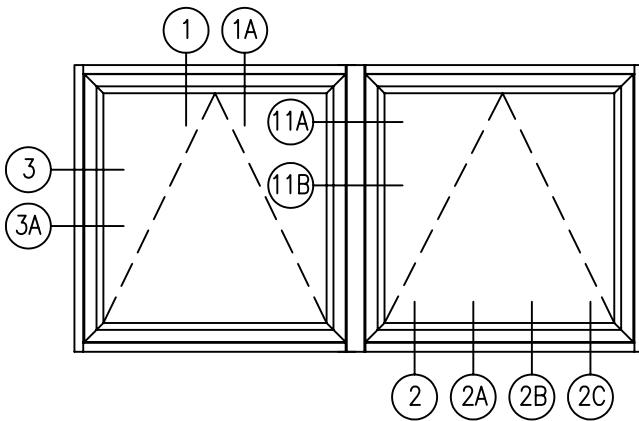
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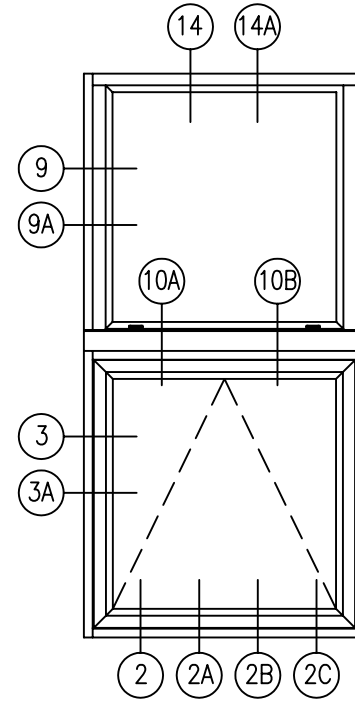
Projected Out/Projected In



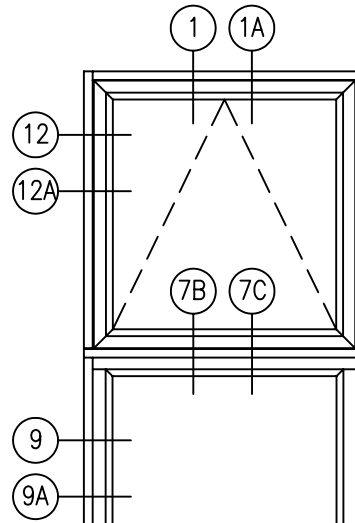
Projected Out/Fixed



Projected Out/Projected Out

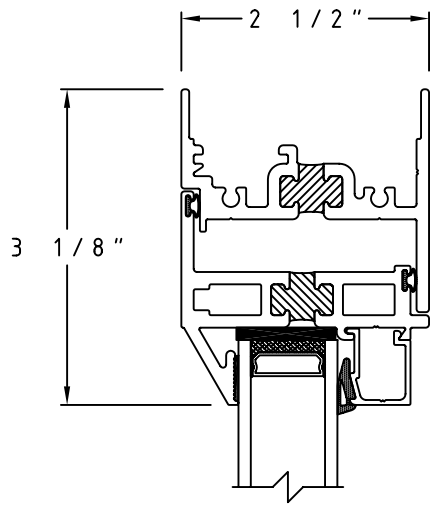


Fixed/Projected Out

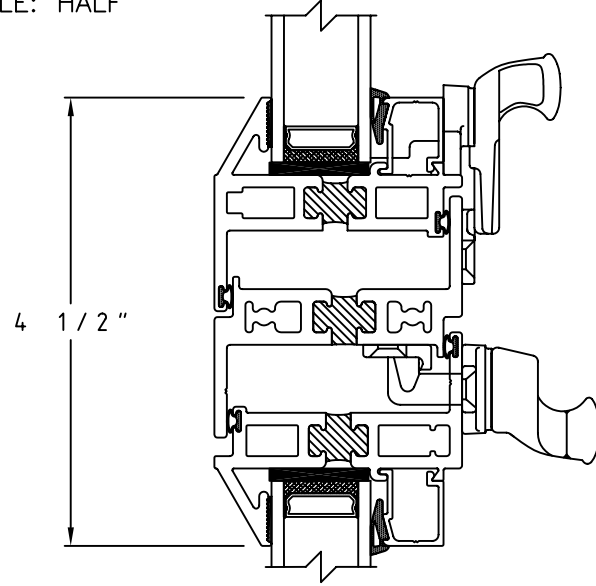


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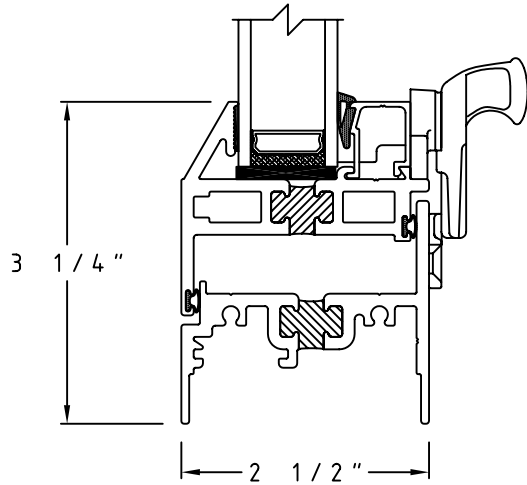
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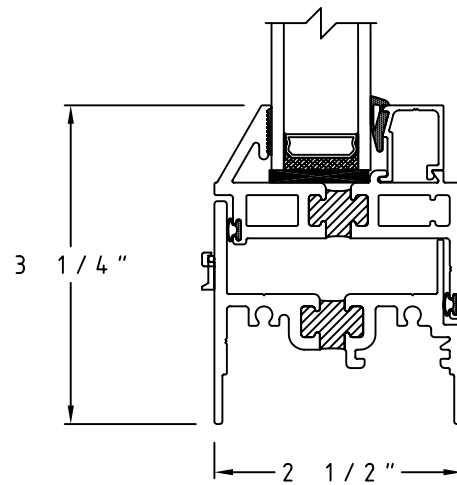
① Head Detail



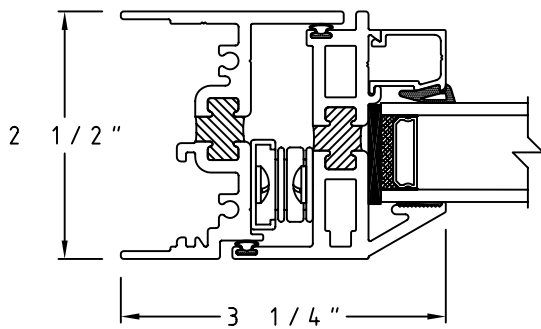
④ Projected Out/Projected In Mullion Detail



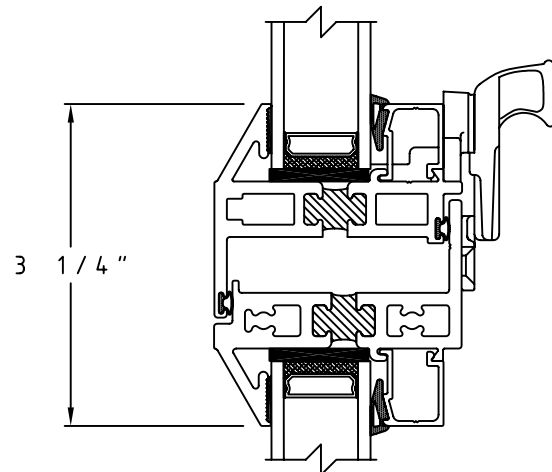
② Sill Detail



⑤ Projected In Sill Detail

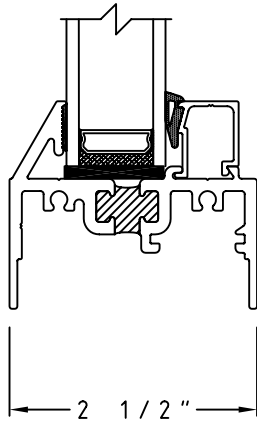


③ Jamb Detail

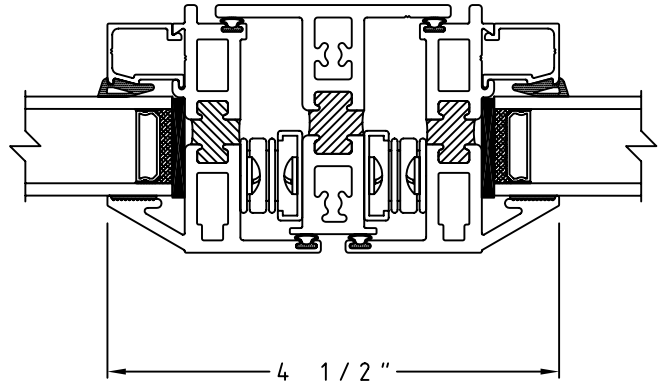


⑦ Projected Out/Fixed Detail

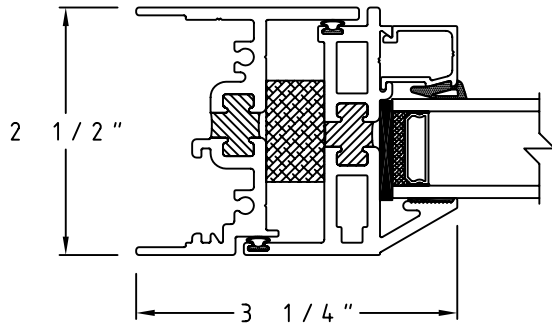
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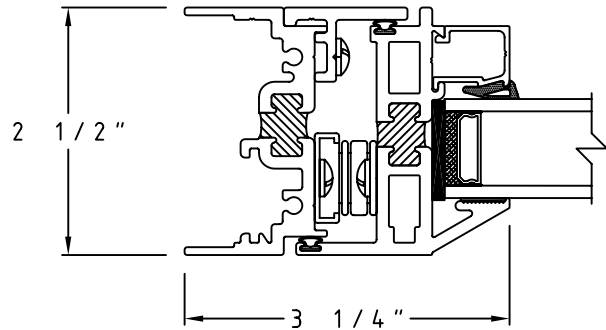
⑧ Fixed Sill Detail



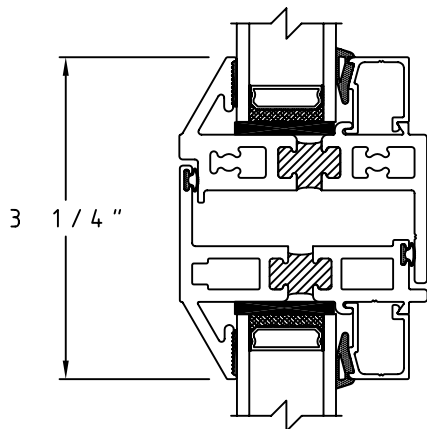
⑪ Projected Out/Projected Out Mullion Detail



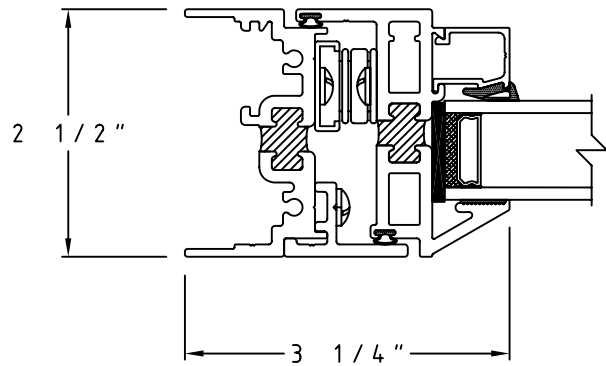
⑨ Fixed Jamb Detail



⑫ Projected Out Jamb Detail

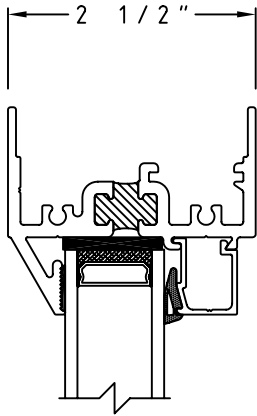


⑩ Fixed/Projected Out Mullion Detail

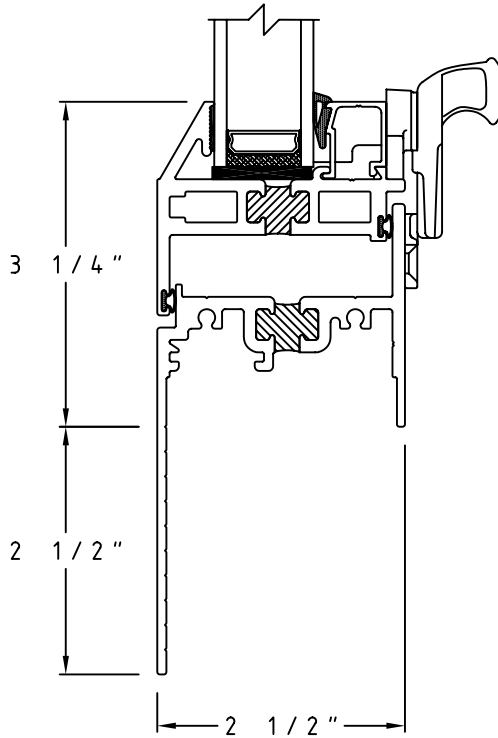


⑬ Projected In Jamb Detail

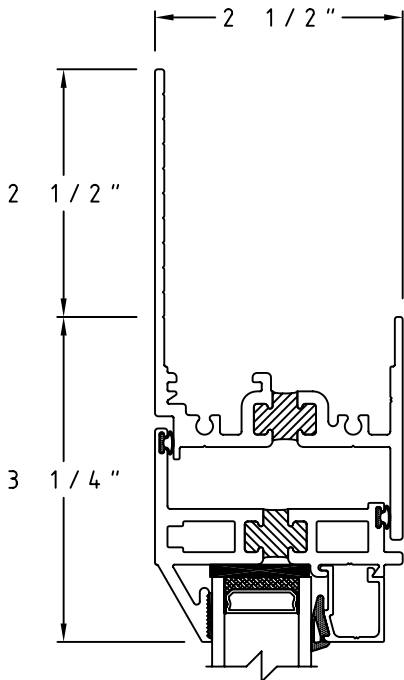
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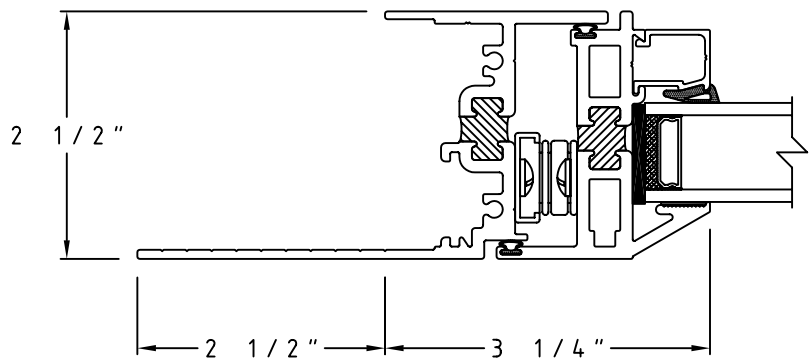
⑭ Fixed Head Detail



②A 2 1/2" Flange Sill Detail

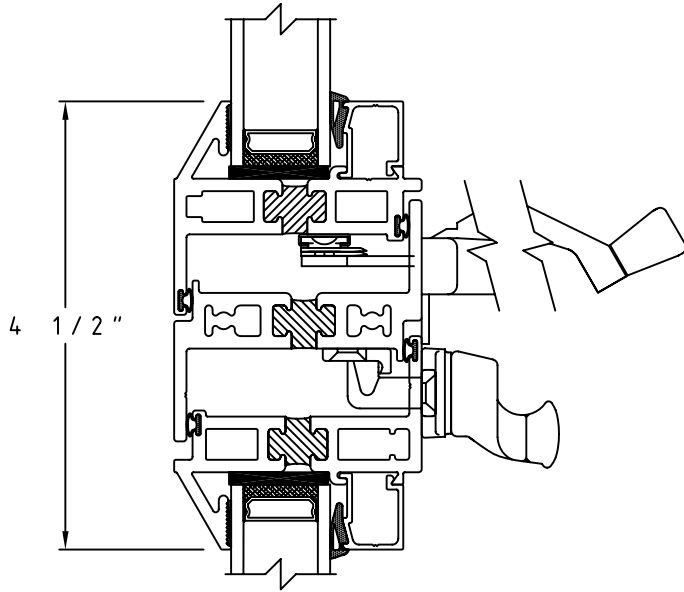


①A 2 1/2" Flange Head Detail

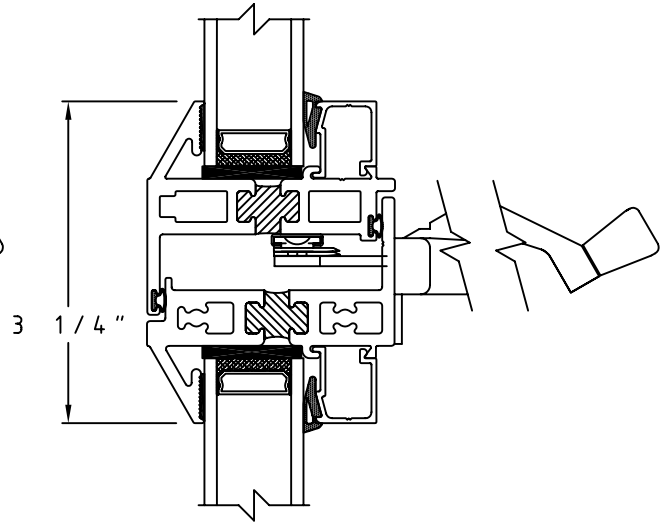


③A 2 1/2" Flange Jamb Detail

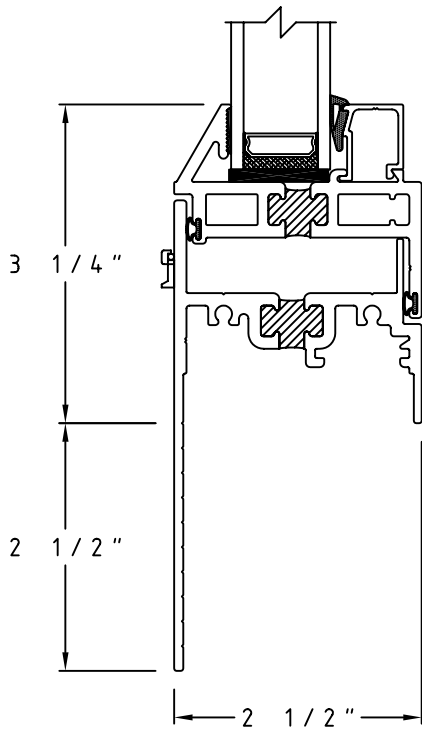
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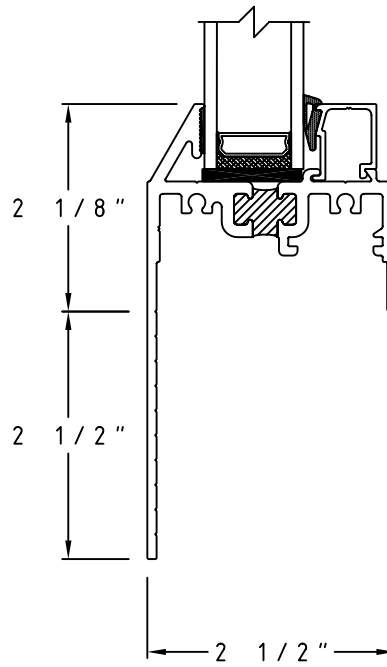
4A Projected Out/Projected In Scissor Crank Detail



7A Projected Out/Fixed with Scissor Crank Detail

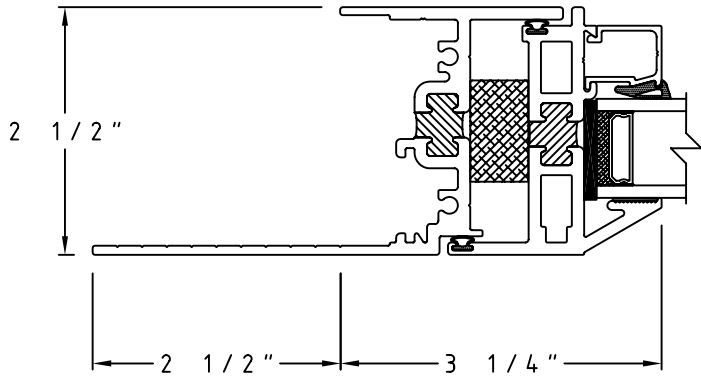


5A 2 1/2" Flange Sill Projected In Detail

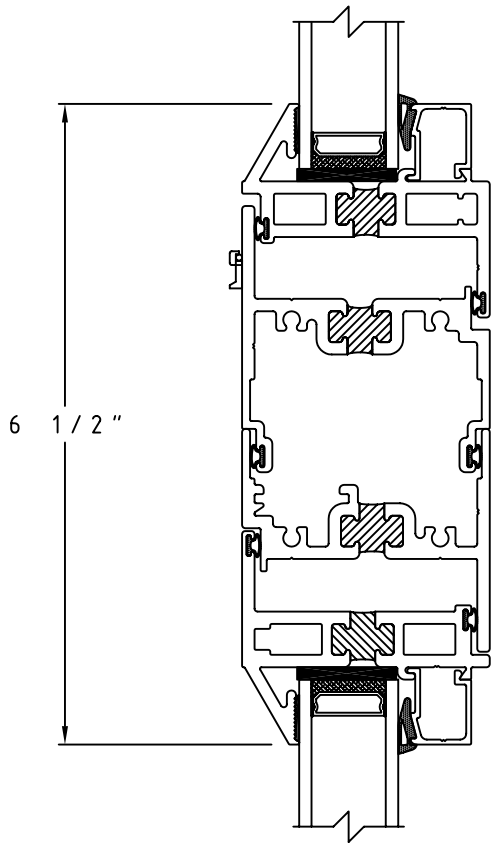


8A 2 1/2" Flange Fixed Sill Detail

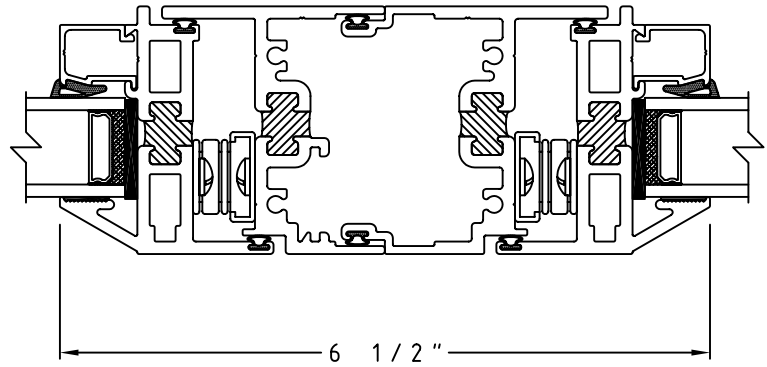
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9A 2 1/2" Flange Fixed Jamb Detail

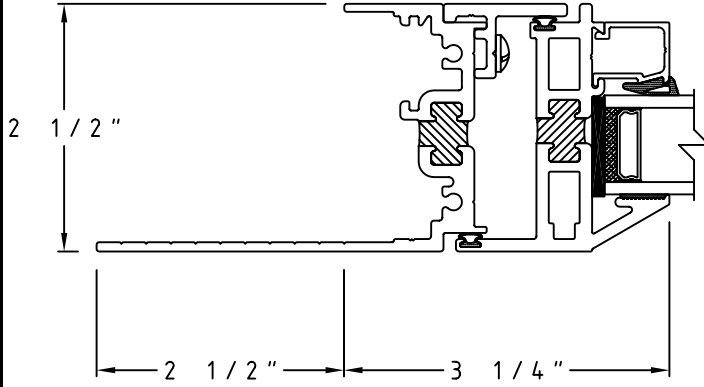


10A Fixed/Projected Out with Male Frame Mullion

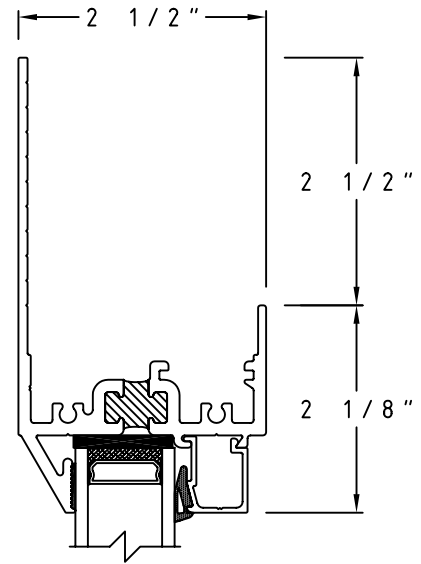


11A Projected Out/Projected Out with Male Frame Mullion

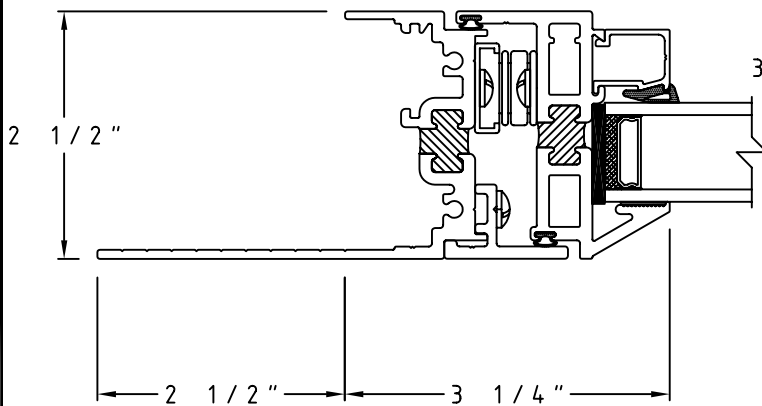
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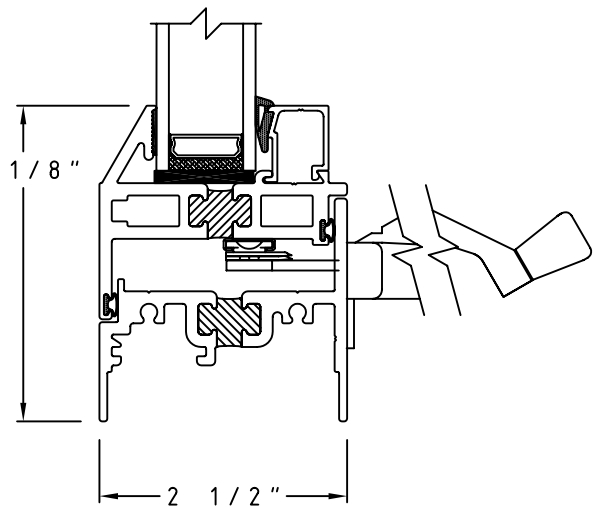
12A 2 1/2" Projected Out Flange Jamb Detail



14A 2 1/2" Fixed Flange Head

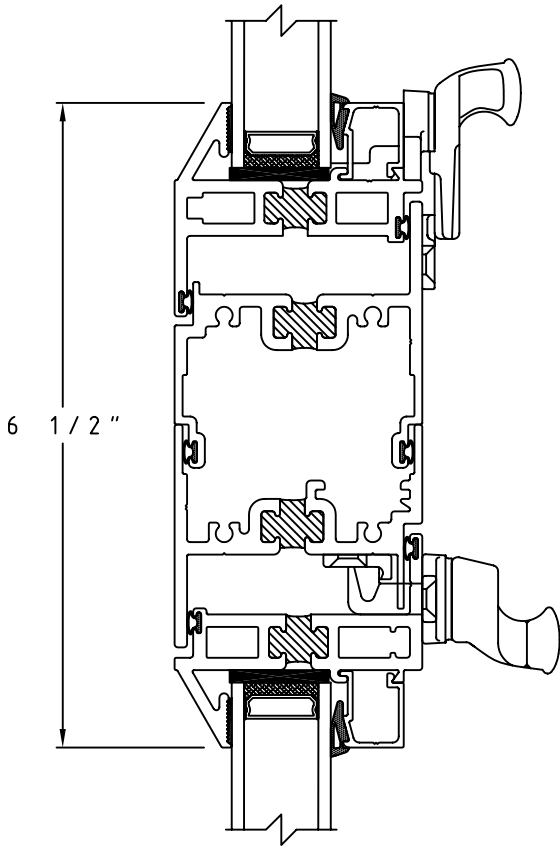


13A 2 1/2" Projected In Flange Jamb Detail

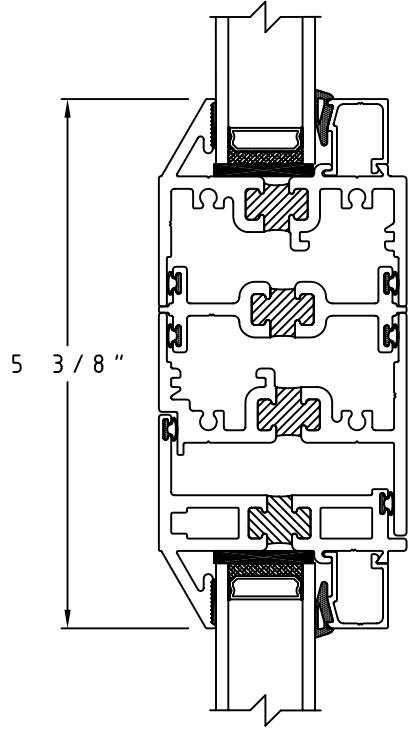


2B Sill with Scissor Crank Detail

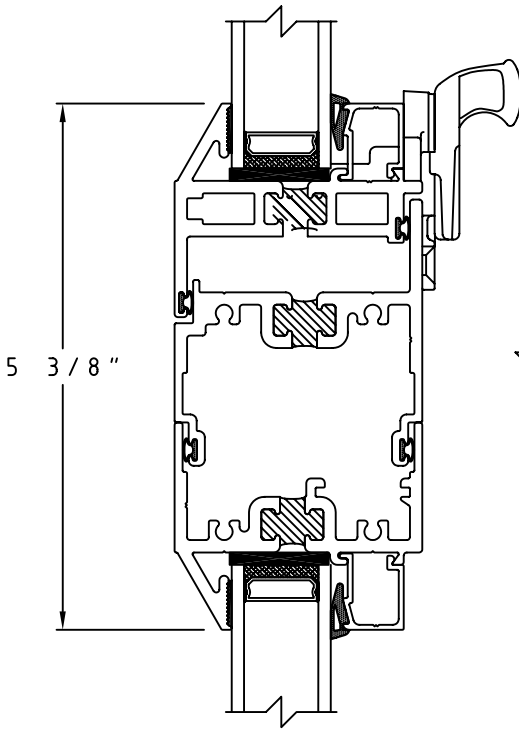
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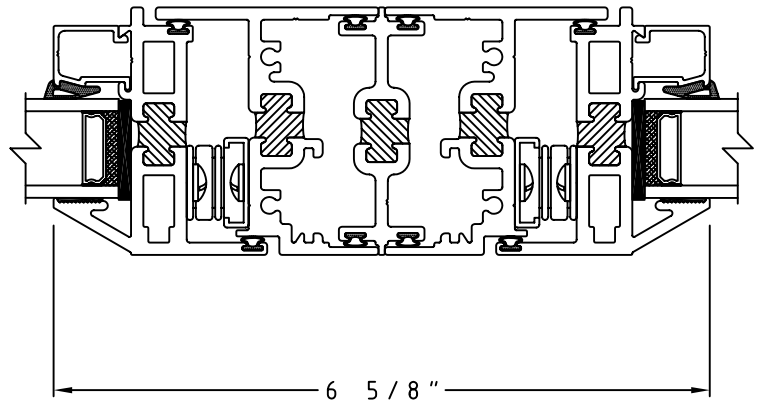
④B Projected Out/Projected In with Male Frame Mullion



⑩B Fixed/Projected Out with H Mullion



⑦B Projected Out/Fixed with Male Frame Mullion

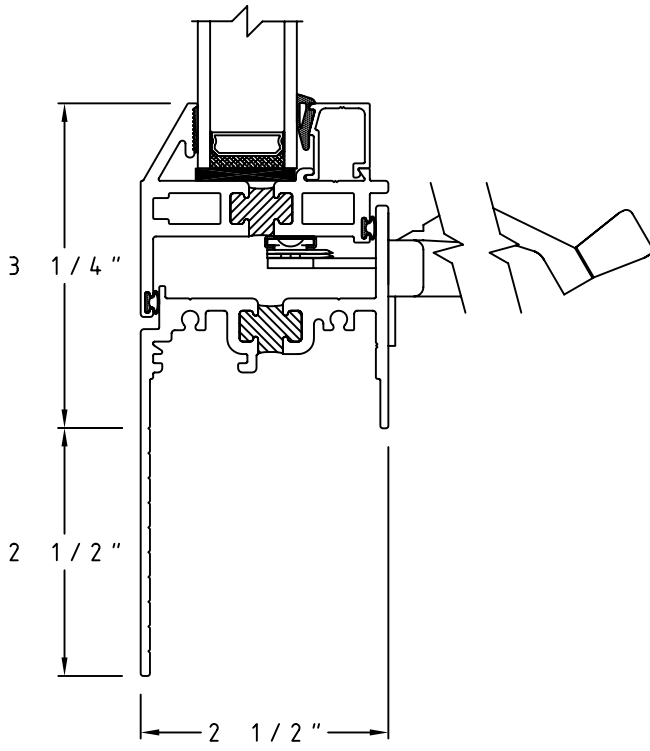


⑪B Projected Out/Projected Out with H Mullion

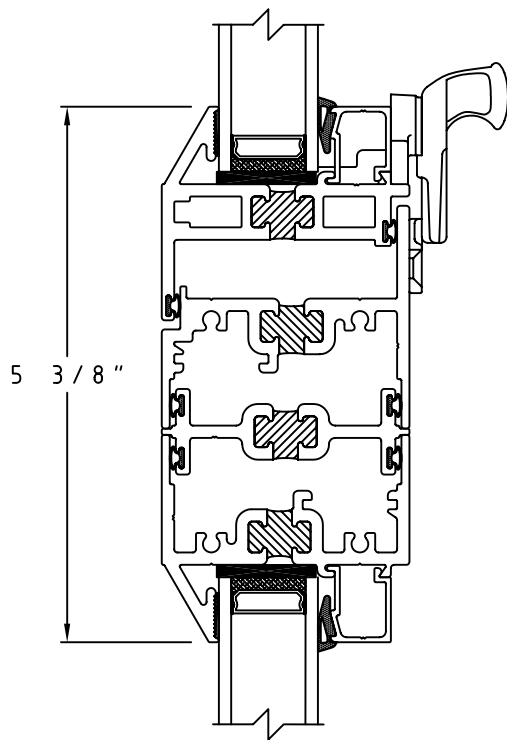


# Champion Series 5100

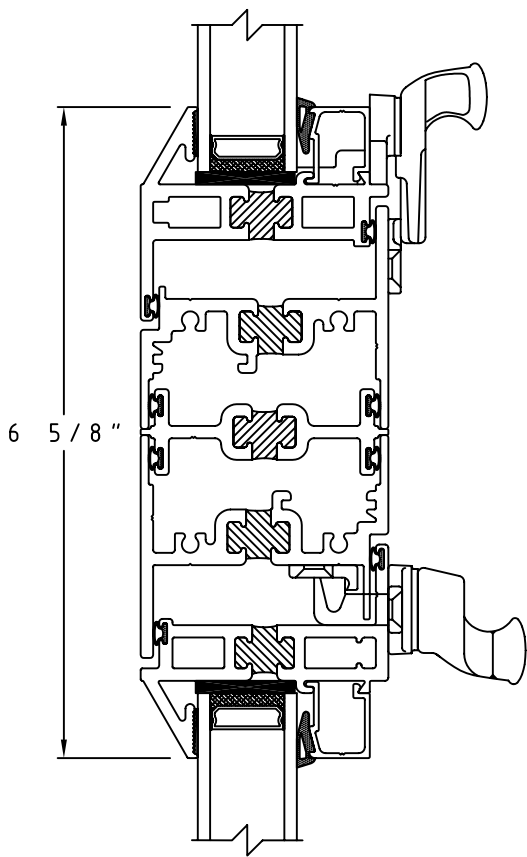
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②C 2 1/2" Flange Sill with Scissor Crank Detail



⑦C Projected Out/Fixed with H Mullion



④C Projected Out/Projected In with H Mullion



## Series 5100 AP-AW120/ AP-HC100 Project Out Awning Window.

### SECTION 085113

#### PART 1 - GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI - Canadian Standards Association  
WDMA - Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101//S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE



### Series 5100 AP-AW120/ AP-HC100 Project Out Awning Window.

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: AP-HC100/ AP-AW120.
- B. Awning Projected Out Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: project out/awning; single vent per frame. (Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to AP-AW120 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 36" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.03 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 180.56 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to AP-HC100 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 32" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall be <0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 180.56 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 5100 Projected Out Awning Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.

**Series 5100 AP-AW120/ AP-HC100 Project Out Awning Window.**

- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges when used with scissor crank] hinges conforming to AAMA 904-96 to rotate vent outward on horizontal axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: single point lock on both sides of the vent] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.
- G. Screens: Full screens with wickets to access handles held in place with stainless steel clips with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced used only with the scissor crank option]

**2.03 FABRICATION**

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

**2.04 GLASS AND GLAZING MATERIALS**

- A. Construction: Provide hermetically sealed insulating glass units. All aluminum spacers to be continuous with bent corners and containing a hot melt butyl. The I.G. unit shall contain desiccant filled into the aluminum spacer. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- A. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774-00; visible, ALI certification for CBA rating level.

**2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS**

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

**2.06 FINISH ON ALUMINUM EXTRUSIONS**

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage: zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]



### Series 5100 AP-AW120/ AP-HC100 Project Out Awning Window.

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 - EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-02 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 5000 Series

## 5200 Projected



<u>Product By Operation:</u>	2-1/2" Hopper
<u>Model By Family:</u>	5200
<u>Product Description:</u>	Projected Inswing
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-05 Rating:</u>	AP-AW110
<u>AAMA Test Size:</u>	60 x 36
<u>101/I.S.2/A440-05 Optional:</u>	AP-HC100
<u>Optional Test Size:</u>	60 x 36
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" tp 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind



### Performance Data

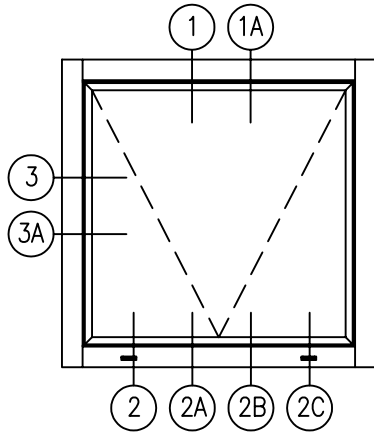


AAMA RATING:	AP-AW110/HC-100
AIR INFILTRATION @ 50 mph	0.02 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	165.52 PSF
DESIGN PRESSURE	120.38 PSF

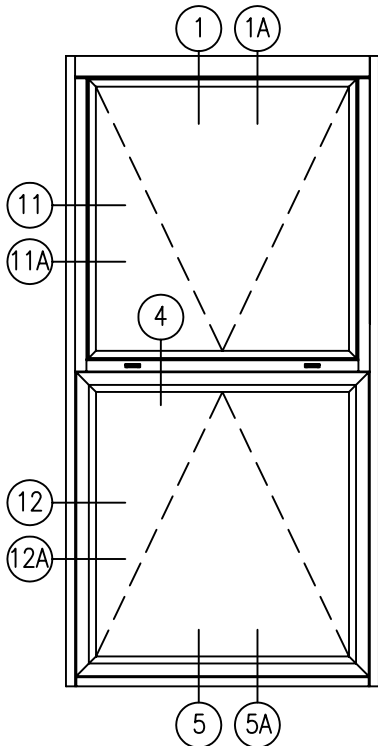
# Champion Series 5200

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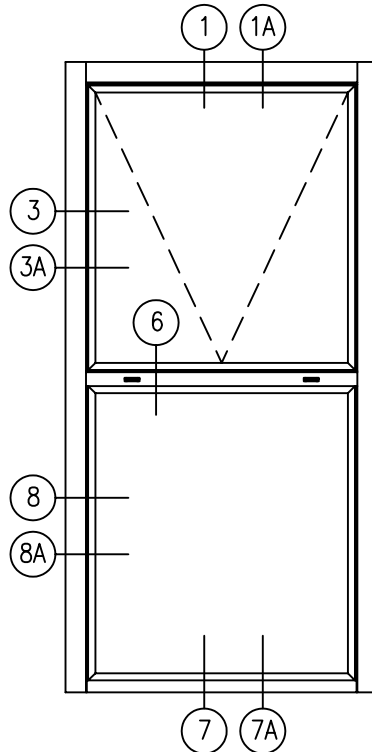
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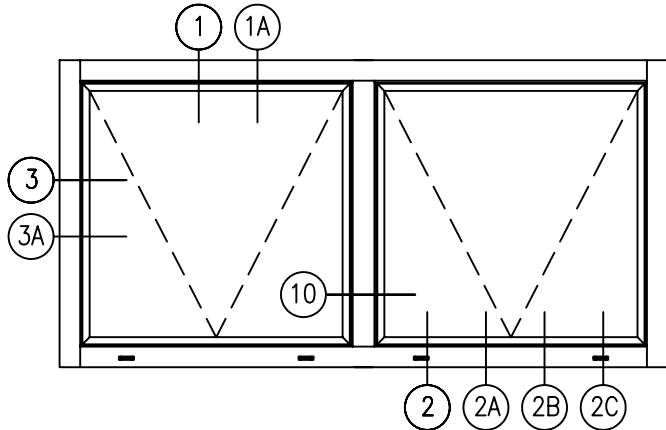
Projected In



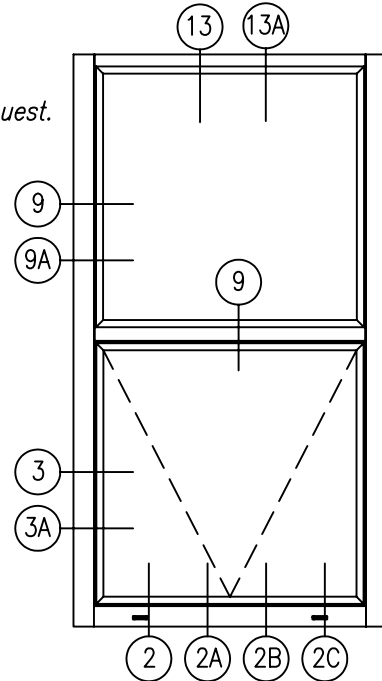
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Continuous Frame



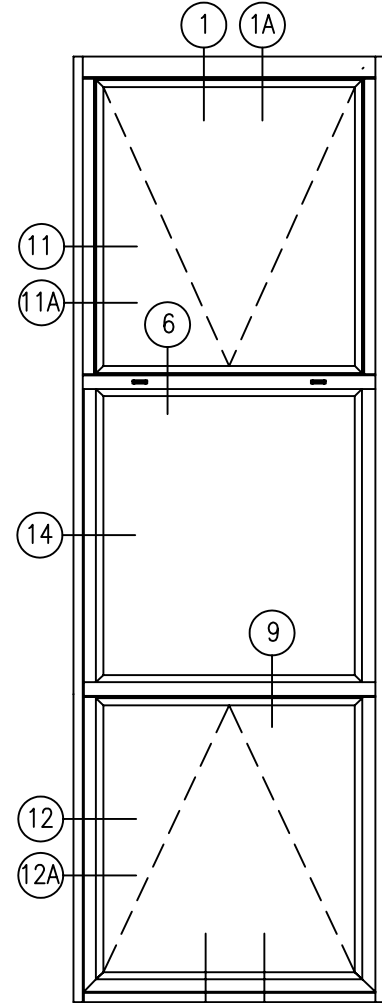
Projected In/Fixed  
Continuous Frame



Projected In/Projected In  
Continuous Frame



Fixed/Projected In  
Continuous Frame

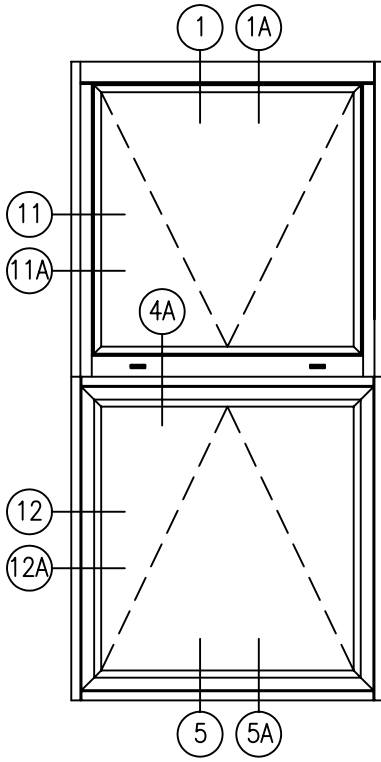


Projected In/Fixed/  
Projected Out  
Continuous Frame

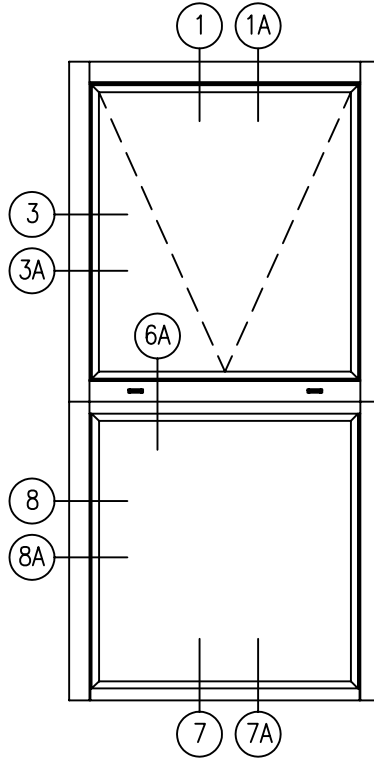
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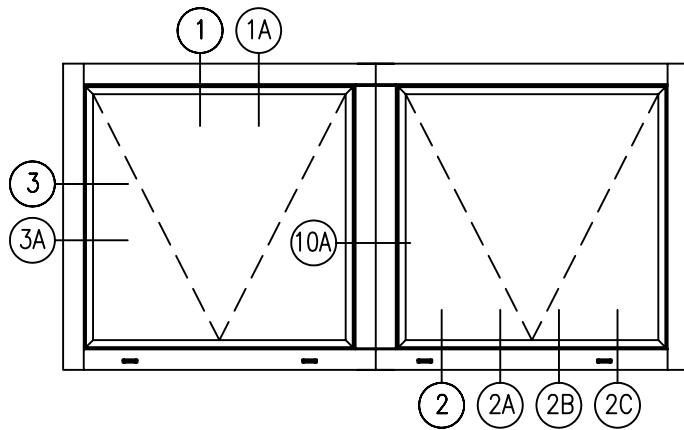
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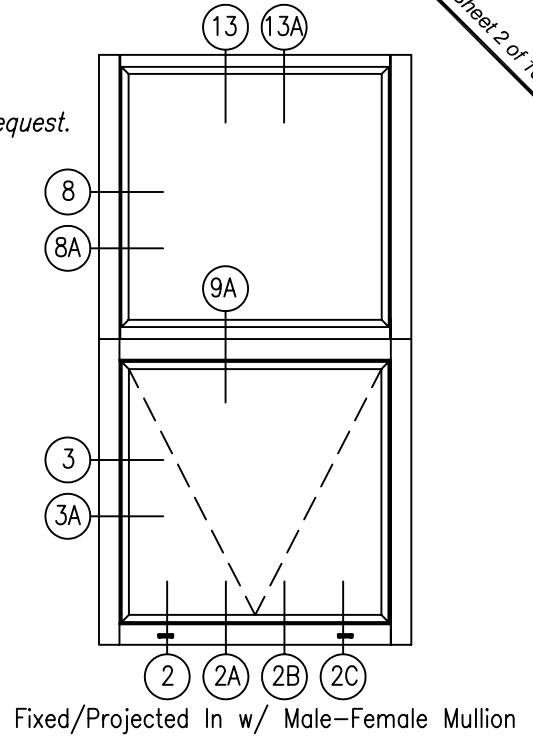
Projected In/Projected Out  
w/ Male-Female Mullion



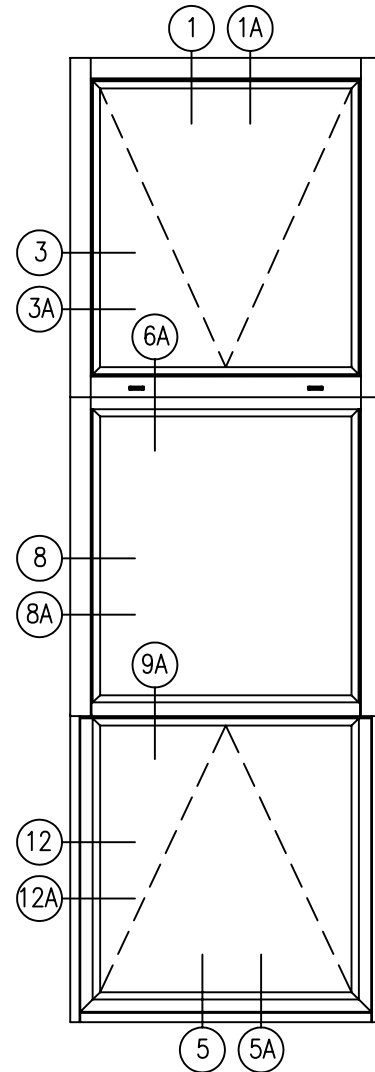
Projected In/Fixed  
w/ Male-Female Mullion



Projected In/Projected In  
w/ Male-Female Mullion



Fixed/Projected In w/ Male-Female Mullion



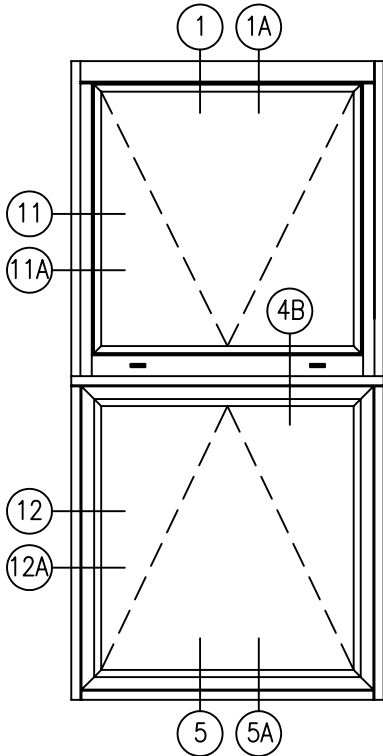
Projected In/Fixed/Project Out  
w/ Male-Female Mullion

*All Elevations are viewed outside looking in.*

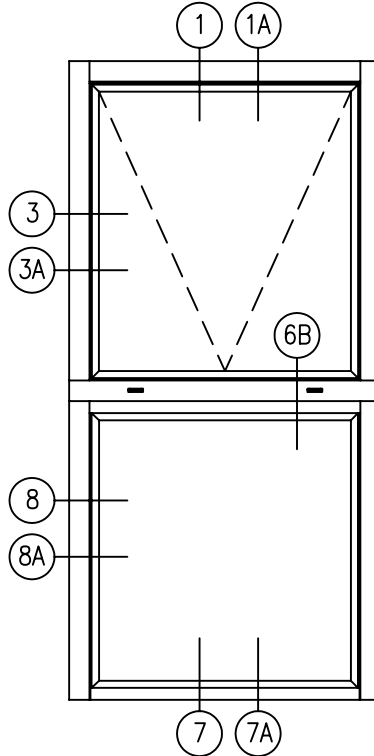


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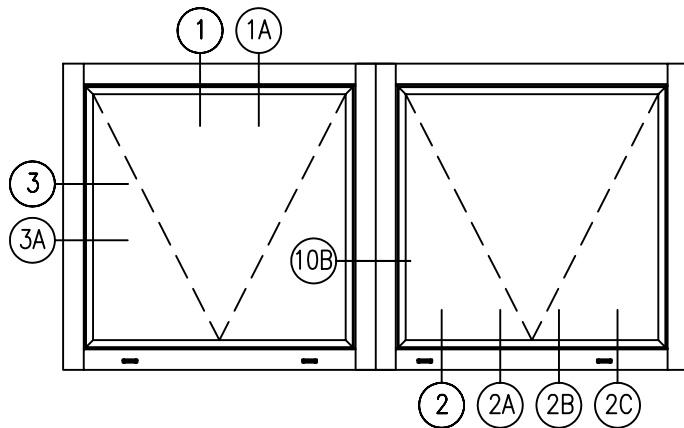
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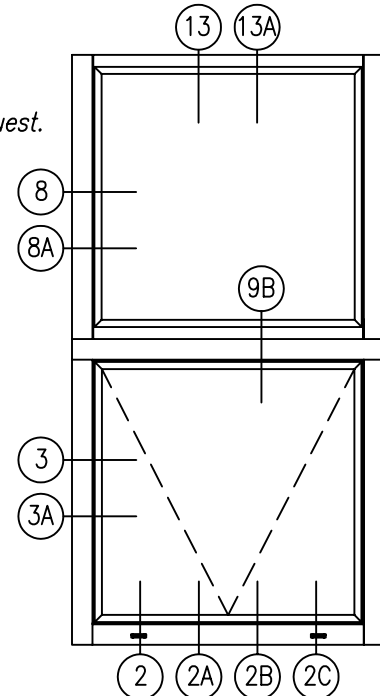
Projected In/Projected Out  
w/ H Mullion



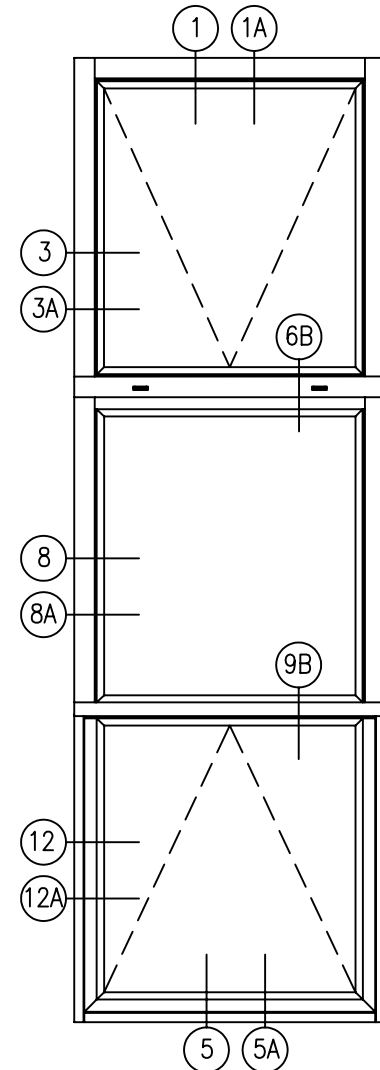
Projected In/Fixed  
w/ H Mullion



Projected In/Projected In  
w/ H Mullion



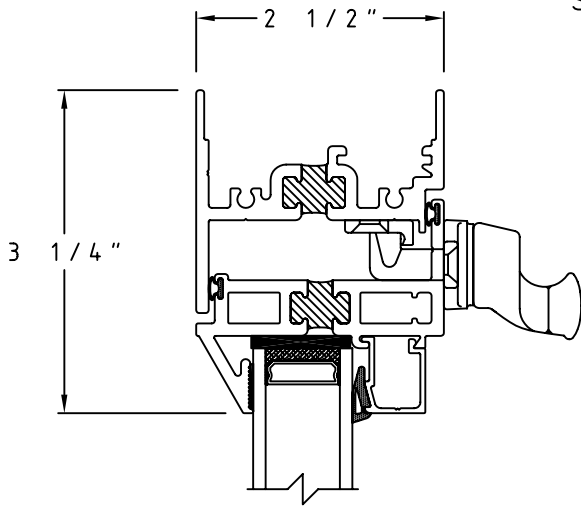
Fixed/Projected In w/ H Mullion



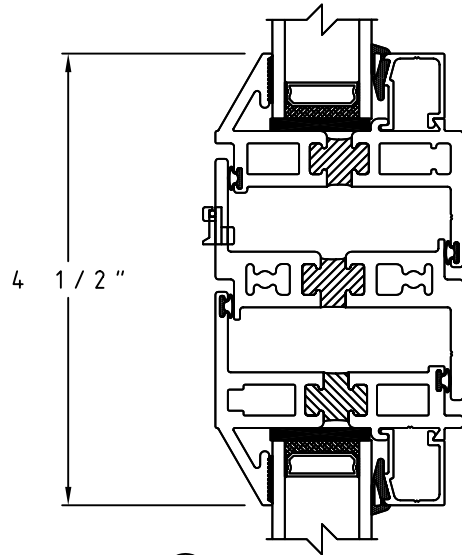
Projected In/Fixed/  
Projected Out w/ H Mullion

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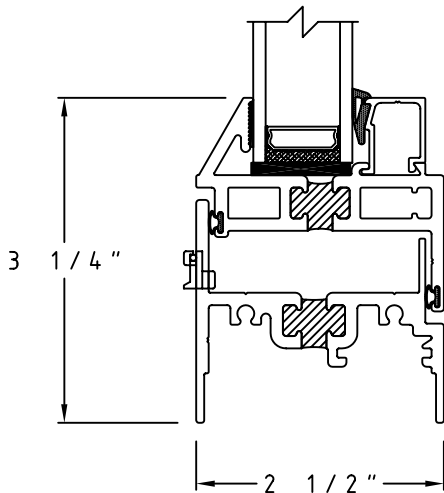
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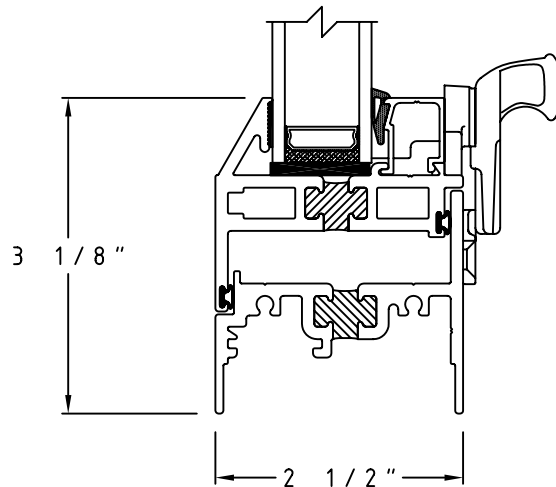
① Head Detail



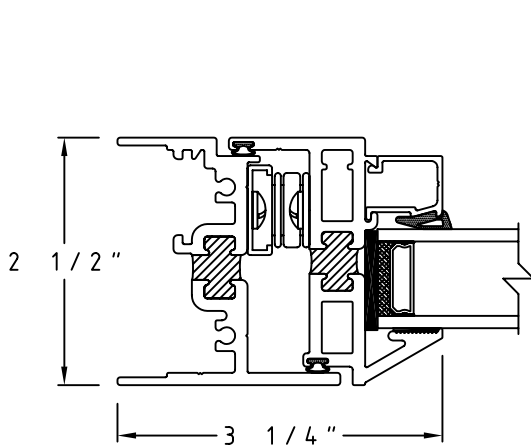
④ Projected In/Projected Out Mullion Detail



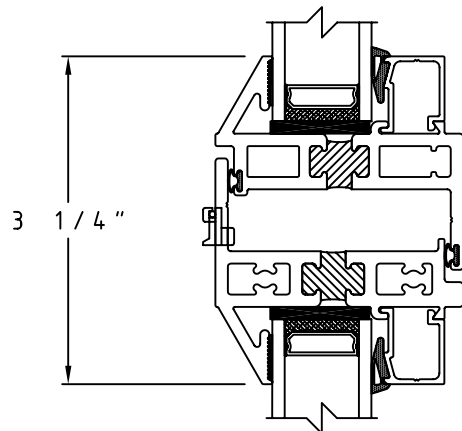
② Sill Detail



⑤ Projected Out Sill Detail

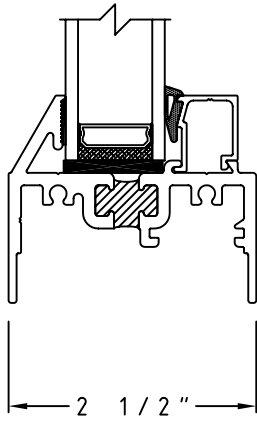


③ Jamb Detail

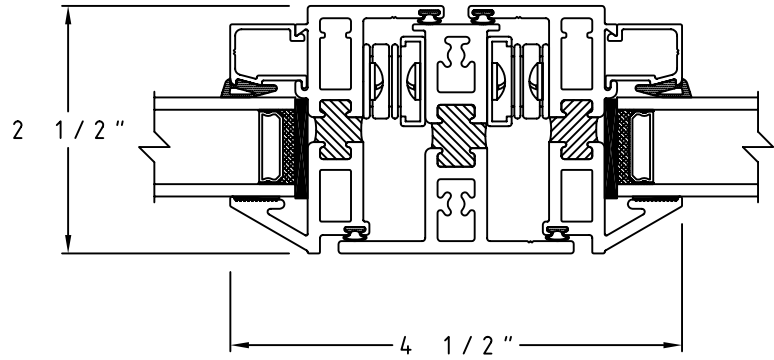


⑥ Projected In/Fixed Mullion Detail

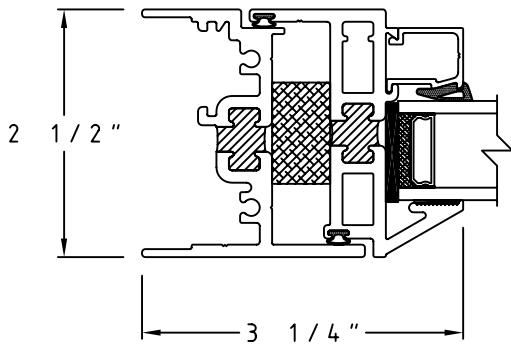
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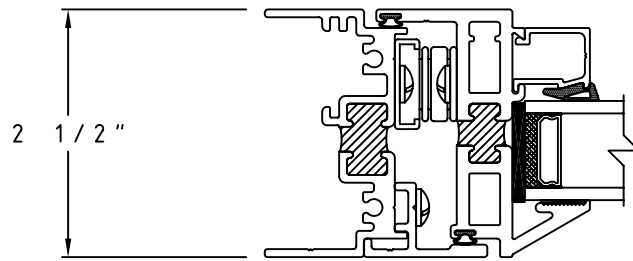
⑦ Fixed Sill Detail



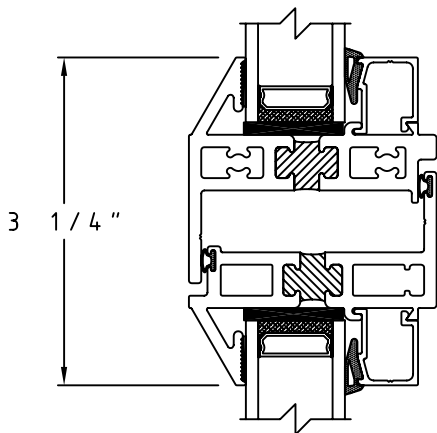
⑩ Projected In/Projected In Mullion Detail



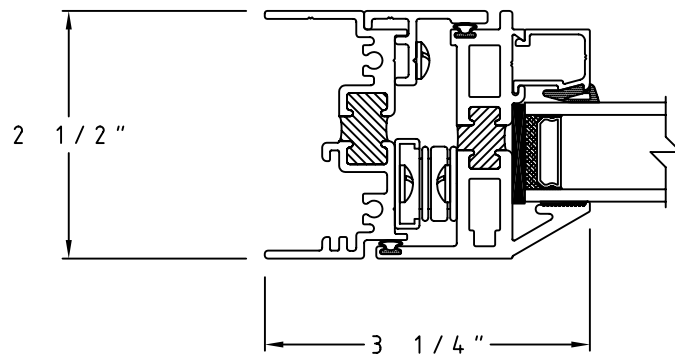
⑧ Fixed Jamb Detail



⑪ Projected In Jamb Detail

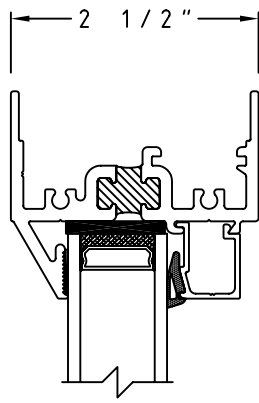


⑨ Fixed/Projected In Mullion Detail

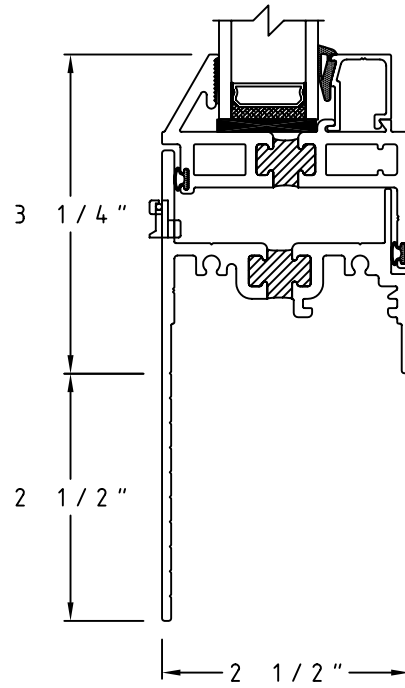


⑫ Projected Out Jamb Detail

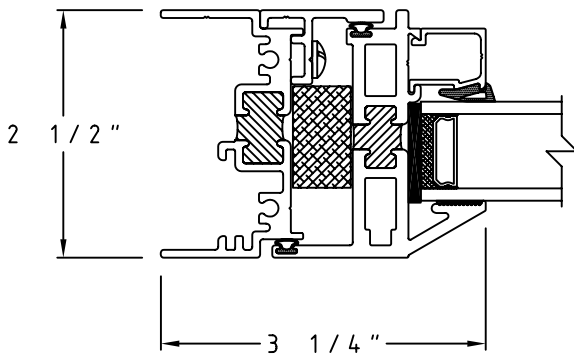
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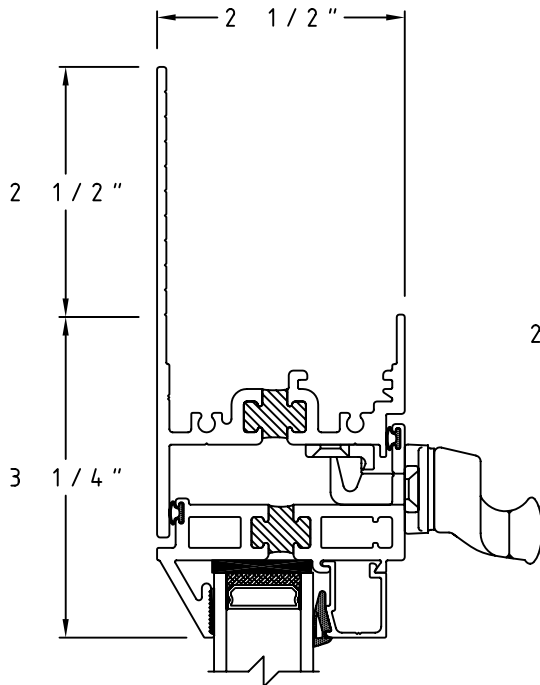
⑬ Fixed Head



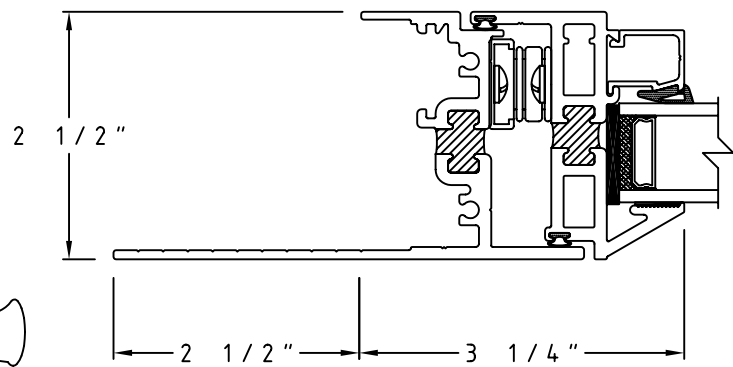
②A 2 1/2" Flange Sill Detail



⑭ Fixed Projected Out Jamb

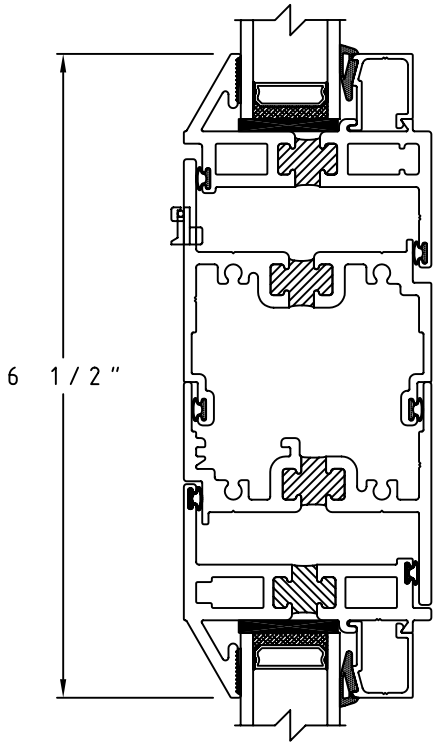


①A 2 1/2" Flange Head Detail

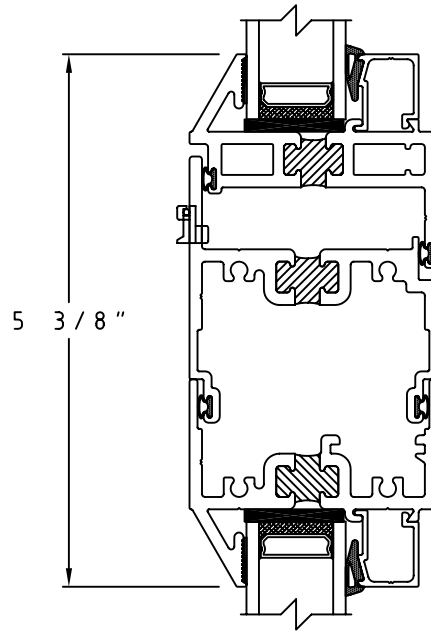


③A 2 1/2" Flange Jamb Detail

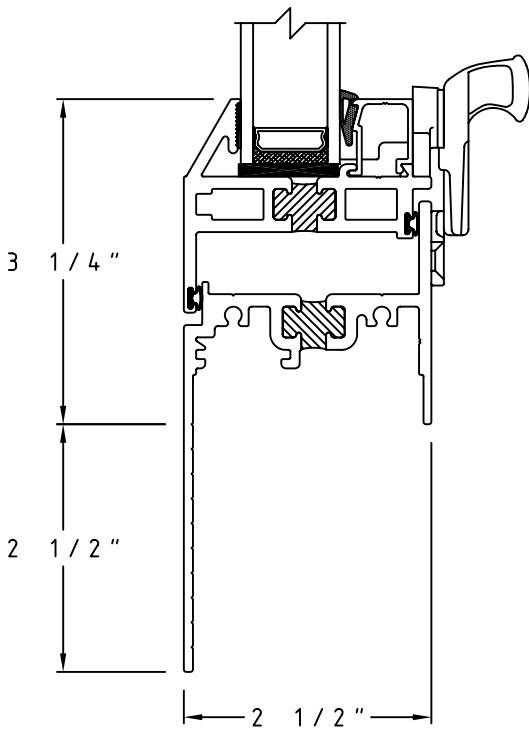
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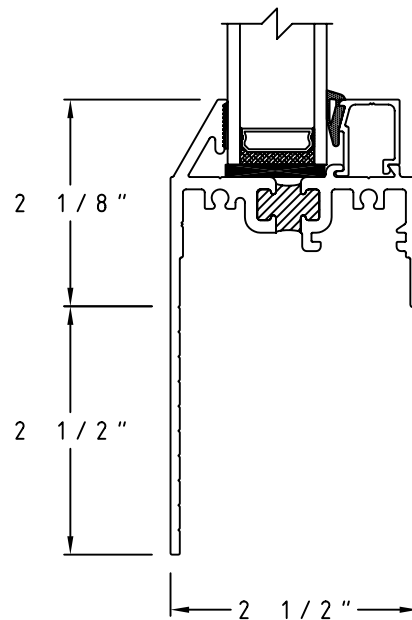
4A Projected In/Projected Out with Male-Female Mullion



6A Projected In/Fixed with Male-Female Mullion

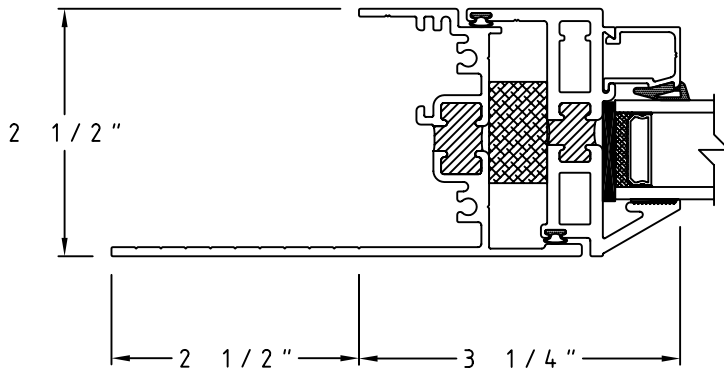


5A 2 1/2" Flange Sill Projected Out Detail

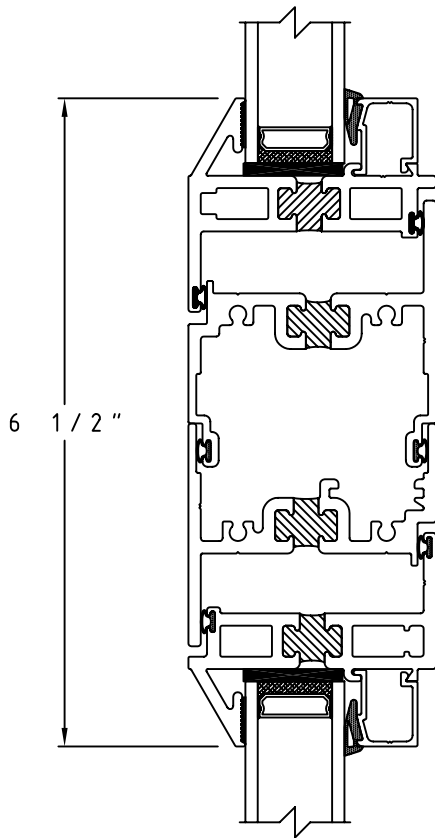


7A 2 1/2" Flange Fixed Sill Detail

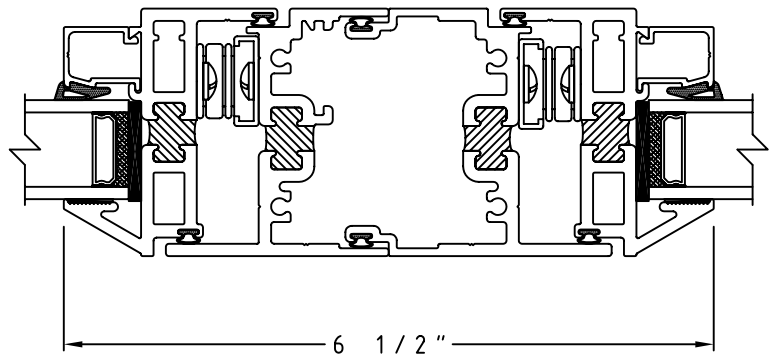
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8A 2 1/2" Flange Fixed Jamb Detail

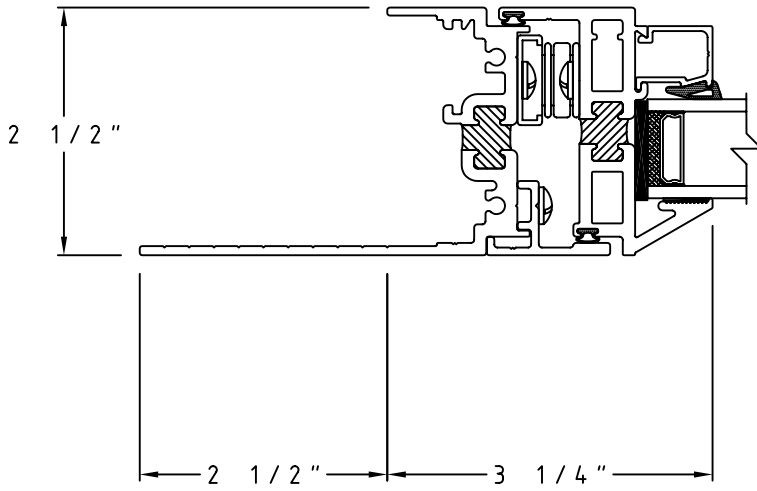


9A Fixed/Projected In with Male-Female Mullion

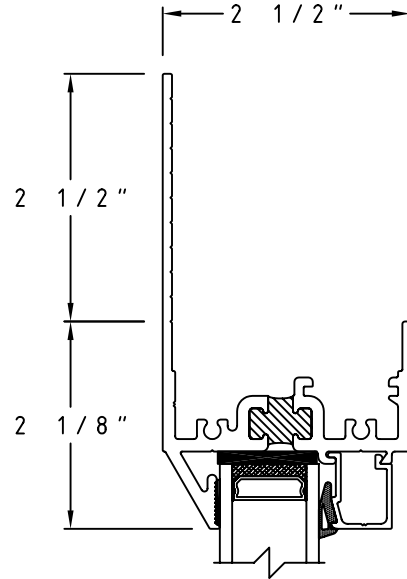


10A Projected In/Projected In with Male-Female Mullion

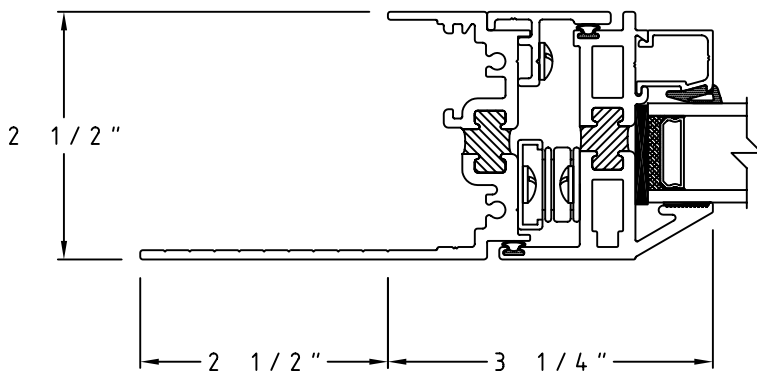
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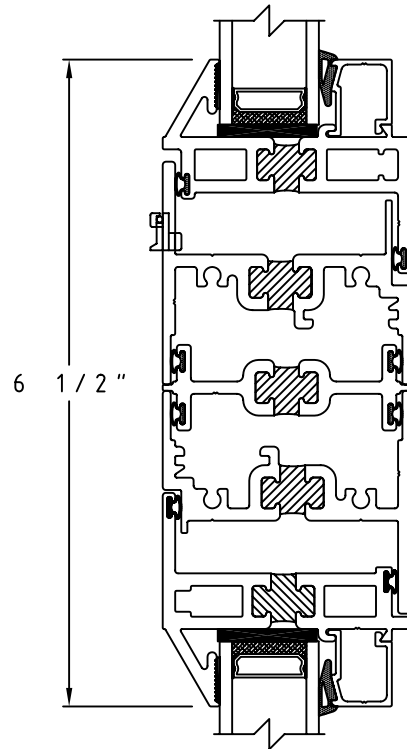
(11A) 2 1/2" Flange Projected In Jamb Detail



(13A) 2 1/2" Fixed Flange Head

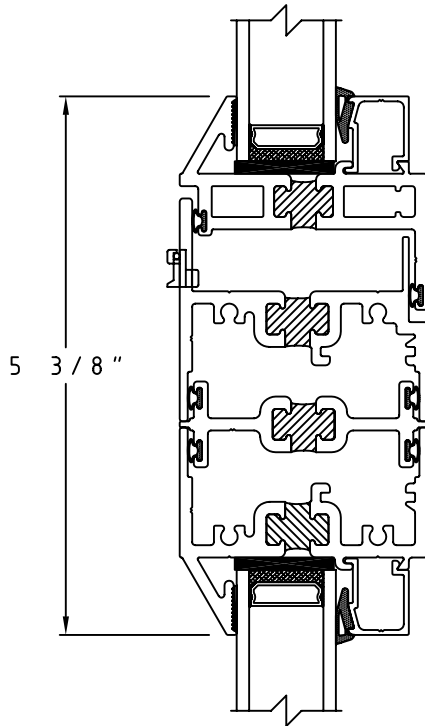


(12A) 2 1/2" Flange Projected Out Jamb Detail

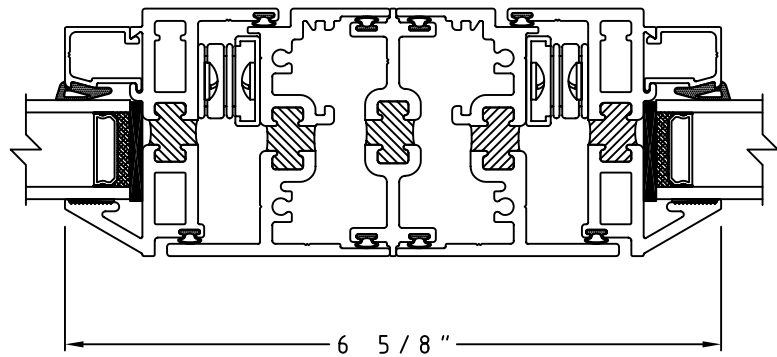


(4B) Projected In/Projected Out with H Mullion

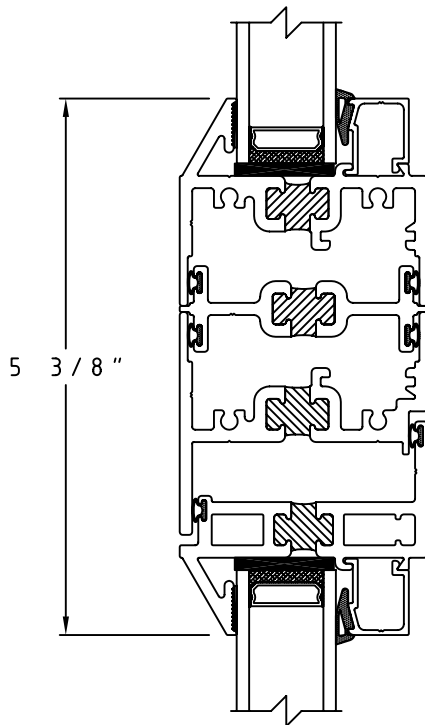
SCALE: HALF



6B Projected In/Fixed with H Mullion



10B Projected In/Projected In with H Mullion



9B Fixed/Projected In with H Mullion





W I N D O W   A N D   D O O R  
Series 5200 AP- HC100 /AW110 Project Inswing Window.

**SECTION 085113**

**PART 1 – GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



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### Series 5200 AP- HC100 /AW110 Project Inswing Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: AP-HC100 and AP-AW110.
- B. Projected In Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: project in; single vent per frame. (Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to AP-AW110 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 36" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.02 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 165.52 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to AP-HC100 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 32" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.02 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 165.2 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 5200 Projected Inswing Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- E. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges when used with scissor crank] hinges conforming to AAMA 904-96 to rotate vent outward on horizontal axis; white bronze strike and cam [Optional: pole-operated]



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### Series 5200 AP- HC100 /AW110 Project Inswing Window.

handle [Optional: single point lock on both sides of the vent] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].

- F. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- G. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.
- F. Screens: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full screens with wickets to access handles held in place with stainless steel clips]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel pacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).



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**Series 5200 AP- HC100 /AW110 Project Inswing Window.**

- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

**2.07 AIR CONDITIONERS**

- A. Provide A/C sashes and A/C kits to the following windows:  
B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

**PART 3 – EXECUTION**

**3.01 PROJECT SUBMITTALS**

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.  
B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.  
C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

**3.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handle all windows and accessories in accordance with AAMA CW-10.  
B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

**3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

**3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.  
B. All window openings must be covered and secure at the end of each workday.  
C. Provide the required shims and blocking and fasten the frames to the opening.  
D. Set each window plumb, level and square, without twisting or bowing the frames.  
E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.  
F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

**3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

**3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.  
B. An AAMA accredited lab will be hired by the owner to perform the required testing.

**3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation  
B. Remove any labels and dirt from the window.

**END OF SECTION 085113**

# 5000 Series

## 5300 Casement



<u>Product By Operation:</u>	2-1/2" Casement
<u>Model By Family:</u>	5000
<u>Product Description:</u>	Casement Outswing
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2-/A440-05 Rating:</u>	C-AW85
<u>AAMA Test Size:</u>	32 x 60
<u>101/I.S.2/A440-05 Optional:</u>	C-HC85
<u>Optional Test Size:</u>	36 x 60
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind

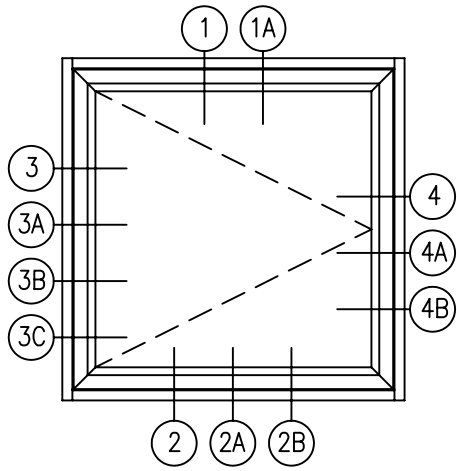


### Performance Data

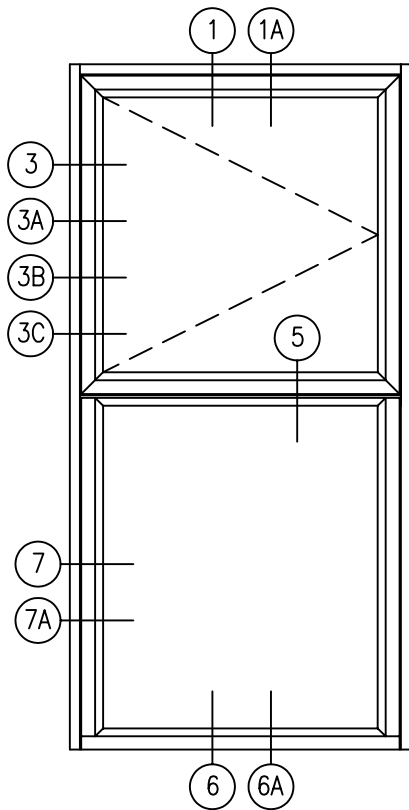


AAMA RATING:	C-AW85/HC-85
AIR INFILTRATION @ 50 mph	<0.01 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	127.90 PSF
DESIGN PRESSURE	85.27 PSF

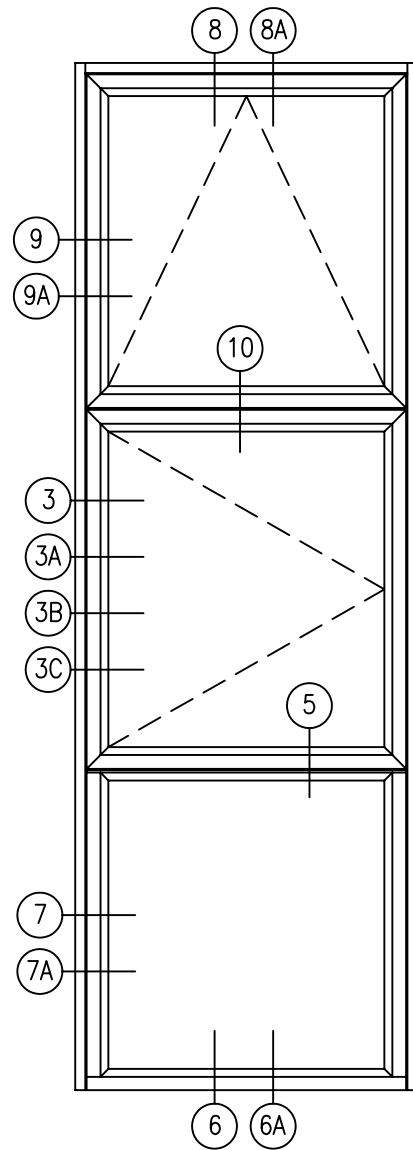
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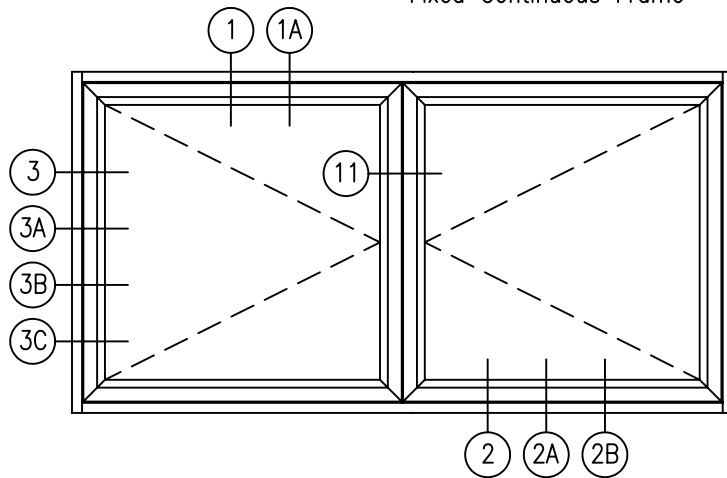
Casement Out  
Continuous Frame



Casement Out/Fixed  
Continuous Frame

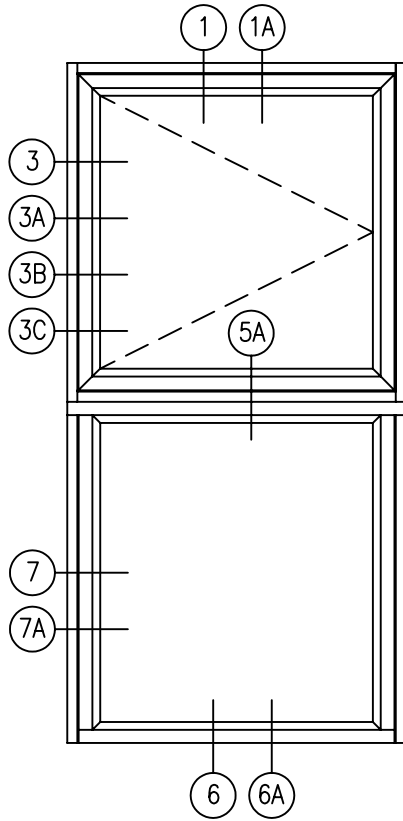


Projected Out/Casement Out/  
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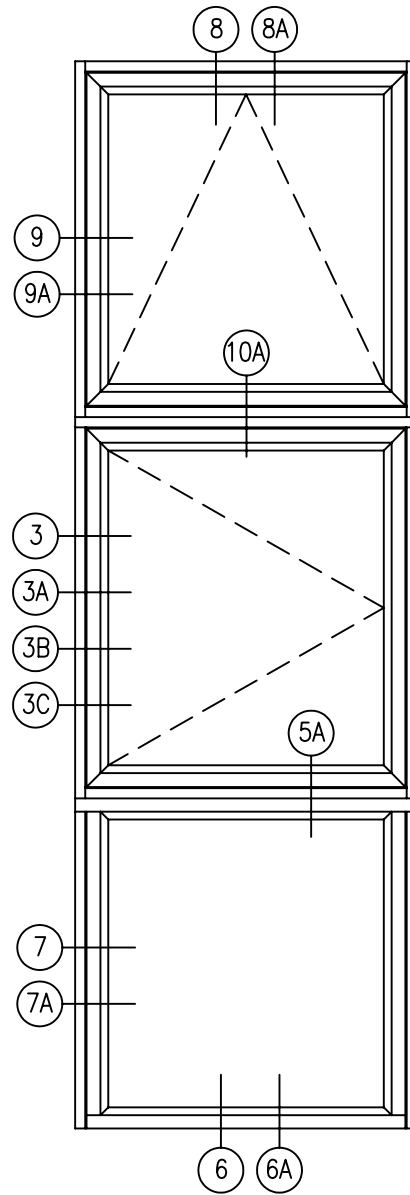


Casement Out/Casement Out  
Continuous Frame

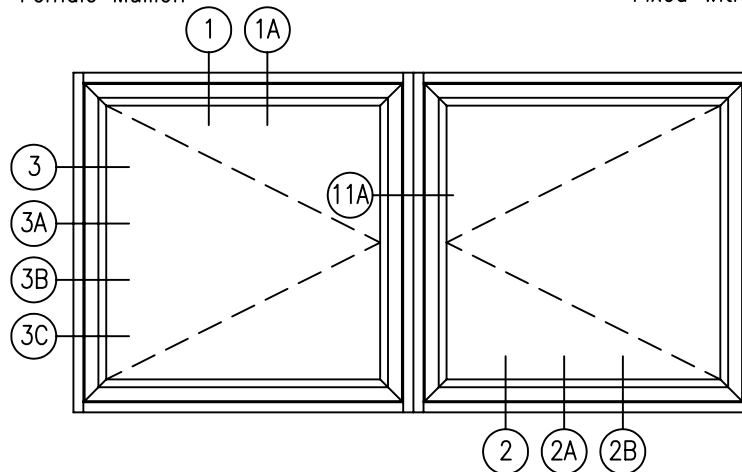
All Elevations are viewed outside looking in.



Casement Out/Fixed  
with Male-Female Mullion

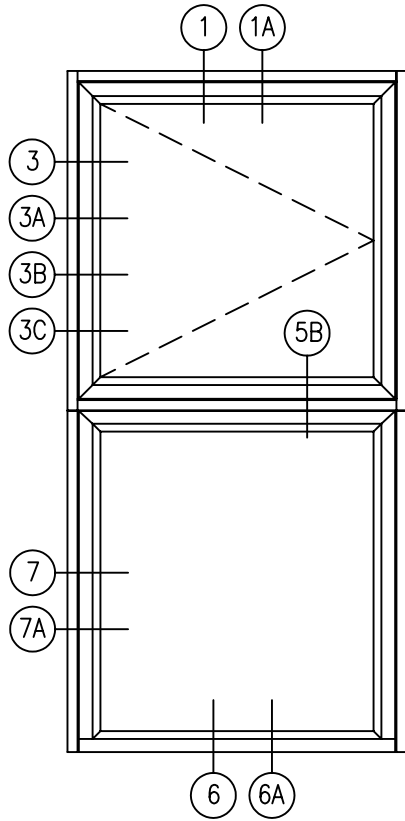


Projected Out/Casement Out/  
Fixed with Male-Female Mullion

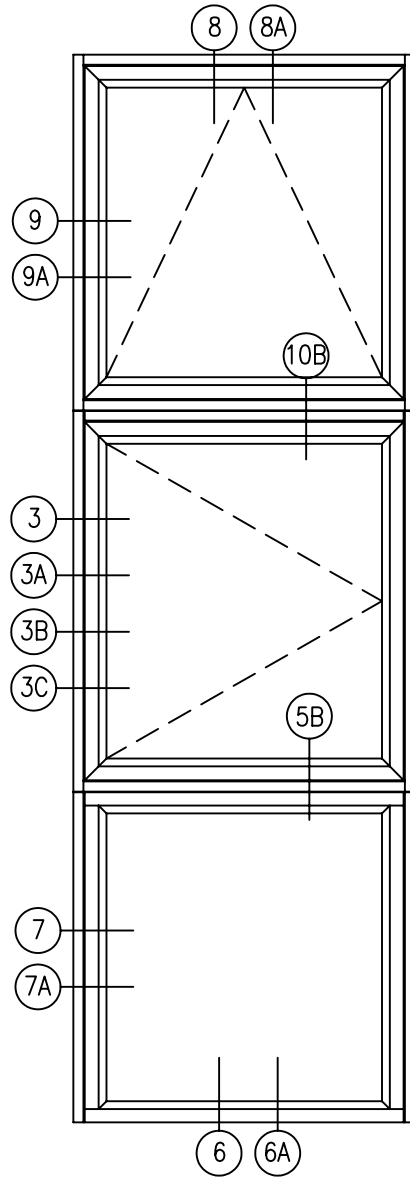


Casement Out/Casement Out  
with Male-Female Mullion

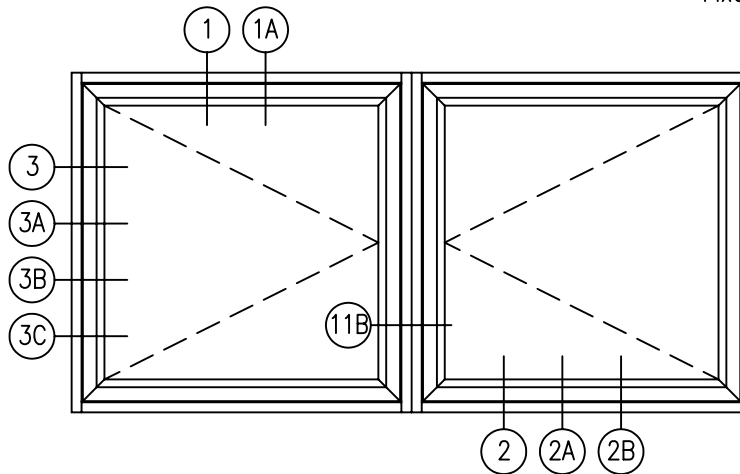
All Elevations are viewed outside looking in.



Casement Out/Fixed  
with H Mullion



Projected Out/Casement Out/  
Fixed with H Mullion

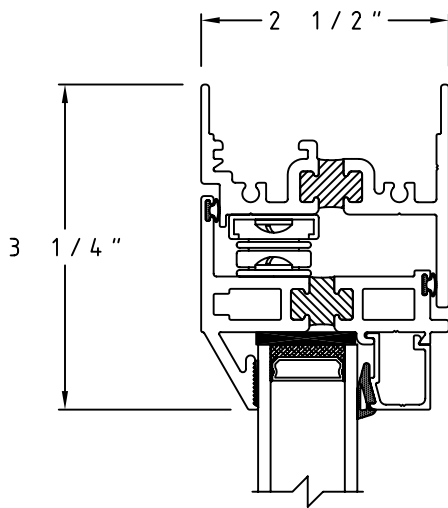


Casement Out/Casement Out  
with H Mullion

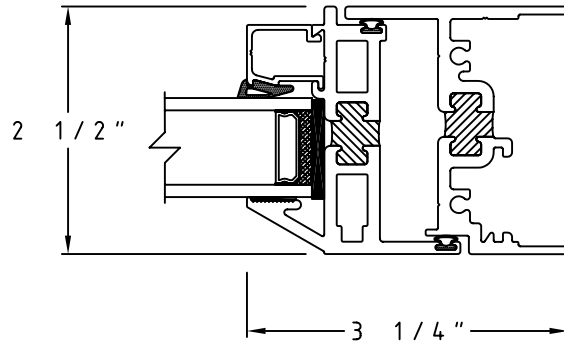
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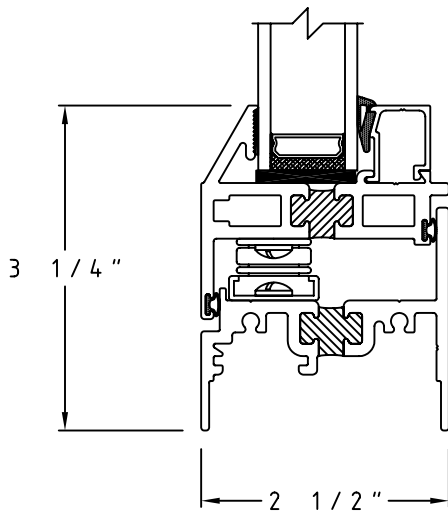
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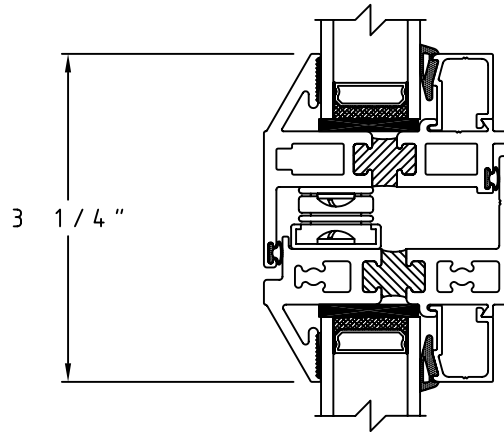
① Head Detail



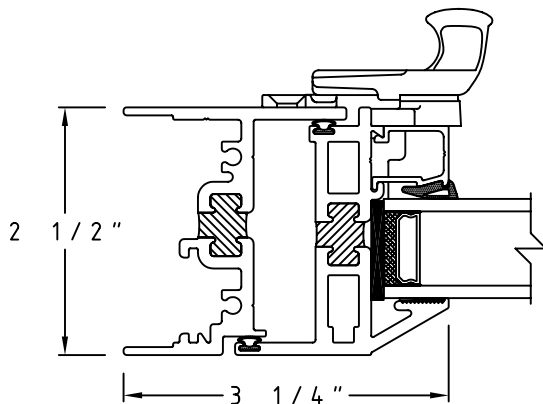
④ Jamb Detail



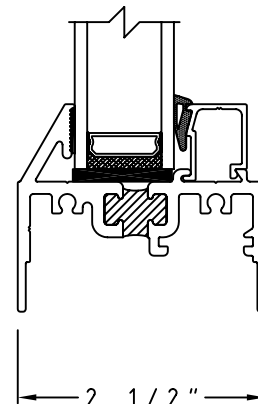
② Sill Detail



⑤ Casement Out/Fixed Mullion Detail

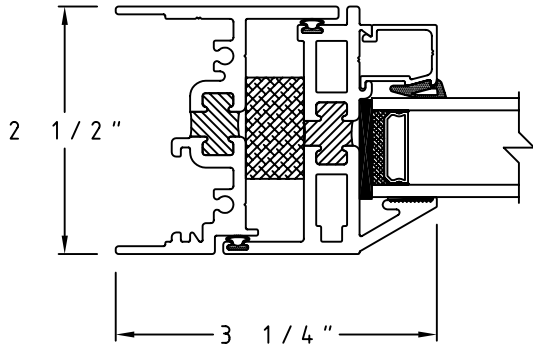


③ Jamb Detail

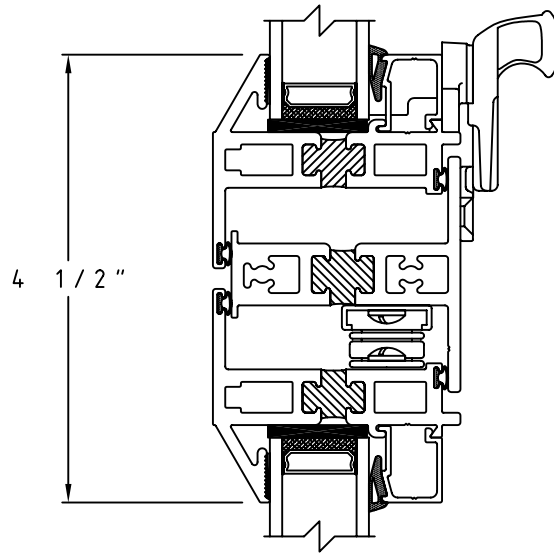


⑥ Fixed Sill Detail

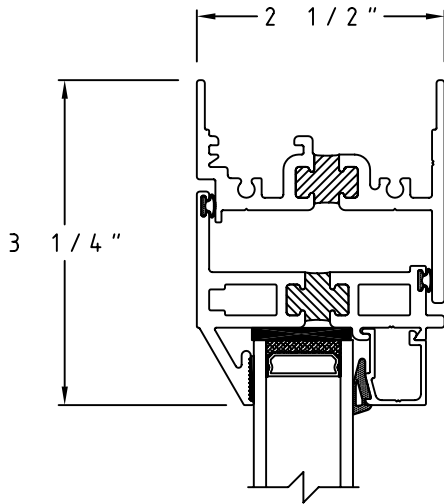
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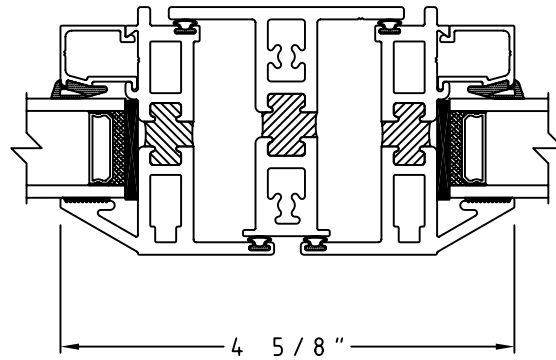
⑦ Fixed Jamb Detail



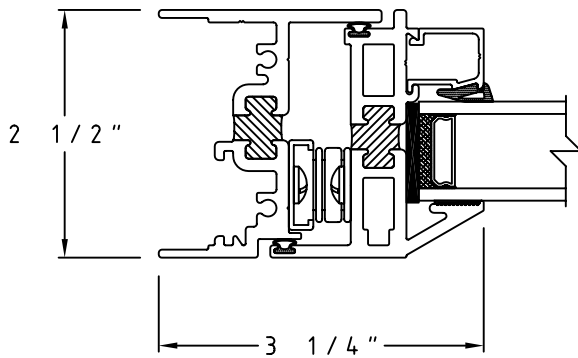
⑩ Projected Out/Casement Out Mullion Detail



⑧ Projected Out Head Detail

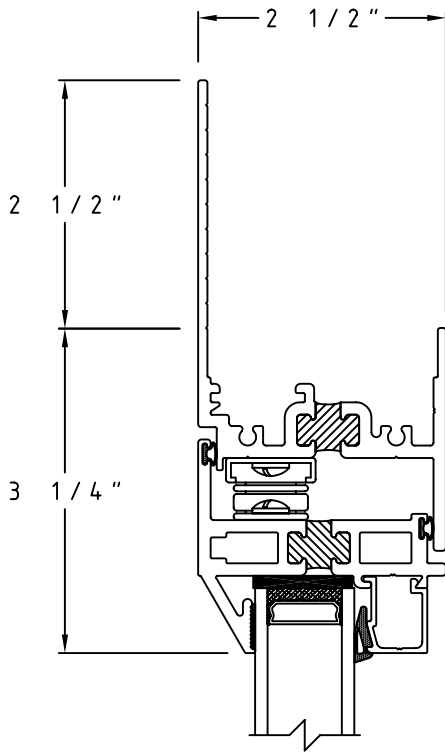


⑪ Casement Out/Casement Out Mullion Detail

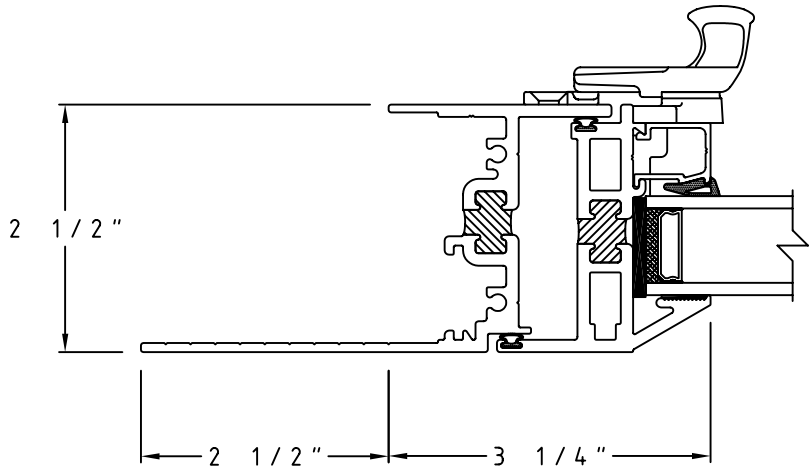


⑨ Projected Out Jamb Detail

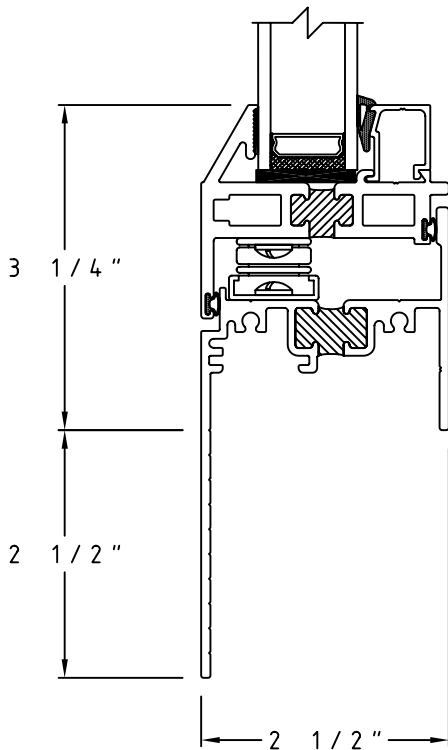
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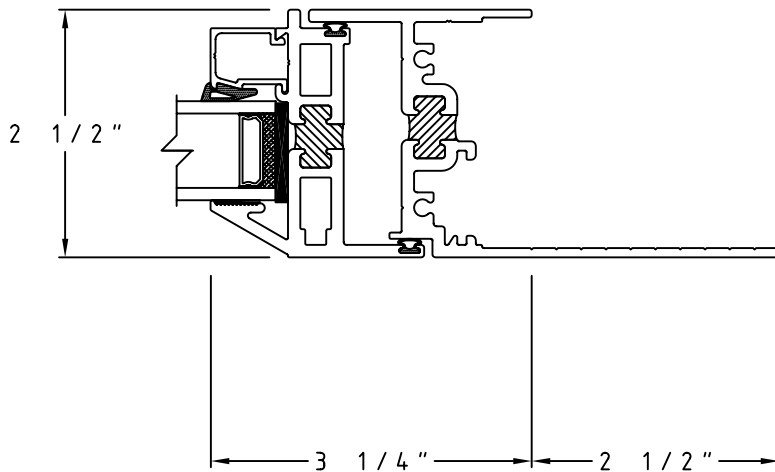
①A 2 1/2" Flange Casement Out Head Detail



③A 2 1/2" Flange Casement Out Jamb Detail

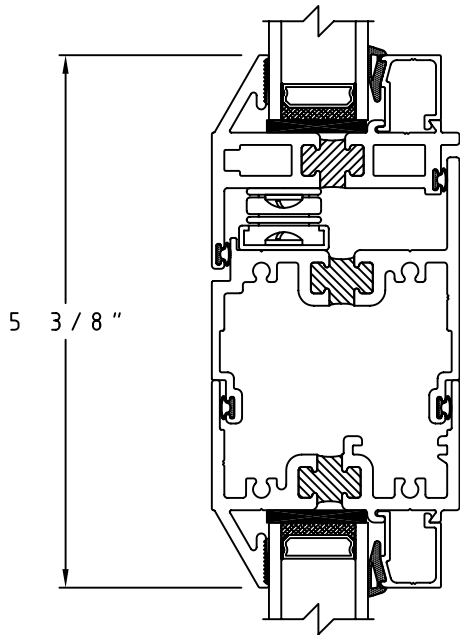


②A 2 1/2" Flange Casement Out Sill Detail

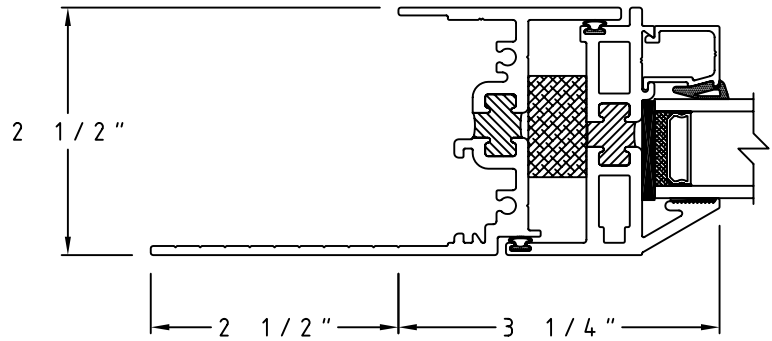


④A 2 1/2" Flange Casement Out/Fixed Jamb Detail

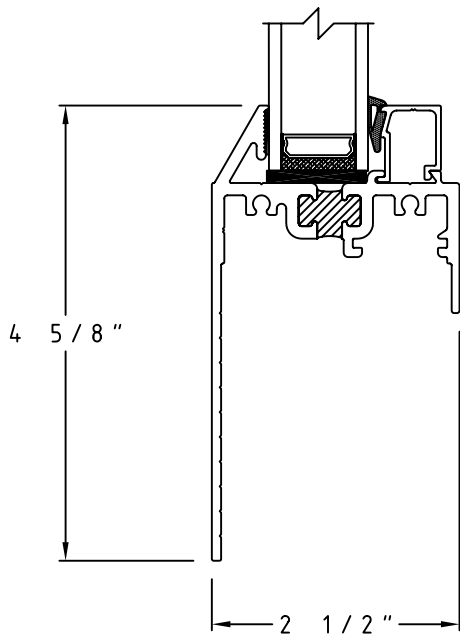
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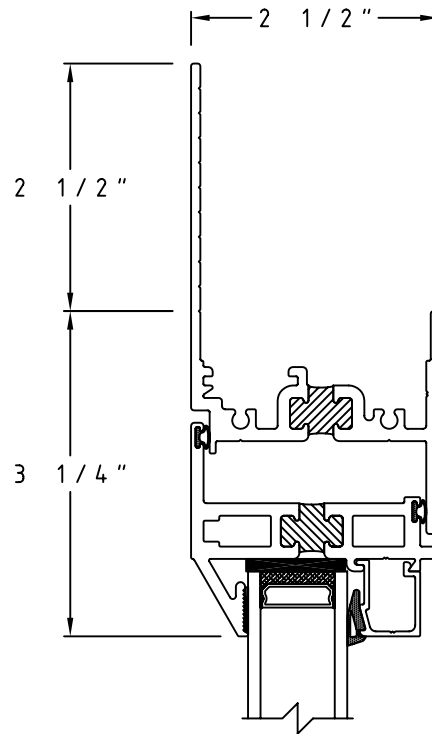
5A Casement Out/Fixed with Male Female Mullion



7A 2 1/2" Flange Fixed Jamb Detail

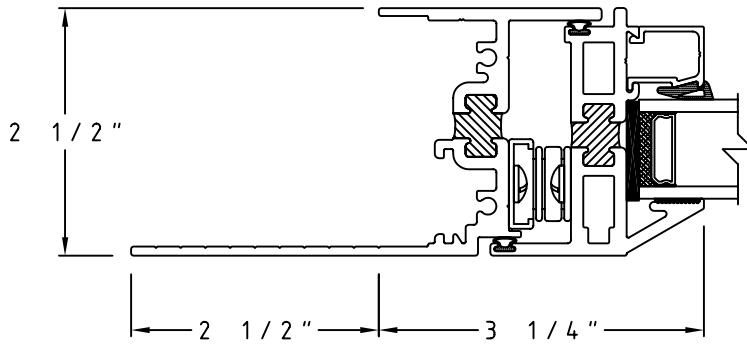


6A 2 1/2" Flange Fixed Sill Detail

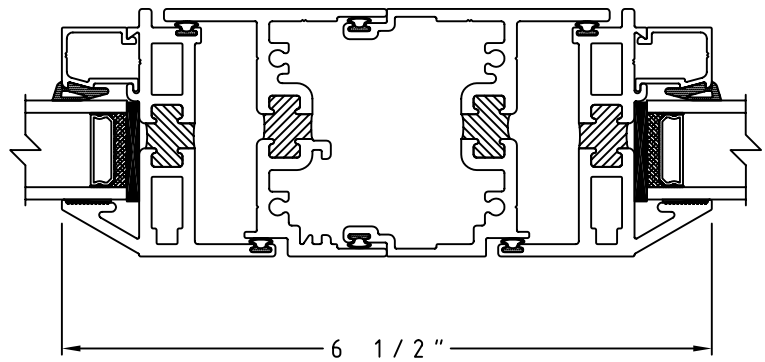


8A 2 1/2" Flange Projected Out Head Detail

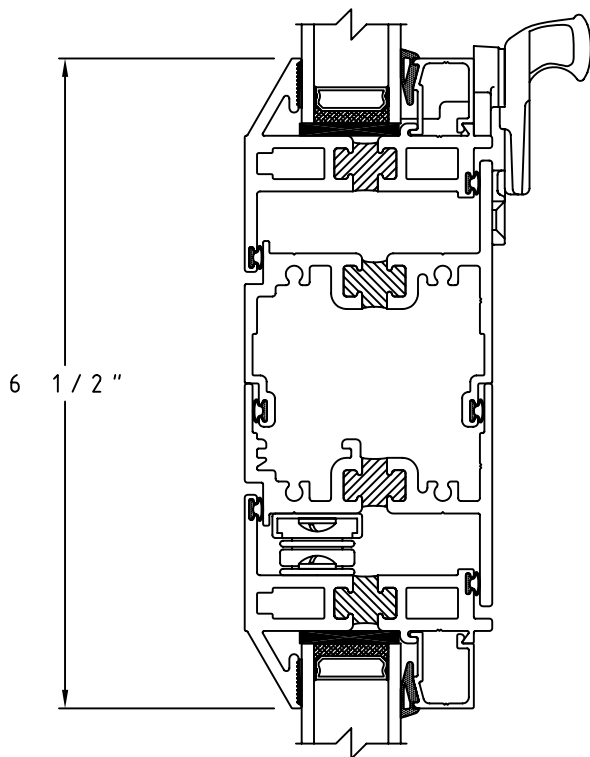
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9A 2 1/2" Flange Projected Out Jamb Detail

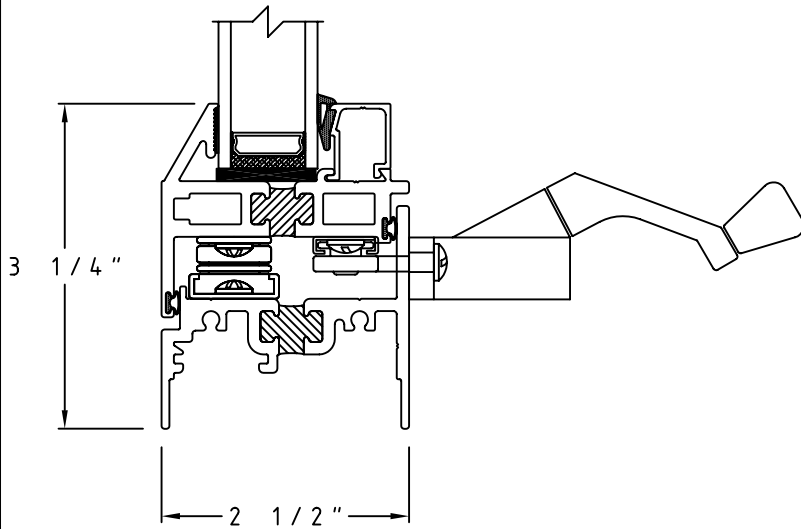


11A Casement Out/Casement Out with Male-Female Mullion

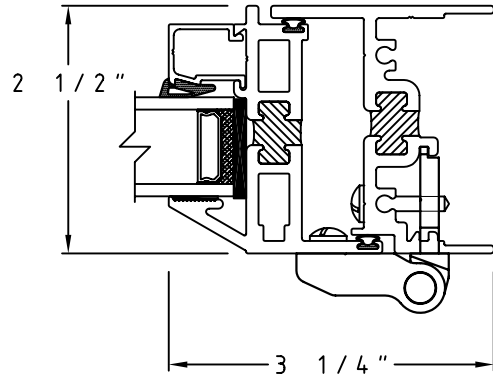


10A Projected Out/Casement Out with Male-Female Mullion

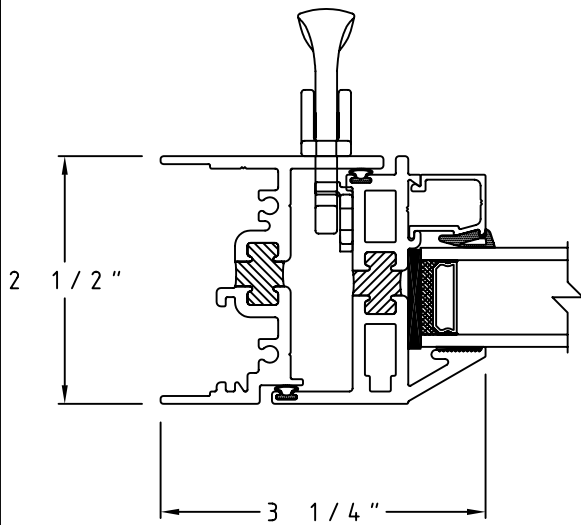
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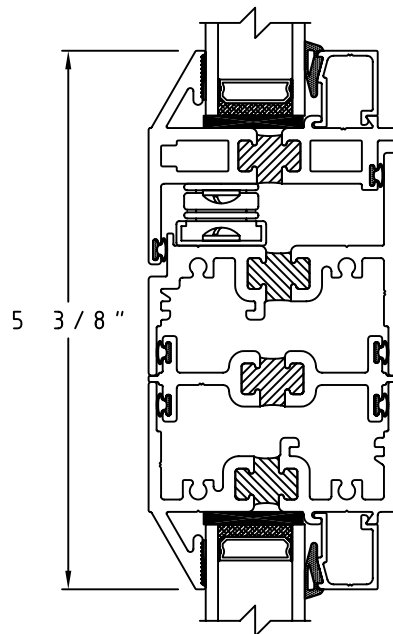
②B Sill with Roto Crank Detail



④B Jamb Butt Hinges Detail

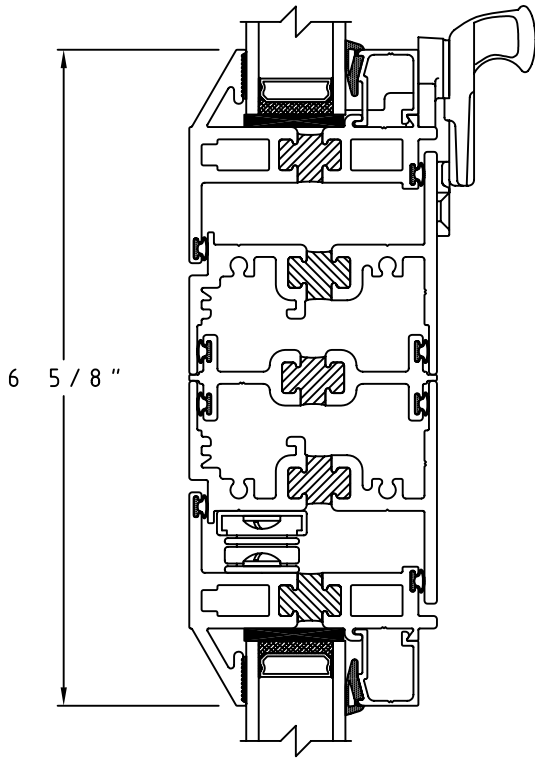


③B Jamb with Multi-Point Lock Detail

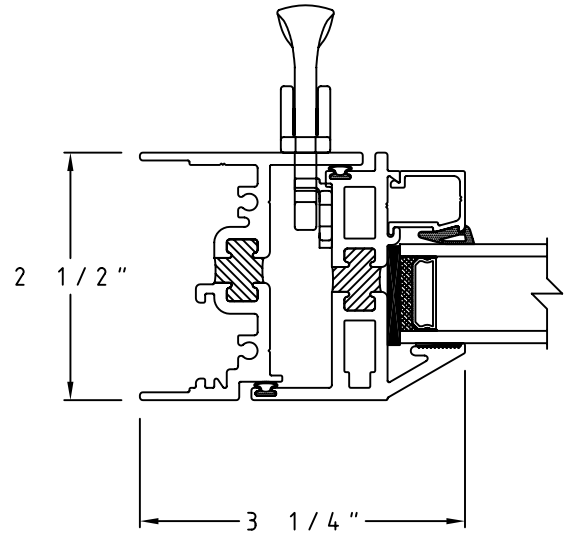


⑤B Casement Out/Fixed with H Mullion

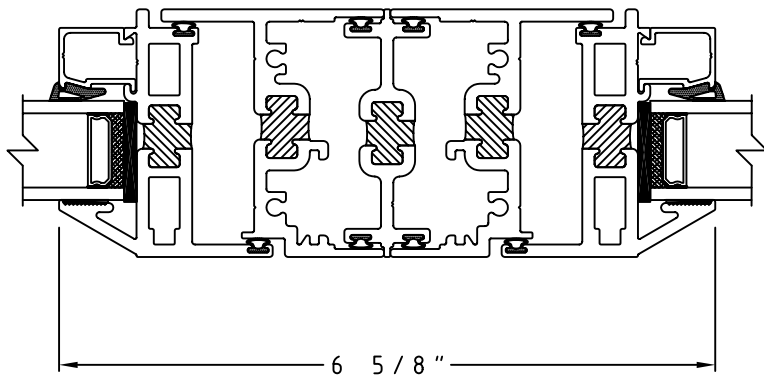
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10B Projected Out/Casement Out with H Mullion



3C Jamb with Single Point lock Detail



11B Casement Out/Casement Out with H Mullion



W I N D O W   A N D   D O O R  
Series 5300 C- HC85/AW85 Casement Out Swing Window.

**SECTION 085113**

**PART 1 – GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).





## W I N D O W   A N D   D O O R

### Series 5300 C- HC85/AW85 Casement Out Swing Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: C-HC85 and C-AW85.
- B. Casement outswing Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: casement outswing; single vent per frame. (Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to C-AW85 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 85.27 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 127.90 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to C-HC85 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 85.27 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 127.90 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 5300 Casement Out Swing Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.



## WINDOW AND DOOR

### Series 5300 C- HC85/AW85 Casement Out Swing Window.

- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges] hinges conforming to AAMA 904-96 to rotate vent outward on vertical axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: multi-point lock] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.
- G. Screens: Full screens with wickets to access handles held in place with stainless steel clips with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced used only with the scissor crank option]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

### Section 085113 Aluminum Windows



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### Series 5300 C- HC85/AW85 Casement Out Swing Window.

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 5000 Series

## 5400 Casement



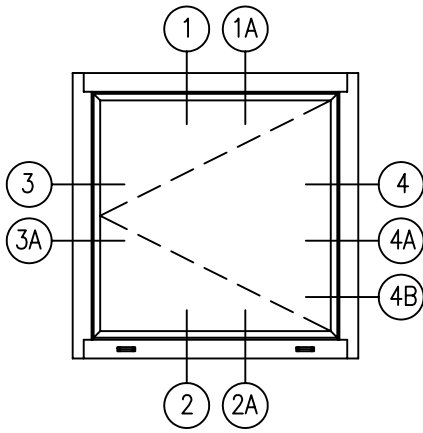
<u>Product By Operation:</u>	2-1/2" Casement
<u>Model By Family:</u>	5000
<u>Product Description:</u>	Casement Inswing
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-05 Rating:</u>	C-AW120
<u>AAMA Test Size:</u>	36 x 60
<u>101/I.S.2/A440-05 Optional:</u>	C-HC100
<u>Optional Test Size:</u>	36 x 60
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind



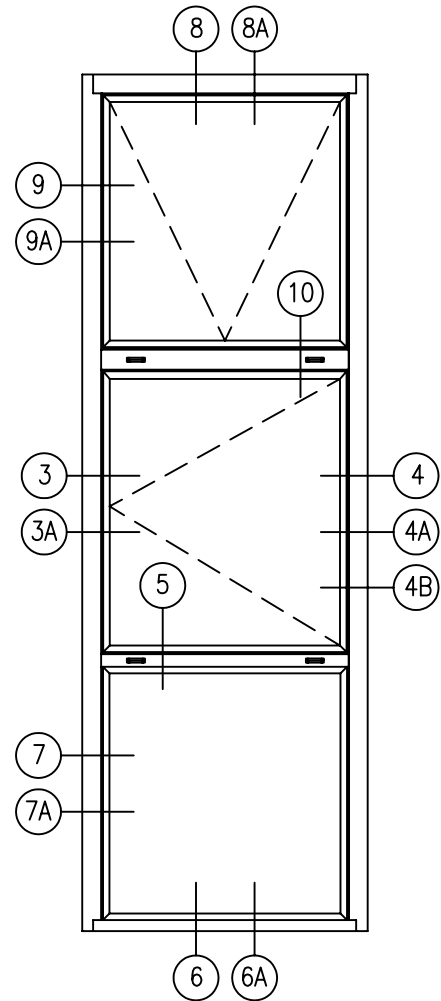
### Performance Data



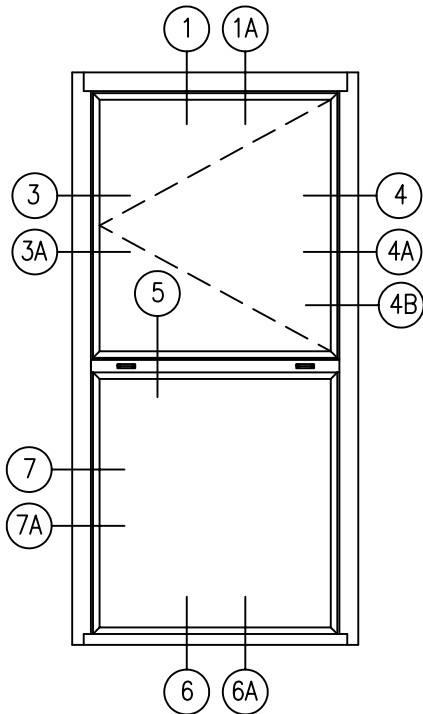
AAMA RATING:	C-AW120/HC-100
AIR INFILTRATION @ 50 mph	<0.01 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	180.57 PSF
DESIGN PRESSURE	120.38 PSF



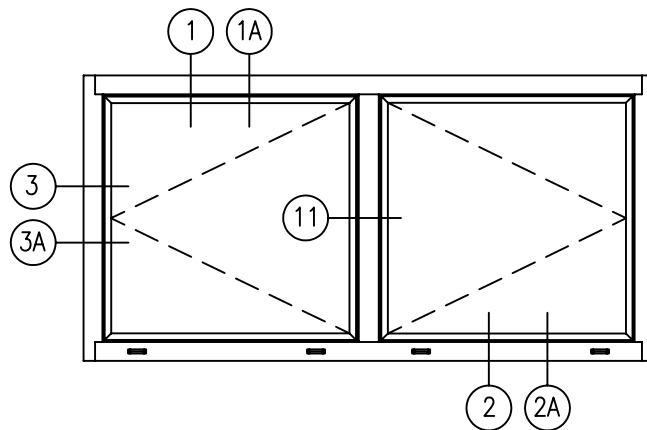
Casement In



Projected In/Casement In/  
Fixed Continuous Frame

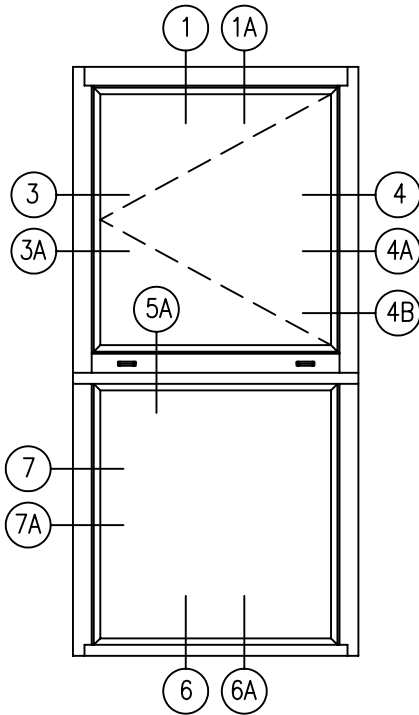


Casement In/Fixed  
Continuous Frame

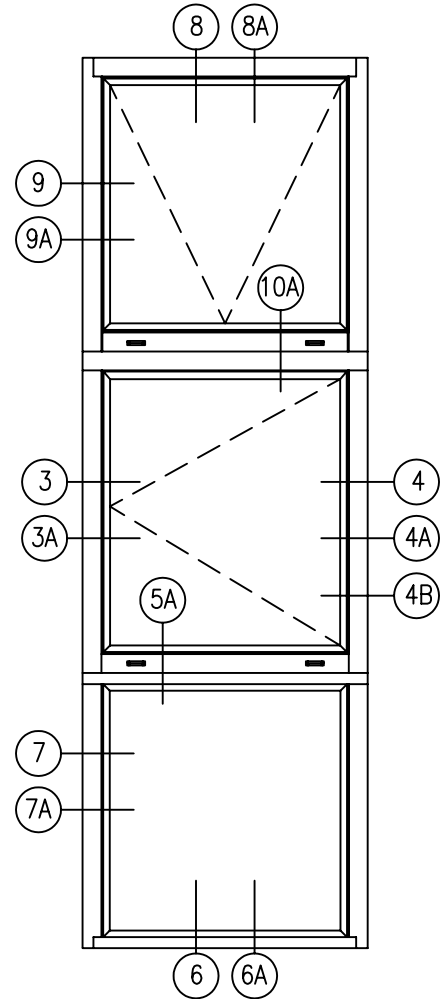


Casement In/Casement In  
Continuous Frame

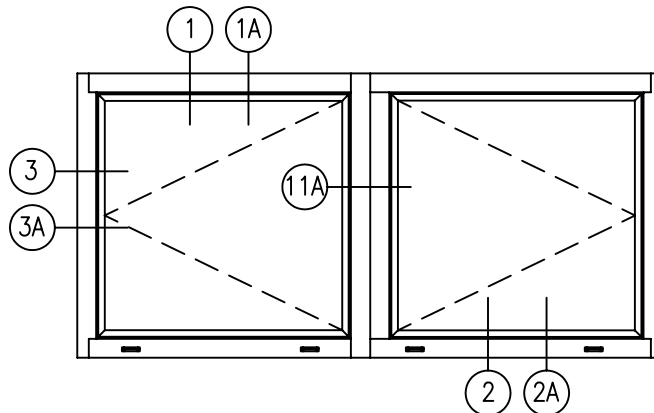
All Elevations are viewed outside looking in.



Casement In/Fixed  
with Male-Female Mullion

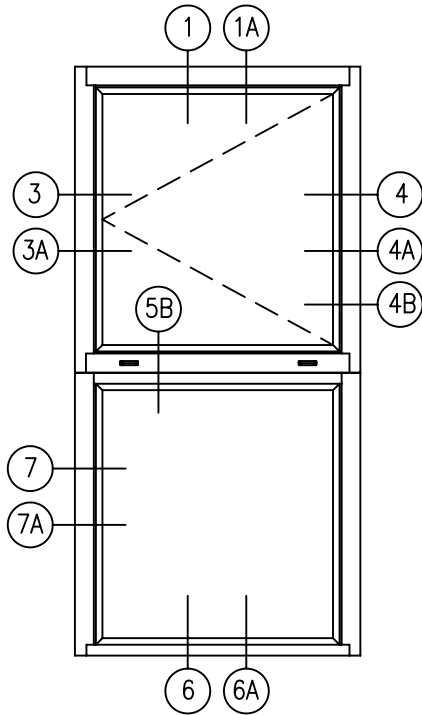


Projected In/Casement In/Fixed  
with Male-Female Mullion

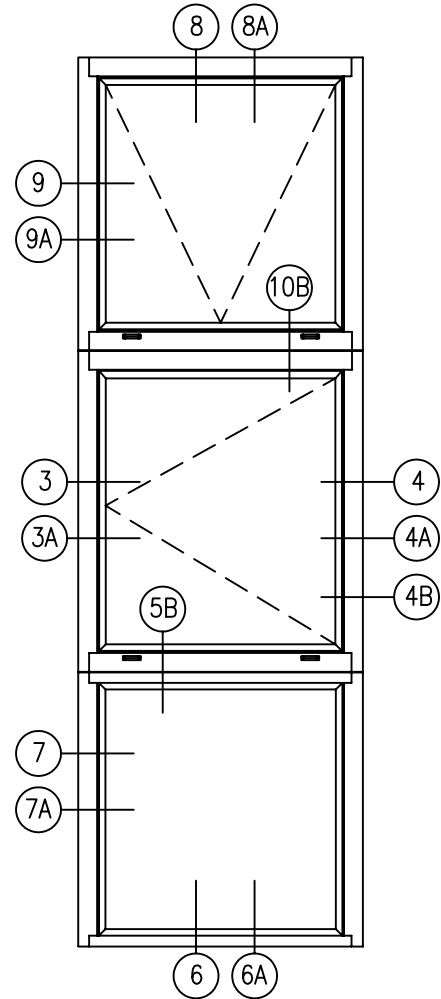


Casement In/Casement In  
with Male-Female Mullion

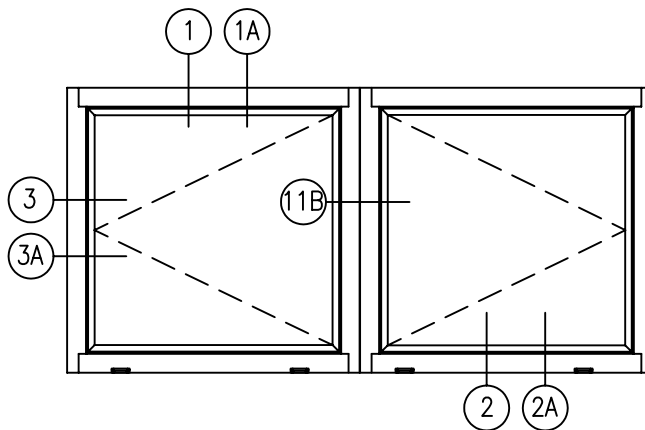
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Casement In/Fixed  
with H Mullion



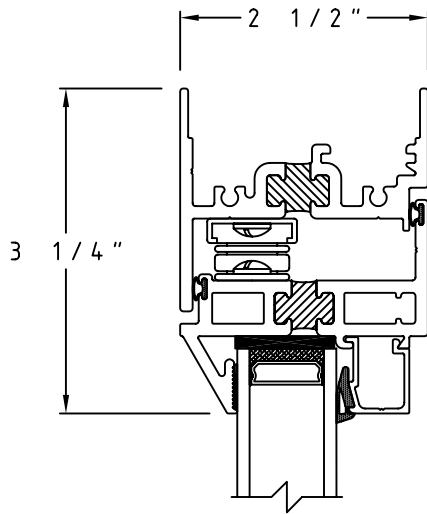
Projected In/Casement In/Fixed  
with H Mullion



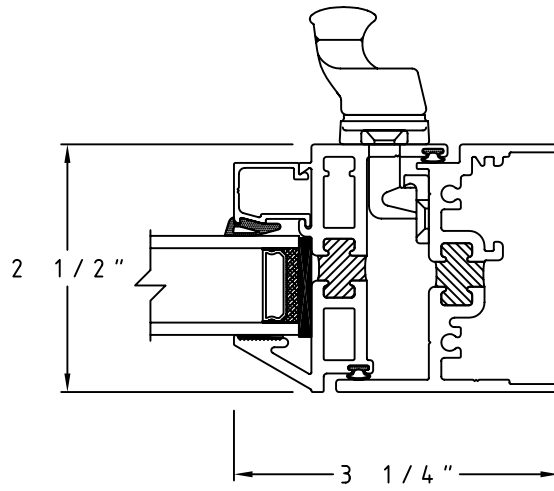
Casement In/Casement In  
with H Mullion

All Elevations are viewed outside looking in.

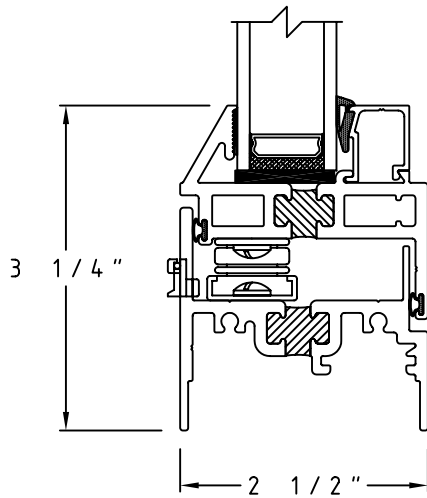
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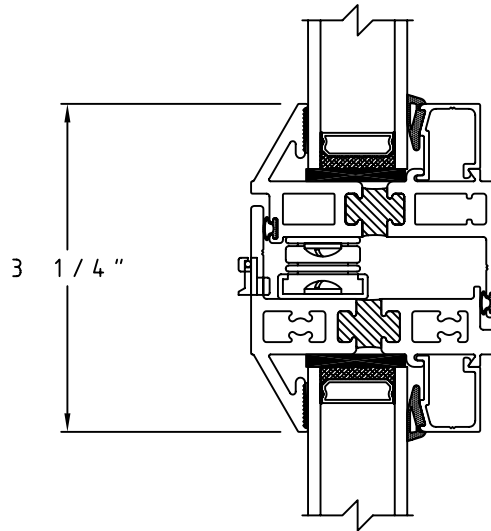
① Head Detail



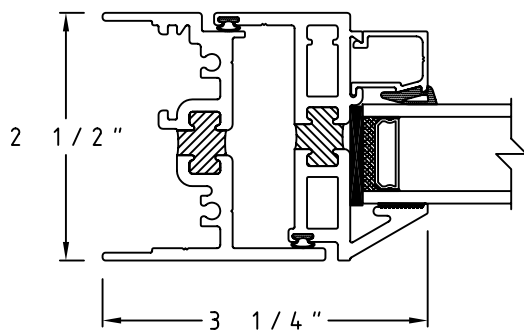
④ Casement In Jamb Detail



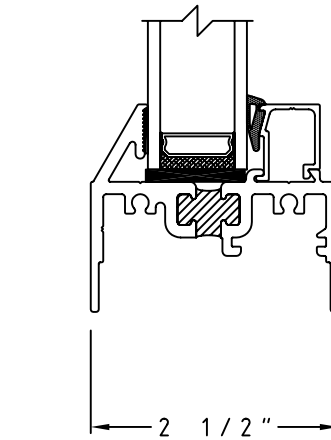
② Sill Detail



⑤ Casement In/Fixed Mullion Detail



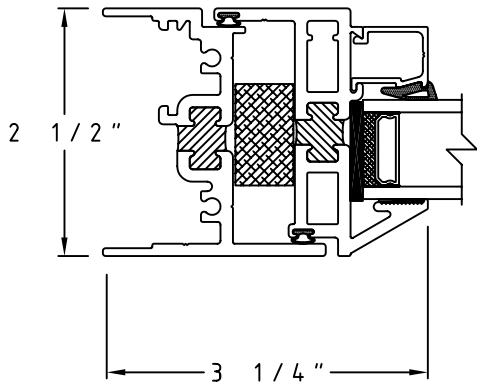
③ Jamb Detail



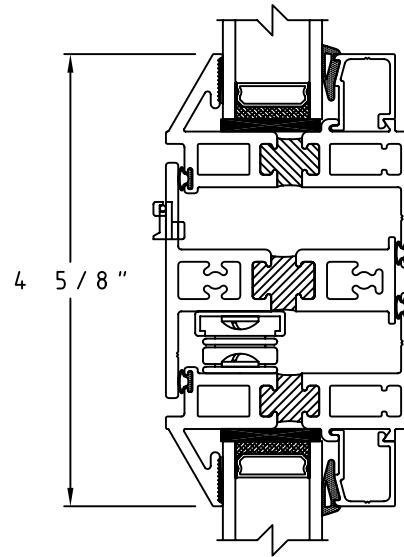
⑥ Fixed Sill Detail



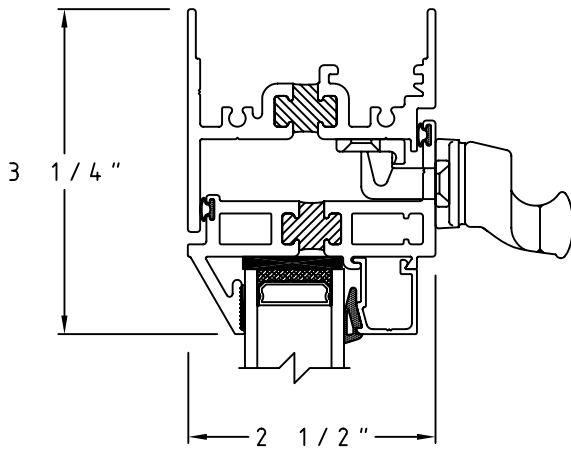
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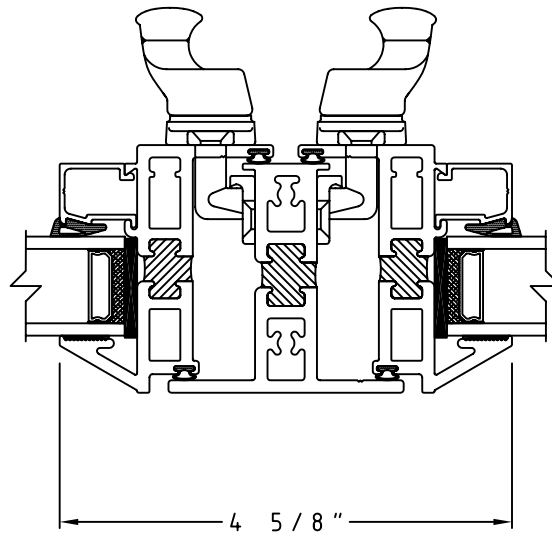
7 Fixed Jamb Detail



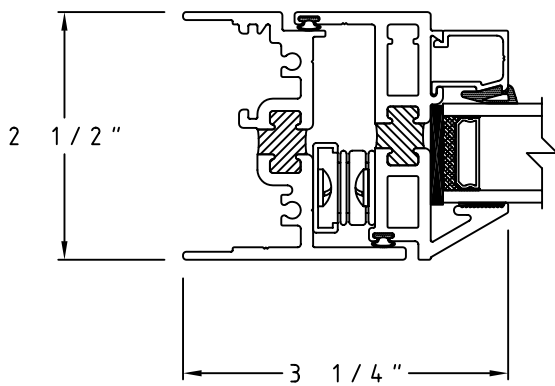
10 Projected In/Casement In Mullion Detail



8 Projected In Head Detail

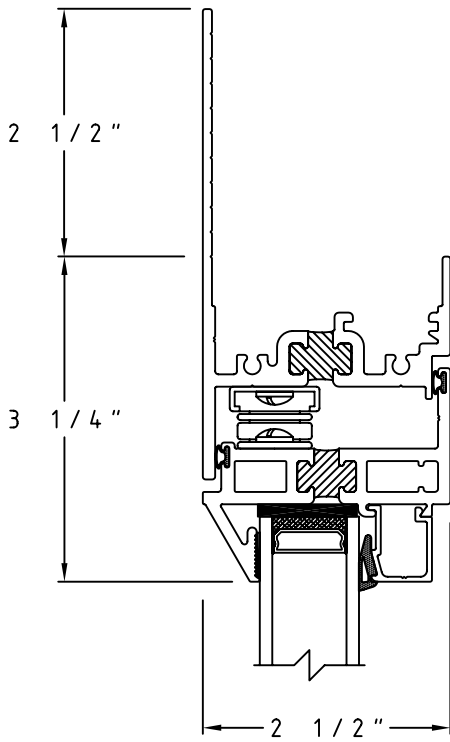


11 Casement In/Casement In Mullion Detail

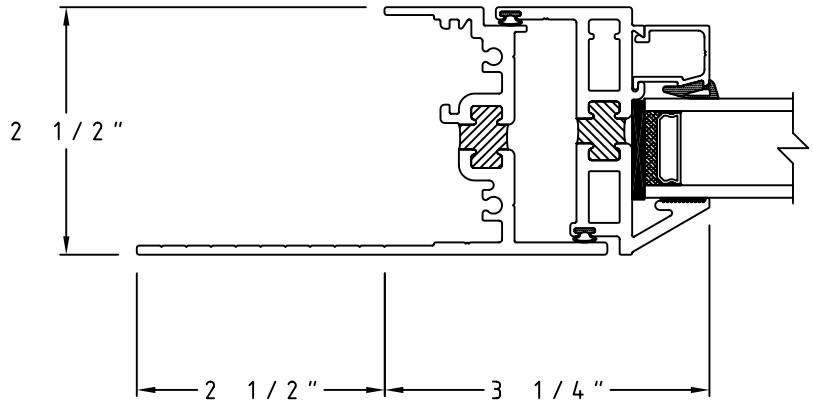


9 Projected In Jamb Detail

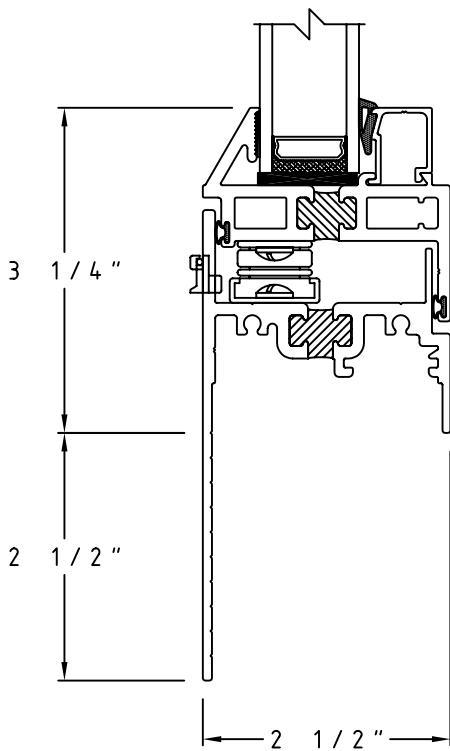
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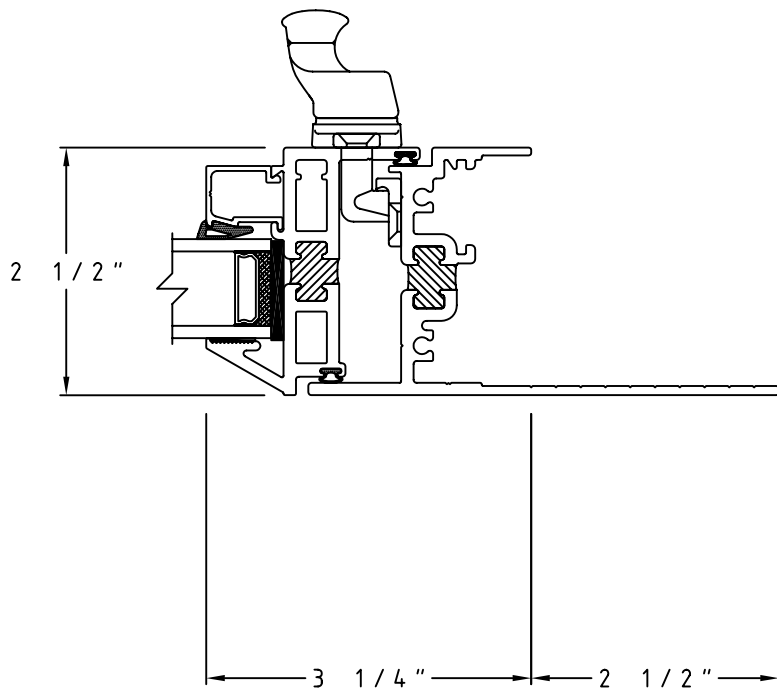
①A 2 1/2" Flange Casement In Head Detail



③A 2 1/2" Flange Casement In Jamb Detail

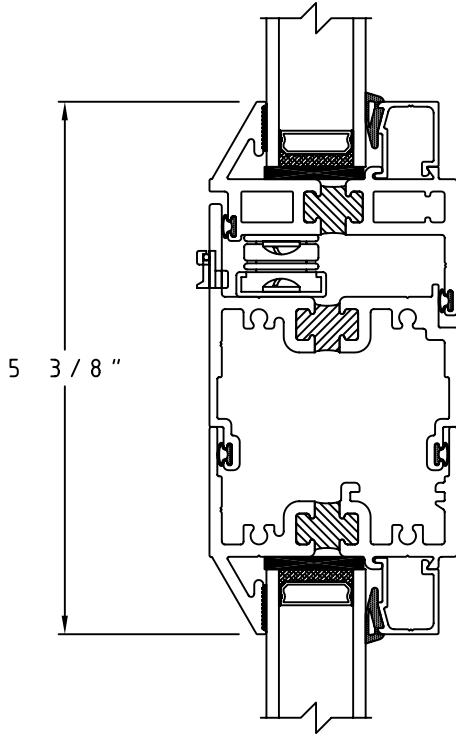


②A 2 1/2" Flange Casement In Sill Detail

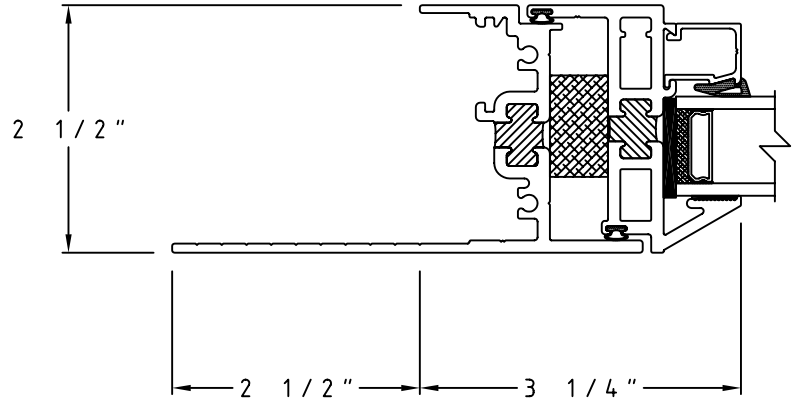


④A 2 1/2" Flange Casement with Latch In Jamb Detail

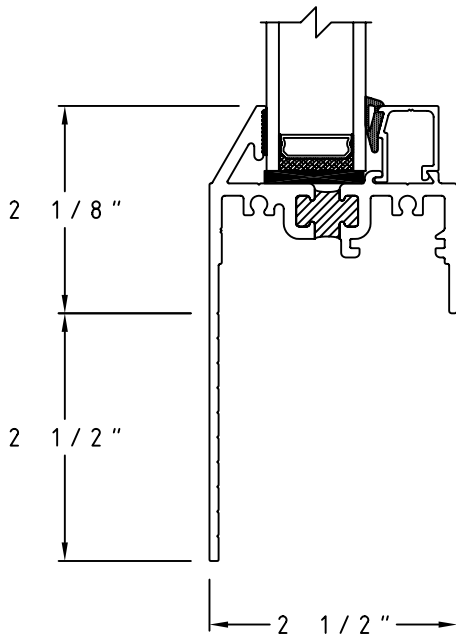
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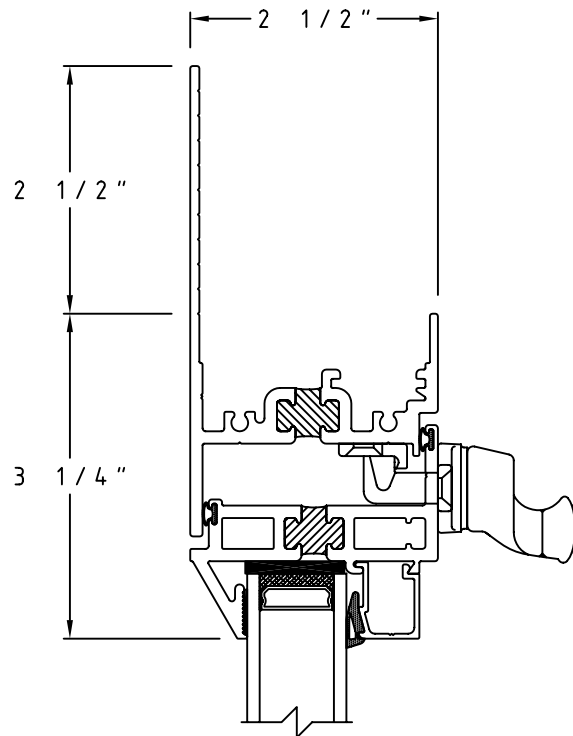
5A Casement In/Fixed with Male Female Mullion



7A 2 1/2" Flange Fixed Jamb Detail

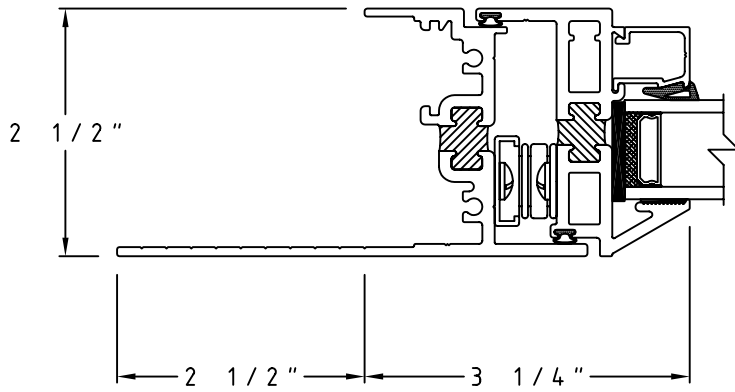


6A 2 1/2" Flange Fixed Sill Detail

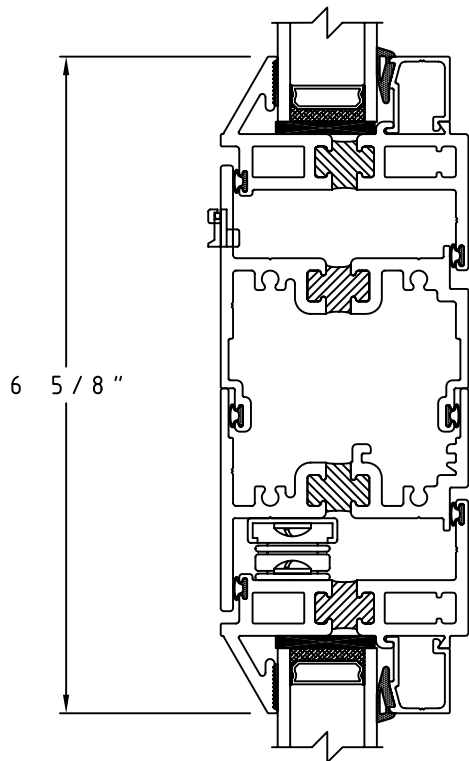


8A 2 1/2" Flange Projected In Head Detail

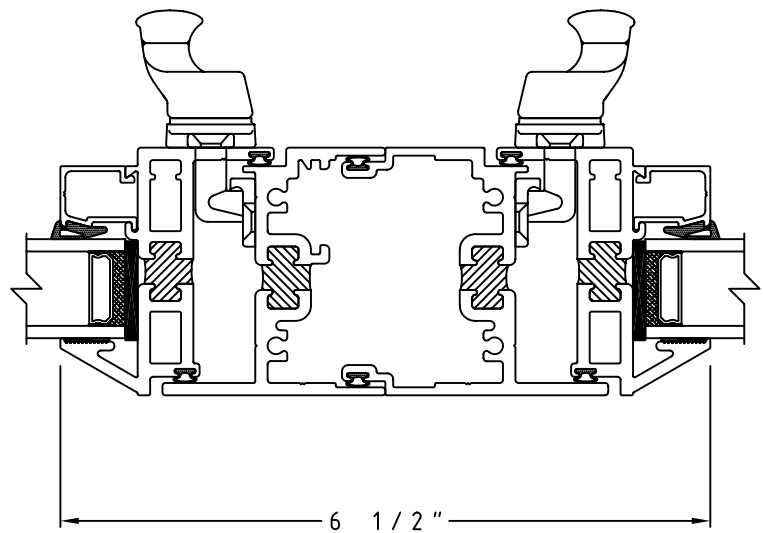
SCALE: HALF



9A 2 1/2" Flange Projected In Jamb Detail

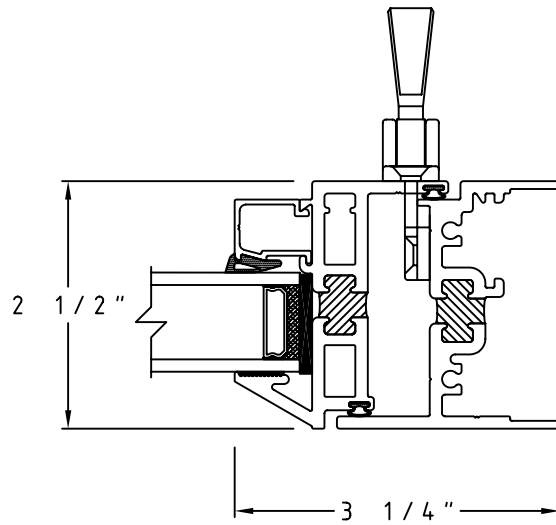
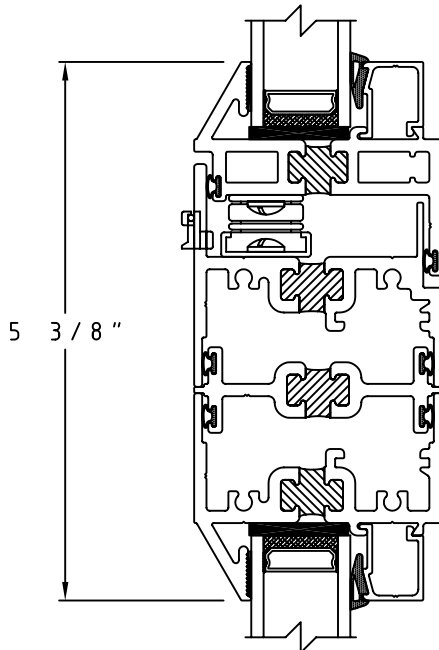


10A Projected In/Casement In with Male-Female Mullion



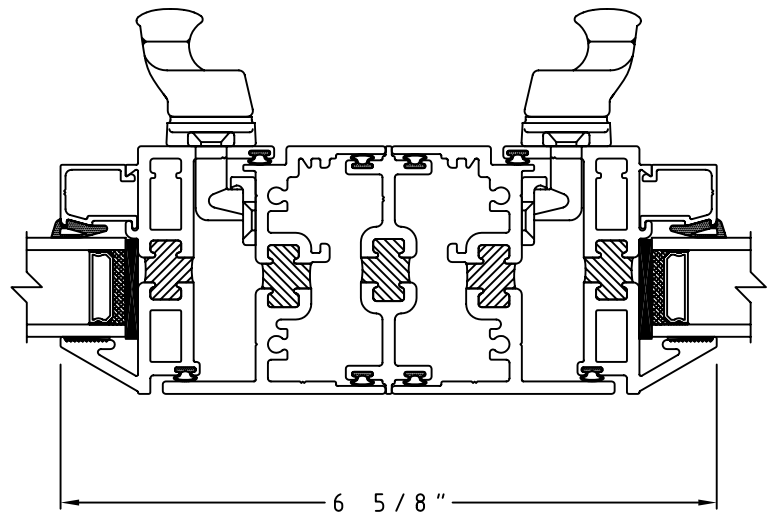
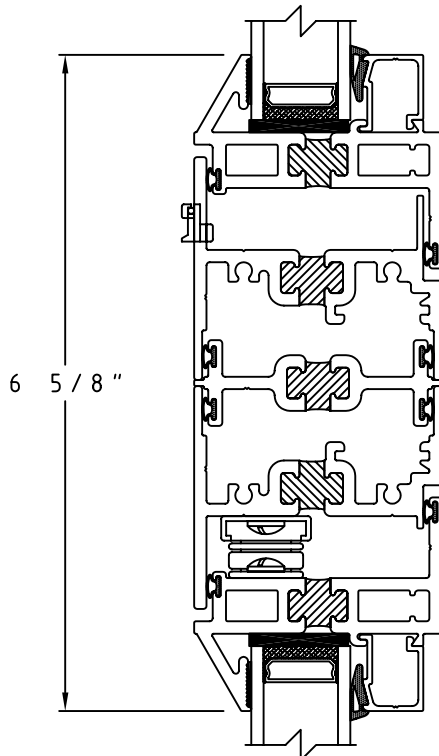
11A Casement In/Casement In with Male-Female Mullion

SCALE: HALF



④B Casement In Jamb Detail With Multipoint Lock

⑤B Casement In/Fixed with H Mullion



⑪B Casement In/Casement In with H Mullion

⑩B Projected In/Casement In with H Mullion



## Series 5400 C- HC100/AW120 Casement Inswing Window.

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



### Series 5400 C- HC100/AW120 Casement Inswing Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: C-HC100 and C-AW120.
- B. Casement Inswing Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: casement inswing; single vent per frame. (Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to C-AW120 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.06 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 180.57 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to C-HC100 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 180.57 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURERS

Champion 5400 Casement Inswing Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.

**Series 5400 C- HC100/AW120 Casement Inswing Window.**

- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges when used with scissor crank] hinges conforming to AAMA 904-96 to rotate vent outward on horizontal axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: single point lock on both sides of the vent] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.
- G. Screens: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full screens with wickets to access handles held in place with stainless steel clips]

**2.03 FABRICATION**

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

**2.04 GLASS AND GLAZING MATERIALS**

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

**2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS**

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

**2.06 FINISH ON ALUMINUM EXTRUSIONS**

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

**Standard Clear Anodized Finish:**

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).





### Series 5400 C- HC100/AW120 Casement Inswing Window.

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 5000 Series

## 5710 Fixed Window



<u>Product By Operation:</u>	2-1/2" Fixed
<u>Model By Family:</u>	5000
<u>Product Description:</u>	Fixed Window
<u>Frame Depth:</u>	2 -1/2"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-05 Rating:</u>	FW-AW80
<u>AAMA Test Size:</u>	60 x 99
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind

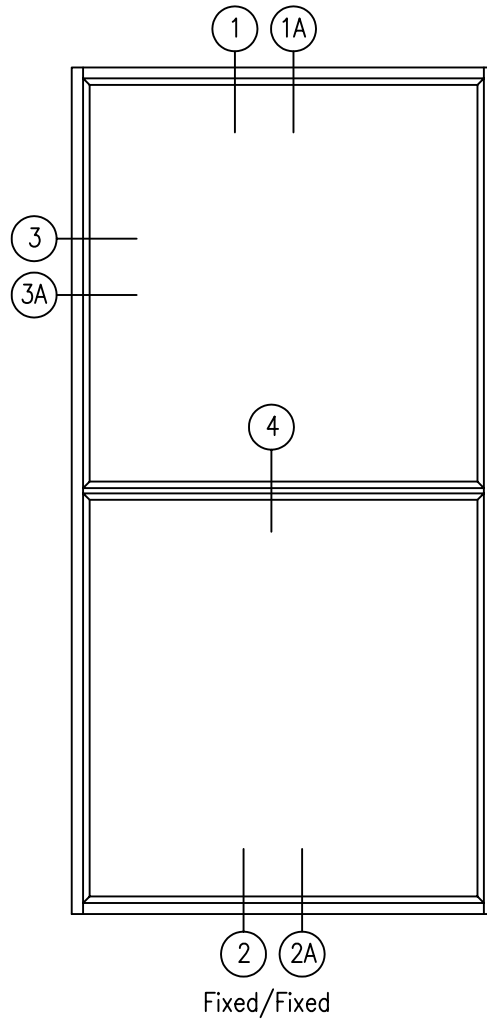
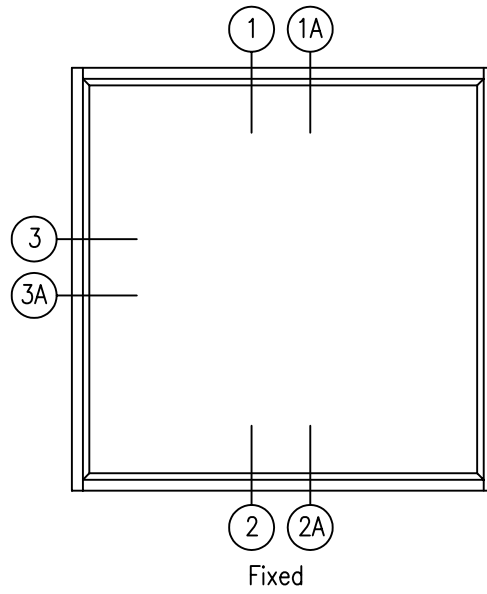


### Performance Data

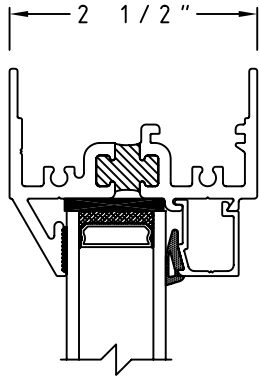


AAMA RATING:	FW-AW80
AIR INFILTRATION @ 50 mph	<0.01 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	120.38 PSF
DESIGN PRESSURE	90.28 PSF

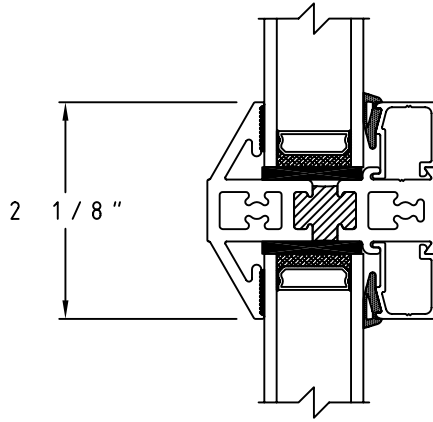
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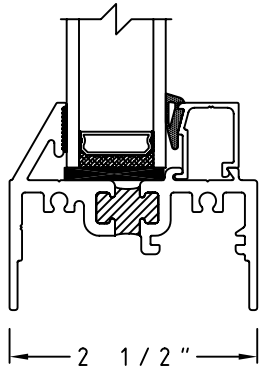
All Elevations are viewed outside looking in.



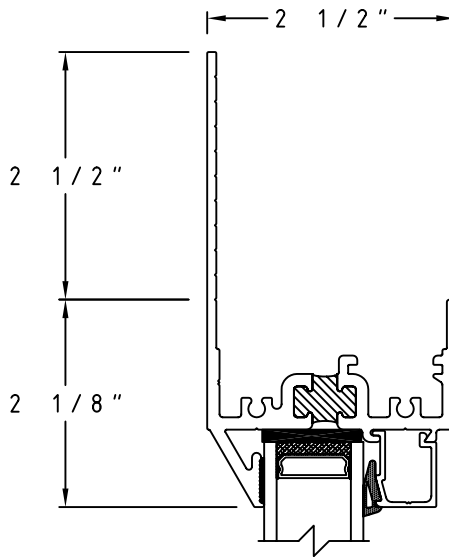
① Head Detail



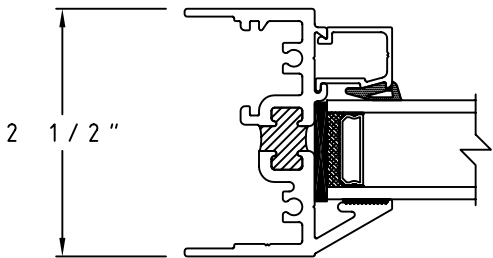
④ Horizontal True Muntin Detail



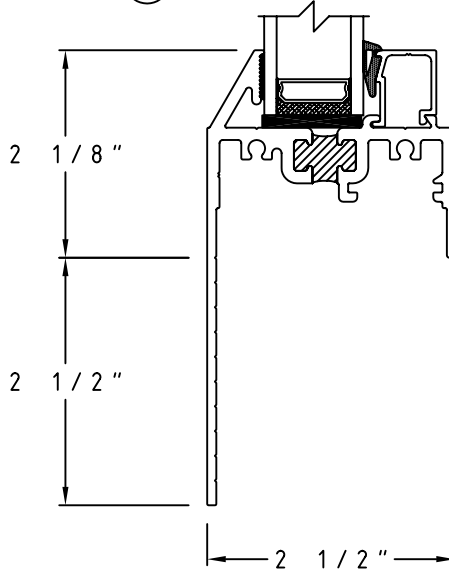
② Sill Detail



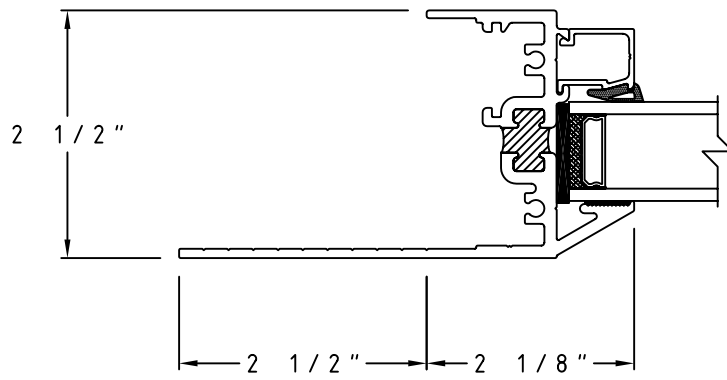
①A 2 1/2" Flange Head Detail



③ Jamb Detail



②A 2 1/2" Flange Sill Detail



③A 2 1/2" Flange Jamb Detail



## Series 5710 FW-AW80 Fixed Window.

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



### Series 5710 FW-AW80 Fixed Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: FW-AW80.
- B. Fixed Windows are 2 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with frame; equal-leg [Optional: Extruded Flange: Head, Sill and Jamb at 2 1/2"] frame; factory-assembled. Vent shall have beveled glazing legs.
- C. Configuration: Fixed; single frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; [Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to FW-AW80 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  - 1. Air Infiltration Test: The window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration tested at 0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Uniform Deflection: No more than <.25 mm when tested per ASTM E 330 at a static air pressure difference of 90.28 psf.
  - 4. Structural Load Test: Window to be fixed, and maximum .2% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 120.38 psf.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type: D; Grade: 40.

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURERS

Champion 5710 Fixed Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 2-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame



### Series 5710 FW-AW80 Fixed Window.

creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 3/16" [Optional: 1/8" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 3/16" [Optional: 1/8" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.





### **Series 5710 FW-AW80 Fixed Window.**

#### **3.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### **3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### **3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### **3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### **3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-02 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### **3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

**END OF SECTION 085113**

# 5145 Series

## 5145 Projected Window



Product By Operation: 4-1/2" Casement

Model By Family: 5045

Product Description: Projected-Out

Frame Depth: 4-1/2"

Flange Frame Head Options: ~

Flange Frame Jamb Options: ~

Flange Frame Sill Options: ~

101/I.S.2/A440-05 Rating: AP-AW120

AAMA Test Size: 60" x 36"

101/I.S.2/A440-05 Optional: AP-HC100

Optional Test Size: 60" x 32"

Cut Size On W&H: 1/8"

Std. Glazing: 1" Ins

Optional Glazing: ~



### Performance Data



AAMA RATING: AP-AW120

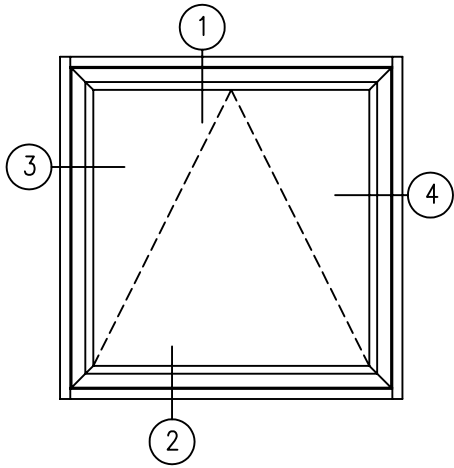
AIR INFILTRATION @ 50 mph 0.03 CFM

WATER TEST PRESSURE 15.05 PSF

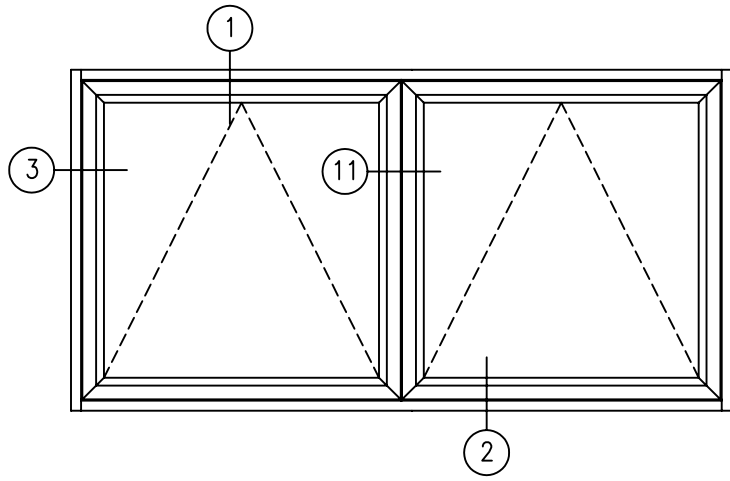
STRUCTURAL LOAD 180.56 PSF

DESIGN PRESSURE 120.38 PSF

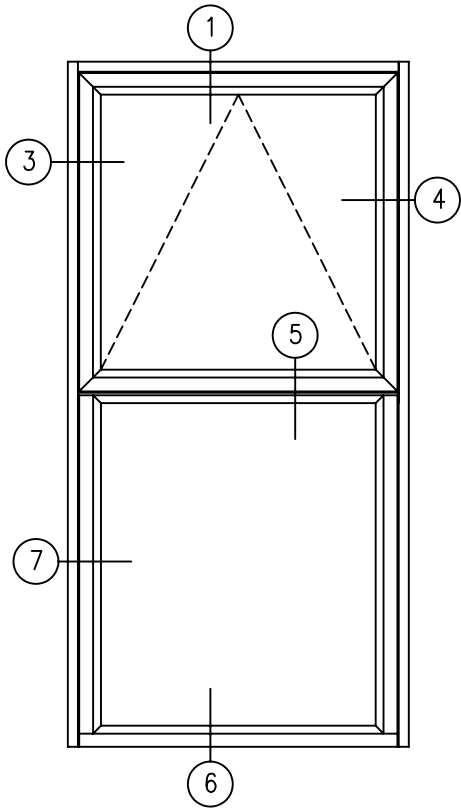
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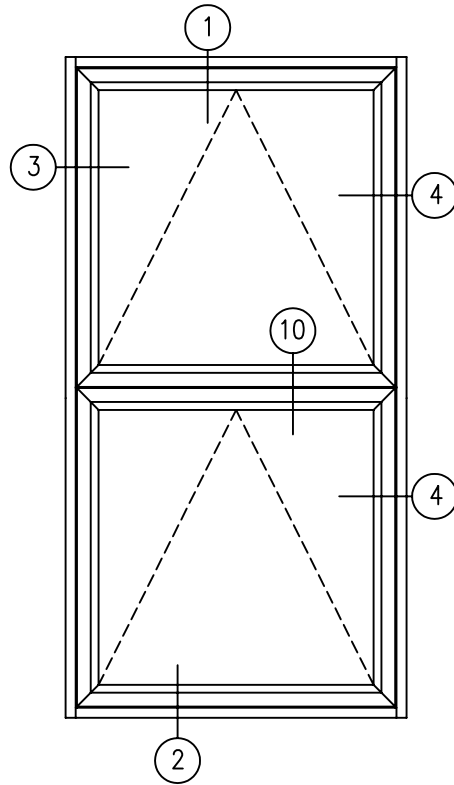
Projected Out



Projected Out/Projected Out  
Continuous Frame



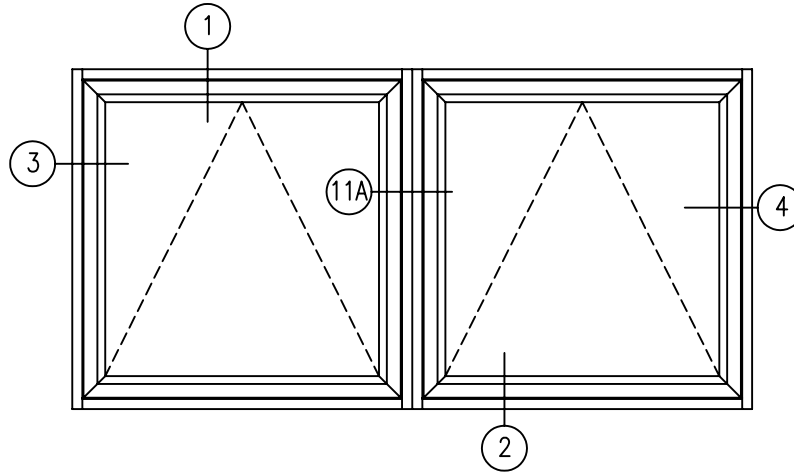
Projected Out/Fixed  
Continuous Frame



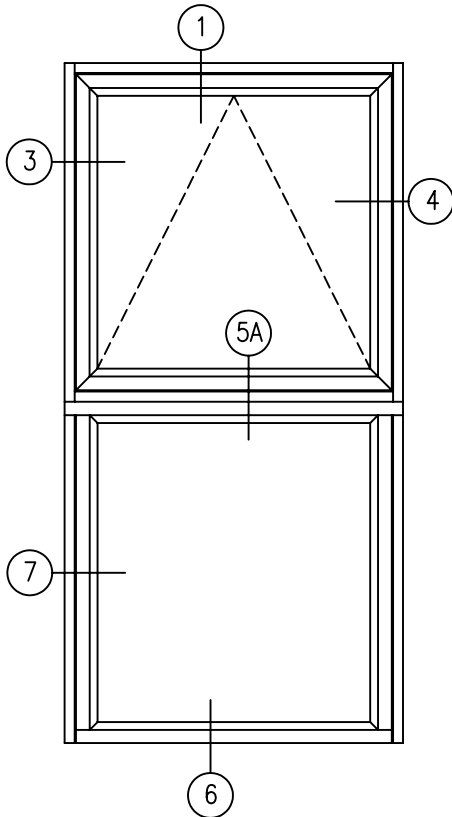
Projected Out/Projected Out  
Continuous Frame

All Elevations are viewed outside looking IN.

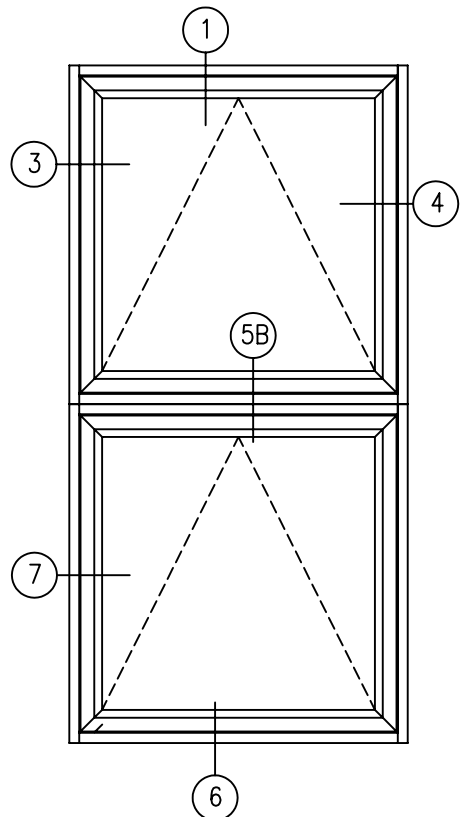
SCALE: HALF



Projected Out/Projected Out  
with Male-Female Mullion

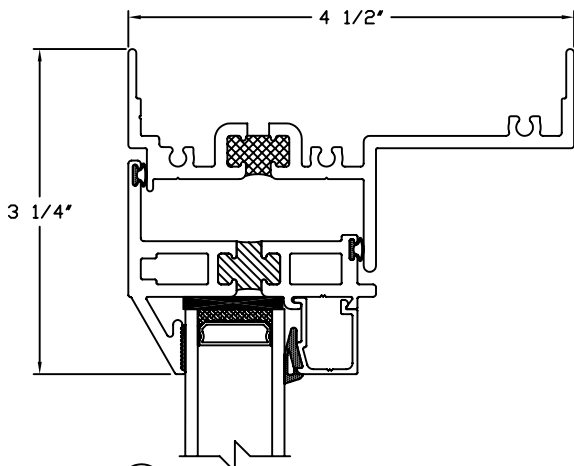


Projected Out/Fixed  
with Male-Female Mullion

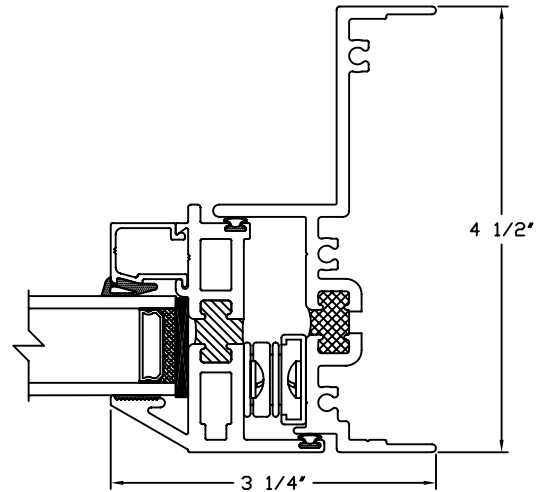


Projected Out/Project Out  
with Male-Female Mullion

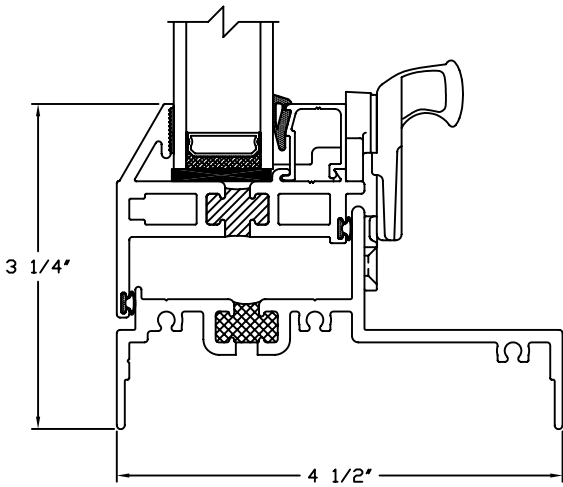
SCALE: HALF



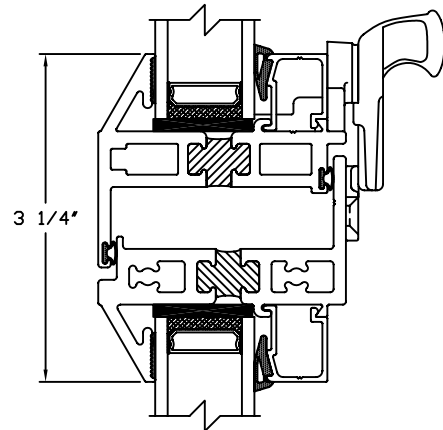
① Head Detail



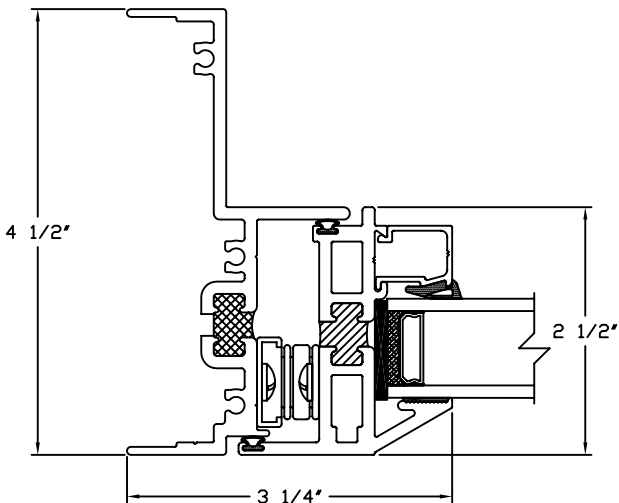
④ Jamb Detail



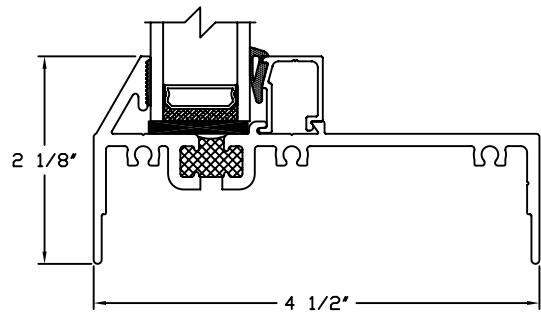
② Sill Detail



⑤ Project Out/Fixed Mullion Detail

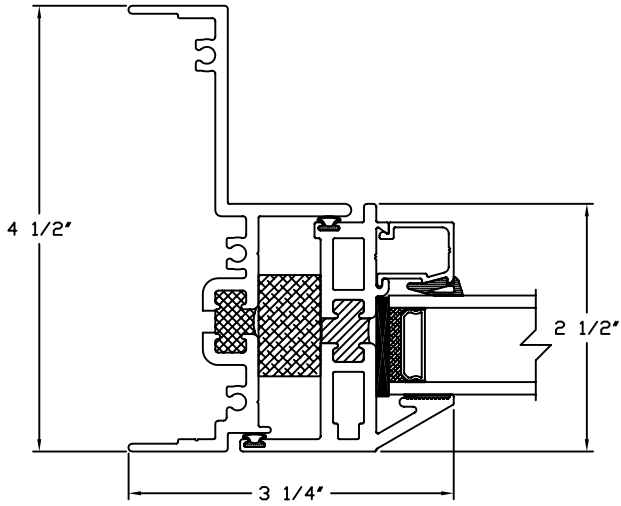


③ Jamb Detail

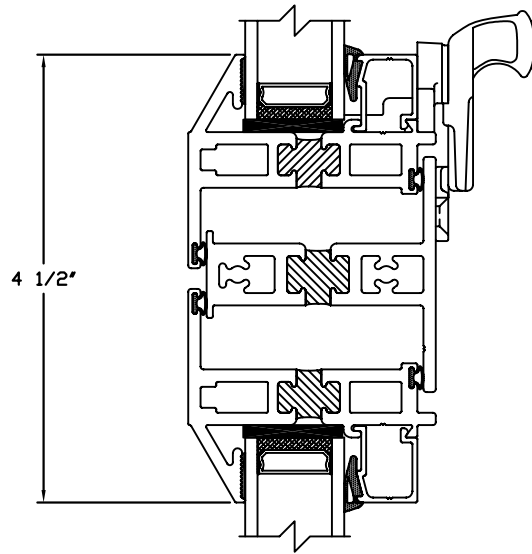


⑥ Fixed Sill Detail

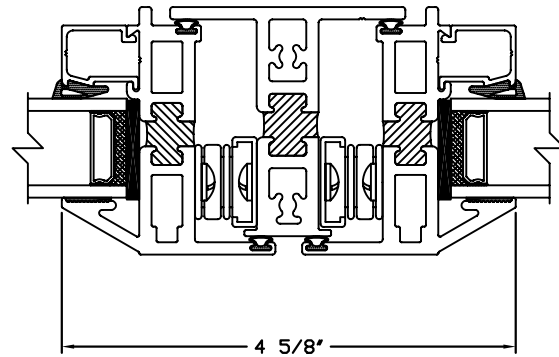
SCALE: HALF



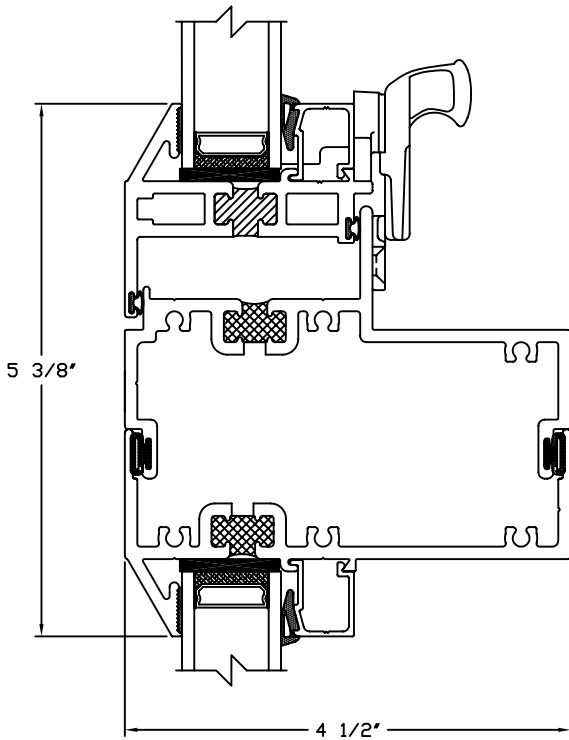
7 Fixed Jamb Detail



10 Projected Out/Projected Out Mullion Detail

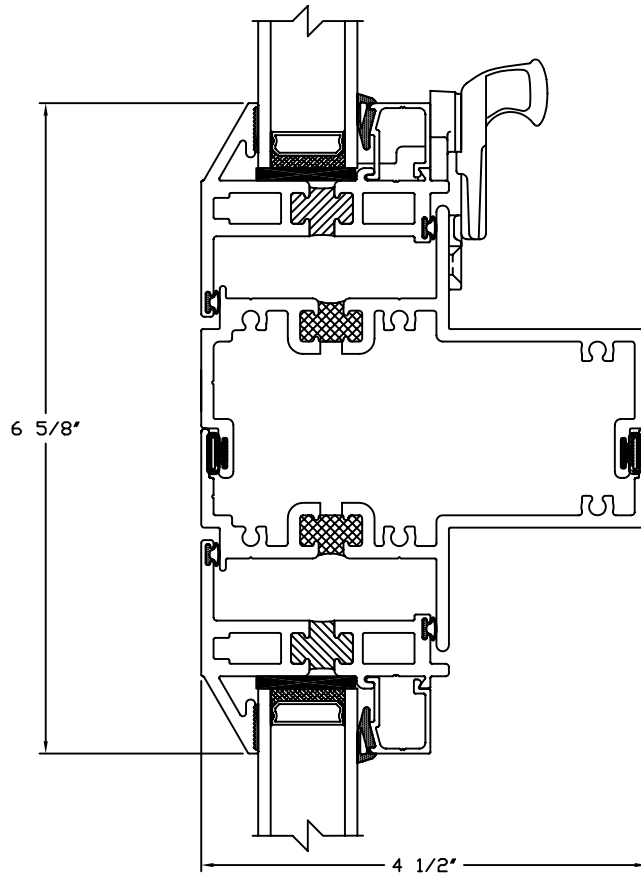


11 Projected Out/Projected Out Mullion Detail

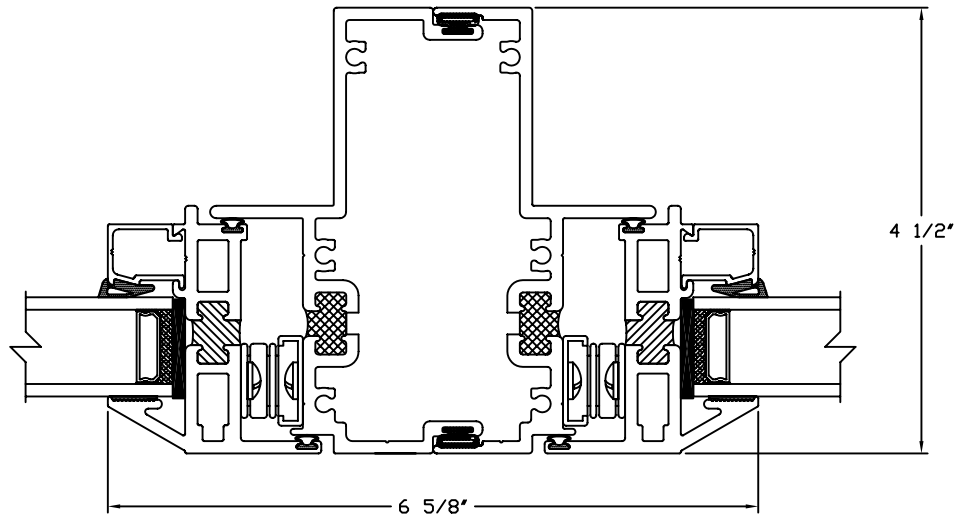


5A Projected Out/Fixed with Male-Female Mullion

SCALE: HALF



5B Projected Out/Projected Out with Male-Female Mullion



11A Projected Out/Projected Out with Male-Female Mullion



W I N D O W   A N D   D O O R  
Series 5145 AP- HC100/AW120 Project Outswing Window.

**SECTION 085113**

**PART 1 – GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).





## W I N D O W   A N D   D O O R

### Series 5145 AP- HC100/AW120 Project Outswing Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: AP-HC100 and AP-AW120.
- B. Projected Out Windows are 4 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with exterior plane of frame; equal-leg frame; factory-assembled. Vent shall be 2 1/2" deep with beveled glazing legs.
- C. Configuration: projected out; single vent per frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; **[Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds]** factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **AP-AW120** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 36" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.03 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 180.56 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to **AP-HC100** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 32" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed <0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 180.56 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURERS

Champion 5145 Projected Inswing Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 4-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.



## WINDOW AND DOOR

### Series 5145 AP- HC100/AW120 Project Outswing Window.

- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges] hinges conforming to AAMA 904 to rotate vent outward on vertical axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: multi-point lock] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.
- G. Screens: Full screens with wickets to access handles held in place with stainless steel clips with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced used only with the scissor crank option]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).



W I N D O W   A N D   D O O R

**Series 5145 AP- HC100/AW120 Project Outswing Window.**

Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

**2.07 AIR CONDITIONERS**

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

**PART 3 – EXECUTION**

**3.01 PROJECT SUBMITTALS**

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

**3.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

**3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

**3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

**3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

**3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

**3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

**END OF SECTION 085113**

# 5245 Series

## 5245 Projected Window



Product By Operation: 4-1/2" Casement

Model By Family: 5045

Product Description: Projected-In

Frame Depth: 4-1/2"

Flange Frame Head Options: ~

Flange Frame Jamb Options: ~

Flange Frame Sill Options: ~

101/I.S.2/A440-05 Rating: AP-AW110

AAMA Test Size: 60" x 36"

101/I.S.2/A440-05 Optional: AP-HC100

Optional Test Size: 60" x 32"

Cut Size On W&H: 1/8"

Std. Glazing: 1" Ins

Optional Glazing: ~



### Performance Data



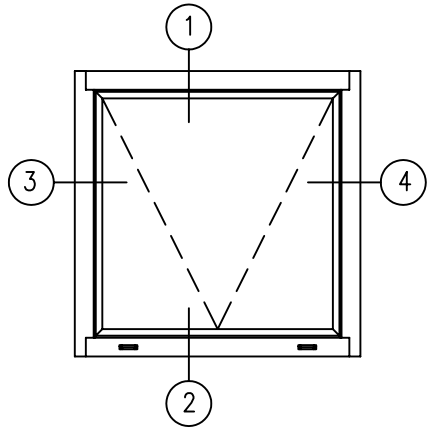
AAMA RATING: AP-AW120

AIR INFILTRATION @ 50 mph 0.02 CFM

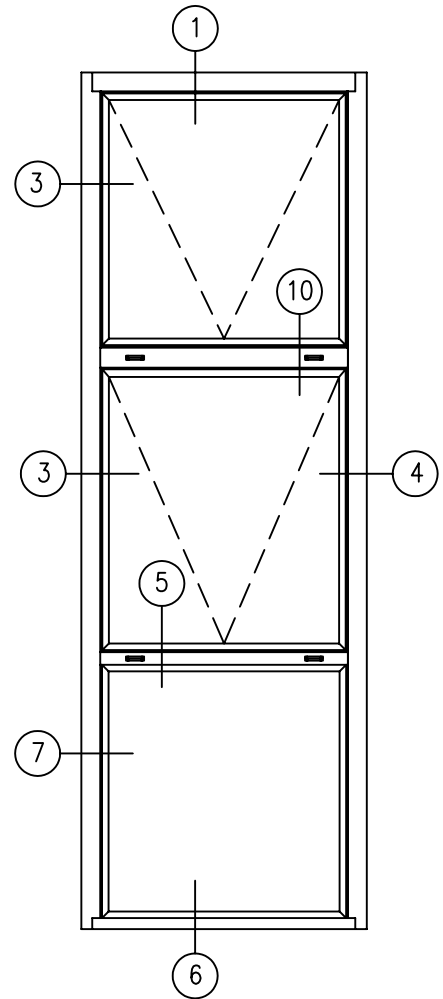
WATER TEST PRESSURE 12.12 PSF

STRUCTURAL LOAD 165.52 PSF

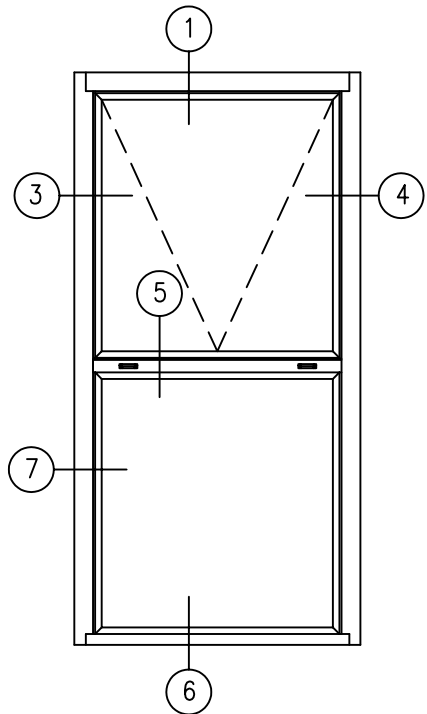
DESIGN PRESSURE 120.38 PSF



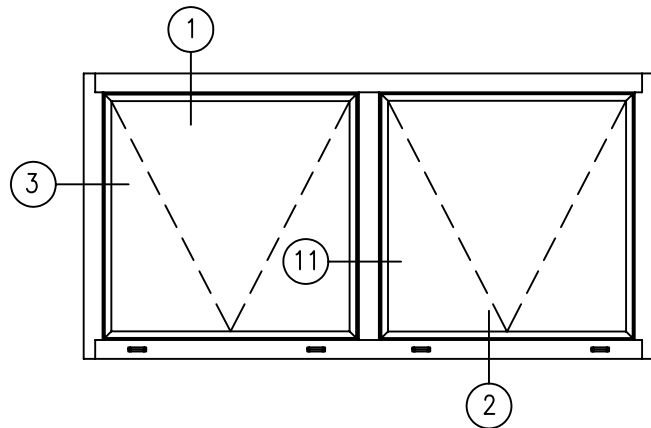
Projected In



Projected In/Projected In/  
Fixed Continuous Frame



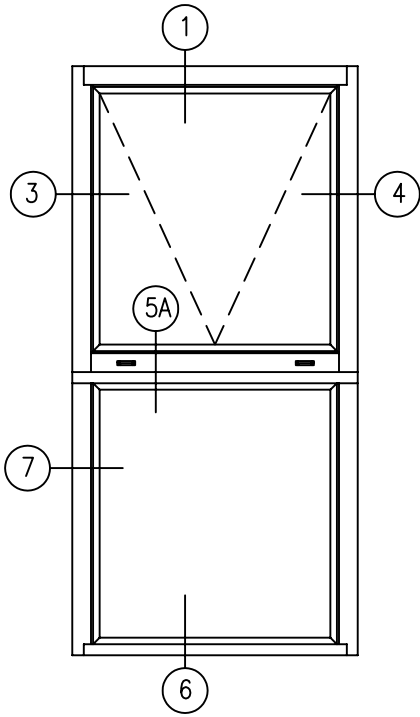
Projected In/Fixed  
Continuous Frame



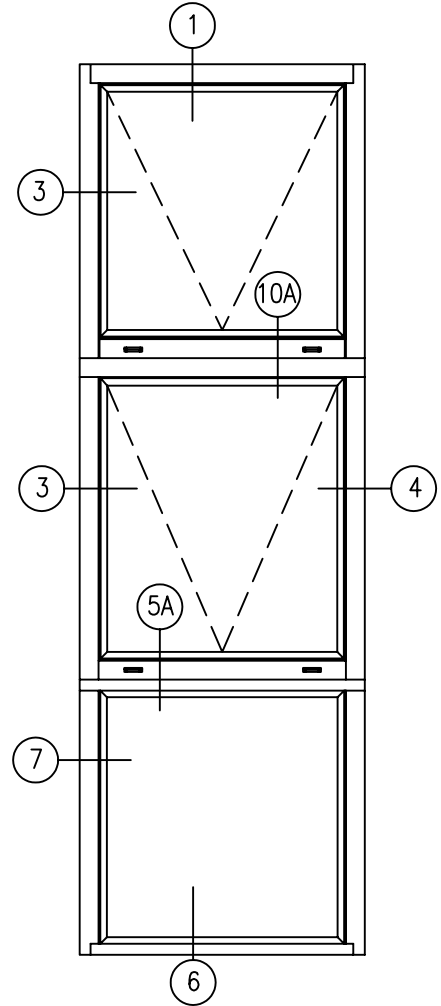
Projected In/Projected In  
Continuous Frame

All Elevations are viewed outside looking in.

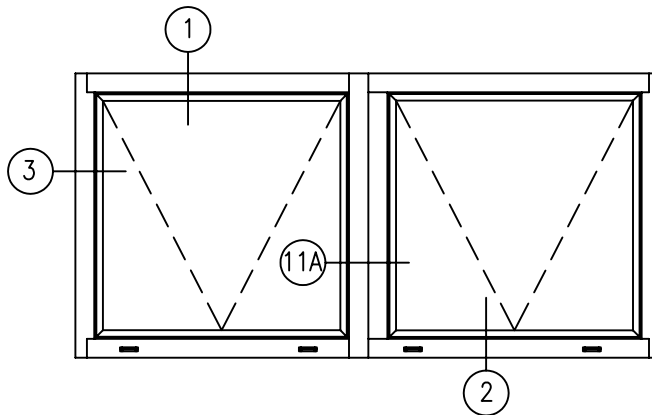
SCALE: NONE



Projected In/Fixed  
with Male-Female Mullion



Projected In/Projected In/Fixed  
with Male-Female Mullion



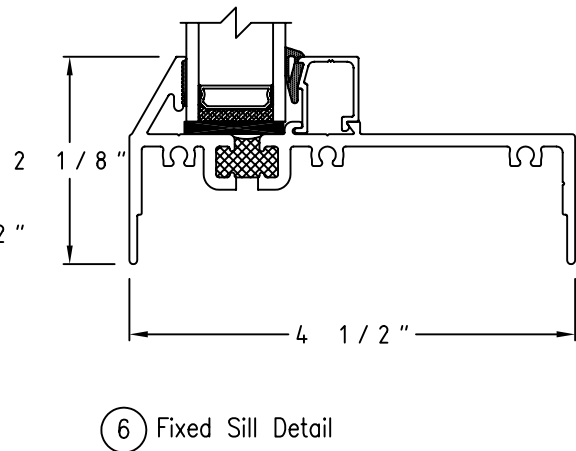
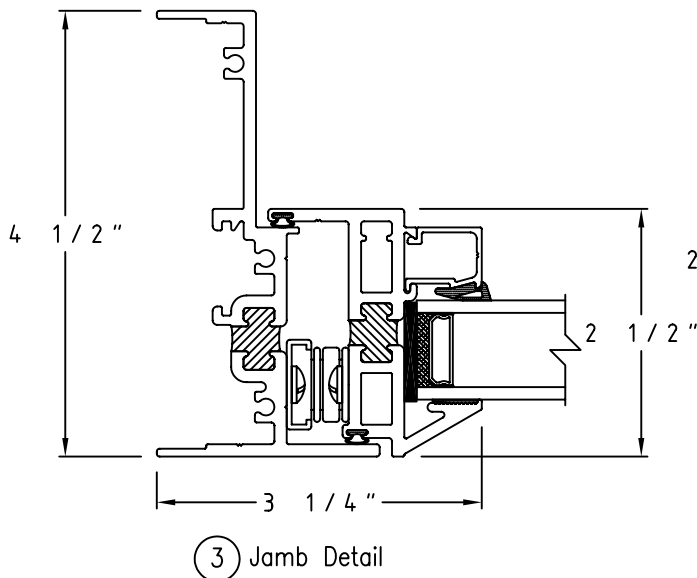
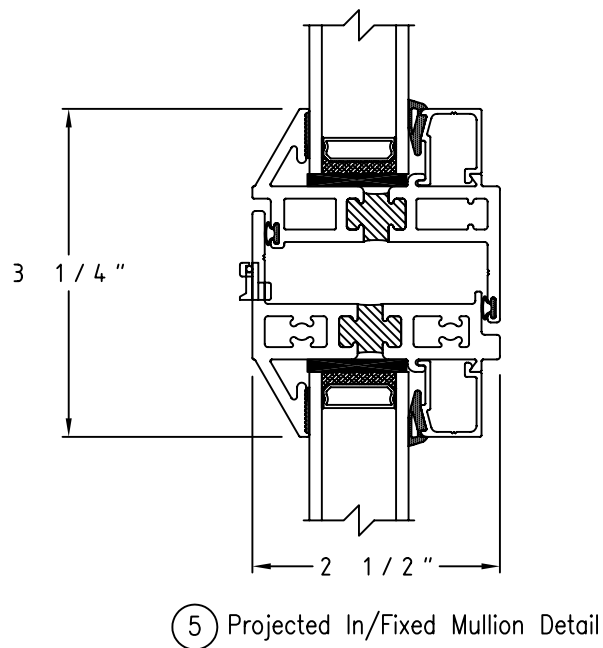
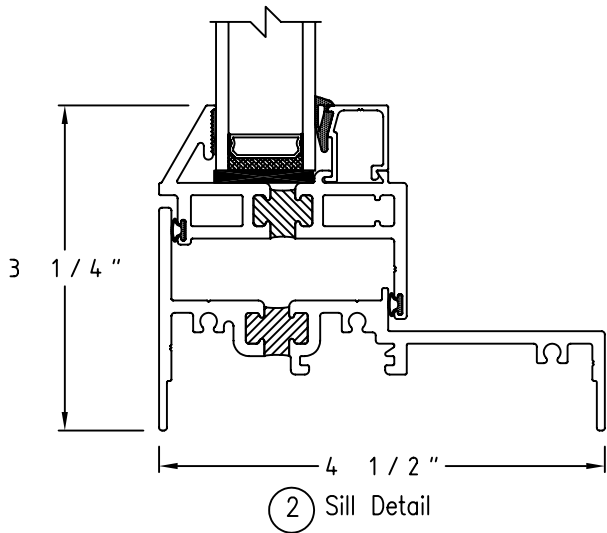
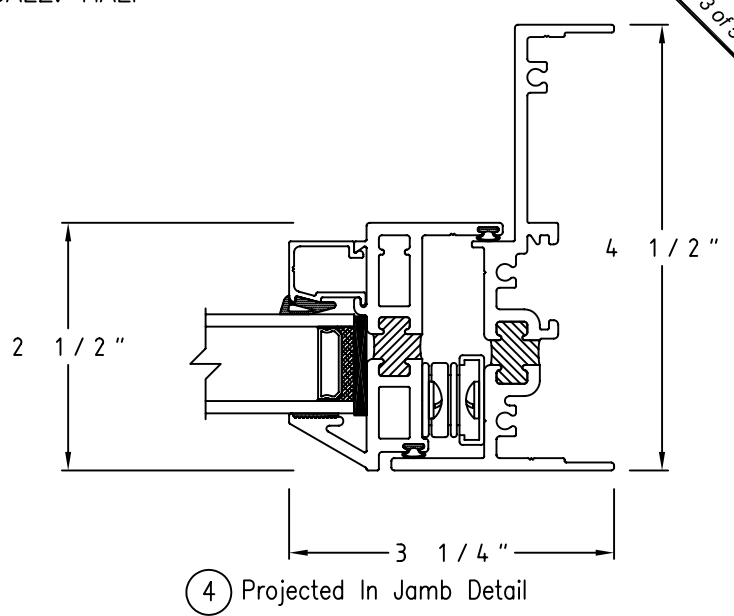
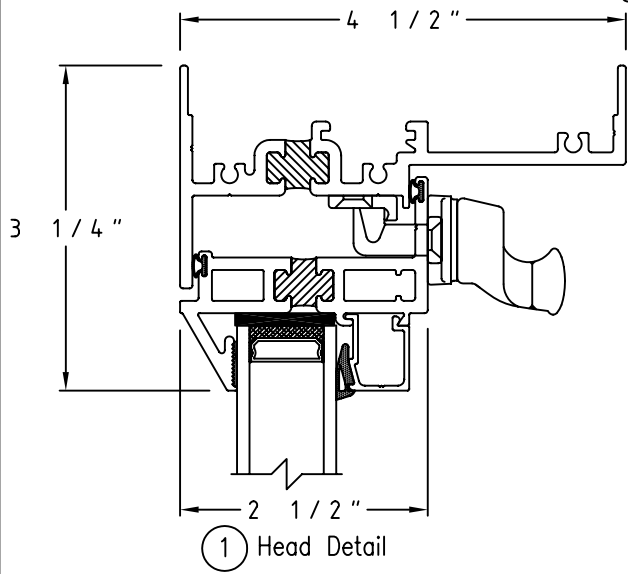
Projected In/Projected In  
with Male-Female Mullion

All Elevations are viewed outside looking in.

# Champion Series 5245

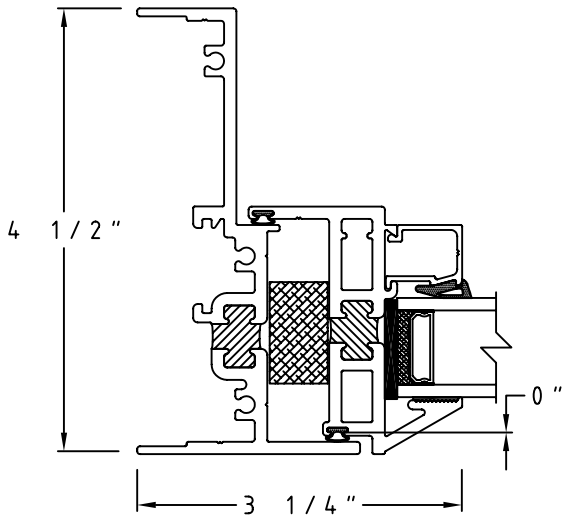
Sheet 3 of 5

SCALE: HALF

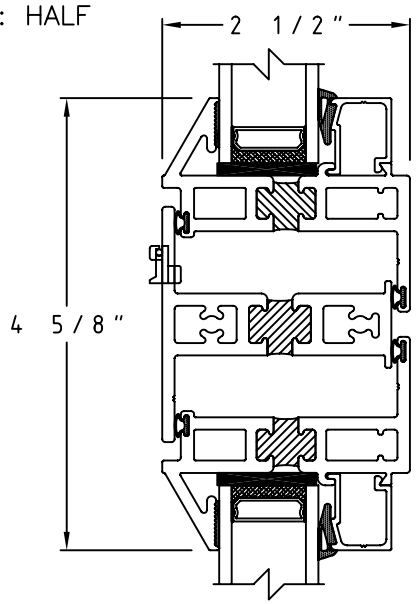


Champion Series 5245

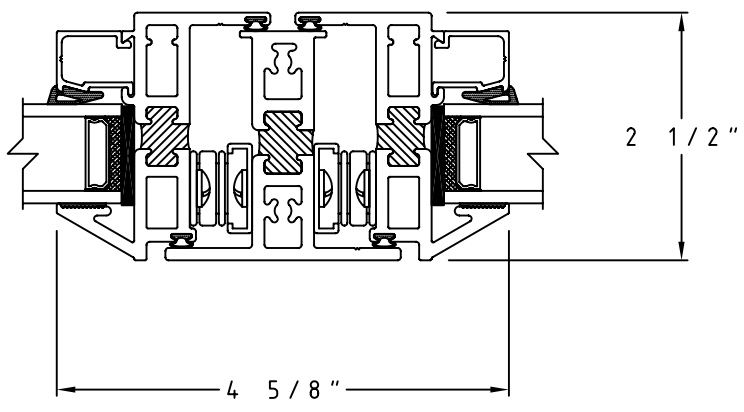
SCALE: HALF



⑦ Fixed Jamb Detail



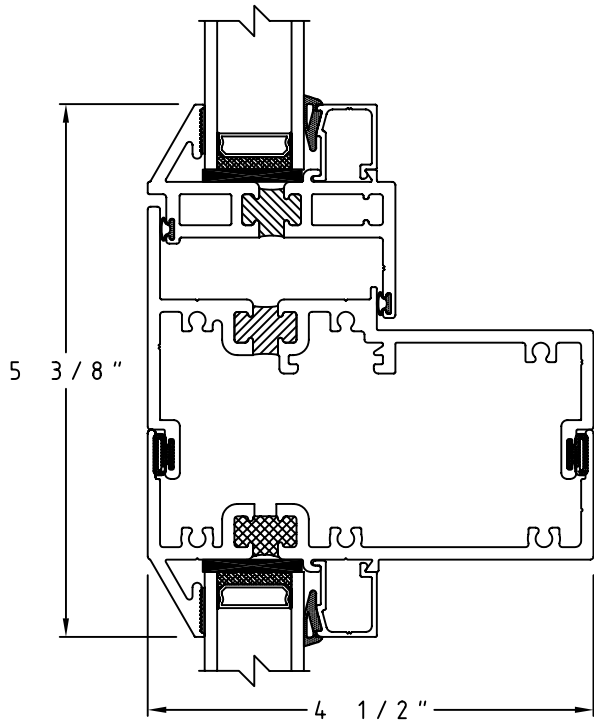
⑩ Projected In/Projected In Mullion Detail



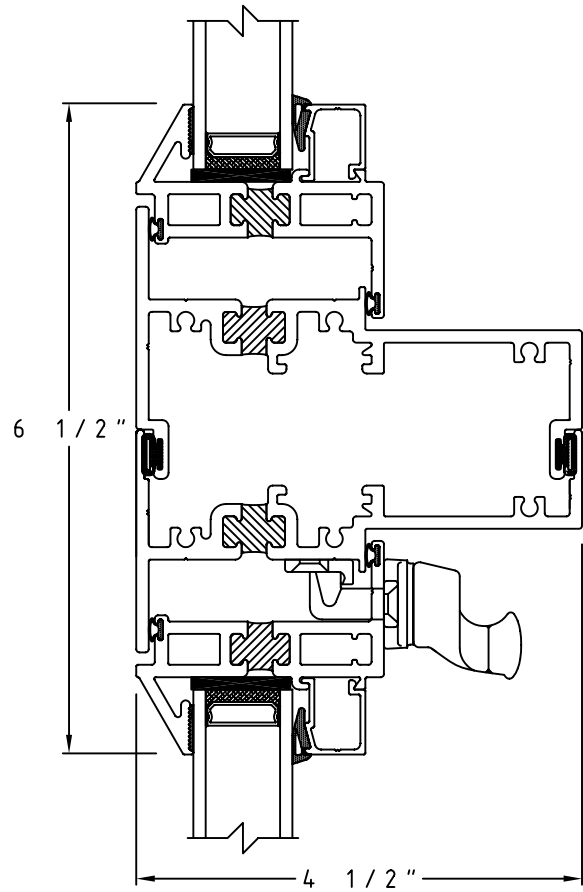
⑪ Projected In/Projected In Mullion Detail



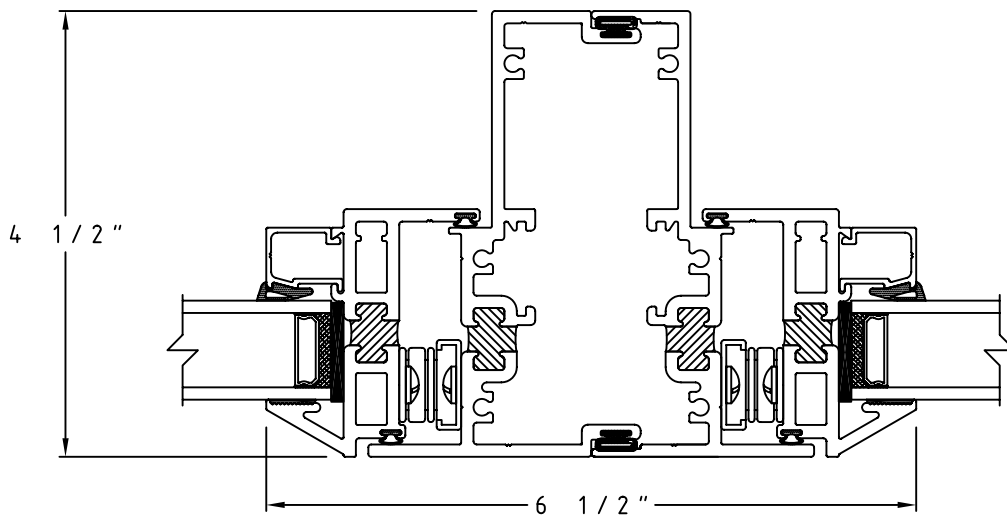
SCALE: HALF



5A Projected In/Fixed Detail with Male-Female Mullion



10A Projected In/Projected In Detail with Male-Female Mullion



11A Projected In/Projected In Detail with Male-Female Mullion



W I N D O W   A N D   D O O R

**Series 5245 AP- HC100/AW110 Project Inswing Window.**

## SECTION 085113

### PART 1 – GENERAL

#### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

#### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

#### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

#### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

#### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

#### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



## W I N D O W   A N D   D O O R

### Series 5245 AP- HC100/AW110 Project Inswing Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: AP-HC100 and AP-AW110.
- B. Projected In Windows are 4 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with exterior plane of frame; equal-leg frame; factory-assembled. Vent shall be 2 1/2" deep with beveled glazing legs.
- C. Configuration: projected in; single vent per frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; **[Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds]** factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **AP-AW110** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 36" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.02 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 165.52 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to **AP-HC100** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 32" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 165.20 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 5245 Projected Inswing Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 4-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.



## W I N D O W   A N D   D O O R

### Series 5245 AP- HC100/AW110 Project Inswing Window.

- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges] hinges conforming to AAMA 904 to rotate vent outward on vertical axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: multi-point lock] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.
- G. Screens: Full screens with wickets to access handles held in place with stainless steel clips with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced used only with the scissor crank option]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).



## W I N D O W   A N D   D O O R

### Series 5245 AP- HC100/AW110 Project Inswing Window.

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation.
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 5345 Series

## 5345 Casement Window



Product By Operation: 4-1/2" Casement

Model By Family: 5045

Product Description: Casement-Out

Frame Depth: 4-1/2"

Flange Frame Head Options: ~

Flange Frame Jamb Options: ~

Flange Frame Sill Options: ~

101/I.S.2/A440-05 Rating: C-AW85

AAMA Test Size: 36" x 60"

101/I.S.2/A440-05 Optional: C-HC85

Optional Test Size: 36" x 60"

Cut Size On W&H: 1/8"

Std. Glazing: 1" Ins

Optional Glazing: ~



### Performance Data



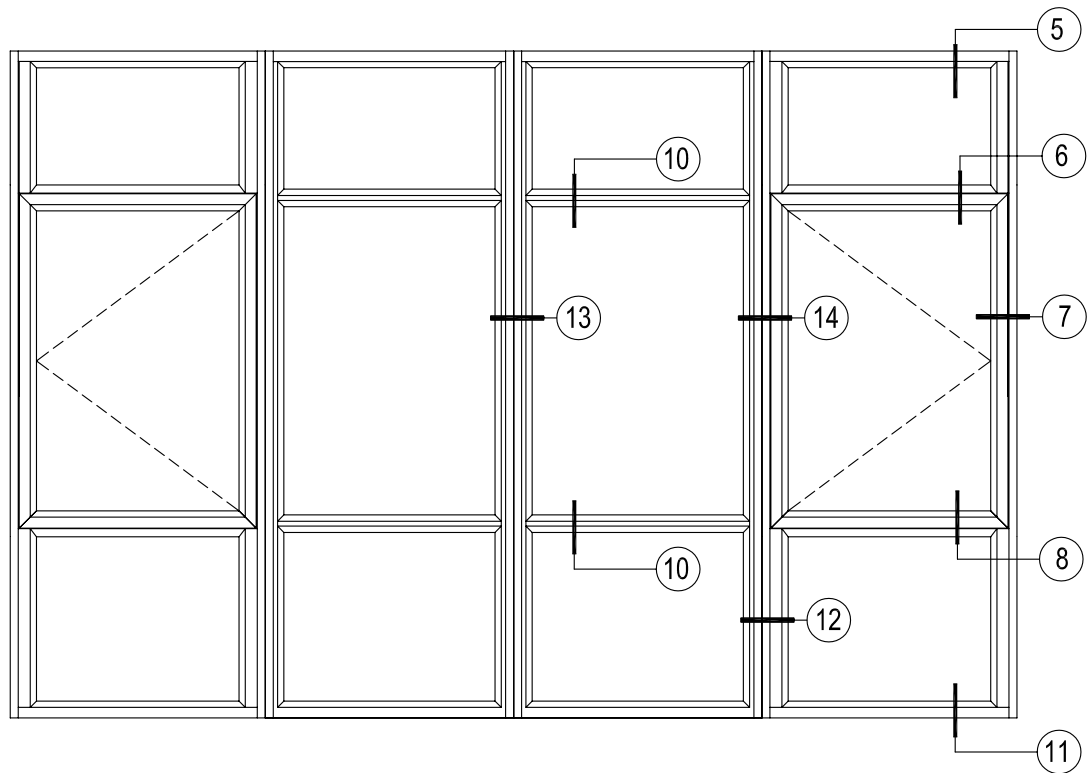
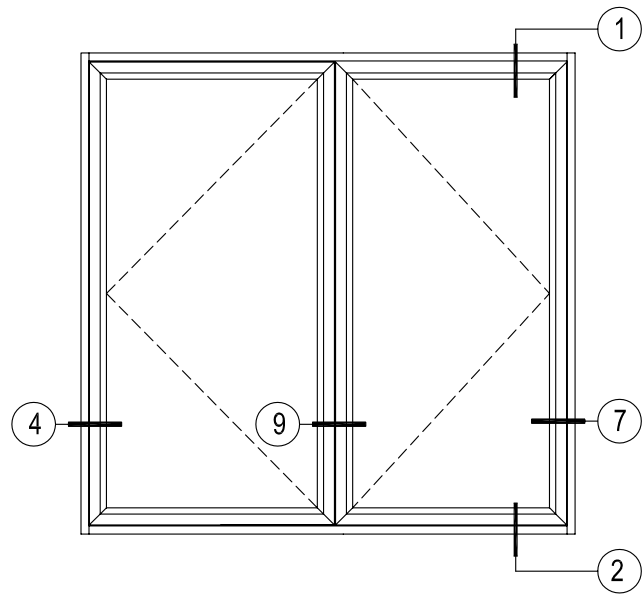
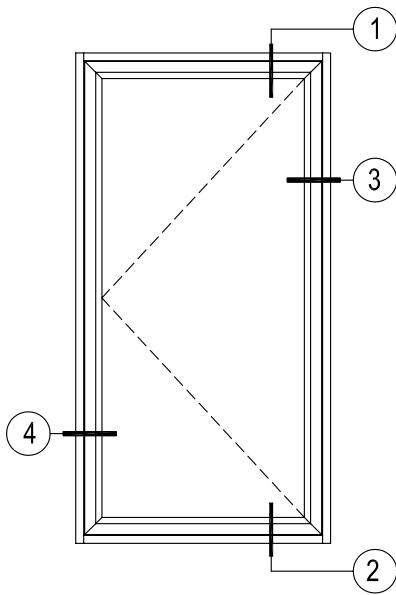
AAMA RATING: C-AW85

AIR INFILTRATION @ 50 mph <0.01 CFM

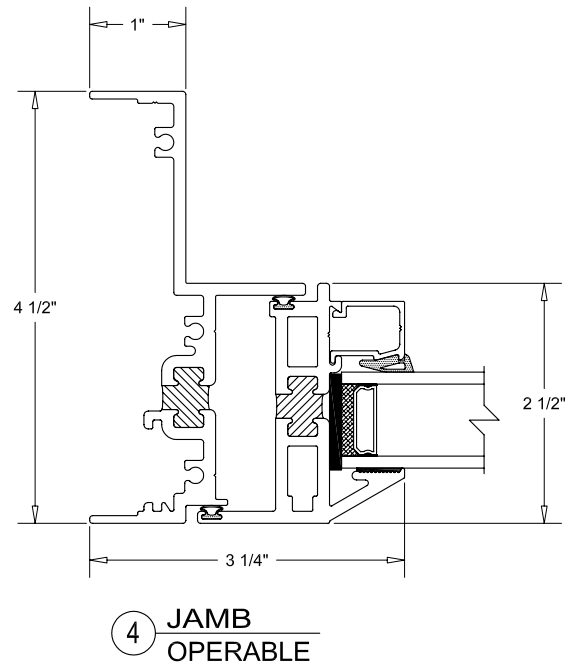
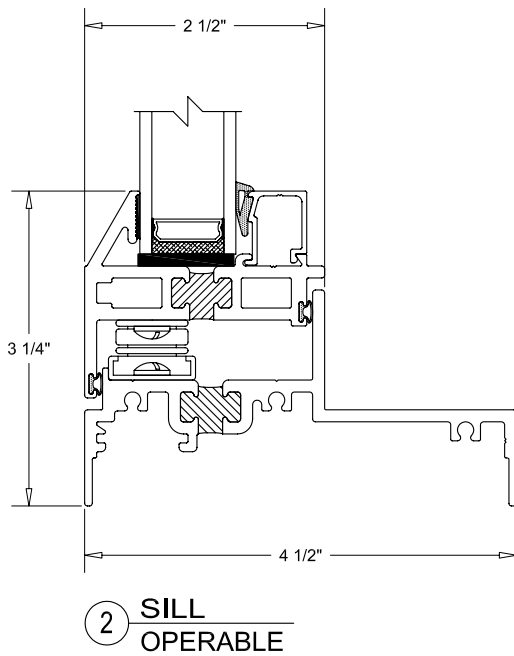
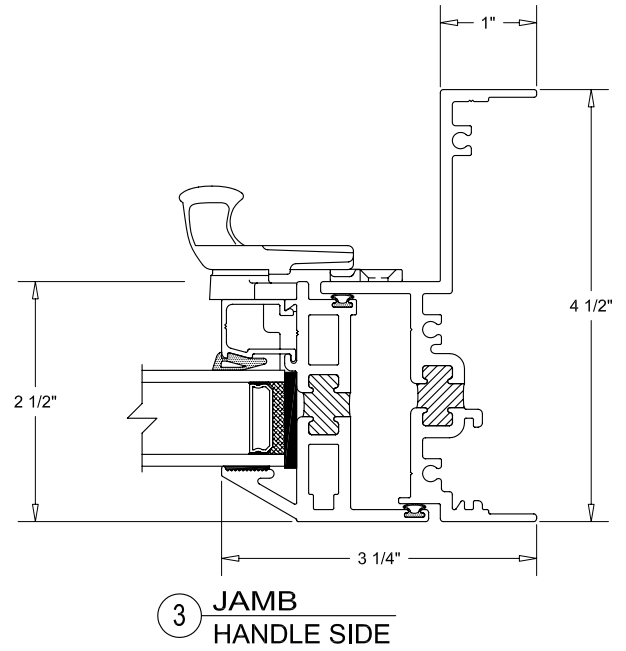
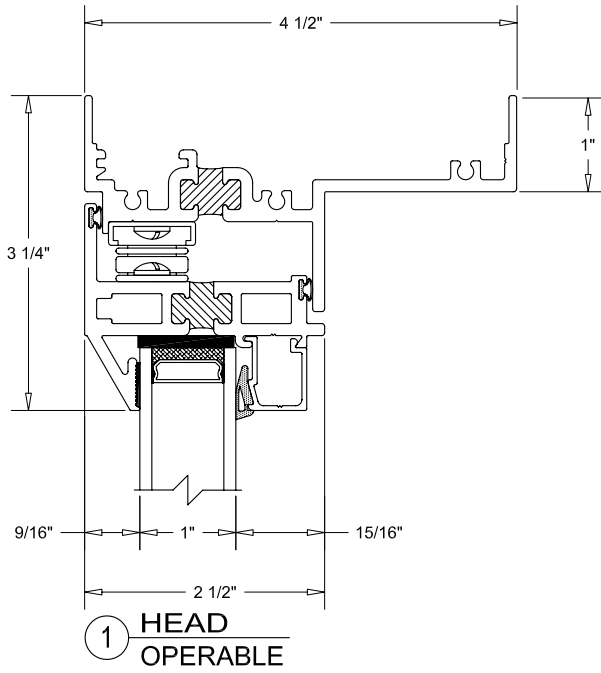
WATER TEST PRESSURE 15.05 PSF

STRUCTURAL LOAD 127.90 PSF

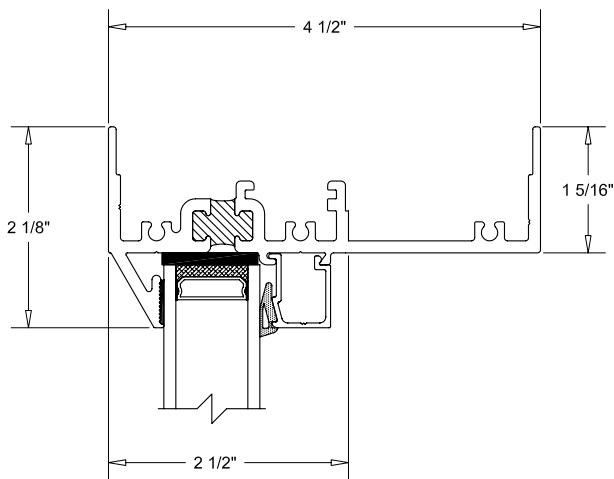
DESIGN PRESSURE 85.27 PSF



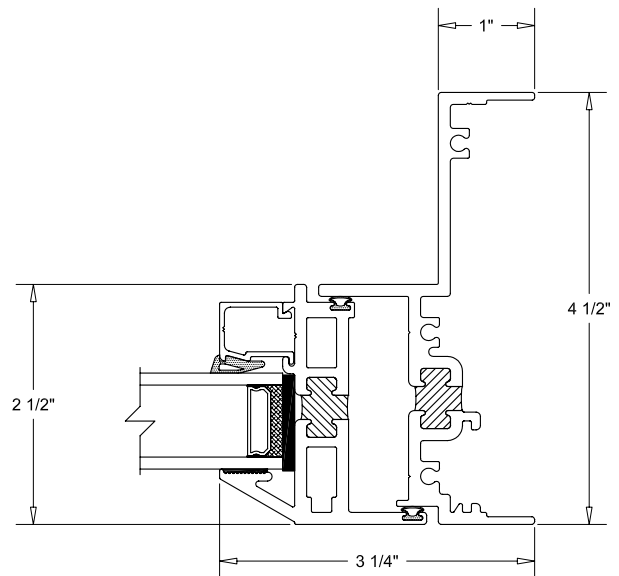
(NOTE: SEE SECTION (16), (17), (18) FOR TYPICAL INSTALLATION DETAILS)



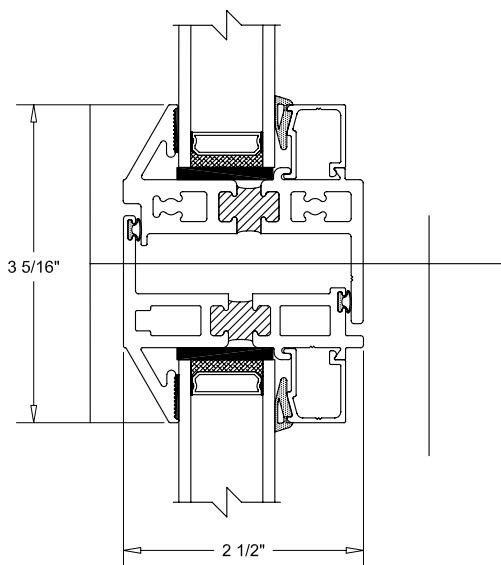




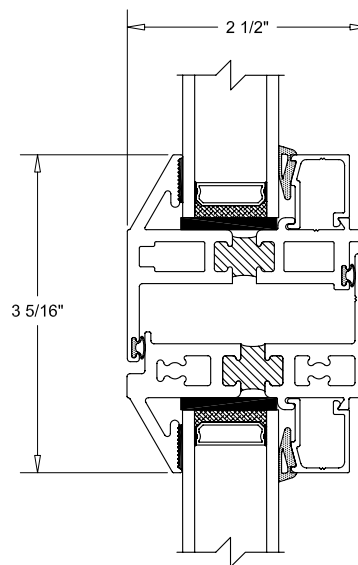
5 HEAD  
FIXED



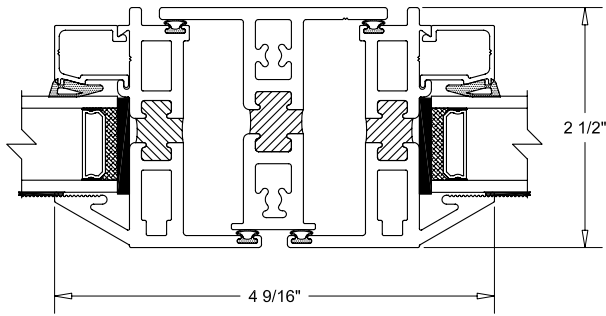
7 JAMB  
OPERABLE



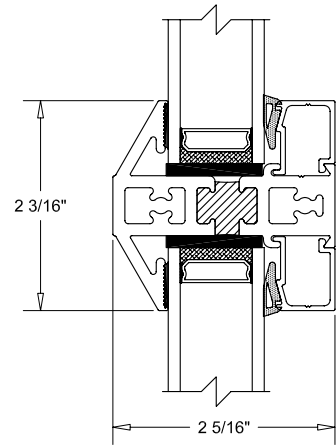
6 IMPOST  
FIXED OVER OPERABLE



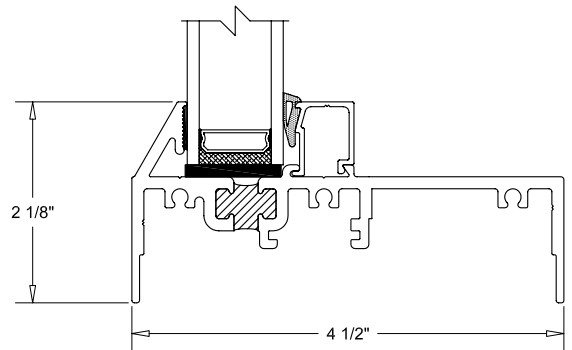
8 IMPOST  
OPERABLE OVER FIXED



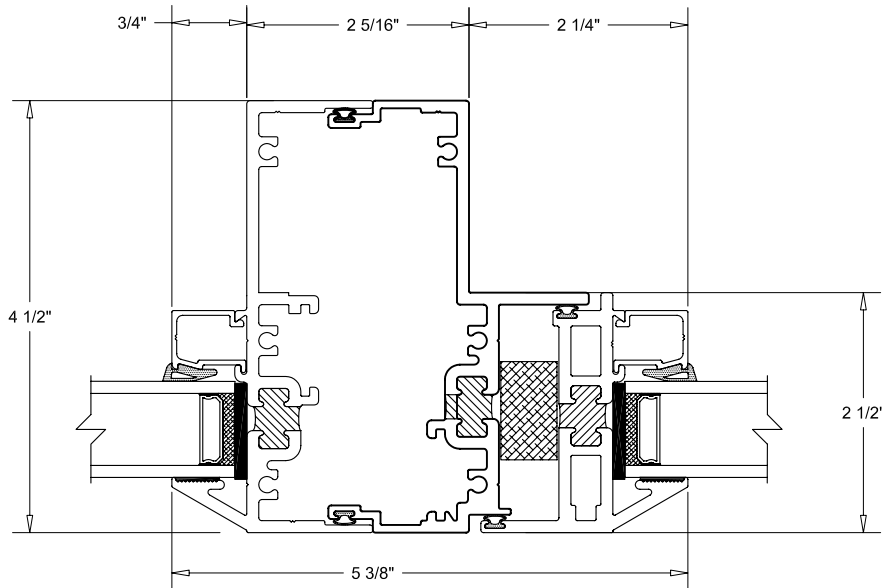
9 **IMPOST**  
OPERABLE TO OPERABLE



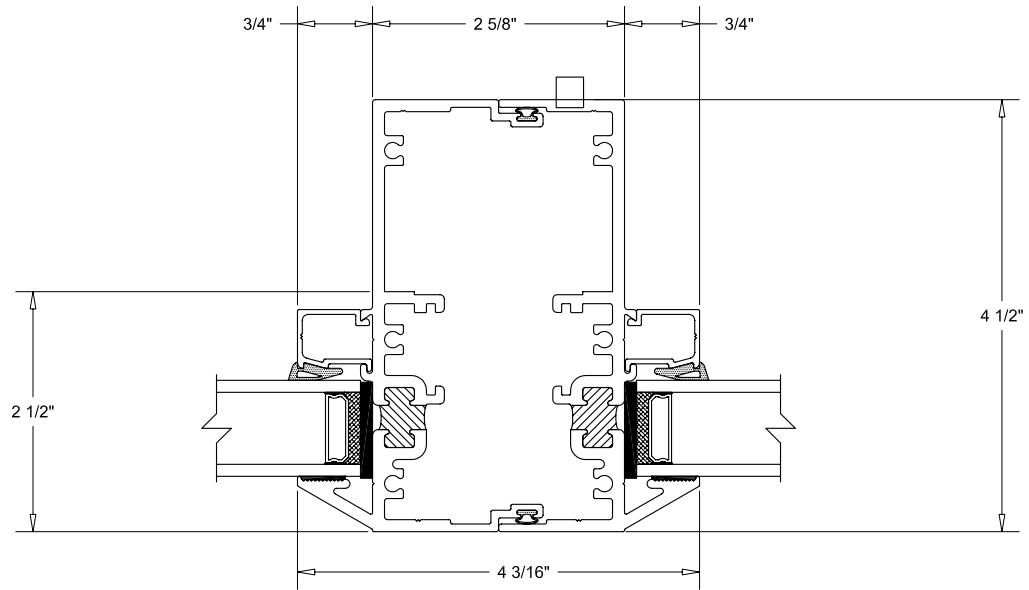
10 **IMPOST**  
FIXED OVER FIXED



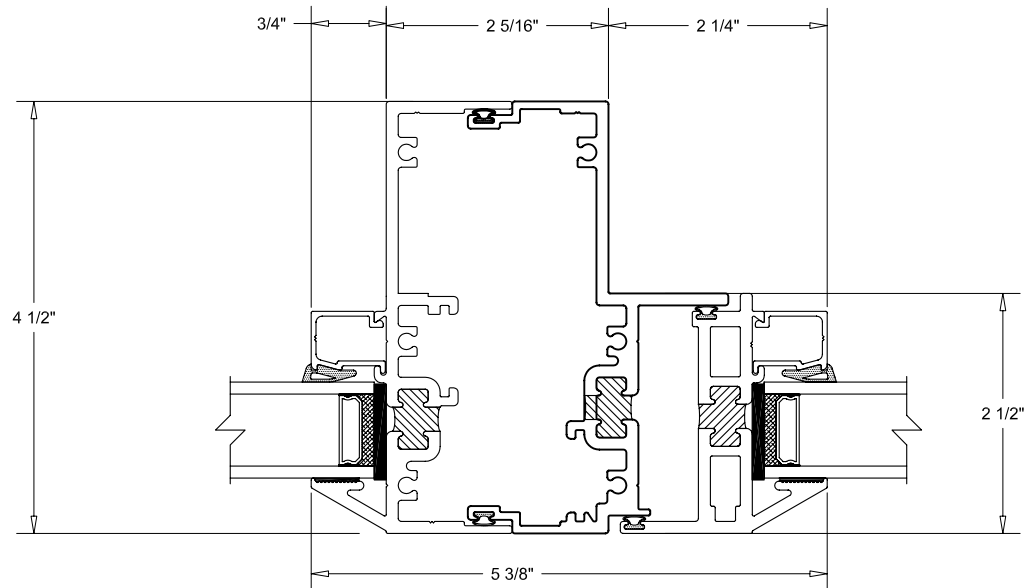
11 **SILL**  
FIXED



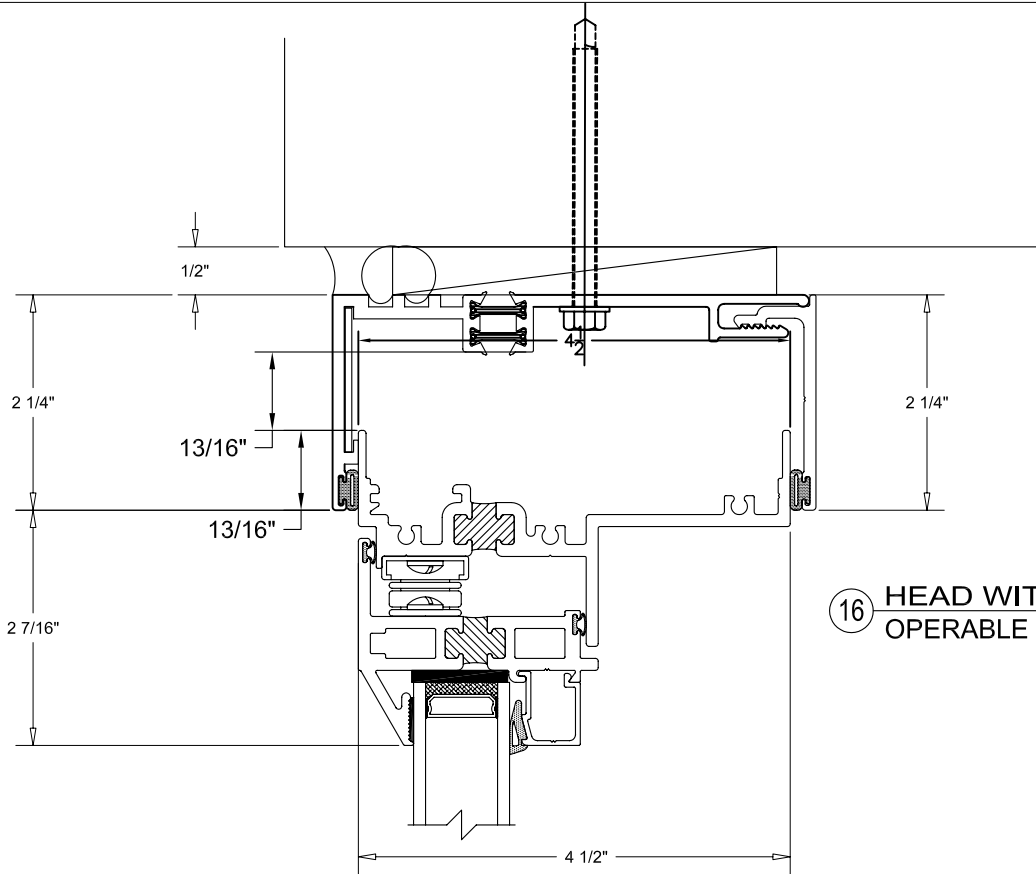
12 **MALE-FEMALE MULLION**  
FIXED TO FIXED SASH



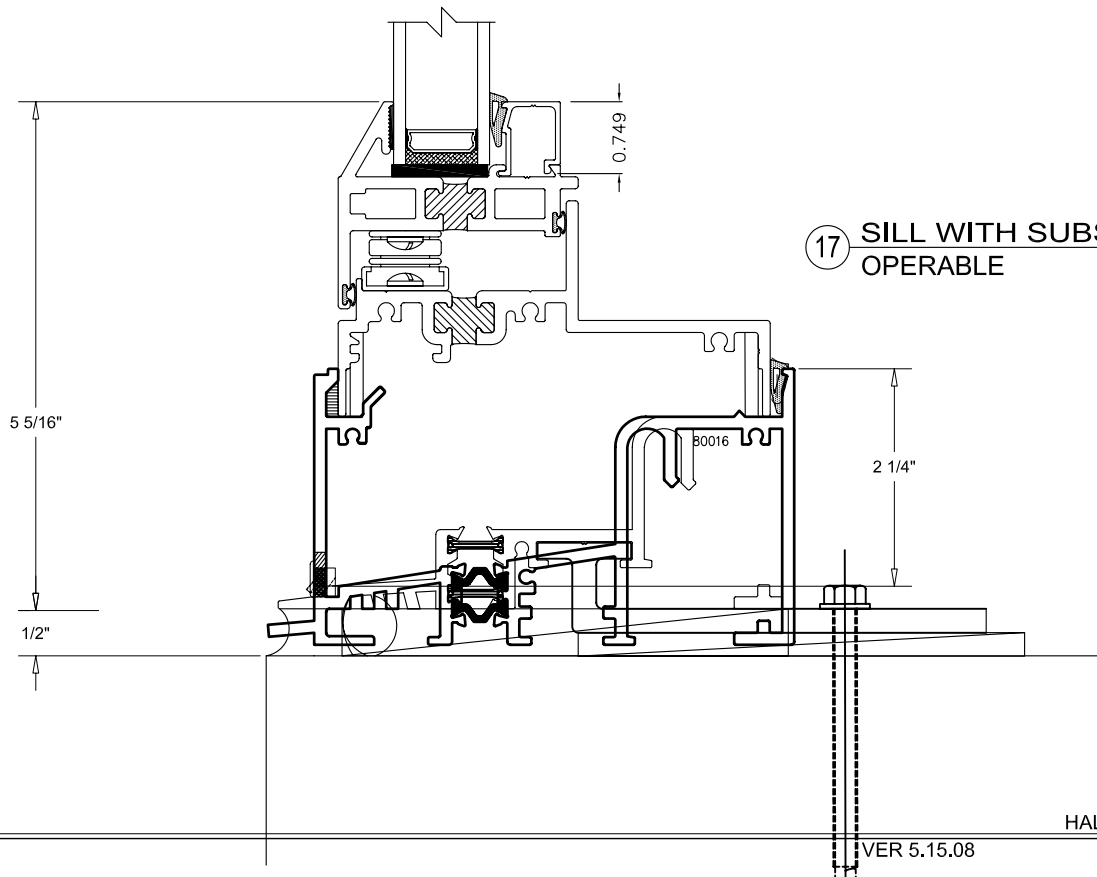
13 MALE-FEMALE MULLION  
FIXED TO FIXED



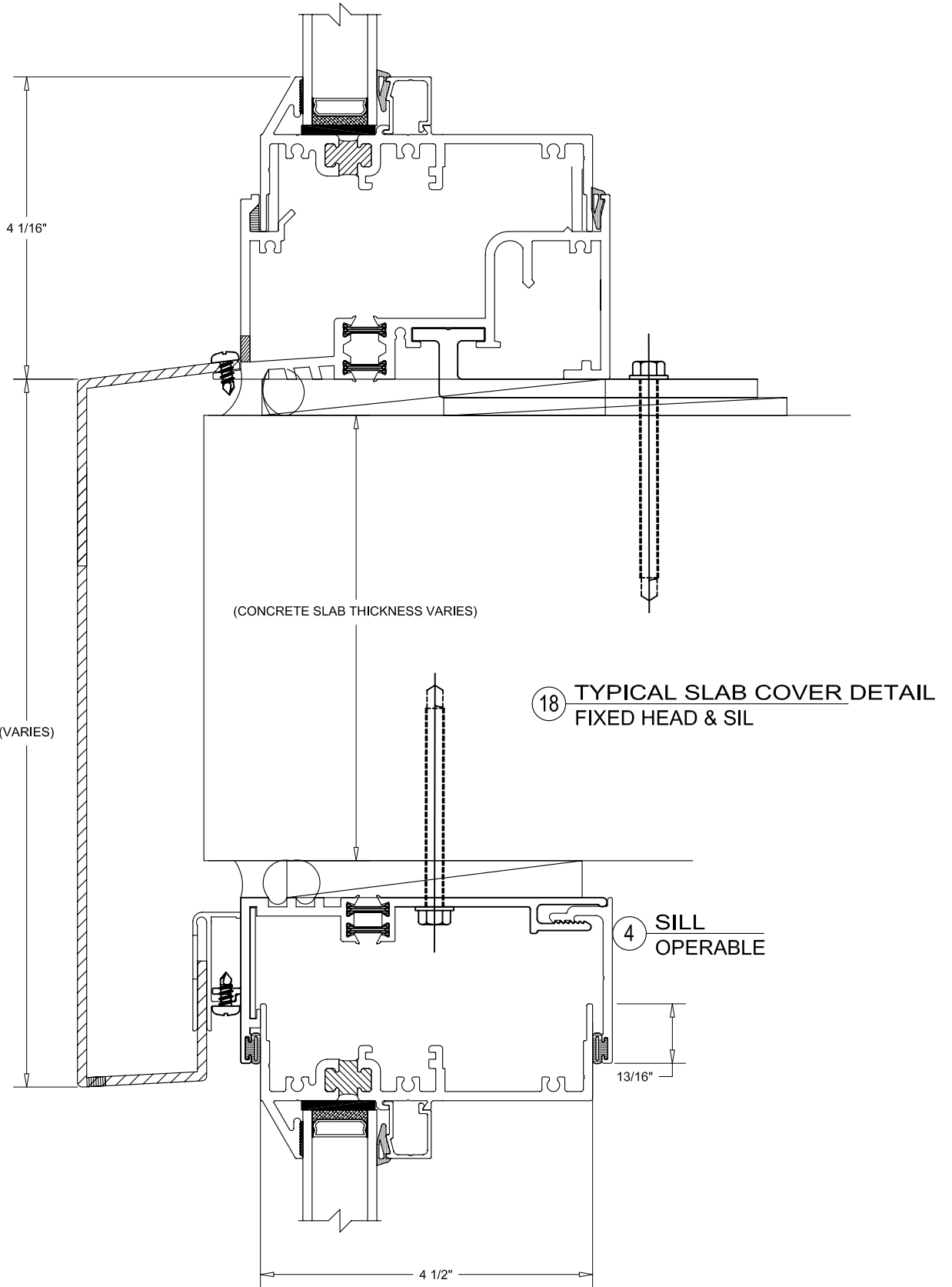
14 MALE-FEMALE MULLION  
FIXED TO OPERABLE



16 HEAD WITH RECEPTOR OPERABLE



17 SILL WITH SUBSILL OPERABLE





W I N D O W   A N D   D O O R  
Series 5345 C- HC85/AW85 Casement Outswing Window.

**SECTION 085113**

**PART 1 – GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



## W I N D O W   A N D   D O O R

### Series 5345 C- HC85/AW85 Casement Outswing Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: C-HC85 and C-AW85.
- B. Casement outswing Windows are 4 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with exterior plane of frame; equal-leg frame; factory-assembled. Vent shall be 2 1/2" deep with beveled glazing legs.
- C. Configuration: casement outswing; single vent per frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; **[Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds]** factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **C-AW85** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 85.27 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 127.90 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to **C-HC85** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 85.27 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 127.90 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 5345 Casement Outswing Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 4-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.



## W I N D O W   A N D   D O O R

### Series 5345 C- HC85/AW85 Casement Outswing Window.

- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges] hinges conforming to AAMA 904-96 to rotate vent outward on vertical axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: multi-point lock] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.
- G. Screens: Full screens with wickets to access handles held in place with stainless steel clips with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced used only with the scissor crank option]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

### Section 085113 Aluminum Windows





## W I N D O W   A N D   D O O R

### Series 5345 C- HC85/AW85 Casement Outswing Window.

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 5445 Series

## 5445 Casement Window



Product By Operation: 4-1/2" Casement

Model By Family: 5045

Product Description: Casement-In

Frame Depth: 4-1/2"

Flange Frame Head Options: ~

Flange Frame Jamb Options: ~

Flange Frame Sill Options: ~

101/I.S.2/A440-05 Rating: C-AW120

AAMA Test Size: 36" x 60"

101/I.S.2/A440-05 Optional: C-HC100

Optional Test Size: 36" x 60"

Cut Size On W&H: 1/8"

Std. Glazing: 1" Ins

Optional Glazing: ~



### Performance Data



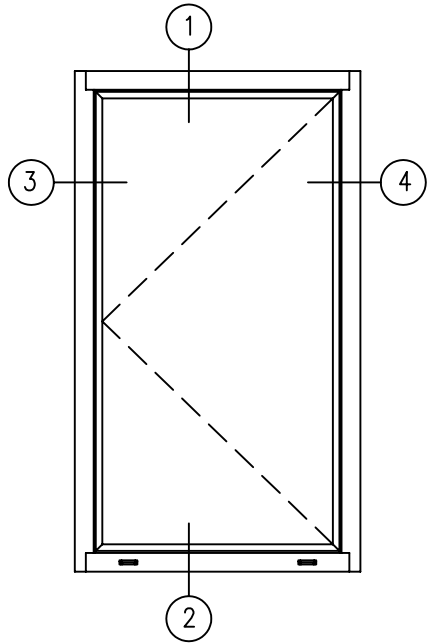
AAMA RATING: C-AW120

AIR INFILTRATION @ 50 mph 0.06 CFM

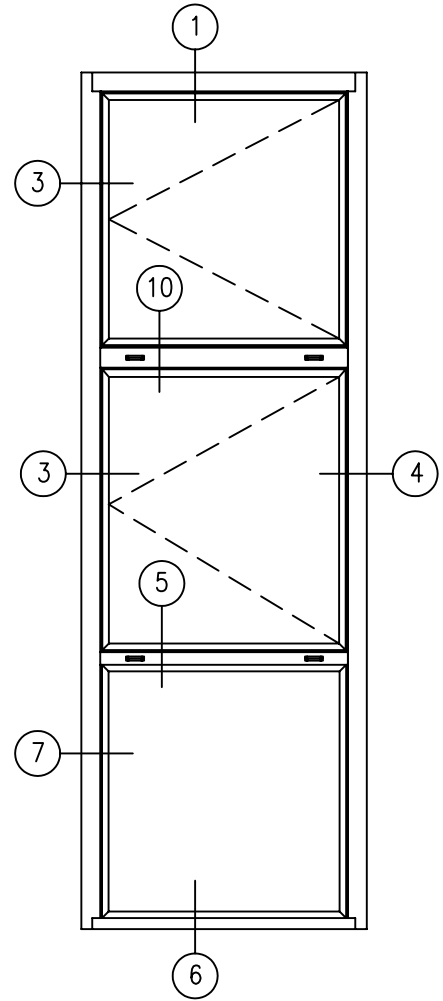
WATER TEST PRESSURE 12.12 PSF

STRUCTURAL LOAD 180.57 PSF

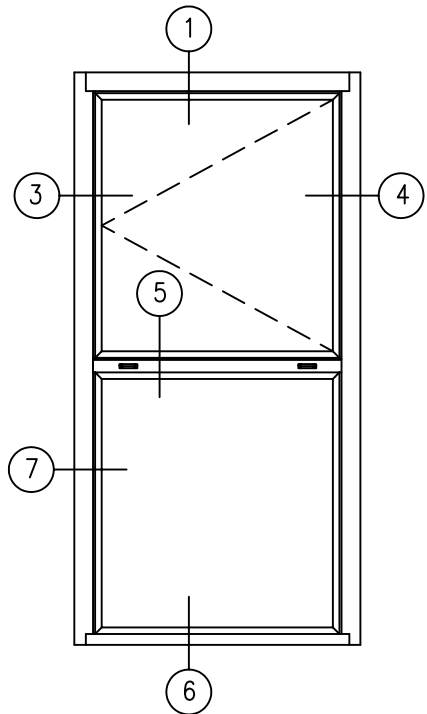
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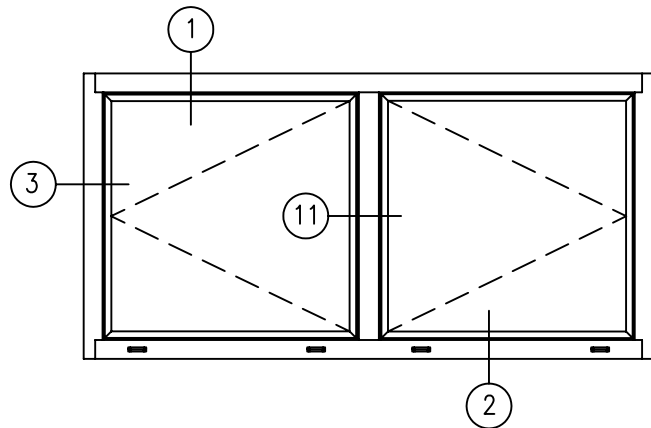
Casement In



Casement In/Casement In/  
Fixed Continuous Frame



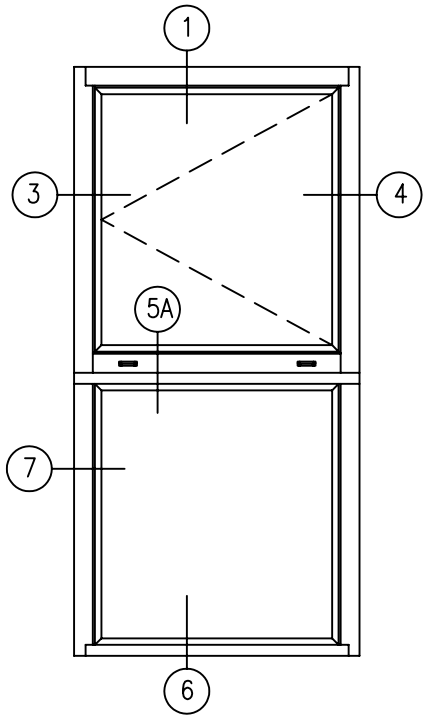
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Continuous Frame



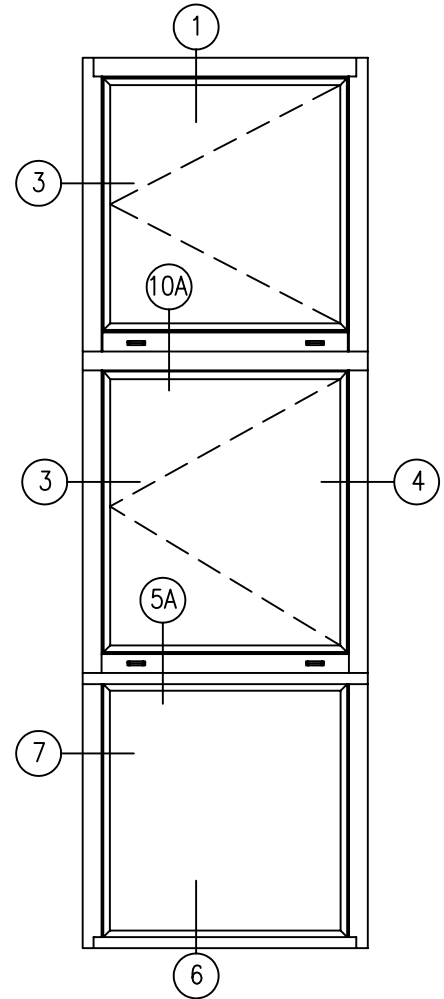
Casement In/Casement In  
Continuous Frame

All Elevations are viewed outside looking in.

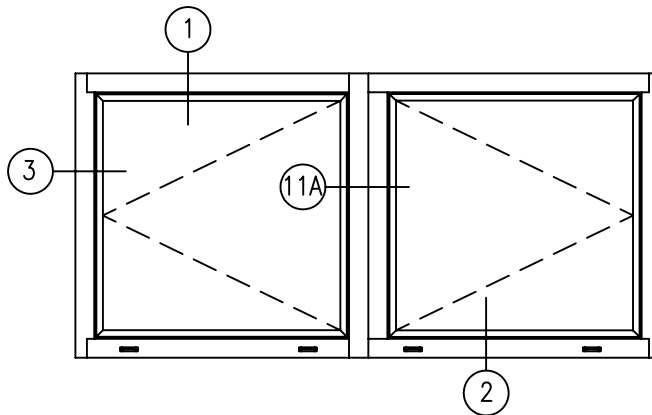
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Casement In/Fixed  
with Male-Female Mullion



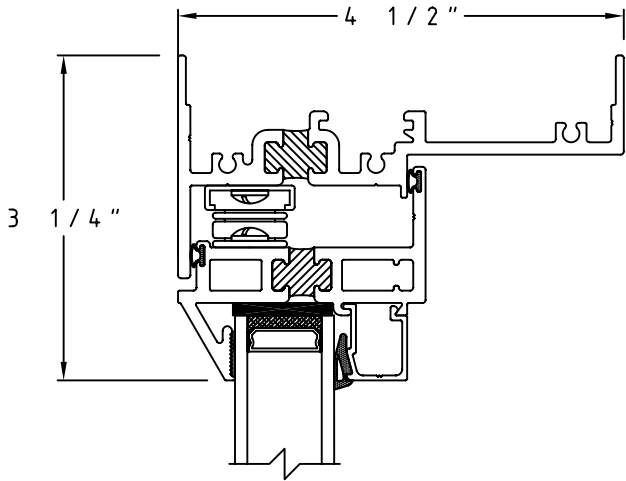
Casement In/Casement In/Fixed  
with Male-Female Mullion



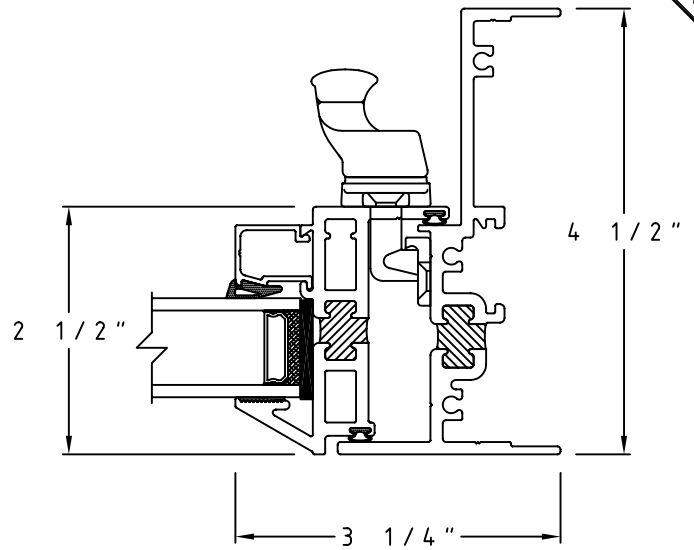
Casement In/Casement In  
with Male-Female Mullion

All Elevations are viewed outside looking in.

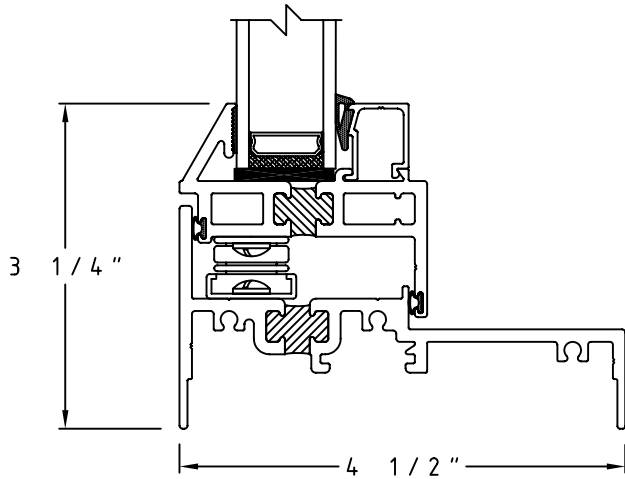
SCALE: HALF



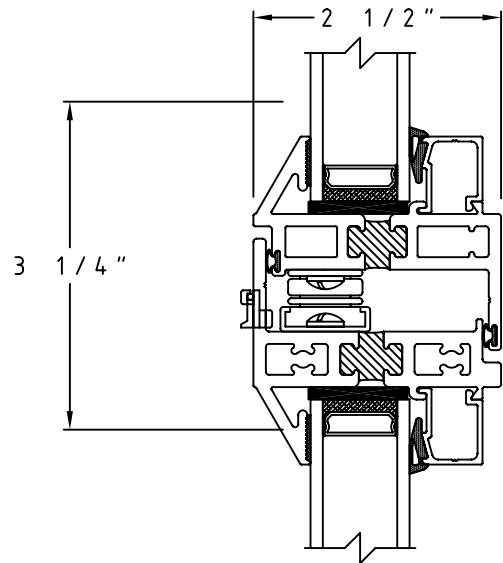
① Head Detail



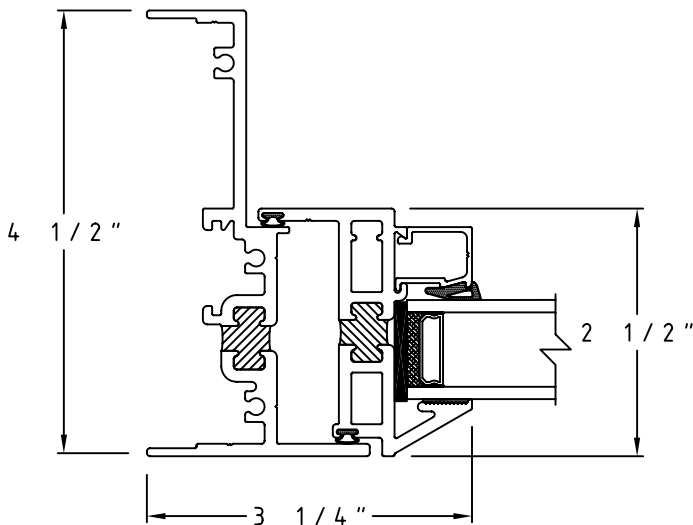
④ Casement In Jamb Detail



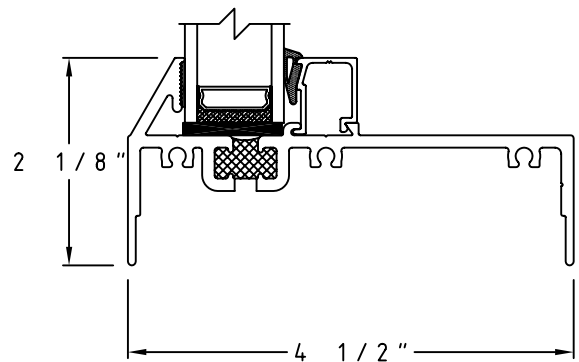
② Sill Detail



⑤ Casement In/Fixed Mullion Detail

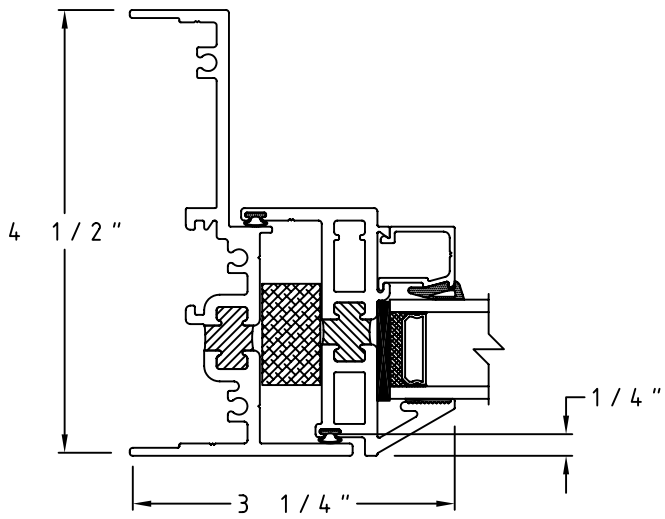


③ Jamb Detail

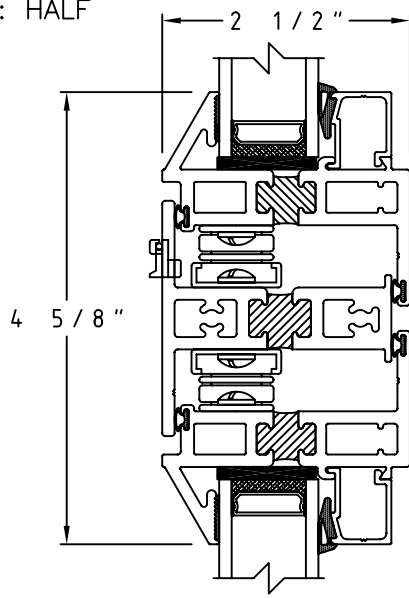


⑥ Fixed Sill Detail

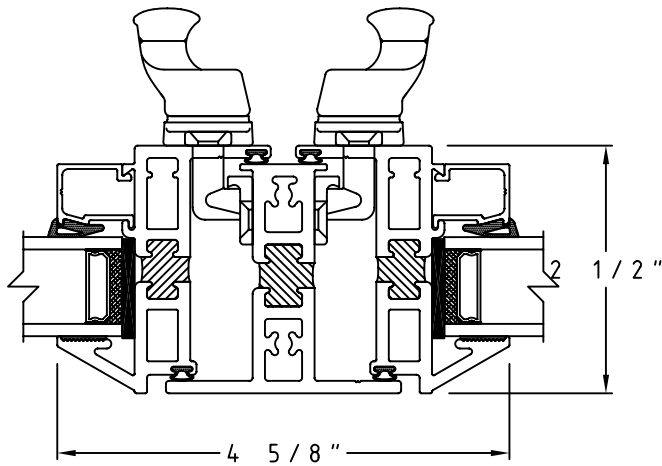
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⑦ Fixed Jamb Detail

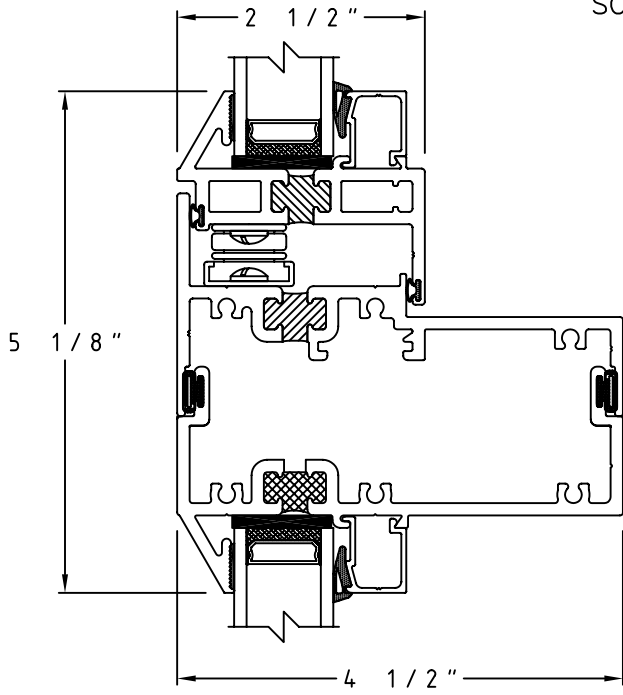


⑩ Casement In/Casement In Mullion Detail

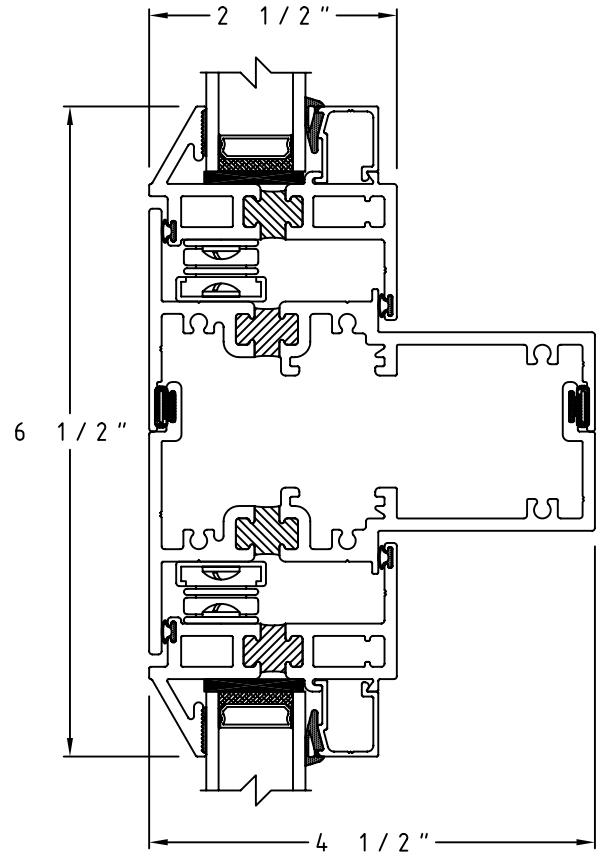


⑪ Casement In/Casement In Mullion Detail

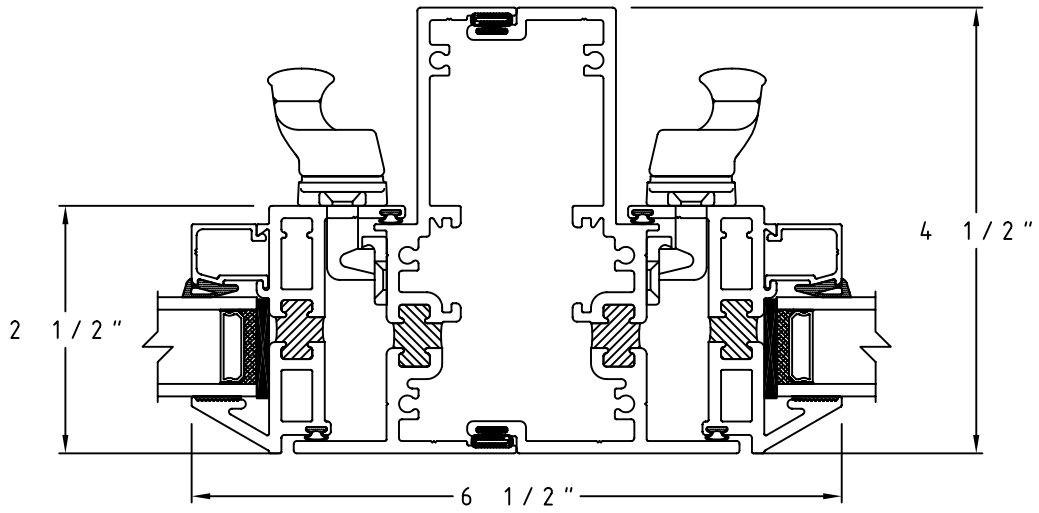
SCALE: HALF



5A Casement In/Fixed Mullion Detail with Male-Female Mullion



10A Casement In/Casement In Mullion Detail with Male-Female Mullion



11A Casement In/Casement In Mullion Detail with Male-Female Mullion



W I N D O W   A N D   D O O R  
Series 5445 C- HC100/AW120 Casement Inswing Window.

**SECTION 085113**

**PART 1 – GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).





## W I N D O W   A N D   D O O R

### Series 5445 C- HC100/AW120 Casement Inswing Window.

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: C-HC100 and C-AW120.
- B. Casement inswing Windows are 4 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with exterior plane of frame; equal-leg frame; factory-assembled. Vent shall be 2 1/2" deep with beveled glazing legs.
- C. Configuration: casement inswing; single vent per frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; **[Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds]** factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **C-AW120** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.06 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 180.57 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to **C-HC100** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 60" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 180.57 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 5445 Casement Inswing Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 4-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.



## WINDOW AND DOOR

### Series 5445 C- HC100/AW120 Casement Inswing Window.

- D. Hardware: concealed stainless steel 4 bar friction [Optional non-friction or exposed powder coated butt hinges] hinges conforming to AAMA 904 to rotate vent outward on vertical axis; white bronze strike and cam [Optional: pole-operated] handle [Optional: multi-point lock] [Optional: custodial lock with removable handle] [Optional: quick disconnect limit device with custodial key set at 4-1/2"].
- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.
- G. Screens: Full screens with wickets to access handles held in place with stainless steel clips with 18 x 16 charcoal fiberglass [Optional: aluminum wire or stainless steel wire] mesh and PVC spline. [Optional: Full flat screen with thumb turn clips; extruded tubular aluminum frame; corners mitered, gusset reinforced used only with the scissor crank option]

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).



**W I N D O W   A N D   D O O R**  
**Series 5445 C- HC100/AW120 Casement Inswing Window.**

**Optional Anodized Finish:**

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

**2.07 AIR CONDITIONERS**

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

**PART 3 – EXECUTION**

**3.01 PROJECT SUBMITTALS**

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

**3.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

**3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

**3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

**3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

**3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

**3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

**END OF SECTION 085113**

# 5045 Series

## 5745 Fixed Window



<u>Product By Operation:</u>	4-1/2" Fixed
<u>Model By Family:</u>	5045
<u>Product Description:</u>	Fixed Window
<u>Frame Depth:</u>	4 -1/2"
<u>Flange Frame Head Options:</u>	~
<u>Flange Frame Jamb Options:</u>	~
<u>Flange Frame Sill Options:</u>	~
<u>101/I.S.2/A440-05 Rating:</u>	FW-AW80
<u>AAMA Test Size:</u>	60 x 99
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" to 1-1/2" Ins.
<u>Optional Glazing:</u>	Dual Blind

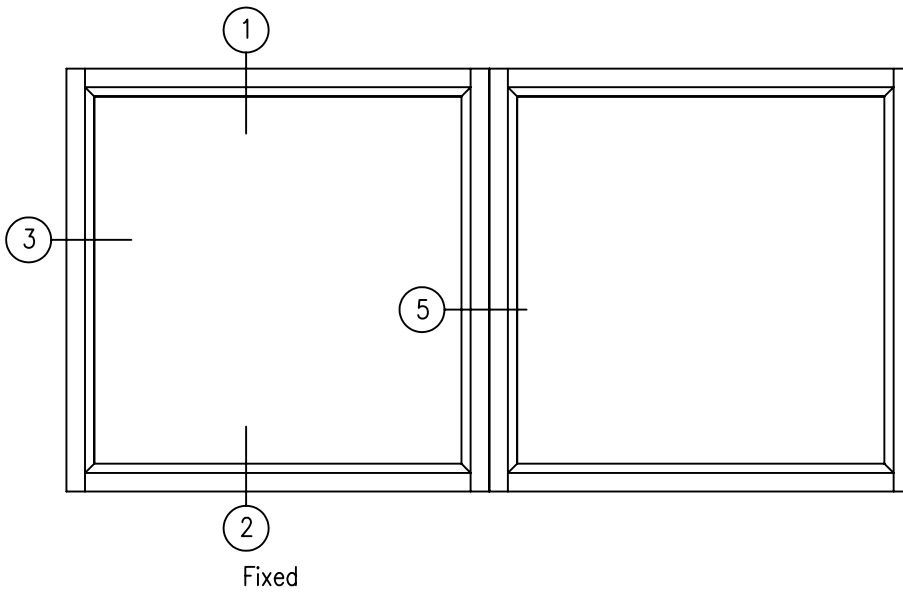
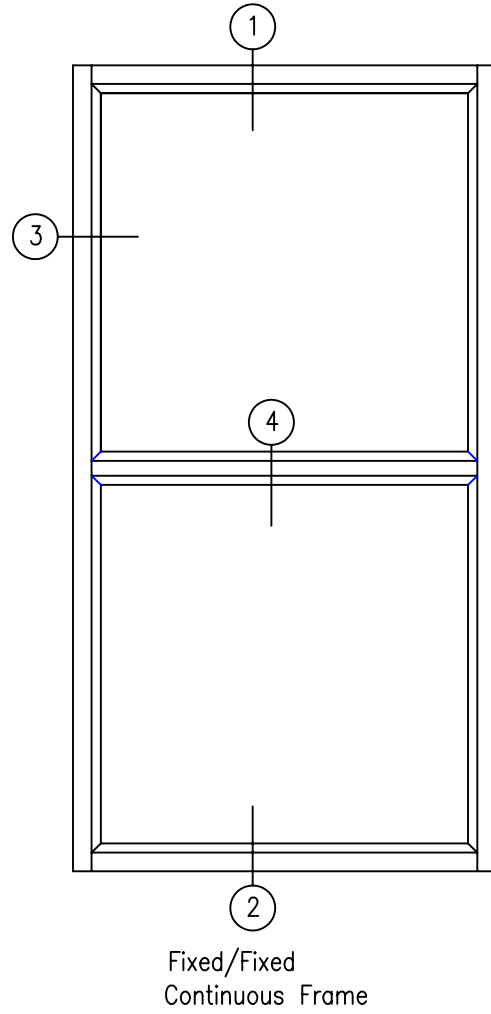
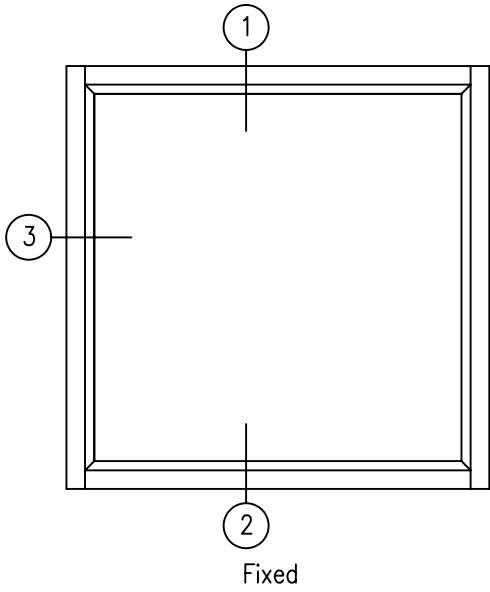


### Performance Data

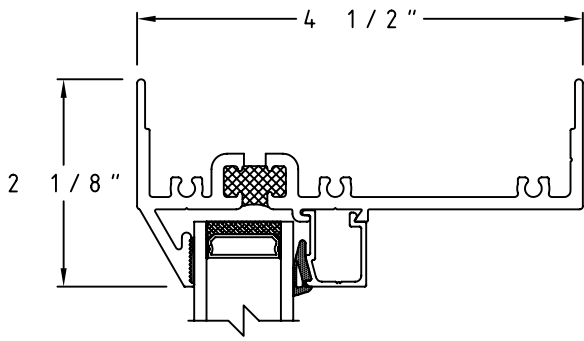


AAMA RATING:	FW-AW80
AIR INFILTRATION @ 50 mph	<0.01 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	120.38 PSF
DESIGN PRESSURE	90.28 PSF

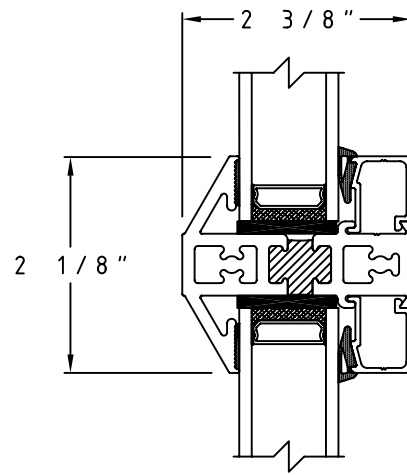
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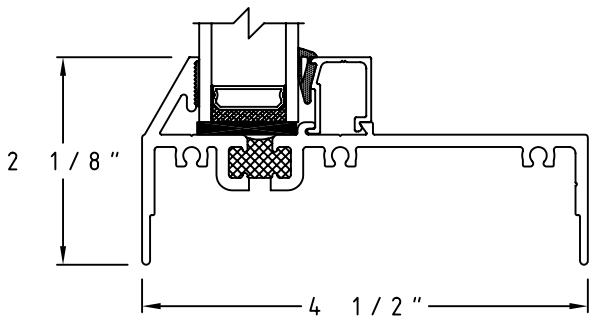
All Elevations are viewed outside looking in.



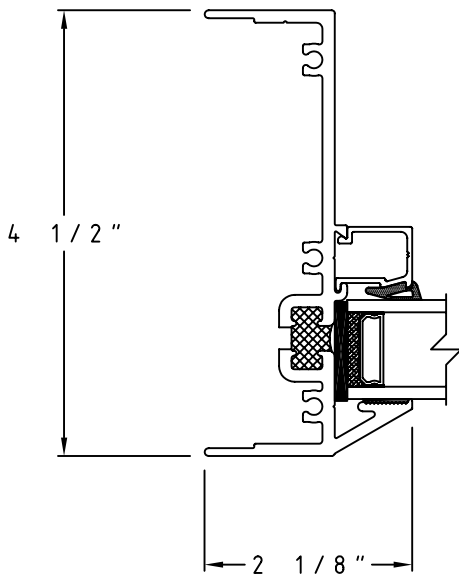
① Head Detail



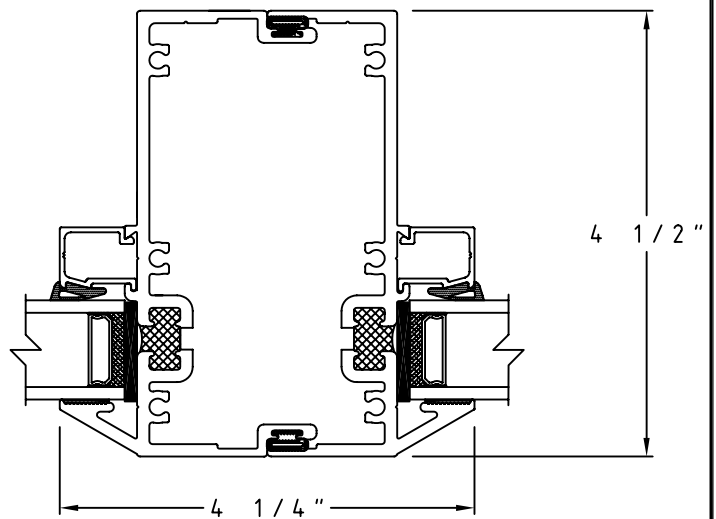
④ Horizontal True Muntin Detail



② Sill Detail



③ Jamb Detail



⑤ Fixed/Fixed with Male-Female Mullion



W I N D O W   A N D   D O O R

**Series 5745 FW-/AW80 Fixed Window.**

**SECTION 085113**

**PART 1 – GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
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ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).



W I N D O W   A N D   D O O R

**Series 5745 FW-/AW80 Fixed Window.**

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

**1.07 PRE-QUALIFICATION**

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

**1.08 SYSTEM DESCRIPTION**

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: FW-AW80.
- B. Fixed Windows are 4 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break; vent flush with exterior plane of frame; equal-leg frame; factory-assembled.
- C. Configuration: Fixed; single frame. **(Any configuration within one master frame limited only to a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket; **[Optional: 1-1/2" Insulating glass with special glazing bead adapter] [Optional: Monolithic single 1/4" exterior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite] [Optional: Monolithic dual glazing 1/4" exterior 1/4" interior lite with internal blinds]** factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. See Paragraph 2.06 for finish options.

**1.09 PERFORMANCE REQUIREMENTS**

- A. Conformance to FW-AW80 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  - 1. Air Infiltration Test: The window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration tested at 0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Uniform Deflection: No more than <.25 mm when tested per ASTM E 330 at a static air pressure difference of 90.28 psf.
  - 4. Structural Load Test: Window to be fixed, and maximum .2% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 120.38 psf.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type: D; Grade: 40.

**PART 2 – PRODUCTS**

**2.01 APPROVED MANUFACTURERS**

Champion 5745 Fixed Window

**2.02 MATERIALS**

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 4-1/2 inches. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.

**2.03 FABRICATION**

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped, butted with corners sealed, neatly joined and secured by means of two screws into integral screw ports. Vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: Backsealed mitered beveled glazing legs. The vent shall have a continuous 1/8" to 3/16" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame





## W I N D O W   A N D   D O O R

### Series 5745 FW-/AW80 Fixed Window.

creating equal spacing all around. Snap on glazing beads with the wedge gasket fully seated between the glazing bead and the glass without rippling. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. **Optional:** (Grey, Bronze, Green)
  - 3. Type: Annealed **Optional:** (Heat Strengthened, Tempered)
  - 4. Coating: **Optional:** (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. **Optional:** (Grey, Bronze, Green)
  - 3. Type: Annealed **Optional:** (Heat Strengthened, Tempered)
  - 4. Coating: **Optional:** (Pyrolitic Low-E on #3 surface)
- D. **Optional:** Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. **[Optional: Other panel, Spandrel Glass, etc.]**

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. **[Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]**
- C. Quality standard: conforming to AAMA 2603. **[Optional: 2604, 2605]**
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils **[Optional: 1.4 mil Acranar, 1.2 mils Duranar]** on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. **[Optional: custom color to be selected.]**

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. **[Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]**

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.



**Series 5745 FW-/AW80 Fixed Window.**

**3.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

**3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

**3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

**3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

**3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

**3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

**END OF SECTION 085113**

# 8000 Series

## 8000 Window Wall



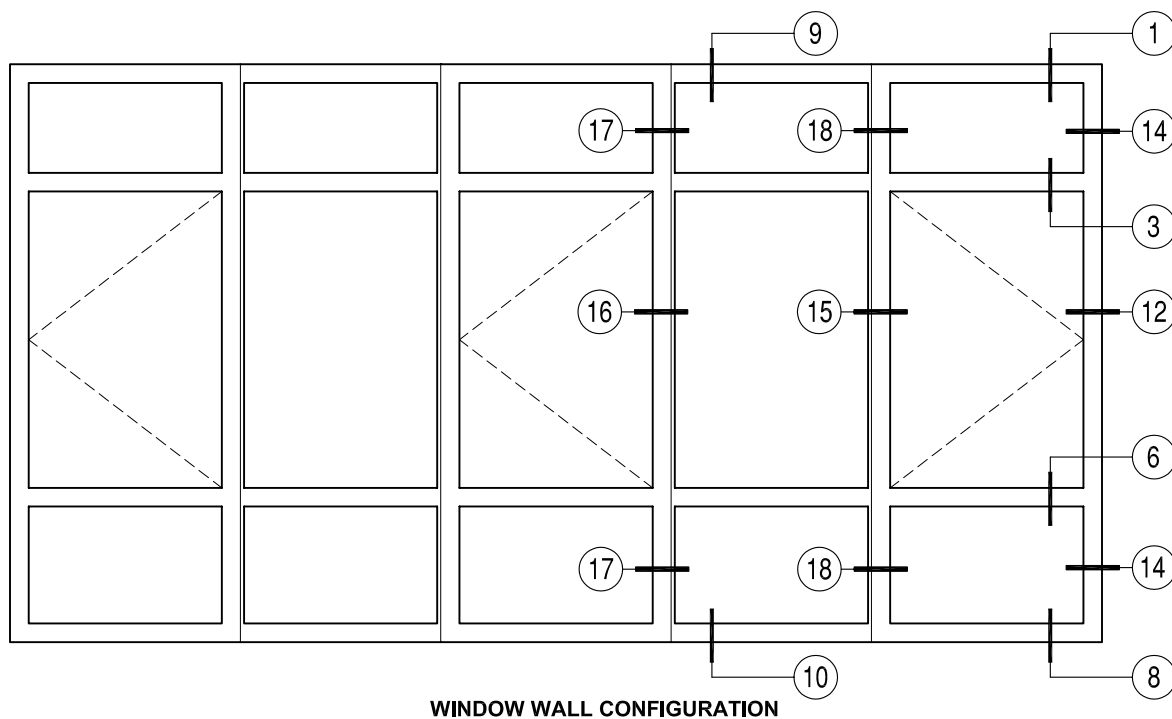
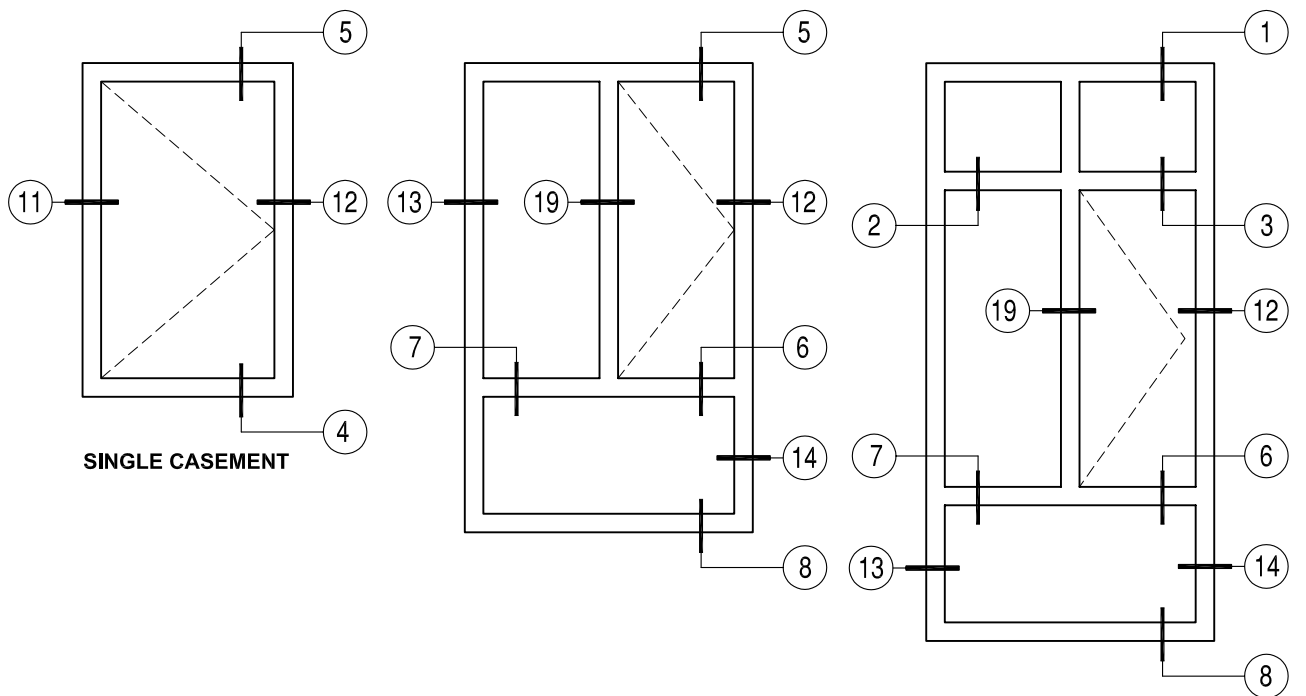
<u>Product By Operation:</u>	4-1/2" Casement
<u>Model By Family:</u>	8000
<u>Product Description:</u>	Casement Window
<u>Frame Depth:</u>	4-1/2"
<u>Flange Frame Head Options:</u>	~
<u>Flange Frame Jamb Options:</u>	~
<u>Flange Frame Sill Options:</u>	~
<u>101/I.S.2/A440-05 Rating:</u>	C-AW70
<u>AAMA Test Size:</u>	36" x 120"
<u>101/I.S.2/A440-05 Optional:</u>	C-HC70
<u>Optional Test Size:</u>	36" x 120"
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins
<u>Optional Glazing:</u>	~

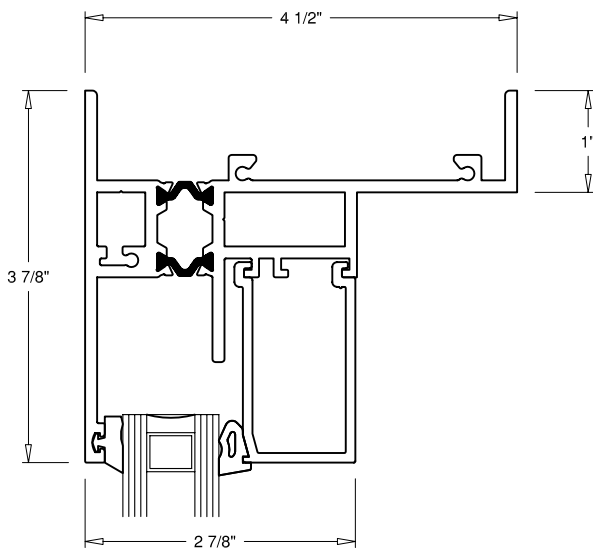


### Performance Data

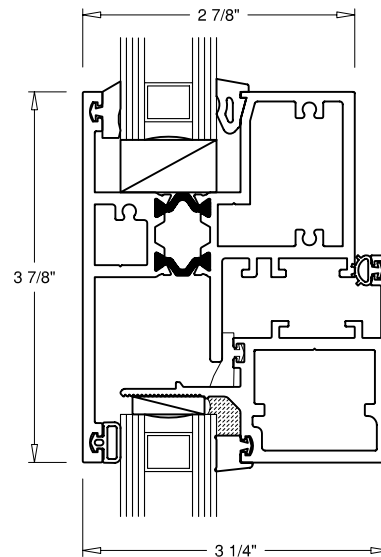


AAMA RATING:	C-AW70
AIR INFILTRATION @ 50 mph	0.08 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	105.33 PSF
DESIGN PRESSURE	70.22 PSF

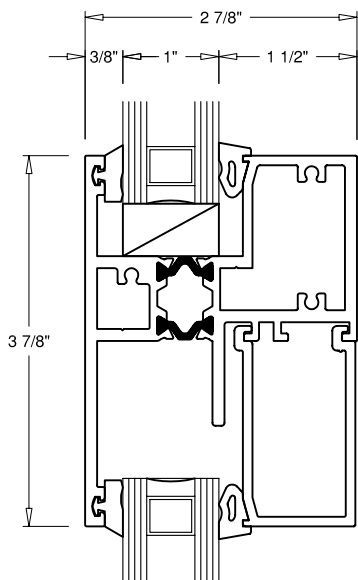




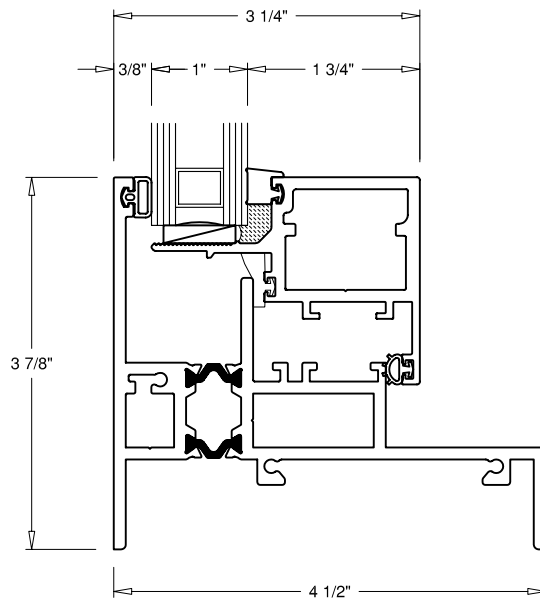
① **HEAD**  
**FIXED**



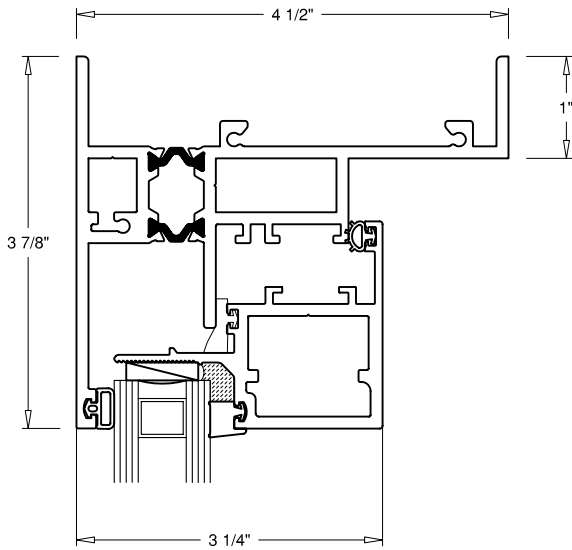
③ **INT. MULLION**  
**FIXED OVER OPERABLE**



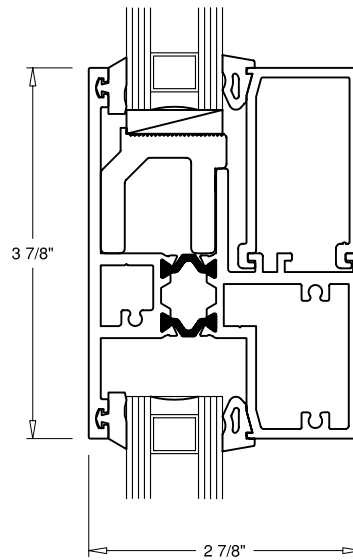
② **INT. MULLION**  
**FIXED OVER FIXED**



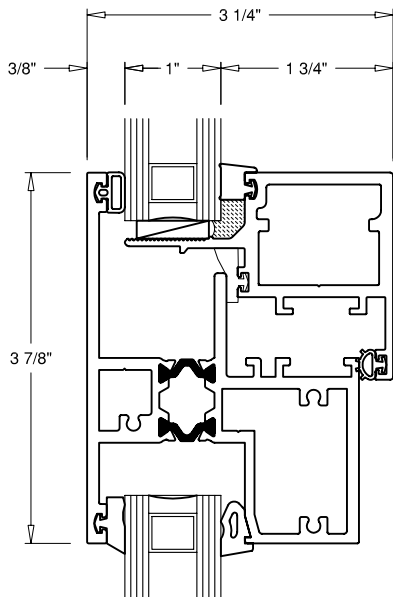
④ **SILL**  
**OPERABLE**



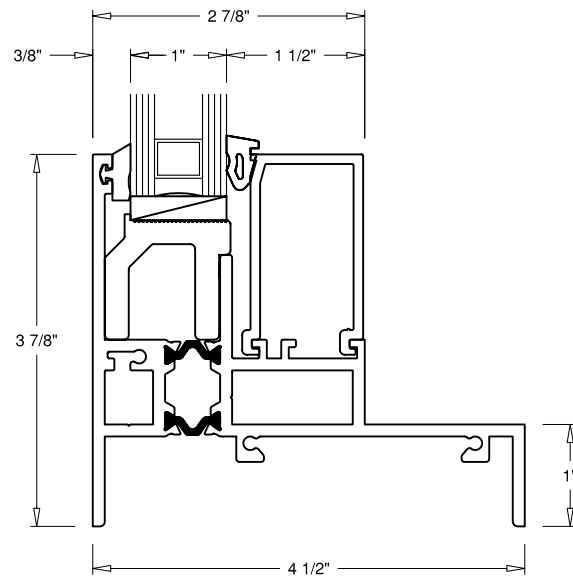
5 HEAD  
OPERABLE



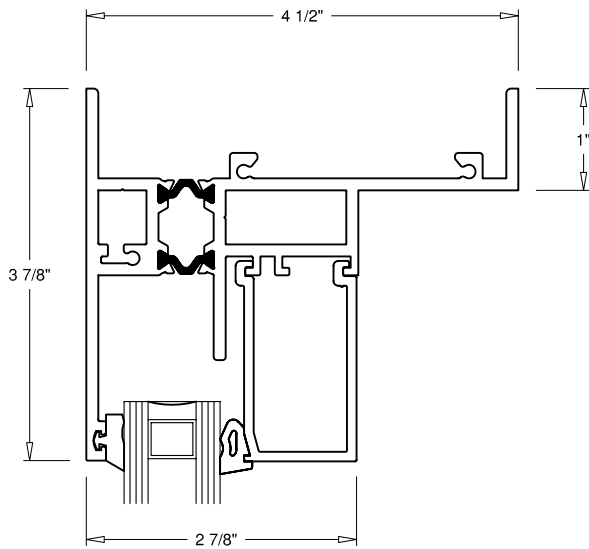
7 INT. MULLION  
FIXED OVER FIXED



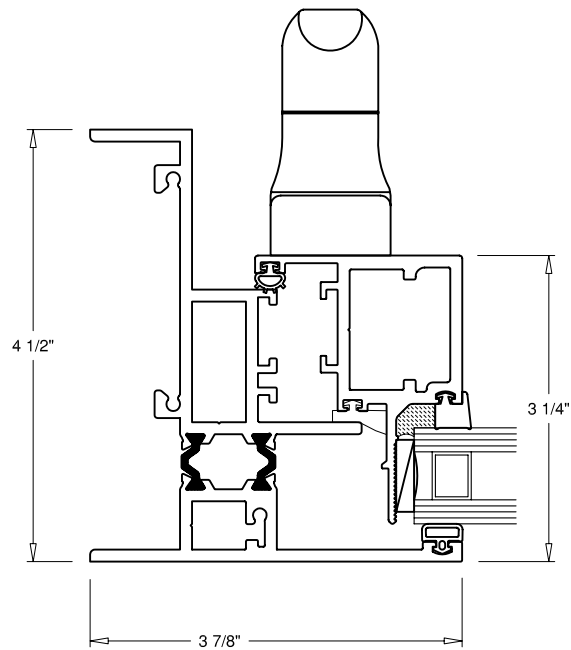
6 INT. MULLION  
OPERABLE OVER FIXED



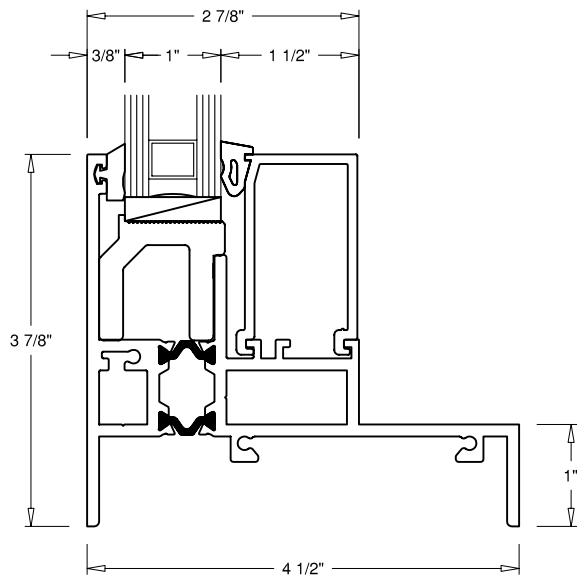
8 SILL  
FIXED



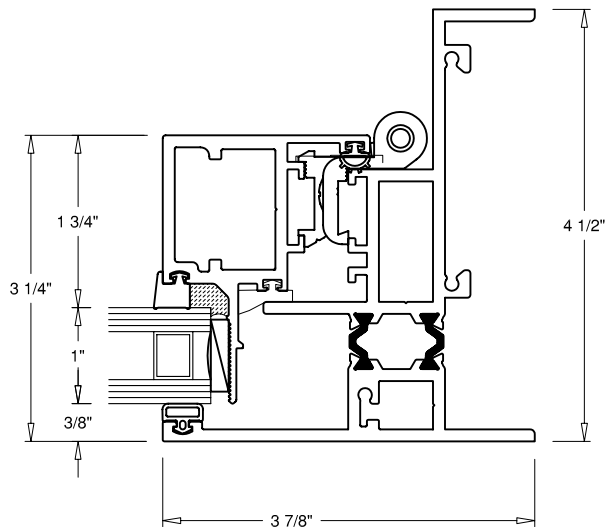
9 HEAD  
FIXED



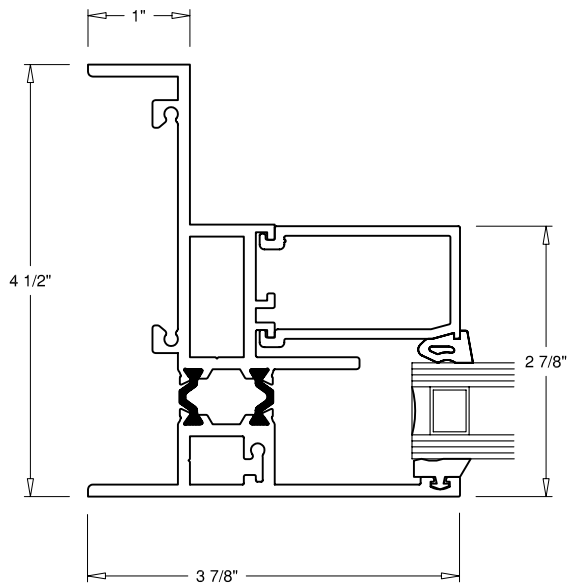
11 JAMB  
OPERABLE (HANDLE SIDE)



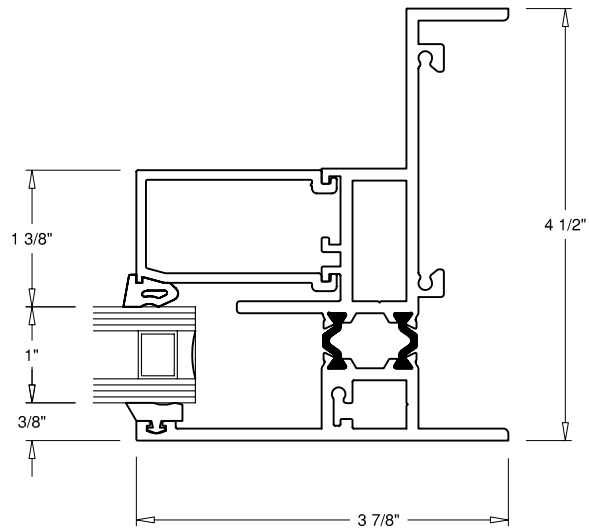
10 SILL  
FIXED



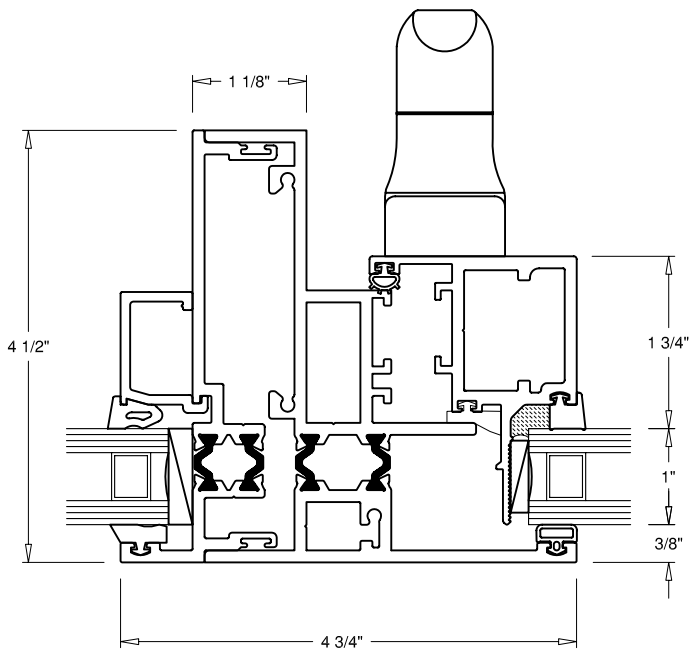
12 JAMB  
OPERABLE (HINGE SIDE)



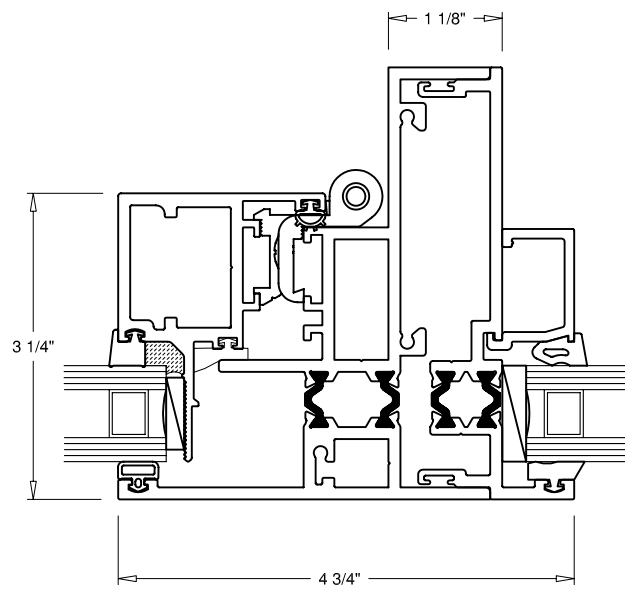
13 JAMB  
FIXED



14 JAMB  
FIXED

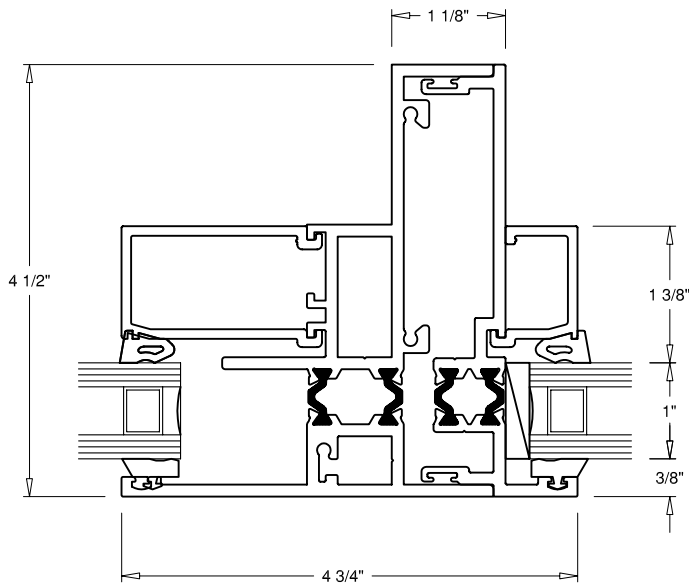


15 MULLION  
FIXED TO OPERABLE

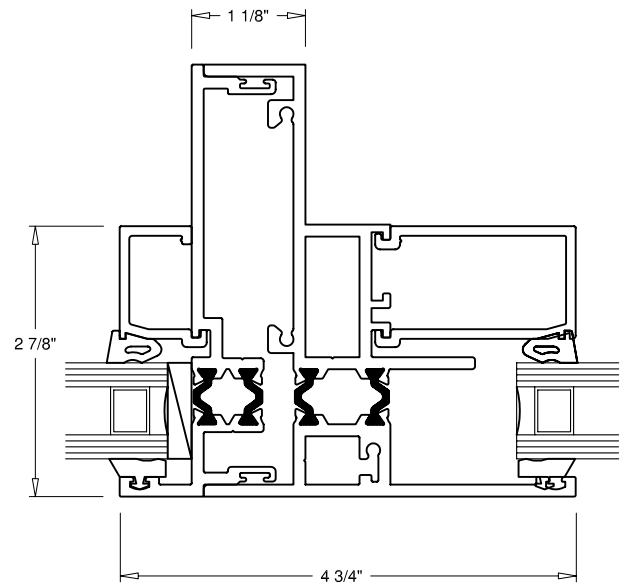


16 MULLION  
OPERABLE TO FIXED

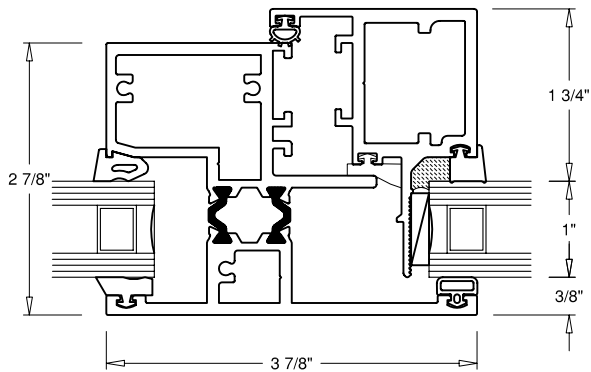




17 **MULLION**  
FIXED TO FIXED



18 **MULLION**  
FIXED TO FIXED



19 **INT. MULLION**  
FIXED TO OPERABLE



## Series 8000 C- AW70/HC70 Casement Inswing Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.



## Series 8000 C- AW70/HC70 Casement Inswing Window

### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: C-HC70 and C-AW70.
- B. Casement Inswing Windows are 4 1/2" frame depth; extruded aluminum with integral structural "insulbar" thermal break; equal-leg frame; factory-assembled.
- C. Configuration: casement inswing in combination with fixed panels. **(Any configuration within one master frame including a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: Sash - 1" insulating glass with structurally glazed silicone interior perimeter sealant and silicone spacer gasket; factory-glazed. Fixed - 1" insulating glass with EPDM gasket in exterior and interior. [Optional: Dual glazing with 1" insulating glass on the exterior and ¼" glass on an access panel] See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. [Optional: Different interior and exterior finishes] See Paragraph 2.06 for finish options.

### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **C-AW70** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 120" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.08 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 70.22 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 105.33 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to **C-HC70** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 120" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.07 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 70.22 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 105.33 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 8000 Casement Inswing Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 4-1/2 inches and 2-13/16 inches, respectively. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: Provide lever handle mounted to sash interior without exposed screws. Handle shall activate a concealed slide bar connected to multiple locking points on the frame as required by window size. [Optional: Window units shall be equipped with a limit stop at head and



### Series 8000 C- AW70/HC70 Casement Inswing Window

sill to prevent the window from opening more than a specified clear opening.] Provide butt hinges with stainless steel pins, minimum 0.250" in diameter. Attachment of hinges to the sash and main frame shall be by means of stainless steel machine screws.

- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All main frame vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames shall be thermally broken by the "insulbar" method. The thermal barrier material shall be of "insulbar" with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The vent shall have a continuous 1/4" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads on the vents are not permitted. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8", or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8", or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]



## Series 8000 C- AW70/HC70 Casement Inswing Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

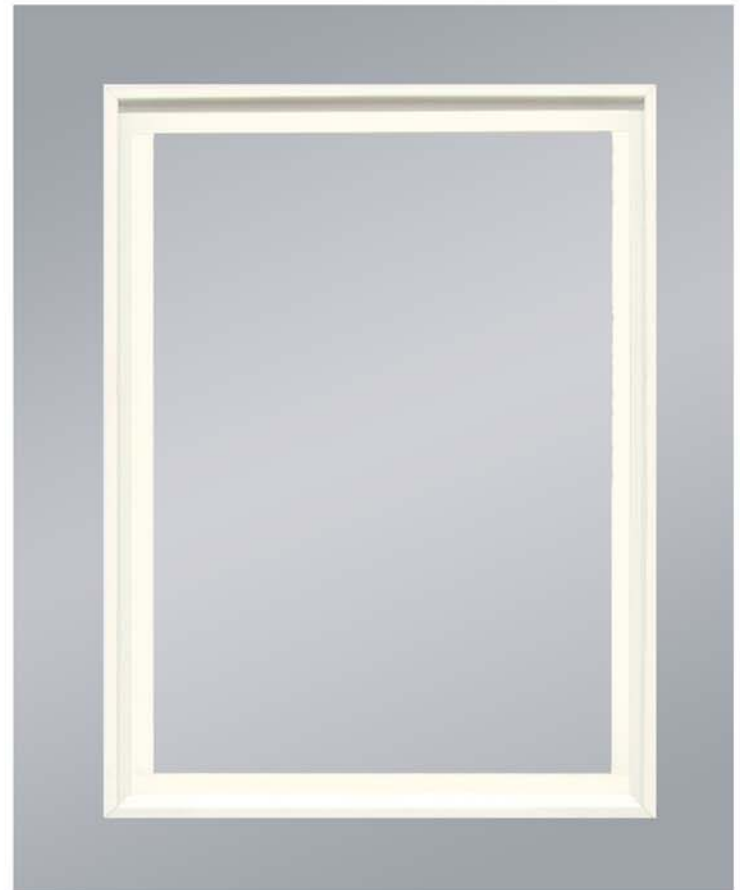
END OF SECTION 085113

# 8000 Series

## 8010 Fixed Window



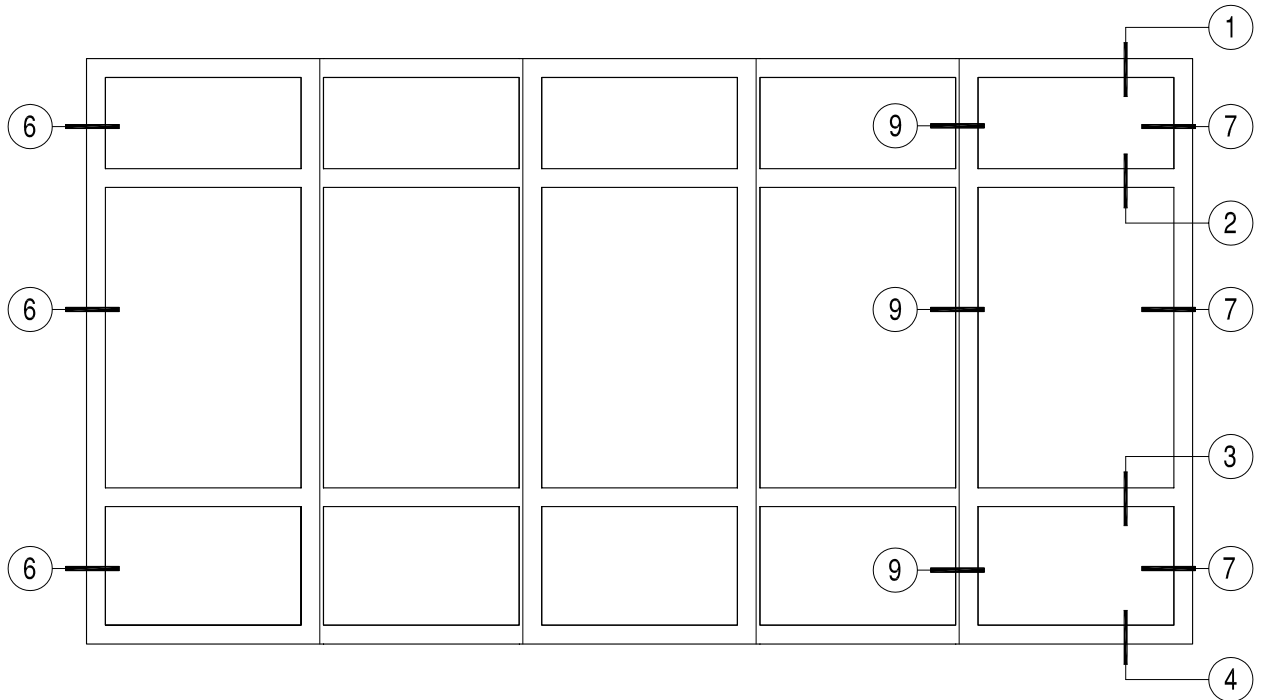
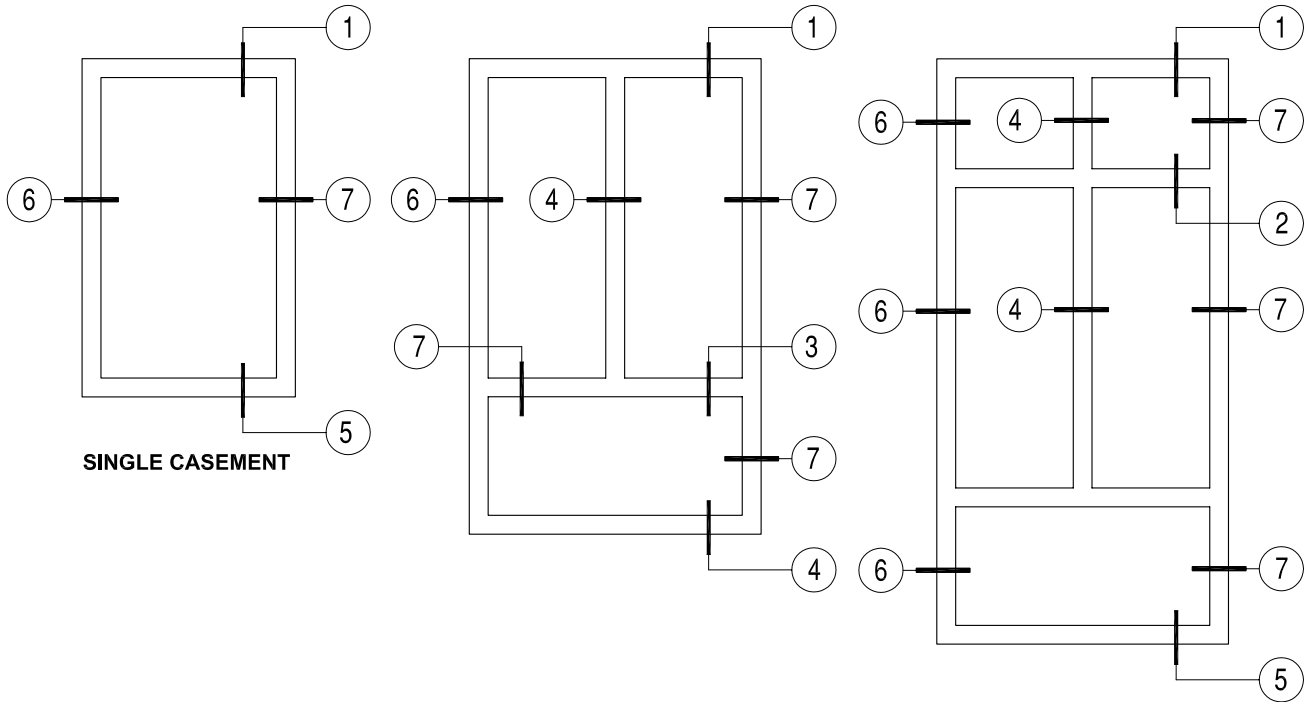
<u>Product By Operation:</u>	4-1/2" Fixed
<u>Model By Family:</u>	8000
<u>Product Description:</u>	Fixed Window
<u>Frame Depth:</u>	4-1/2"
<u>Flange Frame Head Options:</u>	~
<u>Flange Frame Jamb Options:</u>	~
<u>Flange Frame Sill Options:</u>	~
<u>101/I.S.2/A440-05 Rating:</u>	FW-AW110
<u>AAMA Test Size:</u>	60" x 99"
<u>101/I.S.2/A440-05 Optional:</u>	FW-HC100
<u>Optional Test Size:</u>	60" x 99"
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins
<u>Optional Glazing:</u>	~



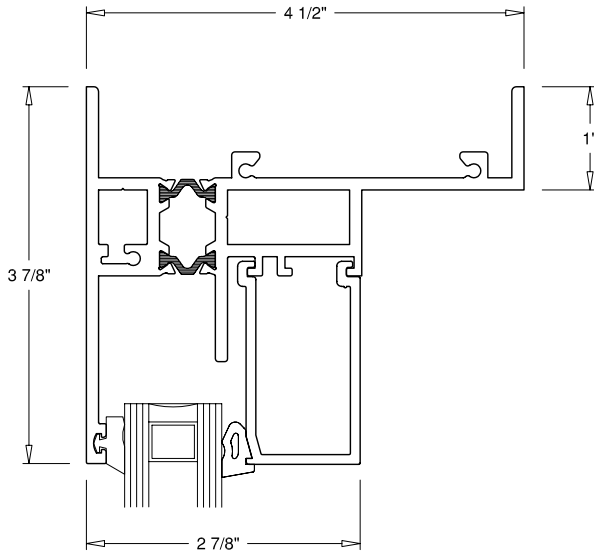
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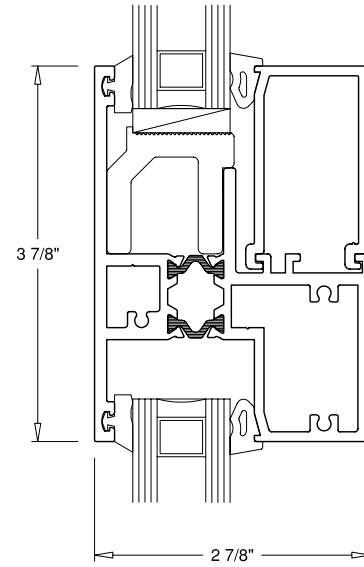
AAMA RATING:	FW-AW1120
AIR INFILTRATION @ 50 mph	<0.01 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	165.51 PSF
DESIGN PRESSURE	120.38 PSF



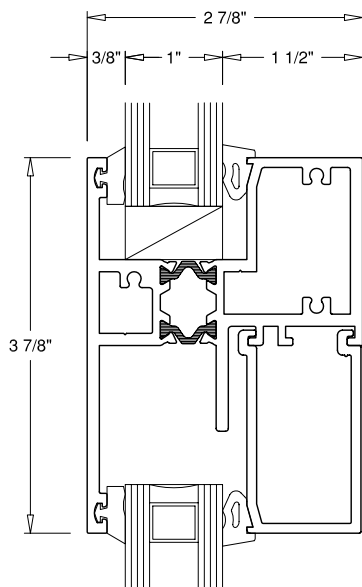
**WINDOW WALL CONFIGURATION**



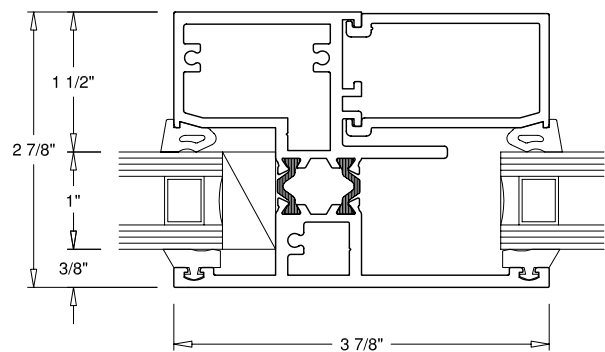
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**FIXED**



③ **INT. MULLION**  
**FIXED OVER FIXED**

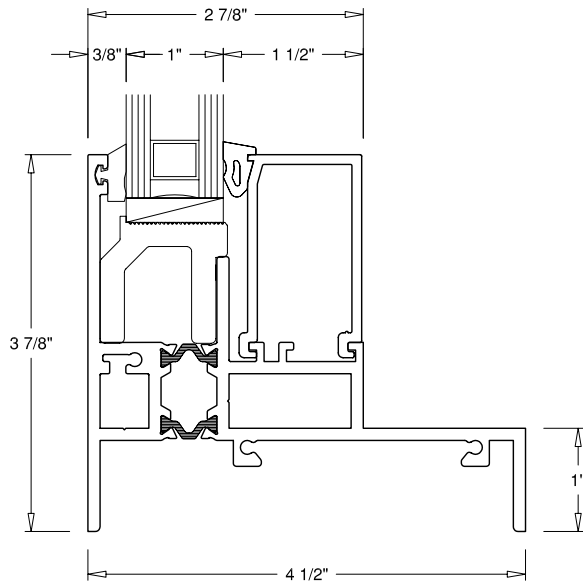


② **INT. MULLION**  
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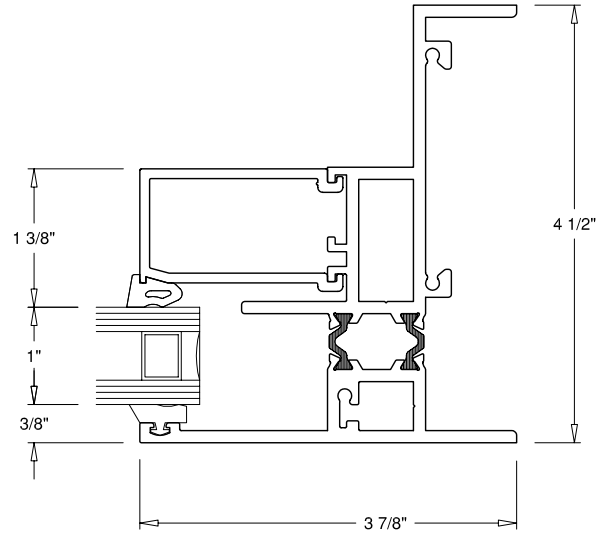


④ **MULLION**  
**FIXED TO FIXED**

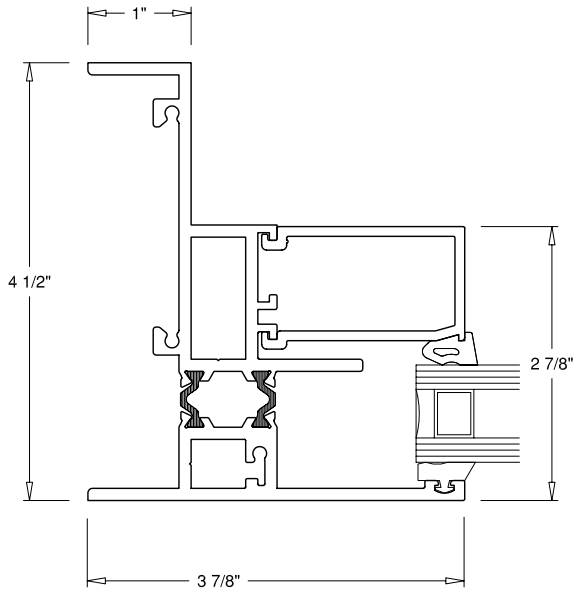




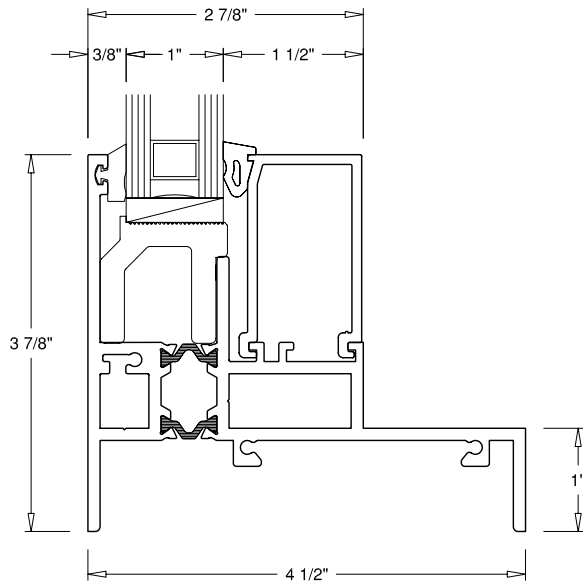
⑤ **SILL**  
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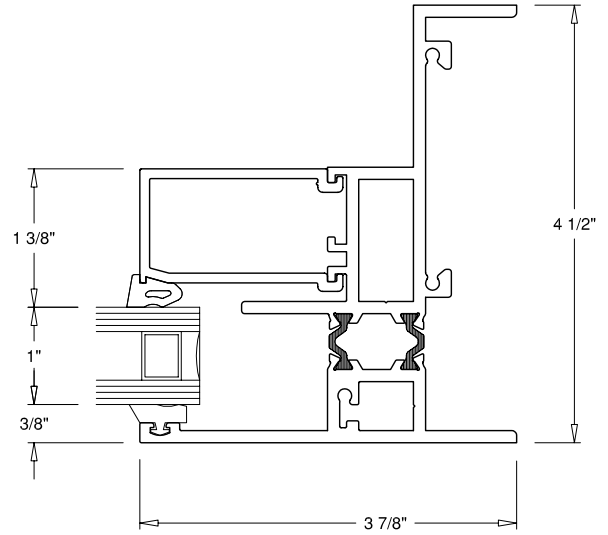
⑦ **JAMB**  
**FIXED**



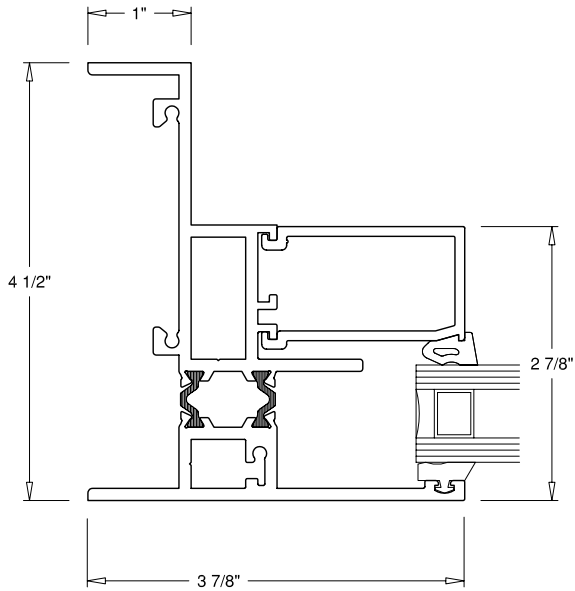
⑥ **JAMB**  
**FIXED**



⑤ **SILL**  
**FIXED**



⑦ **JAMB**  
**FIXED**



⑥ **JAMB**  
**FIXED**



## Series 8010 FW- HC100/AW110 Fixed Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.



## Series 8010 FW- HC100/AW110 Fixed Window

### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: FW-HC100 and FW-AW110.
- B. Fixed Windows are 4 1/2" frame depth; extruded aluminum with integral structural "insulbar" thermal break; equal-leg frame; factory-assembled.
- C. Configuration: casemet inswing in combination with fixed panels. **(Any configuration within one master frame including a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with EPDM gasket in exterior and interior; [Optional: Dual glazing with 1" insulating glass on the exterior and ¼" glass on an access panel] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. [Optional: Different interior and exterior finishes] See Paragraph 2.06 for finish options.

### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **FW-AW110** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall be <0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 165.51 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type D; Grade: 40.
- B. Conformance to **FW-HC100** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall be <0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 165.51 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type D; Grade: 40.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 8010 Fixed Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 4-1/2 inches and 2-13/16 inches, respectively. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: Provide lever handle mounted to sash interior without exposed screws. Handle shall activate a concealed slide bar connected to multiple locking points on the frame as required by window size. [Optional: Window units shall be equipped with a limit stop at head and



### Series 8010 FW- HC100/AW110 Fixed Window

sill to prevent the window from opening more than a specified clear opening.] Provide butt hinges with stainless steel pins, minimum 0.250" in diameter. Attachment of hinges to the sash and main frame shall be by means of stainless steel machine screws.

- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All main frame vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames shall be thermally broken by the "insulbar" method. The thermal barrier material shall be of "insulbar" with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The vent shall have a continuous 1/4" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads on the vents are not permitted. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8", or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8", or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]



## Series 8010 FW- HC100/AW110 Fixed Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 8000N Series

## 8000N Window Wall



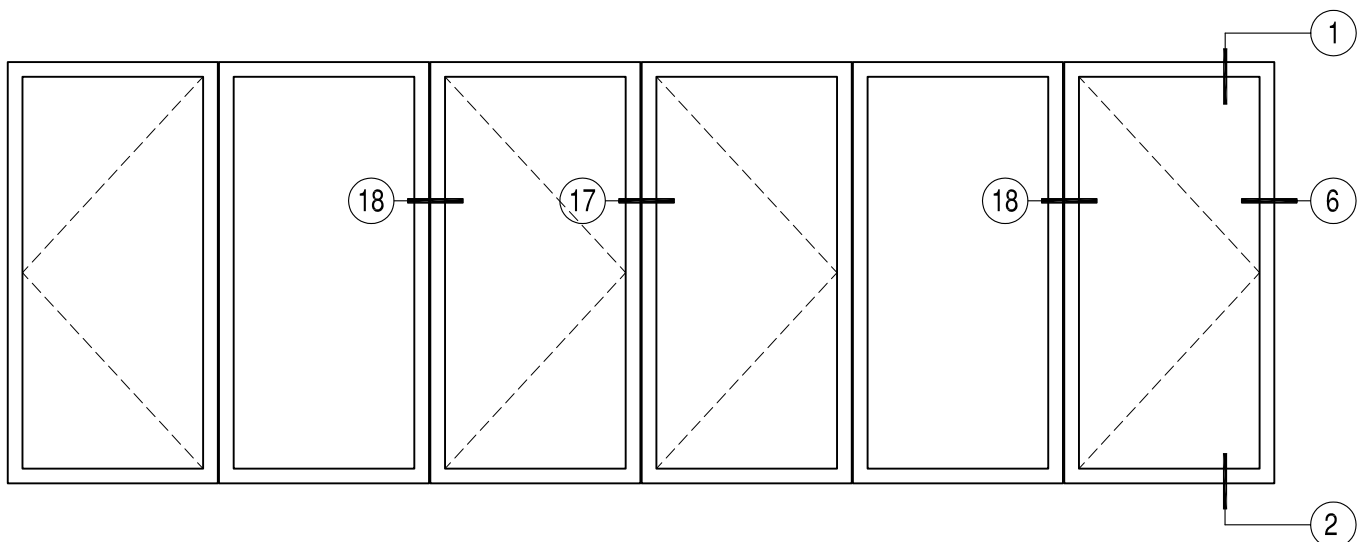
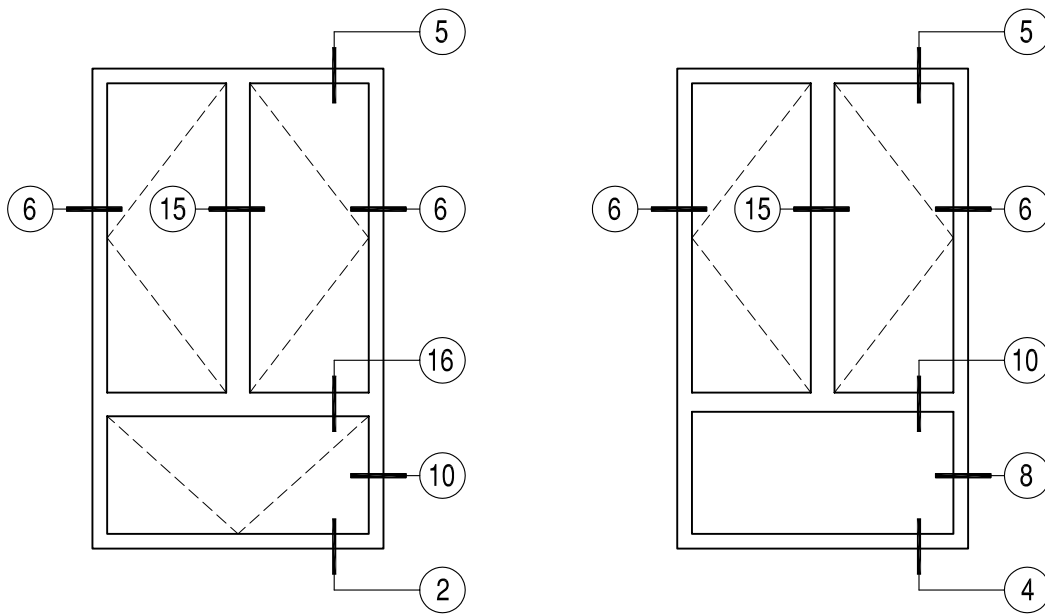
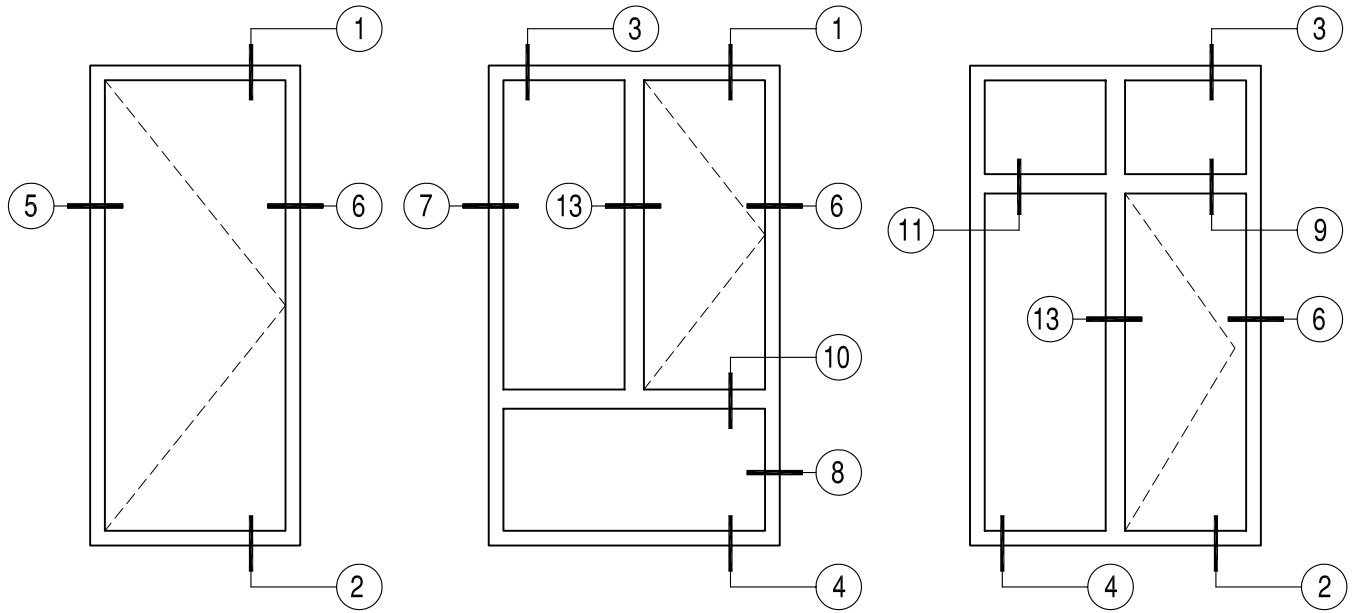
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<u>Model By Family:</u>	8000N
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<u>Flange Frame Head Options:</u>	~
<u>Flange Frame Jamb Options:</u>	~
<u>Flange Frame Sill Options:</u>	~
<u>101/I.S.2/A440-05 Rating:</u>	C-AW70
<u>AAMA Test Size:</u>	36" x 120"
<u>101/I.S.2/A440-05 Optional:</u>	C-HC70
<u>Optional Test Size:</u>	36" x 120"
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<u>Std. Glazing:</u>	1" Ins
<u>Optional Glazing:</u>	~



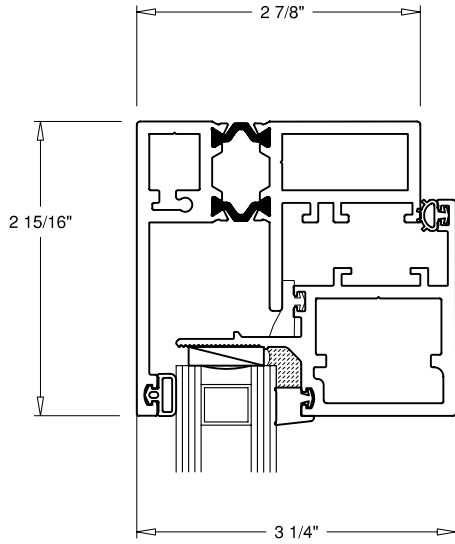
### Performance Data



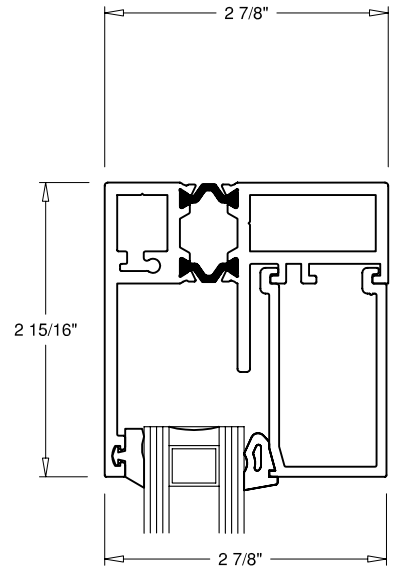
AAMA RATING:	C-AW70
AIR INFILTRATION @ 50 mph	0.08 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	105.33 PSF
DESIGN PRESSURE	70.22 PSF



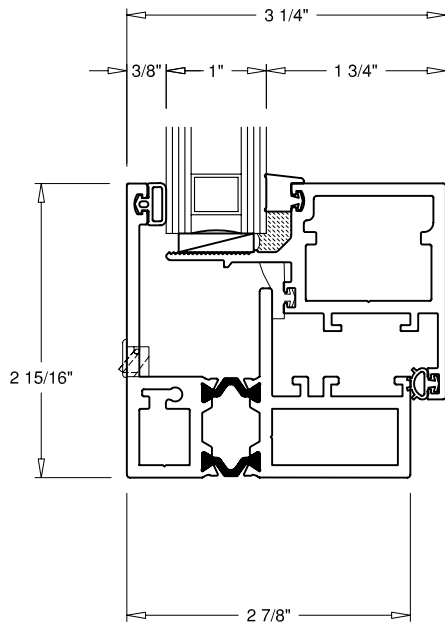




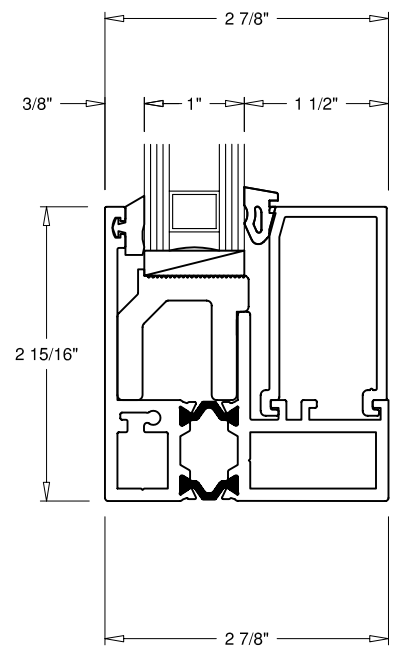
① **HEAD**  
**OPERABLE**



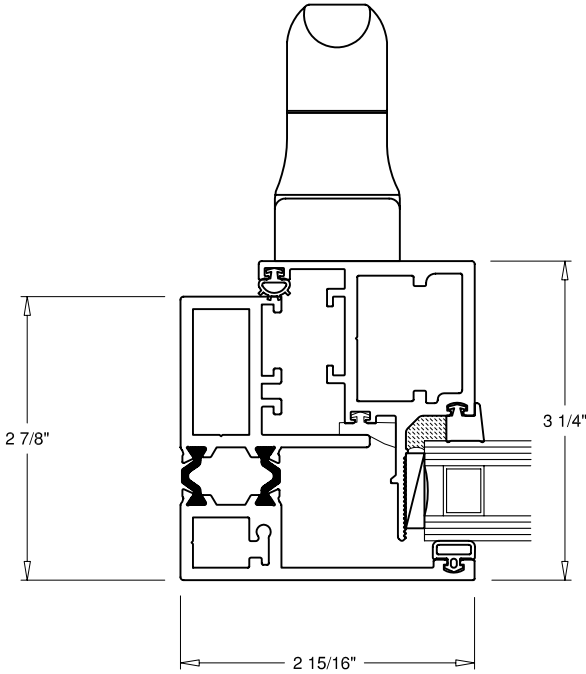
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**FIXED**



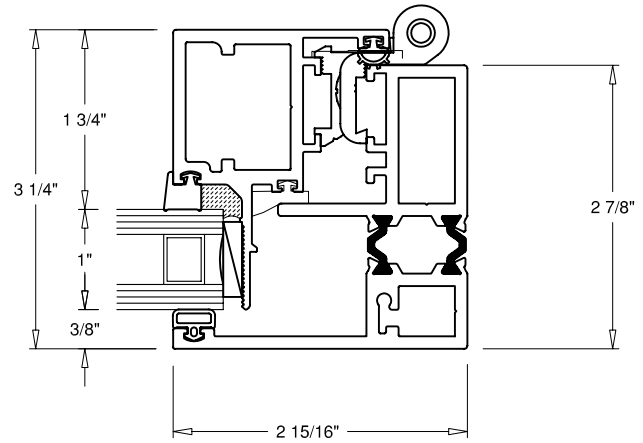
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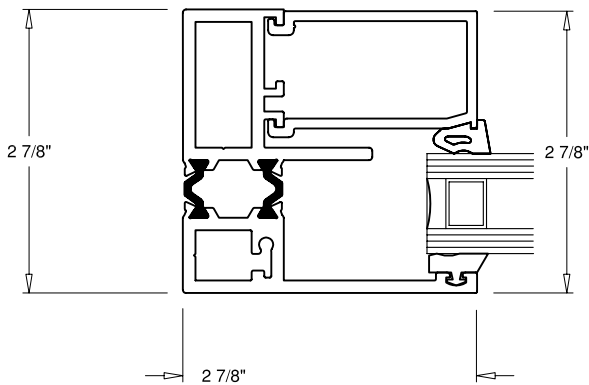
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**FIXED**



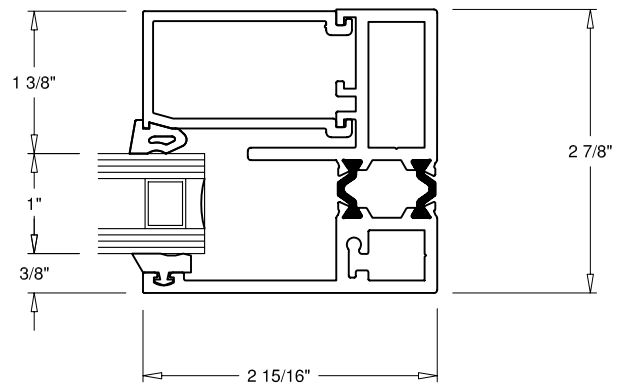
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OPERABLE (HANDLE SIDE)



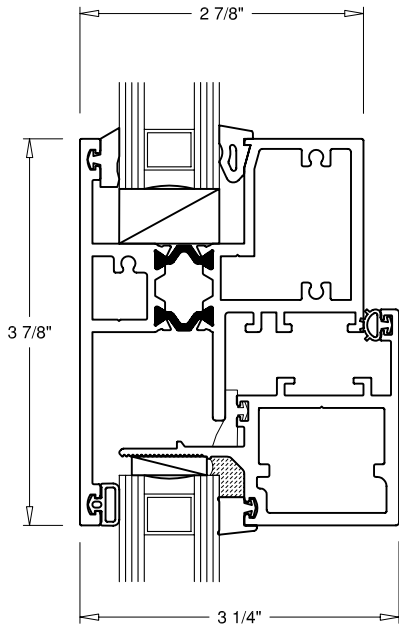
⑥ **JAMB**  
OPERABLE (HINGE SIDE)



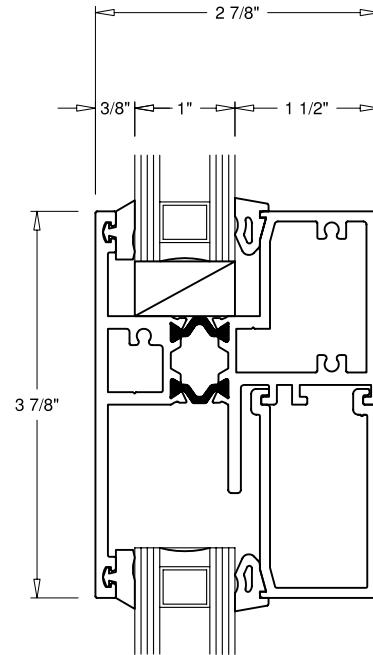
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FIXED



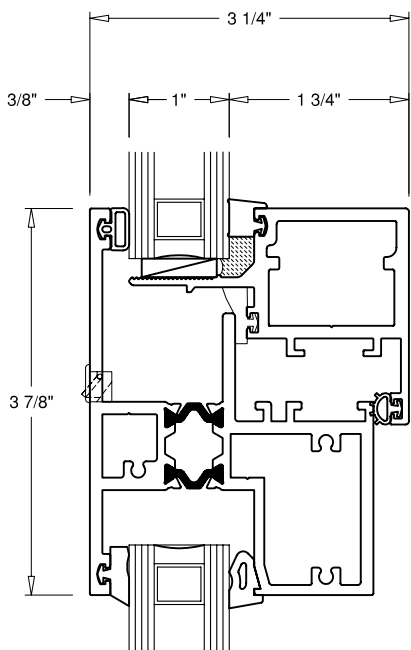
⑧ **JAMB**  
FIXED



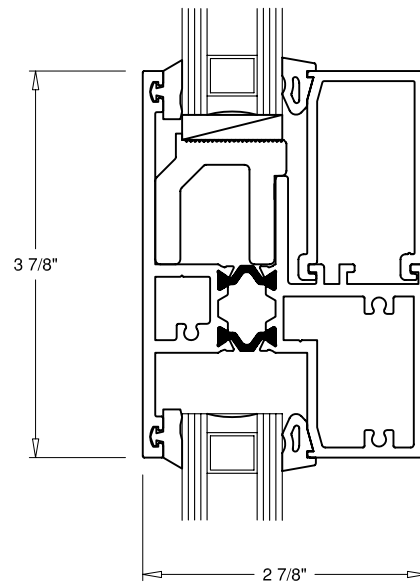
9 INT. MULLION  
FIXED OVER OPERABLE



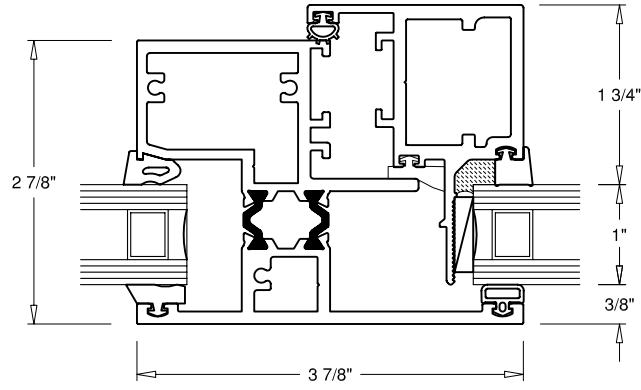
11 INT. MULLION  
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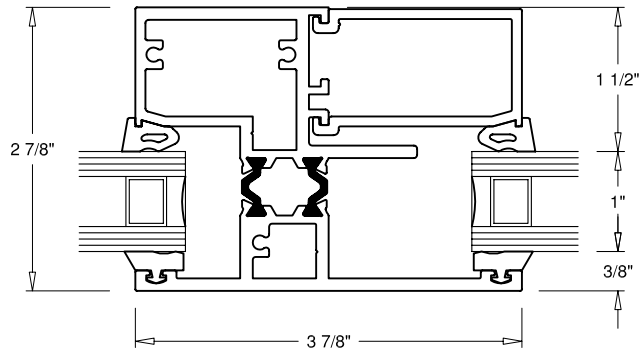
10 INT. MULLION  
OPERABLE OVER FIXED



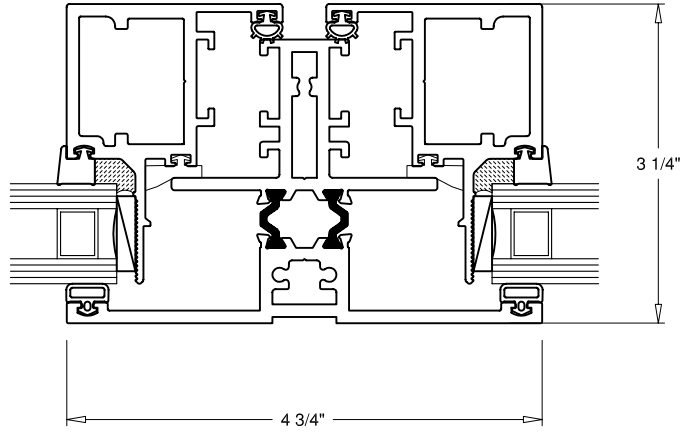
12 INT. MULLION  
FIXED OVER FIXED



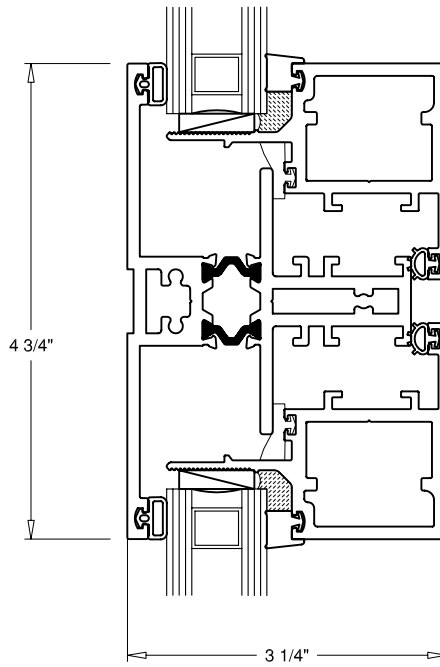
13 IMPOST  
FIXED TO OPERABLE



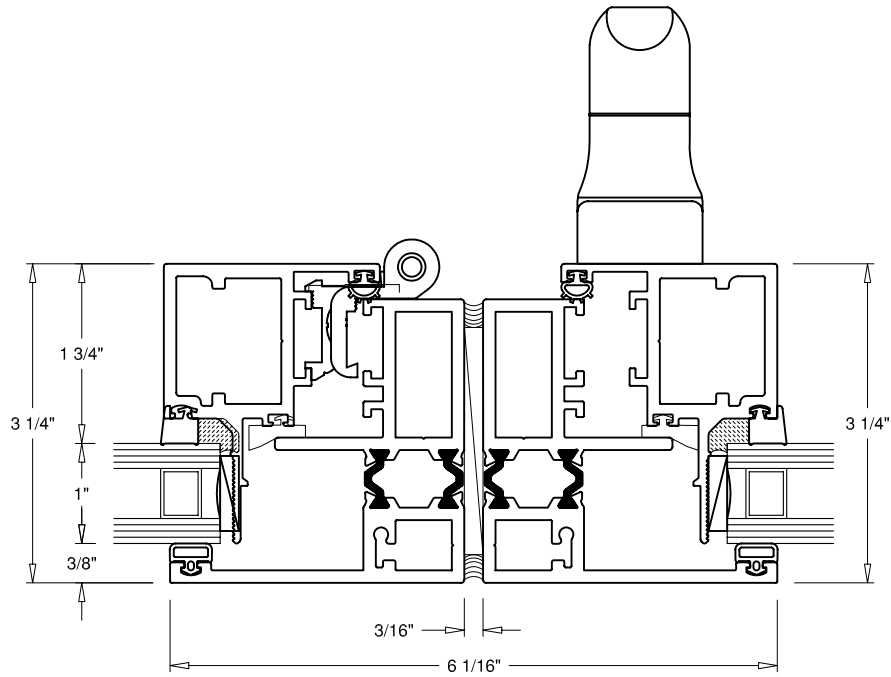
14 IMPOST  
FIXED TO FIXED



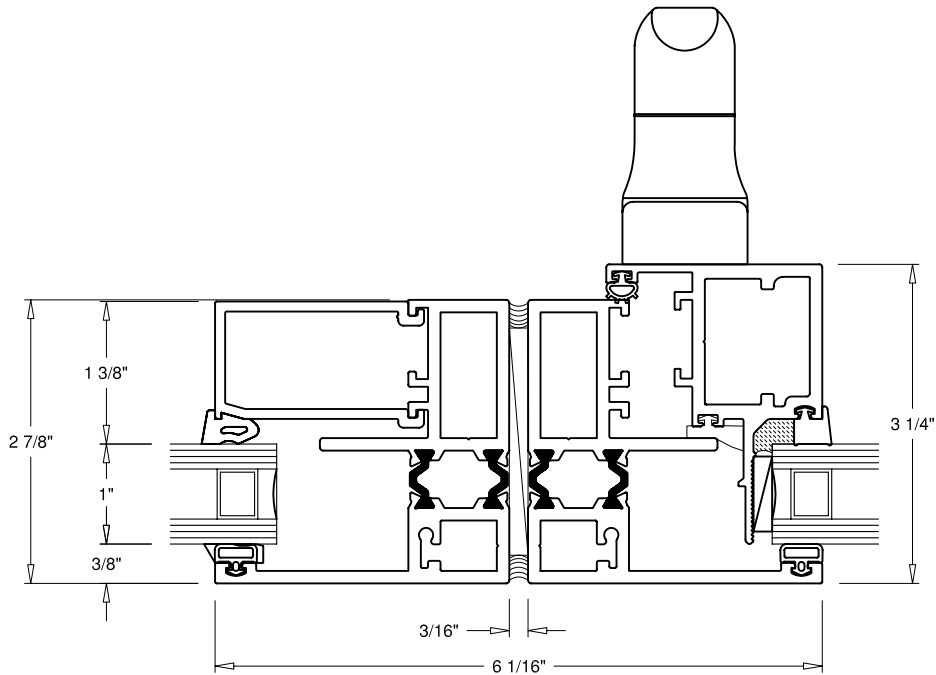
**15** IMPOST (VERTICAL)  
OPERABLE TO OPERABLE



**16** IMPOST (HORIZONTAL)  
OPERABLE TO OPERABLE



17 **MULLION**  
OPERABLE (HINGE SIDE)



18 **MULLION**  
FIXED TO OPERABLE



## Series 8000N C- AW70/HC70 Casement Inswing Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.



## Series 8000N C- AW70/HC70 Casement Inswing Window

### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: C-HC70 and C-AW70.
- B. Casement Inswing Windows are 2 7/8" frame depth; extruded aluminum with integral structural "insulbar" thermal break; equal-leg frame; factory-assembled.
- C. Configuration: casement inswing in combination with fixed panels. **(Any configuration within one master frame including a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: Sash - 1" insulating glass with structurally glazed silicone interior perimeter sealant and silicone spacer gasket; factory-glazed. Fixed - 1" insulating glass with EPDM gasket in exterior and interior. [Optional: Dual glazing with 1" insulating glass on the exterior and ¼" glass on an access panel] See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. [Optional: Different interior and exterior finishes] See Paragraph 2.06 for finish options.

### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **C-AW70** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 120" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.08 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 70.22 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 105.33 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.
- B. Conformance to **C-HC70** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 36" x 120" minimum test size with the following test results:
  1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.07 cfm/ft<sup>2</sup> at 6.2 psf.
  2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  3. Design Pressure: Design pressure when tested per ASTM E 330 of 70.22 psf.
  4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 105.33 psf with no damage.
  5. Forced Entry Resistance as per ASTM F 588 = Type B; Grade: 10.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 8000 Casement Inswing Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 4-1/2 inches and 2-13/16 inches, respectively. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: Provide lever handle mounted to sash interior without exposed screws. Handle shall activate a concealed slide bar connected to multiple locking points on the frame as required by window size. [Optional: Window units shall be equipped with a limit stop at head and





### Series 8000N C- AW70/HC70 Casement Inswing Window

sill to prevent the window from opening more than a specified clear opening.] Provide butt hinges with stainless steel pins, minimum 0.250" in diameter. Attachment of hinges to the sash and main frame shall be by means of stainless steel machine screws.

- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All main frame vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames shall be thermally broken by the "insulbar" method. The thermal barrier material shall be of "insulbar" with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The vent shall have a continuous 1/4" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads on the vents are not permitted. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" **Optional: (3/16" or 1/8" may be used, however structural performance will be limited to the capability of the glass).**
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Annealed **Optional: (Heat Strengthened, Tempered)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #2 surface)**
- C. Interior glass lite
  - 1. Thickness: 1/4" **Optional: (3/16" or 1/8" may be used, however structural performance will be limited to the capability of the glass).**
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Annealed **Optional: (Heat Strengthened, Tempered)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #3 surface)**
- D. **Optional: Dual Glazing (Non-Sealed glass)**
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. **[Optional: Other panel, Spandrel Glass, etc.]**

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. **[Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]**
- C. Quality standard: conforming to AAMA 2603. **[Optional: 2604, 2605]**
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils **[Optional: 1.4 mil Acranar, 1.2 mils Duranar]** on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. **[Optional: custom color to be selected.]**

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. **[Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]**



## Series 8000N C- AW70/HC70 Casement Inswing Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 8000N Series

## 8010N Fixed Window



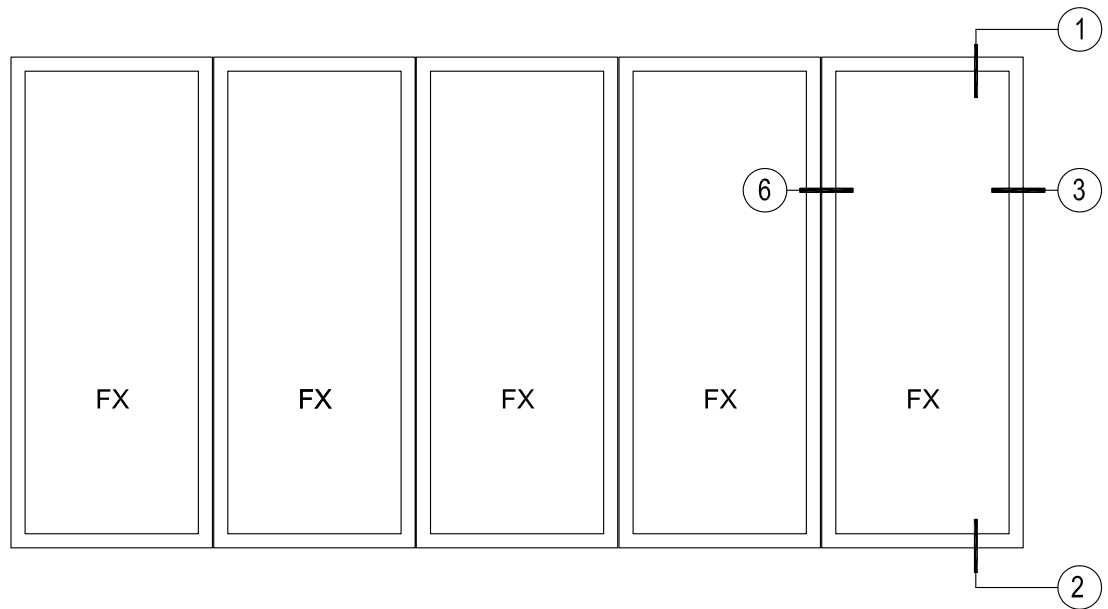
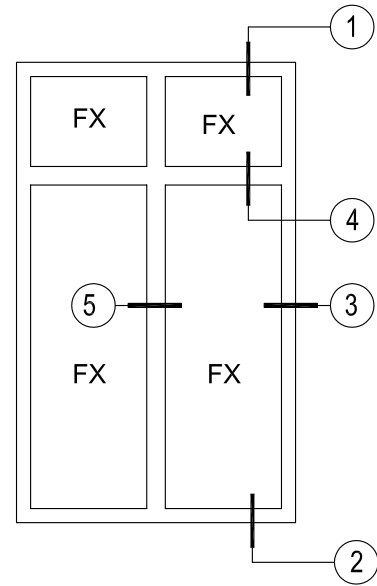
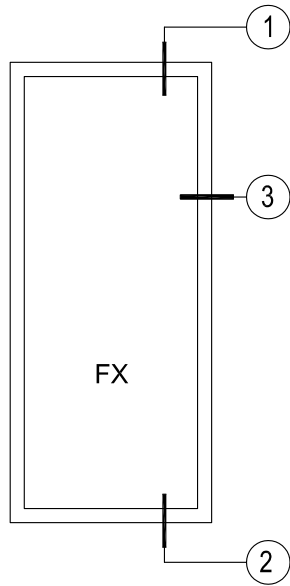
<u>Product By Operation:</u>	2-7/8" Fixed
<u>Model By Family:</u>	8000N
<u>Product Description:</u>	Fixed Window
<u>Frame Depth:</u>	2-7/8"
<u>Flange Frame Head Options:</u>	~
<u>Flange Frame Jamb Options:</u>	~
<u>Flange Frame Sill Options:</u>	~
<u>101/I.S.2/A440-05 Rating:</u>	FW-AW110
<u>AAMA Test Size:</u>	60" x 99"
<u>101/I.S.2/A440-05 Optional:</u>	FW-HC100
<u>Optional Test Size:</u>	60" x 99"
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins
<u>Optional Glazing:</u>	~

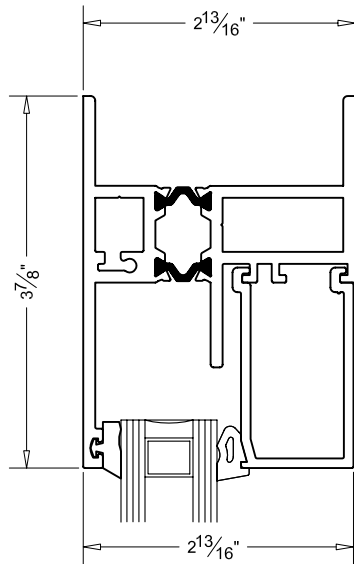


### Performance Data

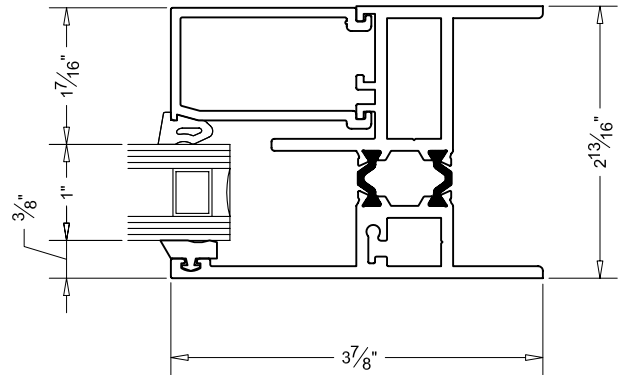


AAMA RATING:	FW-AW1120
AIR INFILTRATION @ 50 mph	<0.01 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	165.51 PSF
DESIGN PRESSURE	120.38 PSF

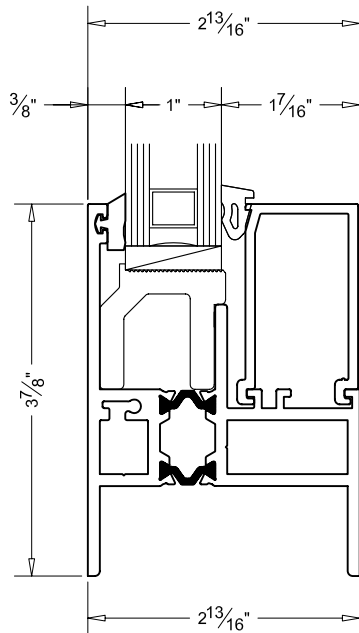




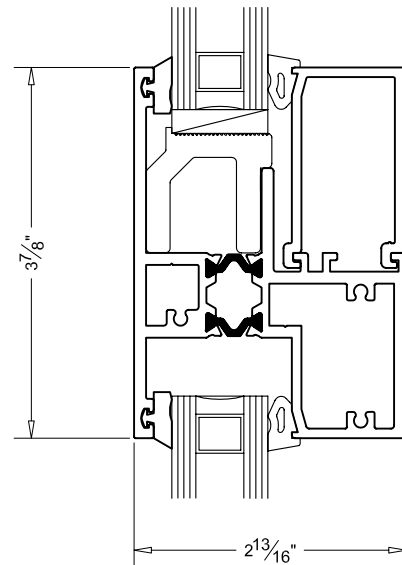
① **HEAD  
FIXED**



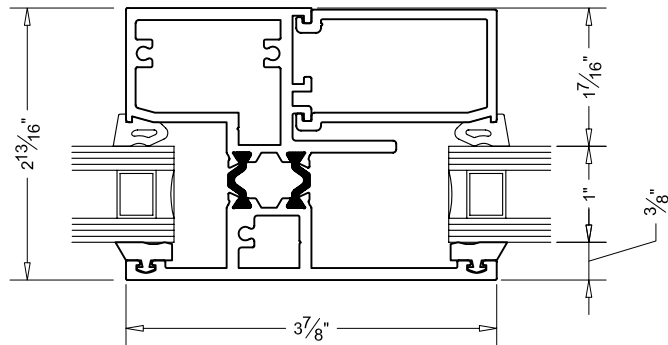
③ **JAMB  
FIXED**



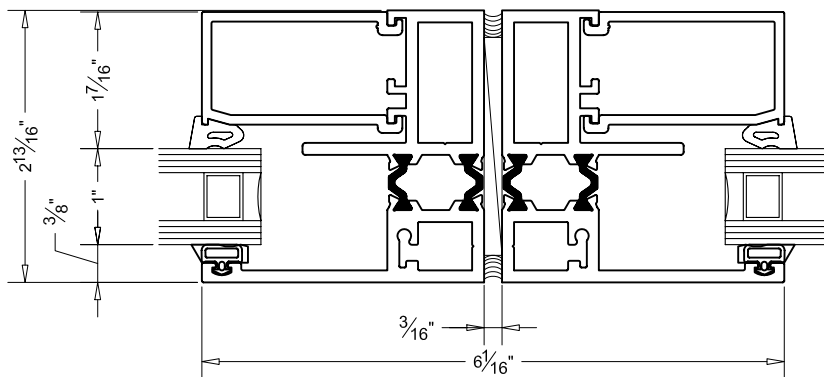
② **SILL  
FIXED**



④ **INT. MULLION  
FIXED OVER FIXED**



5 **IMPOST**  
FIXED TO FIXED



6 **MULLION**  
FIXED TO FIXED



## Series 8010N FW- HC100/AW110 Fixed Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
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AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.



## Series 8010N FW- HC100/AW110 Fixed Window

### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-05 Designation: FW-HC100 and FW-AW110.
- B. Fixed Windows are 2 7/8" frame depth; extruded aluminum with integral structural "insulbar" thermal break; equal-leg frame; factory-assembled.
- C. Configuration: casemet inswing in combination with fixed panels. **(Any configuration within one master frame including a four-point intersection of horizontal & vertical mullions)**
- D. Glazing: 1" insulating glass with EPDM gasket in exterior and interior; [Optional: Dual glazing with 1" insulating glass on the exterior and ¼" glass on an access panel] factory-glazed. See glass description in paragraph 2.04.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria or dipped anodizing. [Optional: Different interior and exterior finishes] See Paragraph 2.06 for finish options.

### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **FW-AW110** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall be <0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 165.51 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type D; Grade: 40.
- B. Conformance to **FW-HC100** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  - 1. Air Infiltration Test: With the vent in a closed and locked position, the window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall be <0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 120.38 psf.
  - 4. Structural Load Test: The window shall be subjected to a positive and negative structural load test in accordance with ASTM E 330 at 165.51 psf with no damage.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type D; Grade: 40.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 8010 Fixed Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main frame and sash members shall have a nominal wall thickness of not less than .125". Main frame and sash members shall have an overall depth of not less than 2-13/16 inches and 2-13/16 inches, respectively. Frame sill shall have a nominal wall thickness of .125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used.
- D. Hardware: Provide lever handle mounted to sash interior without exposed screws. Handle shall activate a concealed slide bar connected to multiple locking points on the frame as required by window size. [Optional: Window units shall be equipped with a limit stop at head and





### Series 8010N FW- HC100/AW110 Fixed Window

sill to prevent the window from opening more than a specified clear opening.] Provide butt hinges with stainless steel pins, minimum 0.250" in diameter. Attachment of hinges to the sash and main frame shall be by means of stainless steel machine screws.

- E. Hardware having component parts, which are exposed, shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- F. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All main frame vent construction is mitered, keyed, crimped, with sealed corners.
- B. Thermal Barrier: All main frames shall be thermally broken by the "insulbar" method. The thermal barrier material shall be of "insulbar" with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The vent shall have a continuous 1/4" bead of structural silicone on the glazing legs. Glass shall be set into the glazing pocket square with the vent and shall have setting blocks set between the glass and the vent frame creating equal spacing all around. Snap on glazing beads on the vents are not permitted. Continuous wedge gasket is not acceptable.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8", or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8", or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Optional: Dual Glazing (Non-Sealed glass)
  - 1. Provide non-hermetically sealed lites of glass.
  - 2. Glass lites to be (Select from glass choices above and include here).
- E. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with corrugated polyallomer stabilizers and Aluminum Skin on the interior and exterior. Core to be polystyrene. [Optional: Other panel, Spandrel Glass, etc.]

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]



## Series 8010N FW- HC100/AW110 Fixed Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 2000 Series

## 2000 Slider



<u>Product By Operation:</u>	3-1/4" Sliding
<u>Model By Family:</u>	2000
<u>Product Description:</u>	Horizontal Slider
<u>Frame Depth:</u>	3-1/4"
<u>Flange Frame Head Options:</u>	1 1/2"
<u>Flange Frame Jamb Options:</u>	1 1/2"
<u>Flange Frame Sill Options:</u>	1 1/2"
<u>101/I.S. 2/A440-05 Rating:</u>	HS-C55
<u>AAMA Test Size:</u>	71 x 60
<u>101/I.S. 2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	7/8" Insul.
<u>Optional Glazing:</u>	~

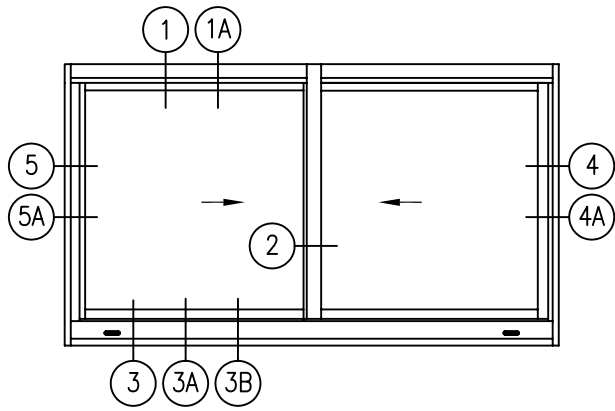


### Performance Data

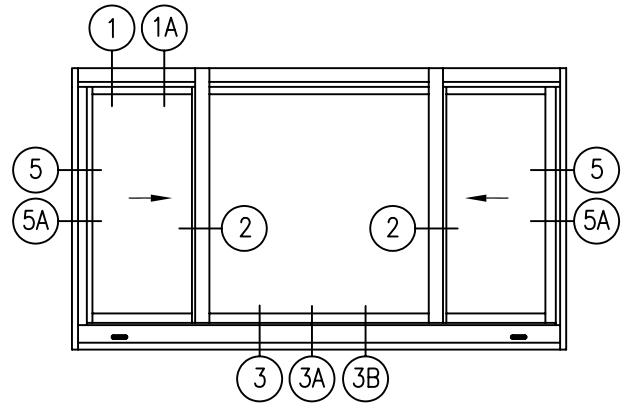


AAMA RATING:	HS-C55
AIR INFILTRATION @ 25 mph	0.07 CFM
WATER TEST PRESSURE	8.36 PSF
STRUCTURAL LOAD	82.76 PSF
DESIGN PRESSURE	55.17 PSF

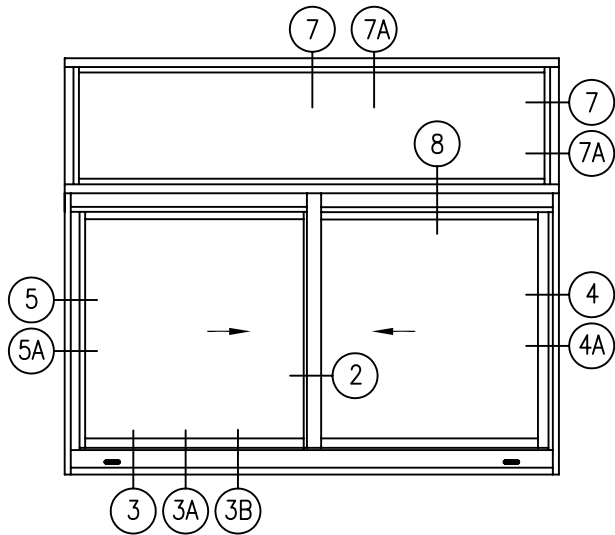
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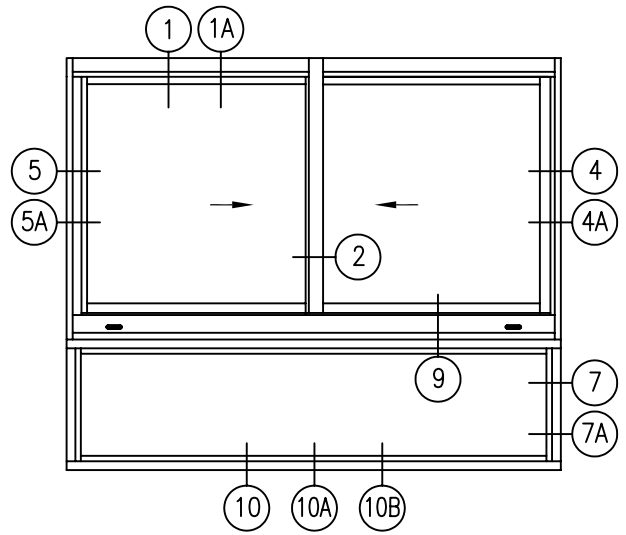
2-Lite Slider



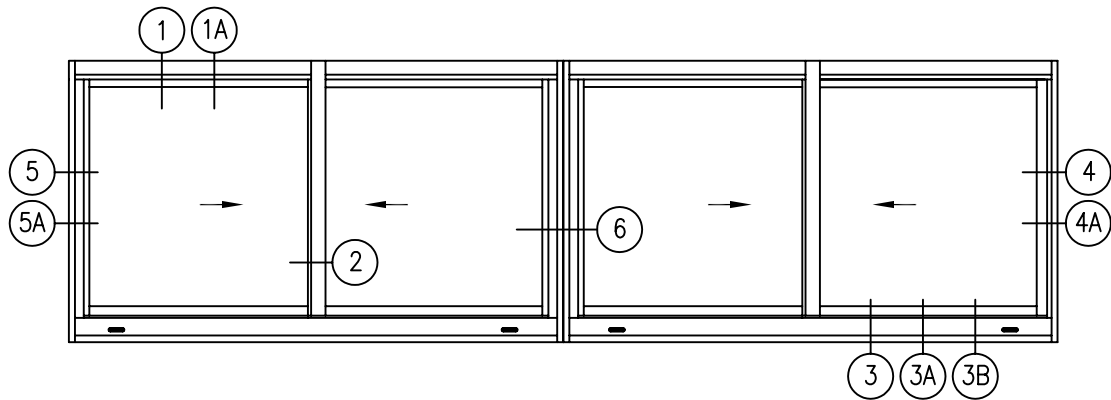
3-Lite Slider



2-Lite Slider with Top Transom

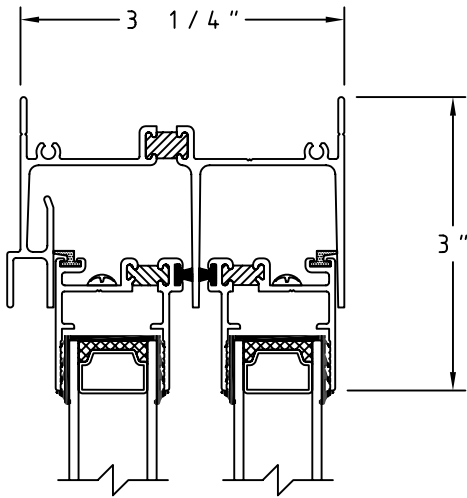


2-Lite Slider with Bottom Transom

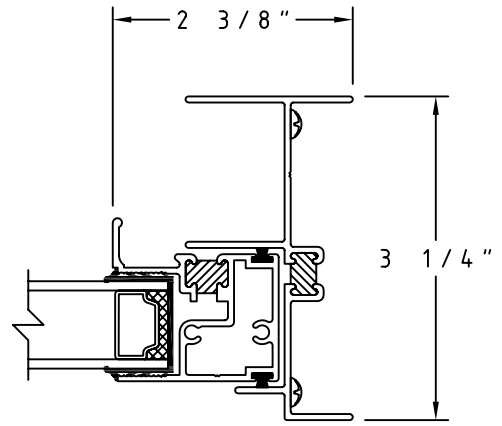


Twin 2-Lite Sliders with H Mullion

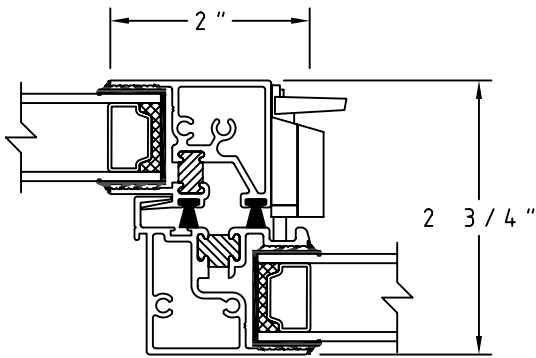
All Elevations are viewed outside looking IN.



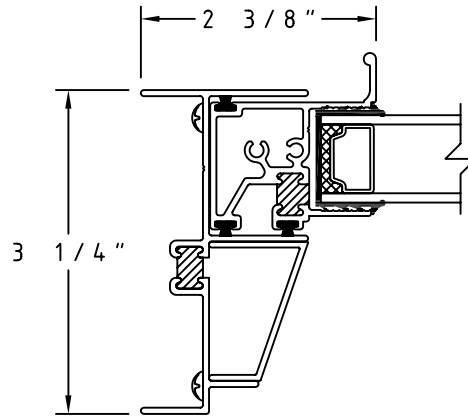
① Head Detail



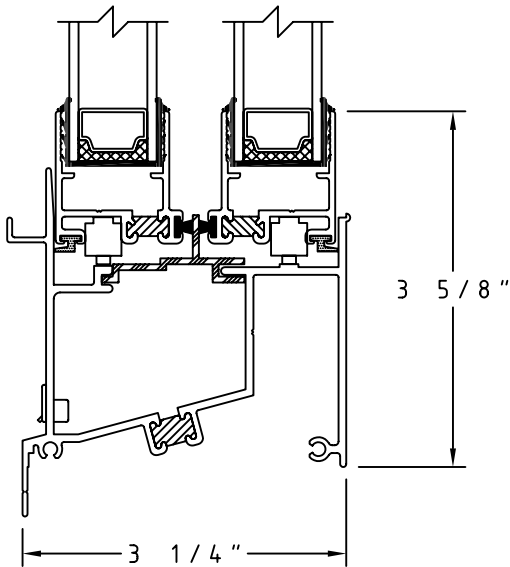
④ Right Jamb Detail



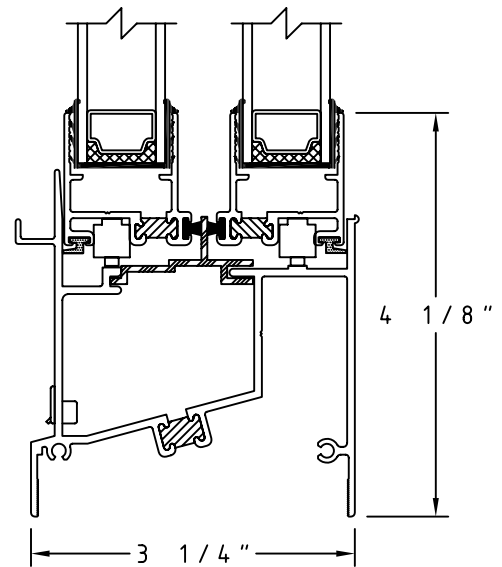
② Interlock Detail



⑤ Left Jamb Detail

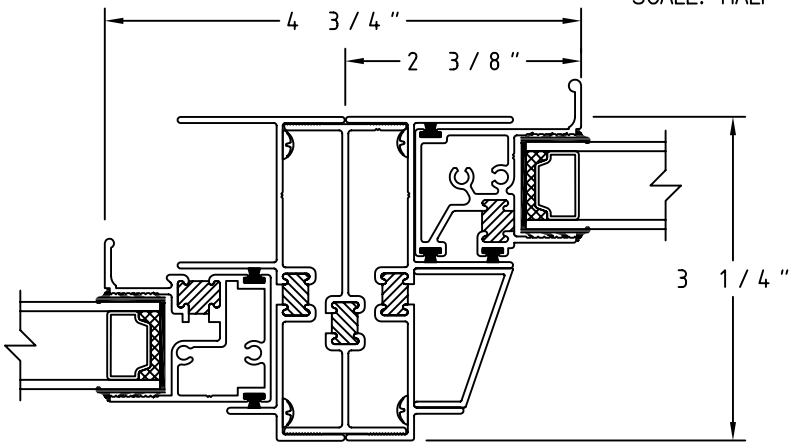


③ Sill Detail

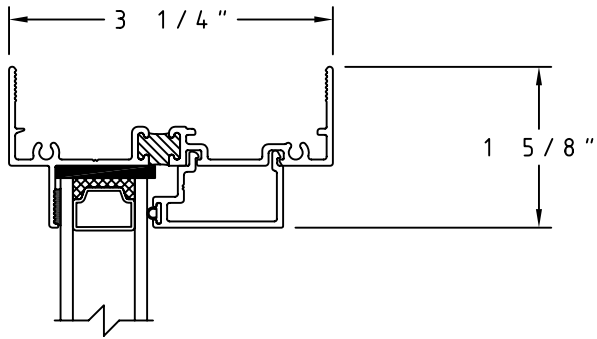


③A Equal Leg Sill Detail

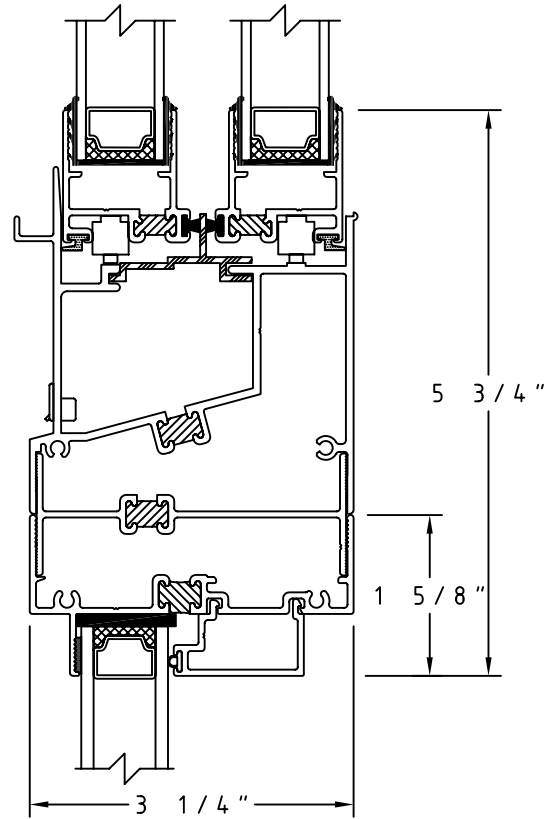
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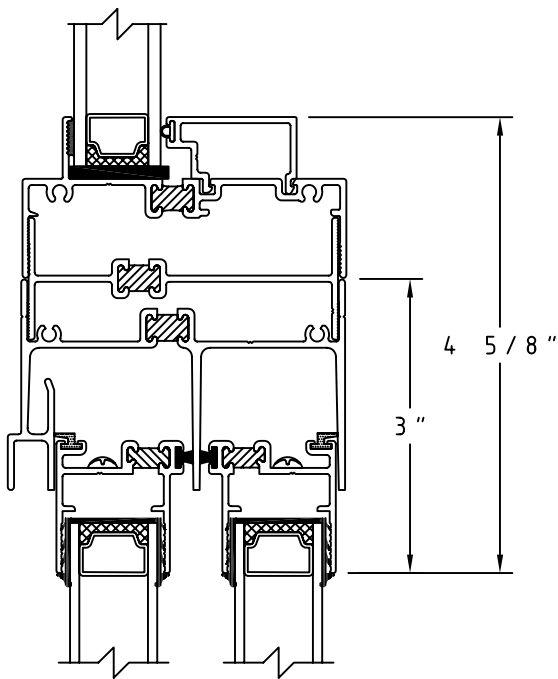
⑥ Horizontal Slider/Horizontal Slider Vertical H Mullion Detail



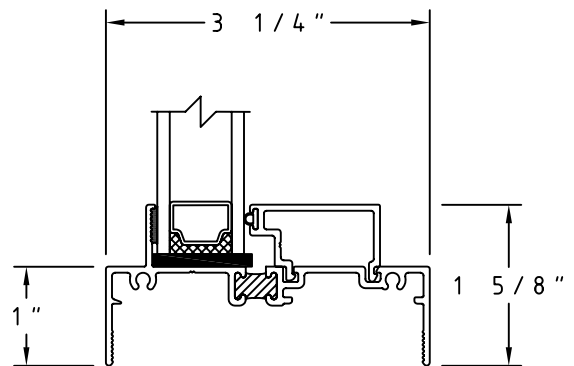
⑦ Fixed Head/Jamb Detail



⑨ Horizontal Slider Over Fixed with "H" Mullion Detail

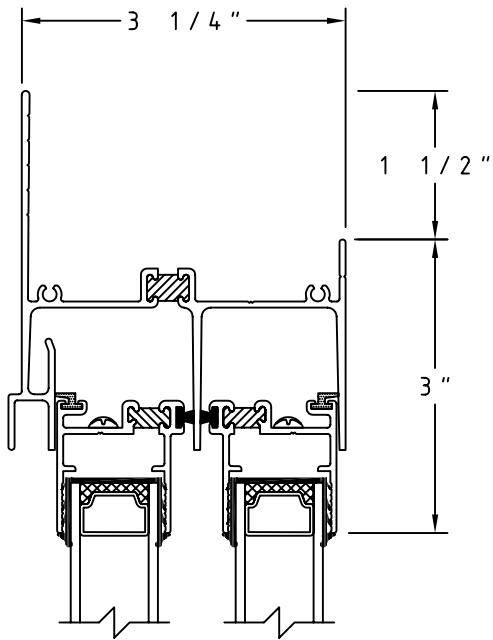


⑧ Fixed Over Horizontal Slider with "H" Mullion Detail

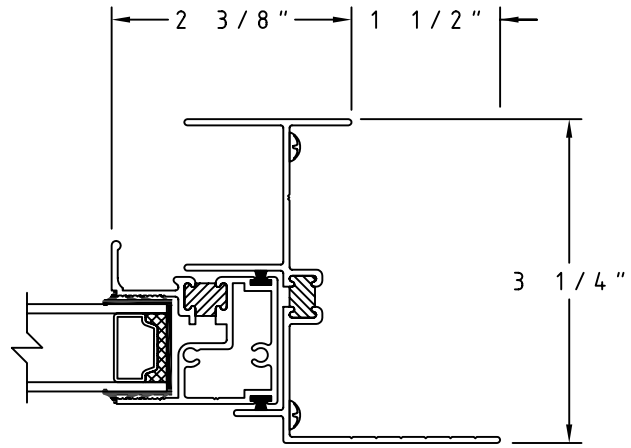


⑩ Equal Leg Fixed Sill Detail

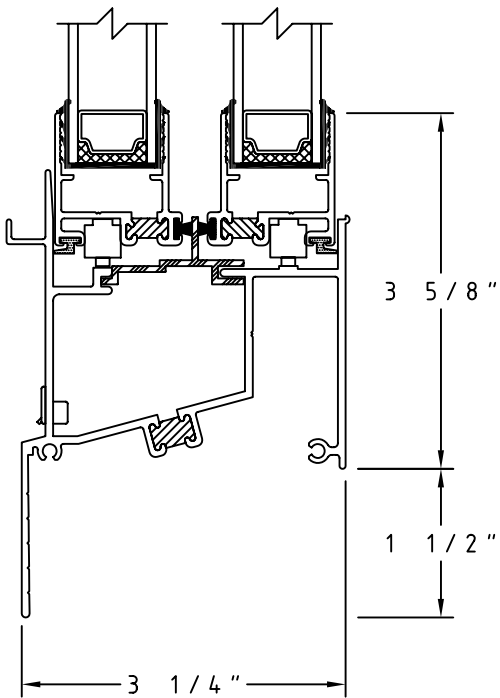
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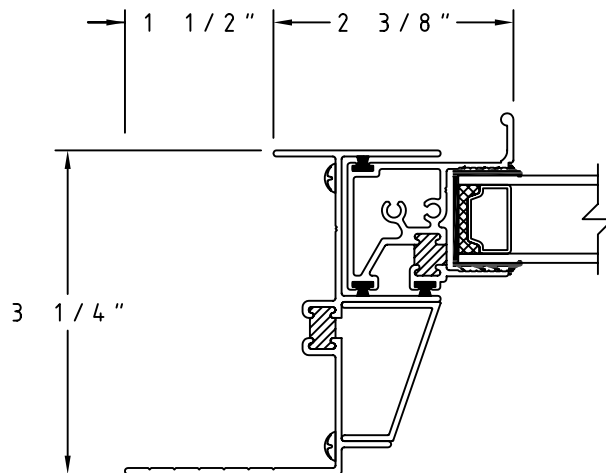
1A 1 1/2" Flange Frame Head Detail



4A 1 1/2" Right Flange Jamb Detail

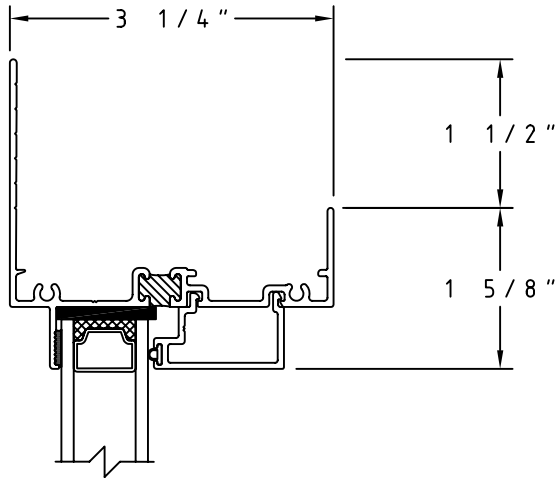


3B 1 1/2" Flange Frame Sill Detail

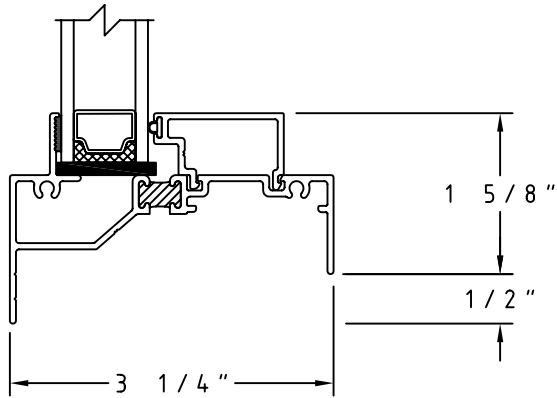


5A 1 1/2" Left Flange Jamb Detail

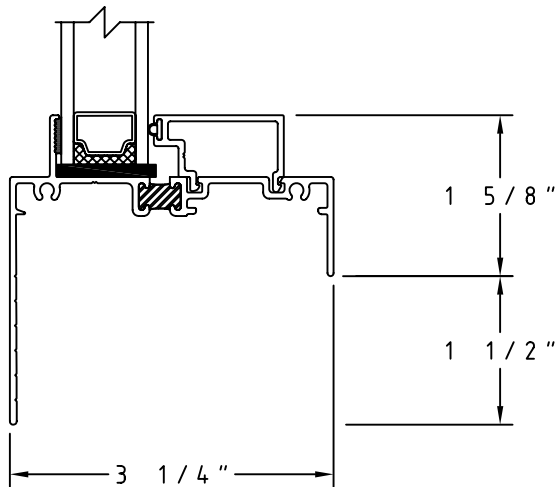
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7A 1 1/2" Flange Fixed Head/Jamb Detail



10A 1/2" Flange Fixed Sill Detail



10B 1 1/2" Flange Fixed Sill Detail





## Series 2000 HS-C55 Horizontally Sliding Window

### SECTION 085113

#### PART 1 - GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701&702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI - Canadian Standards Association  
WDMA - Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.



### Series 2000 HS-C55 Horizontally Sliding Window

- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: HS-C55.
- B. Windows: 3 1/4" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; finish factory-applied; frames and sash factory assembled.
- C. Configuration: XX dual sash horizontal operation. **Optional: XOX triple slider**
- D. Glazing: 7/8" insulating glass units; reusable flexible PVC channel gasket with weep holes; glass and panel descriptions in paragraph 2.04; factory-glazed.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to HS-C55 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 71" x 60" minimum test size with the following test results:
  - 1. Air Infiltration: maximum 0.07 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283 at a static air pressure difference of 1.6 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 547. There shall be no leakage at a static pressure of 8.36 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 55.17 psf.
  - 4. Uniform Structural: window to be operable, and maximum 0.3% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 82.76 psf.
  - 5. Forced entry resistance as per ASTM F 588 = Type A; Grade 10

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURER

Champion 2000 HS-C55 Horizontal Sliding Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main framing and sash members shall have a nominal wall thickness of not less than 0.062". Main framing and sash members shall have an overall depth of not less than 3.25 inches. Frame sill shall have a nominal wall thickness of 0.078".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- D. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel or other non corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel chrome-plated steel, where used, shall be in accordance with ASTM B 456. Horizontal Slider windows shall have one (1) zinc die-cast sweep-type lock (two available upon request) and integral keeper for positive locking.
- E. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair. Adhered weather-stripping shall not be allowed. Sash of horizontal slider windows shall be weather-stripped using woven pile with mylar center fin, double on sash stiles and single on sash rails.
- F. Rollers: All rollers shall be tandem type fabricated with a nylon casing and brass [Option: stainless steel] rollers.

### Section 085113 Aluminum Windows



### Series 2000 HS-C55 Horizontally Sliding Window

- G. Screens: One half screen held in exterior tracks with stainless steel leaf springs; 5/16" x 1 1/2" x .045" extruded tubular aluminum frame; corners mitered, gusset reinforced, and crimped; 18 x 16 dark fiberglass mesh; PVC spline.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sash shall mechanically interlock in a closed position. All main framing units shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Mullions and Mullion Covers: Mullions shall be provided as indicated on the drawings and shall be of the size and type to insure the structural integrity of the proposed window system.
- D. Glazing: The double hung aluminum windows shall be glazed with 7/8" single sealed, structurally glazed insulated glass.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria.
- F. Frame Options: Extruded Flanges: Head, Sill and Jamb at 2 1/2."

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All aluminum spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone or a single seal with hot melt butyl. The 7/8" I.G. unit shall contain desiccant filled into the aluminum spacer. Plastic corner keys will not be accepted.
- B. Exterior glass lite
1. Thickness: 1/8" [Optional: 3/32" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
1. Thickness: 1/8" [Optional: 3/32" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Seal durability: conformance to ASTM E 774-00: visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 7/8" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603 [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603-02. [Optional: 2604-05, 2605-05]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM10C22A31 Class II #204 Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM10C22A44 Class I-.7 mils.
- B. Color: (#311 Light Bronze) (#312 Medium Bronze) (#313 Dark Bronze) (#315 Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

## Section 085113 Aluminum Windows



## Series 2000 HS-C55 Horizontally Sliding Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal-to-metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-02 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 7500 Series

## 7500 Slider



<u>Product By Operation:</u>	4-1/8" Sliding
<u>Model By Family:</u>	7500
<u>Product Description:</u>	Horizontal Slider
<u>Frame Depth:</u>	4-1/8"
<u>Flange Frame Head Options:</u>	2 1/2"
<u>Flange Frame Jamb Options:</u>	2 1/2"
<u>Flange Frame Sill Options:</u>	2 1/2"
<u>101/I.S.2/A440-08 Rating:</u>	HS-AW-PG65
<u>AAMA Test Size:</u>	99 x 79
<u>101/I.S.2/A440-08 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins.
<u>Optional Glazing:</u>	1" Panel



### **\*Built for High-Rise High Performance Applications\***

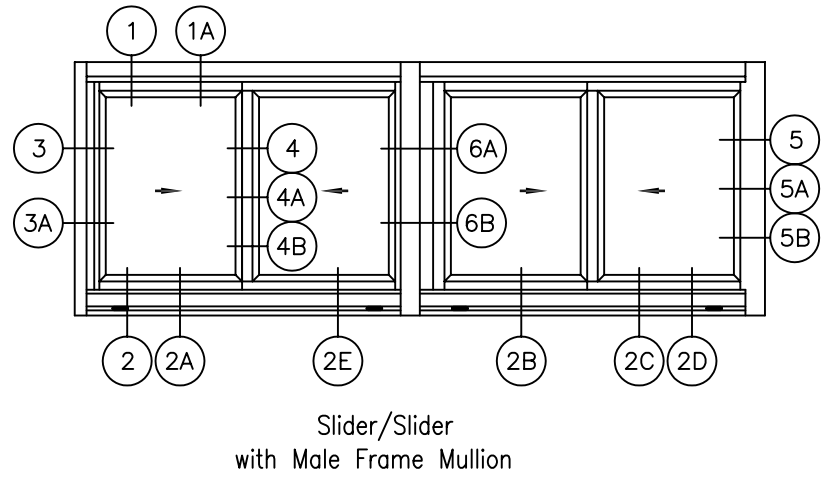
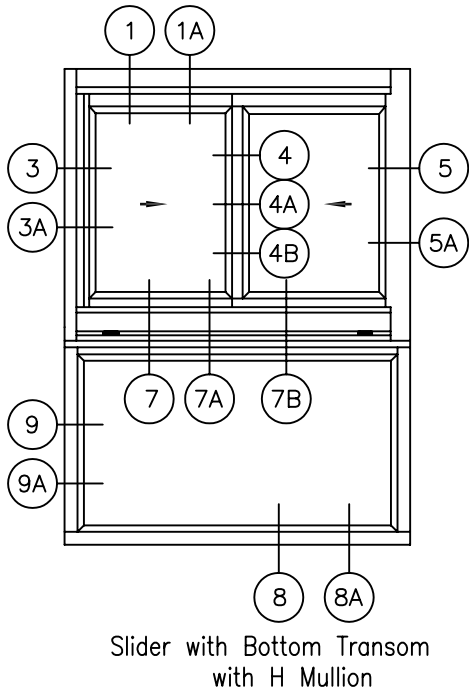
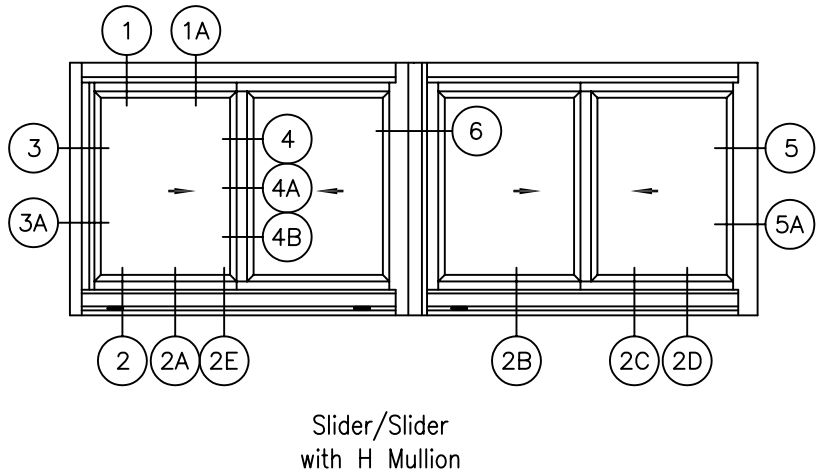
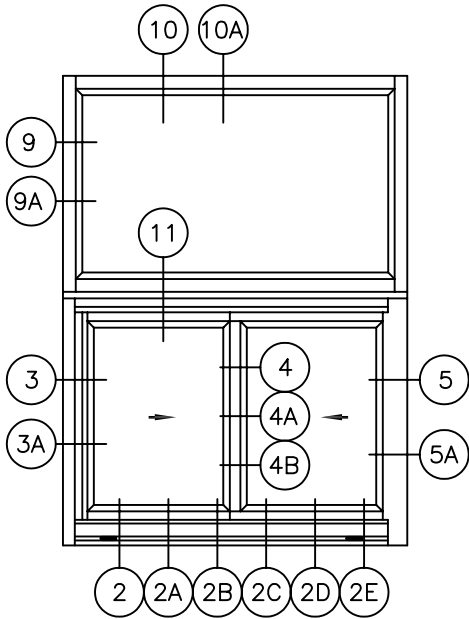
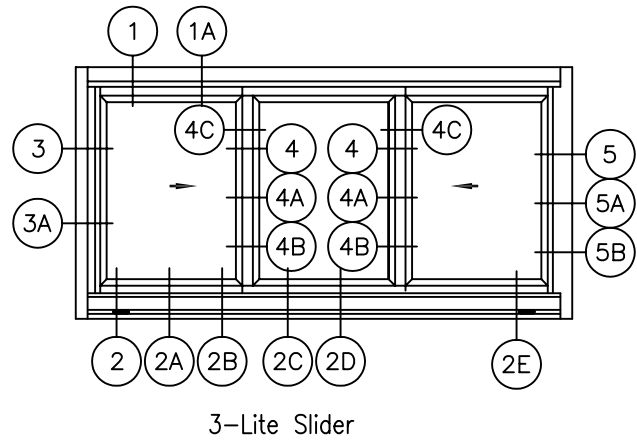
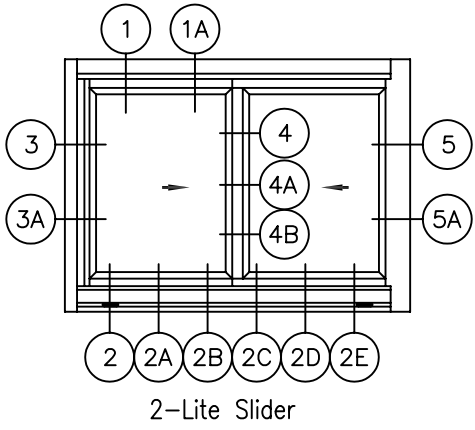
- Raised Stainless Steel Track
- Ball Bearing Rollers
- Removable Sill for Easy Cleaning
- Bypass Capability
- Auto-Lock (available)

### Performance Data

AAMA RATING:	HS-AW-PG65
AIR INFILTRATION @ 50 mph	0.17 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	97.81 PSF
DESIGN PRESSURE	65.20 PSF

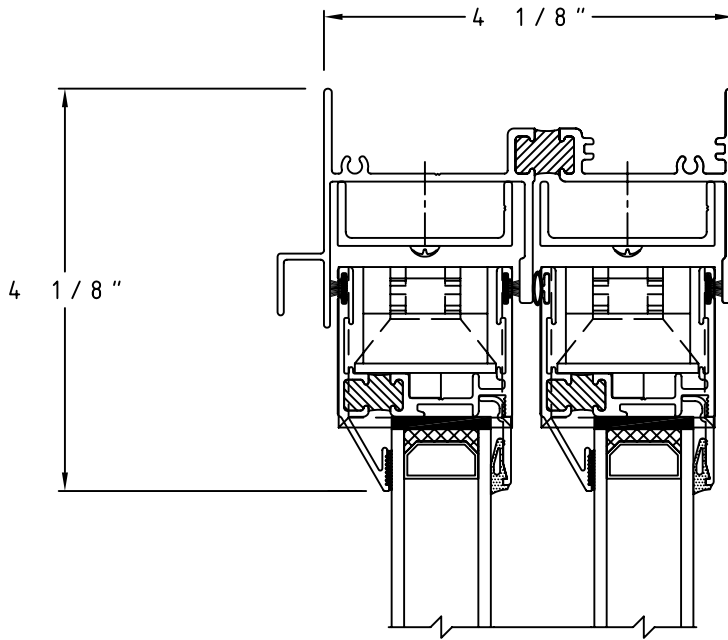


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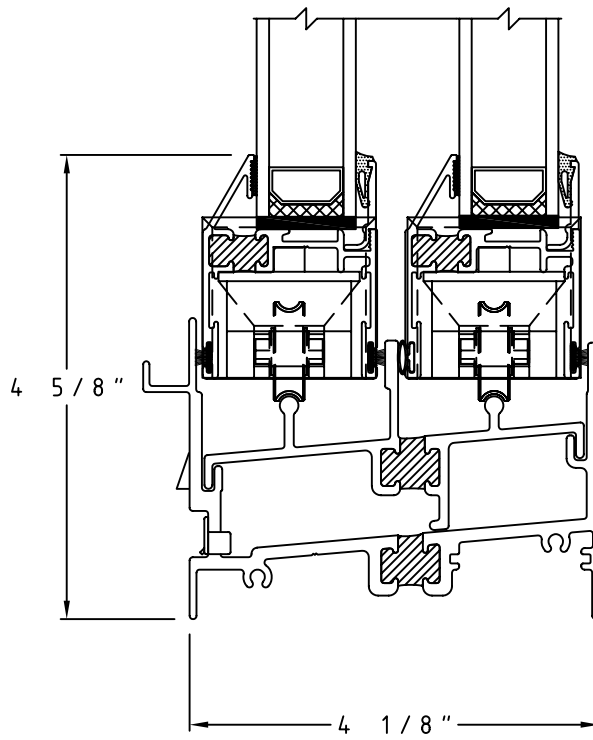


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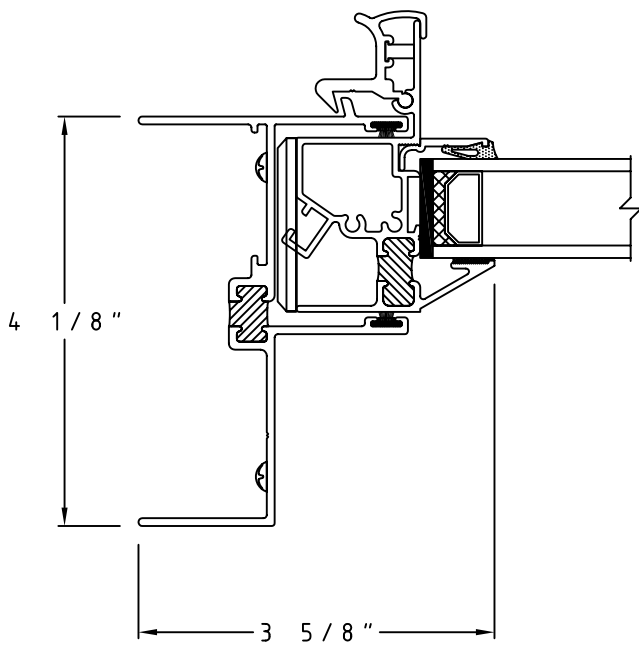
① Head



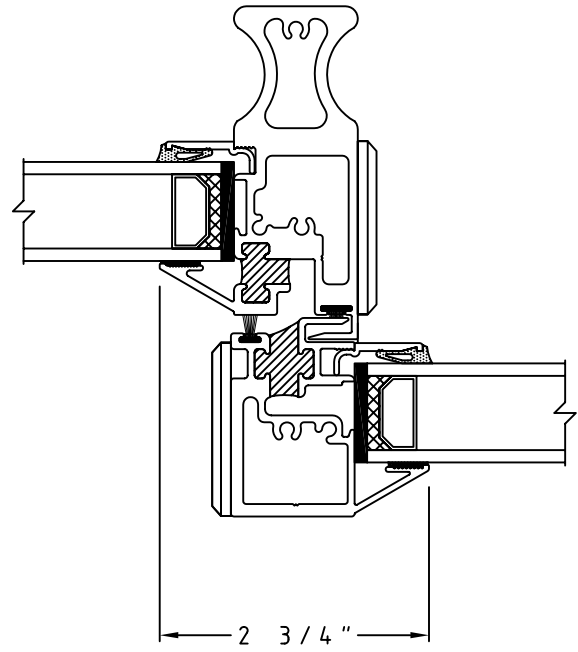
② 10# Sill

All Elevations are viewed outside looking IN.

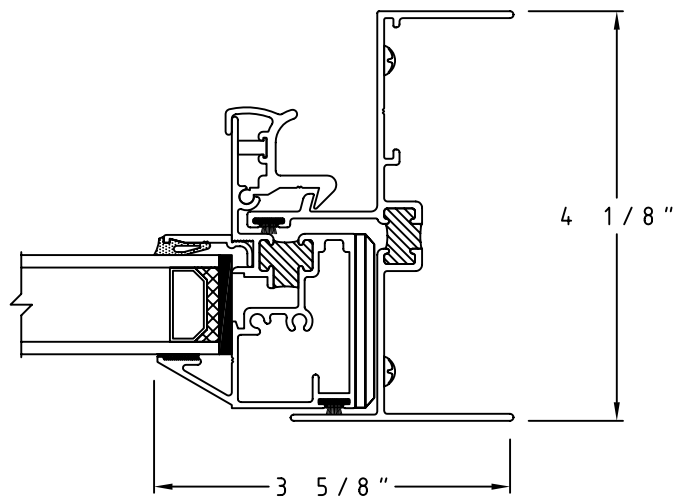
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③ Left Jamb



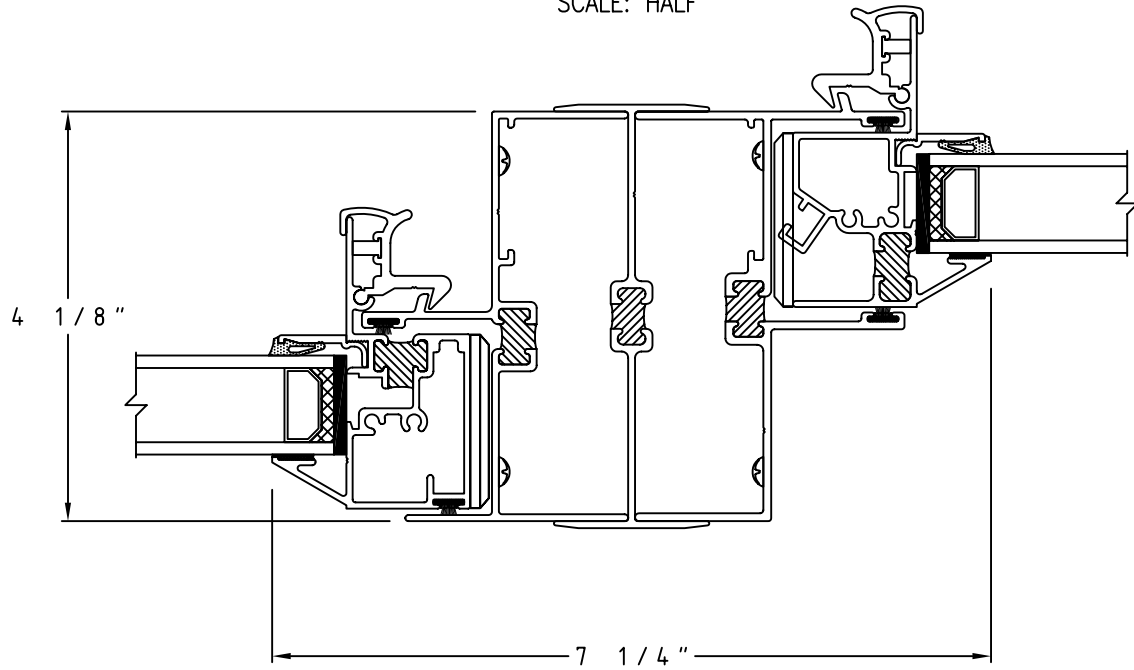
④ Interlock Mullion



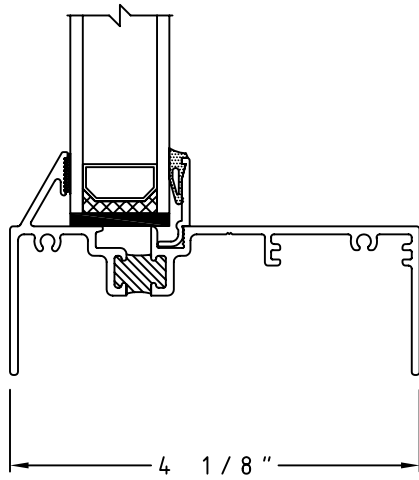
⑤ Right Jamb



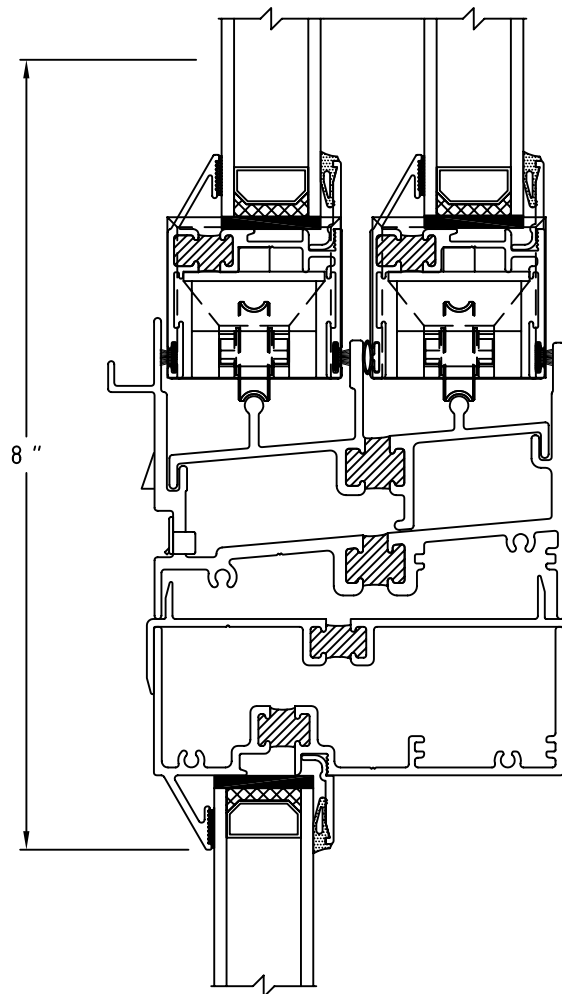
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⑥ Slider "H" Mullion

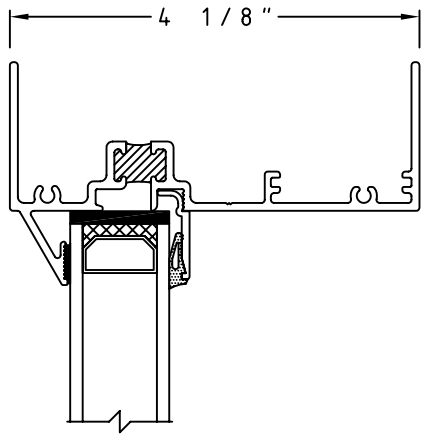


⑧ Transom Sill

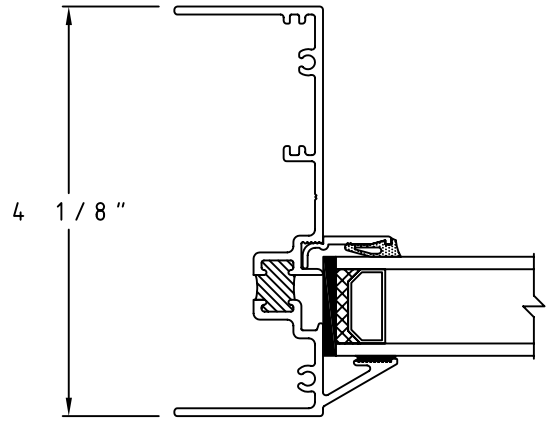


⑦ 10# Slider over Fixed with Horizontal Mullion

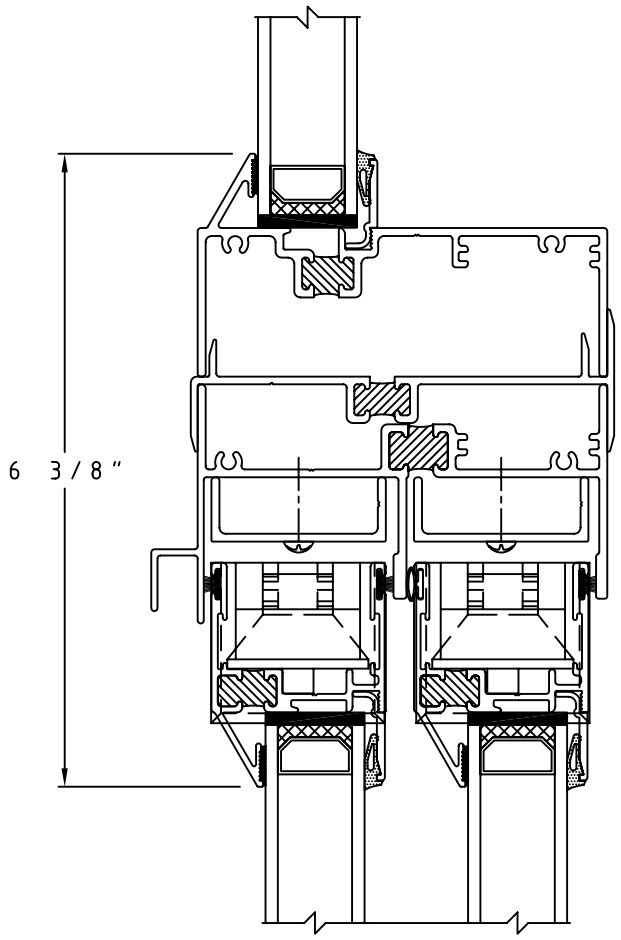
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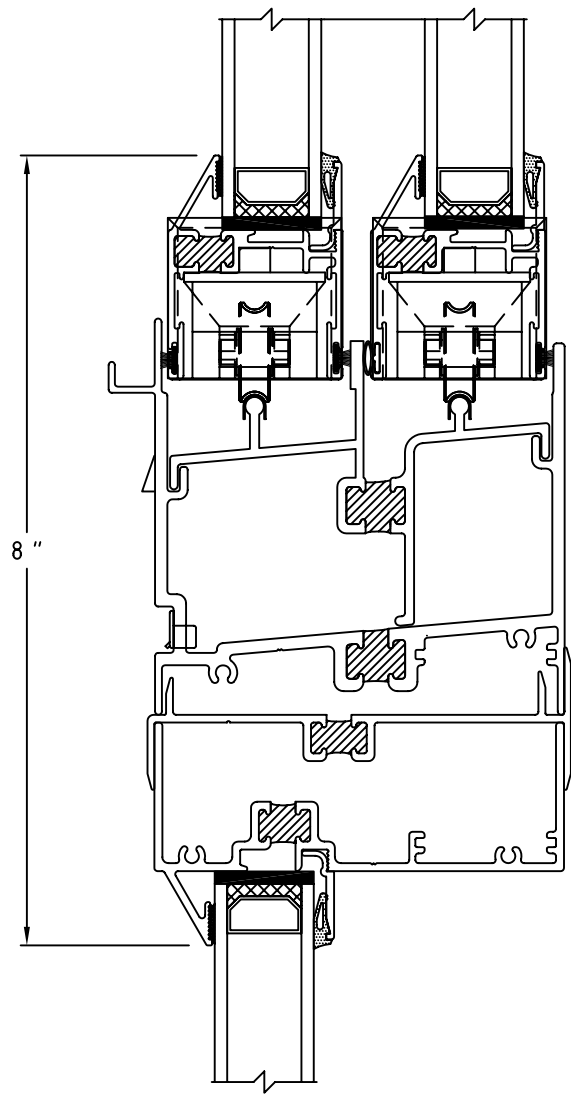
10 Transom Head



9 Fixed Jamb

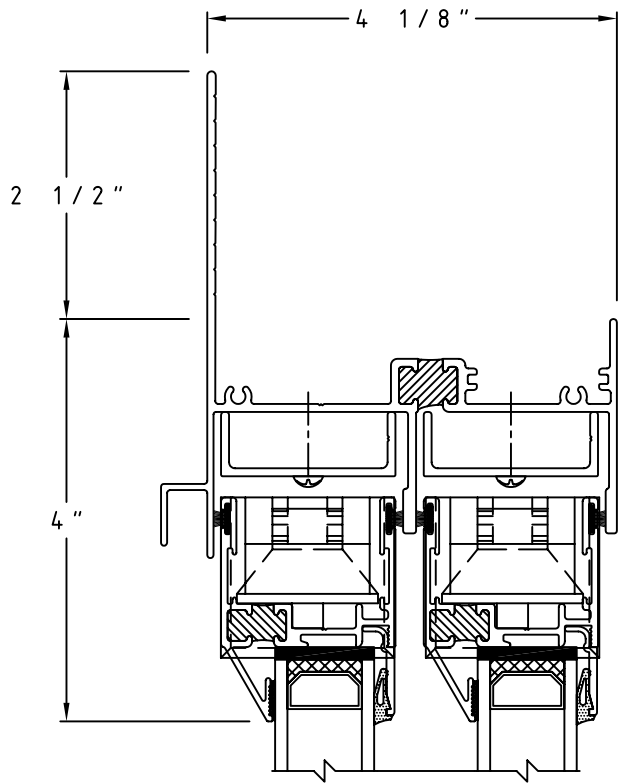


11 Fixed over Slider with Horizontal Mullion

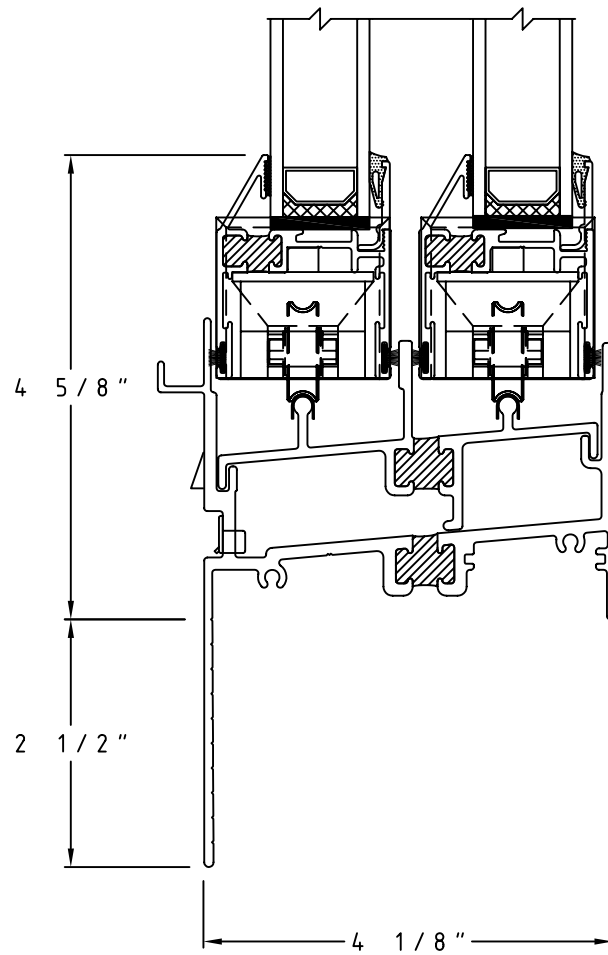


7B 15# Slider over Fixed with Horizontal Mullion

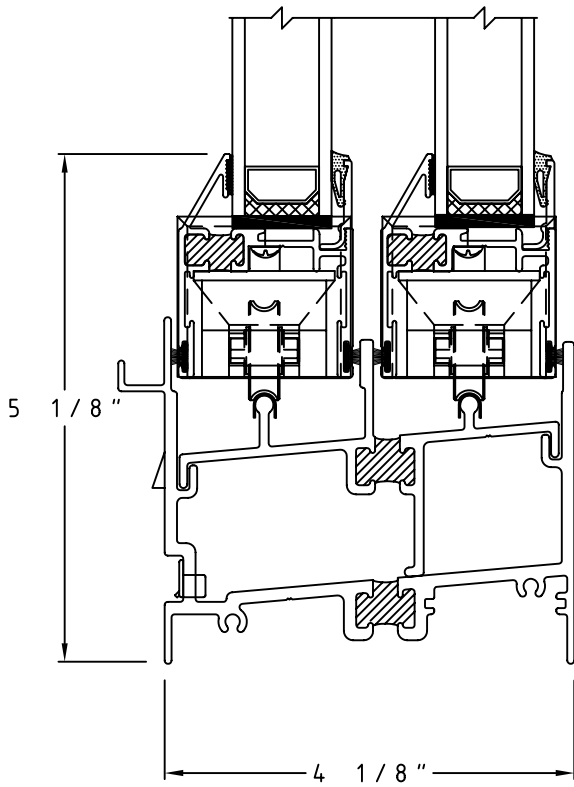
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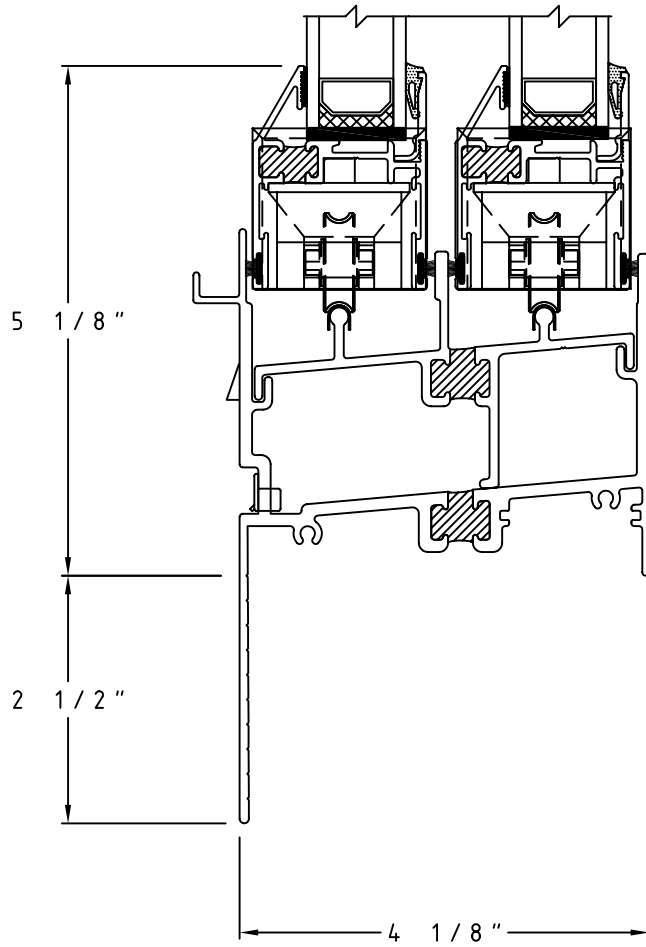
①A 2 1/2" Flange Head



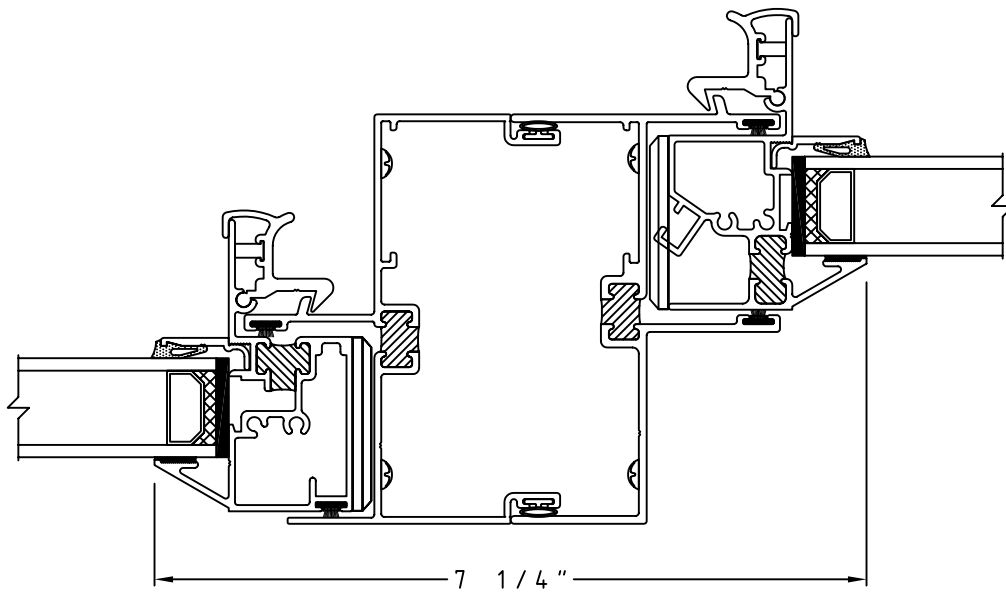
②A 2 1/2" Flange 10# Sill



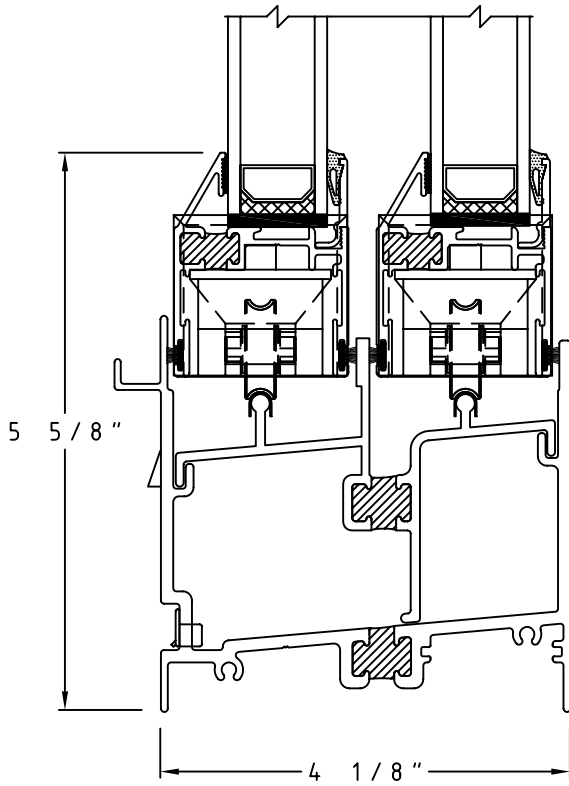
2B 12# Sill



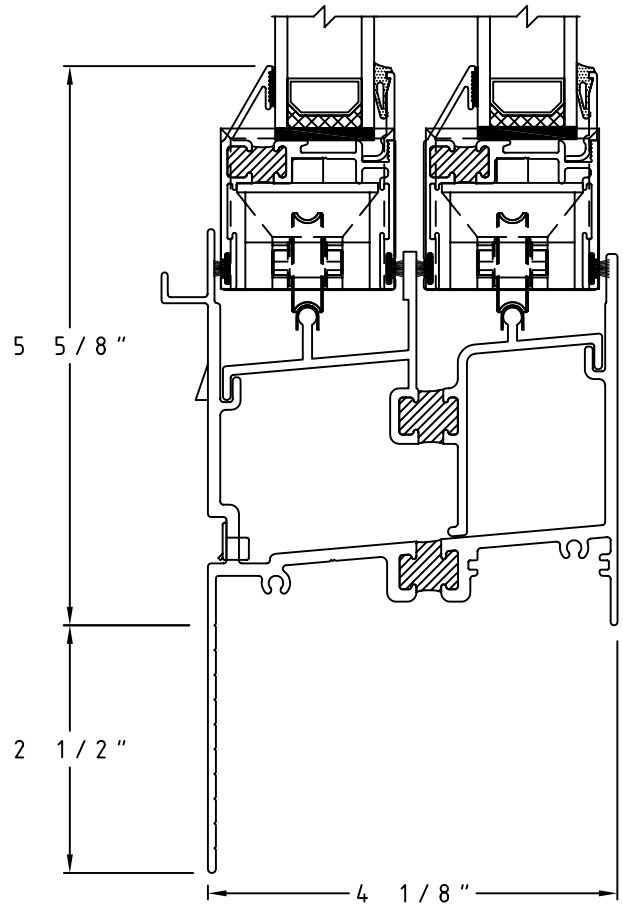
2C 2 1/2" Flange 12# Sill



6B Male-Female Mullion

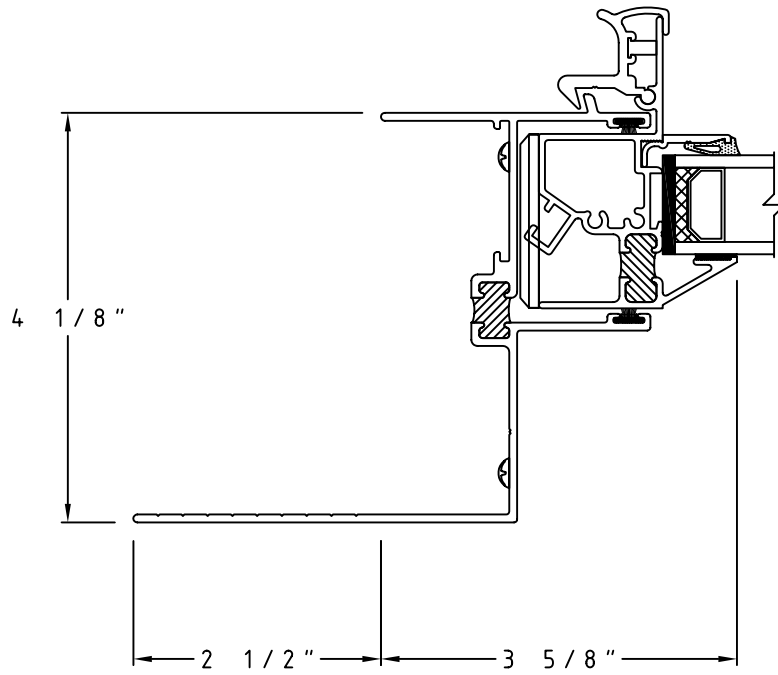


②D 15# Sill

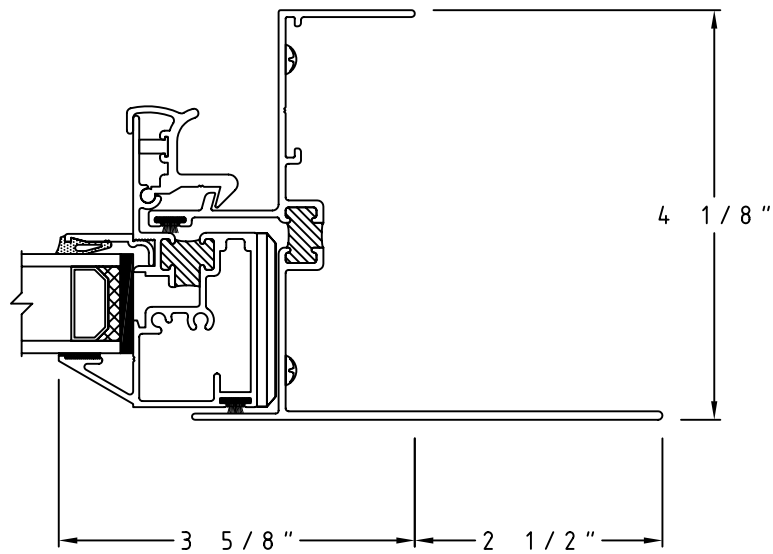


②E 2 1/2" Flange 15# Sill

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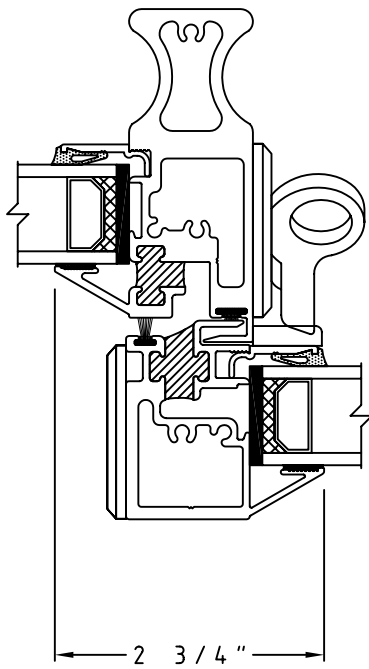


3A 2 1/2" Flange Left Jamb

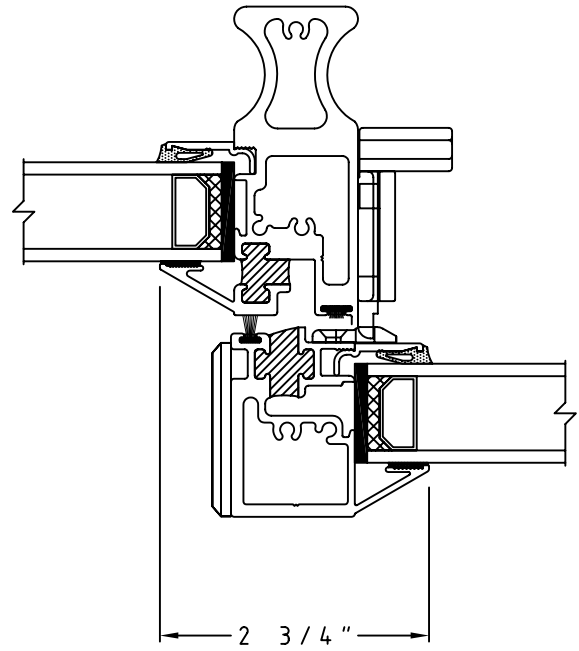


5A 2 1/2" Flange Right Jamb

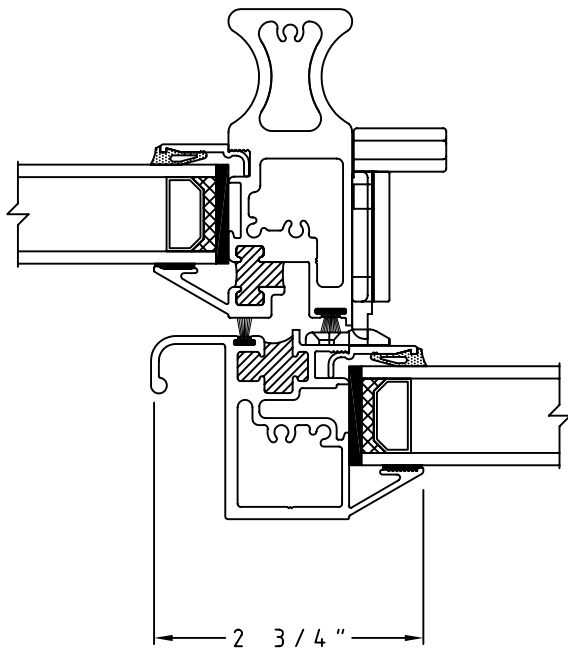
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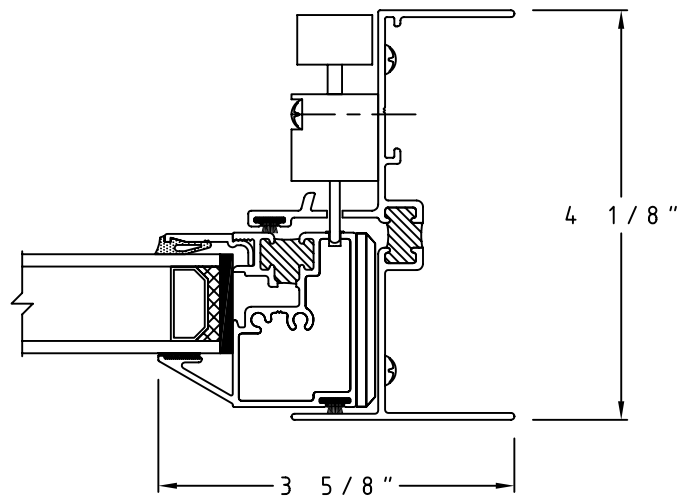
④A Interlock Mullion with Lock Option #1



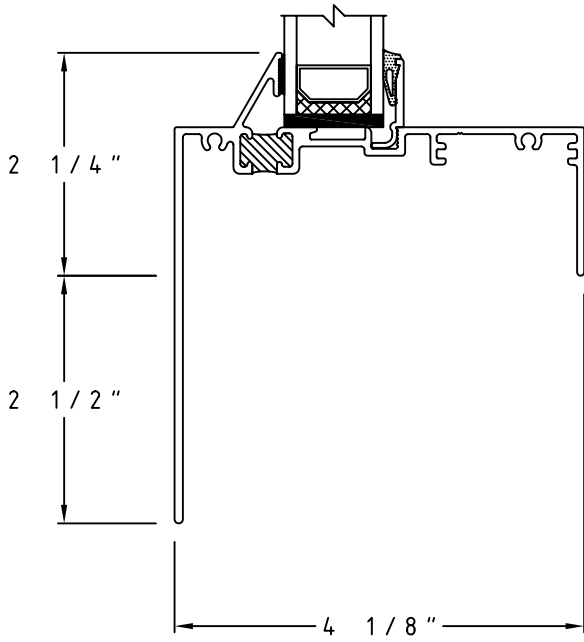
④B Interlock Mullion with Lock Option # 2



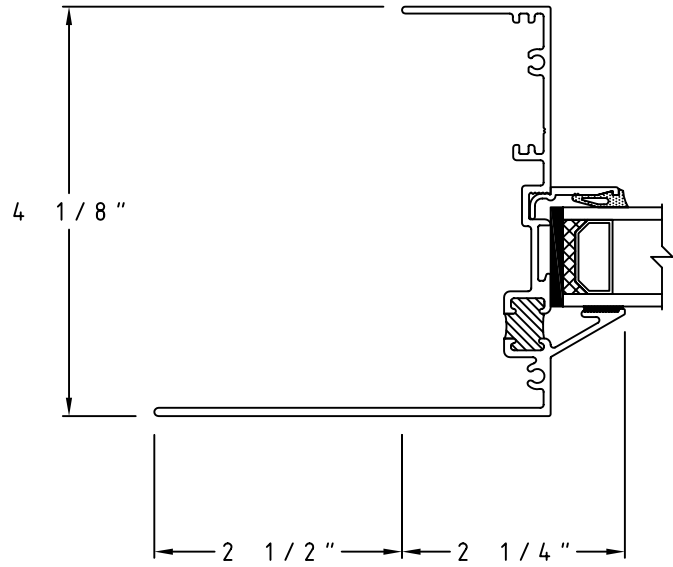
④C Bypass Interlock Mullion with Lock Option # 2



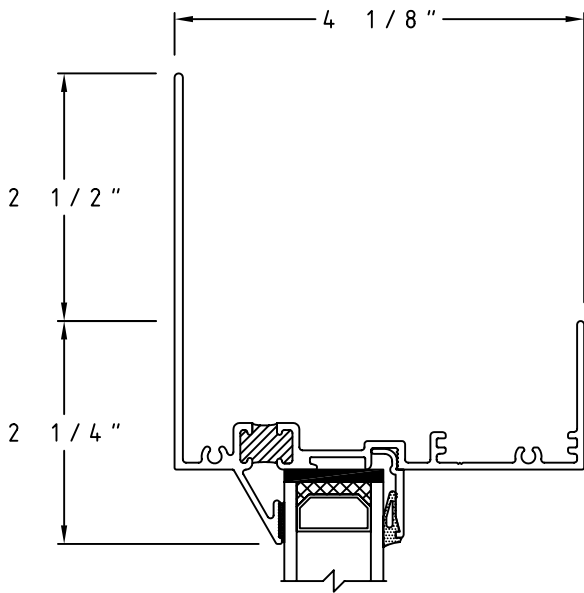
⑤B Option Bypass Sash Jamb Lock



8A 2 1/2" Flange Fixed Sill

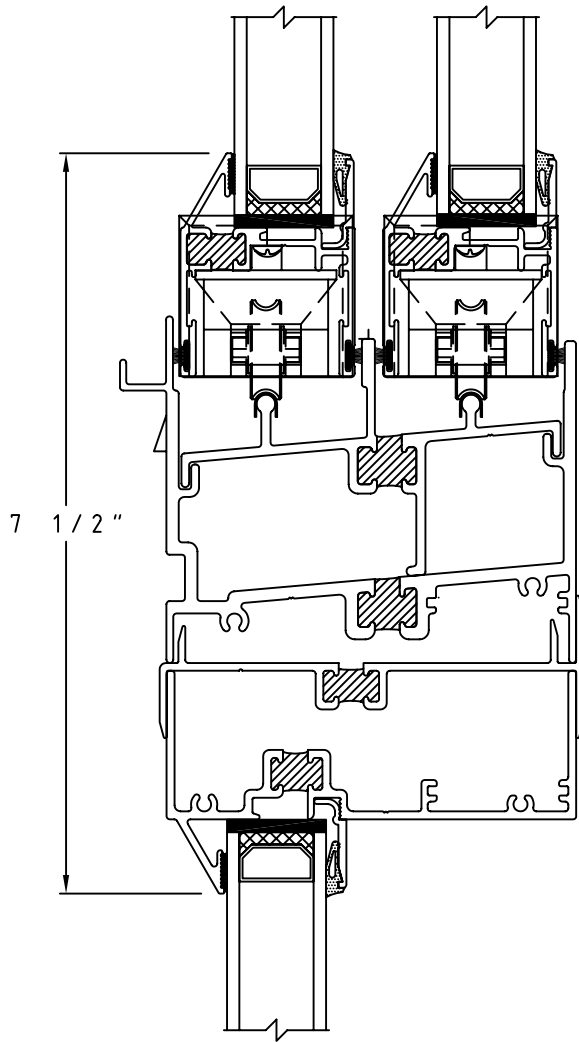


9A 2 1/2" Flange Fixed Jamb

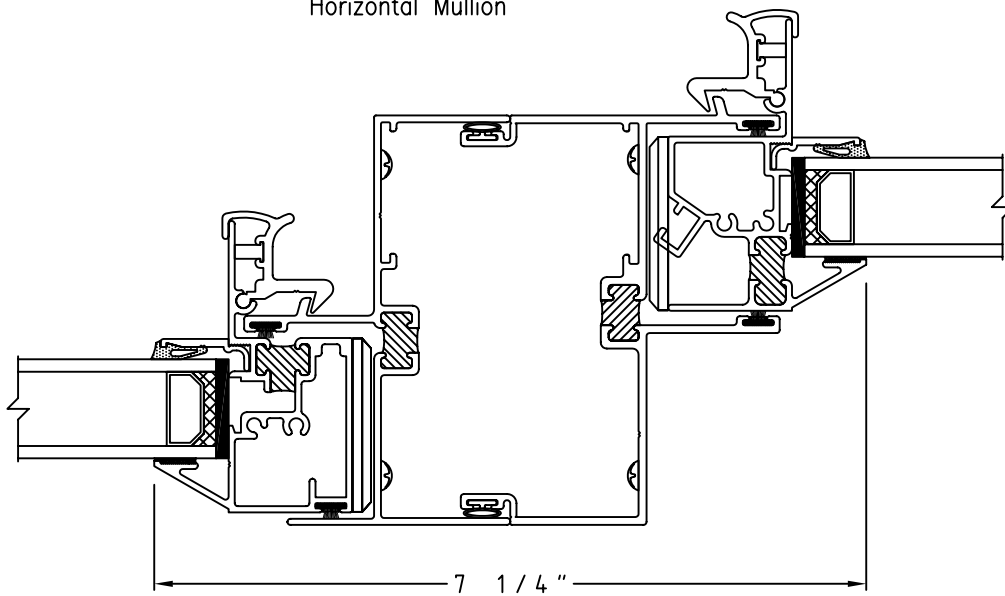


10A 2 1/2" Flange Fixed Head





7A 12# Slider over Fixed with Horizontal Mullion



6A Female-Male Mullion



**Series 7500 HS-PG-AW65 Horizontal Sliding Window**

**SECTION 085113**

**PART 1 - GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
ANSI - American National Standards Institute  
ANSI/AAMA/WDMA/CSA 101/I.S.2-97 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).

**Section 085113 Aluminum Windows**



### Series 7500 HS-PG-AW65 Horizontal Sliding Window

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMACSA 101/I.S.2/A440-08, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: HS-PG-AW65 Series 7500 Horizontally Sliding Window
- B. Windows: 4 1/8" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; finish factory-applied; frames and sash factory assembled.
- C. Configuration: XX dual sash (**Optional: outside sash with bypass feature**) (**Optional: XO or OX**) horizontal operation. (**Optional: XOX triple**)
- D. The sill tank cover is removable for maintenance with reuseable sill track end caps.
- E. Aluminum channel limit stops with rubber bumpers (**Optional: to limit the travel to any desired opening.**) 6" from each jamb.
- F. Both sash have a raised stainless steel cap track for ease of heavy duty compression bearing roller operation.
- A. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket.

#### 1.09 PERFORMANCE REQUIREMENTS

##### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to HS-PG-AW65 specifications in AAMA/WDMACSA 101/I.S.2/A440-08 when tests are performed on the prescribed 99" x79" minimum test size with the following test results:
  - 1. Air Infiltration: maximum 0.17 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283 at a static air pressure difference of 6.24 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 547 and ASTM E 330. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Uniform Deflection: No more than L/175 when tested per ASTM E 330-90 at a static air pressure difference of 65.20 psf.
  - 4. Uniform Structural: maximum of .2% deformation per member in accordance with ASTM E 330 at 97.81 psf.
  - 5. Life Cycle testing - When tested in accordance with AAMA 910, there shall be no damage to fasteners, hardware parts, support arms, actuating mechanisms or any other damage causing the window to be inoperable, and air leakage and water resistance tests shall not exceed the Gateway Performance Requirements specified in Table 2.1.
  - 6. Forced entry resistance as per ASTM F 588 = Type A; Grade 10

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURER

Champion 7500 HS-AW-PG65 Horizontal Sliding Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main framing and sash members shall have a nominal wall thickness of not less than 0.080". Main framing and sash members shall have an overall depth of not less than 4.125 inches. Frame sill shall have a nominal wall thickness of 0.125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- D. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel or other non corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. **Optional: white bronze automatic engagement lock wan keeper for use with the bypass sash option only.**
- E. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal Section 08520 Aluminum Windows - 3 - Series 7500 HS-AW65 HS-HC65 Horizontally Sliding Window contact between the master frame and the sash. All weather-stripping shall be installed in specially extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair. Adhered weather-stripping shall not be

## Section 085113 Aluminum Windows



### Series 7500 HS-PG-AW65 Horizontal Sliding Window

allowed. Sash of horizontal slider windows shall be weather-stripped using woven pile with mylar center fin, double on sash stiles and single on sash rails.

- F. Rollers: All rollers shall be tandem type fabricated with a nylon casing and stainless steel rollers. Roller housings shall be cast aluminum.
- E. Screens: One half screen held in exterior tracks with stainless steel leaf springs; 5/16" x 1 1/2" x .045" extruded tubular aluminum frame; corners mitered, gusset reinforced, and crimped; 18 x 16 dark fiberglass mesh; PVC spline.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting stiles of both sash shall mechanically interlock in a closed position. All main framing units shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The horizontal sliding aluminum windows shall be glazed with 1" dual sealed, structurally glazed insulated glass.
- D. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria.
- E. Frame Options: Extruded Flanges: Head, Sill and Jamb at 2 1/2."

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8" or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8" or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Seal durability: conformance to ASTM E 774; visible, ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

## Section 085113 Aluminum Windows



**Series 7500 HS-PG-AW65 Horizontal Sliding Window**

**PART 3 – EXECUTION**

**3.01 PROJECT SUBMITTALS**

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

**3.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

**3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

**3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

**3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

**3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

**3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 7500 Series

## 7510 Fixed Window



<u>Product By Operation:</u>	4-1/8" Fixed
<u>Model By Family:</u>	7500
<u>Product Description:</u>	Fixed Window
<u>Frame Depth:</u>	4-1/8"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-08 Rating:</u>	FW-AW-PG75
<u>AAMA Test Size:</u>	60 x 99
<u>101/I.S.2/A440-08 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins.
<u>Optional Glazing:</u>	~
	~



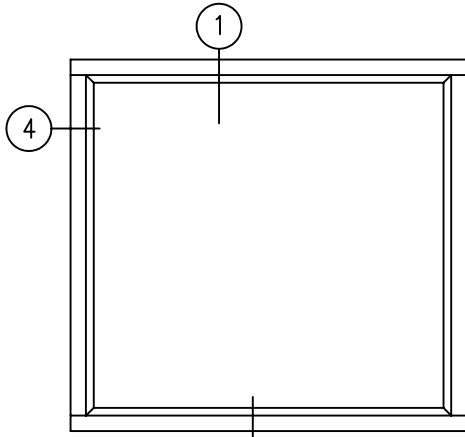
### Performance Data



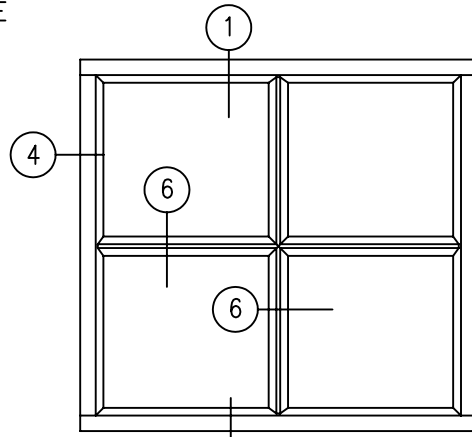
AAMA RATING:	FW-AW-PG75
AIR INFILTRATION @ 50 mph	<0.01 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	112.85 PSF
DESIGN PRESSURE	75.24 PSF

# Champion Series 7510

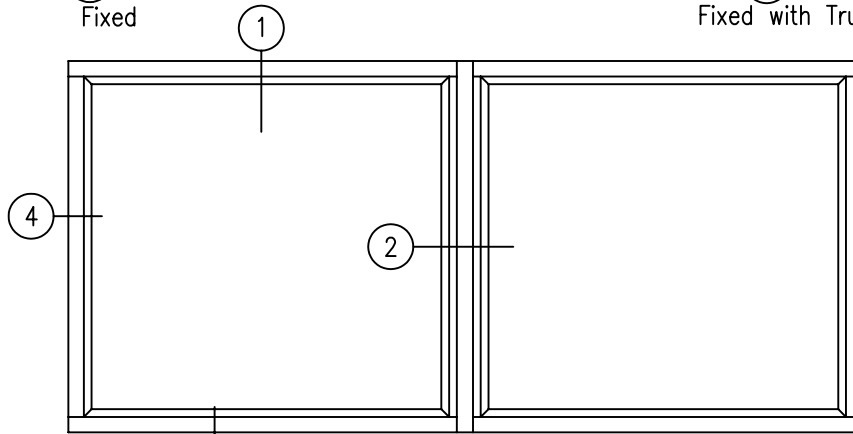
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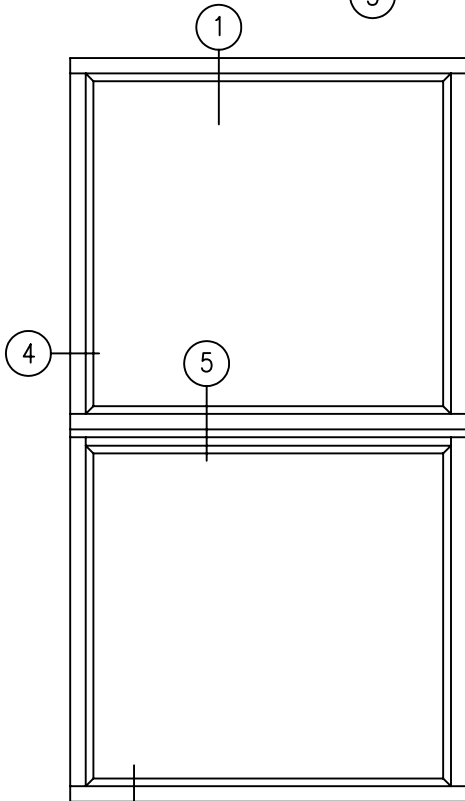
3 Fixed



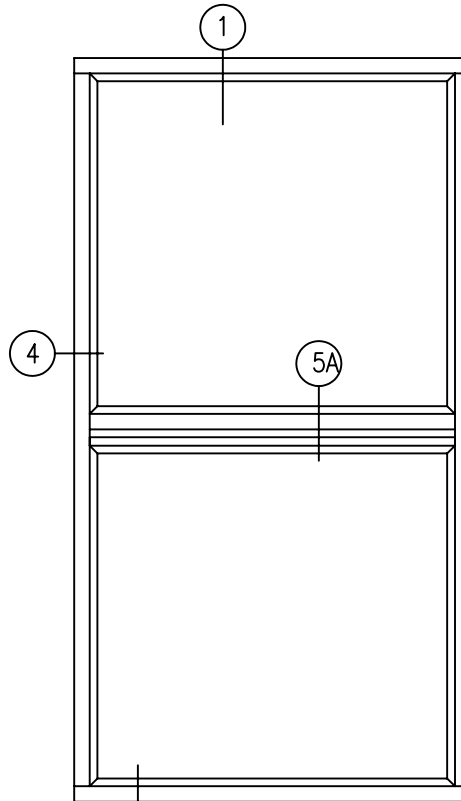
3 Fixed with True Muntin



Fixed/Fixed



3 Fixed Over Fixed



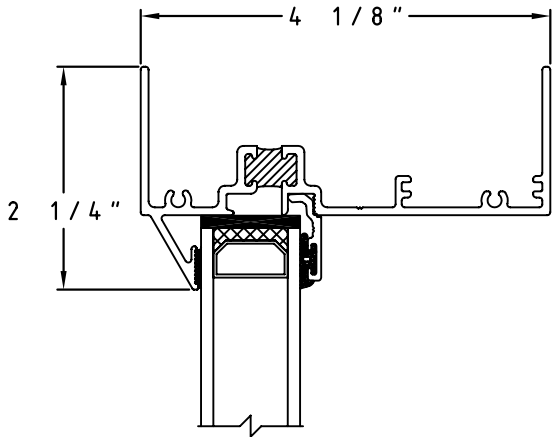
3 Fixed Over Fixed  
Continuous Frame

All Elevations are viewed outside looking IN.

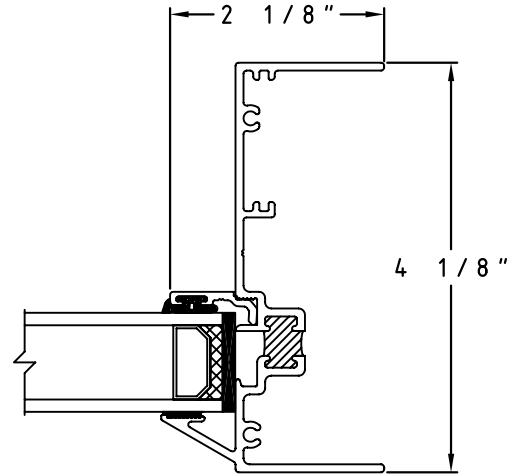
# Champion Series 7510

Sheet 2 of 3

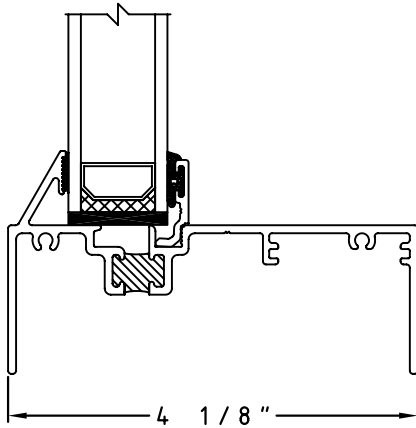
SCALE: HALF



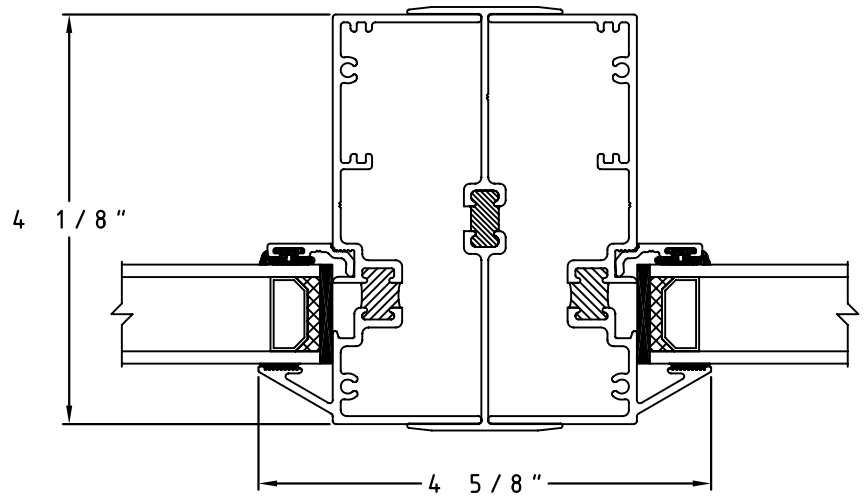
① Fixed Frame Head/Sill/Jamb Detail



④ Fixed Frame Jamb Detail



③ Fixed Frame Sill Detail

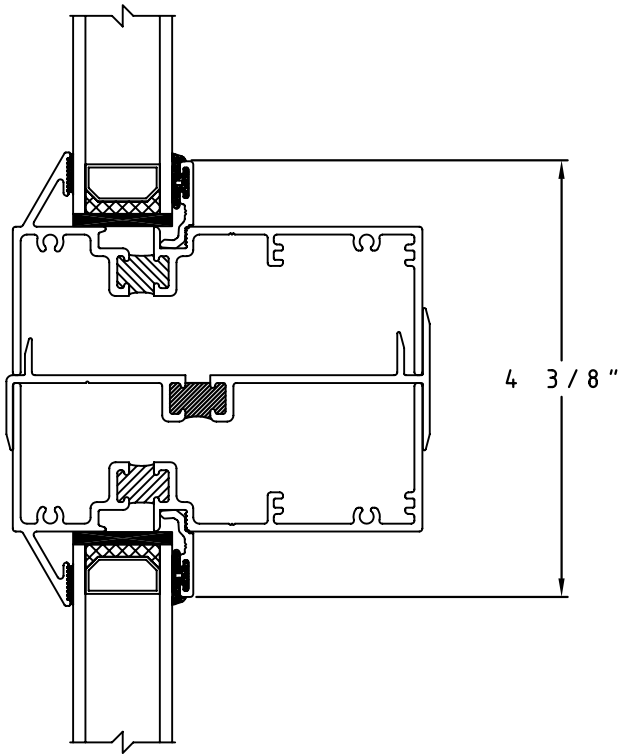


② Fixed/Fixed H Mullion Detail

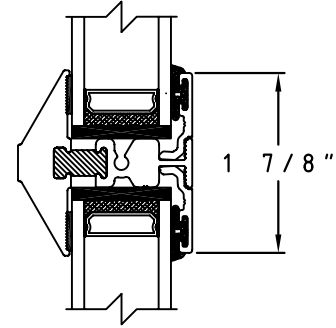
Champion Series 7510



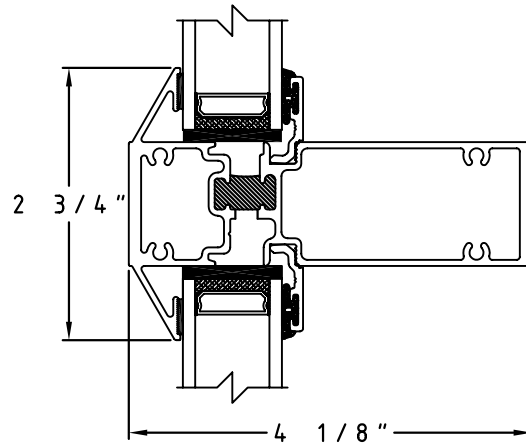
SCALE: HALF



⑤ Fixed Over Fixed Detail



⑥ True Muntin Detail (Horizontal/Vertical)



⑤A Fixed/Fixed Frame Mullion Detail  
Continuous Frame



## Series 7510 FW-AW-PG75 Fixed Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).

## Section 085113 Aluminum Windows



### Series 7510 FW-AW-PG75 Fixed Window

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-08, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: FW-AW75
- B. Windows: 4 1/8" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; [Optional: flange frame] finish factory-applied; frames and sash factory-assembled.
- C. Configuration: Single Fixed Window.
- D. Glazing: 1" insulating glass units; glass and panel descriptions in paragraph 2.04; factory-glazed.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to FW-AW75 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-08 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  - 1. Air Infiltration Test: The window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration tested at <0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Uniform Deflection: No more than <.25 mm when tested per ASTM E 330 at a static air pressure difference of 75.24 psf.
  - 4. Structural Load Test: T Window to be fixed, and maximum .2% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 112.85 psf.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type: D; Grade: 40.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURER

Champion 7510 FW-AW75 Fixed Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Fixed frame shall have a nominal wall thickness of not less than 0.070 inch.
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.

### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sashes shall mechanically interlock in a closed position. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The fixed aluminum windows shall be glazed with 1" insulated glass.
- D. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria.
- E. Frame equal leg [Optional: Extruded Flanges: Head, Sill and Jamb at 2 ½."]

## Section 085113 Aluminum Windows

### Series 7510 FW-AW-PG75 Fixed Window

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8" or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8" or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Seal durability: conformance to ASTM E 774-00; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports, as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION



### **Series 7510 FW-AW-PG75 Fixed Window**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings are in accordance with approved shop drawings.

#### **3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal-to-metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### **3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### **3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### **3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 1000 Series

## 1000 Double Hung



<u>Product By Operation:</u>	3-1/4" Sideload DH
<u>Model By Family:</u>	1000
<u>Product Description:</u>	Sideload DH
<u>Frame Depth:</u>	3-1/4"
<u>Flange Frame Head Options:</u>	1 1/2, 2 1/8
<u>Flange Frame Jamb Options:</u>	1 1/2, 2 1/8
<u>Flange Frame Sill Options:</u>	1 1/2, 2 1/8
<u>101/I.S.2/A440-05 Rating:</u>	H-C65
<u>AAMA Test Size:</u>	54 x 90
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	7/8" Insul.
<u>Optional Glazing:</u>	~

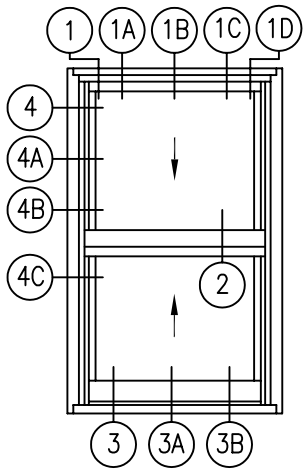


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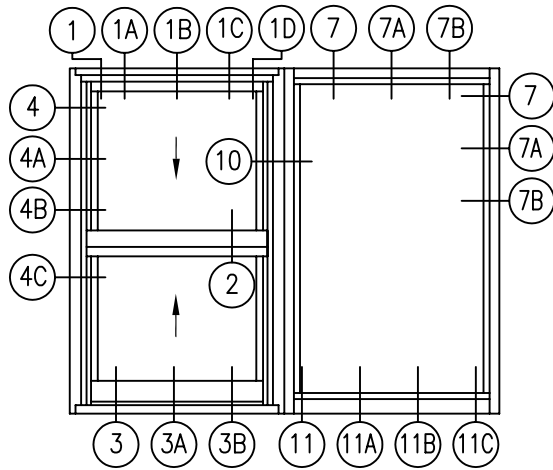


AAMA RATING:	H-C65
AIR INFILTRATION @ 25 mph	0.10 CFM
WATER TEST PRESSURE	9.82 PSF
STRUCTURAL LOAD	97.81 PSF
DESIGN PRESSURE	65.20 PSF

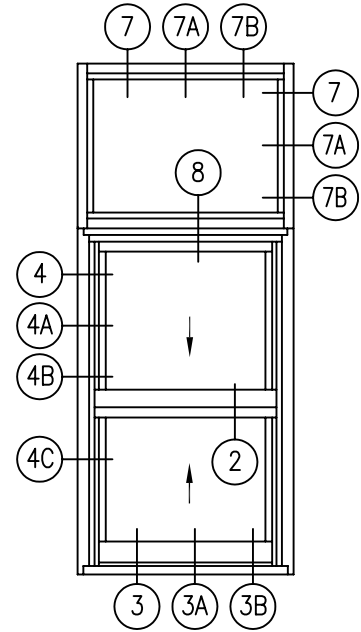
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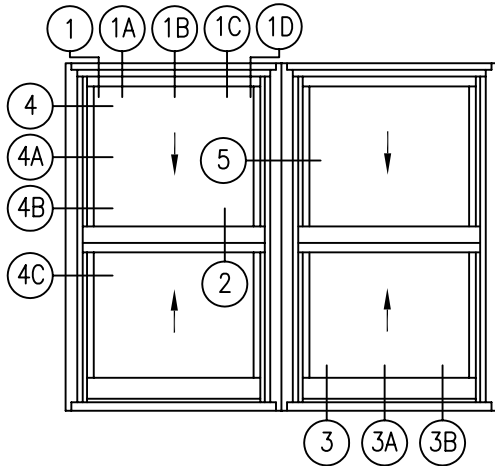
Double hung



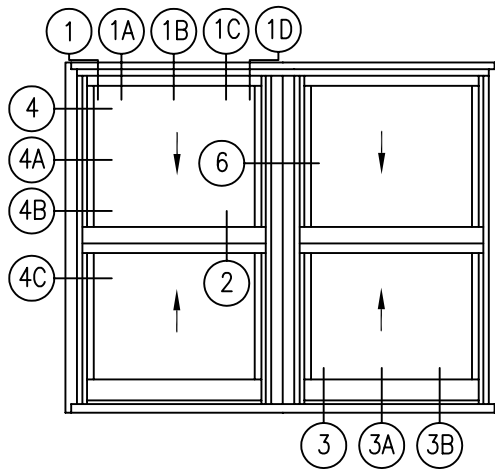
Double Hung/Fixed



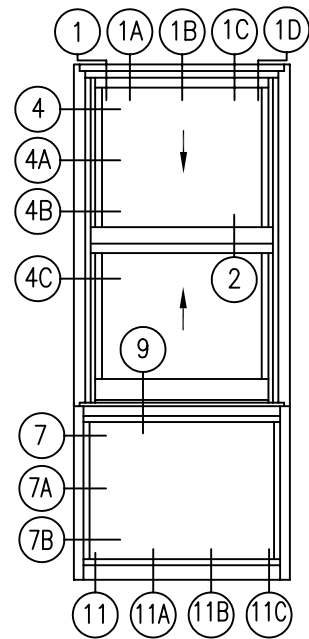
Fixed over Double Hung



Twin with H Mullion



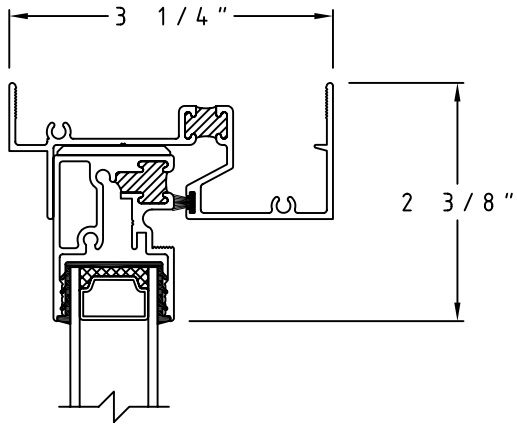
Twin Continuous Frame



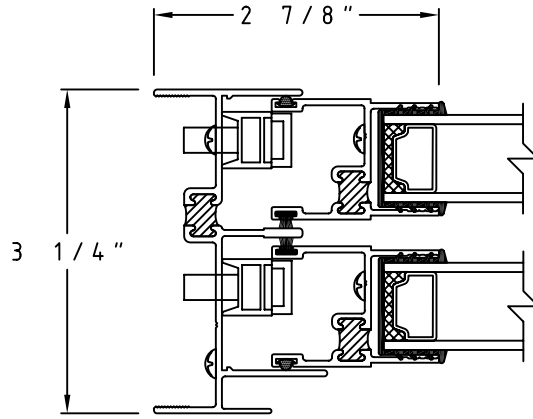
Double Hung over Fixed

All Elevations are viewed outside looking IN.  
 Note: Other Configurations Available Upon Request

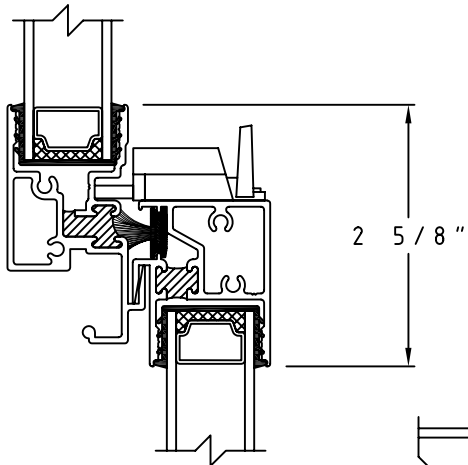
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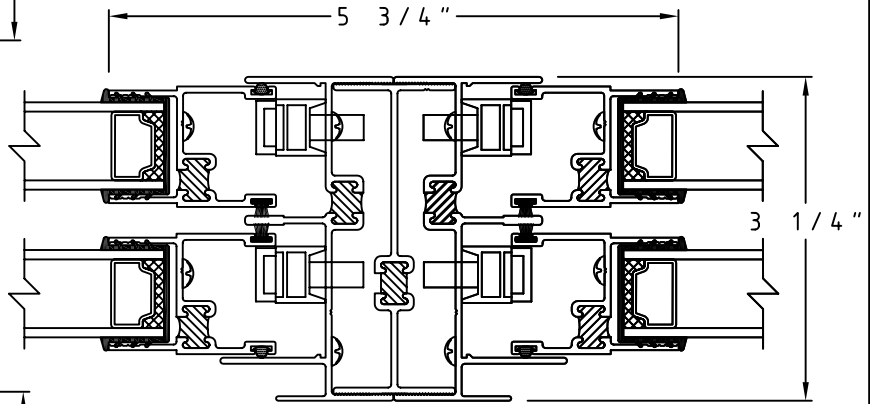
① Head Detail



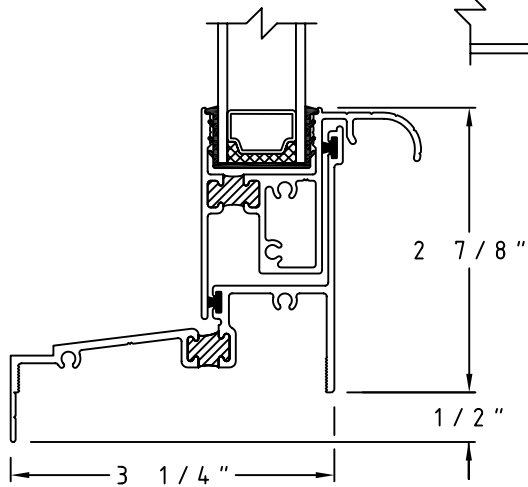
④ Jamb Detail



② Meeting Rail Detail



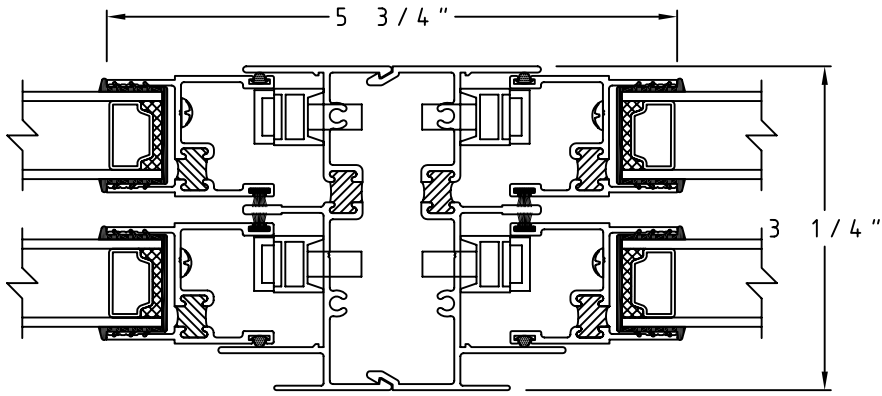
⑤ Vertical H Mullion Detail



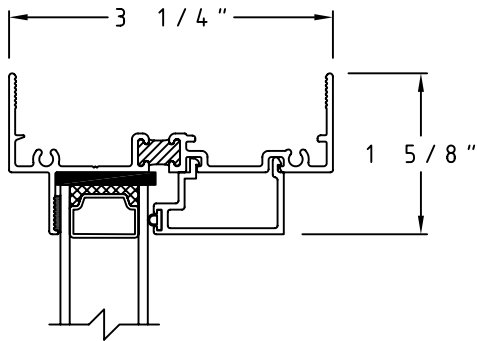
③ Sill Detail



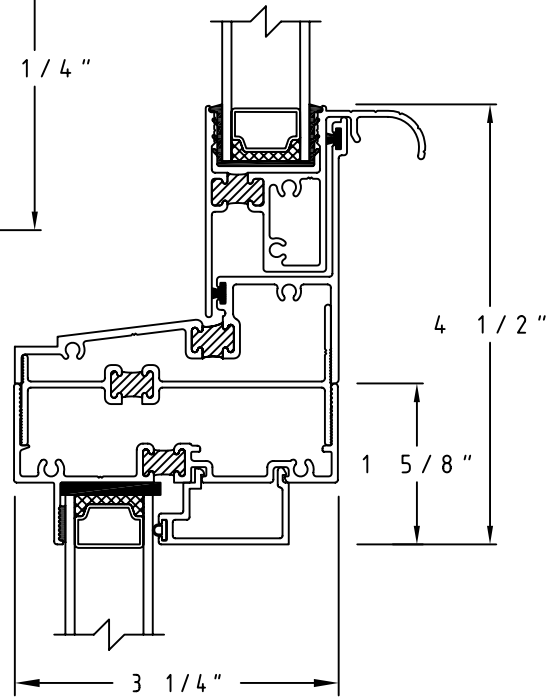
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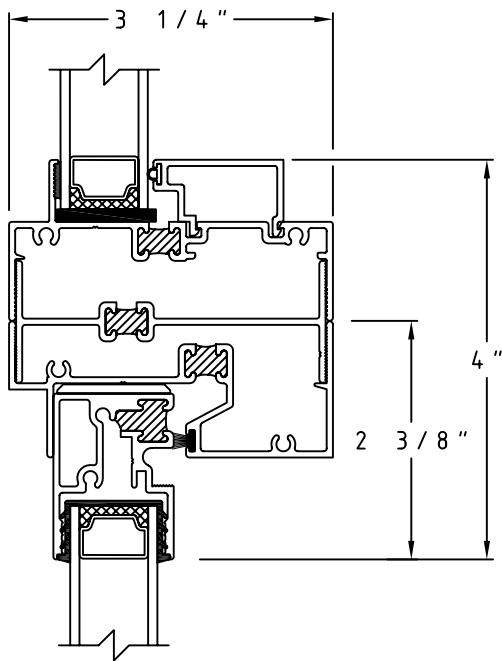
⑥ Double Hung/Double Hung with a Male/Female Intergal Mullion



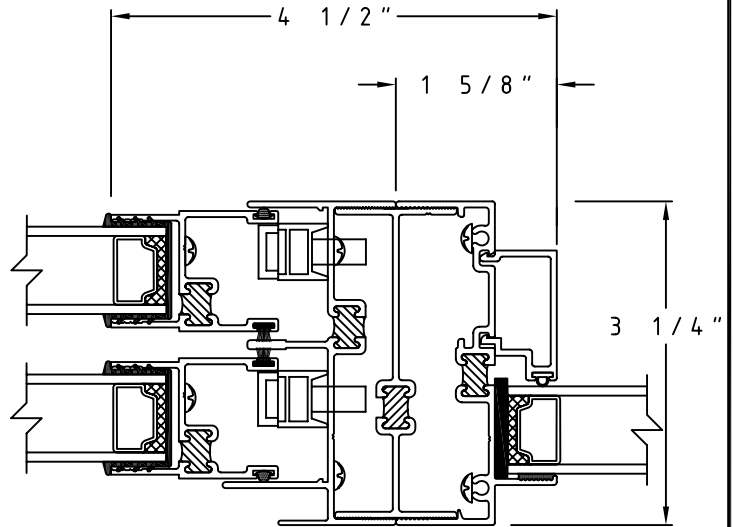
⑦ Fixed Head/Jamb Detail



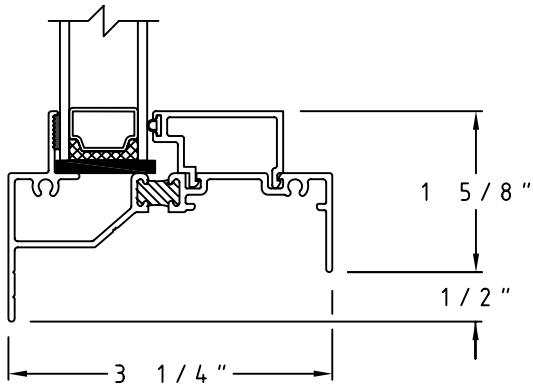
⑨ Double Hung Over Fixed with Stack Mullion Detail



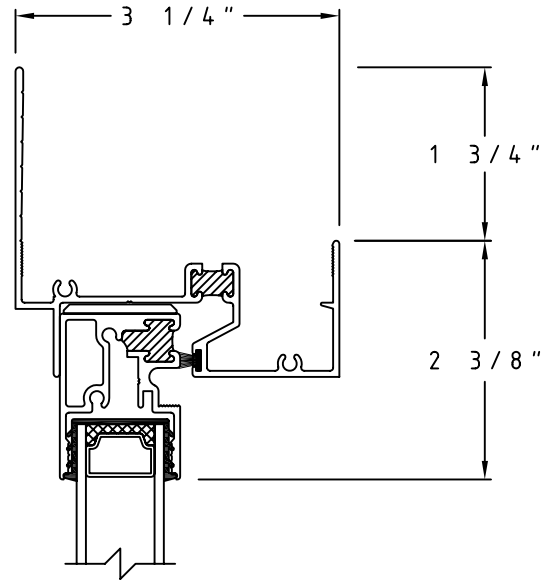
⑧ Fixed Over Double Hung with H Mullion Detail



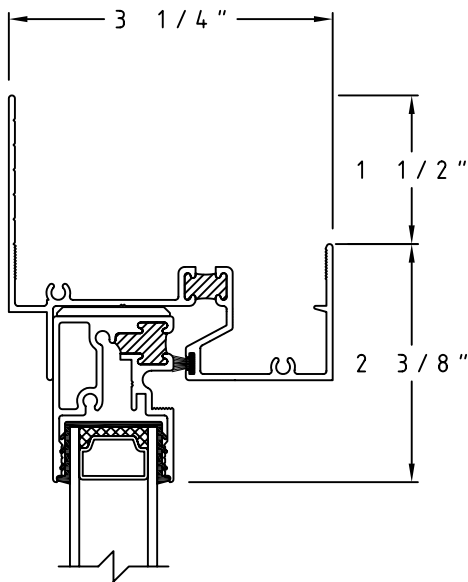
⑩ Double Hung Fixed H Mullion Detail



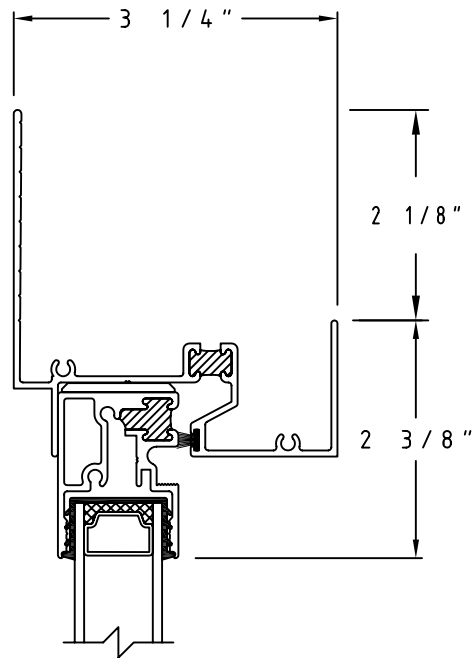
⑪ Fixed Sill Detail



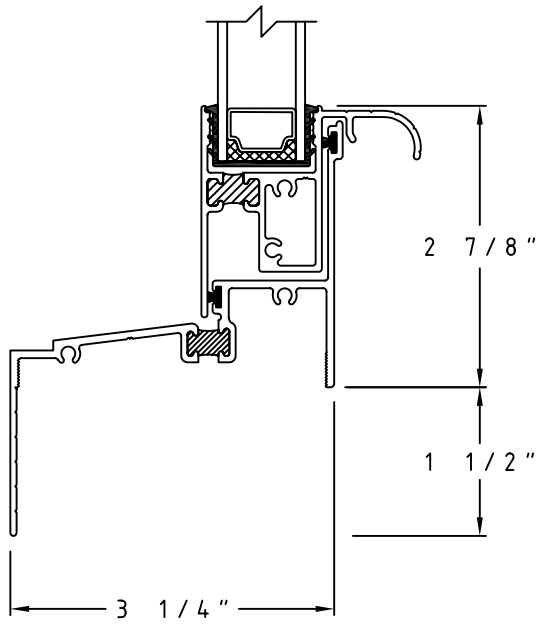
⑪B 1 3/4" Flange Head Detail



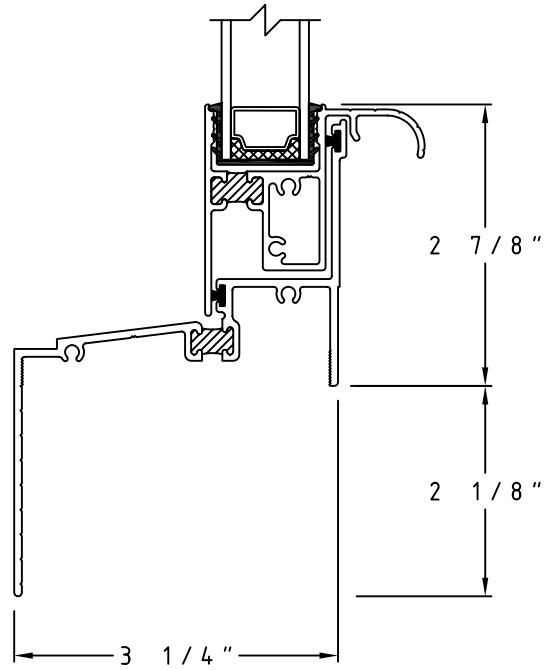
⑪A 1 1/2" Flange Head Detail



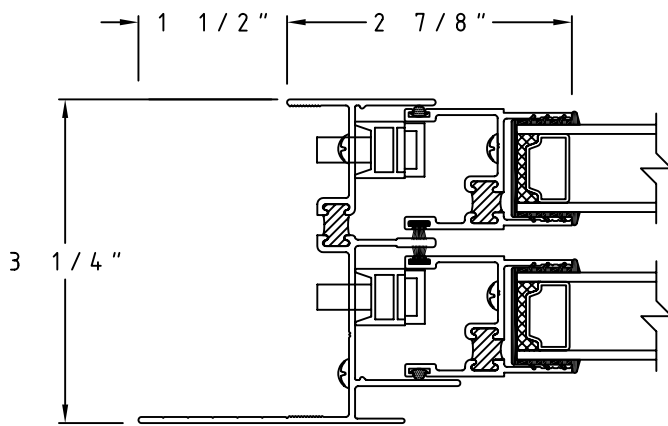
⑪C 2 1/8" Flange Head Detail



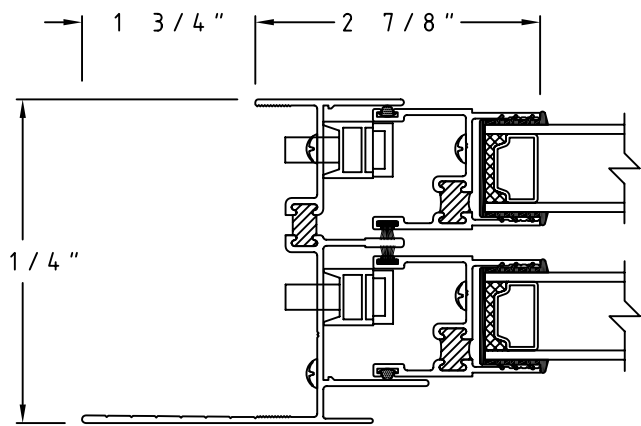
3A 1 1/2" Flange Sill Detail



3B 2 1/8" Flange Sill Detail

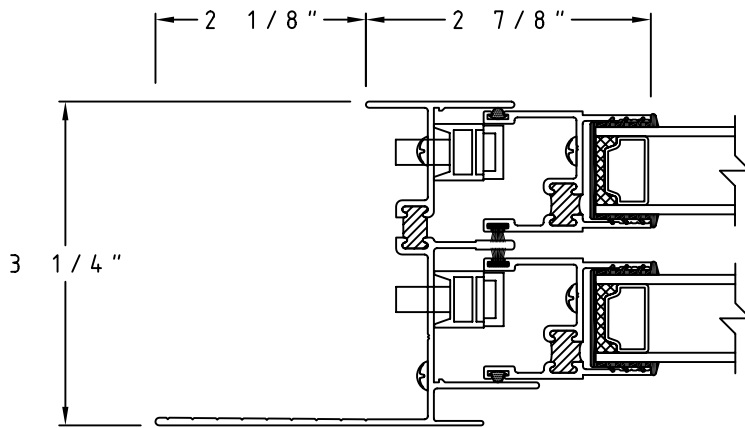


4A 1 1/2" Flange Jamb Detail

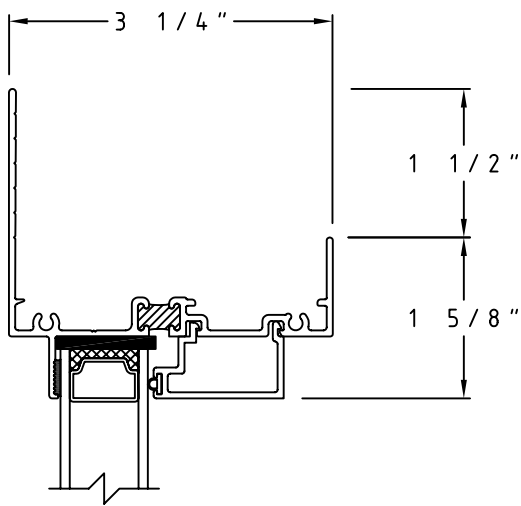


4B 1 3/4" Flange Jamb Detail

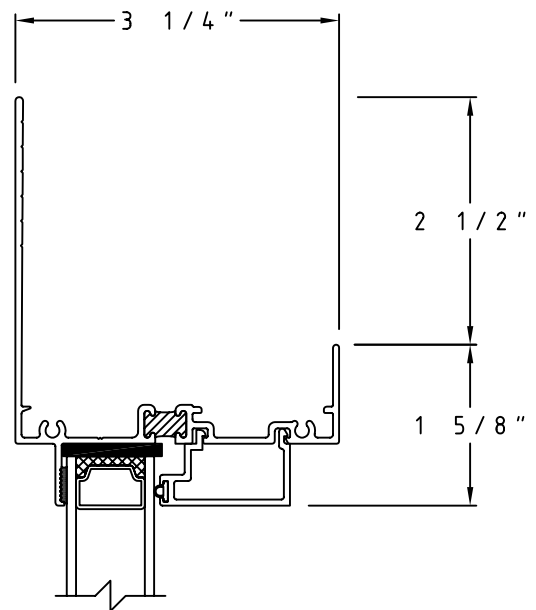
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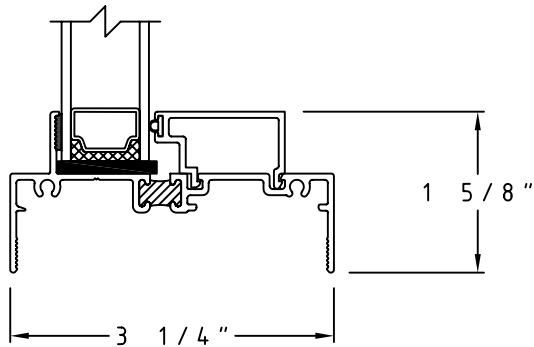
④C 2 1/8" Flange Jamb Detail



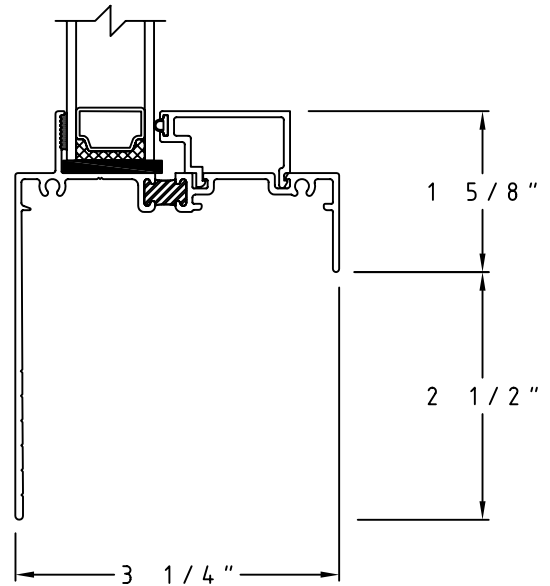
⑦A 1 1/2" Flange Fixed Head/Jamb Detail



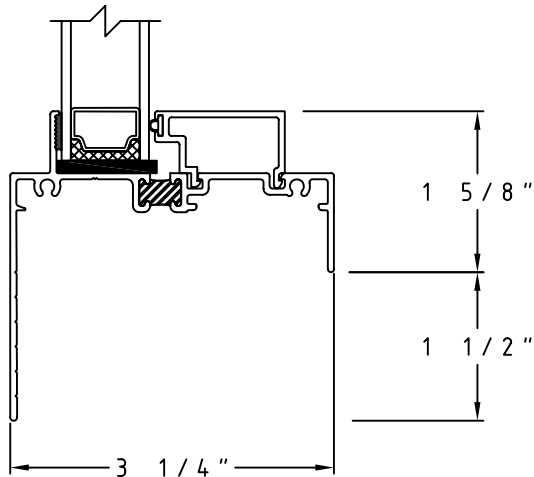
⑦B 2 1/2" Flange Fixed Head/Jamb Detail



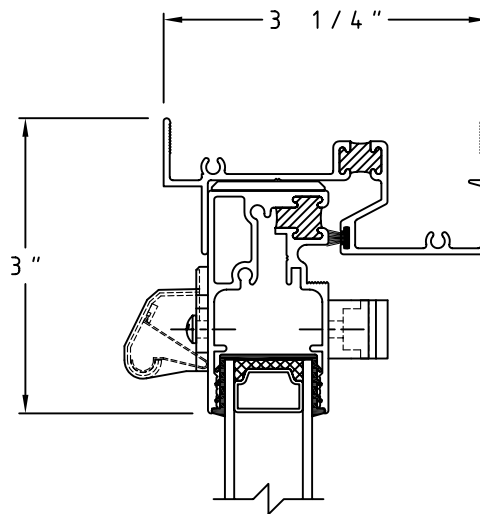
11A Equal Leg Fixed Sill Detail



11C 2 1/2" Flange Fixed Sill Detail



11B 1 1/2" Flange Fixed Sill Detail



1D Head with Trickle Vent Detail



W I N D O W   A N D   D O O R

## Series 1000 H-C65 Double Hung Side Load Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701&702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
ANSI - American National Standards Institute  
ANSI/AAMA/WDMA/CSA 101/I.S.2-97 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.

## Section 085113 Aluminum Windows



### Series 1000 H-C65 Double Hung Side Load Window

- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: H-C65.
- B. Windows: 3 1/4" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; finish factory-applied; frames and sash factory assembled.
- C. Configuration: Double hung; top and bottom sash operate and side load for glass cleaning.
- D. Glazing: 7/8" insulating glass units; reusable flexible PVC channel gasket with weep holes; glass and panel descriptions in paragraph 2.04; factory-glazed.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to H-C65 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 56" x 91" minimum test size with the following test results:
  - 1. Air Infiltration: maximum .10 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283-04 at a static air pressure difference of 1.57 psf.
  - 2. Water Penetration: no uncontrolled water leakage when tested per ASTM E 547-00 and ASTM E 331-00 at a static air pressure difference of 9.82 psf. (With and without screen in place.)
  - 3. Uniform Structural: window to be operable, and maximum .4% permanent deformation per member when tested per ASTM E 330-02 at a static air pressure difference of 97.81 psf.
  - 4. Forced entry resistance=Type: A Grade: 10

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURER

Champion 1000 H-C65 Double Hung Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main framing and sash members shall have a nominal wall thickness of not less than 0.062". Main framing and sash members shall have an overall depth of not less than 3.25 inches. Frame sill shall have a nominal wall thickness of 0.078".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- D. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel or other non corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel chrome-plated steel, where used, shall be in accordance with ASTM B 456. Double hung windows shall have one (1) zinc die-cast sweep-type lock (two (2) on units over 40" wide) and integral keeper for positive locking. All top sashes shall have one slide anti-drift lock.
- E. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair. Adhered weather-stripping shall not be allowed. Sash of double hung windows shall be weather-stripped using woven pile with mylar center fin, double on sash stiles and lift rail and single on sash rails.
- F. Balances: Double hung windows shall have sash balances of appropriate size and capacity to hold sash stationary at any open position. Balances shall be factory applied, easily accessible and shall be field replaceable. Balances shall be of the block and tackle type.
- G. Side Load Feature: Sashes are designed to be removed for cleaning and maintenance purposes.

### Section 085113 Aluminum Windows



### Series 1000 H-C65 Double Hung Side Load Window

- H. Screens: One half screen held in exterior tracks with stainless steel leaf springs; 5/16" x 1 1/2" x .045" extruded tubular aluminum frame; corners mitered, gusset reinforced, and crimped; 18 x 16 dark fiberglass mesh; PVC spline.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sashes shall mechanically interlock in a closed position. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Mullions and Mullion Covers: Mullions shall be provided as indicated on the drawings and shall be of the size and type to insure the structural integrity of the proposed window system.
- D. Glazing: The double hung aluminum windows shall be glazed with 7/8" dual sealed, structurally glazed insulated glass.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria.
- F. Frames: Equal leg [Options: Extruded Flanges: Head, jamb & sill 1-1/2", 1-3/4" and 2-1/8"]

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All aluminum spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone or a single seal with hot melt butyl. The 7/8" I.G. unit shall contain desiccant filled into the aluminum spacer. Plastic corner keys will not be accepted.
- B. Exterior glass lite
1. Thickness: 1/8" [Optional: 3/32" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
1. Thickness: 1/8" [Optional: 3/32" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Seal durability: conformance to ASTM E 774-00; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 7/8" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603 [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603-02. [Optional: 2604-05, 2605-05]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

## Section 085113 Aluminum Windows





## Series 1000 H-C65 Double Hung Side Load Window

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal-to-metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-02 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation.
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 2400 Series

## 2400 Double Hung



<u>Product By Operation:</u>	3-1/4" Tilt DH
<u>Model By Family:</u>	2400
<u>Product Description:</u>	Tilt DH
<u>Frame Depth:</u>	3-1/4"
<u>Flange Frame Head Options:</u>	1 1/2", 2 1/2"
<u>Flange Frame Jamb Options:</u>	1 1/2", 2 1/2"
<u>Flange Frame Sill Options:</u>	1 1/2", 2 1/2"
<u>101/I.S.2/A440-05 Rating:</u>	H-C35
<u>AAMA Test Size:</u>	56 x 91
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	7/8" Insul.
<u>Optional Glazing:</u>	~

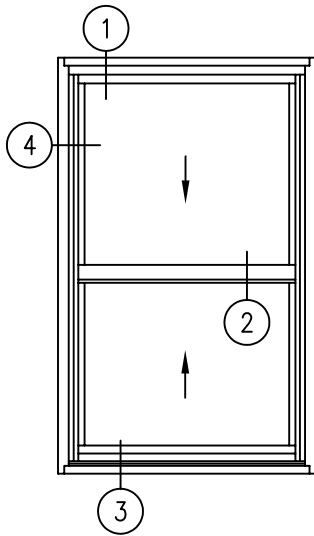


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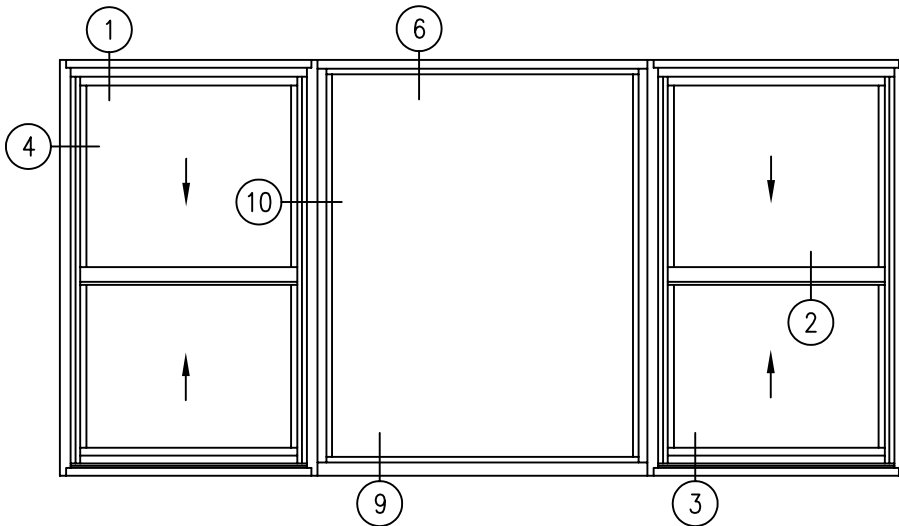
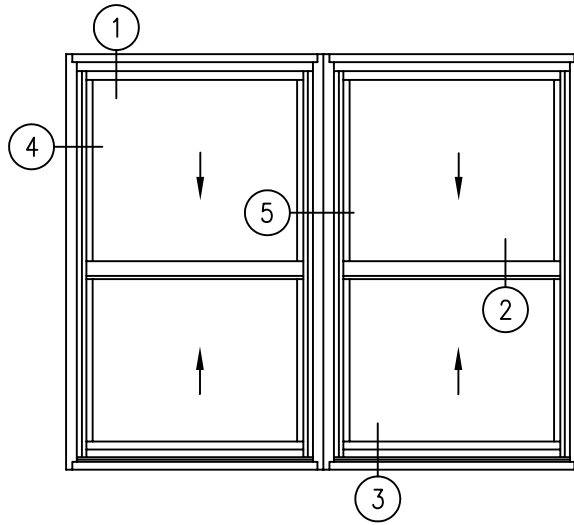


AAMA RATING:	H-C35
AIR INFILTRATION @ 25 mph	0.05 CFM
WATER TEST PRESSURE	5.43 PSF
STRUCTURAL LOAD	52.66 PSF
DESIGN PRESSURE	45.14 PSF

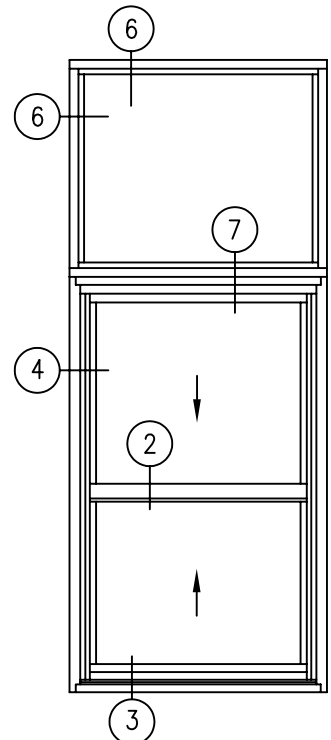
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Single Double Hung

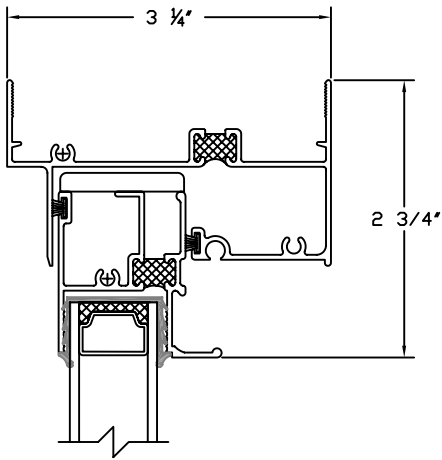


Double Hung/Fixed/Double Hung

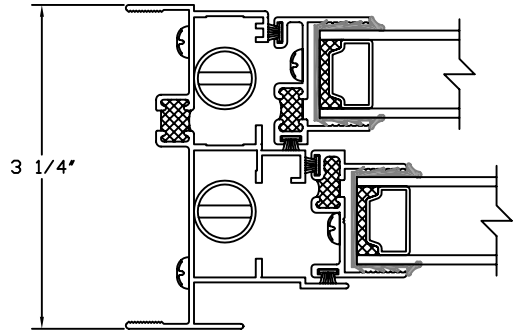


Fixed/Double Hung

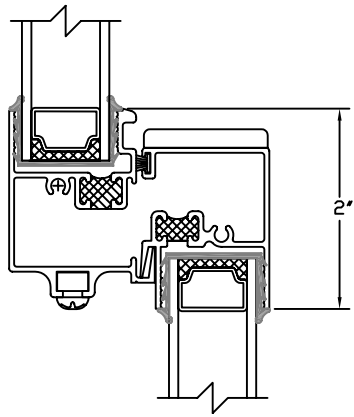
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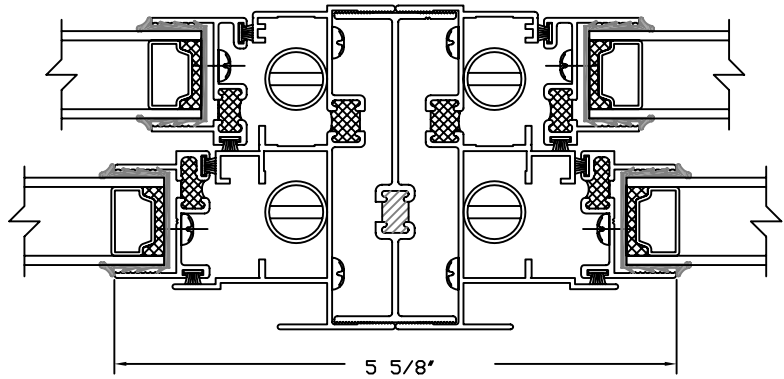
① Head Detail



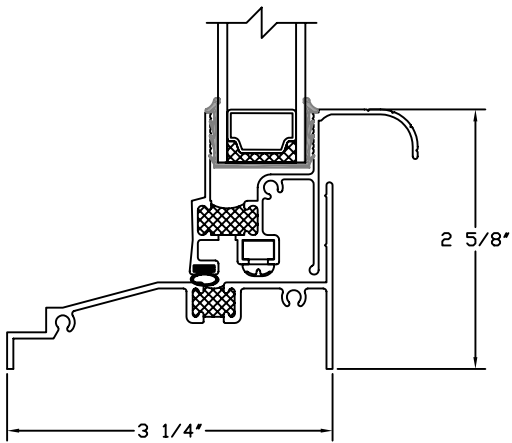
④ Jamb Detail



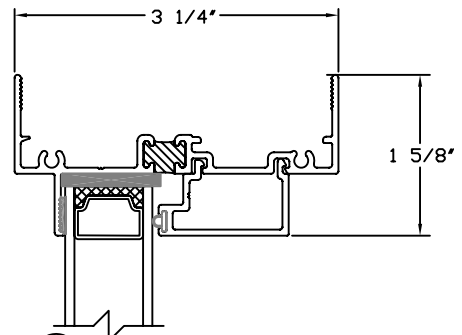
② Meeting Rail Detail



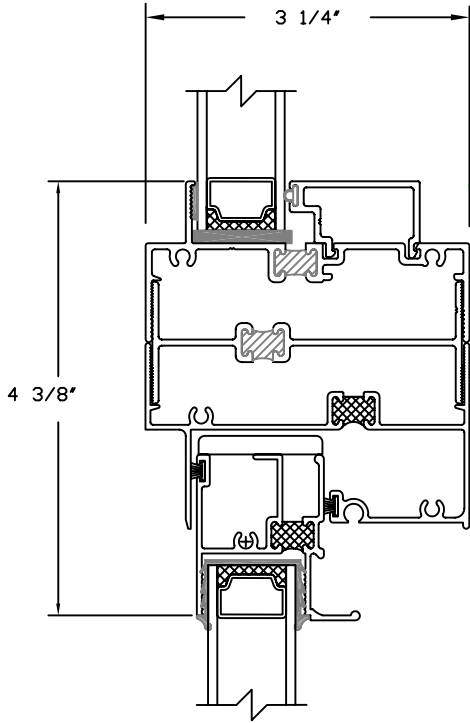
⑤ Vertical H Mullion Detail



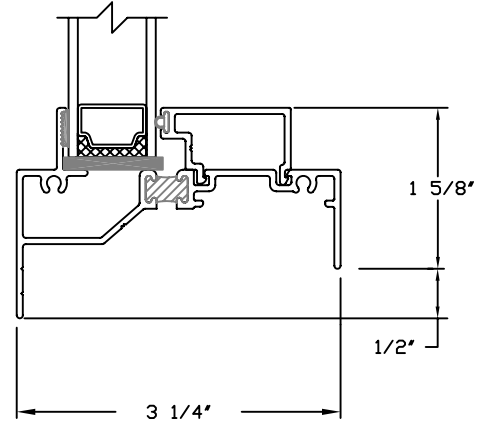
③ Sill Detail



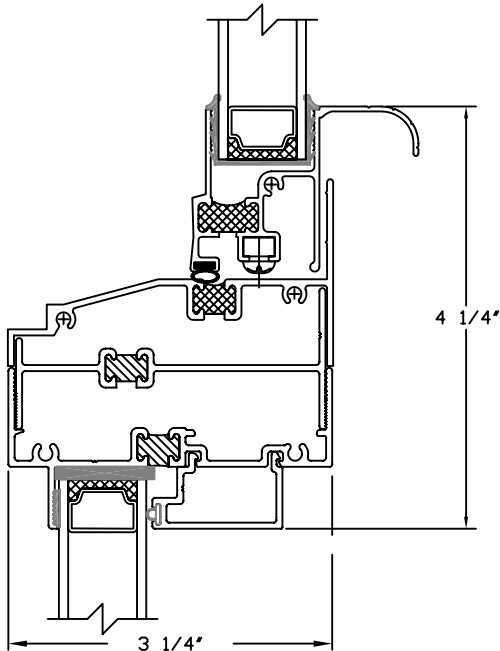
⑥ Fixed Head/Jamb Detail



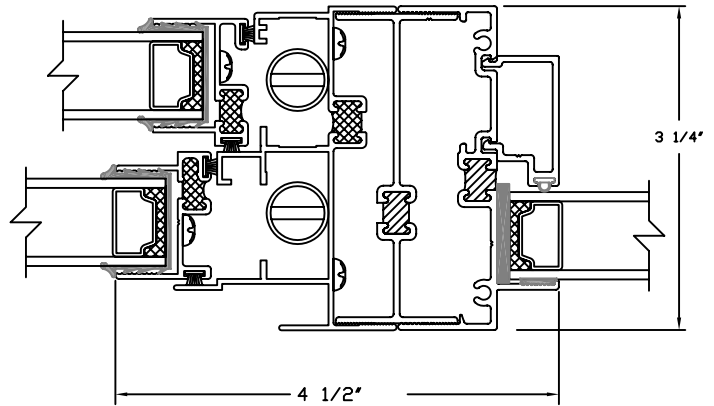
7 Fixed Over Double Hung With H Mullion Detail



9 Fixed Sill Detail



8 Double Hung Over Fixed Detail



10 Double Hung/Fixed With H Mullion Detail



## Series 2400 H-C35 Double Hung Tilt-in Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2603-02 "Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 2605-05 "Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSA – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

## Section 085113 Aluminum Windows



### Series 2400 H-C35 Double Hung Tilt-in Window

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: H-C35.
- B. Windows: 3 1/4" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; finish factory-applied; frames and sash factory-assembled.
- C. Configuration: double hung; top and bottom sash tilt in for glass cleaning.
- D. Glazing: 7/8" insulating glass units; reusable flexible PVC channel gasket with weep holes; glass and panel descriptions in paragraph 2.04; factory-glazed.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to H-C35 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 56" x 91" minimum test size with the following test results:
  - 1. Air Infiltration: maximum 0.05 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283 at a static air pressure difference of 1.6 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 547. There shall be no leakage at a static pressure of 5.43 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 45.14 psf.
  - 4. Uniform Structural: window to be operable, and maximum 0.3% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 52.66 psf.
  - 5. Forced entry resistance as per ASTM F 588 = Type A; Grade 10

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURER

Champion 2400 H-C35 Double Hung Window

#### 2.02 MATERIALS

- A. Aluminum extrusions: produced from commercial quality 6063-T5 alloy; free from defects impairing strength and durability.
- B. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel or other non corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel chrome-plated steel, where used, shall be in accordance with ASTM B 456. Double hung windows shall have one (1) zinc die-cast sweep-type lock (two (2) on units over 40" wide and an integral keeper for positive locking.
- C. Weather-stripping: Weather-stripping conforming to AAMA 701/702. Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair. Adhered weather-stripping shall not be allowed. Sash of double hung windows shall be weather-stripped using woven pile with mylar center fin, double on sash stiles and single on sash rails. Lift rail shall seal to frame sill with dual vinyl compression bulb.
- D. Balances: spiral [Option: ultra-lifts] conforming to AAMA 902 and of appropriate capacity to hold each sash stationary and permit it to operate freely; nylon balance shoes which lock in the tilted position to prevent sash travel. Balances shall be factory applied, easily accessible and shall be field replaceable.
- E. Screens: half; held in exterior tracks with stainless steel leaf springs; 5/16" x 1 1/2" x .045" extruded tubular aluminum frame; corners mitered, gusset reinforced; 18 x 16 dark fiberglass mesh; PVC spline.

### Section 085113 Aluminum Windows

### Series 2400 H-C35 Double Hung Tilt-in Window

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sashes shall mechanically interlock in a closed position. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Mullions and Mullion Covers: Mullions shall be provided as indicated on the drawings and shall be of the size and type to insure the structural integrity of the proposed window system.
- D. Glazing: The double hung aluminum windows shall be glazed with 7/8" insulated glass.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically applied painted conforming to meet AAMA criteria.
- F. Frame equal leg [Options: Extruded Flanges: Head, Sill and Jamb at 1 ½ or 2 ½"]

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [3/32" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E 270 on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [3/32" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E 270 on #3 surface)
- D. Seal durability: conformance to ASTM E 774; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 7/8" Insulating Panel with 1/8" thermolite backups and stucco Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

## Section 085113 Aluminum Windows





### Series 2400 H-C35 Double Hung Tilt-in Window

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 2500 Series

## 2500 Double Hung



<u>Product By Operation:</u>	3-1/4" Tilt DH
<u>Model By Family:</u>	2500
<u>Product Description:</u>	Tilt DH
<u>Frame Depth:</u>	3-1/4"
<u>Flange Frame Head Options:</u>	1 1/2", 2 1/2"
<u>Flange Frame Jamb Options:</u>	1 1/2", 2 1/2"
<u>Flange Frame Sill Options:</u>	1 1/2", 2 1/2"
<u>101/I.S.2/A440-05 Rating:</u>	H-C45
<u>AAMA Test Size:</u>	56 x 91
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	7/8" Insul.
<u>Optional Glazing:</u>	~

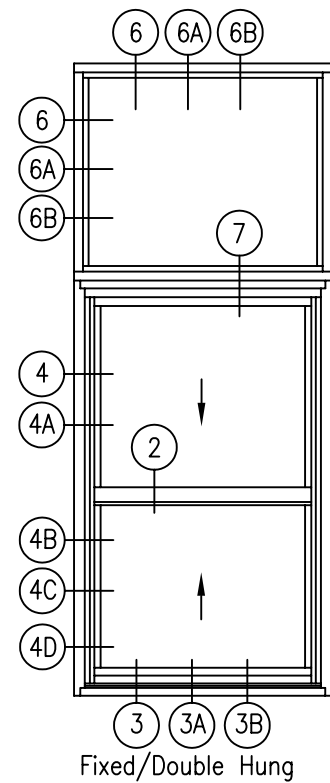
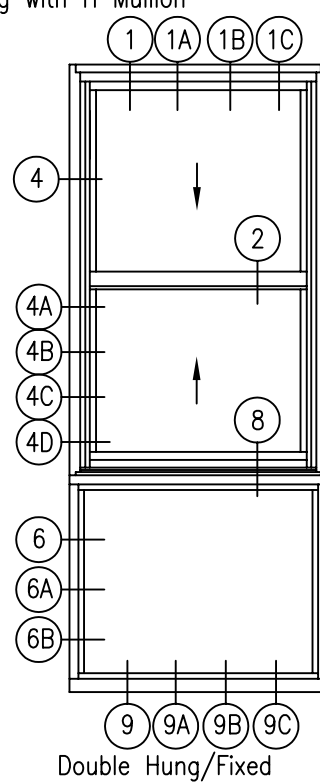
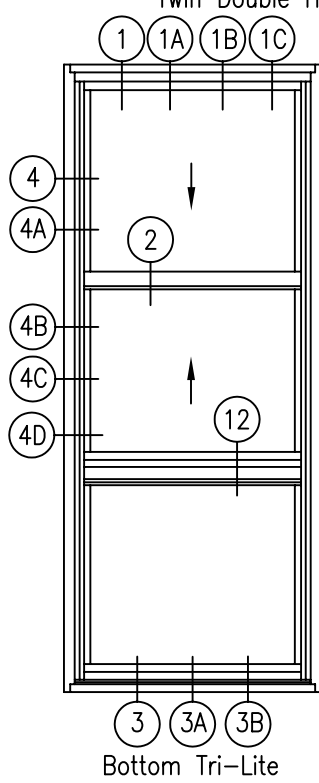
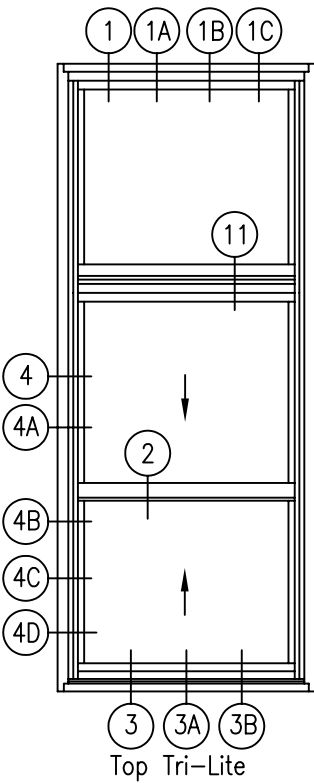
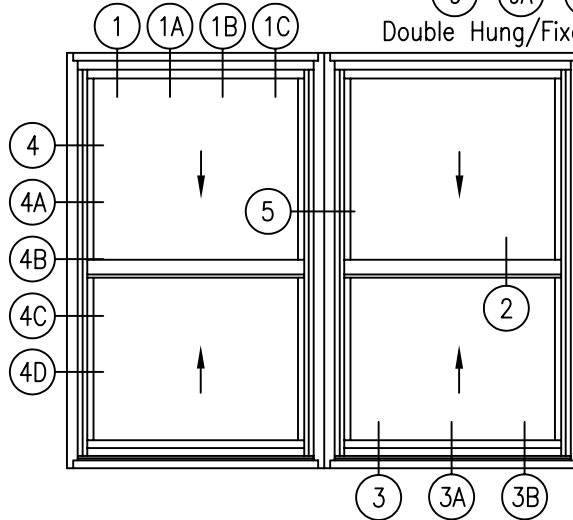
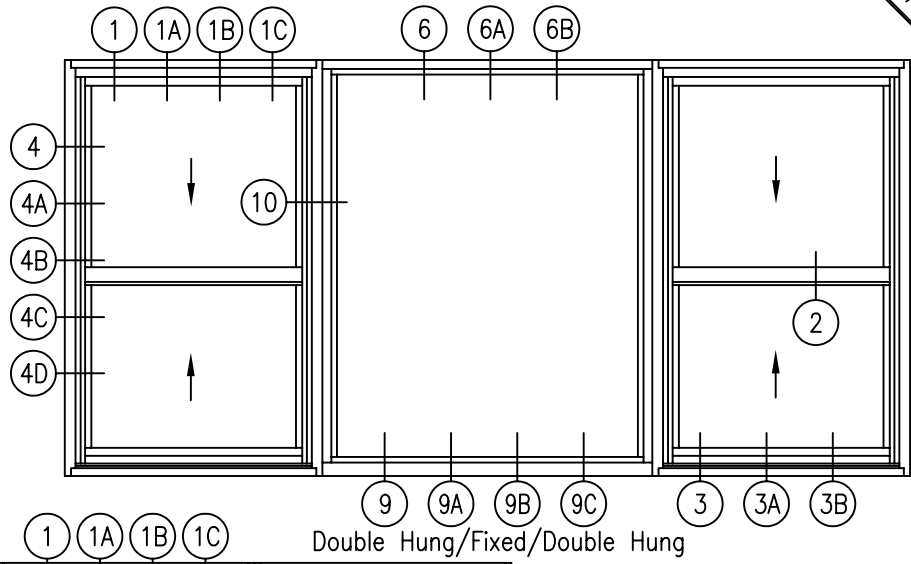
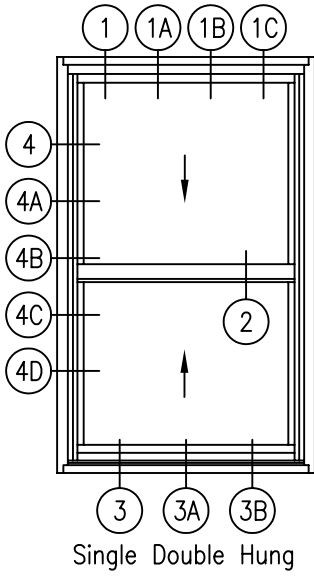


### Performance Data



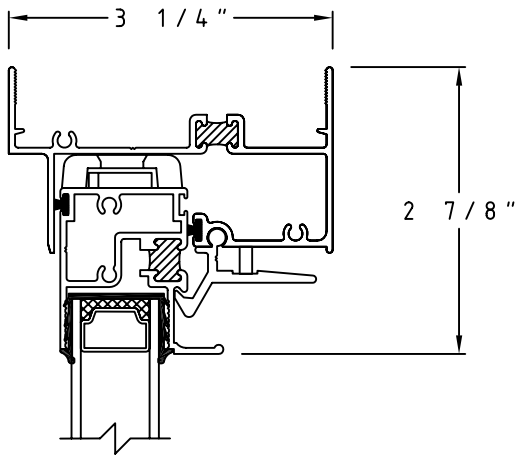
AAMA RATING:	H-C45
AIR INFILTRATION @ 25 mph	0.06 CFM
WATER TEST PRESSURE	6.90 PSF
STRUCTURAL LOAD	67.71 PSF
DESIGN PRESSURE	45.14 PSF

SCALE: NONE

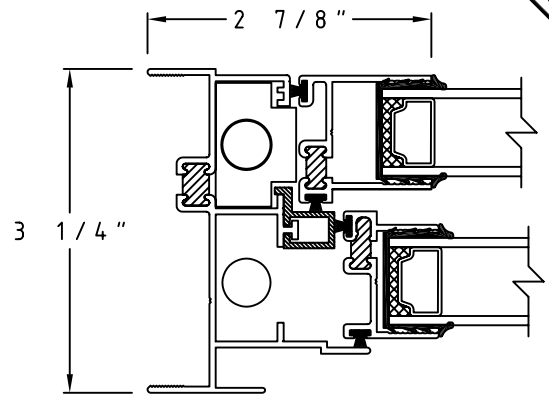


All Elevations are viewed outside looking IN.

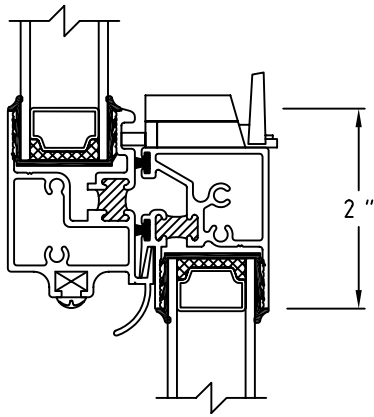
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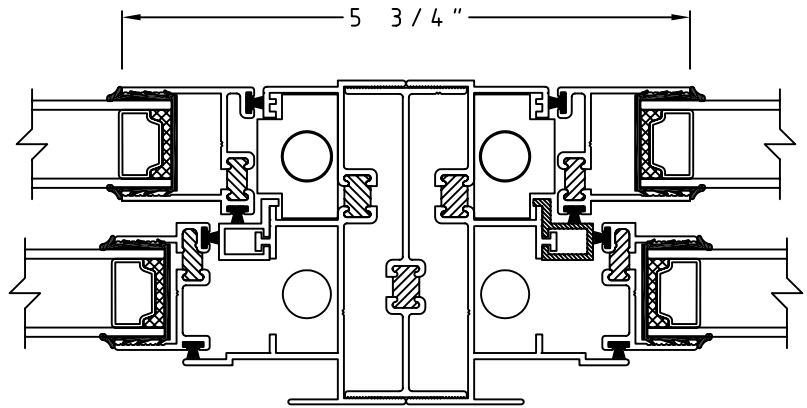
① Head Detail



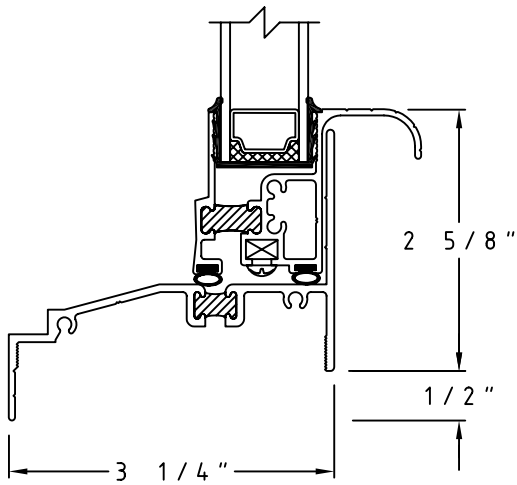
④ Jamb Detail



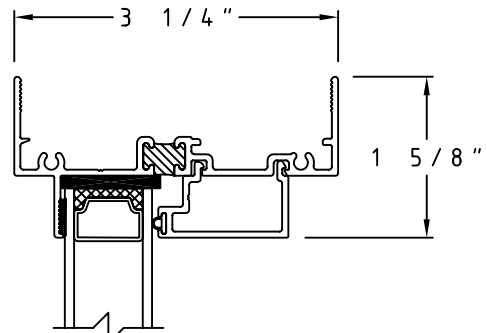
② Meeting Rail Detail



⑤ Vertical H Mullion Detail

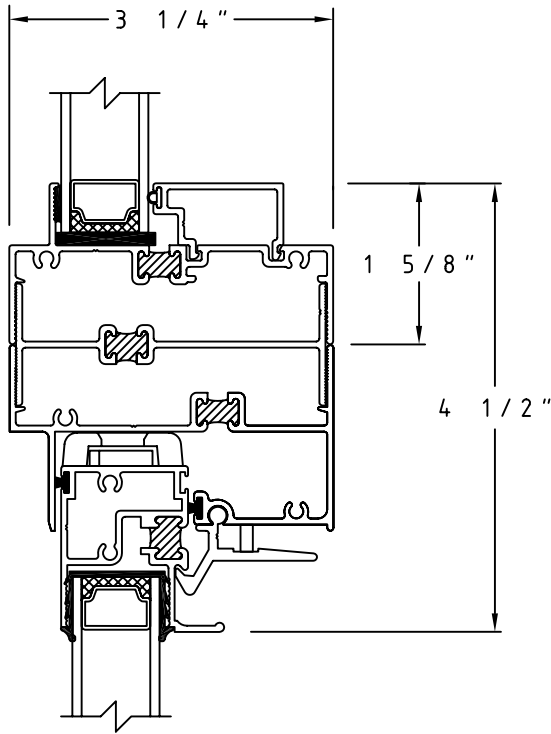


③ Sill Detail

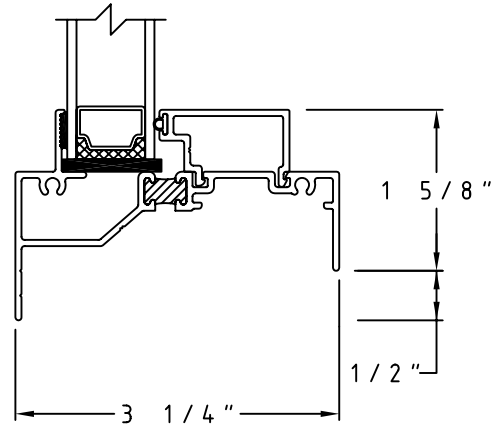


⑥ Fixed Head/Jamb Detail

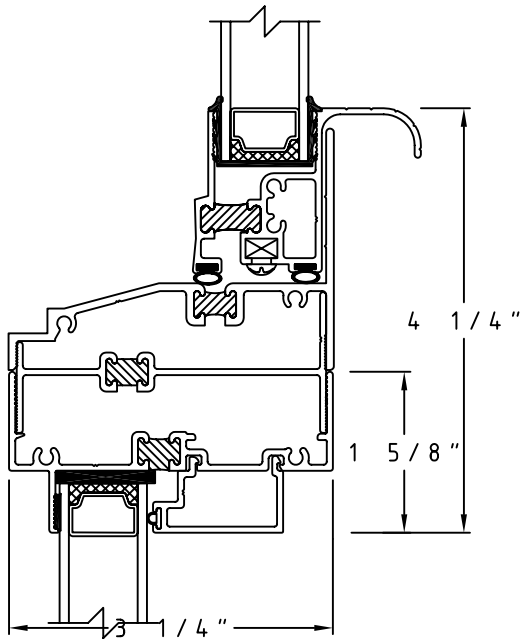
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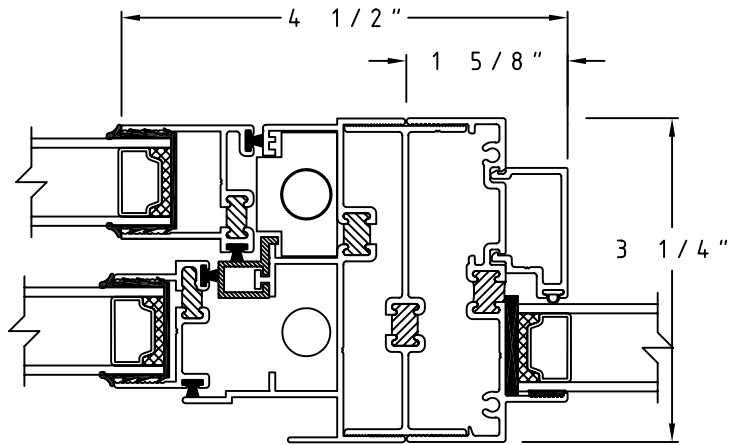
7 Fixed Over Double Hung With H Mullion Detail



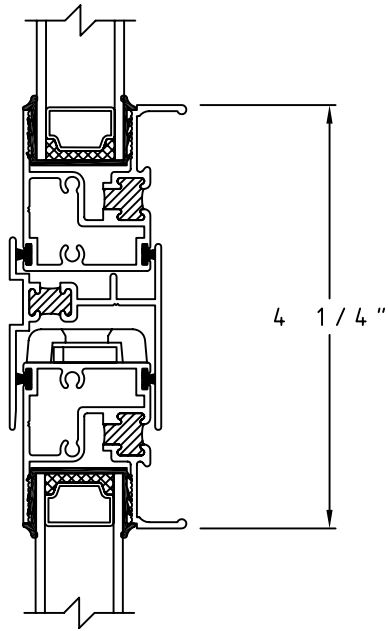
9 Fixed Sill Detail



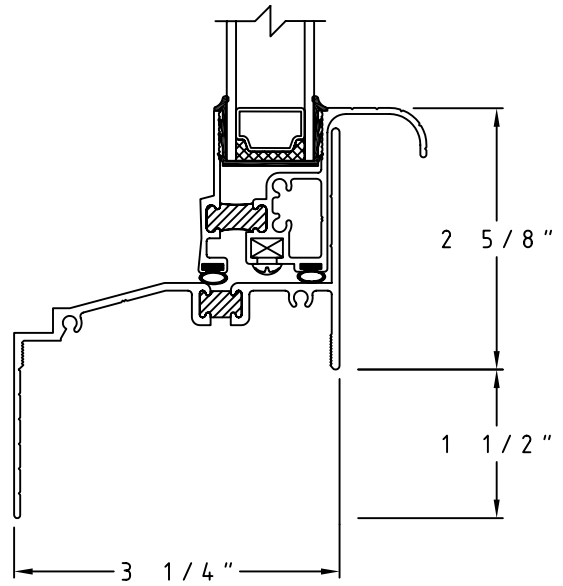
8 Double Hung Over Fixed Detail



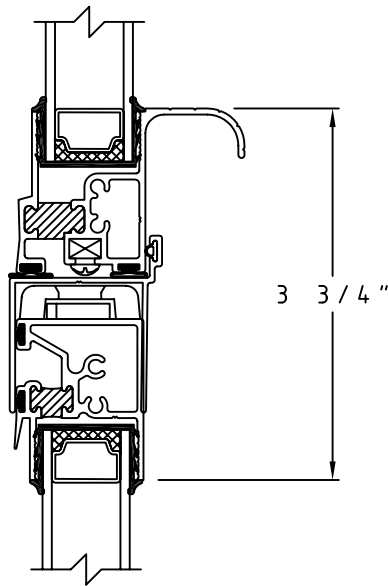
10 Double Hung/Fixed With H Mullion Detail



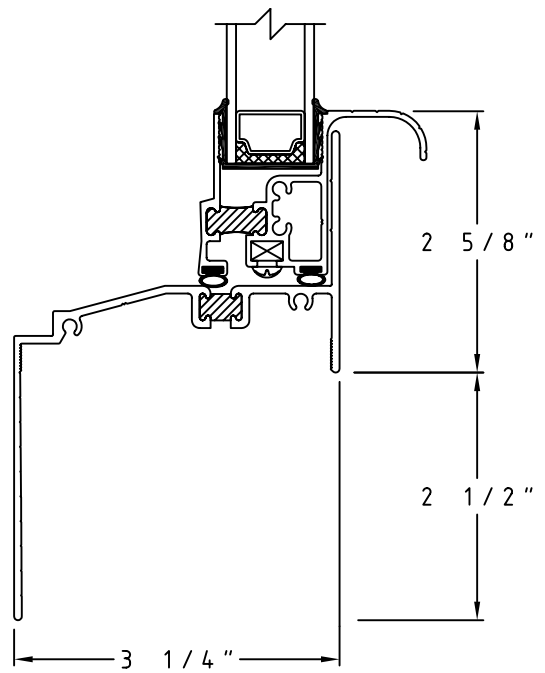
① Fixed Over Double Hung Intergal Mullion Detail



③A 1 1/2" Flange Frame Sill Detail

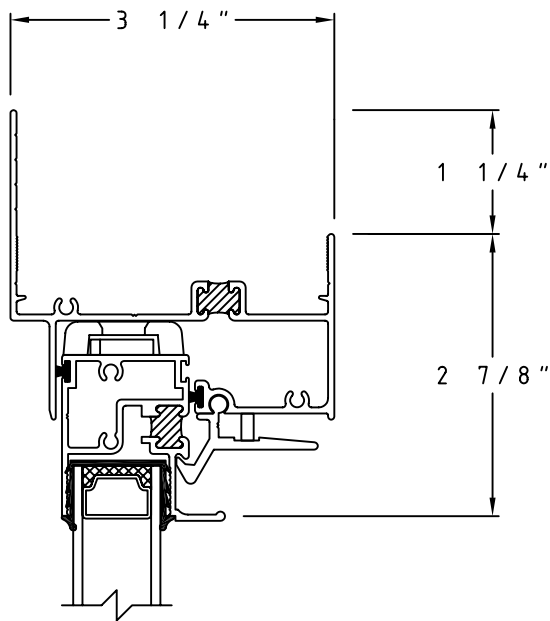


① Double Hung Over Fixed Intergal Mullion Detail

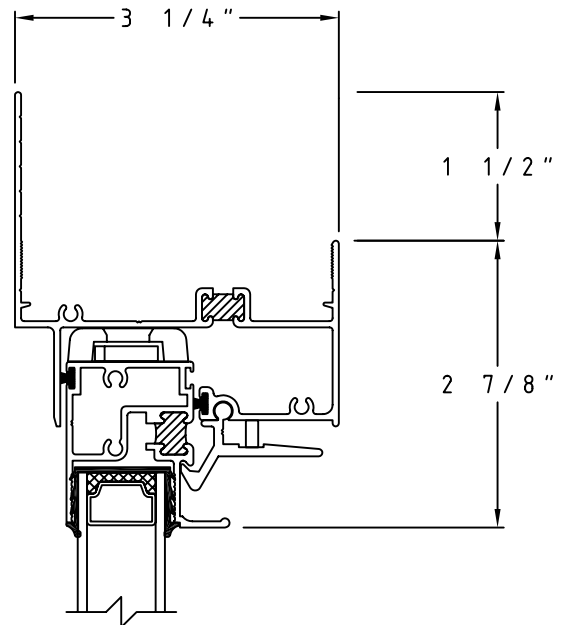


③B 2 1/2" Flange Frame Sill Detail

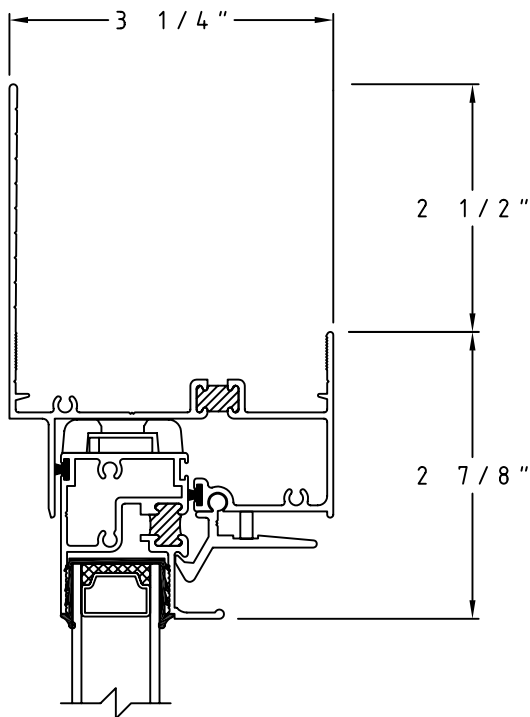
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①A 1 1/4" Flange Frame Head Detail

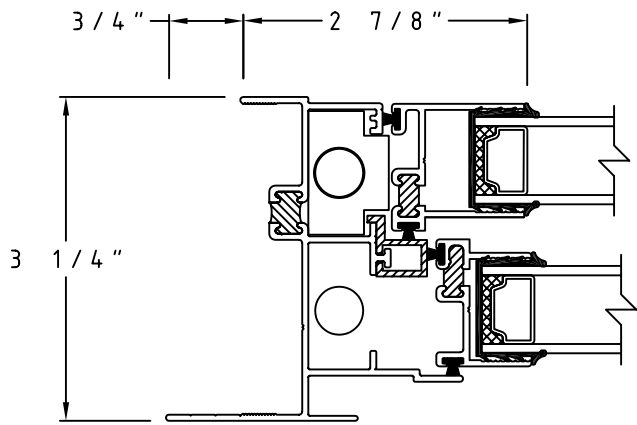


①B 1 1/2" Flange Frame Head Detail

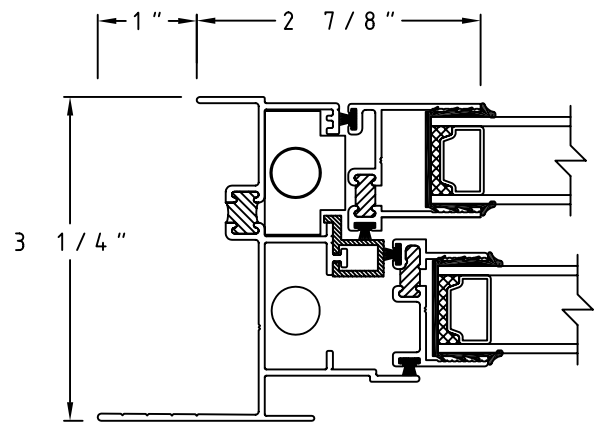


①C 2 1/2" Flange Frame Head Detail

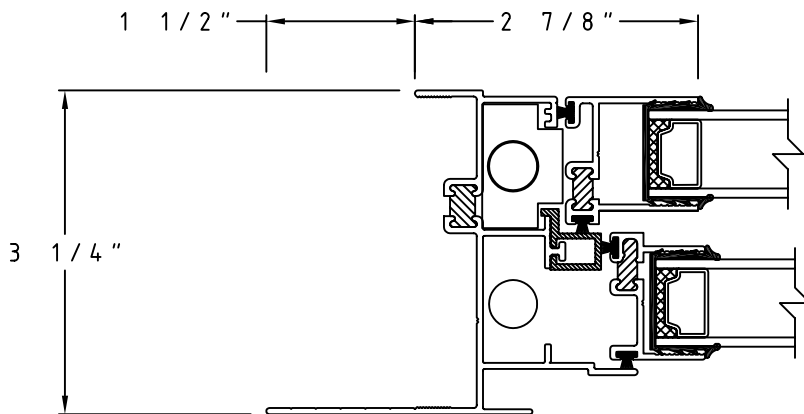
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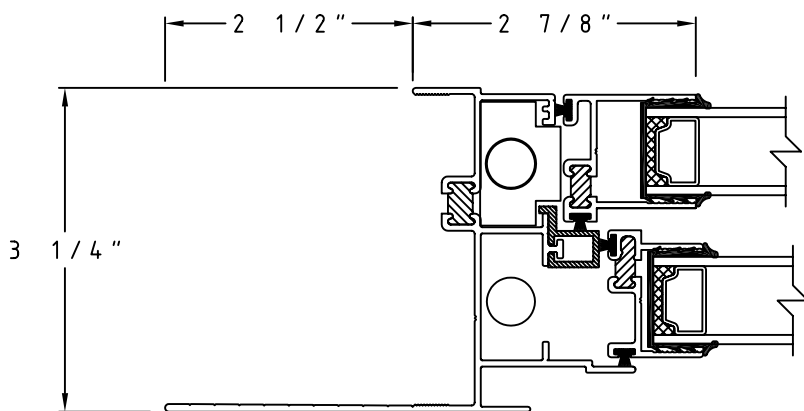
④D 3/4" Flange Frame Jamb Detail



④C 1" Flange Frame Jamb Detail



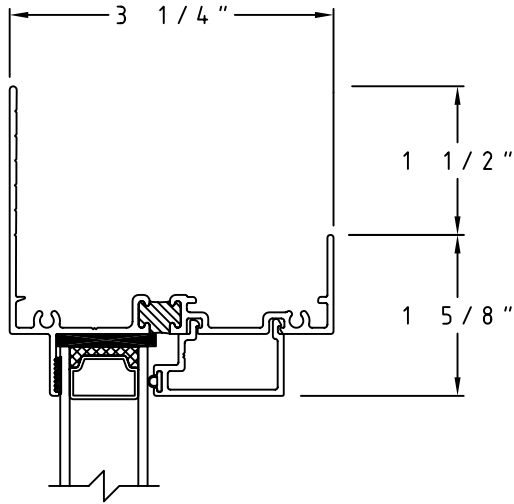
④A 1 1/2" Flange Frame Jamb Detail



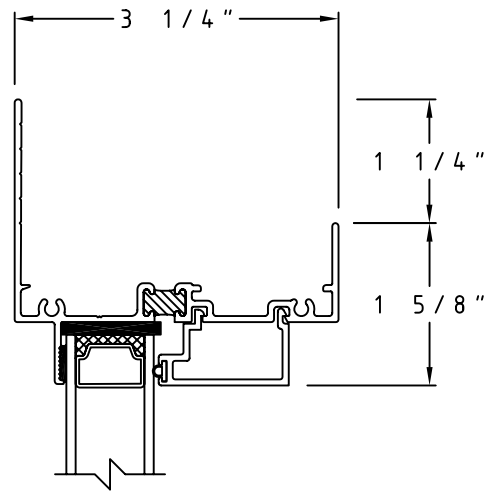
④B 2 1/2" Flange Frame Jamb Detail



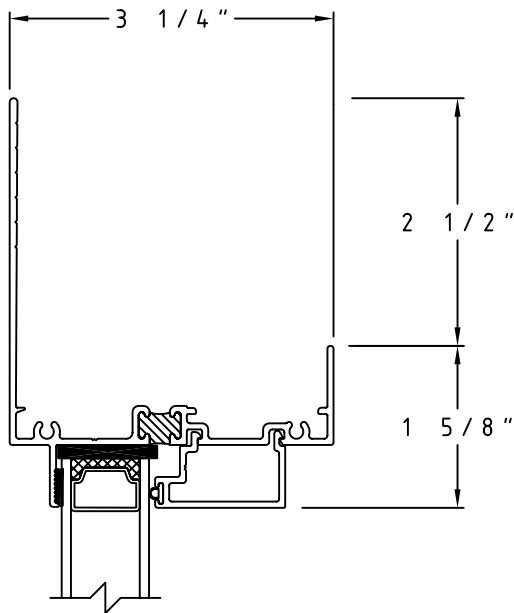
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6B 1 1/2" Flange Fixed Head/Jamb Detail

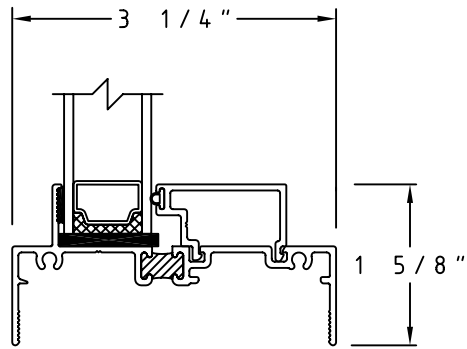


6A 1 1/4" Flange Fixed Head/Jamb Detail

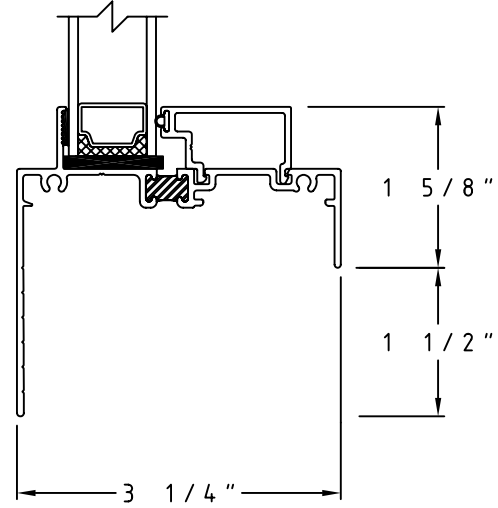


6C 2 1/2" Flange Fixed Head/Jamb Detail

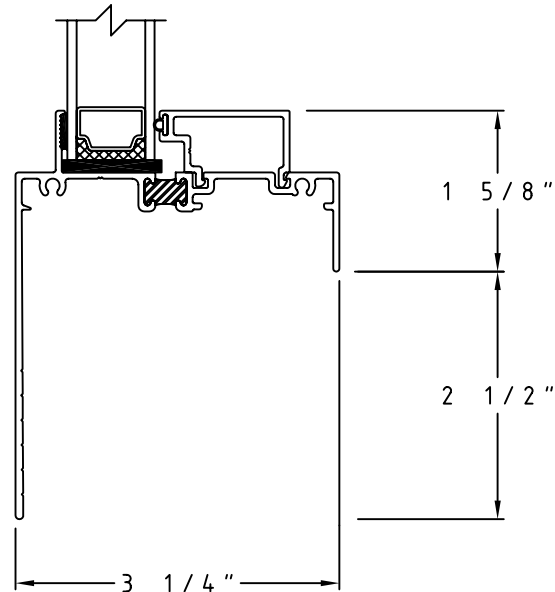
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9A Fixed Equal Leg Sill Detail



9B 1 1/2" Flange Fixed Sill Detail



9C 2 1/2" Flange Fixed Sill Detail



## Series 2500 H-C45 Double Hung Tilt-in Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2603-02 "Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 2605-05 "Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSA – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

## Section 085113 Aluminum Windows



### Series 2500 H-C45 Double Hung Tilt-in Window

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: H-C45.
- B. Windows: 3 1/4" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; finish factory-applied; frames and sash factory-assembled.
- C. Configuration: double hung; top and bottom sash tilt in for glass cleaning.
- D. Glazing: 7/8" insulating glass units; reusable flexible PVC channel gasket with weep holes; glass and panel descriptions in paragraph 2.04; factory-glazed.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to H-C45 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 56" x 91" minimum test size with the following test results:
  - 1. Air Infiltration: maximum 0.06 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283 at a static air pressure difference of 1.6 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 547. There shall be no leakage at a static pressure of 6.90 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 45.14 psf.
  - 4. Uniform Structural: window to be operable, and maximum 0.3% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 67.71 psf.
  - 5. Forced entry resistance as per ASTM F 588 = Type A; Grade 10

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURER

Champion 2500 H-C45 Double Hung Window

#### 2.02 MATERIALS

- A. Aluminum extrusions: produced from commercial quality 6063-T5 alloy; free from defects impairing strength and durability.
- B. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel or other non corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel chrome-plated steel, where used, shall be in accordance with ASTM B 456. Double hung windows shall have one (1) zinc die-cast sweep-type lock (two (2) on units over 40" wide and an integral keeper for positive locking.
- C. Weather-stripping: Weather-stripping conforming to AAMA 701/702. Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair. Adhered weather-stripping shall not be allowed. Sash of double hung windows shall be weather-stripped using woven pile with mylar center fin, double on sash stiles and single on sash rails. Lift rail shall seal to frame sill with dual vinyl compression bulb.
- D. Balances: spiral [Option: ultra-lifts] conforming to AAMA 902 and of appropriate capacity to hold each sash stationary and permit it to operate freely; nylon balance shoes which lock in the tilted position to prevent sash travel. Balances shall be factory applied, easily accessible and shall be field replaceable.
- E. Screens: half; held in exterior tracks with stainless steel leaf springs; 5/16" x 1 1/2" x .045" extruded tubular aluminum frame; corners mitered, gusset reinforced; 18 x 16 dark fiberglass mesh; PVC spline.

## Section 085113 Aluminum Windows

### Series 2500 H-C45 Double Hung Tilt-in Window

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sashes shall mechanically interlock in a closed position. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Mullions and Mullion Covers: Mullions shall be provided as indicated on the drawings and shall be of the size and type to insure the structural integrity of the proposed window system.
- D. Glazing: The double hung aluminum windows shall be glazed with 7/8" insulated glass.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically applied painted conforming to meet AAMA criteria.
- F. Frame equal leg [Options: Extruded Flanges: Head, Sill and Jamb at 1 ½ or 2 ½"]

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [3/32" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E 270 on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [3/32" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E 270 on #3 surface)
- D. Seal durability: conformance to ASTM E 774; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 7/8" Insulating Panel with 1/8" thermolite backups and stucco Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

## Section 085113 Aluminum Windows



### Series 2500 H-C45 Double Hung Tilt-in Window

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 2500 Series

## 2510 Fixed Window



<u>Product By Operation:</u>	3-1/4" Fixed
<u>Model By Family:</u>	2500
<u>Product Description:</u>	Fixed Window
<u>Frame Depth:</u>	3 -1/4"
<u>Flange Frame Head Options:</u>	1-1/2", 2-1/2"
<u>Flange Frame Jamb Options:</u>	1-1/2", 2-1/2"
<u>Flange Frame Sill Options:</u>	1-1/2", 2-1/2"
<u>101/I.S.2/A440-05 Rating:</u>	FW-HC100
<u>AAMA Test Size:</u>	60 x 71
<u>101/I.S.2/A440-05 Optional:</u>	FW-AW75
<u>Optional Test Size:</u>	60 x 71
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	7/8" Ins
<u>Optional Glazing:</u>	7/8" Panel

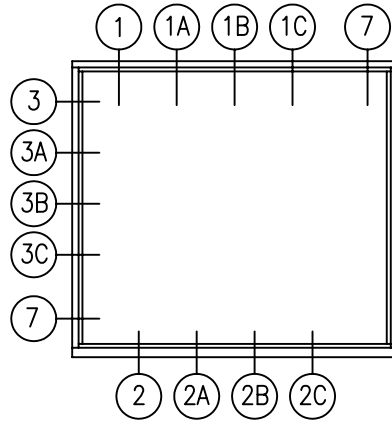


### Performance Data

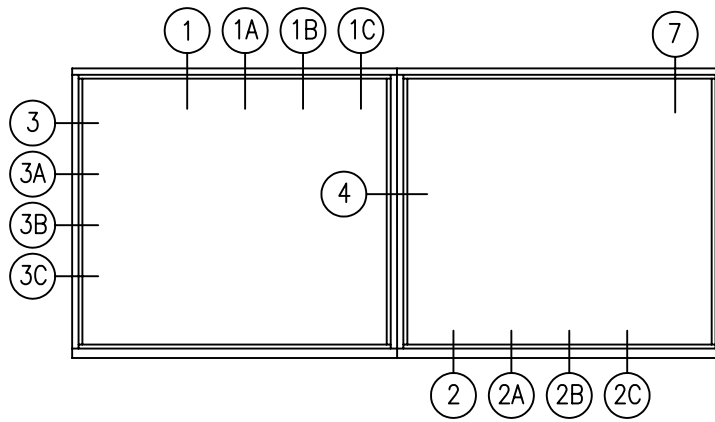


AAMA RATING:	FW-HC100
AIR INFILTRATION @ 50mph	<0.01 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	150.47 PSF
DESIGN PRESSURE	105.33 PSF

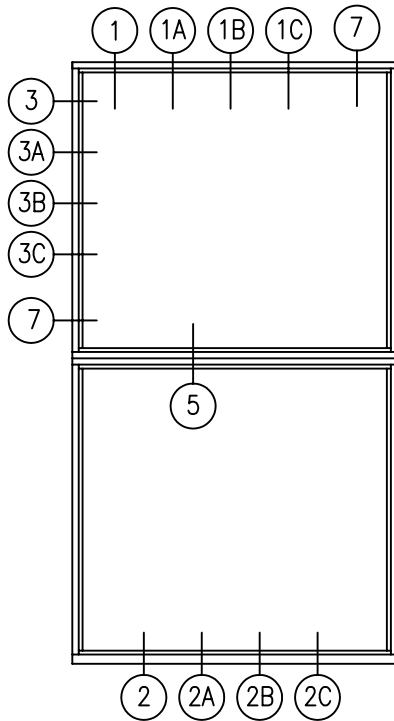
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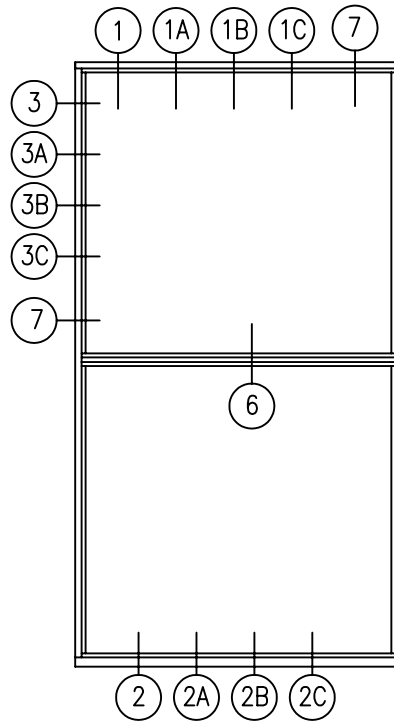
Fixed



Fixed/Fixed



Fixed Over Fixed

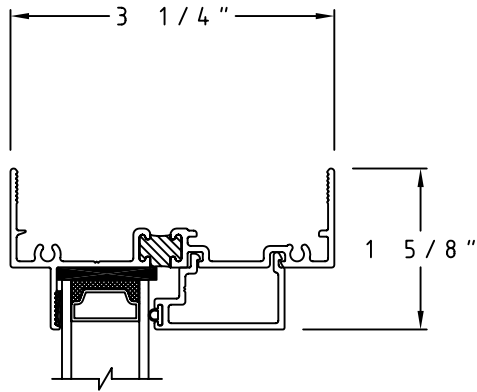


Fixed Over Fixed

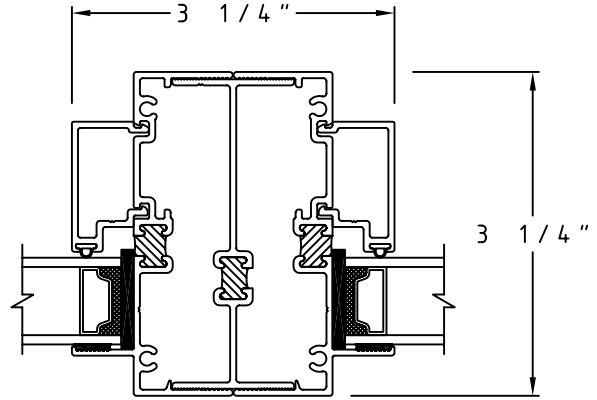
All Elevations are viewed outside looking IN.



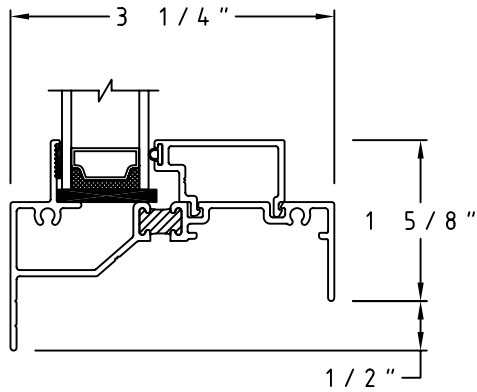
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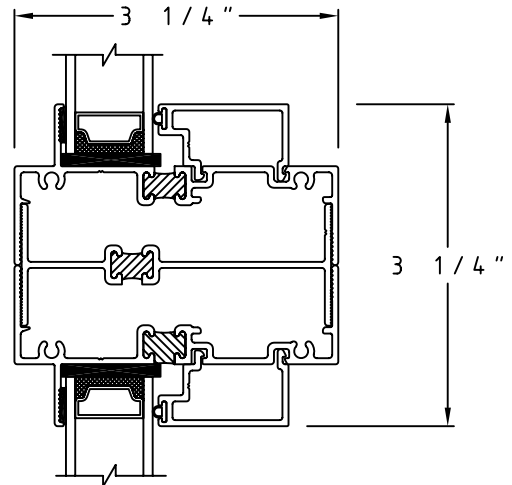
① Head Detail



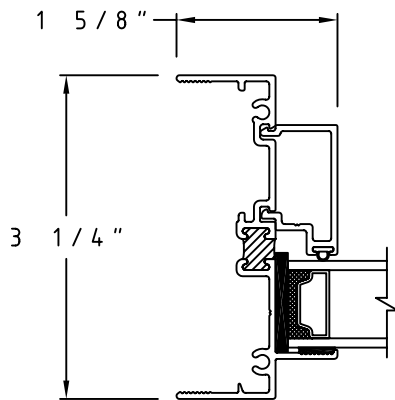
④ Fixed/Fixed Jamb Detail



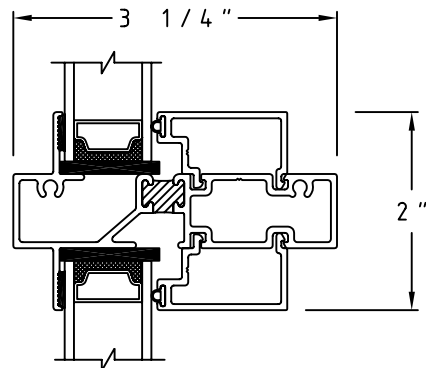
② Sill Detail



⑤ Fixed Over Fixed With H Mullion Detail

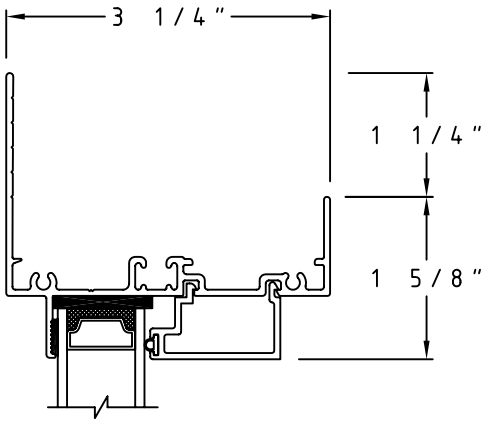


③ Jamb Detail

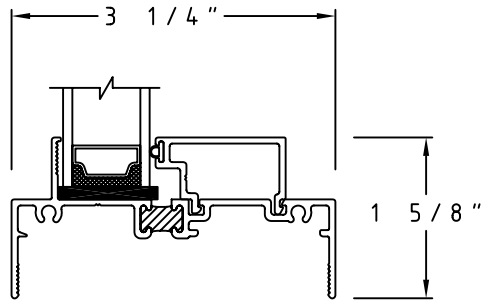


⑥ Fixed Over Fixed With Continuous Frame Detail

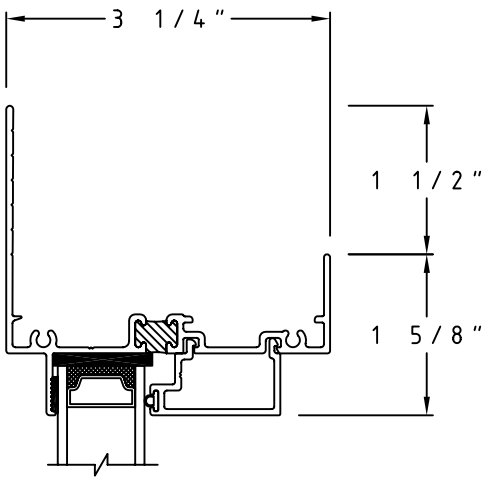
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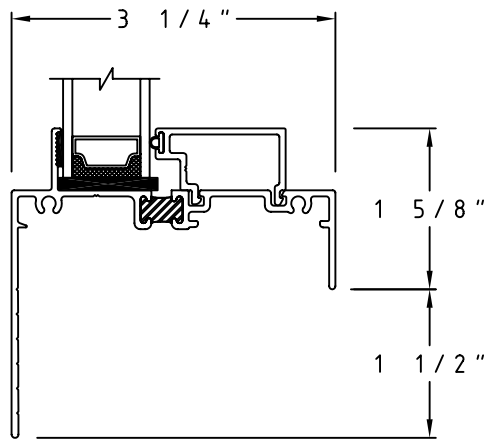
1A 1 1/4" Flange Frame Head Detail



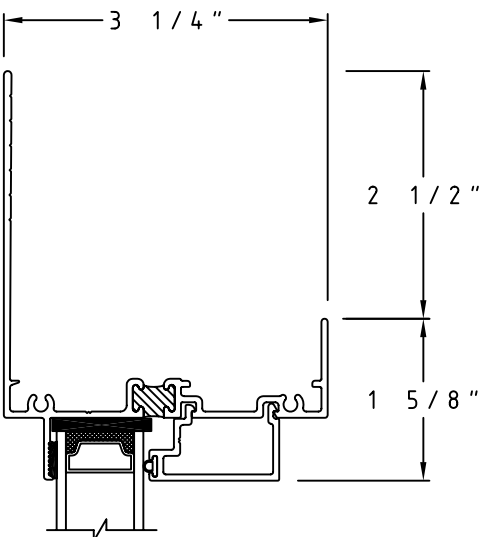
2A Equal Leg Sill Detail



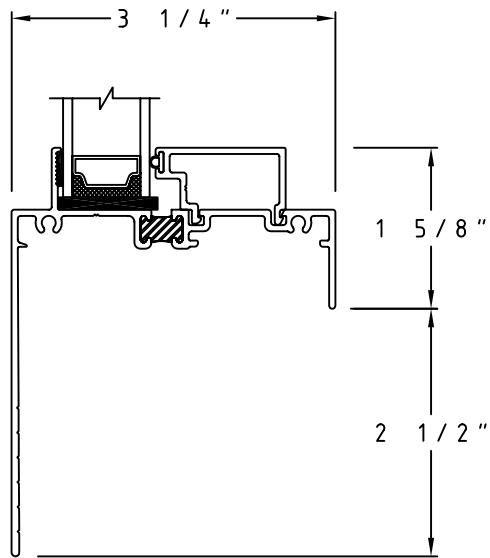
1B 1 1/2" Flange Frame Head Detail



2B 1 1/2" Flange Frame Sill Detail

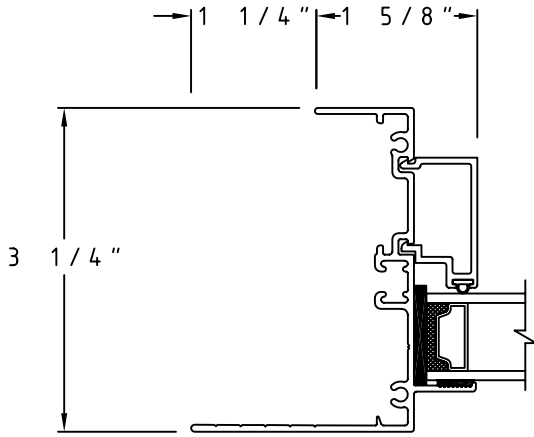


1C 2 1/2" Flange Frame Head Detail

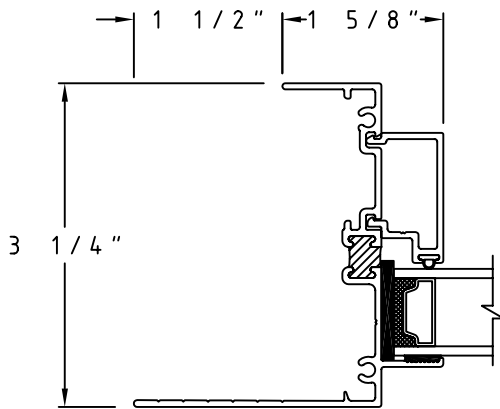


2C 2 1/2" Flange Frame Sill Detail

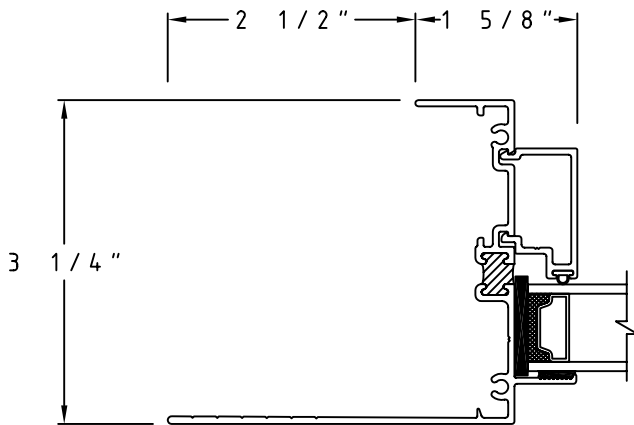
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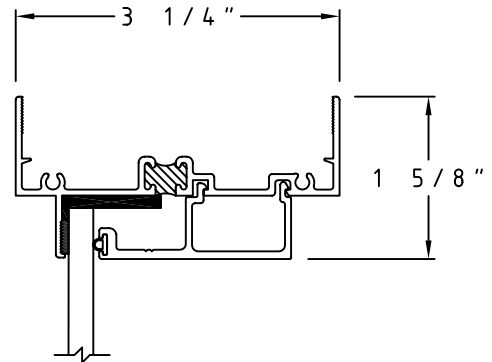
3A 1 1/4" Flange Frame Jamb Detail



3B 1 1/2" Flange Frame Jamb Detail



3C 2 1/2" Flange Frame Jamb Detail



7 Jamb/Head Detail with Optional 1/4" Glazing

**Series 2510 FW-HC100 Fixed Window**

SECTION 085113

**PART 1 – GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

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AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
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AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.



### Series 2510 FW-HC100 Fixed Window

- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: FW-HC100.
- B. Windows: 3 1/4" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; finish factory-applied; frames factory assembled.
- C. Configuration: Fixed Window. [Option: multiple units in single master frame]
- D. Glazing: 7/8" insulating glass units; glass and panel descriptions in paragraph 2.04; factory-glazed.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to FW-HC100 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 71" minimum test size with the following test results:
  - 1. Air Infiltration: <0.01 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283 at a static air pressure difference of 6.2 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Uniform Deflection: <0.25 mm when tested per ASTM E 330 at a static air pressure difference of 105.33 psf.
  - 4. Uniform Structural: Window to be fixed, and maximum .4% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 150.47 psf.
  - 5. Forced entry resistance as per ASTM F 588 = Type D; Grade 40

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURER

Champion 2510 FW-HC100 Fixed Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Fixed frame shall have a nominal wall thickness of not less than 0.062".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- D. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed in specially extruded ports and secured to prevent movement and shrinkage. Adhered weather-stripping shall not be allowed.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two (2) screws into integral screw ports. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Mullions: Intrigal vertical and /or horizontal to create multiple fixed units in a single master frame.
- D. Glazing: The fixed aluminum windows shall be glazed with 7/8" insulated glass.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes.
- F. Frame equal leg [Options: Extruded Flanges: Head 2 1/2", Sill 2 1/2", Jamb 2 1/4"]

### Section 085113 Aluminum Windows

### Series 2510 FW-HC100 Fixed Window

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone or a single seal with hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8", 3/16" may be used, however design and structural performance may vary with thickness. 1/2" IG with applied landmark grids].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8", 3/16" may be used, however design and structural performance may vary with thickness. 1/2" IG with applied landmark grids].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Seal durability: conformance to ASTM E 774-00: visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 7/8" Insulating Panel with 1/8" thermolite backups and stucco Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows: [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.



### **Series 2510 FW-HC100 Fixed Window**

#### **3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### **3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal-to-metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### **3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### **3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### **3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 6200 Series

## 6200 Double Hung



<u>Product By Operation:</u>	4-1/8" Tilt DH
<u>Model By Family:</u>	6500
<u>Product Description:</u>	Dual Glazed Tilt DH
<u>Frame Depth:</u>	4-1/8"
<u>Flange Frame Head Options:</u>	2 1/2"
<u>Flange Frame Jamb Options:</u>	2 1/2"
<u>Flange Frame Sill Options:</u>	2 1/2"
<u>101/I.S.2/A440-08 Rating:</u>	H-AW-PG55
<u>AAMA Test Size:</u>	60 x 99
<u>101/I.S.2/A440-08 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Insul.
<u>Optional Glazing:</u>	~



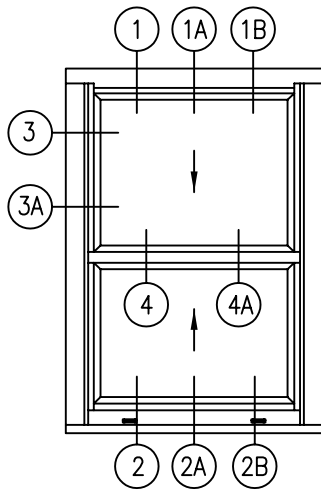
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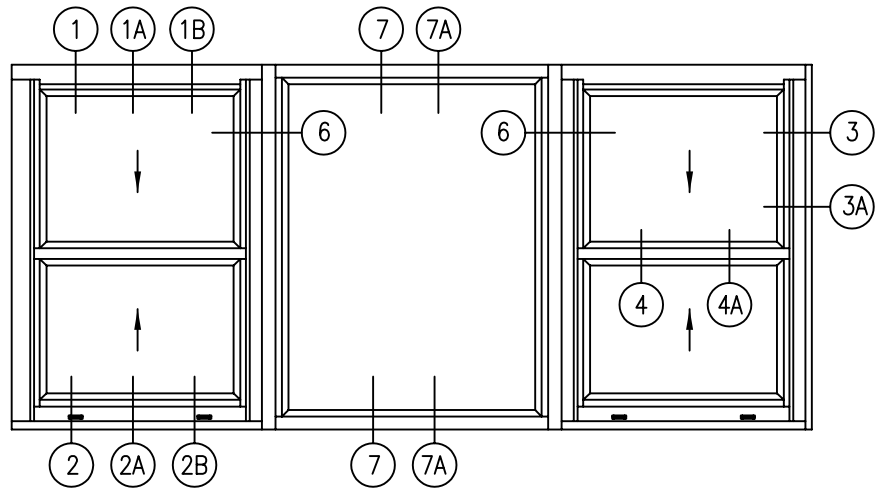
AAMA RATING:	H-AW-PG55
AIR INFILTRATION @ 50 mph	0.25 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	82.76 PSF
DESIGN PRESSURE	55.17 PSF



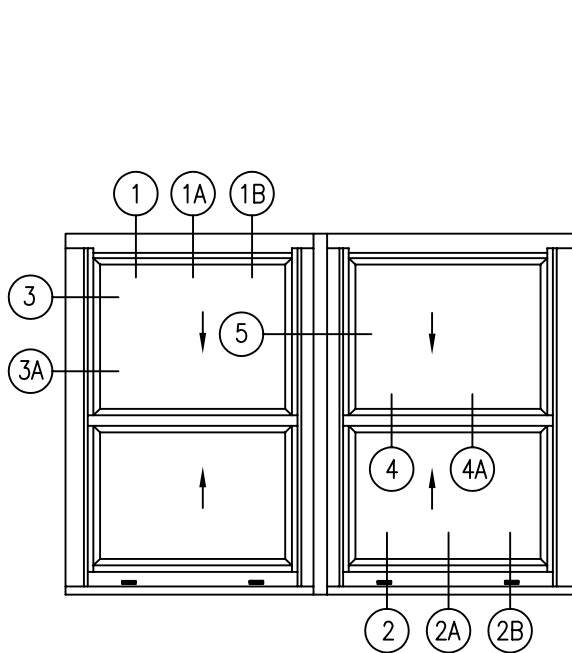
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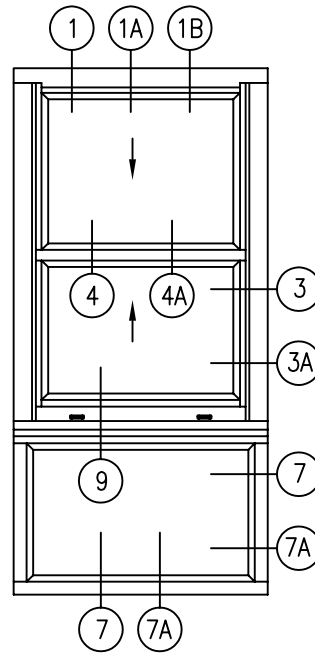
Double Hung



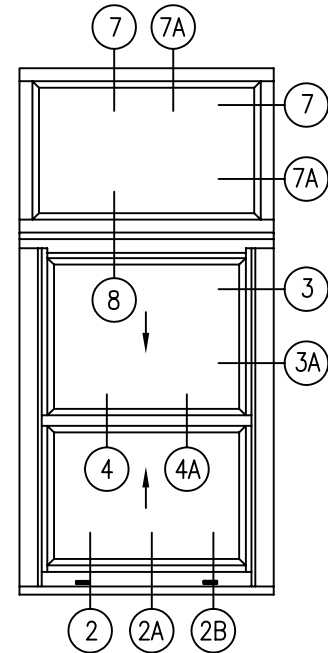
Double Hung/Fixed/Double Hung



Twin Double Hung with H Mullion



Fixed/Double Hung



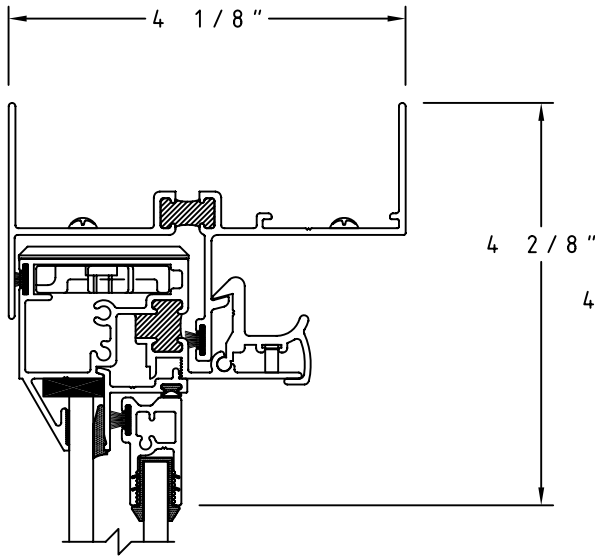
Fixed/Double Hung

Champion Series 6200

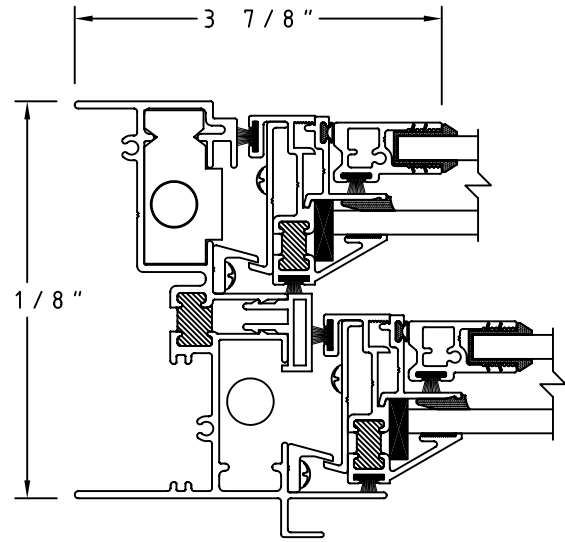
All Elevations are viewed outside looking IN.

# Champion Series 6200

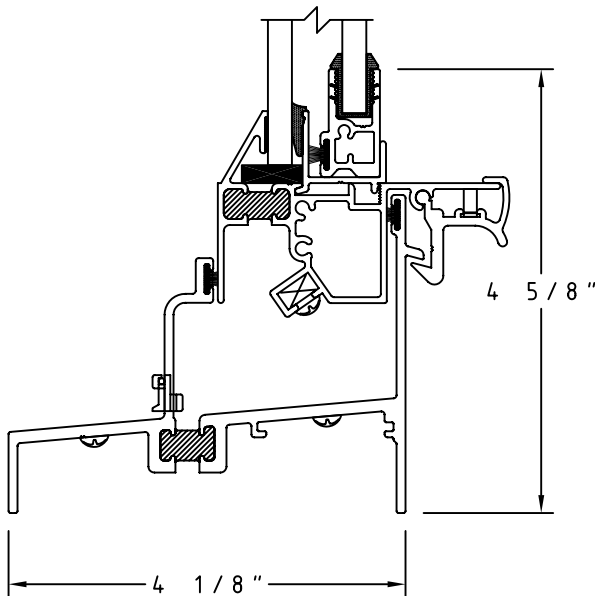
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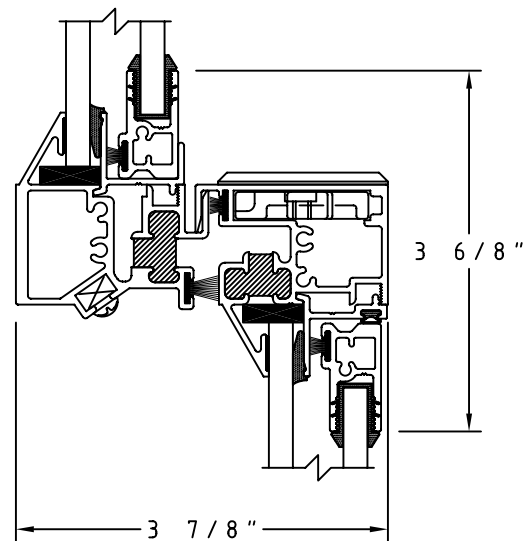
① Head Detail



③ Jamb Detail

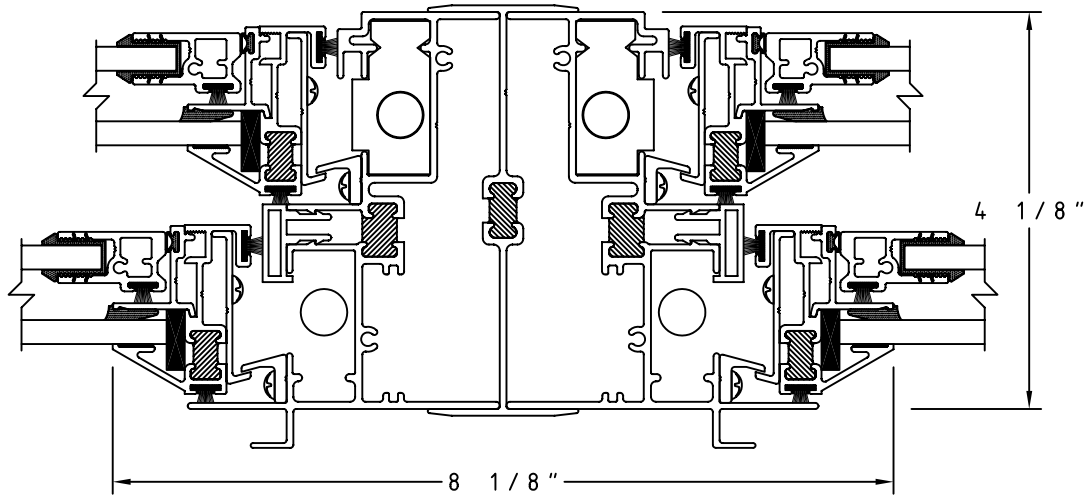


② Sill Detail

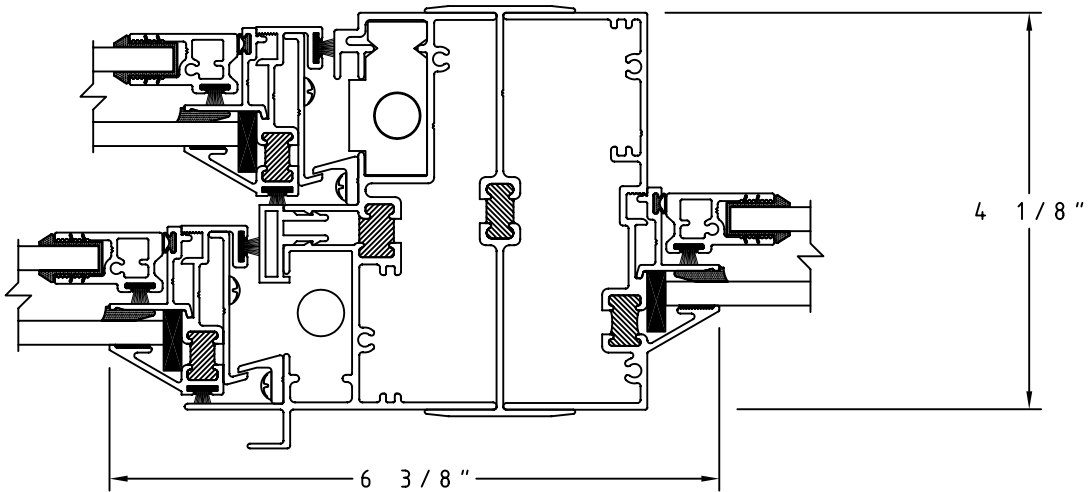


④ Meeting Rail Detail

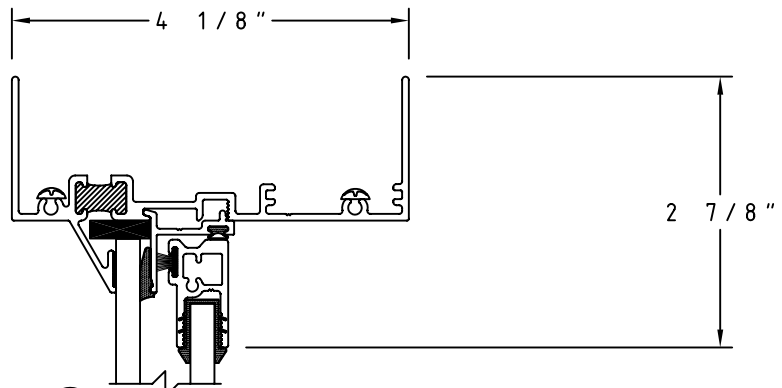
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⑤ Vertical H Mullion Detail

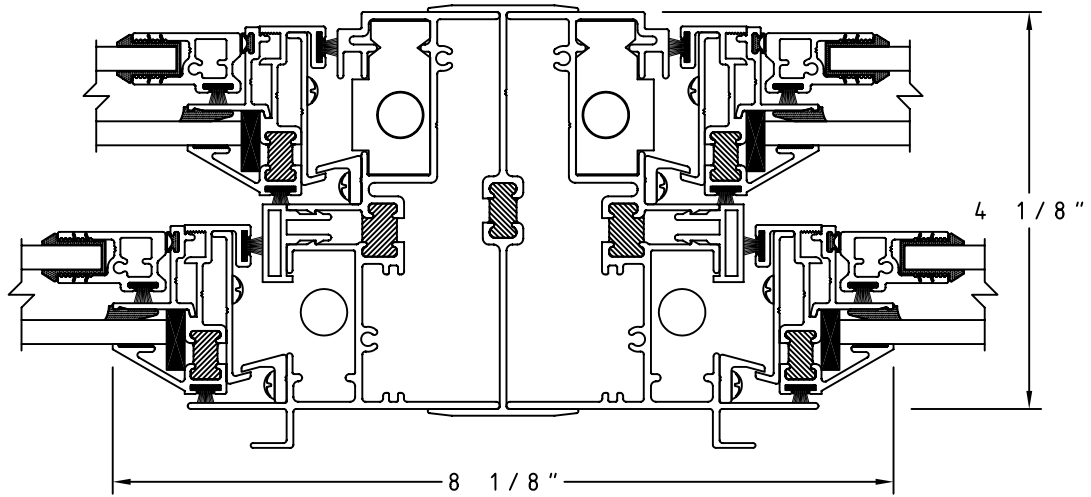


⑥ Double Hung/Fixed with Vertical H Mullion Detail

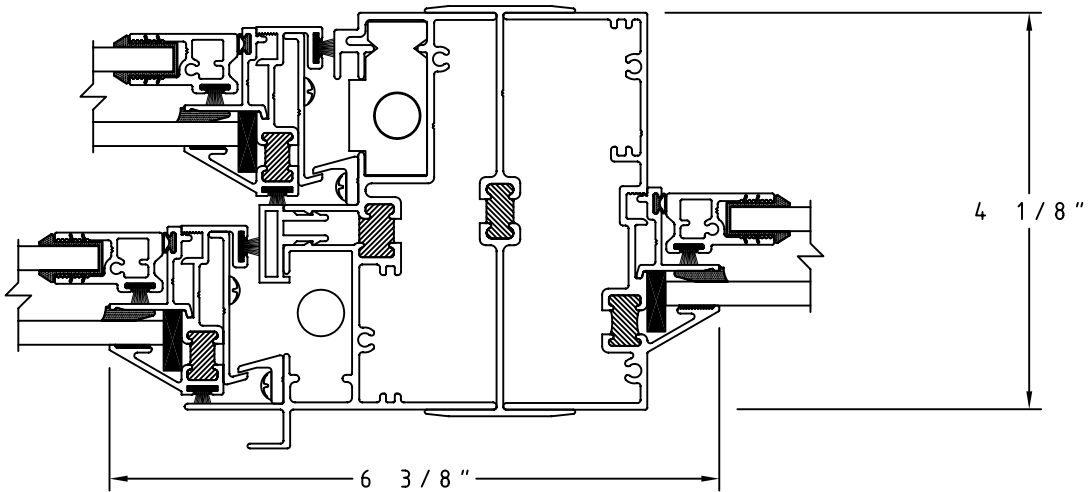


⑦ Fixed Head/Jamb/Sill Detail

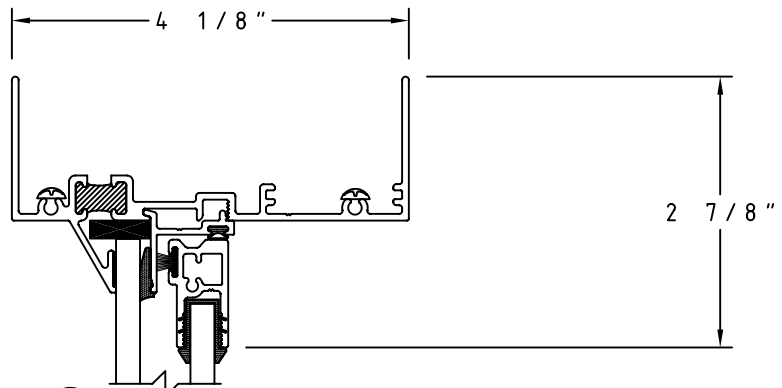
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⑤ Vertical H Mullion Detail

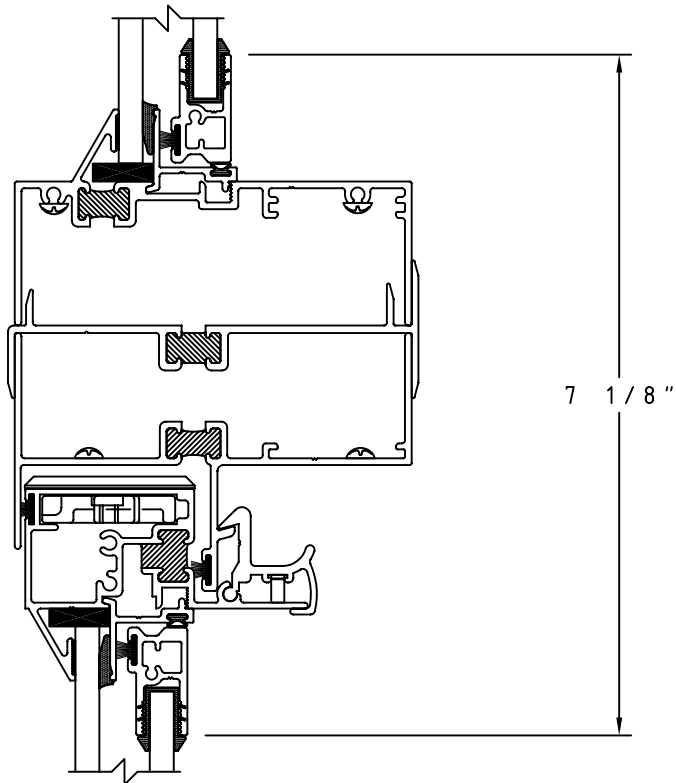


⑥ Double Hung/Fixed with Vertical H Mullion Detail

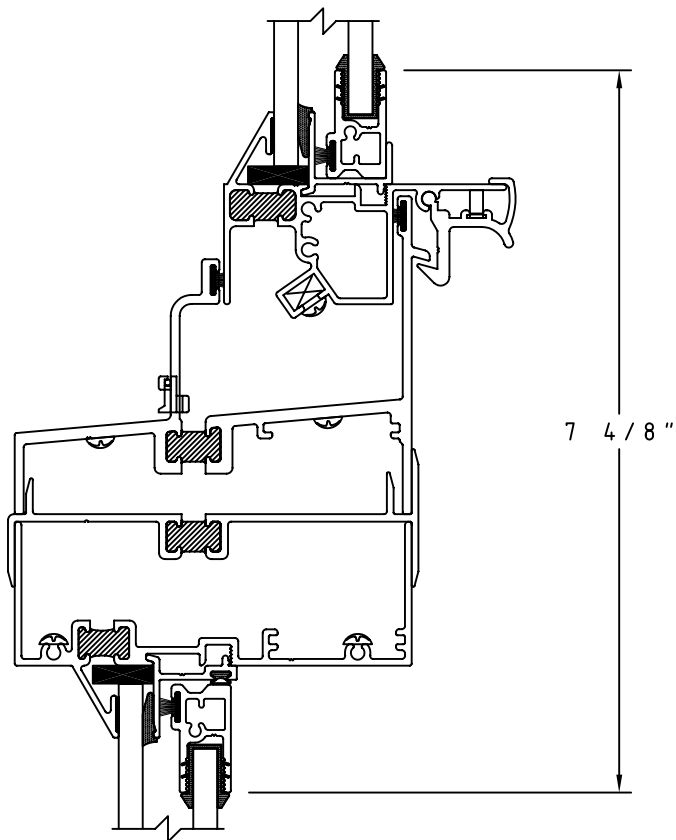


⑦ Fixed Head/Jamb/Sill Detail

SCALE: HALF



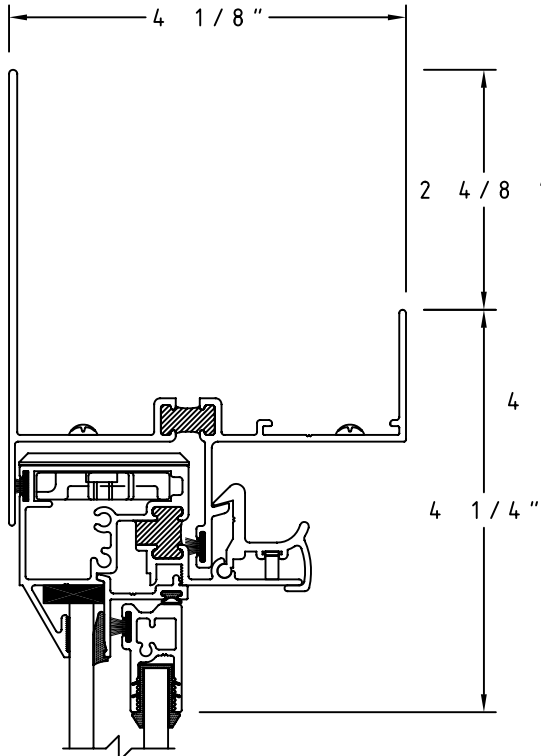
8 Fixed Over Double Hung Detail



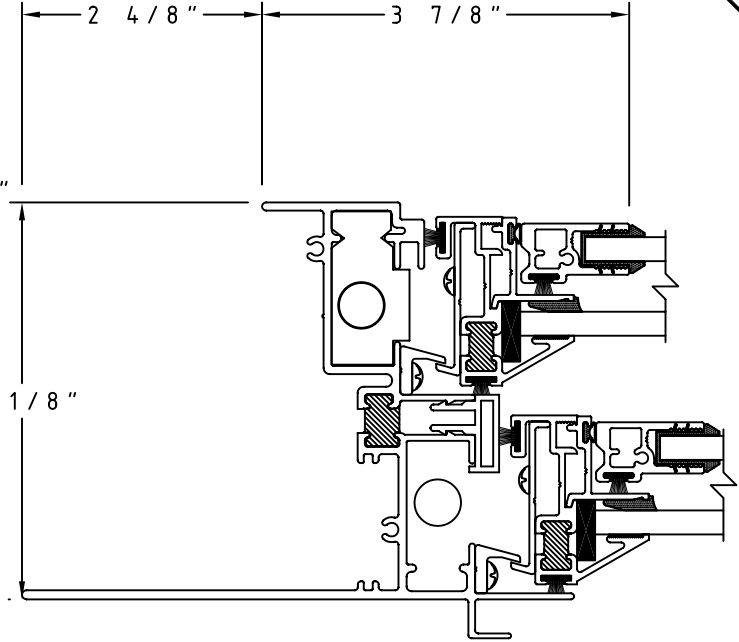
9 Double Hung Over Fixed Detail

# Champion Series 6200

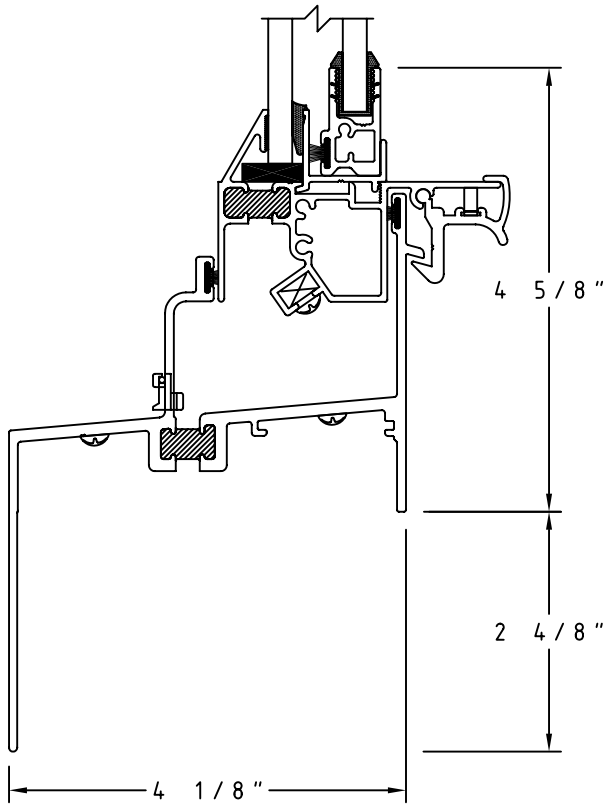
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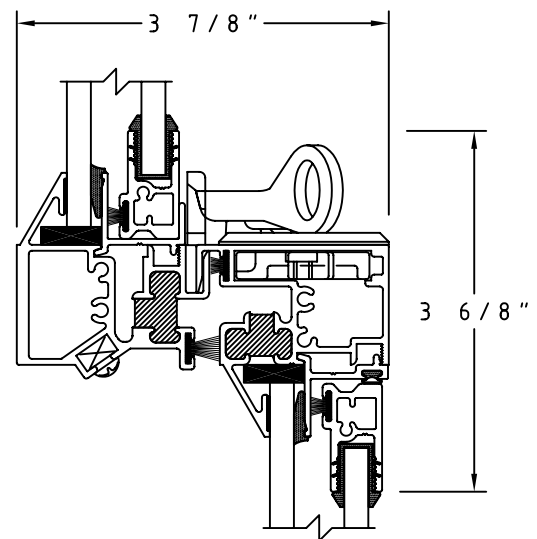
①A 2 1/2" Flange Frame Head



③A 2 1/2" Flange Frame Jamb Detail

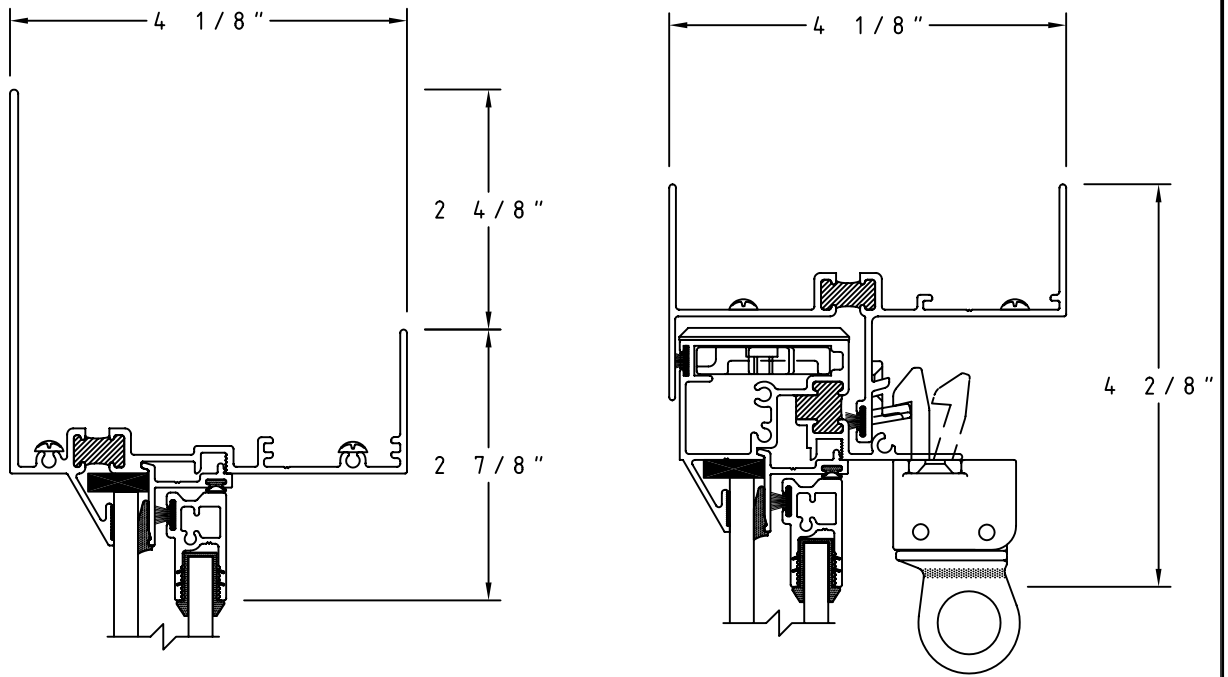


②A 2 1/2" Flange Frame Sill Detail



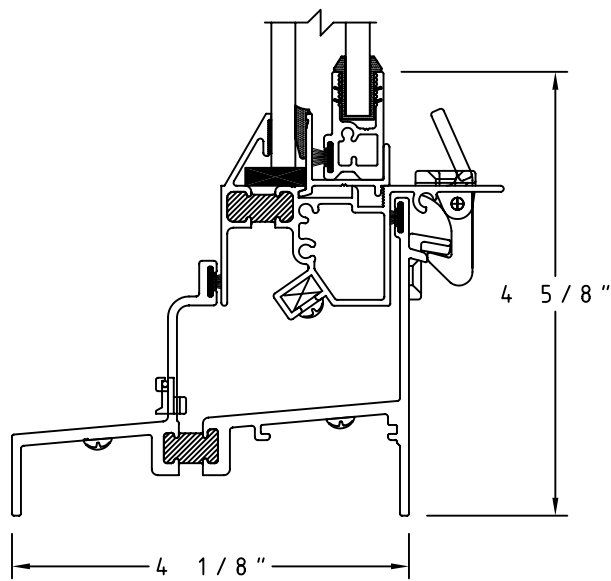
④A Meeting Rail with Latch Detail

SCALE: HALF



7A 2 1/2" Flange Frame Fixed Head/Sill/Jamb Detail

1B Head with Latch Detail



2B Sill with Latch Detail

# 6500 Series

## 6500 Double Hung



<u>Product By Operation:</u>	4-1/8" Tilt DH
<u>Model By Family:</u>	6500
<u>Product Description:</u>	Bevel Sash / Tilt DH
<u>Frame Depth:</u>	4-1/8"
<u>Flange Frame Head Options:</u>	2 1/2"
<u>Flange Frame Jamb Options:</u>	2 1/2"
<u>Flange Frame Sill Options:</u>	2 1/2"
<u>101/I.S.2/A440-08 Rating:</u>	H-AW-PG55
<u>AAMA Test Size:</u>	60 x 99
<u>101/I.S.2/A440-08 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Insul.
<u>Optional Glazing:</u>	~



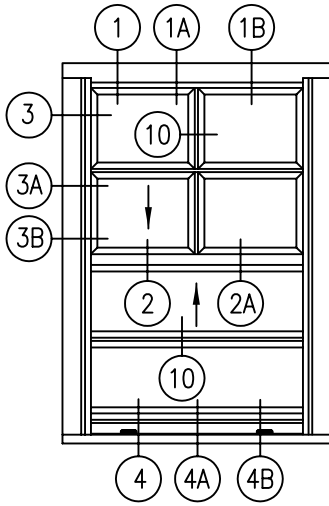
### Performance Data



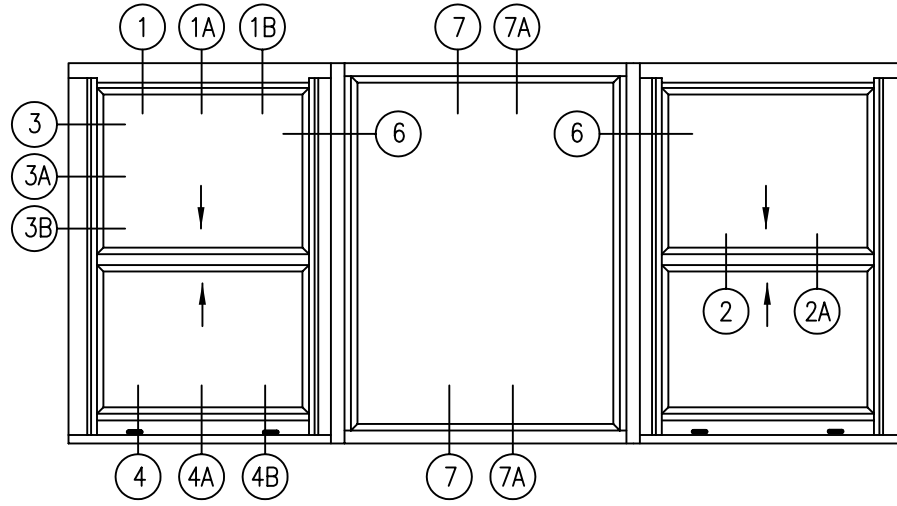
AAMA RATING:	H-AW-PG55
AIR INFILTRATION @ 50 mph	0.25 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	82.76 PSF
DESIGN PRESSURE	55.17 PSF



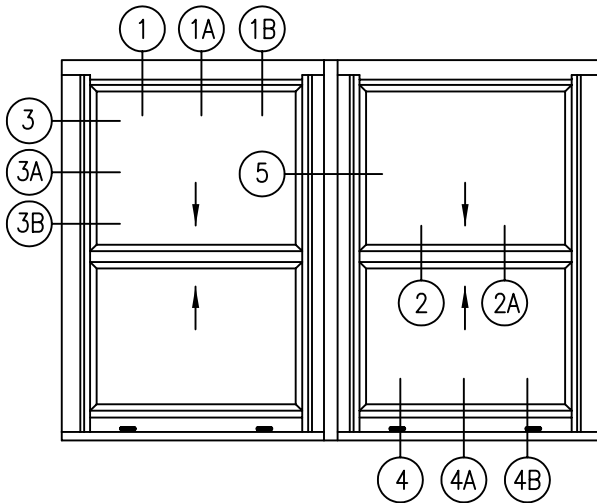
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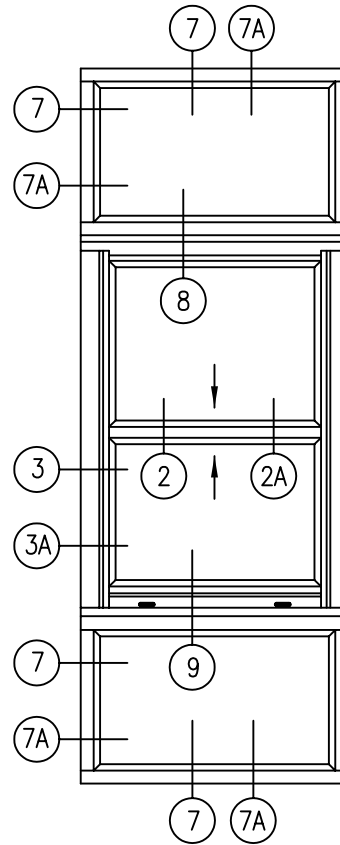
Double Hung



Double Hung/Fixed/Double Hung



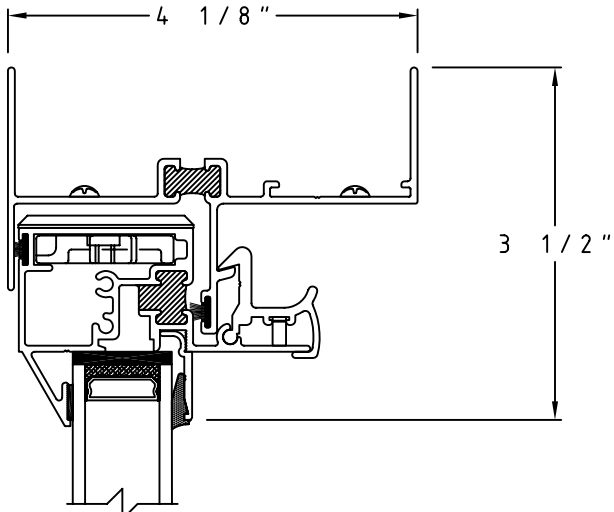
Twin Double Hung with H Mullion



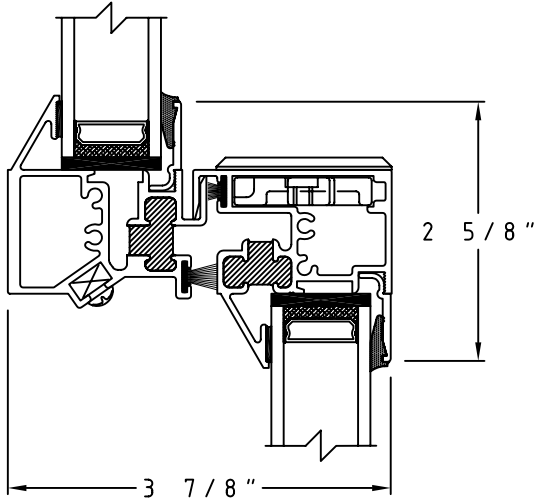
Double Hung with Top and Bottom Transoms

All Elevations are viewed outside looking IN.

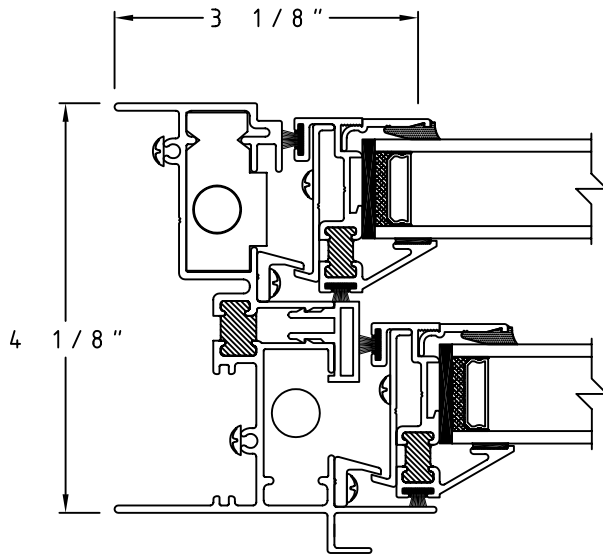
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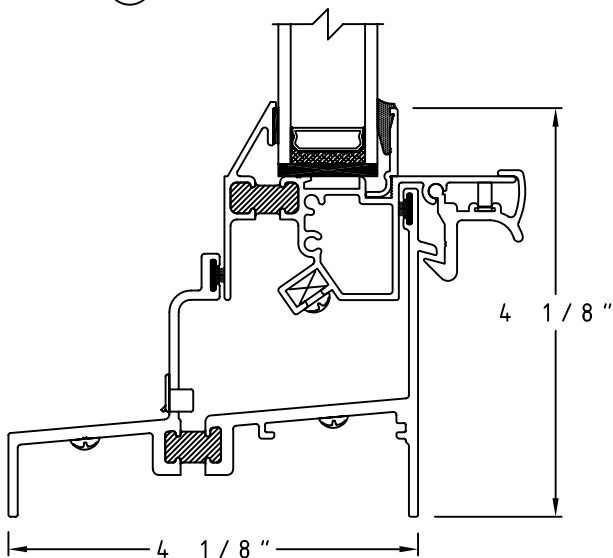
① Head Detail



② Meeting Rail Detail

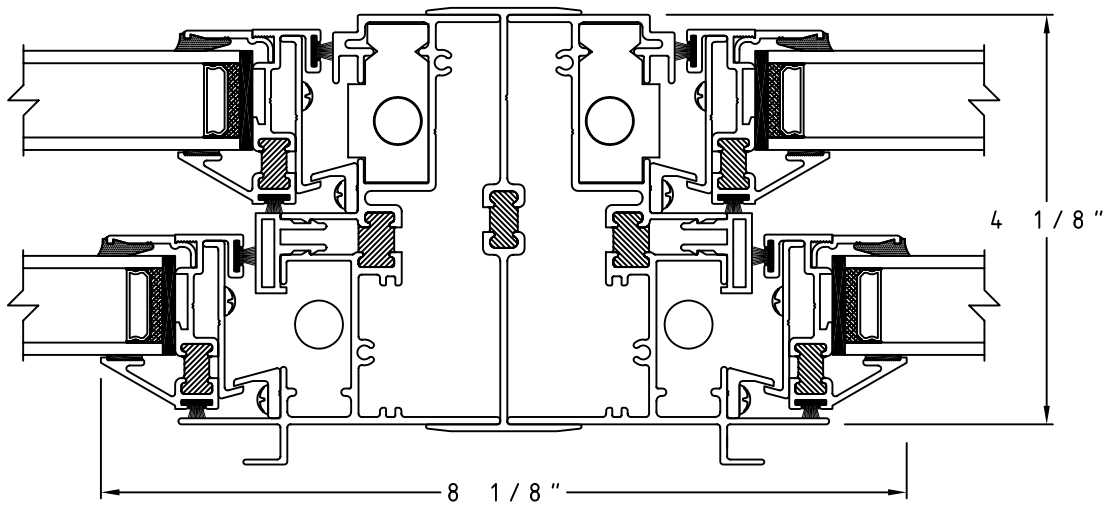


③ Jamb Detail

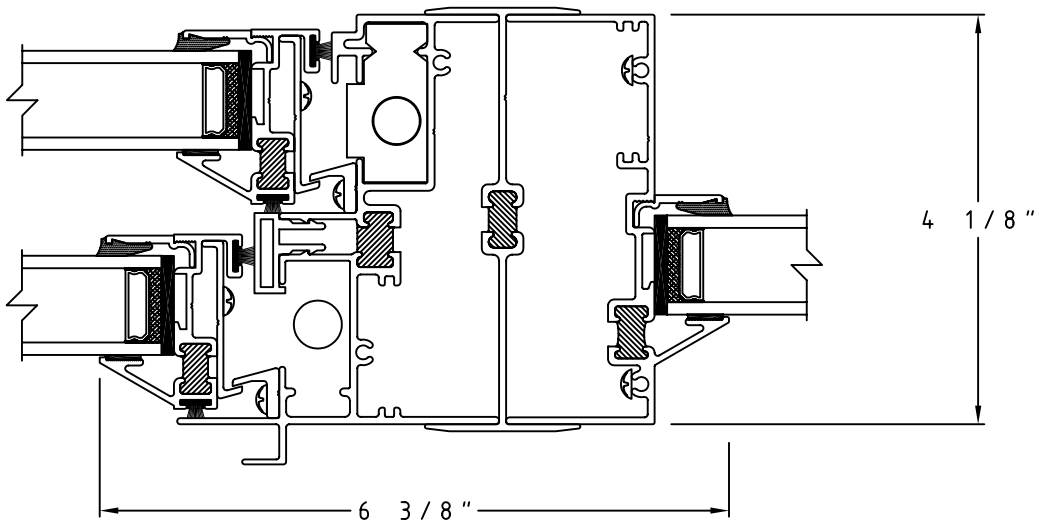


④ Sill Detail

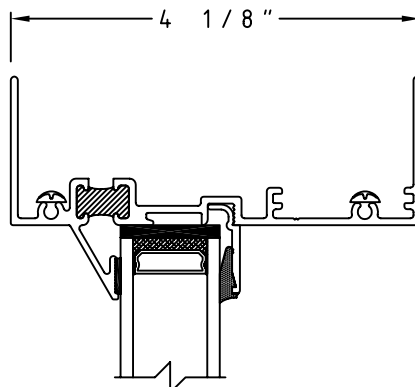
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⑤ Vertical H Mullion Detail

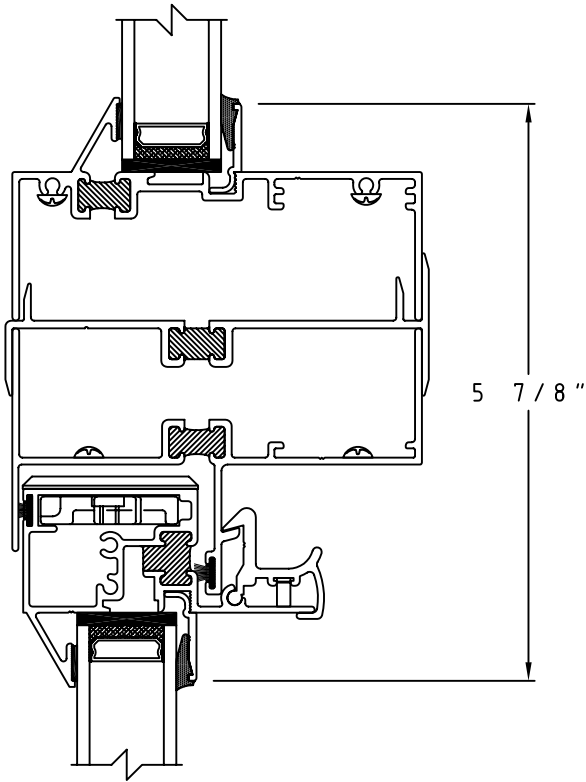


⑥ Double Hung/Fixed with Vertical H Mullion Detail

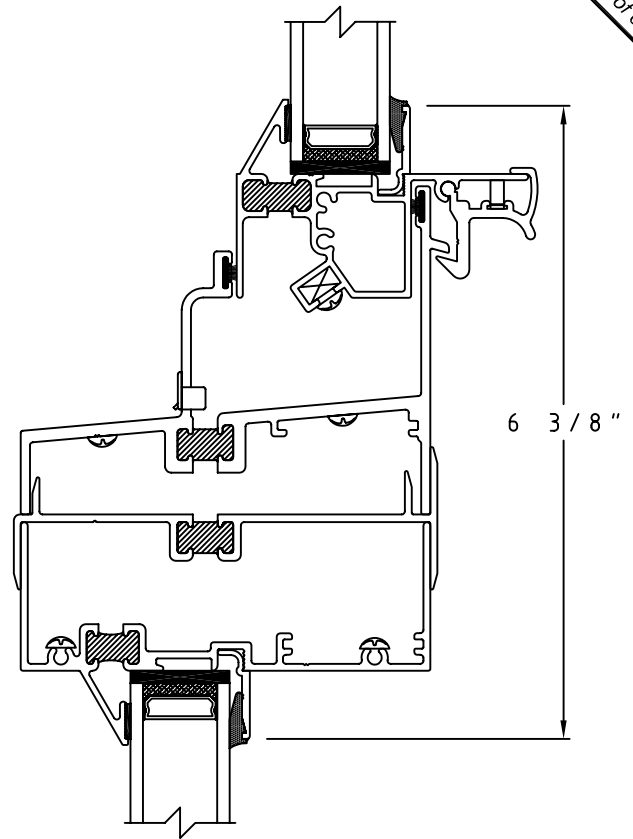


⑦ Fixed Head/Jamb/Sill Detail

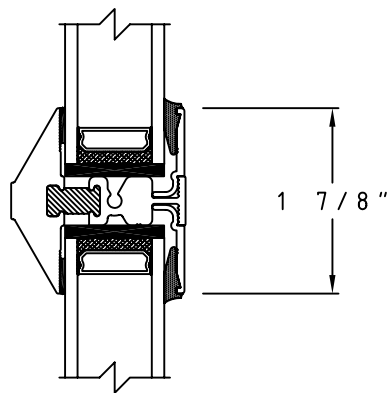
SCALE: HALF



⑧ Fixed Over Double Hung Detail

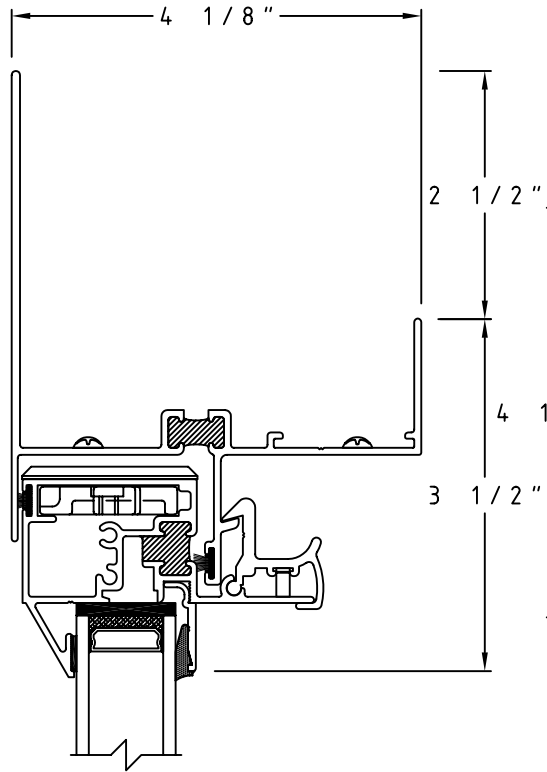


⑨ Double Hung Over Fixed Detail

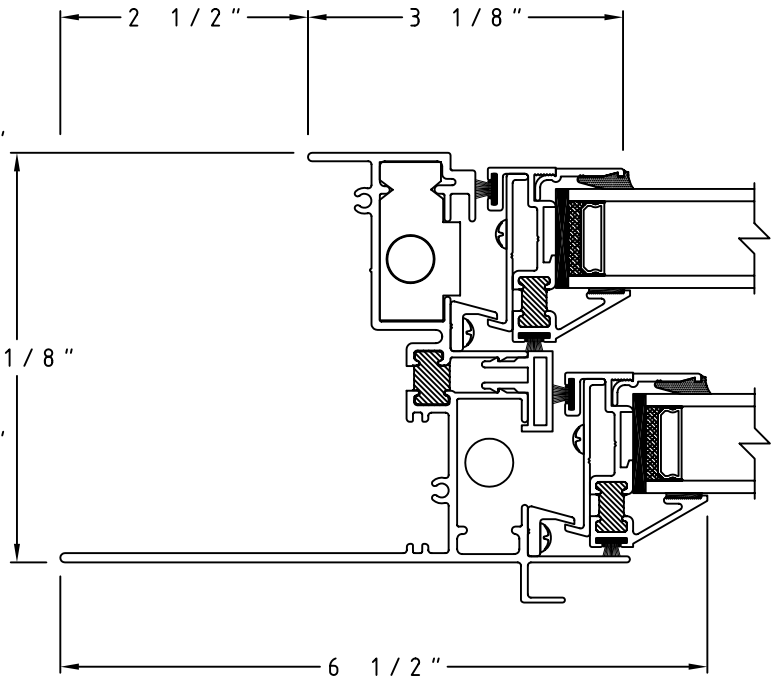


⑩ True Muntin Detail  
(Horizontal/Vertical)

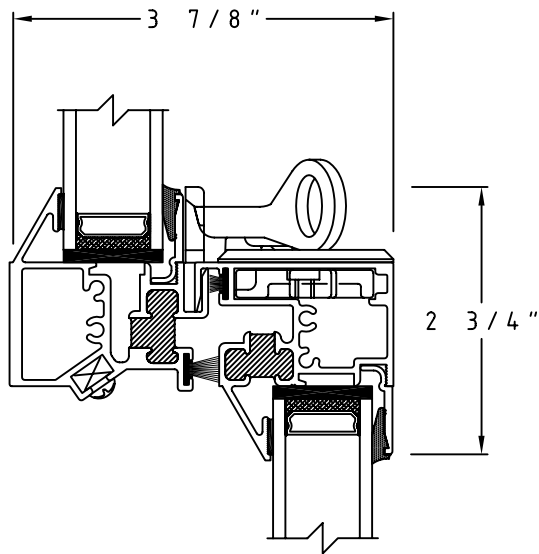
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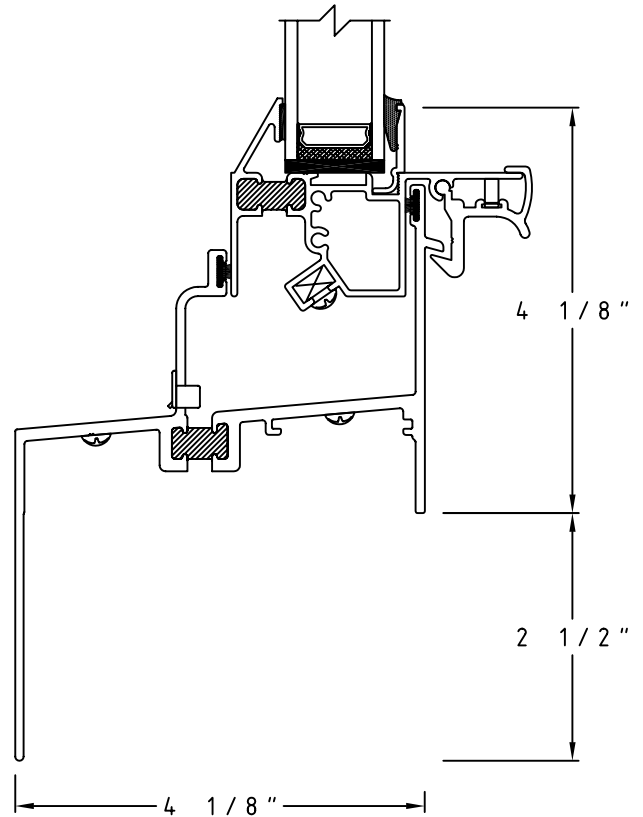
1A 2 1/2" Flange Frame Head



3A 2 1/2" Flange Frame Jamb Detail

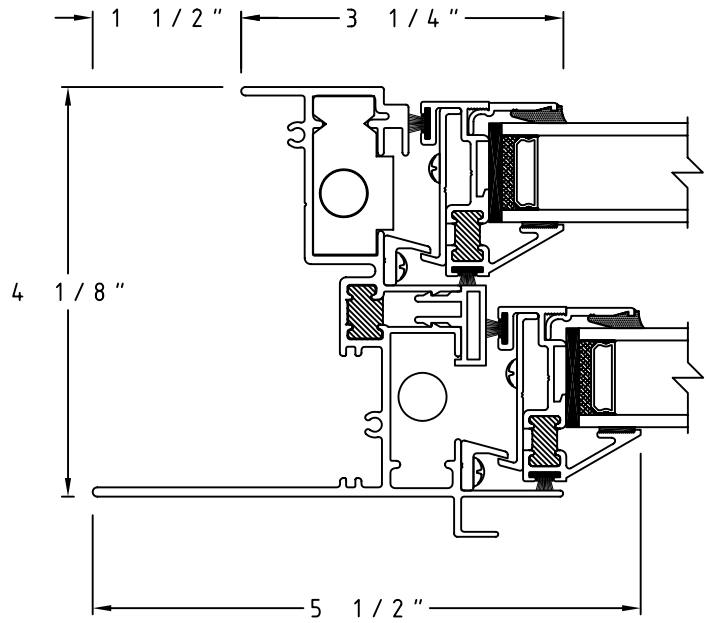
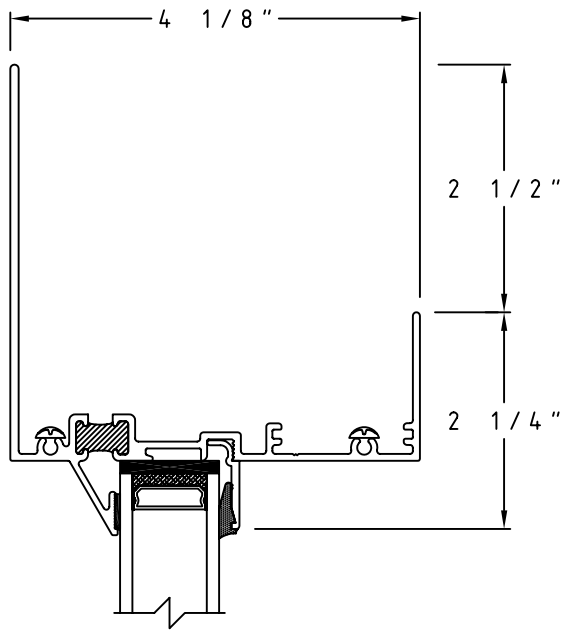


2A Optional Meeting Rail with Latch Detail



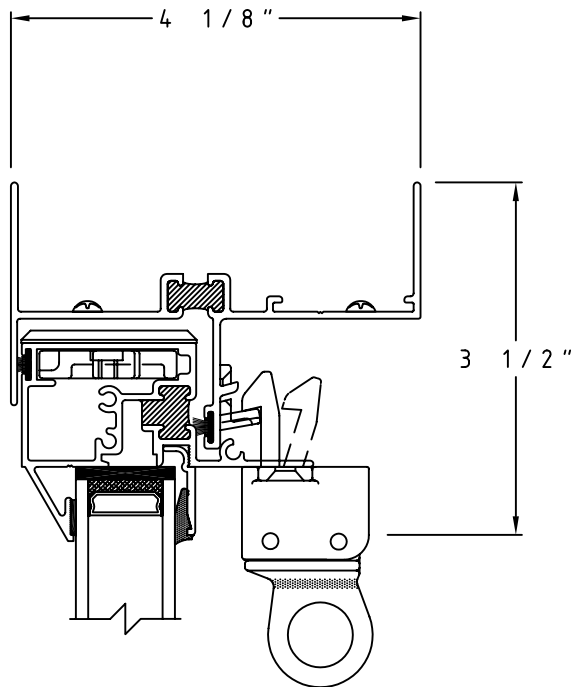
4A 2 1/2" Flange Frame Sill Detail

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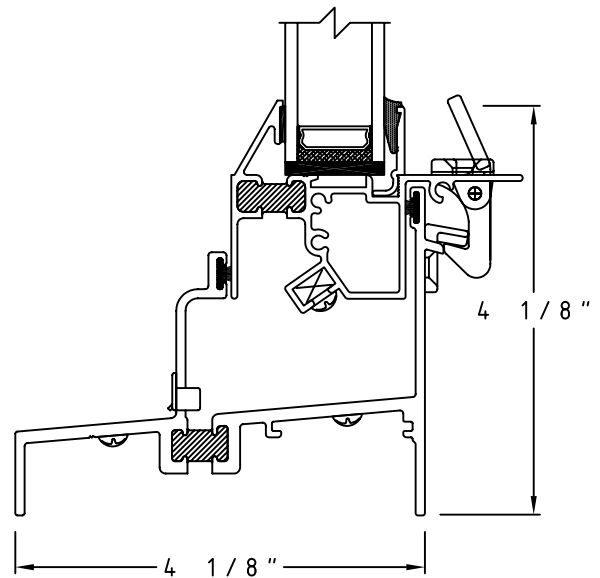


7A) 2 1/2" Flange Frame Fixed Head/Jamb/Sill Detail

3B) 1 1/2" Flange Frame Jamb Detail



1B) Optional Head with Pole Ring Latch Detail



4B) Optional Sill with Latch Detail



W I N D O W   A N D   D O O R

## Series 6500 H-AW-PG55 Century Tilt-in Double Hung Window

SECTION 085113

### PART 1 – GENERAL

#### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

#### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association

AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"

AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"

AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"

AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"

AAMA 902-99 "Voluntary Specification for Sash Balances"

AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"

AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"

CSI – Canadian Standards Association

WDMA – Window & Door Manufacturers Association

AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"

ASTM - American Society for Testing and Materials

ASTM C 1036-06 "Standard Specification for Flat Glass"

ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"

ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"

ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"

ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"

ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"

ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"

ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

#### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

#### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

#### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

#### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).

## Section 085113 Aluminum Windows



### Series 6500 H-AW-PG55 Century Tilt-in Double Hung Window

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-08, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-08 Designation: H-AW-PG55.
- B. Aluminum windows: 4-1/8" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; finish factory-applied; frames and sash factory-assembled.
- C. Configuration: Double hung; top and bottom sash tilt in for glass cleaning.
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket.
- E. Muntins: true divided lites, internal muntin grids or applied landmark grids

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to H-AW-PG55 specifications in AAMA AAMA/WDMA/CSA 101/I.S.2/A440-08 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  - 1. Air Infiltration: maximum 0.25 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283 at a static air pressure difference of 6.24 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 331. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Uniform Deflection: No more than L/175 when tested per ASTM E 330 at a static air pressure difference of 55.17 psf.
  - 4. Uniform Structural: window to be operable, and maximum of .2% deformation per member in accordance with ASTM E 330 at 82.76 psf.
  - 5. Life Cycle testing- When tested in accordance with AAMA 910, there shall be no damage to fasteners, hardware parts, support arms, actuating mechanisms or any other damage causing the window to be inoperable, and air leakage and water resistance tests shall not exceed the Gateway Performance Requirements specified in Table 2.1.
  - 6. Forced entry resistance as per ASTM F 588 = Type A: Grade 10

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 6500 Century Double Hung Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main framing and sash members shall have a nominal wall thickness of not less than 0.070". Main framing and sash members shall have an overall depth of not less than 4.125 inches. Frame sill shall have a nominal wall thickness of 0.125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used
- D. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- E. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair. Sash of double hung windows shall be weather-stripped using woven pile with mylar center fin, double on sash stiles and single on sash rails. Lift rail shall seal to frame sill with vinyl compression bulb and fin seal weather stripping.
- F. Balances: Double hung windows shall have sash balances of appropriate size and capacity to hold sash stationary at any open position. Balances shall be factory applied, easily accessible and shall be field replaceable. Balances shall be Ultra-lift type. [Optional: Spiral, Super-lift].
- G. Tilt Feature: Windows can be tilted inward for cleaning and maintenance purposes. Tilt latches shall have Allen key custodial locks that securely hold the sash from tilting-in without first unscrewing the lock. Tilt latches automatically engage when the sash is closed.

## Section 085113 Aluminum Windows





### Series 6500 H-AW-PG55 Century Tilt-in Double Hung Window

- H. Screens: Half or (optional full) held in exterior tracks with stainless steel leaf springs; 5/16" x 1 1/2" x .045" extruded tubular aluminum frame; corners mitered, gusset reinforced, with 18 x 16 fiberglass [Optional: aluminum, stainless steel] mesh and PVC spline.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sashes shall mechanically interlock in a closed position. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The double hung aluminum windows shall be glazed with 1" dual sealed, structurally glazed insulated glass.
- D. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria.
- E. Frame equal leg [Optional: Extruded Flanges: Head, Sill and Jamb at 2 1/2."]

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
1. Thickness: 3/16" [Optional: 1/8" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
1. Thickness: 3/16" [Optional: 1/8" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Seal durability: conformance to ASTM E 774-00; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

## Section 085113 Aluminum Windows



W I N D O W   A N D   D O O R

### Series 6500 H-AW-PG55 Century Tilt-in Double Hung Window

#### PART 3 – EXECUTION

##### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

##### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

##### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

##### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

##### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

##### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-02 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

##### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

## Section 085113 Aluminum Windows

# 6800 Series

## 6800 Double Hung



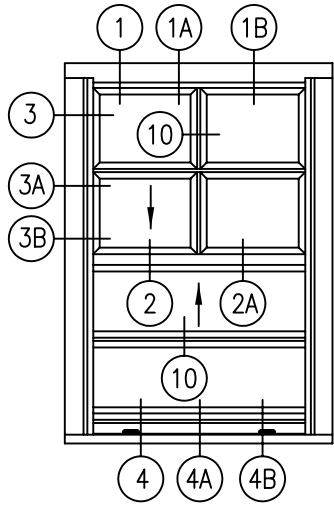
<u>Product By Operation:</u>	4-1/8" Tilt DH
<u>Model By Family:</u>	6800
<u>Product Description:</u>	Bevel Sash / Sideload DH
<u>Frame Depth:</u>	4-1/8"
<u>Flange Frame Head Options:</u>	2 1/2"
<u>Flange Frame Jamb Options:</u>	2 1/2"
<u>Flange Frame Sill Options:</u>	2 1/2"
<u>101/I.S.2/A440-08 Rating:</u>	H-AW-PG50
<u>AAMA Test Size:</u>	61 x 99
<u>101/I.S.2/A440-08 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Insul.
<u>Optional Glazing:</u>	~



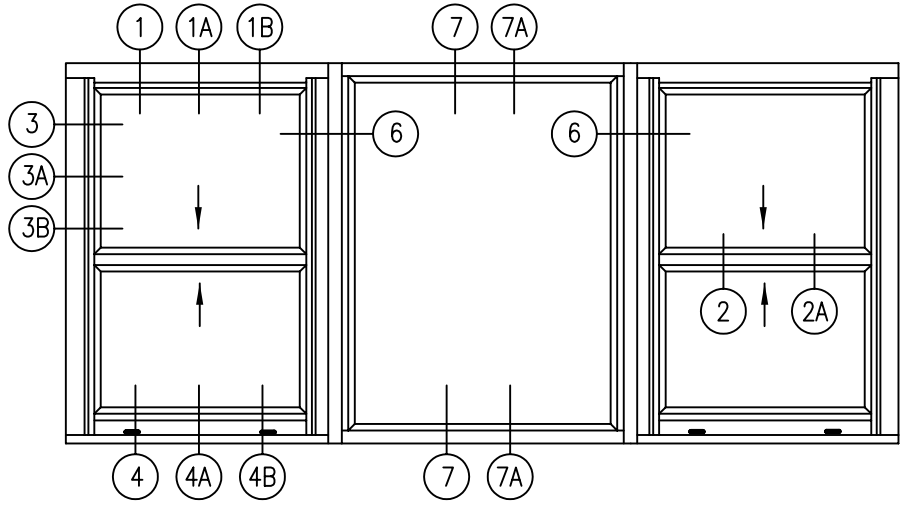
### Performance Data



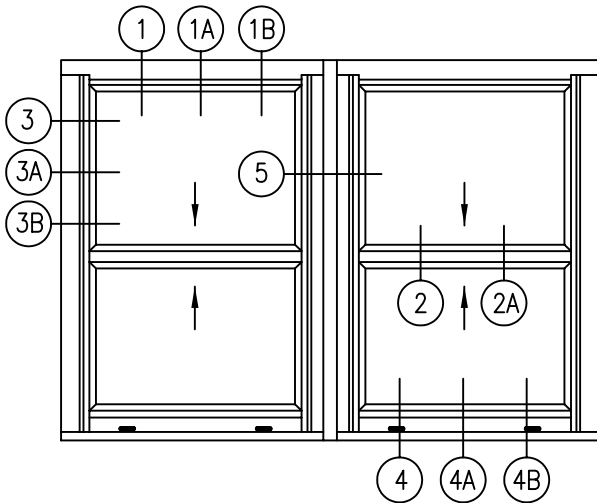
AAMA RATING:	H-AW-PG50
AIR INFILTRATION @ 50 mph	0.19 CFM
WATER TEST PRESSURE	15.05 PSF
STRUCTURAL LOAD	75.24 PSF
DESIGN PRESSURE	50.16 PSF



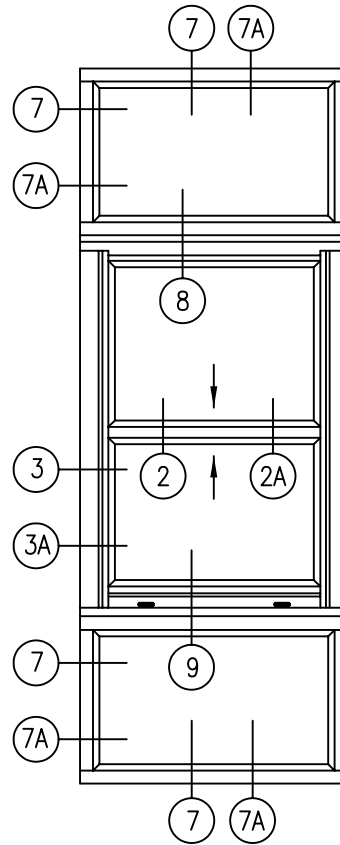
Double Hung



Double Hung/Fixed/Double Hung



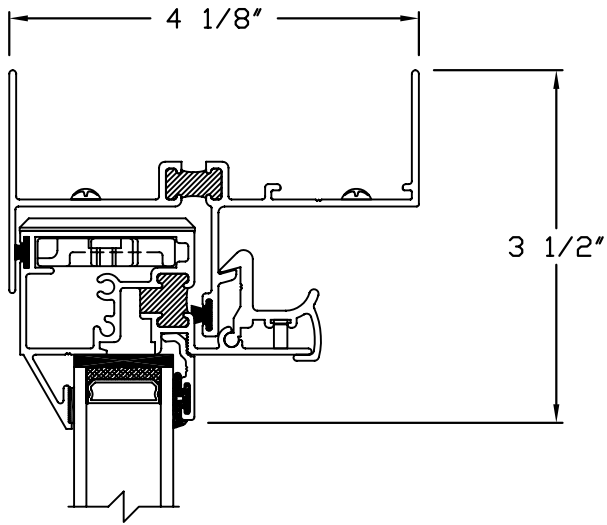
Twin Double Hung with H Mullion



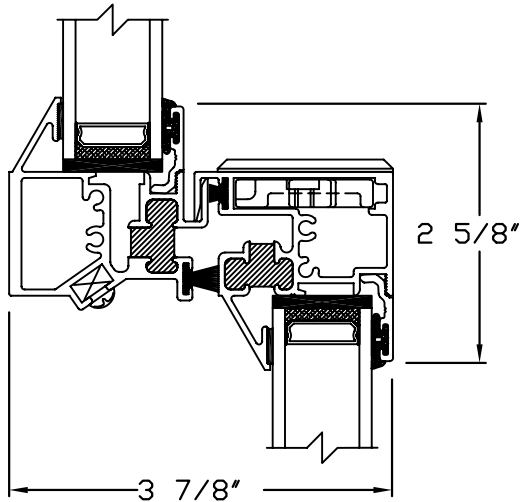
Double Hung with Top and Bottom Transoms

All Elevations are viewed outside looking IN.

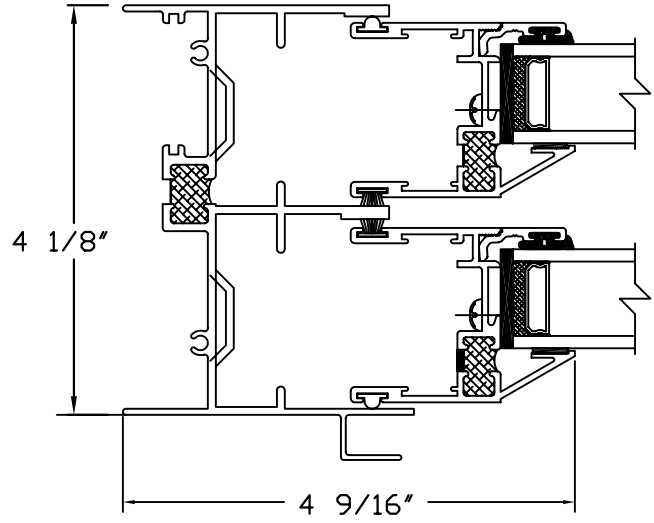
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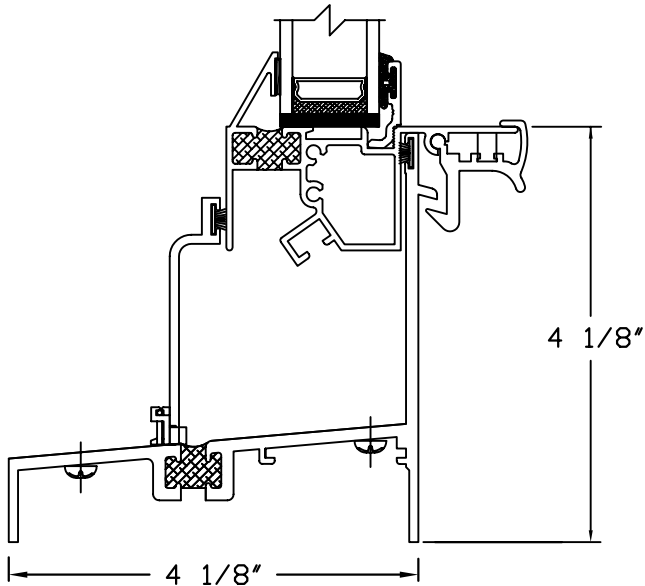
① Head Detail



② Meeting Rail Detail

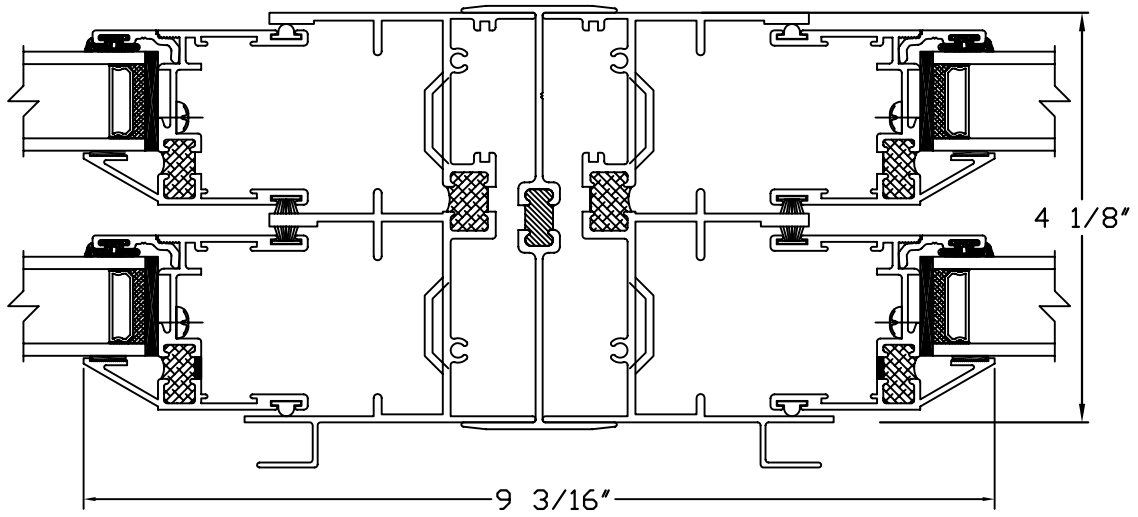


③ Jamb Detail

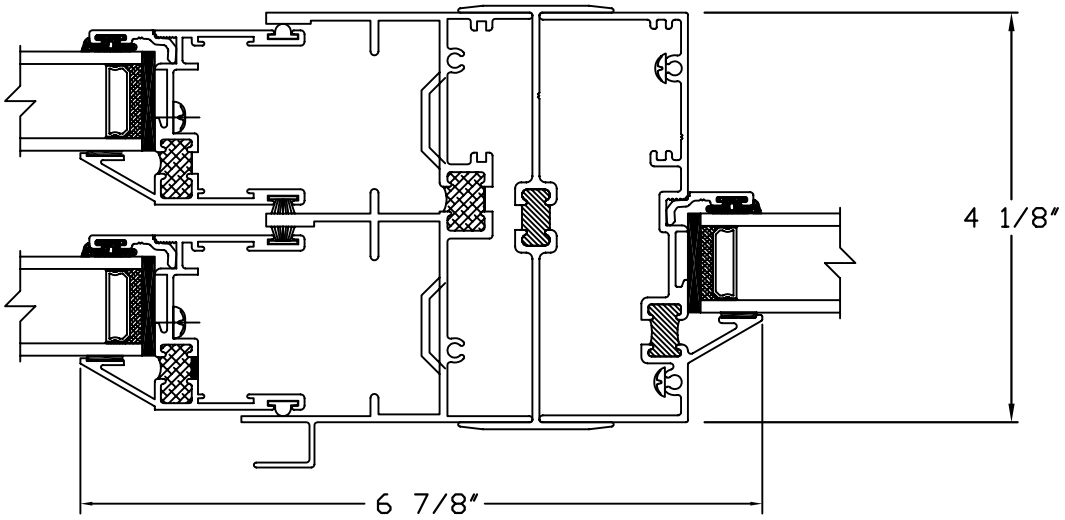


④ Sill Detail

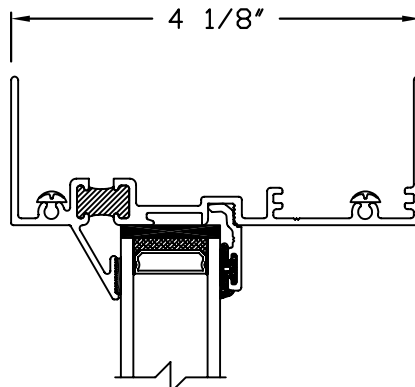
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⑤ Vertical H Mullion Detail

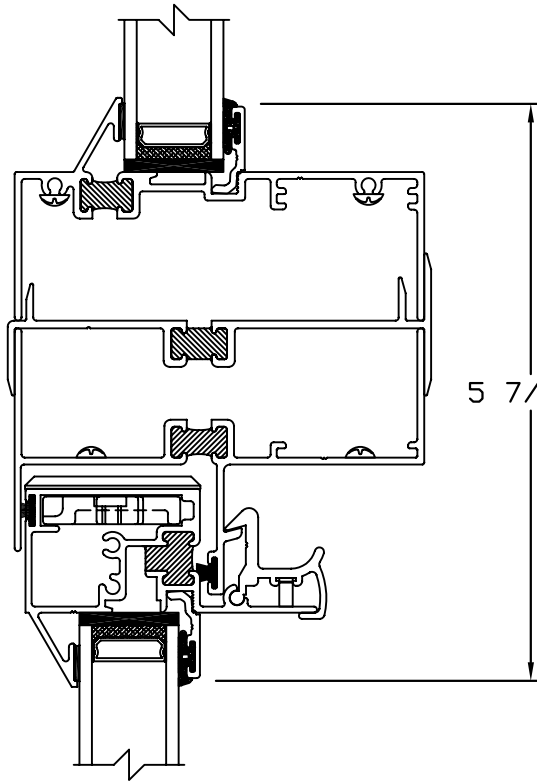


⑥ Double Hung/Fixed with Vertical H Mullion Detail

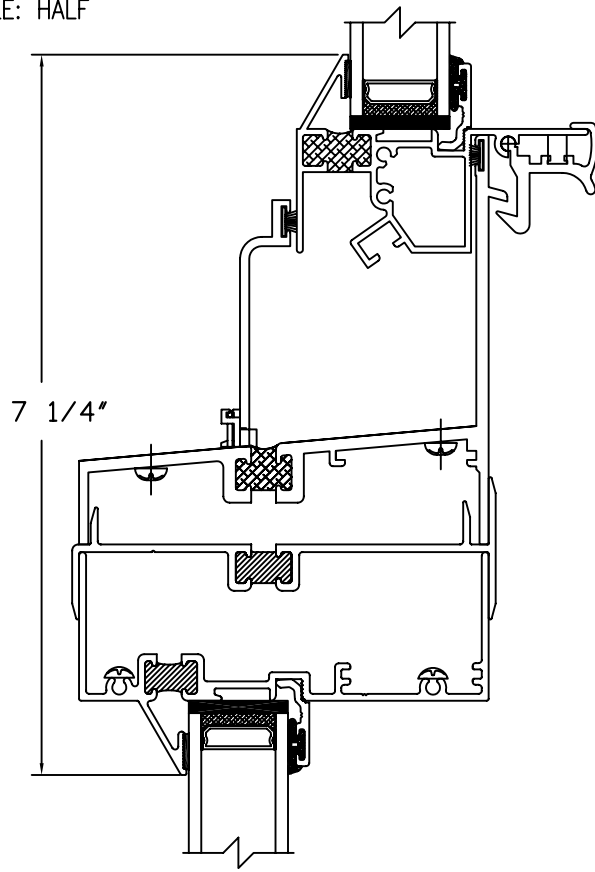


⑦ Fixed Head/Jamb/Sill Detail

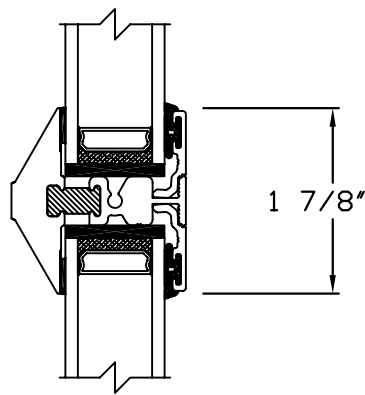
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⑧ Fixed Over Double Hung Detail

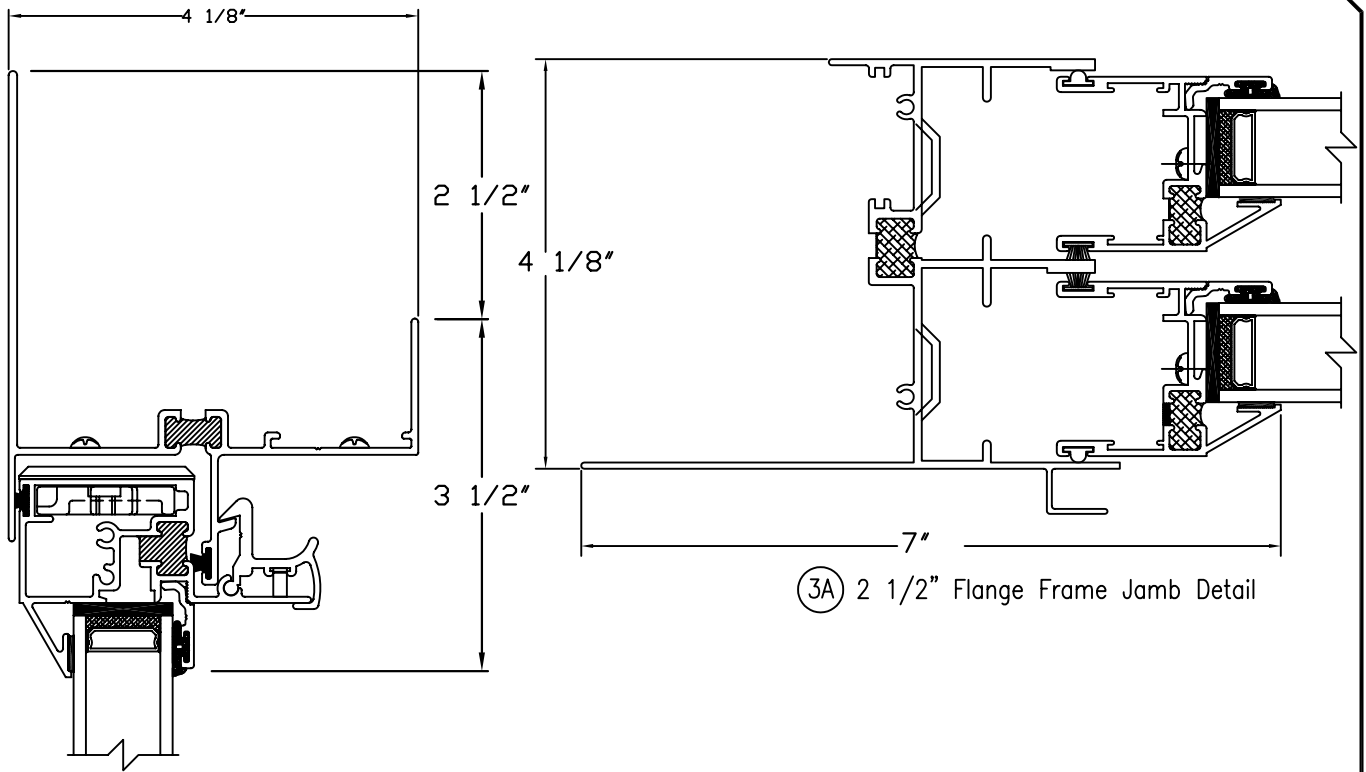


⑨ Double Hung Over Fixed Detail



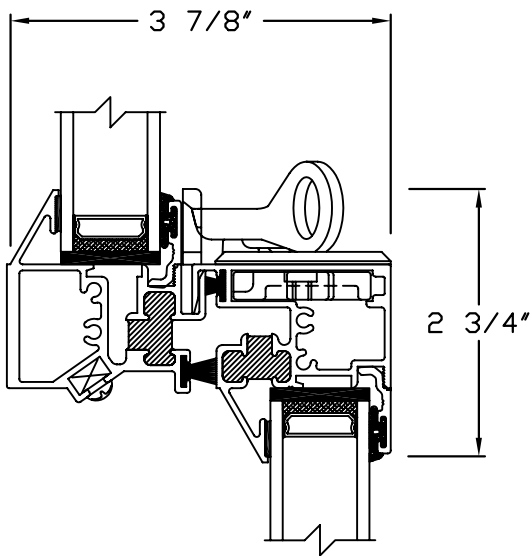
⑩ True Muntin Detail  
(Horizontal/Vertical)

SCALE: HALF

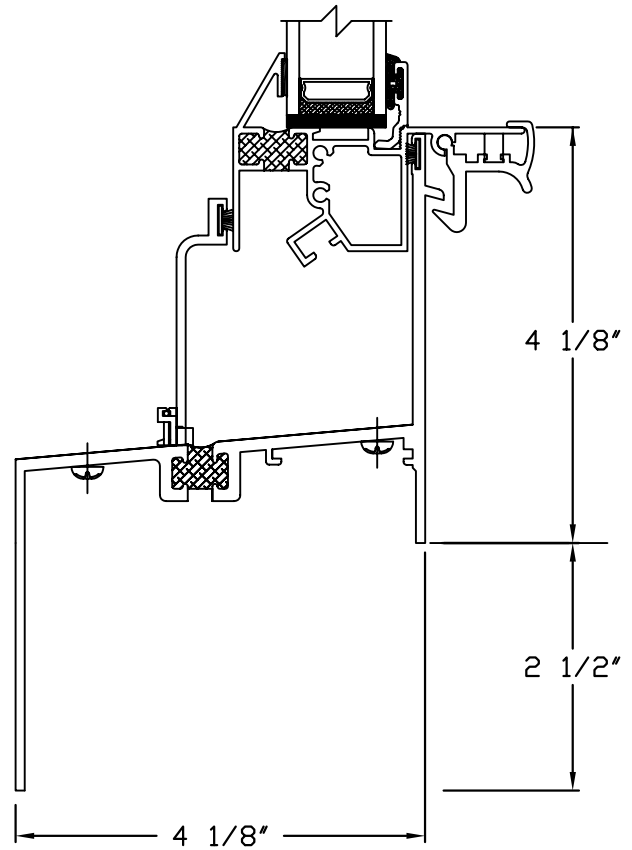


①A 2 1/2" Flange Frame Head

③A 2 1/2" Flange Frame Jamb Detail



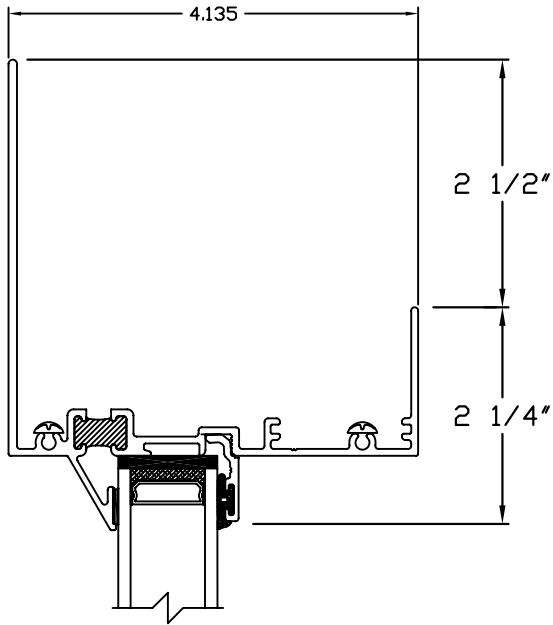
②A Optional Meeting Rail with Latch Detail



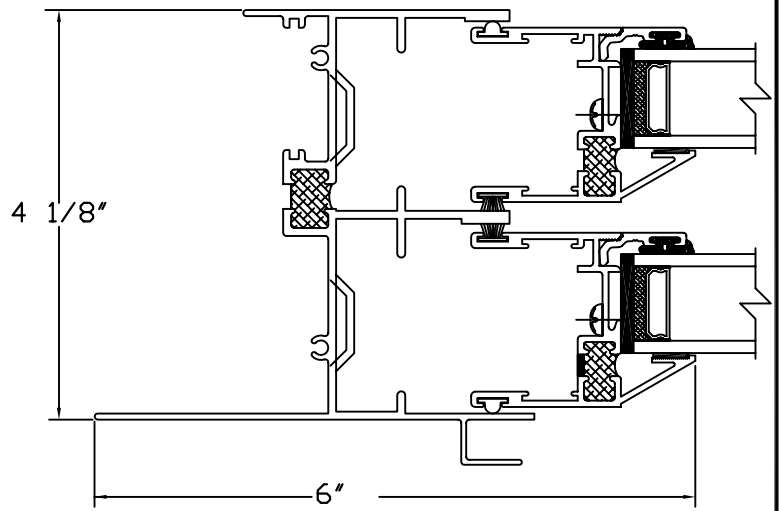
④A 2 1/2" Flange Frame Sill Detail



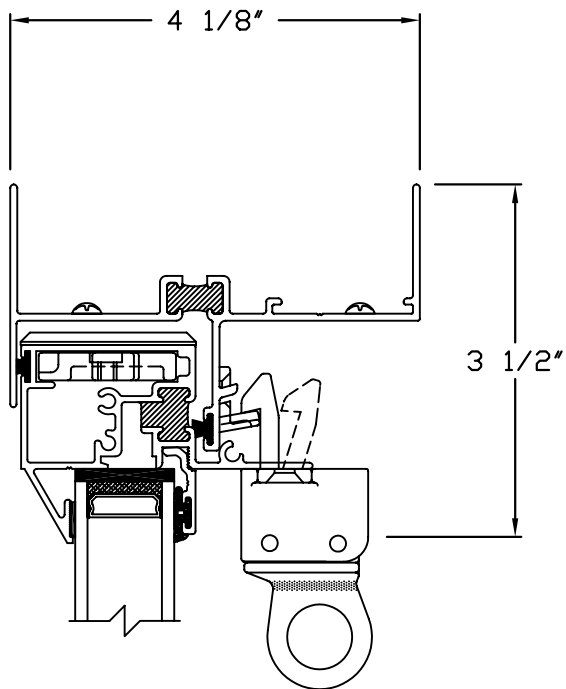
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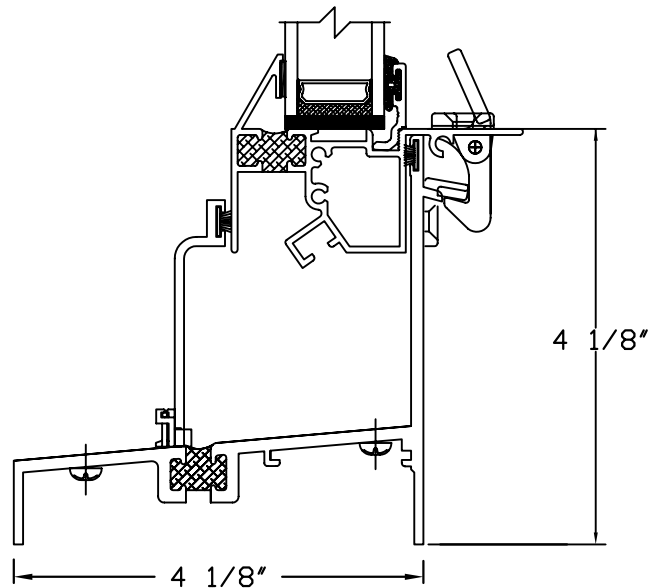
7A 2 1/2" Flange Frame Fixed Head/Jamb/Sill Detail



3B 1 1/2" Flange Frame Jamb Detail



1B Optional Head with Pole Ring Latch Detail



4B Optional Sill with Latch Detail



W I N D O W   A N D   D O O R

## Series 6800 H-AW-50 Side Load Double Hung Window

SECTION 085113

### PART 1 – GENERAL

#### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

#### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association

AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"

AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"

AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"

AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"

AAMA 902-99 "Voluntary Specification for Sash Balances"

AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"

AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"

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WDMA – Window & Door Manufacturers Association

AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"

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ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

#### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

#### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

#### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

#### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).

## Section 085113 Aluminum Windows



### Series 6800 H-AW-50 Side Load Double Hung Window

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-08, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA/WDMA/CSA 101/I.S.2/A440-08 Designation: H-AW-50.
- B. Aluminum windows: 4-1/8" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; finish factory-applied; frames and sash factory-assembled.
- C. Configuration: Double hung; top and bottom sash tilt in for glass cleaning.
- D. Glazing: 1" insulating glass with structurally glazed silicone exterior perimeter sealant and snap in glazing bead with EPDM wedge gasket.
- E. Muntins: true divided lites, internal muntin grids or applied landmark grids

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to H-AW-50 specifications in AAMA AAMA/WDMA/CSA 101/I.S.2/A440-08 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  - 1. Air Infiltration: maximum 0.19 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283 at a static air pressure difference of 6.24 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 331. There shall be no leakage at a static pressure of 15.05 psf.
  - 3. Uniform Deflection: No more than L/175 when tested per ASTM E 330 at a static air pressure difference of 50.16 psf.
  - 4. Uniform Structural: window to be operable, and maximum of .2% deformation per member in accordance with ASTM E 330 at 75.24 psf.
  - 5. Life Cycle testing- When tested in accordance with AAMA 910, there shall be no damage to fasteners, hardware parts, support arms, actuating mechanisms or any other damage causing the window to be inoperable, and air leakage and water resistance tests shall not exceed the Gateway Performance Requirements specified in Table 2.1.
  - 6. Forced entry resistance as per ASTM F 588 = Type A: Grade 10

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURERS

Champion 6500 Century Double Hung Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Main framing and sash members shall have a nominal wall thickness of not less than 0.070". Main framing and sash members shall have an overall depth of not less than 4.125 inches. Frame sill shall have a nominal wall thickness of 0.125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used
- D. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- E. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed so that there is no metal-to-metal contact between the master frame and the sash. All weather-stripping shall be installed in specially-extruded ports and secured to prevent movement, shrinkage, or loss when removing sash either for cleaning or repair. Sash of double hung windows shall be weather-stripped using woven pile with mylar center fin, double on sash stiles and single on sash rails. Lift rail shall seal to frame sill with vinyl compression bulb and fin seal weather stripping.
- F. Balances: Double hung windows shall have sash balances of appropriate size and capacity to hold sash stationary at any open position. Balances shall be factory applied, easily accessible and shall be field replaceable. Balances shall be Ultra-lift type. [Optional: Spiral, Super-lift].
- G. Side Load Feature: Sashes are designed to be removed for cleaning and maintenance purposes.
- H. Screens: Half or (optional full) held in exterior tracks with stainless steel leaf springs; 5/16" x 1 1/2" x .045" extruded tubular aluminum frame; corners mitered, gusset reinforced, with 18 x 16 fiberglass [Optional: aluminum, stainless steel] mesh and PVC spline.

## Section 085113 Aluminum Windows



W I N D O W   A N D   D O O R

### Series 6800 H-AW-50 Side Load Double Hung Window

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sashes shall mechanically interlock in a closed position. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The double hung aluminum windows shall be glazed with 1" dual sealed, structurally glazed insulated glass.
- D. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria.
- E. Frame equal leg [Optional: Extruded Flanges: Head, Sill and Jamb at 2 ½. ]

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 3/16" [Optional: 1/16" & 1/8" glass may be used, however the design and structural load cannot be identified. ¼"]
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Annealed **Optional: (Heat Strengthened, Tempered)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #2 surface)**
- C. Interior glass lite
  - 1. Thickness: 3/16" [Optional: 1/16" & 1/8" glass may be used, however the design and structural load cannot be identified. ¼"] 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Annealed **Optional: (Heat Strengthened, Tempered)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #3 surface)**
- D. Seal durability: conformance to ASTM E 774-00; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. **Options: (Other panel, Spandrel Glass, etc)**

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

#### PART 3 – EXECUTION

## Section 085113 Aluminum Windows



W I N D O W   A N D   D O O R

### Series 6800 H-AW-50 Side Load Double Hung Window

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-02 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 6500 Series

## 6510 Fixed Window



<u>Product By Operation:</u>	4-1/8" Fixed
<u>Model By Family:</u>	6500
<u>Product Description:</u>	Fixed Window
<u>Frame Depth:</u>	4-1/8"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2 -1/2"
<u>Flange Frame Sill Options:</u>	2 -1/2"
<u>101/I.S.2/A440-05 Rating:</u>	FW-AW85
<u>AAMA Test Size:</u>	60 x 99
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins.
<u>Optional Glazing:</u>	~
	~

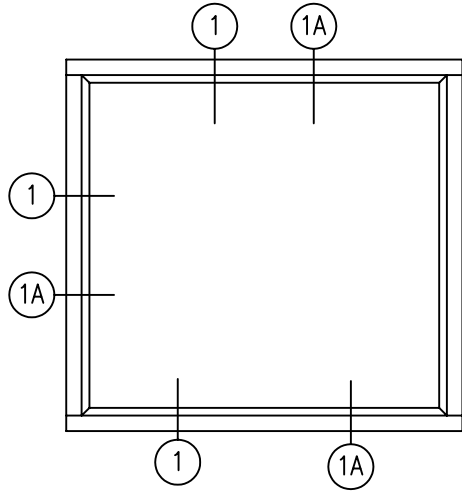


### Performance Data

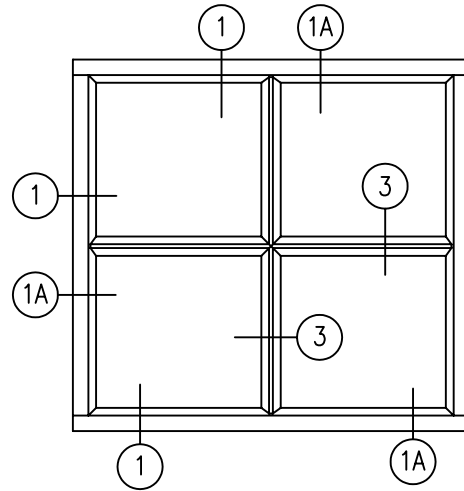


AAMA RATING:	FW-AW85
AIR INFILTRATION @ 50 mph	<0.01 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	127.90 PSF
DESIGN PRESSURE	90.28 PSF

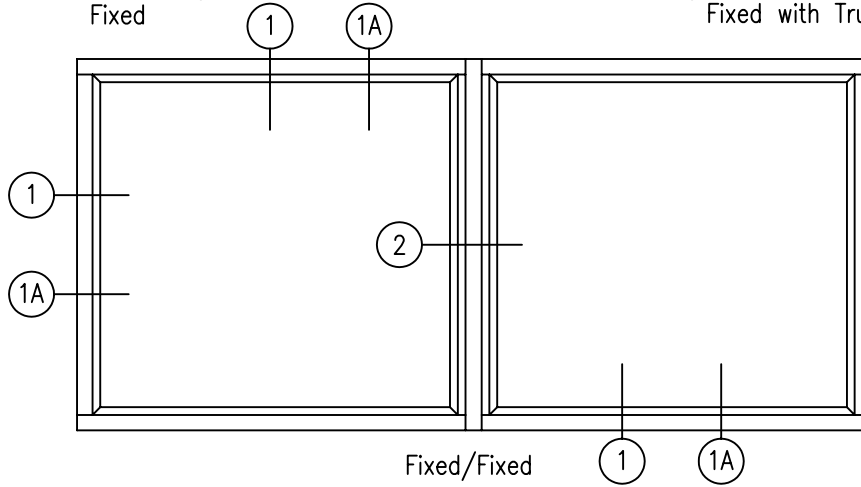
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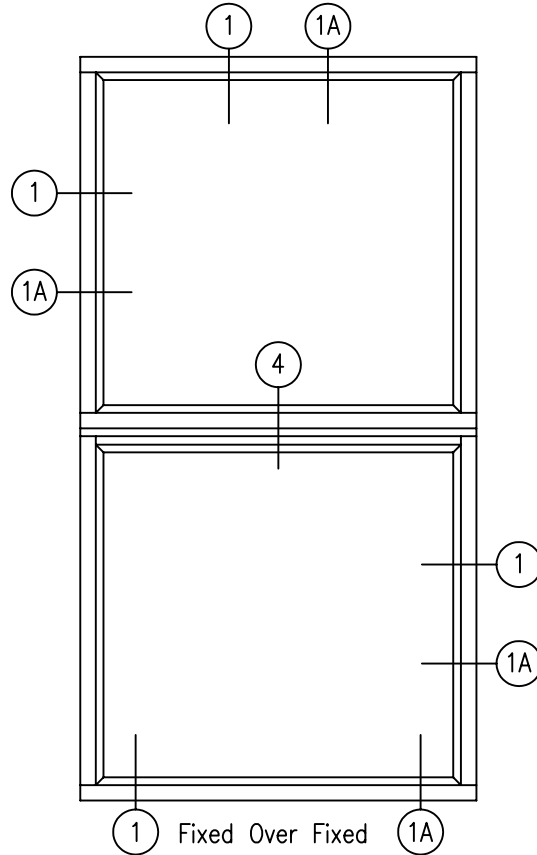
Fixed



Fixed with True Muntin



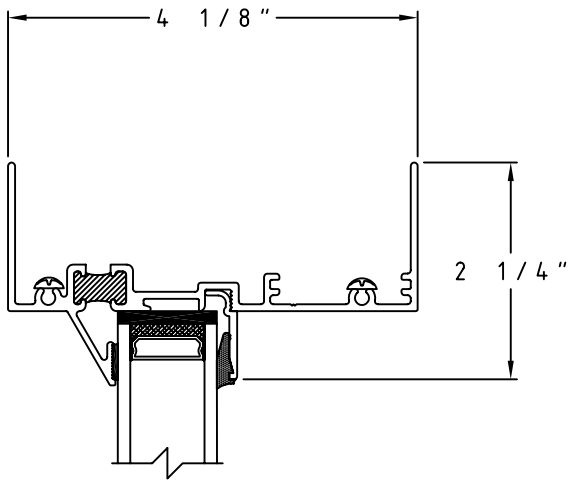
Fixed/Fixed



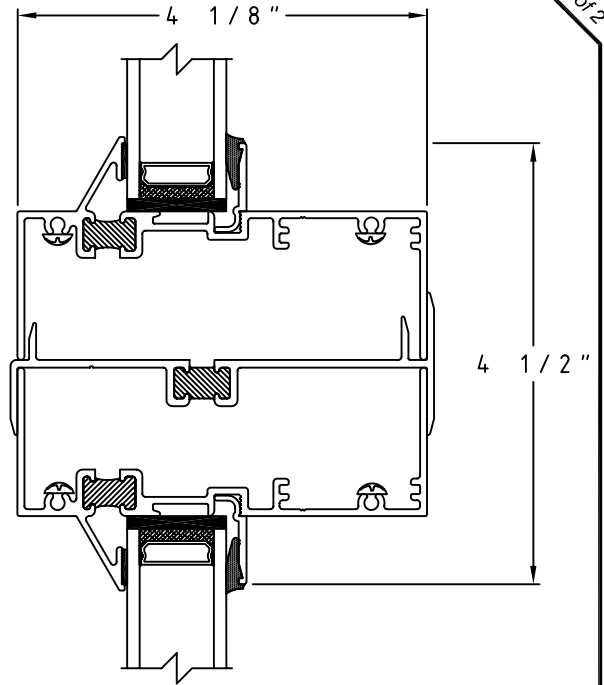
Fixed Over Fixed

All Elevations are viewed outside looking IN.

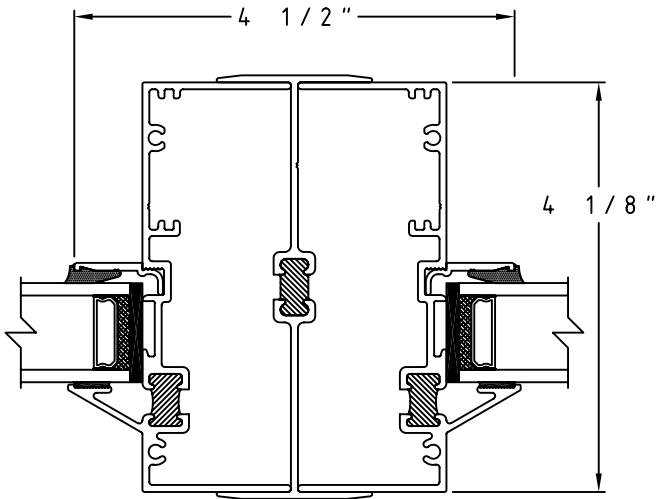
SCALE: HALF



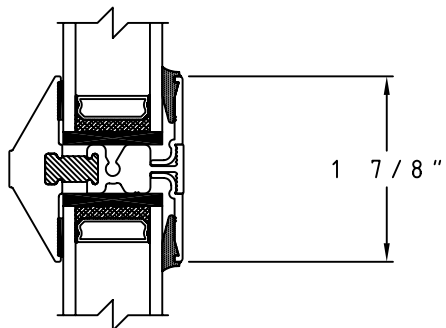
① Fixed Frame Head/Sill/Jamb Detail



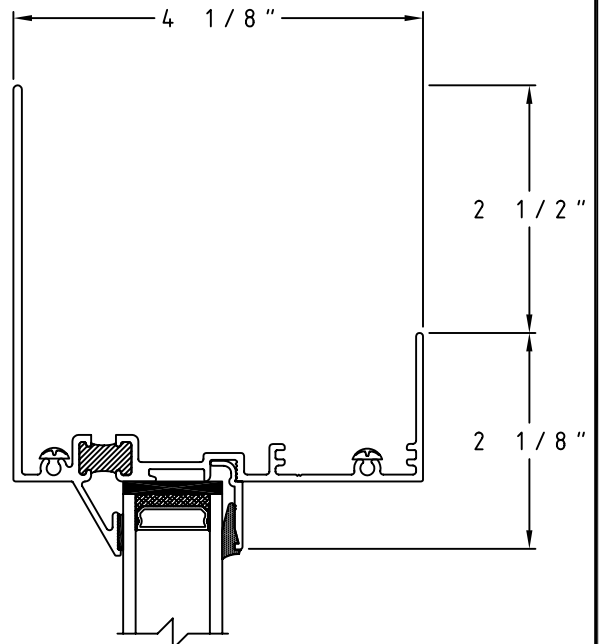
④ Fixed Over Fixed Detail



② Fixed/Fixed H Mullion Detail



③ True Muntin Detail (Horizontal/Vertical)



①A 2 1/2" Flange Frame Fixed Head/Sill/Jamb Detail





## Series 6510 FW-AW85 Fixed Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).

## Section 085113 Aluminum Windows



### Series 6510 FW-AW85 Fixed Window

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: FW-AW85
- B. Windows: 4 1/8" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; [Optional: flange frame] finish factory-applied; frames and sash factory-assembled.
- C. Configuration: Single Fixed Window.
- D. Glazing: 1" insulating glass units; glass and panel descriptions in paragraph 2.04; factory-glazed.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to FW-AW85 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  - 1. Air Infiltration Test: The window shall be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration tested at <0.01 cfm/ft<sup>2</sup> at 6.2 psf.
  - 2. Water Resistance Test: The window shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Uniform Deflection: No more than <.25 mm when tested per ASTM E 330 at a static air pressure difference of 90.28 psf.
  - 4. Structural Load Test: T Window to be fixed, and maximum .2% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 127.90 psf.
  - 5. Forced Entry Resistance as per ASTM F 588 = Type: D; Grade: 40.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURER

Champion 6510 FW-AW85 Fixed Window

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Fixed frame shall have a nominal wall thickness of not less than 0.070 inch.
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.

### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sashes shall mechanically interlock in a closed position. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The fixed aluminum windows shall be glazed with 1" insulated glass.
- D. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria.
- E. Frame equal leg [Optional: Extruded Flanges: Head, Sill and Jamb at 2 ½."]

### 2.04 GLASS AND GLAZING MATERIALS

## Section 085113 Aluminum Windows

**Series 6510 FW-AW85 Fixed Window**

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" [Optional: 1/8" or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 2. Thickness: 1/4" [Optional: 1/8" or 3/16" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Seal durability: conformance to ASTM E 774-00; visible ALI certification for CBA rating level.

**2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS**

- A. 1" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

**2.06 FINISH ON ALUMINUM EXTRUSIONS**

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

**Standard Clear Anodized Finish:**

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

**Optional Anodized Finish:**

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

**2.07 AIR CONDITIONERS**

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

**PART 3 – EXECUTION**

**3.01 PROJECT SUBMITTALS**

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports, as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

**3.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

**3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings are in accordance with approved shop drawings.



### **Series 6510 FW-AW85 Fixed Window**

#### **3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal-to-metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### **3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### **3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### **3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 9000 Series

## 9000 Double Hung



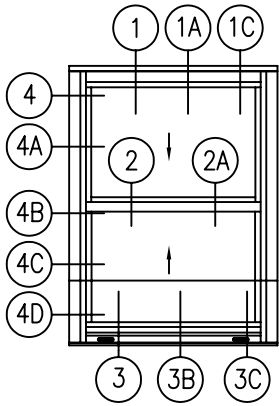
<u>Product By Operation:</u>	3-1/4" Tilt DH
<u>Model By Family:</u>	9000
<u>Product Description:</u>	Tilt DH
<u>Frame Depth:</u>	3-1/4"
<u>Flange Frame Head Options:</u>	2 1/2"
<u>Flange Frame Jamb Options:</u>	2 1/2"
<u>Flange Frame Sill Options:</u>	2 1/2"
<u>101/I.S.2/A440-05 Rating:</u>	H-C70
<u>AAMA Test Size:</u>	56 x 91
<u>101/I.S.2/A440-05 Optional:</u>	H-AW45
<u>Optional Test Size:</u>	56 x 91
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	7/8" Insul.
<u>Optional Glazing:</u>	7/8" Panel



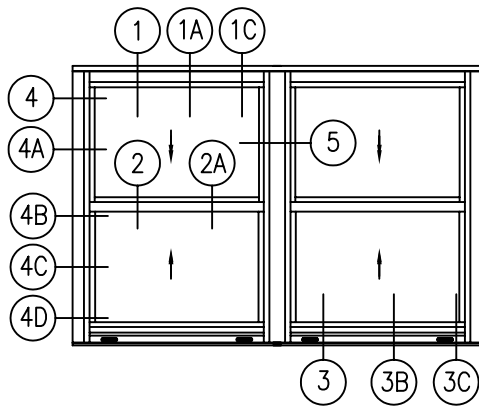
### Performance Data



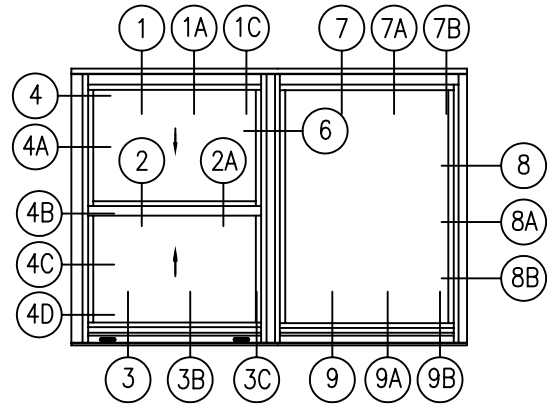
AAMA RATING:	H-C70
AIR INFILTRATION @ 25 mph	0.08 CFM
WATER TEST PRESSURE	10.66 PSF
STRUCTURAL LOAD	105.33 PSF
DESIGN PRESSURE	75.24 PSF



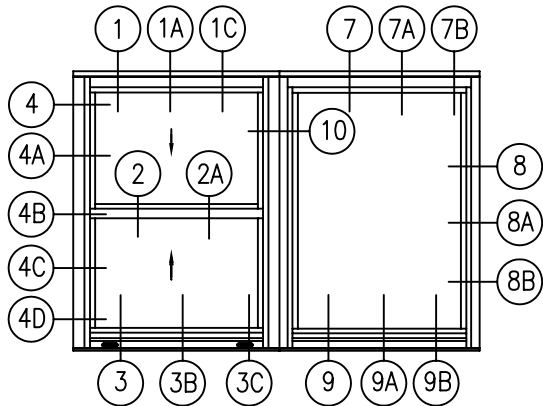
Double Hung



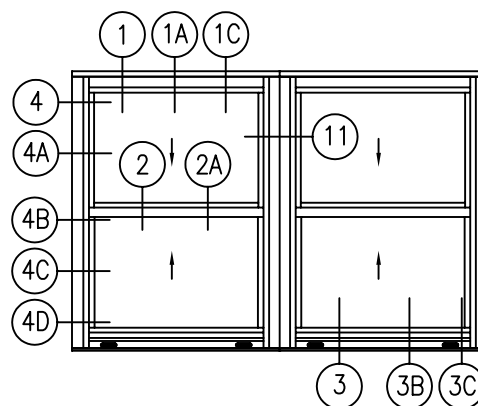
Single Master Frame  
Double Hung/Double Hung



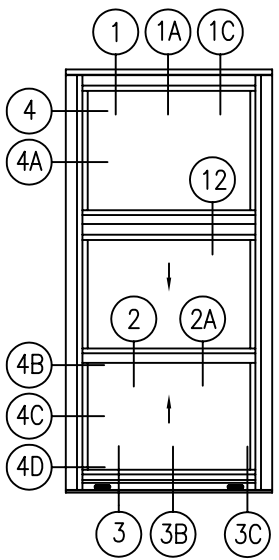
Single Master Frame  
Double Hung/Fixed



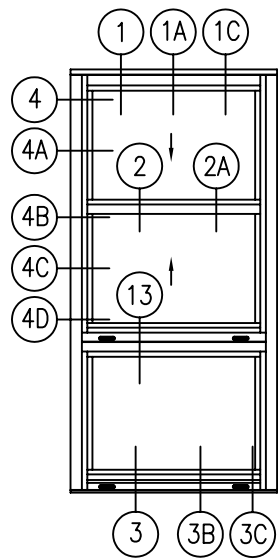
Field Applied Mullion Double Hung/Fixed



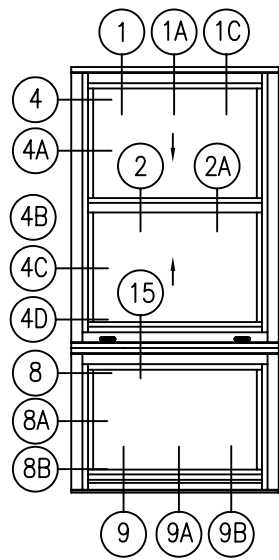
Field Applied Mullion  
Double Hung/Double Hung



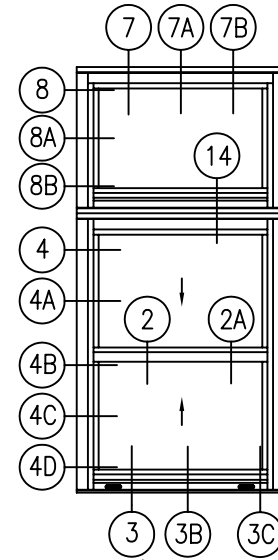
Top Tri-Lite



Bottom Tri-Lite



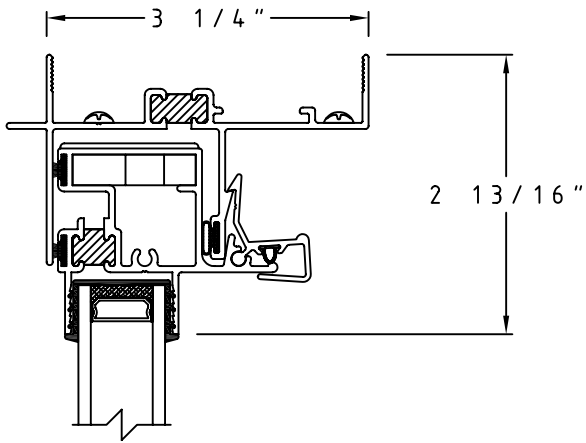
Double Hung/Fixed



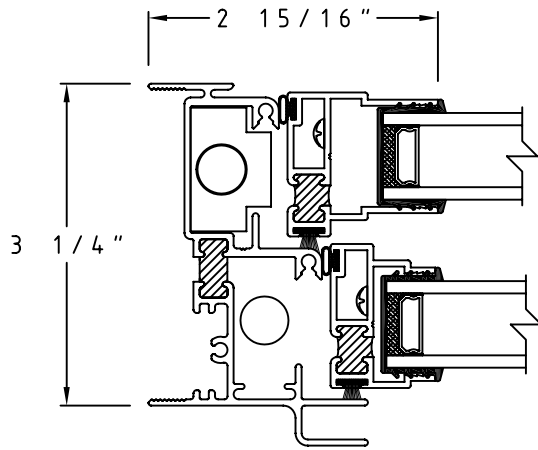
Fixed/Double Hung

All Elevations are viewed outside looking IN.

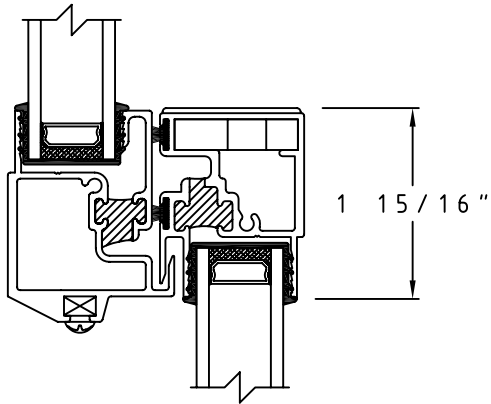
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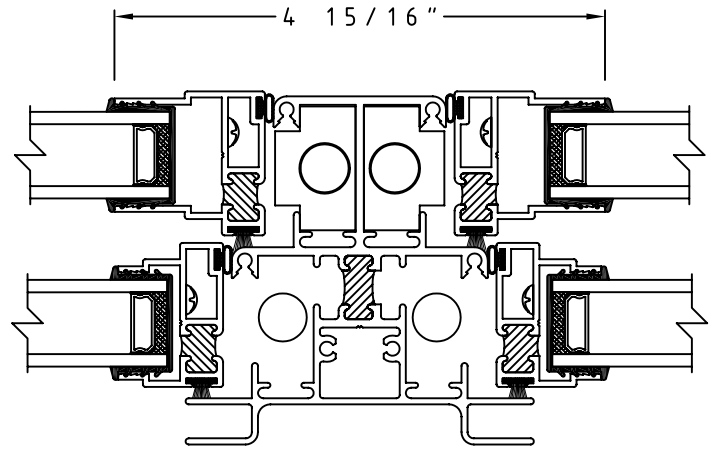
① Head Detail



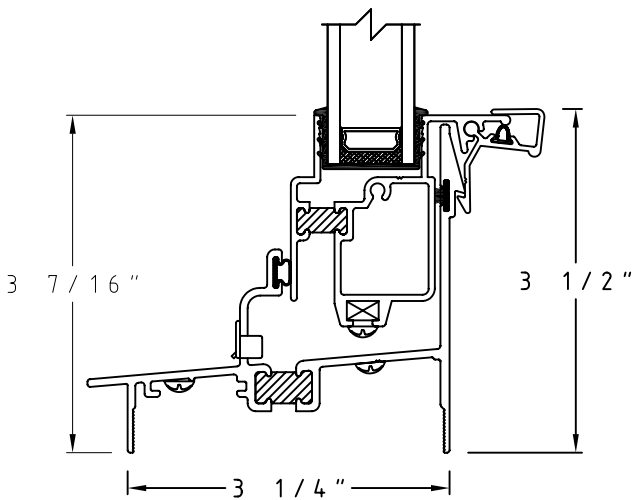
④ Jamb Detail



② Meeting Rail Detail

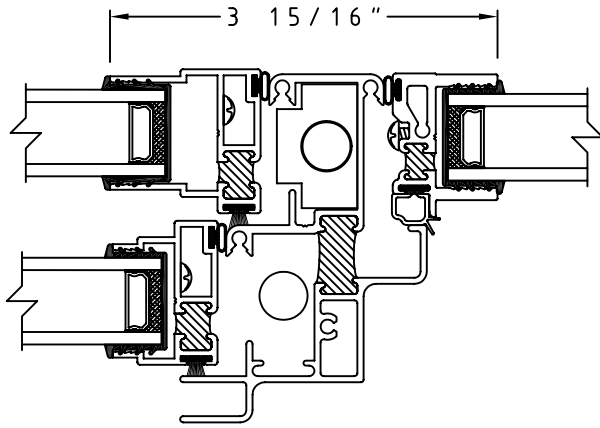


⑤ Intergal Mullion Detail

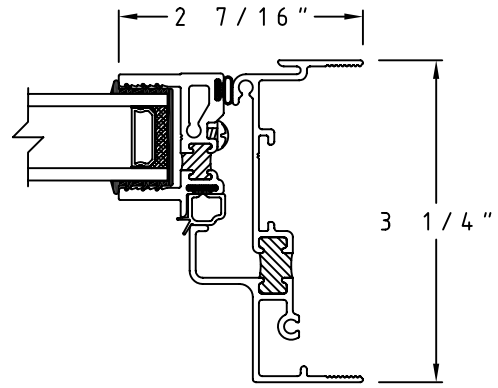


③ Sill Detail

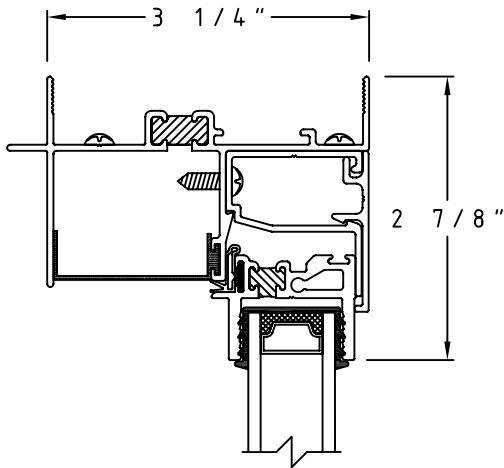
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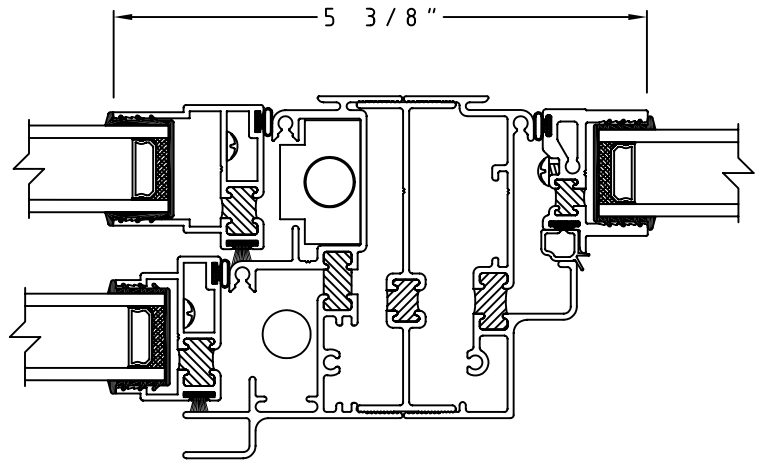
⑥ Double Hung/Fixed Intergal Mullion Detail



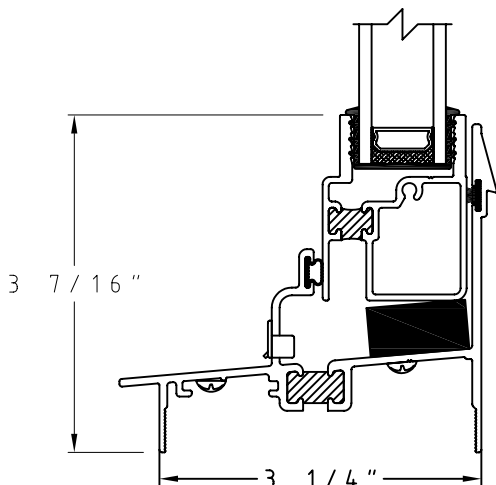
⑧ Fixed Jamb Detail



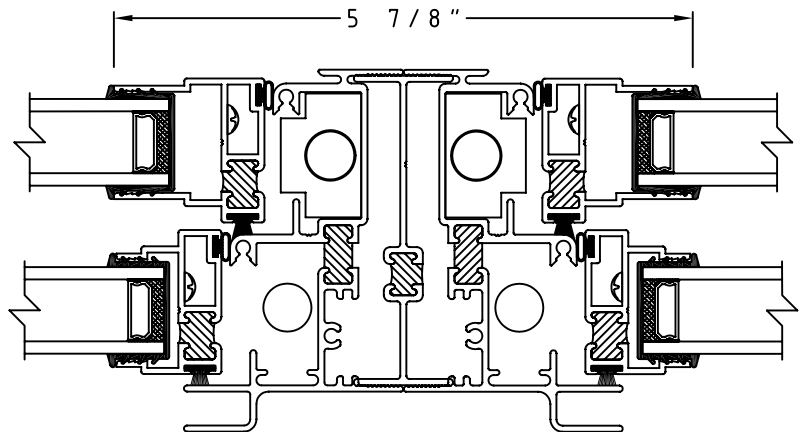
⑦ Fixed Head Detail



⑩ Double Hung/Fixed H Mullion Detail  
(Field Applied)



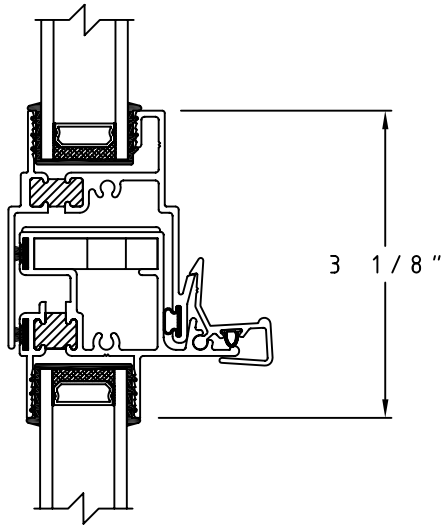
⑨ Fixed Sill Detail



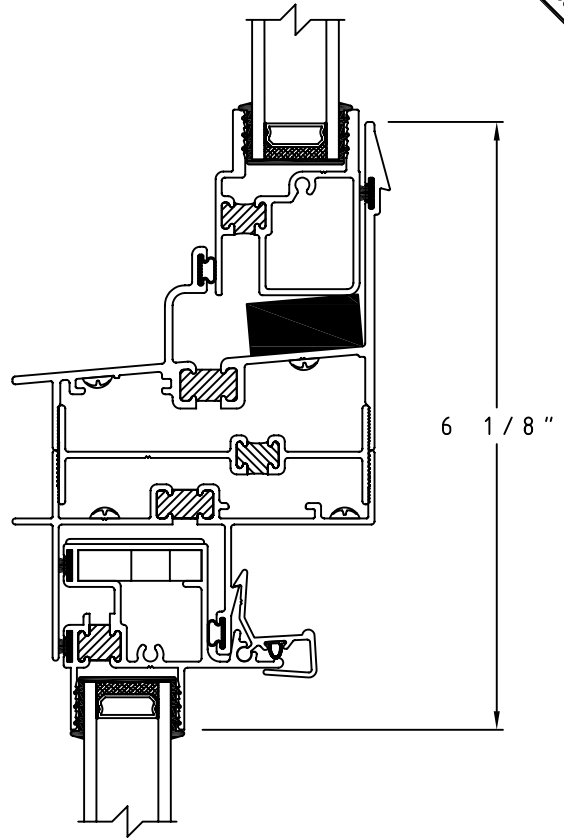
⑪ Double Hung/Double Hung H Mullion Detail  
(Field Applied)



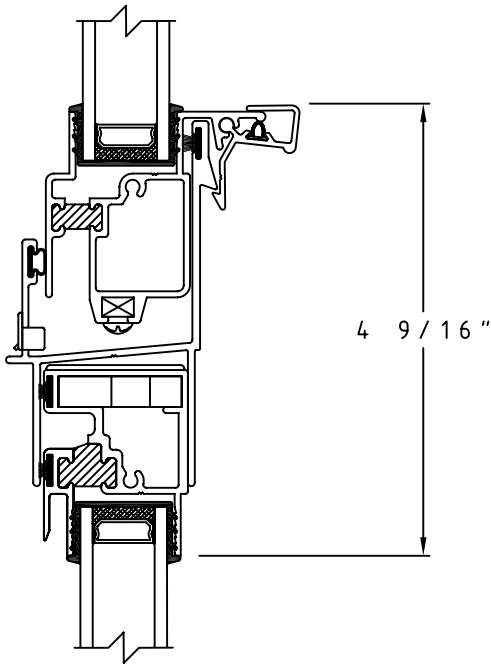
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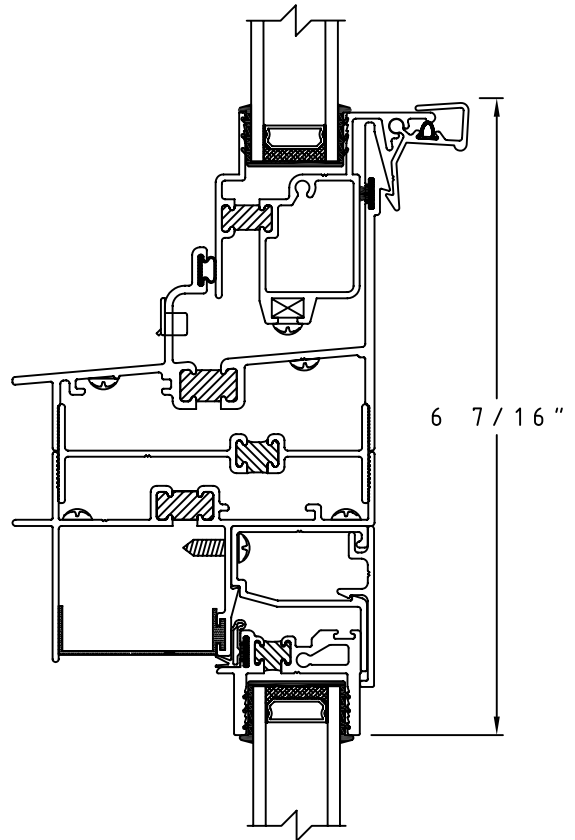
⑫ Top Tri-Lite Detail



⑭ Fixed/Double Hung Detail

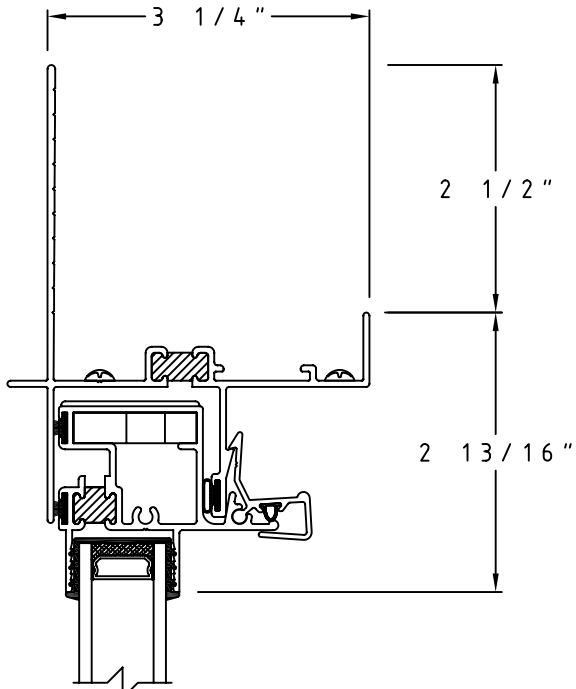


⑬ Bottom Tri-Lite Detail

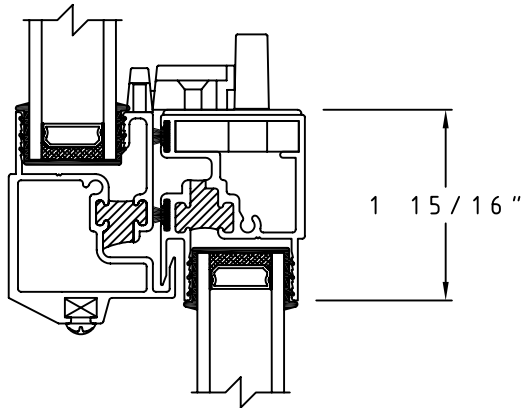


⑮ Double Hung/Fixed Detail

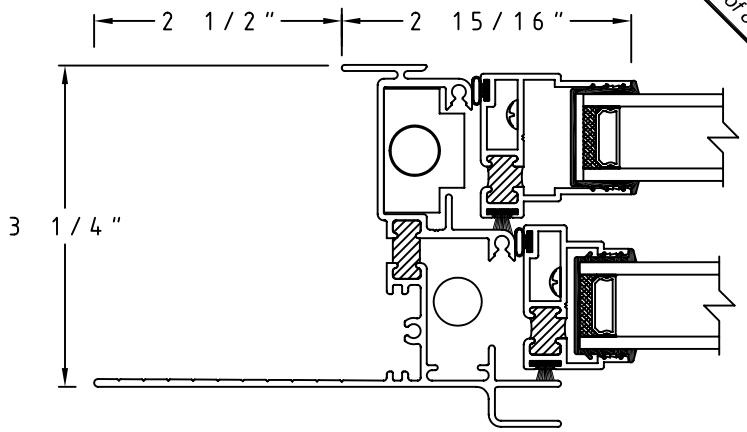
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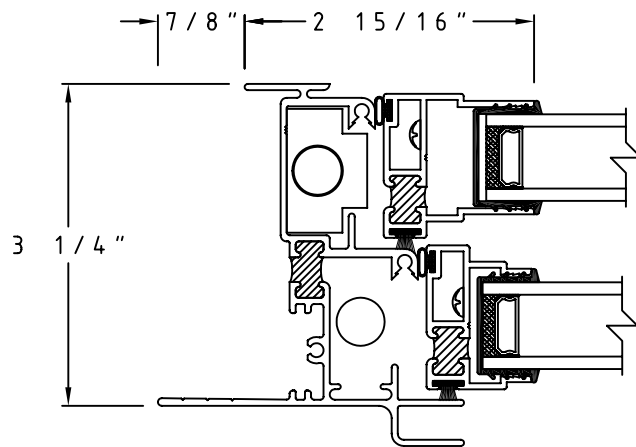
1A 2 1/2" Flange Head Detail



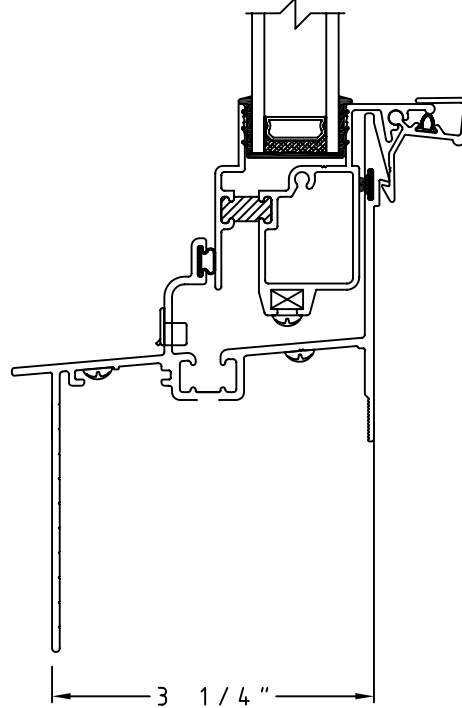
2A Meeting Rail with Lock & Keeper



4A 2 1/2" Flange Jamb Detail

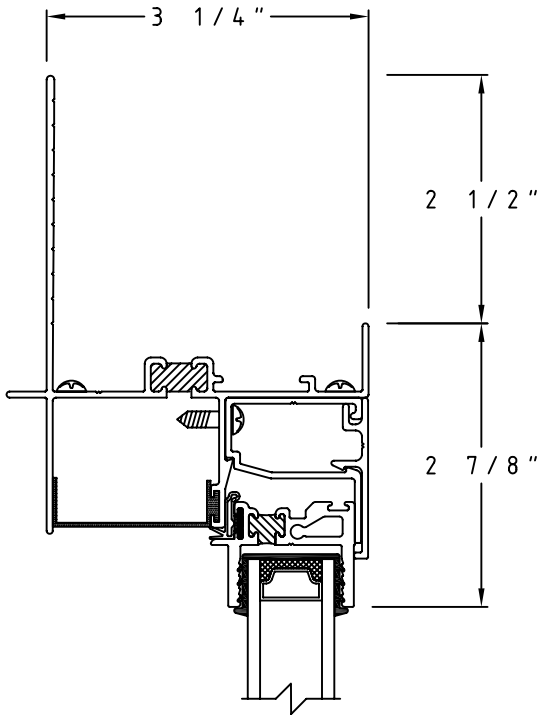


4B 7/8" Flange Jamb Detail

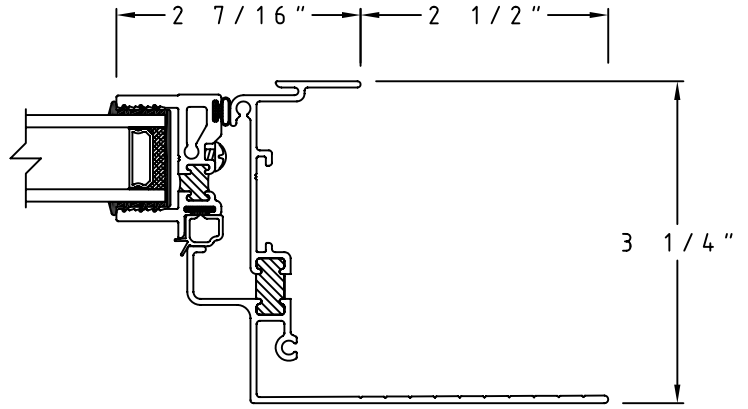


3B 2 1/2" Flange Sill Detail

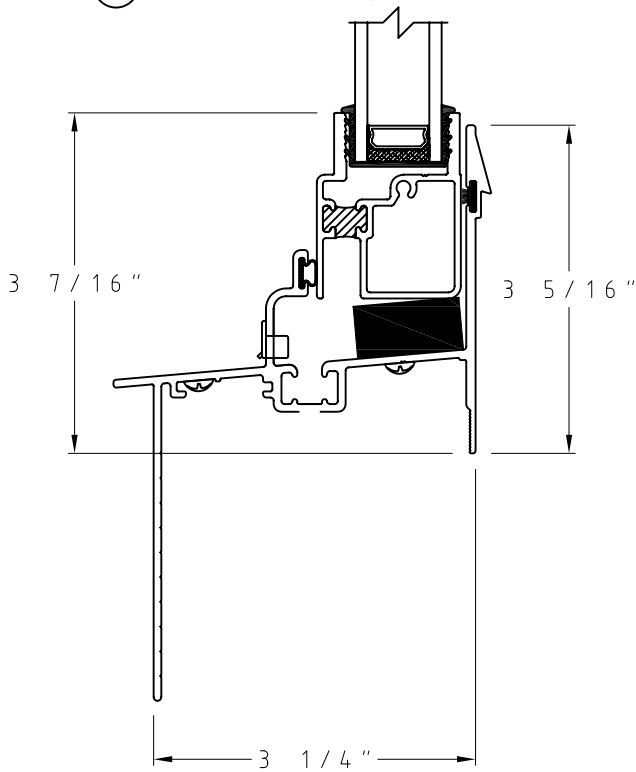
SCALE: HALF



7A 2 1/2" Fixed Flange Head Detail

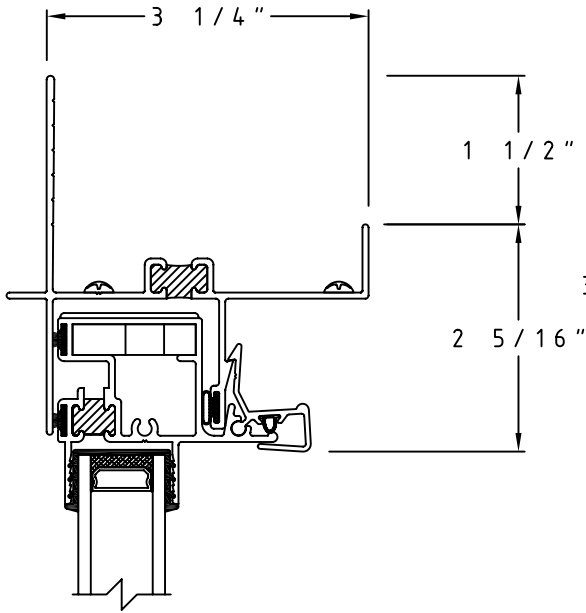


8A 2 1/2" Fixed Flange Jamb Detail

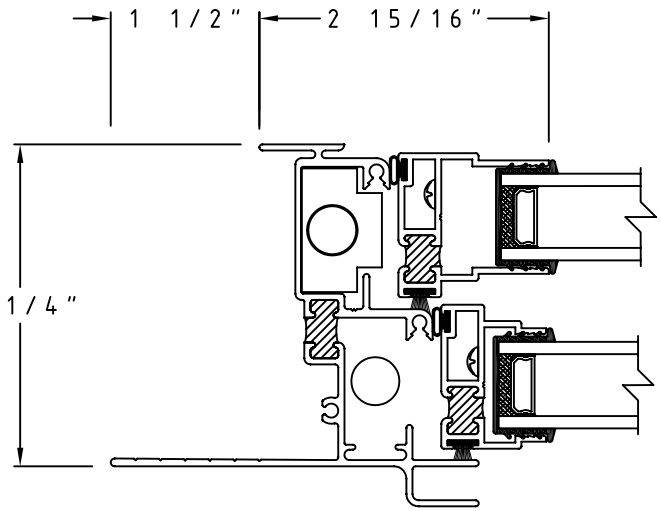


9A 2 1/2" Fixed Flange Sill Detail

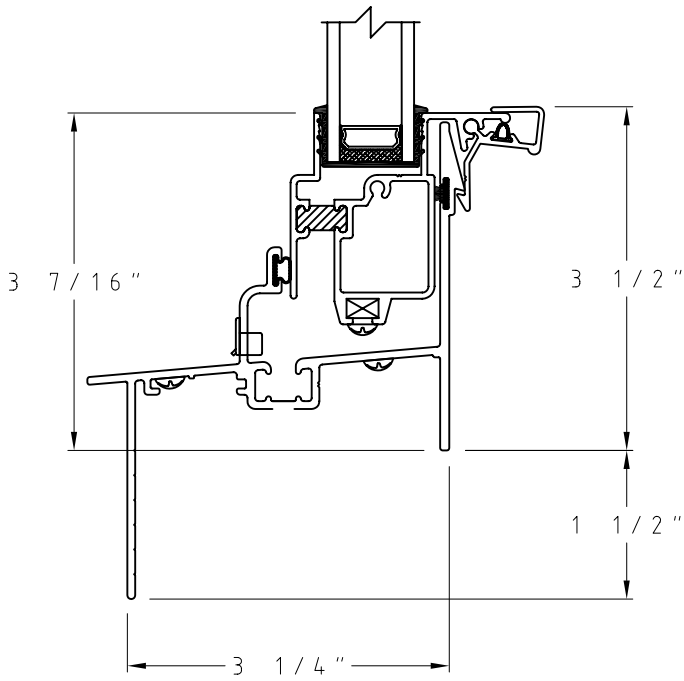
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①C 1 1/2" Flange Head Detail

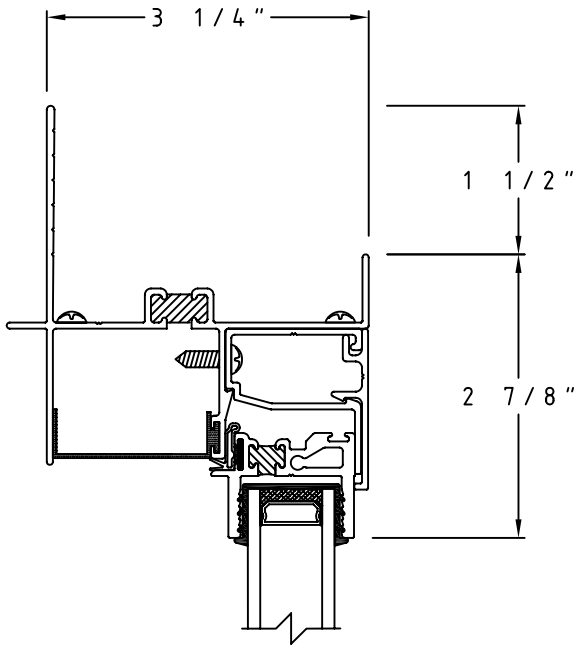


④C 1 1/2" Flange Jamb Detail

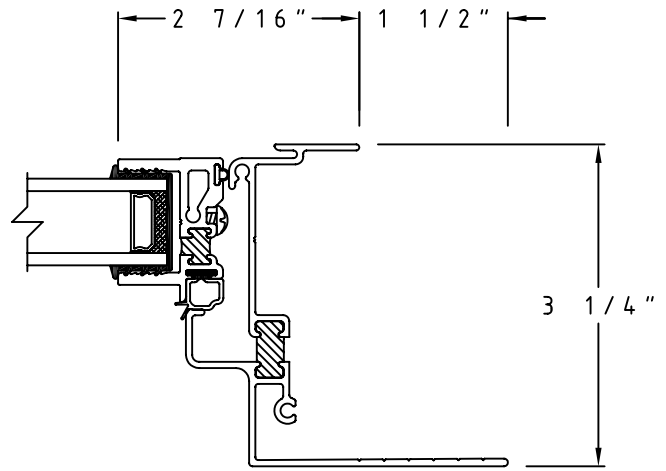


③C 1 1/2" Flange Sill Detail

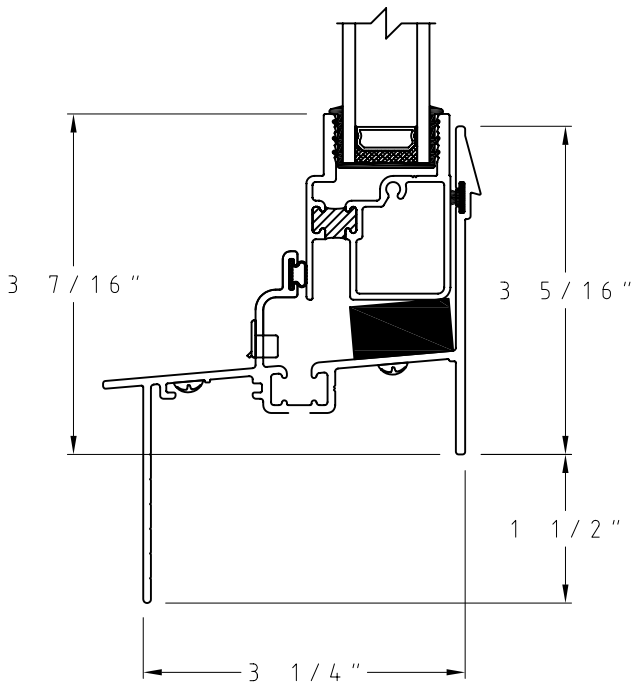
SCALE: HALF



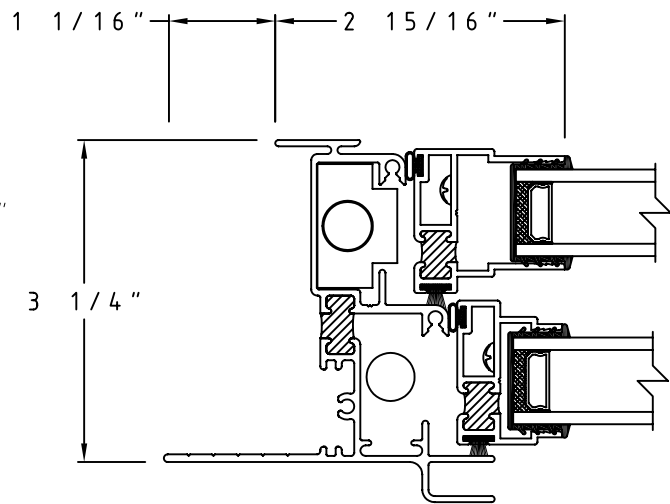
7B 1 1/2" Fixed Flange Head Detail



8B 1 1/2" Fixed Flange Jamb Detail



9B 1 1/2" Fixed Flange Sill Detail



4D 1 1/8" Flange Jamb Detail



W I N D O W   A N D   D O O R

## Series 9000 H-C70 Legend Double Hung Tilt-in Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).

## Section 085113 Aluminum Windows



### Series 9000 H-C70 Legend Double Hung Tilt-in Window

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: H-C70.
- B. Windows: 3 1/4" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; finish factory-applied; frames and sash factory-assembled. All configurations to be provided in a single common master frame to achieve a 4-7/8" common mullion visual sight line from operable to operable window, and a 3-7/8" common mullion sight line from operable to fixed window.
- C. Configuration: double hung; top and bottom sash tilt in for glass cleaning.
- D. Glazing: 7/8" insulating glass units; black reusable flexible PVC channel gasket with weep holes; glass and panel descriptions in paragraph 2.04; factory-glazed.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to H-C70 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 56" x 91" minimum test size with the following test results:
  - 1. Air Infiltration: maximum 0.08 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283 at a static air pressure difference of 1.6 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 547. There shall be no leakage at a static pressure of 10.66 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 75.24 psf.
  - 4. Uniform Structural: window to be operable, and maximum 0.3% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 105.33 psf.
  - 5. Forced entry resistance as per ASTM F 588 = Type A; Grade 10
- B. Thermal testing per AAMA 1502.7-81 at the prescribed 4'0" x 6'0" test size with the following test results:
  - 1. Condensation Resistance Factor: minimum 49 CRF.
  - 2. Thermal Transmittance: maximum 0.64 BTU/HR/SQ.FT/F U value.

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURER

Champion 9000 H-C70 Double Hung Window

#### 2.02 MATERIALS

- A. Aluminum extrusions: produced from commercial quality 6063-T5 alloy; free from defects impairing strength and durability.
- B. Hardware: Stainless steel sash pivot bars, Allen Key [Optional: tamper proof] tilt latches, spring-loaded for automatic jamb engagement when the sash is in the vertical position.
- C. Weatherstrip: secured in extruded ports; double rows on sash perimeters: one pile conforming to AAMA 701-04 in meeting rail, one EPDM bulb seal in bottom sash lift rail in contact with exterior frame sill, and pile conforming to AAMA 701-04 with polypropylene center fin in remaining locations.
- D. Balances: spiral conforming to AAMA 902-99 and of appropriate capacity to hold each sash stationary and permit it to operate freely; nylon balance shoes which lock in the tilted position to prevent sash travel.
- E. Screens: One half screen held in exterior tracks with stainless steel leaf springs; 5/16" x 1 1/2" x .045" extruded tubular aluminum frame; corners mitered, gusset reinforced, and crimped; 18 x 16 dark fiberglass mesh; PVC spline.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two

## Section 085113 Aluminum Windows

### Series 9000 H-C70 Legend Double Hung Tilt-in Window

screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sashes shall mechanically interlock in a closed position. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.

- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Intrigal Mullions: Used for multiples in one master frame. Hung/hung or Hung/fixe
- D. Glazing: The double hung aluminum windows shall be glazed with 7/8" dual sealed, structurally glazed insulated glass.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria.
- F. Frame equal leg [Optional: Extruded Flanges: Head, Sill and Jamb at 2 1/2." ] [Optional: intrigal caulk return]

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 1/8" [Optional: 3/16", or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolitic Low-E on #3 surface)
- D. Applied landmark grids can be used with 1/2" IG
- E. Seal durability: conformance to ASTM E 774; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 7/8" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other





### **Series 9000 H-C70 Legend Double Hung Tilt-in Window**

components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.

- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### **3.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### **3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### **3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### **3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

#### **3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-02 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### **3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 9500 Series

## 9500 Double Hung



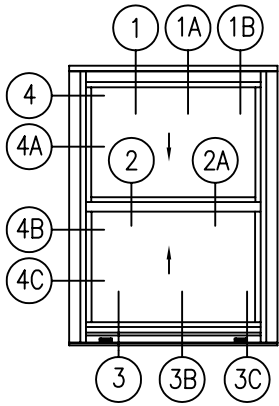
<u>Product By Operation:</u>	3-1/4" Tilt DH
<u>Model By Family:</u>	9500
<u>Product Description:</u>	Tilt DH
<u>Frame Depth:</u>	3-1/4"
<u>Flange Frame Head Options:</u>	2 1/2"
<u>Flange Frame Jamb Options:</u>	2 1/2"
<u>Flange Frame Sill Options:</u>	2 1/2"
<u>101/I.S.2/A440-05 Rating:</u>	H-HC50
<u>AAMA Test Size:</u>	60 x 99
<u>101/I.S.2/A440-08 Optional:</u>	H-AW-PG50
<u>Optional Test Size:</u>	60 x 99
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	7/8" Insul.
<u>Optional Glazing:</u>	7/8" Panel



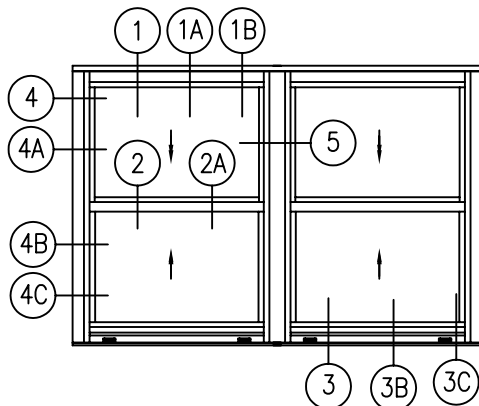
### Performance Data



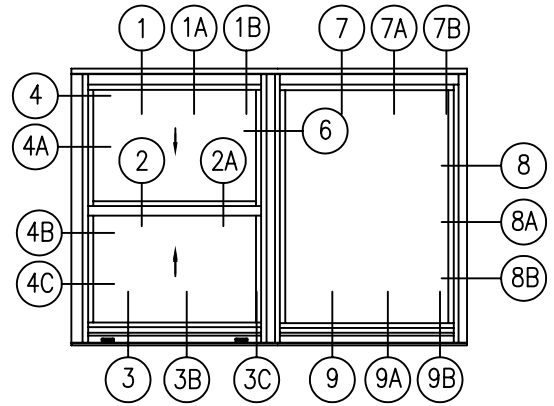
AAMA RATING:	H-AW50/HC50
AIR INFILTRATION @ 25 mph	0.18 CFM
WATER TEST PRESSURE	9.75 PSF
STRUCTURAL LOAD	67.5 PSF



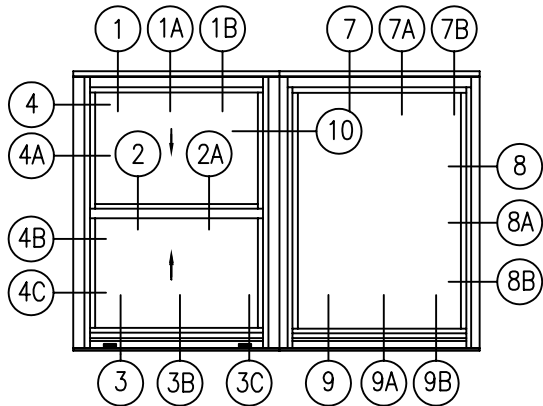
Double Hung



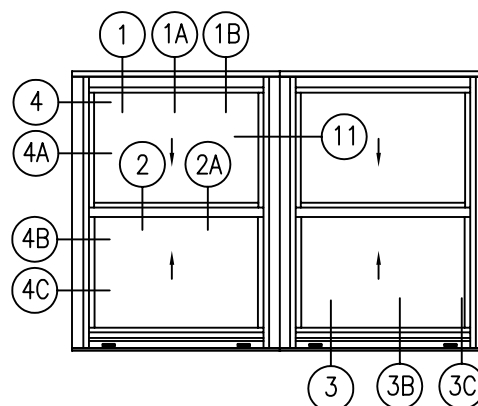
Single Master Frame  
Double Hung/Double Hung



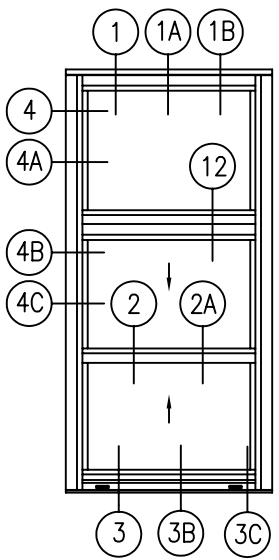
Single Master Frame  
Double Hung/Fixed



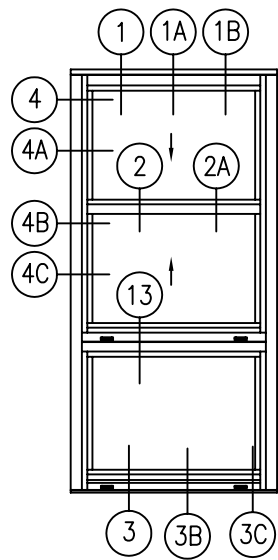
Field Applied Mullion Double Hung/Fixed



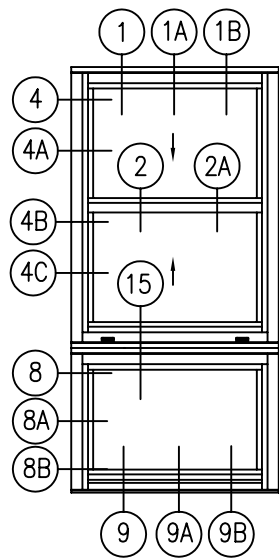
Field Applied Mullion  
Double Hung/Double Hung



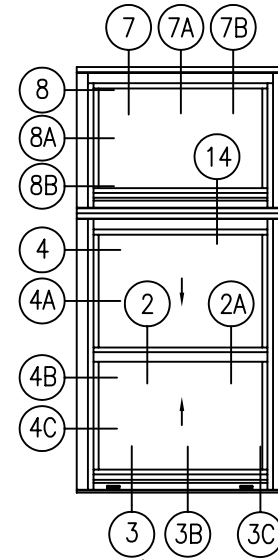
Top Tri-Lite



Bottom Tri-Lite



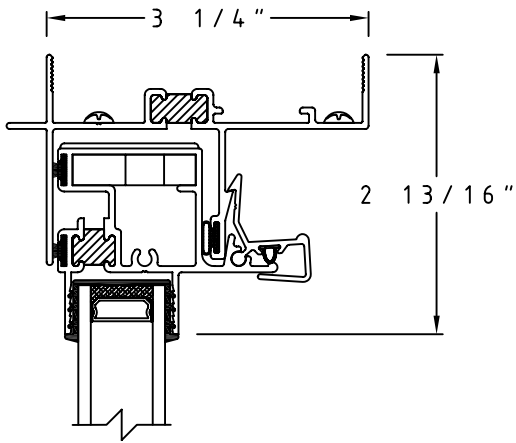
Double Hung/Fixed



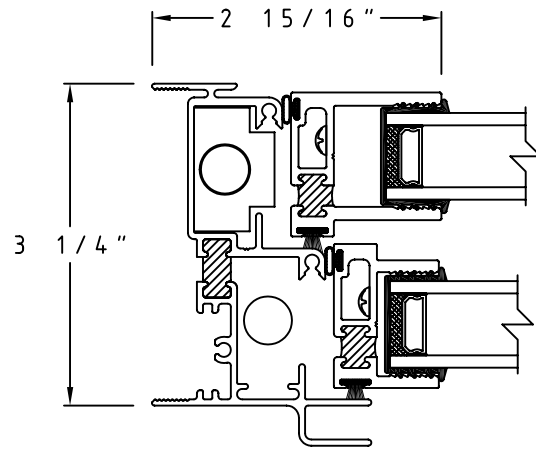
Fixed/Double Hung

All Elevations are viewed outside looking IN.

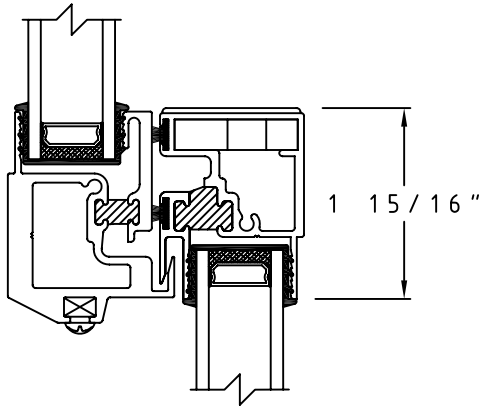
SCALE: HALF



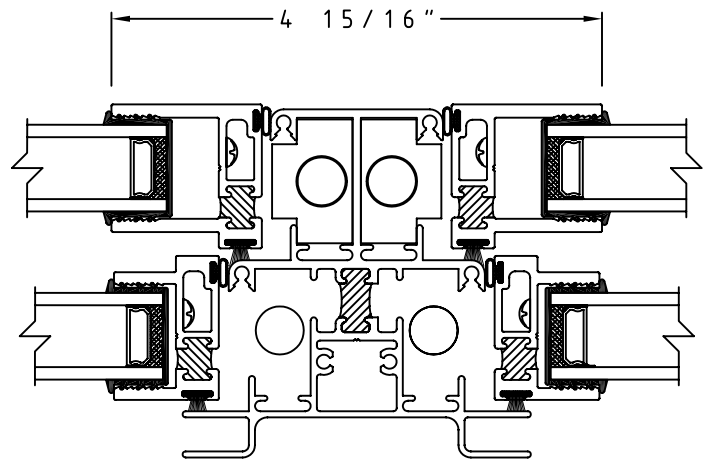
① Head Detail



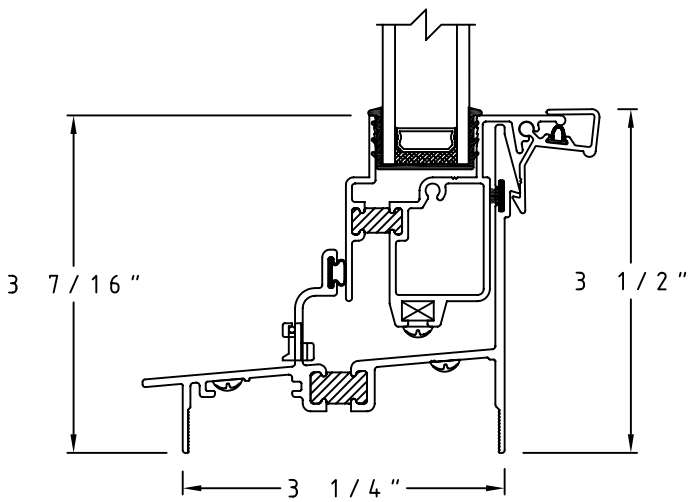
④ Jamb Detail



② Meeting Rail Detail

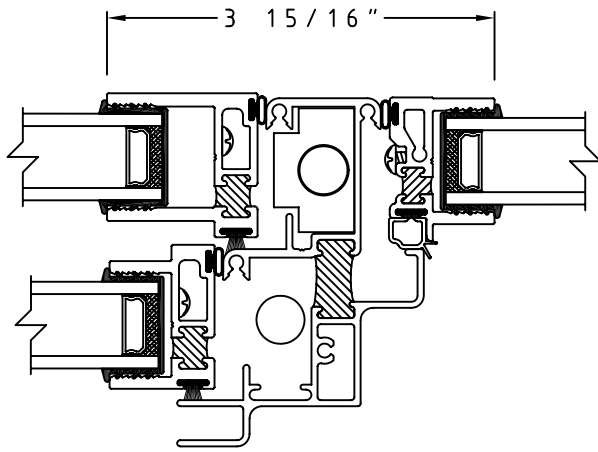


⑤ Interglaz Mullion Detail

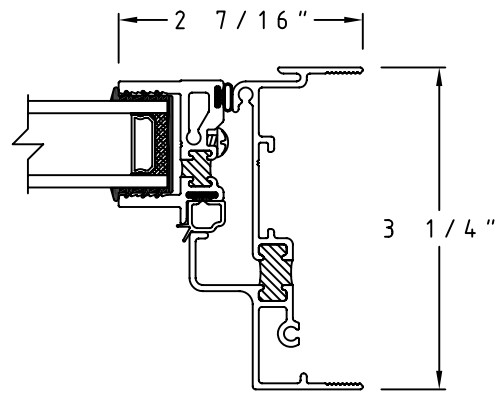


③ Sill Detail

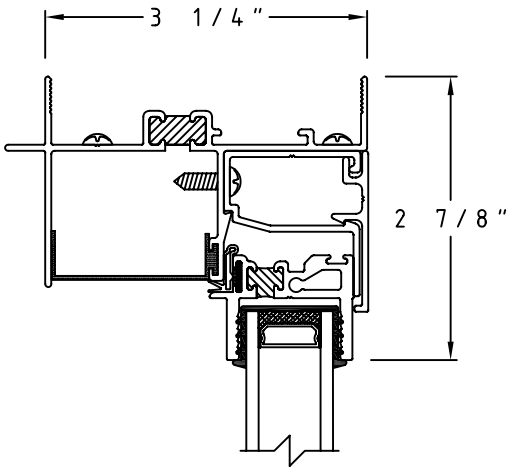
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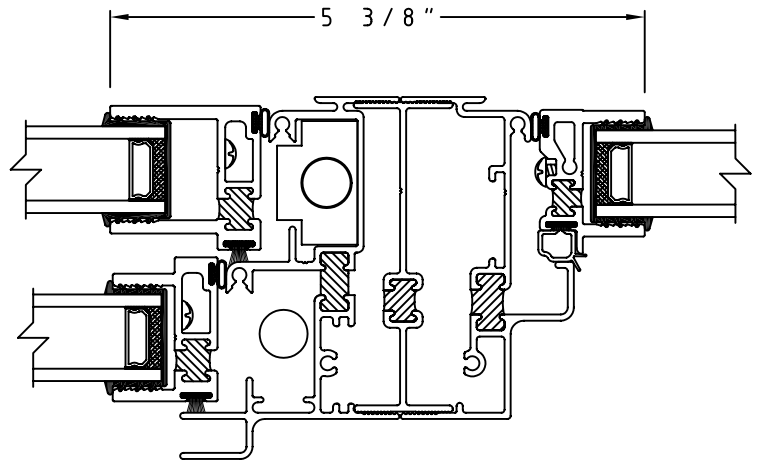
⑥ Double Hung/Fixed Intergal Mullion Detail



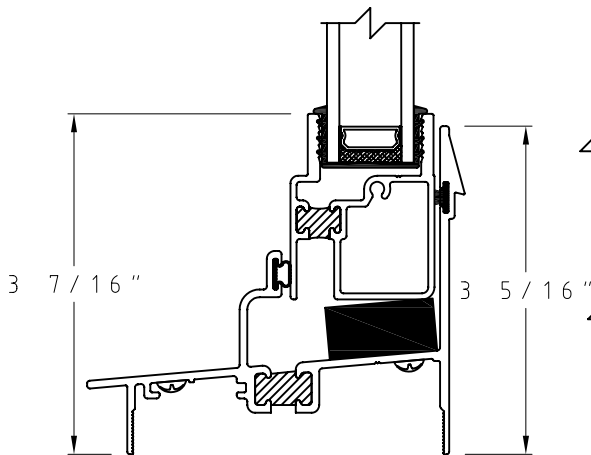
⑧ Fixed Jamb Detail



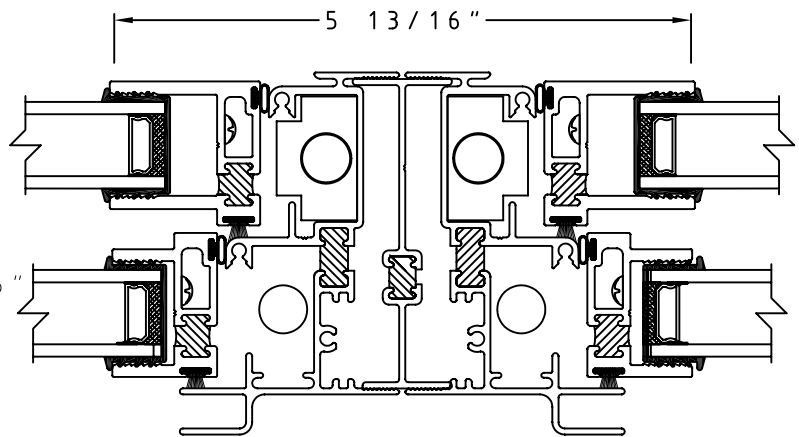
⑦ Fixed Head Detail



⑩ Double Hung/Fixed H Mullion Detail  
(Field Applied)

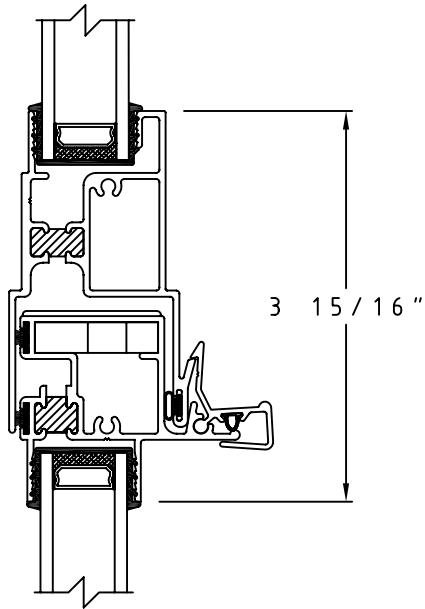


⑨ Fixed Sill Detail

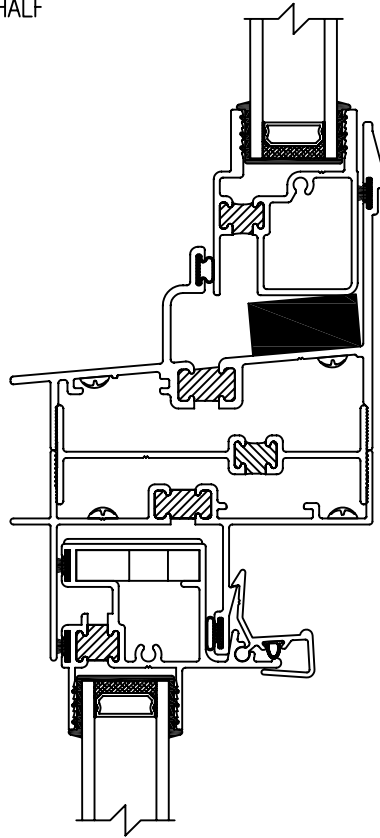


⑪ Double Hung/Double Hung H Mullion Detail  
(Field Applied)

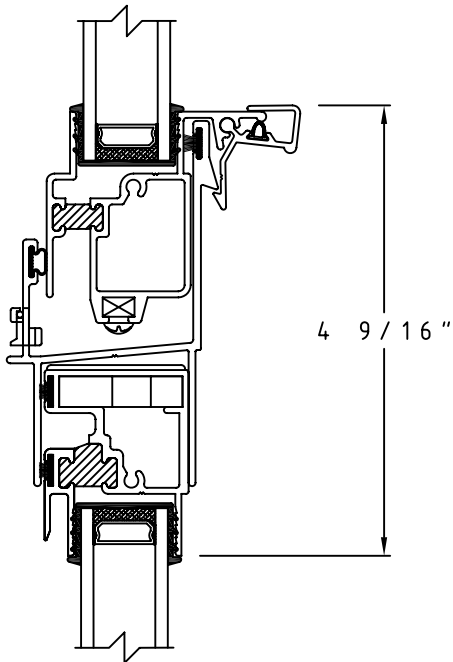
SCALE: HALF



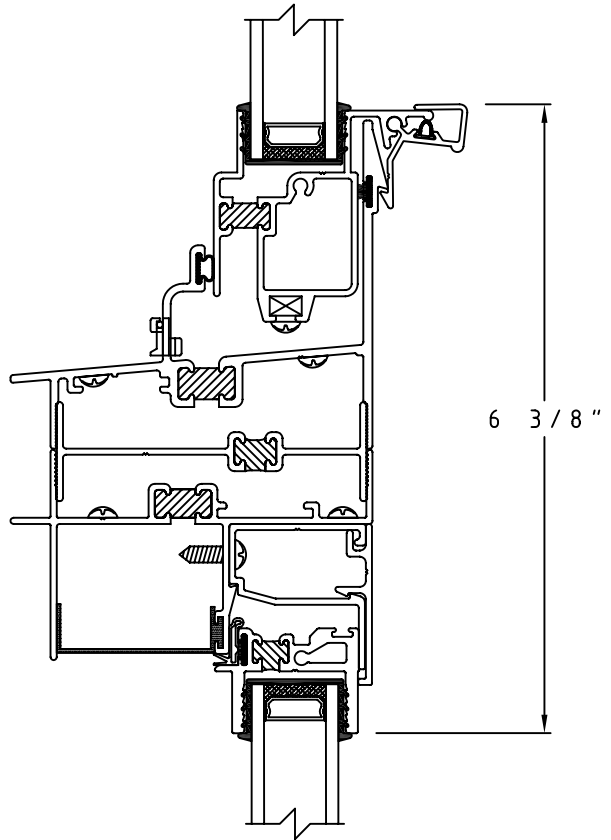
⑫ Top Tri-Lite Detail



⑭ Fixed/Double Hung Detail

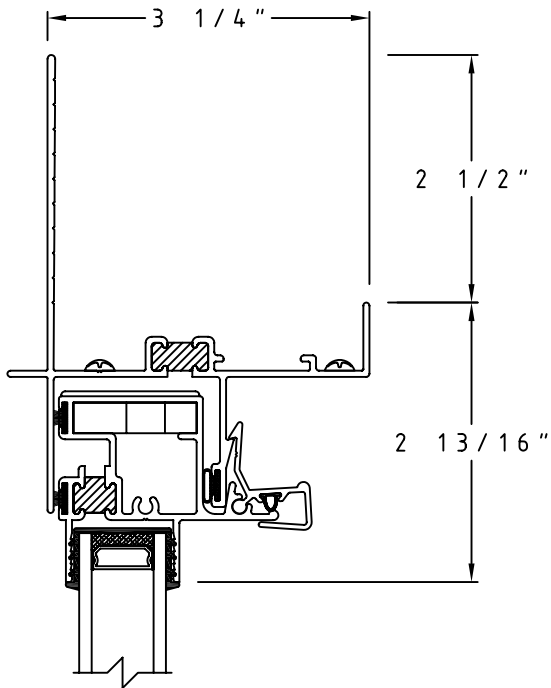


⑬ Bottom Tri-Lite Detail

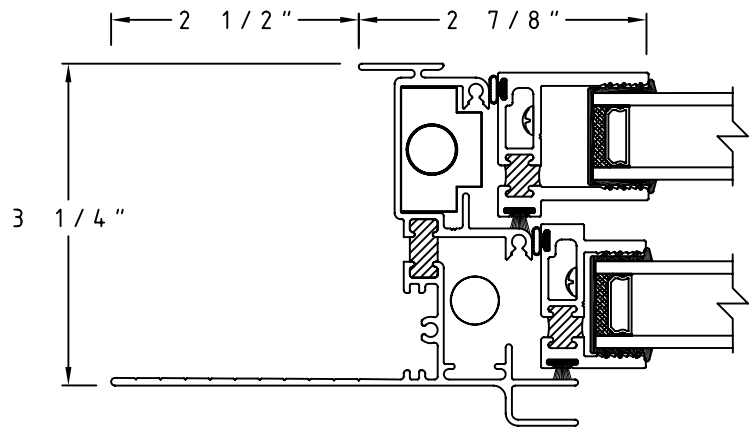


⑮ Double Hung/Fixed Detail

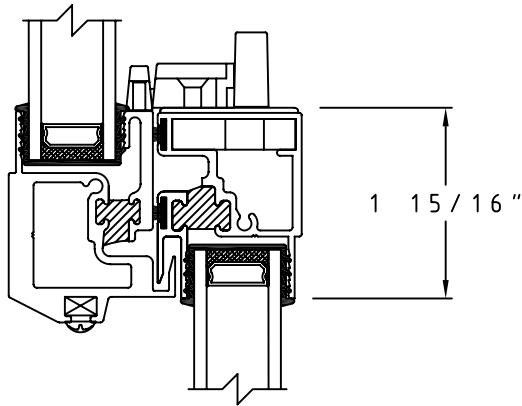
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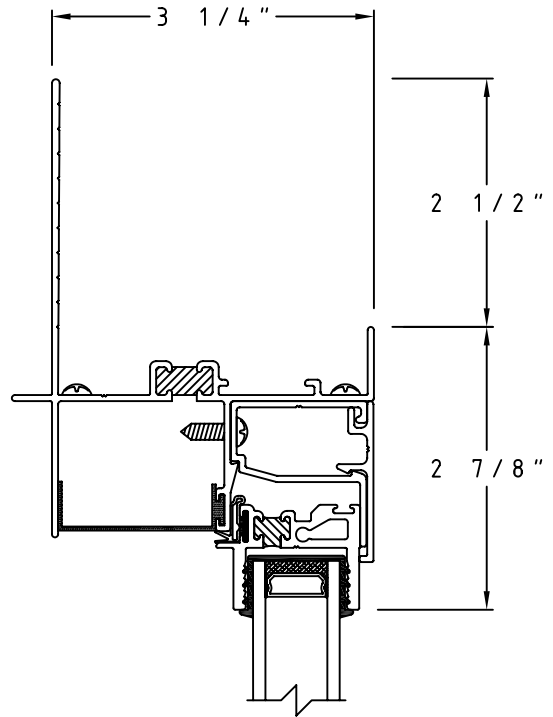
1A 2 1/2" Flange Head Detail



4A 2 1/2" Flange Jamb Detail

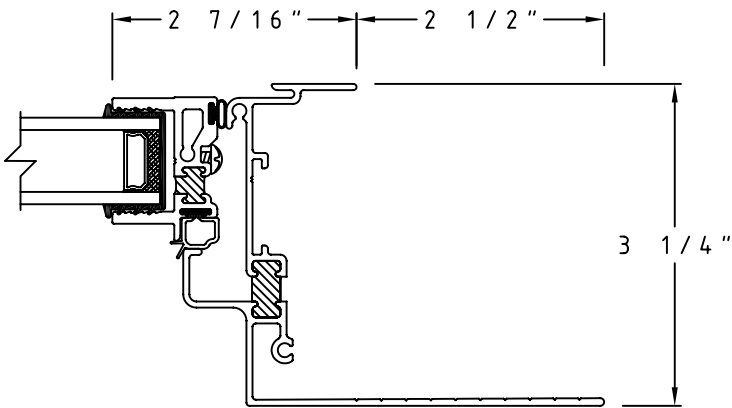


2A Meeting Rail with Lock & Keeper

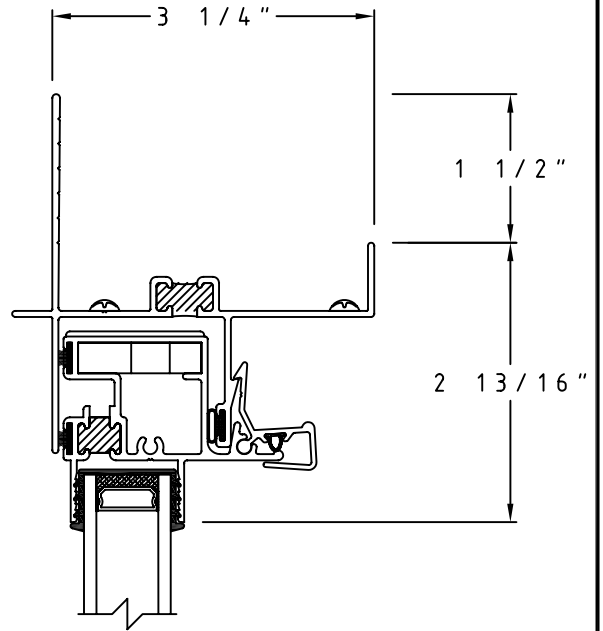


7A 2 1/2" Fixed Flange Head Detail

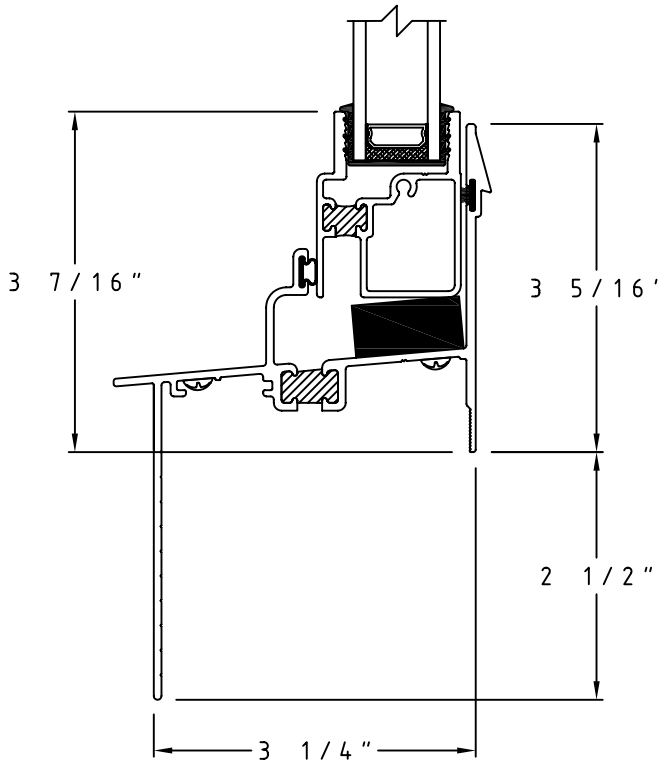
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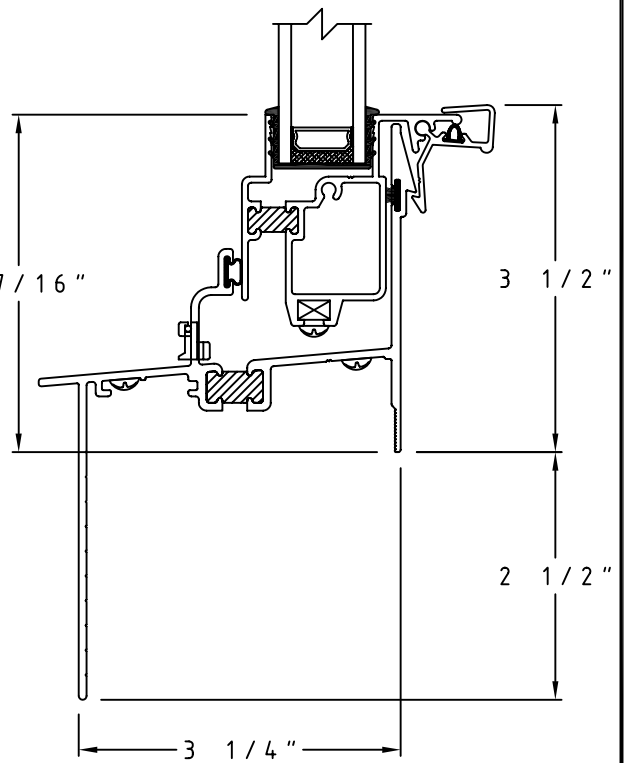
8A 2 1/2" Fixed Flange Jamb Detail



1B 1 1/2" Flange Head Detail



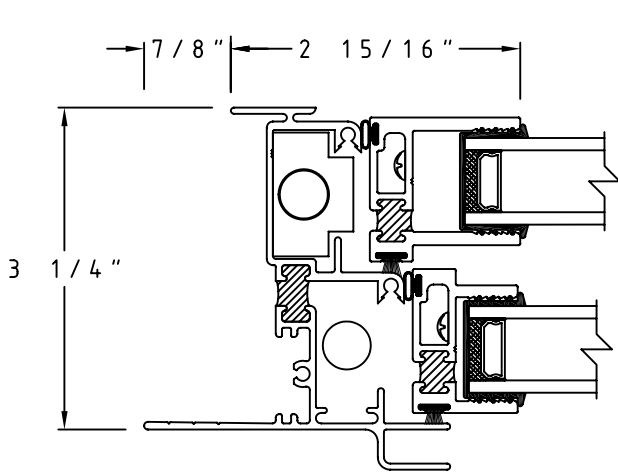
9A 2 1/2" Fixed Flange Sill Detail



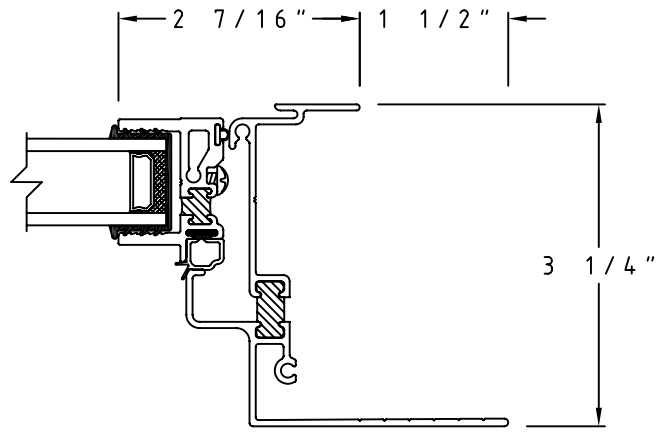
3B 2 1/2" Flange Sill Detail



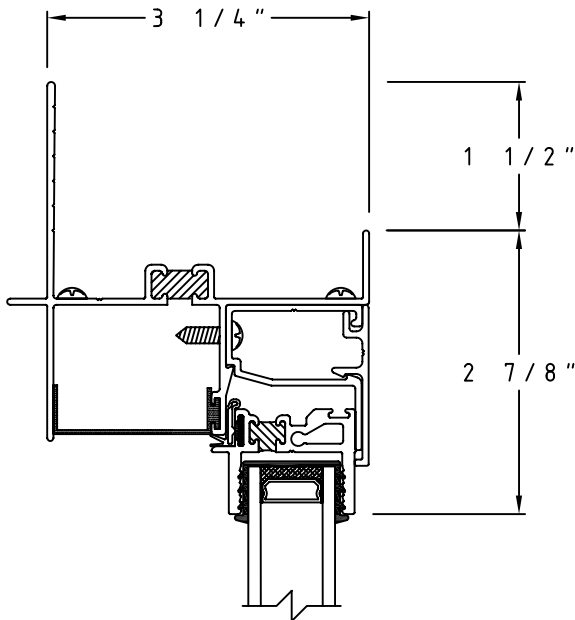
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④B 7/8" Flange Jamb Detail

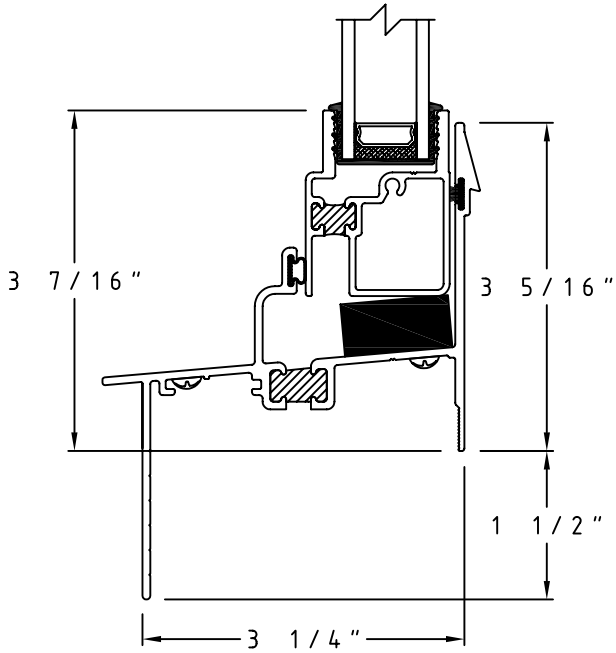


⑧B 1 1/2" Fixed Flange Jamb Detail

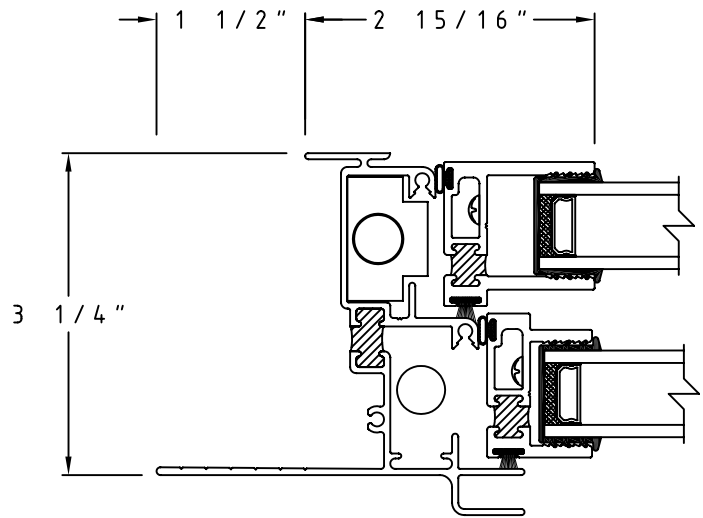


⑦B 1 1/2" Fixed Flange Head Detail

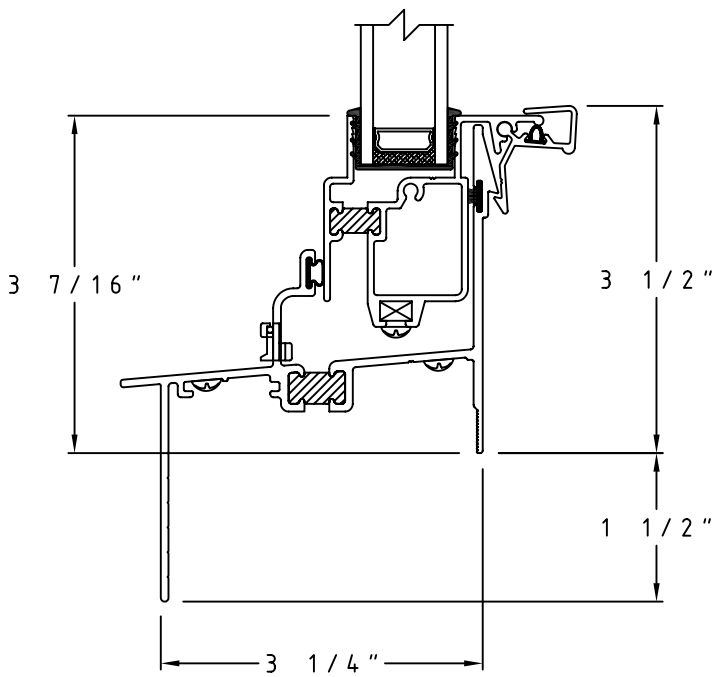
SCALE: HALF



9B 1 1/2" Fixed Flange Sill Detail



4C 1 1/2" Flange Jamb Detail



3C 1 1/2" Flange Sill Detail



## Series 9500 H-AW-PG50/HC50 Legend Double Hung Tilt-in Window

### SECTION 085113

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701&702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
ANSI - American National Standards Institute  
ANSI/AAMA/WDMA/CSA 101/I.S.2-97 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

## Section 085113 Aluminum Windows



## Series 9500 H-AW-PG50/HC50 Legend Double Hung Tilt-in Window

### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-08, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: H-AW-PG50.
- B. Windows: 3 1/4" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; finish factory-applied; frames and sash factory-assembled. All configurations to be provided in a single common master frame to achieve a 4-7/8" common mullion visual sight line from operable to operable window, and a 3-7/8" common mullion sight line from operable to fixed window.
- C. Configuration: double hung; top and bottom sash tilt in for glass cleaning.
- D. Glazing: 7/8" insulating glass units; black reusable flexible PVC channel gasket with weep holes; glass and panel descriptions in paragraph 2.04; factory-glazed.

### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to H-AW-PG50 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-08 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  1. Air Infiltration: maximum .17 cfm/ft of sash perimeter when tested per ASTM E 283-04 at a static air pressure difference of 6.2 psf.
  2. Water Penetration: no uncontrolled water leakage when tested per ASTM E 547-00 and ASTM E 331-00 at a static air pressure difference of 11.08 psf.
  3. Design Pressure: more than L/175 when tested per ASTM E 330 at a static air pressure difference of 50.16 psf.
  4. Uniform Structural: window to be operable, and maximum .4% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 75.24 psf.
  5. Forced entry resistance as per ASTM F 588 = Type A; Grade 10
- B. Conformance to H-HC50 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  1. Air Infiltration: maximum .07 cfm/ft of sash perimeter when tested per ASTM E 283-04 at a static air pressure difference of 6.2 psf.
  2. Water Penetration: no uncontrolled water leakage when tested per ASTM E 547-00 and ASTM E 331-00 at a static air pressure difference of 10.00 psf.
  3. Design Pressure: more than L/175 when tested per ASTM E 330 at a static air pressure difference of 50.00 psf.
  4. Uniform Structural: window to be operable, and maximum .4% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 75.00 psf.
  5. Forced entry resistance as per ASTM F 588 = Type A; Grade 10
- B. Thermal testing per AAMA 1502.7-81 at the prescribed 4'0" x 6'0" test size with the following test results:
  1. Condensation Resistance Factor: minimum 49 CRF.
  2. Thermal Transmittance: maximum 0.64 BTU/HR/SQ.FT/F U value.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURER

Champion 9500 H-AW-PG50 Double Hung Window

### 2.02 MATERIALS

- A. Aluminum extrusions: produced from commercial quality 6063-T5 alloy; free from defects impairing strength and durability.
- B. Hardware: Stainless steel sash pivot bars, Allen Key [Optional: tamper proof] tilt latches, spring-loaded for automatic jamb engagement when the sash is in the vertical position.
- C. Weatherstrip: secured in extruded ports; double rows on sash perimeters: one pile conforming to AAMA 701-04 in meeting rail, one EPDM bulb seal in bottom sash lift rail in contact with exterior frame sill, and pile conforming to AAMA 701-04 with polypropylene center fin in remaining locations.
- D. Balances: spiral conforming to AAMA 902-99 and of appropriate capacity to hold each sash stationary and permit it to operate freely; nylon balance shoes which lock in the tilted position to prevent sash travel.

### Series 9500 H-AW-PG50/HC50 Legend Double Hung Tilt-in Window

- E. Screens: One half screen held in exterior tracks with stainless steel leaf springs; 5/16" x 1 1/2" x .045" extruded tubular aluminum frame; corners mitered, gusset reinforced, and crimped; 18 x 16 dark fiberglass mesh; PVC spline.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two screws into integral screw ports. All sash corners shall be of coped and butt-type construction, neatly joined and secured by means of two screws anchored into an integral screw port at all horizontal member locations. Meeting rails of both sashes shall mechanically interlock in a closed position. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Intrigal Mullions: Used for multiples in one master frame. Hung/hung or Hung/fixed
- D. Glazing: The double hung aluminum windows shall be glazed with 7/8" dual sealed, structurally glazed insulated glass.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes. The finish is to be electrostatically-applied painted conforming to meet AAMA criteria.
- F. Frame equal leg [Optional: Extruded Flanges: Head, Sill and Jamb at 2 ½." ] [Optional: intrigal caulk return]

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
1. Thickness: 1/8" [Optional: 3/16" or 1/4" may be used, however design and structural performance may vary with thickness].
  2. Tint: clear. Optional: (Grey, Bronze, Green)
  3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Applied landmark grids can be used with ½" IG
- E. Seal durability: conformance to ASTM E 774; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 7/8" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603 [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603-02. [Optional: 2604-05, 2605-05]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM10C22A31 Class II #204 Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM10C22A44 Class I-.7 mils.
- B. Color: (#311 Light Bronze) (#312 Medium Bronze) (#313 Dark Bronze) (#315 Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

#### PART 3 – EXECUTION



## Series 9500 H-AW-PG50/HC50 Legend Double Hung Tilt-in Window

### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings are in accordance with approved shop drawings.

### 3.04 INSTALLATION

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal to metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-02 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 9500 Series

## 9510 Fixed Window



<u>Product By Operation:</u>	3-1/4" Fixed
<u>Model By Family:</u>	9500
<u>Product Description:</u>	Fixed Window
<u>Frame Depth:</u>	3 -1/4"
<u>Flange Frame Head Options:</u>	2-1/2"
<u>Flange Frame Jamb Options:</u>	2-1/2"
<u>Flange Frame Sill Options:</u>	2-1/2"
<u>101/I.S.2/A440-05 Rating:</u>	FW-HC70
<u>AAMA Test Size:</u>	60 x 71
<u>101/I.S.2/A440-05 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	7/8" Ins
<u>Optional Glazing:</u>	7/8" Panel

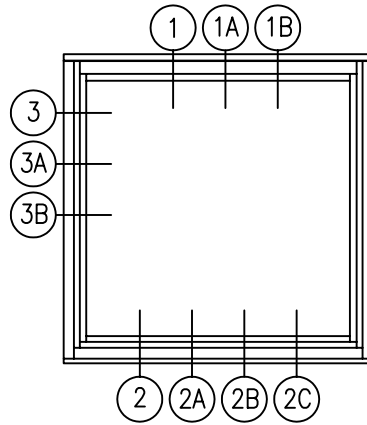


### Performance Data

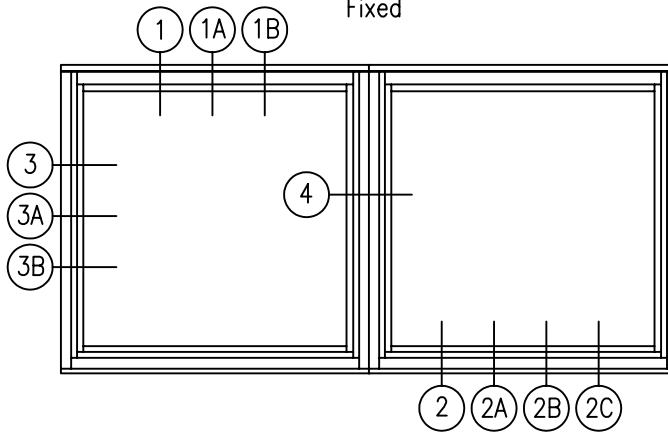


AAMA RATING:	FW-HC70
AIR INFILTRATION @ 50 mph	0.06 CFM
WATER TEST PRESSURE	10.66 PSF
STRUCTURAL LOAD	105.33 PSF
DESIGN PRESSURE	70.22 PSF

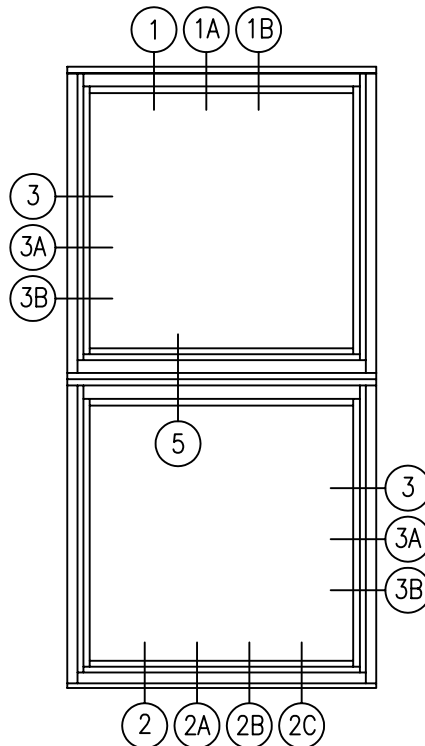
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Fixed



Fixed/Fixed  
With H Mullion

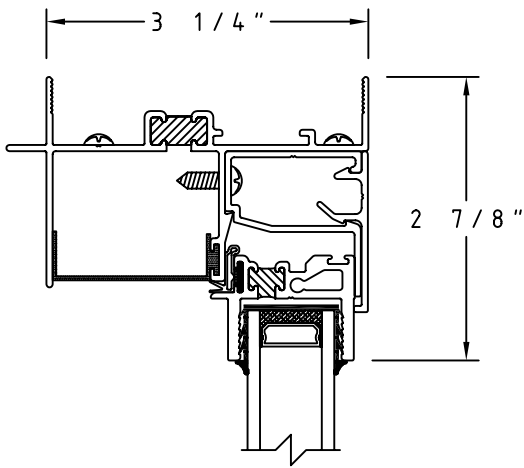


Fixed Over Fixed  
With H Mullion

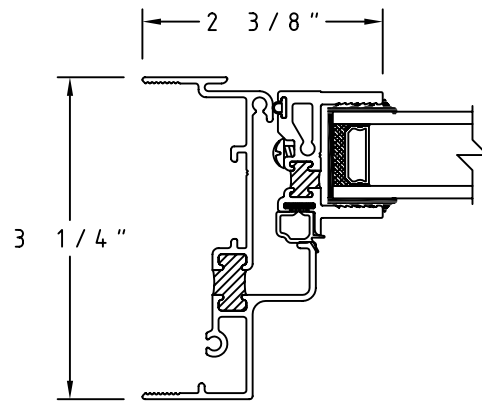
All Elevations are viewed outside looking IN.



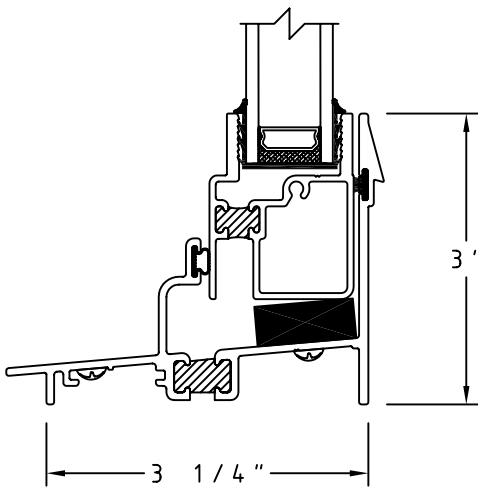
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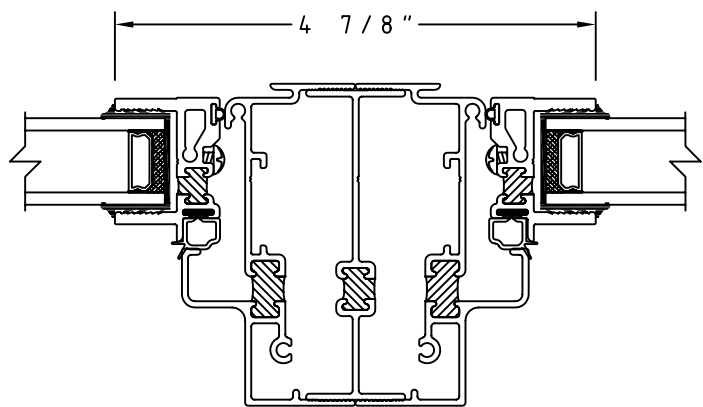
① Fixed Head Detail



③ Fixed Jamb Detail

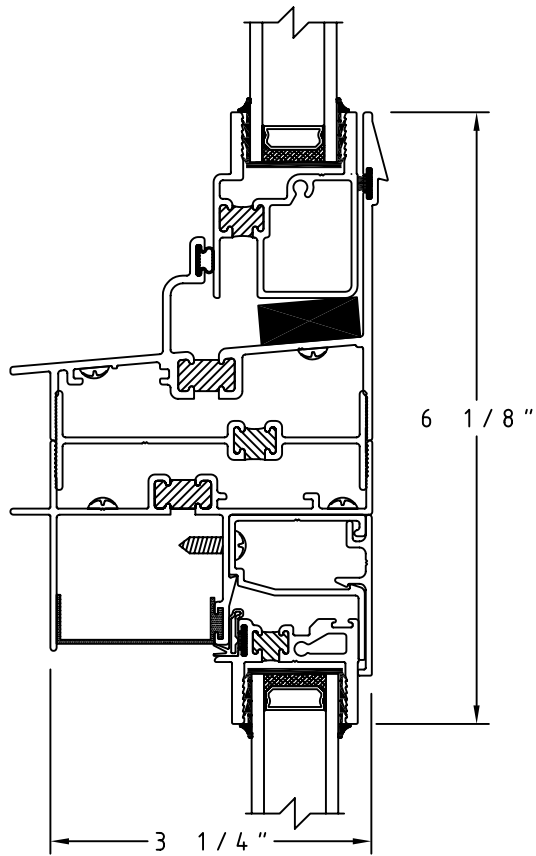


② Fixed Low Sill Detail

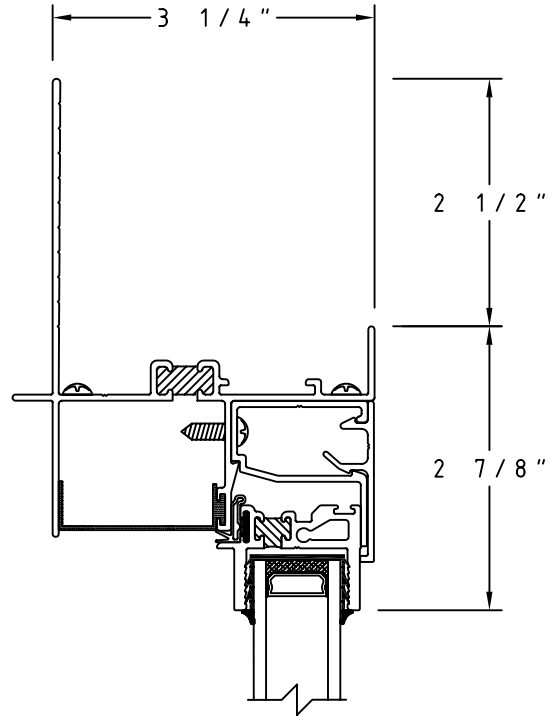


④ Fixed/Fixed Vertical H Mullion Detail

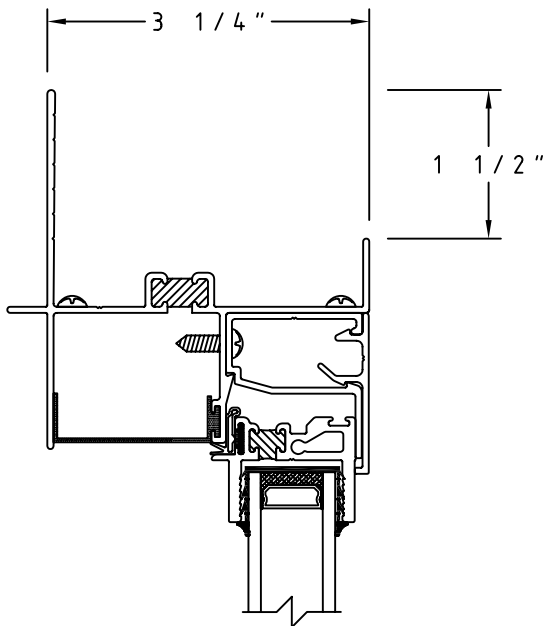
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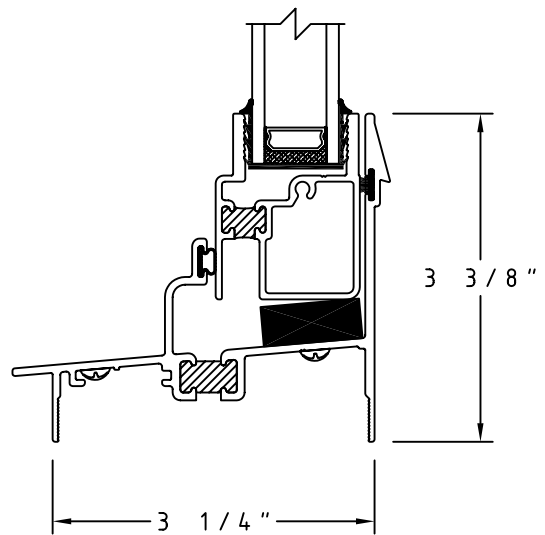
⑤ Fixed/Fixed Horizontal H Mullion Detail



①B 2 1/2" Flange Frame Fixed Head Detail

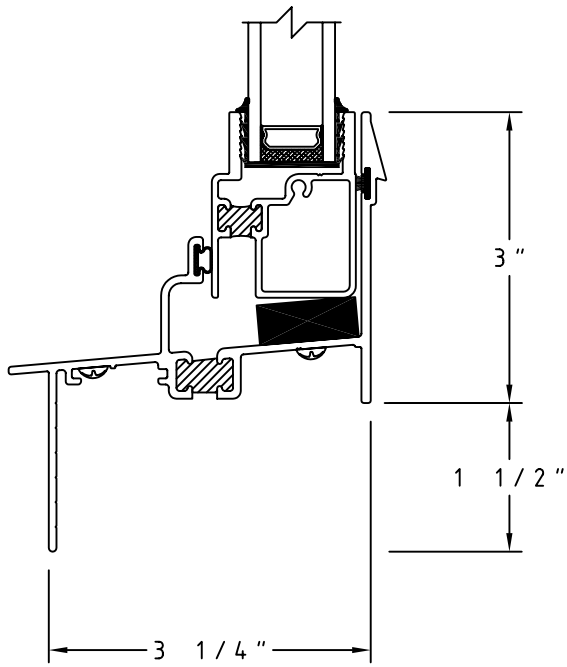


①A 1 1/2" Flange Frame Fixed Head Detail

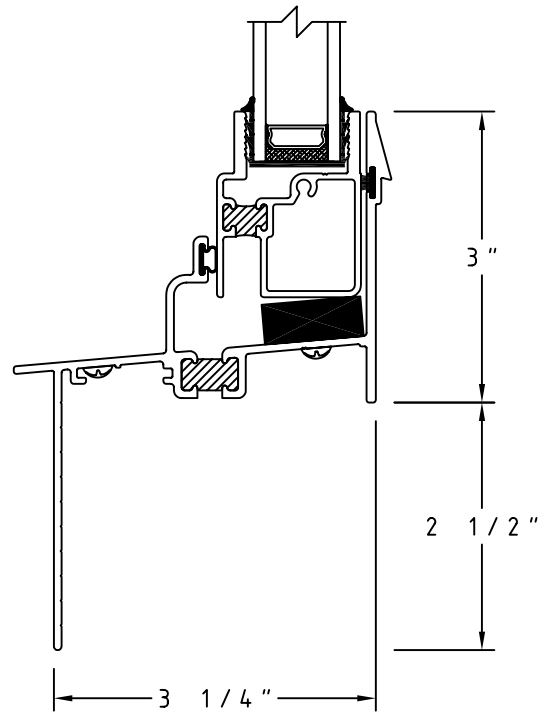


②A Fixed High Sill Detail

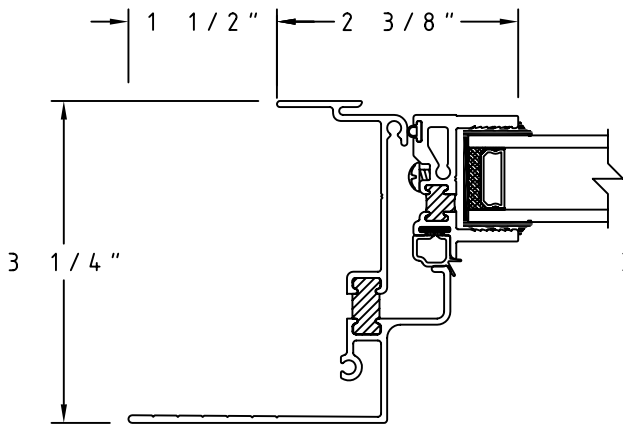
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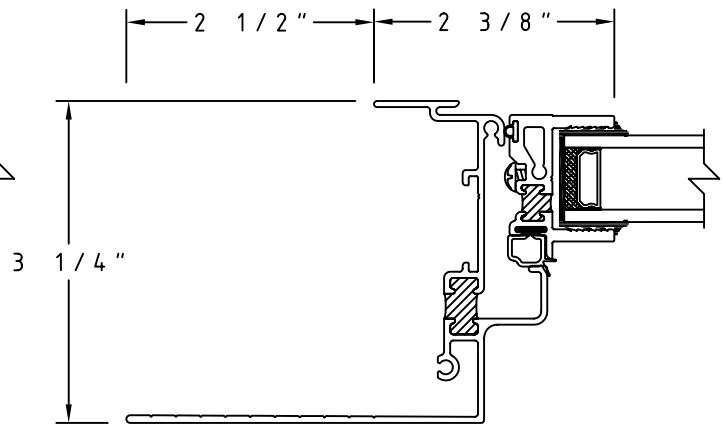
2B 1 1/2" Flange Frame Fixed Sill Detail



2C 2 1/2" Flange Frame Fixed Sill Detail



3A 1 1/2" Flange Frame Fixed Jamb Detail



3B 2 1/2" Flange Frame Fixed Jamb Detail



**hampion**  
WINDOW AND DOOR  
Series 9510 FW-HC70 Fixed Window

SECTION 085113

**PART 1 - GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the window project as shown on the architectural drawings and as specified in 085113 and other related sections.
- B. Renovation Projects: Removal of existing windows, sash, or vents as required by the project documents.
- C. New Construction Projects: Position the new windows and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum windows and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI - Canadian Standards Association  
WDMA - Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.

**Section 085113 Aluminum Windows**



### Series 9510 FW-HC70 Fixed Window

- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: FW-HC70.
- B. Windows: 3 1/4" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and fixed sash members; equal-leg frame; [Optional: flange frame] finish factory-applied; frames and fixed sash factory-assembled. Fixed sash inserted into master frame and anchored via clips and trim set.
- C. Configuration: Fixed Window.
- D. Glazing: 7/8" insulating glass units; black reusable flexible PVC channel gasket with weep holes; glass and panel descriptions in paragraph 2.04; factory-glazed.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to FW-HC70 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 71" minimum test size with the following test results:
  - 1. Air Infiltration: 0.30 cfm/ft<sup>2</sup> of sash perimeter when tested per ASTM E 283 at a static air pressure difference of 6.27 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage at a static pressure of 10.66 psf.
  - 3. Uniform Deflection: <0.25 mm when tested per ASTM E 330 at a static air pressure difference of 70.22 psf.
  - 4. Uniform Structural: Window to be fixed, and maximum .4% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 105.33 psf.
  - 5. Forced entry resistance as per ASTM F 588 = Type D; Grade 40

### PART 2 – PRODUCTS

#### 2.01 APPROVED MANUFACTURER

Champion 9510 FW-HC70 Fixed Window

#### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Window Members: Fixed frame shall have a nominal wall thickness of not less than 0.062 inch.
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- D. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed in specially extruded ports and secured to prevent movement and shrinkage. Adhered weather-stripping shall not be allowed.

#### 2.03 FABRICATION

- A. Assembly: The windows shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All joints of main frames shall be coped and of butt type construction, neatly joined and secured by means of two (2) screws into integral screw ports. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Glazing: The fixed aluminum windows shall be glazed with 7/8" sealed insulated glass.

### Section 085113 Aluminum Windows



### Series 9510 FW-HC70 Fixed Window

- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes.
- F. Frame equal leg [Optional: Extruded Flanges: Head, Sill and Jamb at 2 ½."]

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone or a single seal with hot melt butyl. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 3/16" [Optional: 1/8" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 3/16" [Optional: 1/8" or 1/4" may be used, however design and structural performance may vary with thickness].
  - 2. Tint: clear. Optional: (Grey, Bronze, Green)
  - 3. Type: Annealed Optional: (Heat Strengthened, Tempered)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Seal durability: conformance to ASTM E 774-00; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 7/8" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. Options: (Other panel, Spandrel Glass, etc)

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports, as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all window openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

## Section 085113 Aluminum Windows



**hampion**  
W I N D O W   A N D   D O O R  
Series 9510 FW-HC70 Fixed Window

**3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing window openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

**3.04 INSTALLATION**

- A. Install all of the Aluminum windows and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All window openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the window frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal-to-metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

**3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing windows and debris generated from the installation of the new windows.

**3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-90 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

**3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the window.

END OF SECTION 085113

# 400 Series

## 400 Terrace Door



<u>Product By Operation:</u>	4-1/2" Box Door
<u>Model By Family:</u>	400
<u>Product Description:</u>	Box Frame Door
<u>Frame Depth:</u>	4-1/2"
<u>Flange Frame Head Options:</u>	~
<u>Flange Frame Jamb Options:</u>	~
<u>Flange Frame Sill Options:</u>	~
<u>101/I.S.2/A440-08 Rating:</u>	ATW-AW-PG75
<u>AAMA Test Size:</u>	48 x 96
<u>101/I.S.2/A440-08 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins
<u>Optional Glazing:</u>	~



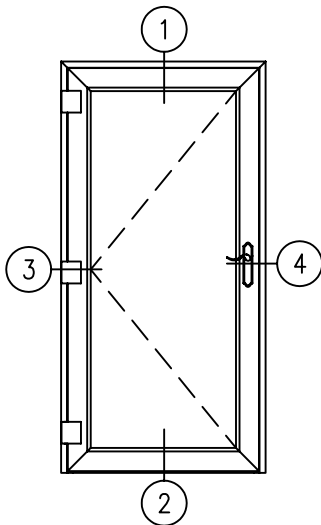
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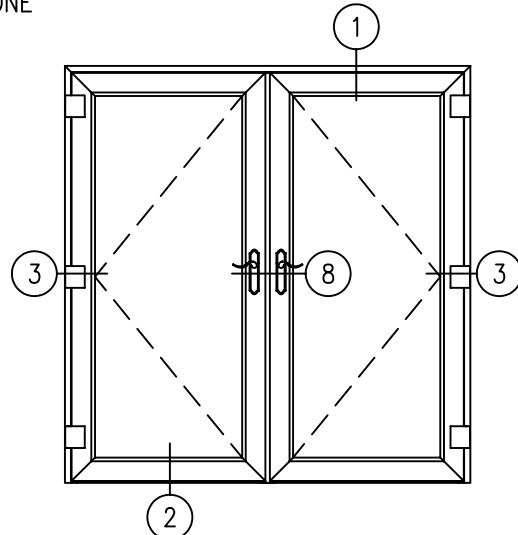
AAMA RATING:	ATW-AW-PG75
AIR INFILTRATION @ 50 mph	0.09 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	112.85 PSF
DESIGN PRESSURE	90.28 PSF



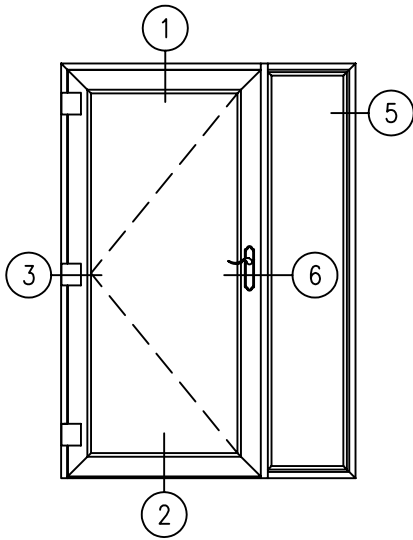
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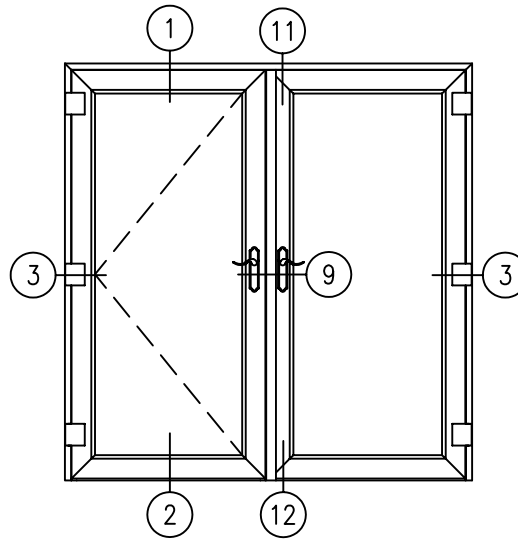
Door



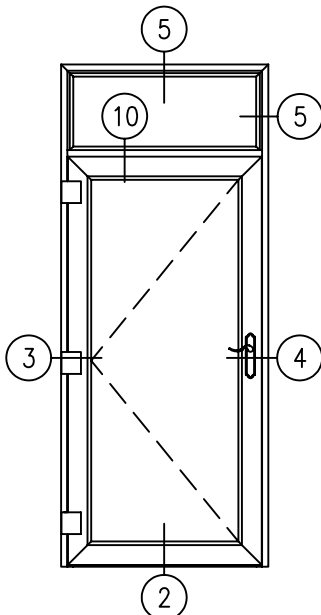
Double Door with Center Post



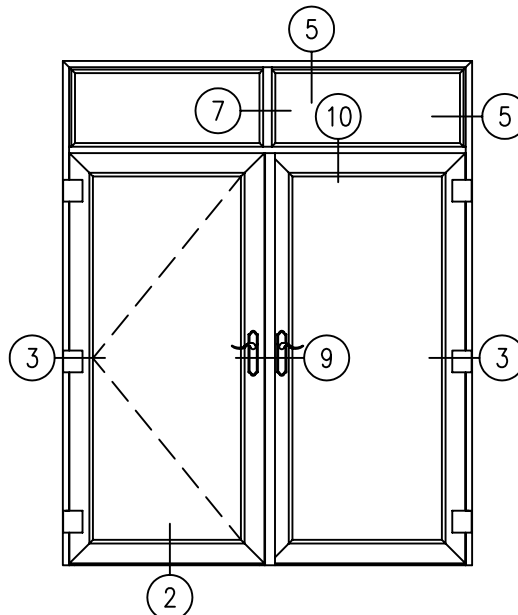
Door with Side-Lite



Door with Stationary Panel



Door with Transom

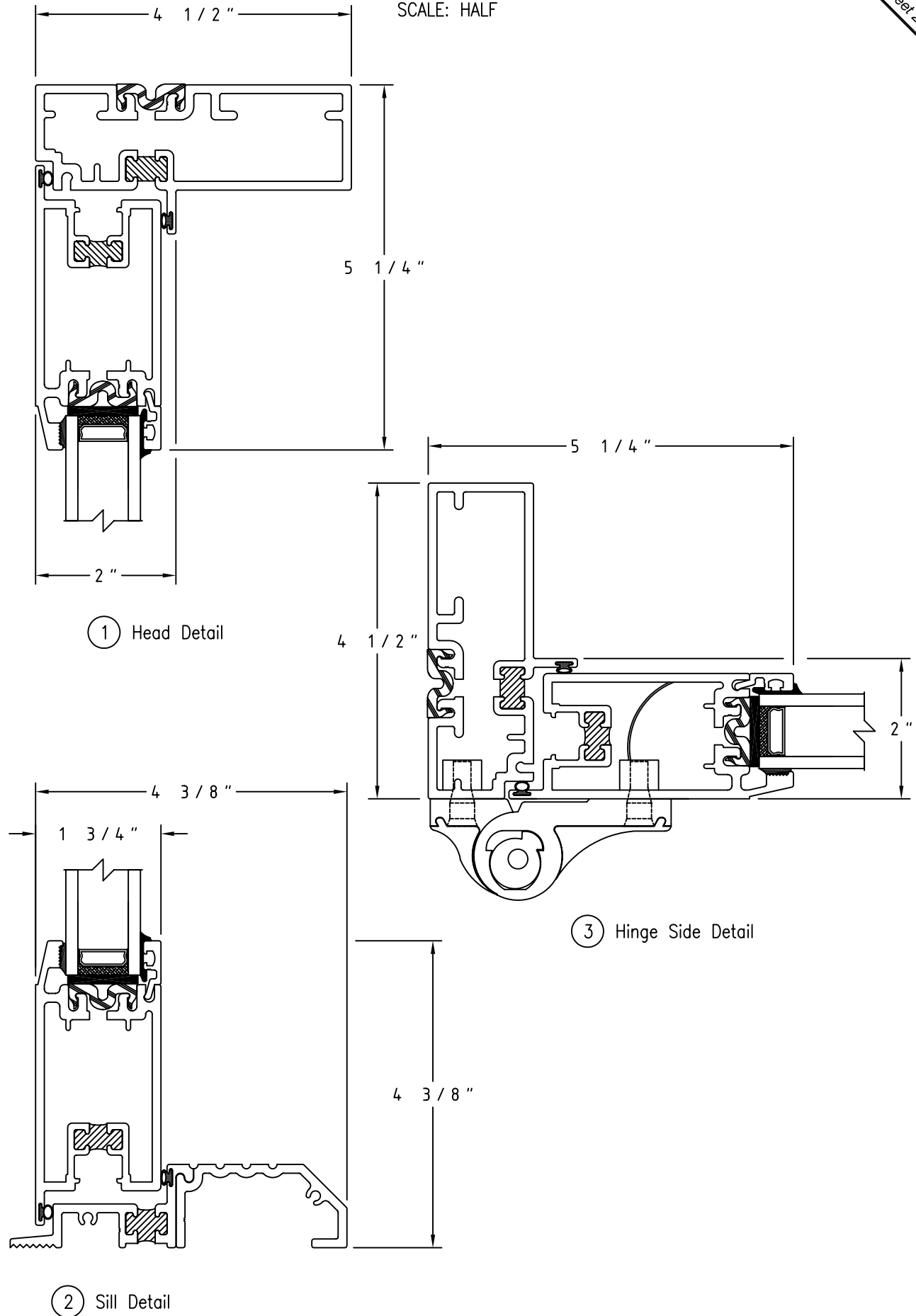


Door with Stationary Panel and Transom

All Elevations are viewed outside looking IN.

# Champion Series 400

SCALE: HALF

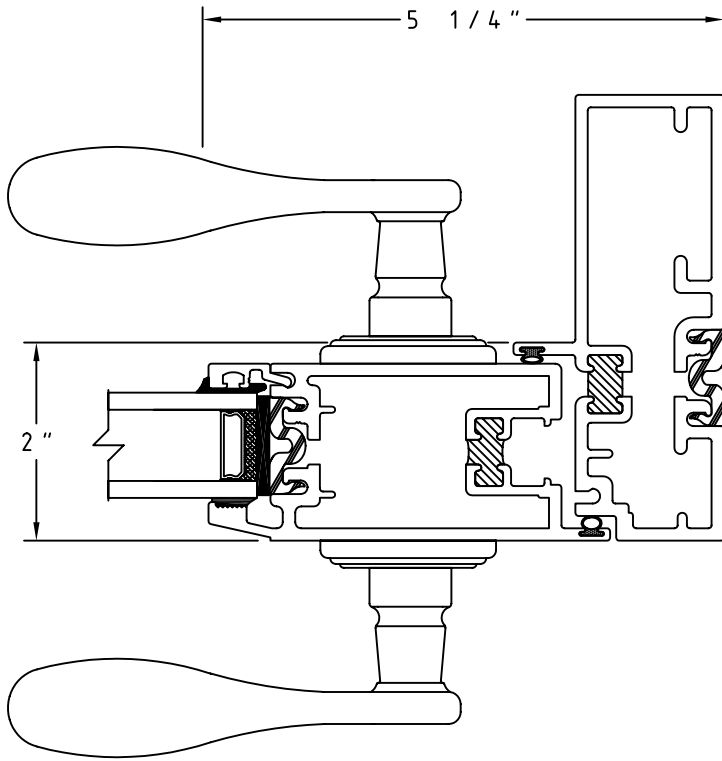


① Head Detail

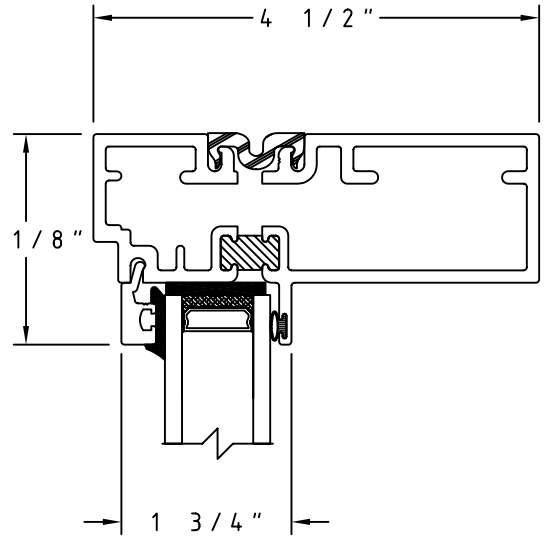
③ Hinge Side Detail

② Sill Detail

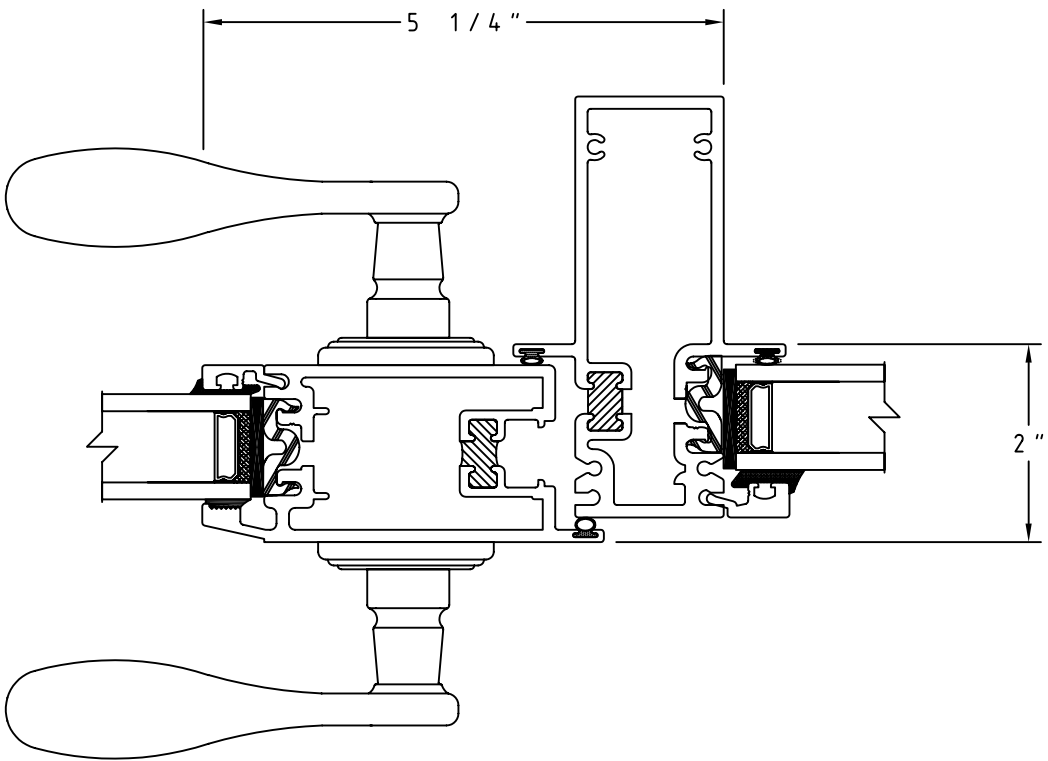
SCALE: HALF



④ Handle Side Detail

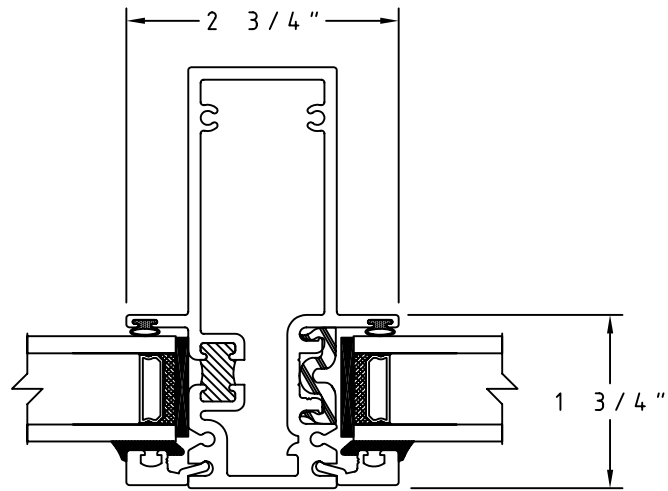


⑤ Transom Head and Jamb Detail

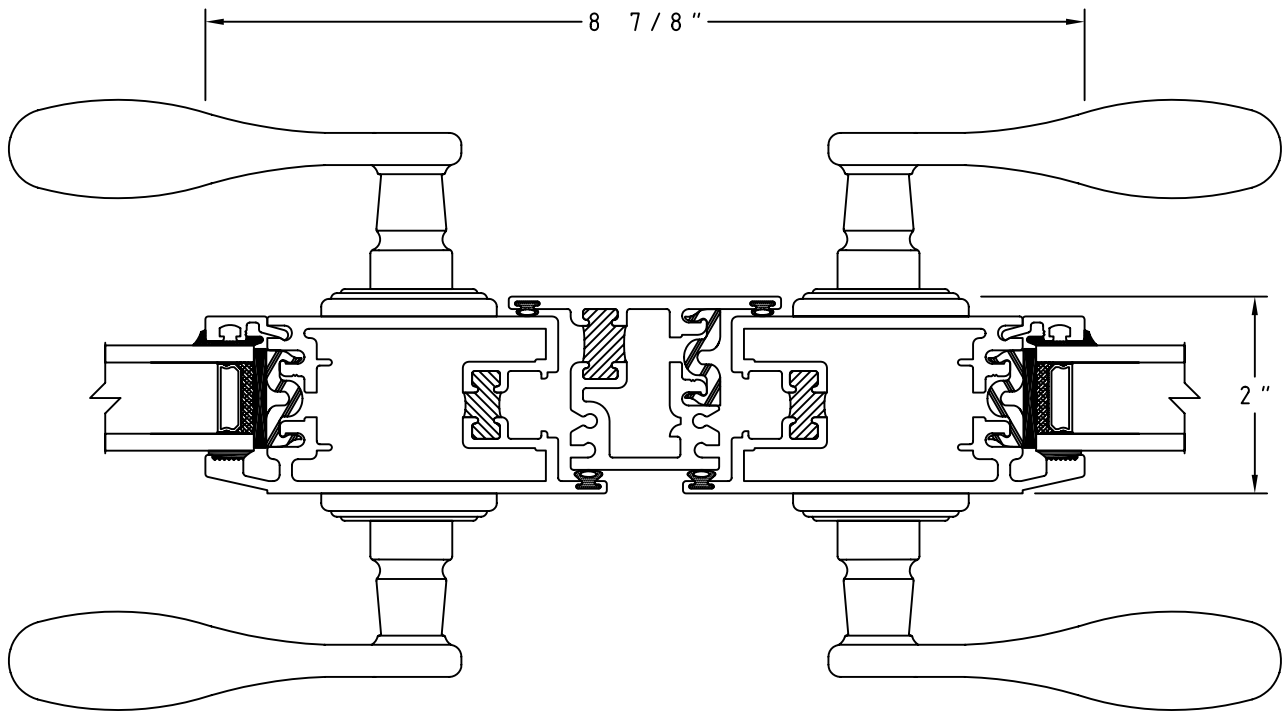


⑥ Door/Side-Lite Mullion Detail

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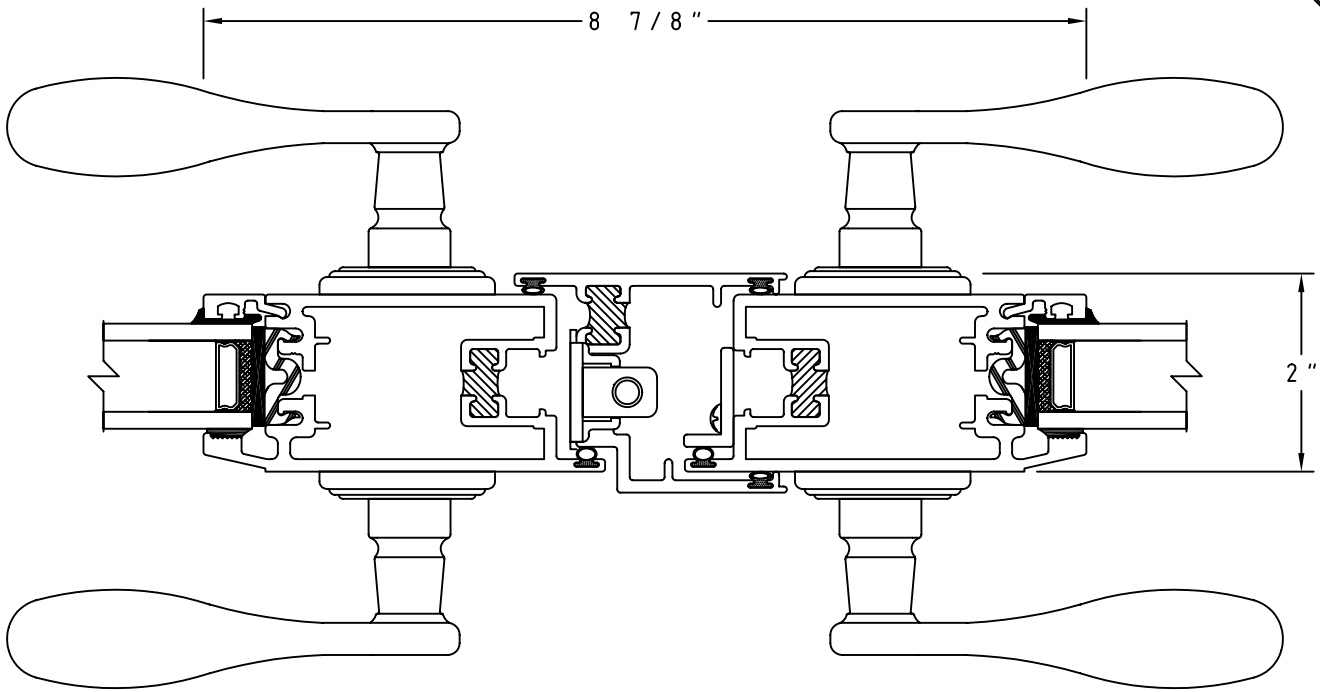


⑦ Transom/Transom Vertical Mullion Detail

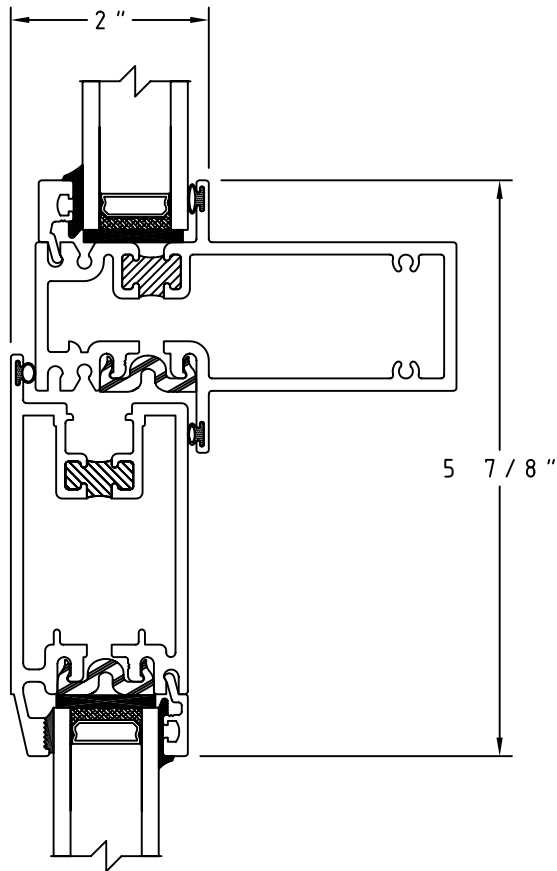


⑧ Double Door Center Post Detail

SCALE: HALF

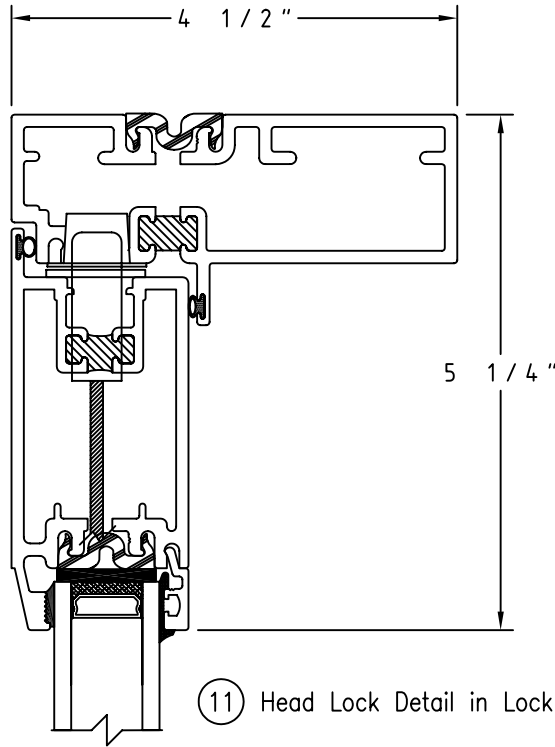


9 Door with Stationary Panel Detail (Non-Stationary)

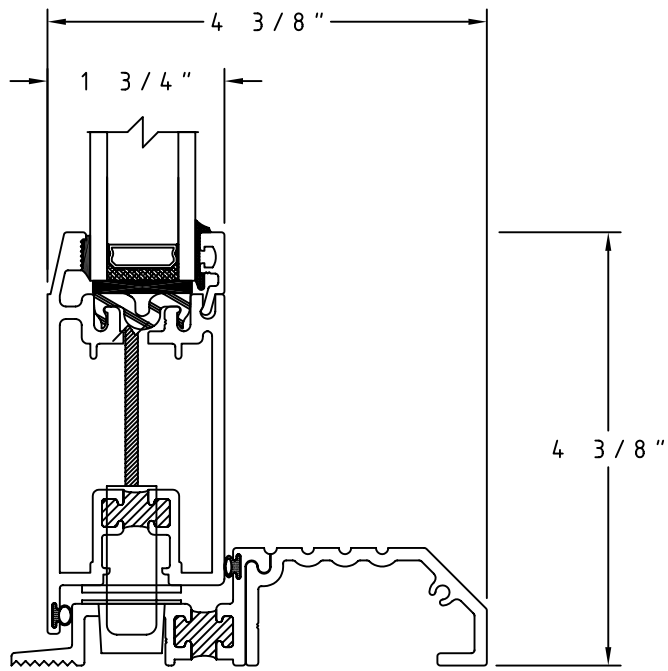


10 Transom above Door Detail

SCALE: HALF



⑪ Head Lock Detail in Lock Position



⑫ Sill Lock Detail in Lock Position



## Series 400 ATW-AW-PG75 Box Frame Hinged Glass Door

### SECTION 081316

#### PART 1 – GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the hinged glass door project as shown on the architectural drawings and as specified in 081316 and other related sections.
- B. Renovation Projects: Removal of existing doors or vents as required by the project documents.
- C. New Construction Projects: Position the new doors and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum hinged doors and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2603-05 "Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 2605-05 "Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701&702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
ANSI - American National Standards Institute  
ANSI/AAMA/WDMA/CSA 101/I.S.2-97 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size will be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size will be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports should be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification, the manufacturer should be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).

## Section 081316 Aluminum Hinged Glass Doors



## Series 400 ATW-AW-PG75 Box Frame Hinged Glass Door

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY 11791. All other bids must pre-qualify for their products.

### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-08 should be less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: ATW-AW-PG75
- B. Door: 4 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; equal-leg frame; finish factory-applied; frames and sash factory-assembled.
- C. Configuration: Hinged Glass Door [Optional: door panel, transom and sidelite frames factory-assembled and factory-glazed configurations can be either field or factory muller together.] All doors are pre-hung single [Optional French double door panel in door frame; out-swing]; [Optional right hand indicates hinges on left jamb when outside looking in] [Optional left hand indicates hinges on right jamb when outside looking in].
- D. Glazing: 1" insulating glass units; glass and panel descriptions in paragraph 2.04; factory-glazed..

### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to ATW-AW-PG75 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-08 when tests are performed on the prescribed 48" x 96" minimum test size with the following test results:
  - 1. Air Infiltration: The window should be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.09 cfm/ft<sup>2</sup> when tested at a static air pressure difference of 6.24 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Uniform Structural: maximum of .4% deformation per member in accordance with ASTM E 330 at 112.85 psf.
  - 4. Forced entry resistance as per ASTM F 588 = Pass.

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURER

Champion 400 ATW-AW-PG75

### 2.02 MATERIALS

- A. Aluminum: Aluminum should be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections should be of 6063-T5 or 6063-T6 and should have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Door Members: Fixed frames should have a nominal wall thickness of not less than 0.125".
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product should be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, should be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, should be in accordance with ASTM B 456.
- D. Hardware: Hardware having component parts which are exposed should be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, should be in accordance with ASTM A 165 or B 633. Nickel chrome-plated steel, where used, should be in accordance with ASTM B 456. Hinged doors should have a three point locking mechanism and thumb turn interior locking mechanism. Handle and base plate should be brushed a silver finish. [Optional finishes available upon request.]
- E. Weather-stripping: Weather-stripping should meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping should be installed in specially extruded ports and secured to prevent movement and shrinkage. Adhered weather-stripping should not be allowed.

### 2.03 FABRICATION

- A. Assembly: The hinged glass doors should be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All corners at the head are to be mitered, keyed, staked and sealed with seam sealer. All main framing joints should be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators should be thermally broken by the poured and debridged method. The thermal barrier material should be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.

## Section 081316 Aluminum Hinged Glass Doors





## Series 400 ATW-AW-PG75 Box Frame Hinged Glass Door

- C. Mullions: Mullions should be provided as indicated on the drawings and should be of the same size and type to ensure the structural integrity of the proposed hinged glass door system.
- D. Glazing: The hinged glass doors and fixed areas should be glazed with 1" sealed insulated tempered 3/16" safety glazing.
- E. Finish: The exposed surfaces of the aluminum members should be clean and free from serious surface blemishes.
- F. Frame Style: Box frame with closed back thermally broken.

### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All aluminum spacers will be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. The 1" I.G. unit should contain desiccant filled into the aluminum spacer. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 3/16" [Optional: varying glass thickness based upon project requirements]
  - 2. Tint: clear Optional: (Grey, Bronze and Green)
  - 3. Type: Tempered Optional: (Laminated)
  - 4. Coating: Optional: (Pyrolytic Low-E on #2 surface)
- C. Interior glass lite
  - 1. Thickness: 3/16" [Optional: varying glass thickness based upon project requirements]
  - 2. Tint: clear Optional: (Grey, Bronze and Green)
  - 3. Type: Tempered Optional: (Laminated)
  - 4. Coating: Optional: (Pyrolytic Low-E on #3 surface)
- D. Performance
  - 1. Seal durability: Performance to ASTM E 774-00; visible ALI certification for CBA rating level.

### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" insulated panel with 1/8" hardboard backups and smooth aluminum skin on the interior and exterior. Core will be polystyrene. Options: (Other panel, Spandrel Glass, etc.)

### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL]
- C. Quality standard: conforming to AAMA 2603. [Optional: 2604, 2605]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [Optional: 1.4 mil Acranar, 1.2 mils Duranar] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [Optional: custom color to be selected.]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows.
- B. [Optional: Provide A/C sleeves by a designated manufacturer. Include manufacturer's name and model number.]

## PART 3 – EXECUTION

### 3.01 PROJECT SUBMITTALS

Provide project submittals for the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all door openings, typical unit elevations and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

### 3.02 DELIVERY, STORAGE AND HANDLING

## Section 081316 Aluminum Hinged Glass Doors



## Series 400 ATW-AW-PG75 Box Frame Hinged Glass Door

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities and other hazards until the project is complete.

### 3.03 PROJECT SITE INSPECTION

- A. Field verify that the existing door openings are within tolerance, plumb, level, clean and provide a solid anchoring surface and substrate. Also confirm that the openings are in accordance with approved shop drawings.

### 3.04 INSTALLATION

- A. Install all of the aluminum doors and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents and approved shop drawings.
- B. All door openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the door frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal-to-metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing doors and debris generated from the installation of the new doors.

### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in performance with AAMA publication number 502-90 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents and hardware after installation as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the door.

END OF SECTION 081316



**Series 410 FW-AW65 Box Frame Fixed Door Panel**  
SECTION 081316

**PART 1 – GENERAL**

**1.01 GENERAL SCOPE**

- A. Furnish all labor, materials, tools and equipment required to complete the fixed glass door project as shown on the architectural drawings and as specified in 081316 and other related sections.
- B. Renovation Projects: Removal of existing doors, or fixed lights as required by the project documents.
- C. New Construction Projects: Position the new fixed door lights and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum fixed door lights and all additional components and systems as required by this specification and the architectural drawings.

**1.02 INDUSTRY REFERENCES**

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701/702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI – Canadian Standards Association  
WDMA – Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101//S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

**1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION**

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

**1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION**

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

**1.05 RELATED SECTIONS**

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

**1.06 QUALITY ASSURANCE**

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).

**Section 081316 Aluminum Doors**



### Series 410 FW-AW65 Box Frame Fixed Door Panel

- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

#### 1.07 PRE-QUALIFICATION

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-05, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

#### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: FW-AW65
- B. Fixed Door Panel: 4 1/2" frame depth; extruded aluminum with integral structural polyurethane thermal break in the frame and sash members; box frame lite: finish factory-applied; frames and sash factory-assembled.
- C. Configuration: Fixed Door Panel, [Optional: door panel, transom, and sidelite frames factory-assembled, factory-glazed, configurations can be either field or factory mullied together.]
- D. Glazing: 1" insulating tempered 3/16" glass as required by code [Optional: Laminated safety] in both lites.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to FW-AW65 specifications in AAMA/WDMA/CSA 101/I.S.2/A440-05 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:
  - 1. Air Infiltration: The window should be subjected to an air infiltration test in accordance with ASTM E 283. Air infiltration shall not exceed 0.01 cfm/ft<sup>2</sup> when tested at a static air pressure difference of 6.2 psf.
  - 2. Water Penetration: The window shall be subjected to a water resistance test in accordance with ASTM E 331 and ASTM E 547. There shall be no leakage at a static pressure of 12.12 psf.
  - 3. Design Pressure: Design pressure when tested per ASTM E 330 of 90.28 psf.
  - 4. Uniform Structural: Door Panel to be fixed, and maximum .4% permanent deformation per member when tested per ASTM E 330 at a static air pressure difference of 97.81 psf.
  - 5. Forced entry resistance as per ASTM F 588 = Type D: Grade 40

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURER

Champion 410 FW-AW65

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for door construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Door Members: Box frame shall have a nominal wall thickness of not less than 0.125 inch.
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- C. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel or other non-corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel chrome-plated steel, where used, shall be in accordance with ASTM B 456
- D. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed in specially extruded ports and secured to prevent movement and shrinkage. Adhered weather-stripping shall not be allowed.

### 2.03 FABRICATION

- A. Assembly: The fixed door panel shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All corners are to be mitered, keyed, staked and sealed with seam sealer. All frame joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Mullions: Mullions shall be provided as indicated on the drawings and shall be of the size and type to insure the structural integrity of the proposed hinged glass door system.
- D. Glazing: The fixed glass door panels shall be glazed with 1" sealed insulated tempered 3/16" glass when codes require safety glazing.

## Section 081316 Aluminum Doors

### Series 410 FW-AW65 Box Frame Fixed Door Panel

- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes.
- F. Frame style: Box frame with closed back thermally broken.

#### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All stainless steel spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 1/4" **Optional: (3/16")**
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Tempered **Optional: (Laminated)**
  - 4. Coating: **Optional: (Pyrolytic Low-E 270 on #2 surface)**
- C. Interior glass lite
  - 1. Thickness: 1/4" **Optional: (3/16")**
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Tempered **Optional: (Laminated)**
  - 4. Coating: **Optional: (Pyrolytic Low-E 270 on #3 surface)**
- D. Performance
  - 1. Seal durability: conformance to ASTM E 774; visible ALI certification for CBA rating level.

#### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with 1/8" thermolite backups and stucco Aluminum Skin on the interior and exterior. Core to be polystyrene. **Options: (Other panel, Spandrel Glass, etc)**

#### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [**Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL**]
- C. Quality standard: conforming to AAMA 2603. [**Optional: 2604, 2605**]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [**Optional: 1.4 mil Acranar, 1.2 mils Duranar**] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [**Optional: custom color to be selected.**]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

#### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [**Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.**]

### PART 3 – EXECUTION

#### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports, as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all door openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

#### 3.02 DELIVERY, STORAGE, AND HANDLING



### **Series 410 FW-AW65 Box Frame Fixed Door Panel**

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

#### **3.03 PROJECT SITE INSPECTION**

- A. Field verify that the existing door openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

#### **3.04 INSTALLATION**

- A. Install all of the Aluminum doors and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All door openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the door frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal-to-metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

#### **3.05 DISPOSAL OF DEBRIS**

- A. Remove all garbage off site and legally dispose of existing doors and debris generated from the installation of the new doors.

#### **3.06 OPTIONAL FIELD TESTING**

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

#### **3.07 ADJUSTMENT AND CLEAN UP**

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the door.

END OF SECTION 081316

# 500 Series

## 500 Terrace Door



<u>Product By Operation:</u>	2" Flange Door
<u>Model By Family:</u>	500
<u>Product Description:</u>	Flange Frame Door
<u>Frame Depth:</u>	2"
<u>Flange Frame Head Options:</u>	1-7/8"
<u>Flange Frame Jamb Options:</u>	1-7/8"
<u>Flange Frame Sill Options:</u>	~
<u>101/I.S.2/A440-08 Rating:</u>	ATW-AW-PG60
<u>AAMA Test Size:</u>	48 x 96
<u>101/I.S.2/A440-08 Optional:</u>	~
<u>Optional Test Size:</u>	~
<u>Cut Size On W&amp;H:</u>	1/8"
<u>Std. Glazing:</u>	1" Ins
<u>Optional Glazing:</u>	~



### Performance Data

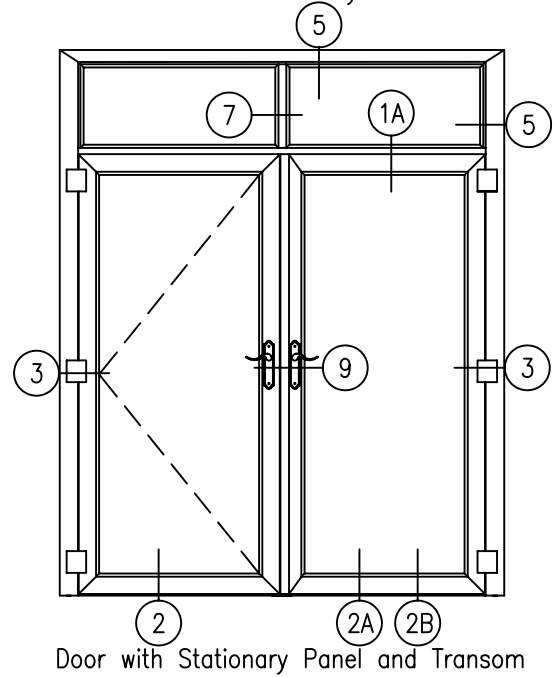
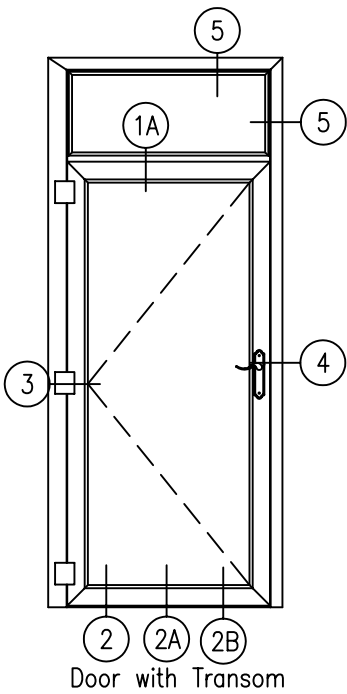
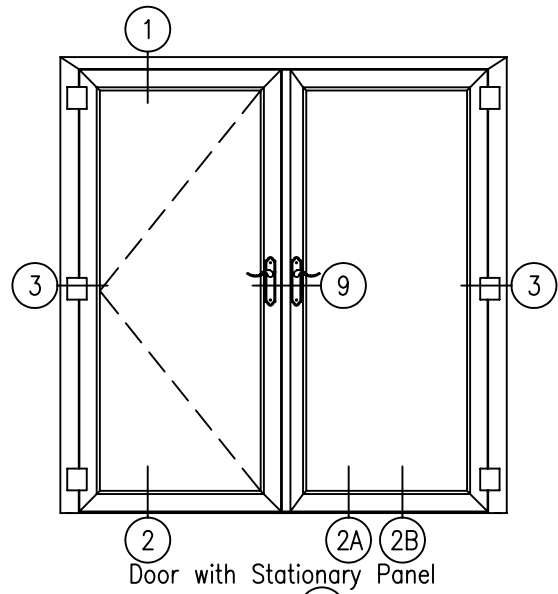
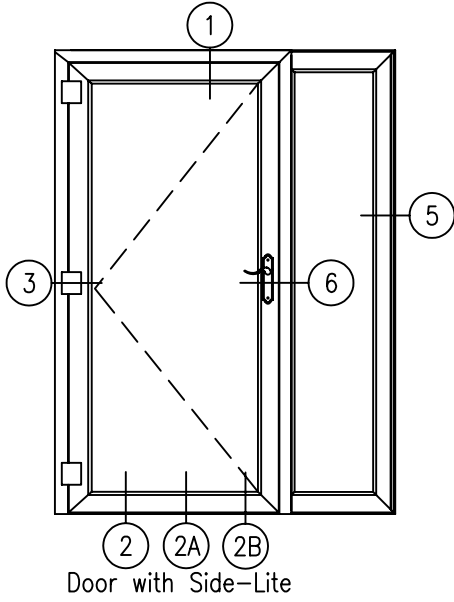
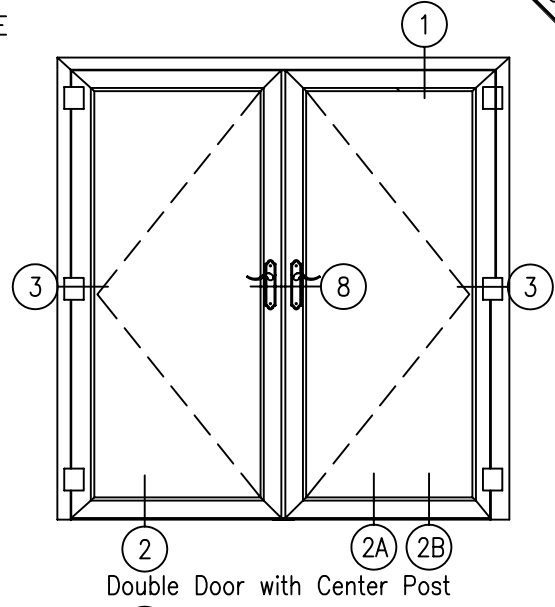
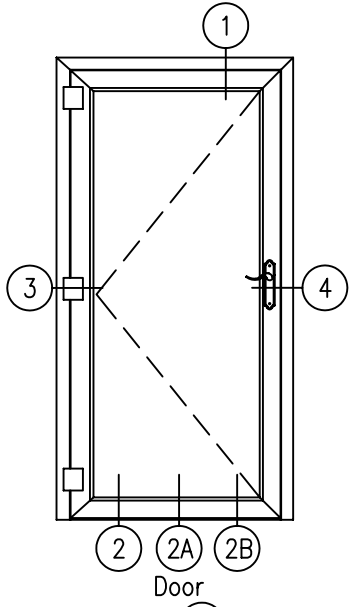


AAMA RATING:	ATW-AW-PG60
AIR INFILTRATION @ 50 mph	0.08 CFM
WATER TEST PRESSURE	12.12 PSF
STRUCTURAL LOAD	90.28 PSF
DESIGN PRESSURE	60.19 PSF

# Champion Series 500

SCALE: NONE

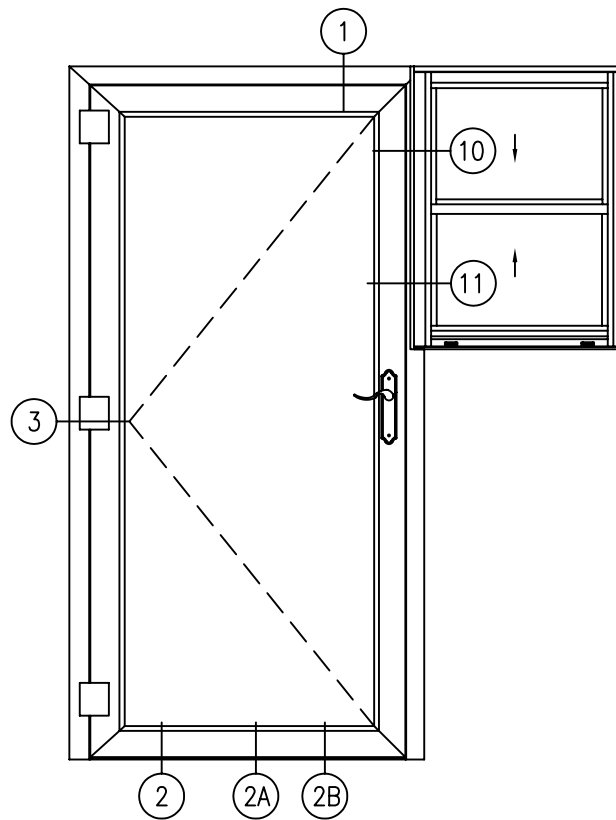
Sheet 1 of 8



All Elevations are viewed outside looking IN.

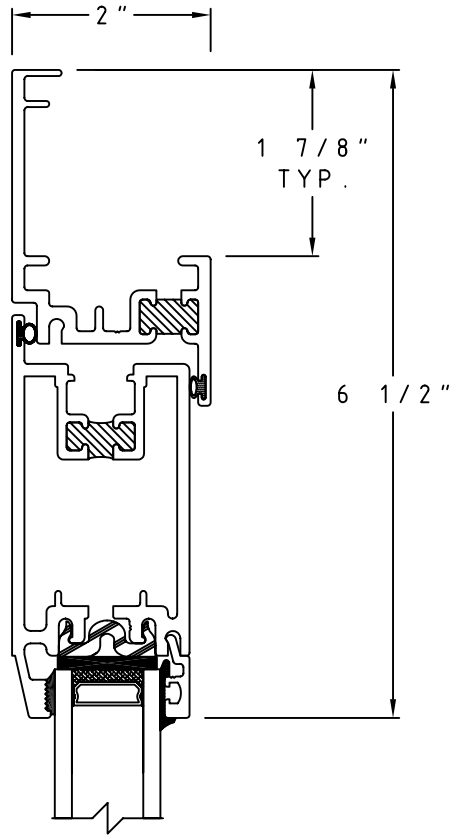
Champion Series 500



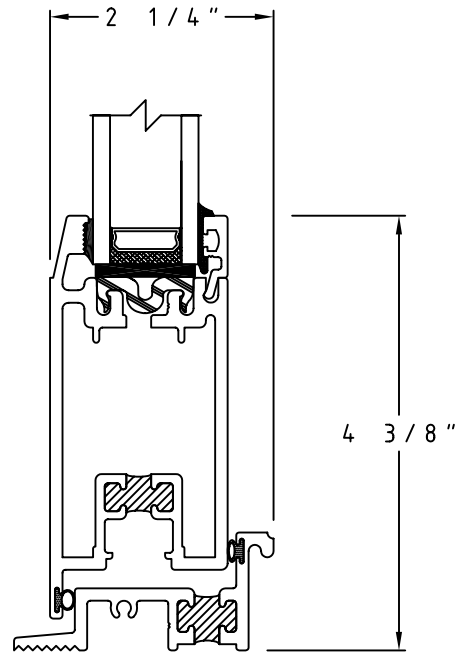


Door/Window with Transition Mullion

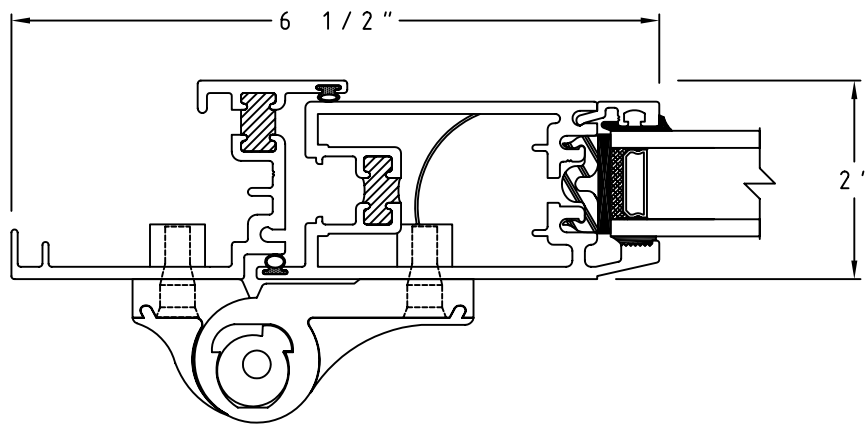
SCALE: HALF



① Head Detail

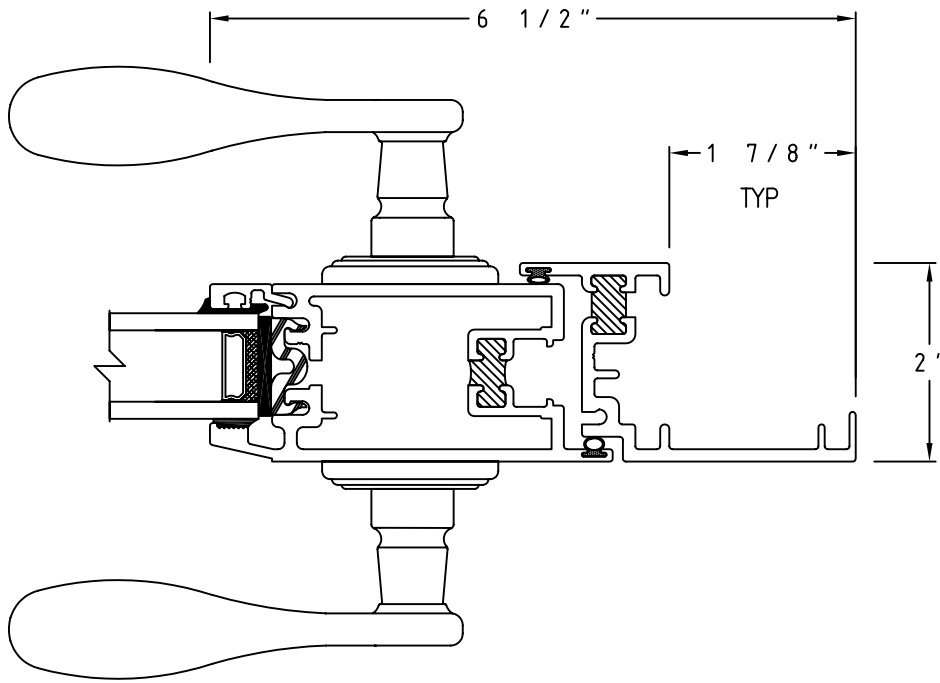


② Sill Detail

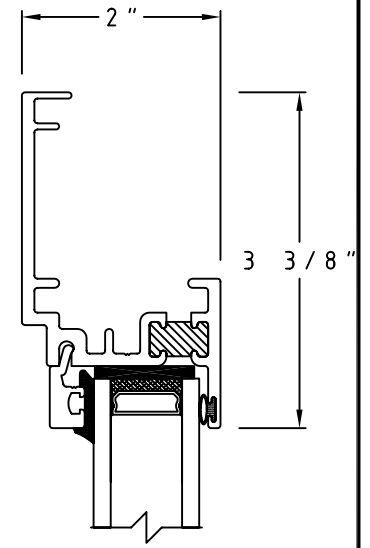


③ Left Hinge Side Jamb Detail

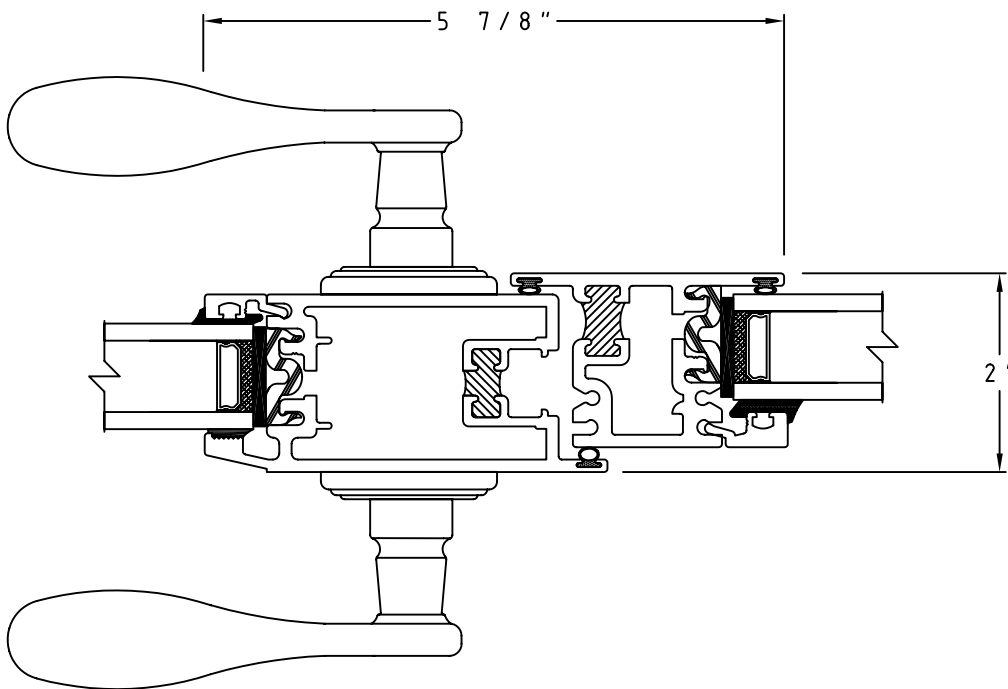
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④ Handle Side Jamb Detail

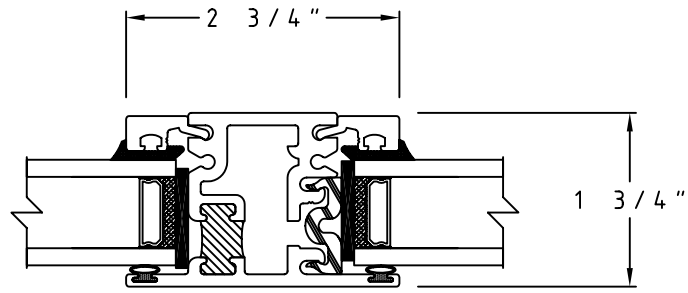


⑤ Transom Head and Jamb Detail

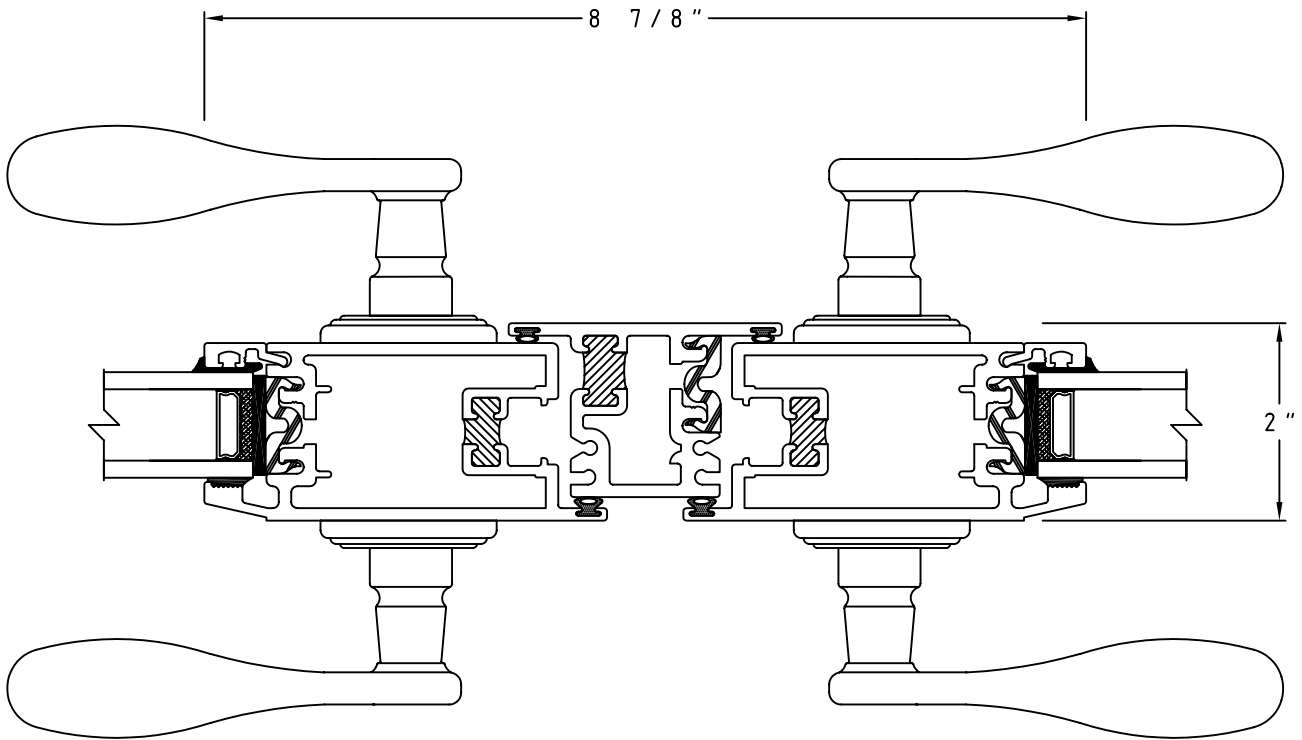


⑥ Door/Side-Lite Jamb Detail

SCALE: HALF

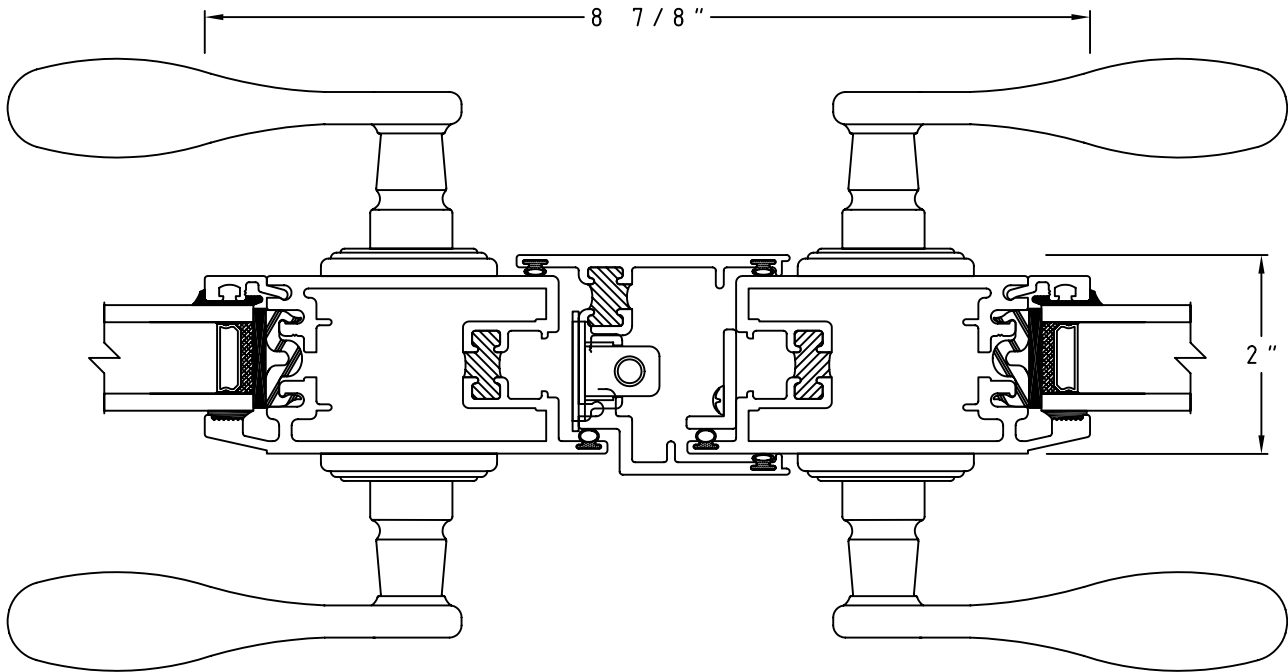


⑦ Transom/Transom Vertical Mullion Detail

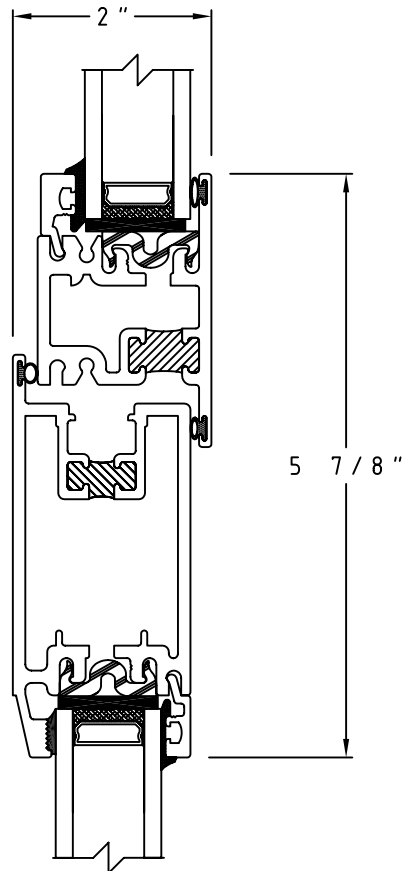


⑧ Double Door Center Post Detail

SCALE: HALF

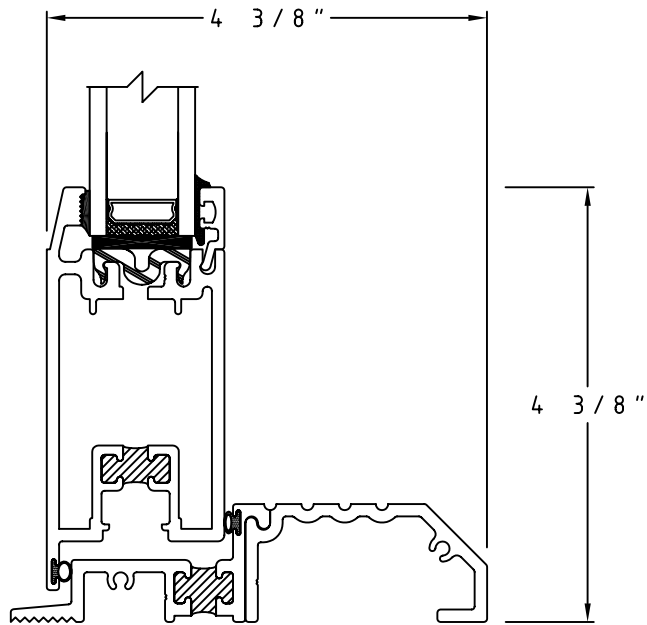


9 Door with Stationary Panel Detail  
(No Center Post)

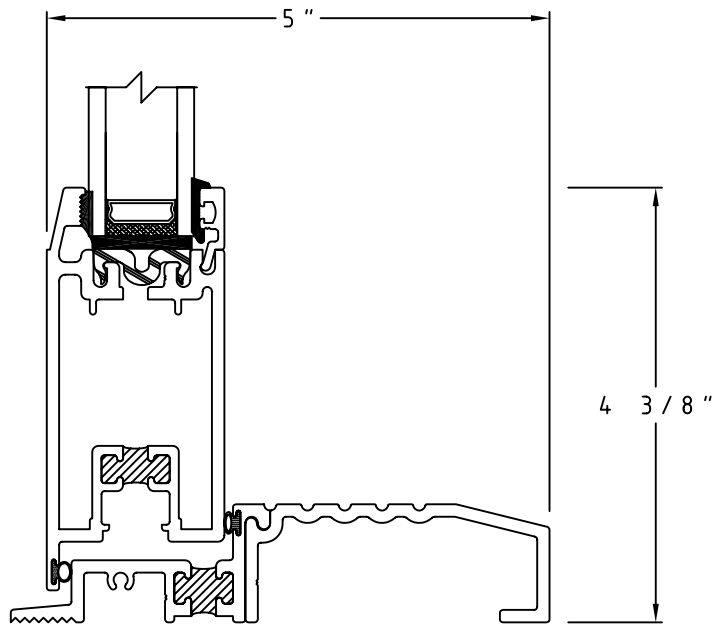


1A Transom above Door Detail

SCALE: HALF

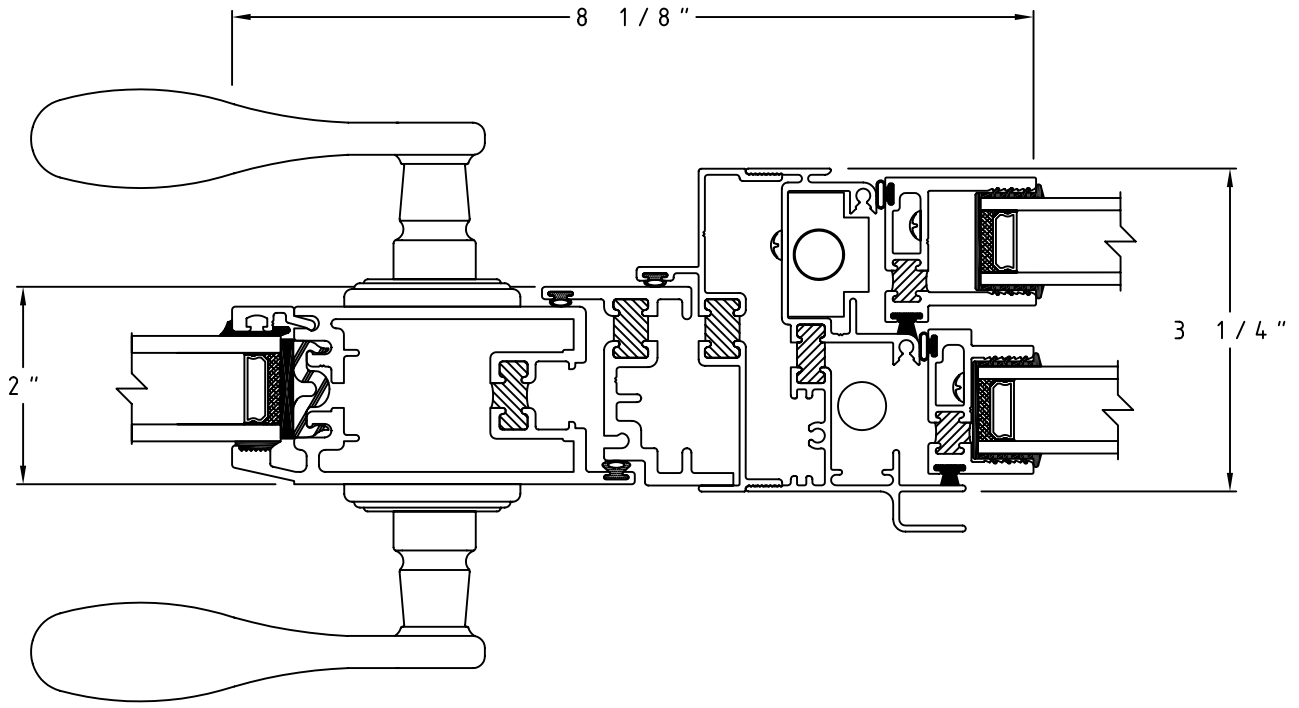


②A Extended Sill #1 Option

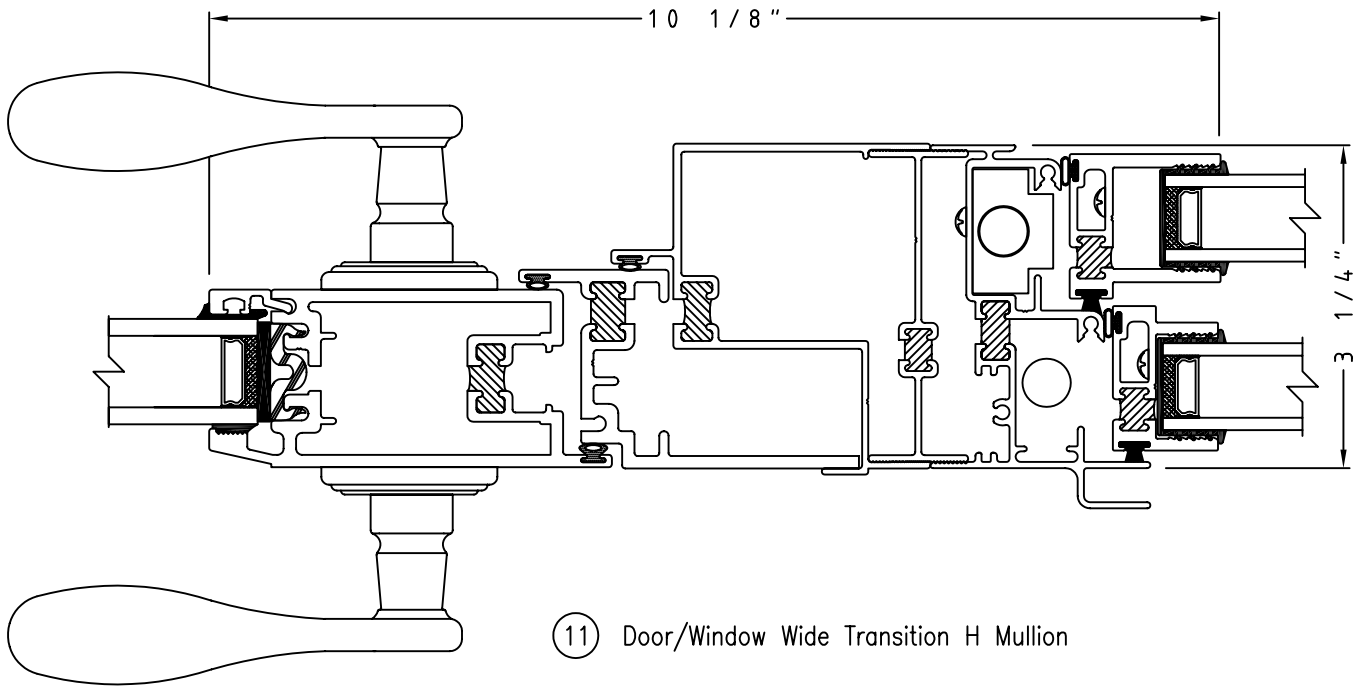


②B Extended Sill #2 Option

SCALE: HALF



⑩ Door/Window Transition Mullion



⑪ Door/Window Wide Transition H Mullion



## Series 500 ATW-AW-PG60 Flange Frame Hinged Glass Door

### SECTION 081316

#### PART 1 - GENERAL

##### 1.01 GENERAL SCOPE

- A. Furnish all labor, materials, tools and equipment required to complete the hinged glass door project as shown on the architectural drawings and as specified in 081316 and other related sections.
- B. Renovation Projects: Removal of existing doors, or vents as required by the project documents.
- C. New Construction Projects: Position the new doors and attachment systems into the openings as indicated by the architectural drawings.
- D. Provide factory glazed, fully thermally broken aluminum hinged doors and all additional components and systems as required by this specification and the architectural drawings.

##### 1.02 INDUSTRY REFERENCES

AAMA - American Architectural Manufacturers Association  
AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"  
AAMA 2604-05 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"  
AAMA 701&702-04 "Voluntary Specification for Pile Weatherstripping & Replaceable Fenestration Weatherseals"  
AAMA 800-05 "Voluntary Specifications and Test Methods for Sealants"  
AAMA 902-99 "Voluntary Specification for Sash Balances"  
AAMA 1503-98 "Voluntary Test Method for Condensation Resistance of Windows, Doors, and Glazed Wall Sections"  
AAMA CW-10-04 "Care and Handling of Architectural Aluminum from Shop to Site"  
CSI - Canadian Standards Association  
WDMA - Window & Door Manufacturers Association  
AAMA/WDMA/CSA 101/I.S.2/A440-05 "Standard/Specification for Windows, Doors, and Unit Skylights"  
ASTM - American Society for Testing and Materials  
ASTM C 1036-06 "Standard Specification for Flat Glass"  
ASTM C 1048-04 "Standard Specification for Heat-Treated Flat Glass"  
ASTM E 90-04 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements"  
ASTM E 283-04 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"  
ASTM E 330-02 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference"  
ASTM E 547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cyclic Static Air Pressure Differential"  
ASTM E 774-97 "Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units"

##### 1.03 INDICATE PRODUCTS FURNISHED BUT NOT INSTALLED IN THIS SECTION

- A. (#) extra sets of glazed sash for each window size to be supplied and delivered to the project at job completion for storage and future needs.
- B. (#) extra screens for each window size to be supplied and delivered to the project at job completion for storage and future needs.

##### 1.04 INDICATE PRODUCTS INSTALLED BUT NOT FURNISHED IN THIS SECTION

- A. Install (#) supplied by (Name) into the new windows in the (Location) rooms as directed.
- B. Reinstallation of air conditioners in (#) windows as directed by the architect.
- C. Reinstall existing air-vents or ducts through (#) windows.
- D. Reinstall existing window treatments and/or blinds at each window.

##### 1.05 RELATED SECTIONS

- A. Section 07190 - Vapor and Air Barriers
- B. Section 07900 - Sealants

##### 1.06 QUALITY ASSURANCE

- A. Provide test reports from an AAMA accredited laboratory certifying the performance as specified in section 1.07 of this specification. Valid test reports shall be no more than four years old.
- B. To ensure that the windows provided for this project are exactly the same as the sample sent to the testing lab for certification the manufacturer shall be an active member in the AAMA Certification Program. All bidders must provide a current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator / validator, Associated Laboratories Inc. (ALI).
- C. Pre-Bid Qualifications: The basis of this specification is Champion Window and Door products located at 140 Eileen Way, Syosset, NY, 11791. All other bids must pre-qualify their products.

##### 1.07 PRE-QUALIFICATION

## Section 081316 Aluminum Hinged Glass Doors





## Series 500 ATW-AW-PG60 Flange Frame Hinged Glass Door

Submit for pre-bid qualification approval ten days prior to the bid opening:

- A. A sample window matching the project criteria with the only exception being the color.
- B. Current test reports that conform to AAMA/WDMA/CSA 101/I.S.2/A440-08, less than 4 years old.
- C. Full size product and accessory details.
- D. Complete product specifications.
- E. The current NOTICE OF PRODUCT CERTIFICATION from the AAMA administrator validator, Associated Laboratories Inc. (ALI).
- F. Pre-qualified "equal" products will be confirmed in a written addendum.

### 1.08 SYSTEM DESCRIPTION

- A. AAMA Designation: **ATW-AW-PG60**
- B. Door: 2" frame depth; extruded aluminum with integral structural polyurethane thermal break in the flange frame; finish factory-applied; frames and sash factory-assembled.
- C. Configuration: Flange Frame Hinged Glass Door, [Optional: **door panel, transom, and sidelite frames factory-assembled, factory-glazed, configurations can be either field or factory mullied together.**] All doors are pre-hung single [Optional French double] door panel in door frame outswing; [Optional right hand indicates hinges on left jamb when outside looking in] [Optional left hand indicates hinges on right jamb when outside looking in].
- D. Glazing: 1" insulating tempered 3/16" glass [Optional: **Laminated safety**] in both lites.

### 1.09 PERFORMANCE REQUIREMENTS

- A. Conformance to **ATW-AW-PG60** specifications in AAMA/WDMA/CSA 101/I.S.2/A440-08 when tests are performed on the prescribed 48" x 96" minimum test size with the following test results:
  1. Air Infiltration: maximum .08 cfm/ft when tested per ASTM E 283-04 at a static air pressure difference of 6.24 psf.
  2. Water Penetration: No uncontrolled water leakage when tested per ASTM E 547-00 and ASTM E 331-00 at a static air pressure difference of 12.12 psf.
  3. Uniform Structural: Door to be operable, and maximum .4% permanent deformation per member when tested per ASTM E 330-02 at a static air pressure difference of 90.28 psf.
  4. Forced entry resistance= Pass

## PART 2 – PRODUCTS

### 2.01 APPROVED MANUFACTURER

Champion 500 ATW-AW-PG60

### 2.02 MATERIALS

- A. Aluminum: Aluminum shall be of commercial quality and of proper alloy and temper for window construction, free from defects impairing strength and durability. All extruded sections shall be of 6063-T5 or 6063-T6 and shall have a minimum ultimate tensile strength of 22,000 psi and a yield of 16,000 psi.
- B. Door Members: Fixed frame shall have a nominal wall thickness of not less than 0.125 inch.
- C. Fasteners: All screws and other miscellaneous fastening devices incorporated in the product shall be of aluminum, stainless steel or other corrosion-resistant material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel or chrome-plated steel, where used, shall be in accordance with ASTM B 456.
- D. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel or other non corrosive material(s) compatible with aluminum and of sufficient strength to perform the functions for which they are used. Cadmium or zinc-plated steel, where used, shall be in accordance with ASTM A 165 or B 633. Nickel chrome-plated steel, where used, shall be in accordance with ASTM B 456. Hinged door shall have a three point locking mechanism and thumb turn interior locking mechanism. Handle and base plate shall be brushed silver finish. [Optional finishes available upon request.]
- E. Weather-stripping: Weather-stripping shall meet the requirements of the specifications as detailed in the appropriate test report. All weather-stripping shall be installed in specially extruded ports and secured to prevent movement and shrinkage. Adhered weather-stripping shall not be allowed.

### 2.03 FABRICATION

- A. Assembly: The hinged glass doors shall be assembled in a secure and professional manner to perform as herein specified and to assure neat and weather tight construction. All corners at the head are to be mitered, keyed, staked and sealed with seam sealer. All main framing joints shall be sealed with sealants meeting the requirement of AAMA 803 or 809.
- B. Thermal Barrier: All main frames and ventilators shall be thermally broken by the poured and debridged method. The thermal barrier material shall be of polyurethane fill with ultimate tensile strength to meet or exceed ASTM D 638.
- C. Mullions: Mullions shall be provided as indicated on the drawings and shall be of the size and type to insure the structural integrity of the proposed hinged glass door system.
- D. Glazing: The hinged glass doors and fixed areas shall be glazed with 1" sealed insulated tempered 3/16" safety glazing.
- E. Finish: The exposed surfaces of the aluminum members shall be clean and free from serious surface blemishes.
- F. Frame style: Box frame with closed back thermally broken.

## Section 081316 Aluminum Hinged Glass Doors



## Series 500 ATW-AW-PG60 Flange Frame Hinged Glass Door

### 2.04 GLASS AND GLAZING MATERIALS

- A. Construction: Provide hermetically sealed insulating glass units. All aluminum spacers to be continuous with bent corners and containing a dual seal of polyisobutylene and silicone. The 1" I.G. unit shall contain desiccant filled into the aluminum spacer. Plastic corner keys will not be accepted.
- B. Exterior glass lite
  - 1. Thickness: 3/16" **Optional: (1/4")**.
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Tempered **Optional: (Laminated)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #2 surface)**
- C. Interior glass lite
  - 1. Thickness: 3/16" **Optional: (1/4")**.
  - 2. Tint: clear. **Optional: (Grey, Bronze, Green)**
  - 3. Type: Tempered **Optional: (Laminated)**
  - 4. Coating: **Optional: (Pyrolytic Low-E on #3 surface)**
- D. Performance
  - 1. Seal durability: conformance to ASTM E 774-00; visible ALI certification for CBA rating level.

### 2.05 OTHER GLASS AND GLAZING MATERIALS – ALUMINUM INSULATED PANELS

- A. 1" Insulating Panel with 1/8" hardboard backups and smooth Aluminum Skin on the interior and exterior. Core to be polystyrene. **Options: (Other panel, Spandrel Glass, etc)**

### 2.06 FINISH ON ALUMINUM EXTRUSIONS

- A. Metal Application: Apply finish on clean extrusions free from serious surface blemishes or scratches. Finish exposed surfaces visible when the installed product's operating sash is closed.
- B. Finish to be PPG Duracron, which meets AAMA 2603. [**Optional: Acranar 50% Kynar AAMA 2604, Duranar 70% Kynar AAMA 2605, Duranar XL**]
- C. Quality standard: conforming to AAMA 2603. [**Optional: 2604, 2605**]
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: an approved applicator using a factory-based electrostatic spray and oven bake system.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .7 mils [**Optional: 1.4 mil Acranar, 1.2 mils Duranar**] on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards. [**Optional: custom color to be selected.**]

#### Standard Clear Anodized Finish:

- A. AAM12C22A31 Class II (A3) Clear Anodized finish (.4mils).

#### Optional Anodized Finish:

- A. AAM12C22A31 Class I (A4) Clear Anodized Finish (.7 mils).
- B. Color: (Light Bronze) (Medium Bronze) (Dark Bronze) (Black)

### 2.07 AIR CONDITIONERS

- A. Provide A/C sashes and A/C kits to the following windows:
- B. [**Optional: Provide A/C sleeves by a designated manufacturer. Include Manufacturer's name and Model number.**]

## PART 3 – EXECUTION

### 3.01 PROJECT SUBMITTALS

Provide project submittals per the following:

- A. Product Data: Submit manufacturer's specifications, recommendations and standard details for aluminum window units, including certified test laboratory reports as necessary to show compliance with requirements.
- B. Shop Drawings: Submit shop drawings, including location floor plans or exterior wall elevations showing all door openings, typical unit elevations, and full size detail sections of every typical composite member. Indicate the type of anchors, hardware, operators and other components not included in manufacturer's standard data. Include glazing details and standards for factory glazed units.
- C. Samples: Submit three samples of each required aluminum finish on a metal panel sample or a 6-inch long section of extrusion.

### 3.02 DELIVERY, STORAGE, AND HANDLING

- A. Handle all windows and accessories in accordance with AAMA CW-10.
- B. Protect the windows and accessories from the elements, construction activities, and other hazards until the project is complete.

### 3.03 PROJECT SITE INSPECTION

## Section 081316 Aluminum Hinged Glass Doors



## Series 500 ATW-AW-PG60 Flange Frame Hinged Glass Door

- A. Field verify that the existing door openings are within tolerance, plumb, level, clean, and provide a solid anchoring surface and substrate. Also confirm that the openings and are in accordance with approved shop drawings.

### 3.04 INSTALLATION

- A. Install all of the Aluminum doors and accessories with skilled installers in accordance with all of the manufacturer's recommendations, project documents, and the approved shop drawings.
- B. All door openings must be covered and secure at the end of each workday.
- C. Provide the required shims and blocking and fasten the frames to the opening.
- D. Set each window plumb, level and square, without twisting or bowing the frames.
- E. Pack fibrous insulation into voids at the door frame perimeter as requested on the architectural drawings.
- F. Apply sealant at joints and all required metal-to-metal intersections and the window perimeter as required. Follow the sealant manufacturer's recommendations listed in their manufacturer's data sheets.

### 3.05 DISPOSAL OF DEBRIS

- A. Remove all garbage off site and legally dispose of existing doors and debris generated from the installation of the new doors.

### 3.06 OPTIONAL FIELD TESTING

- A. Conduct all on-site testing of installed units in conformance with AAMA publication number 502-02 Voluntary Specification for Field Testing of Windows and Sliding Glass Doors. Conduct air and water infiltration testing with the window manufacturer, contractor, and owner present.
- B. An AAMA accredited lab will be hired by the owner to perform the required testing.

### 3.07 ADJUSTMENT AND CLEAN UP

- A. Adjust all products, sash, vents, and hardware after installation, as necessary to provide proper operation and a weather tight installation
- B. Remove any labels and dirt from the door.

END OF SECTION 081316

**SPECIFICATIONS**

**GENERAL:**

ALUMINUM HORIZONTAL SLIDING DOORS SHOWN ON PLANS AND IN SPECIFICATIONS SHALL BE AS MANUFACTURED BY SUNVIEW DOORS LIMITED.

**MATERIAL & CONSTRUCTION:**

DOOR UNITS SHALL BE CONSTRUCTED FROM SPECIALLY DESIGNED HEAVY GAUGE, EXTRUDED SECTIONS OF 6063-T6 TEMPERED ALUMINUM ALLOY, SPLIT WITH A DOUBLE THERMAL BREAK IN ACCORDANCE WITH SUNVIEW ENGINEERING STANDARD DRAWINGS.

**FRAME:**

CONSISTS OF HEAD CHANNEL TRACK, SLOPED SILL TRACK AND JAMB TRACK. CORNER OF FRAME JOINTED BY TWO LARGE DIAMETER SCREWS FASTENED INTO INTEGRAL EXTRUDED STRENGTHENING RIBS IN JAMB. SPECIAL DESIGNED TUBE WITH CONCEALED DRAINAGE SYSTEM.

**SASH:**

STILES AND RAILS CONSTRUCTED OF HEAVY EXTRUDED TUBULAR SECTION. PANEL JAMBS MACHINED TO OVERLAP AND INTERLOCK WITH HEAD & SILL AND JOINED BY BY SCREWS FASTENED INTO EXTRUDED BOSSES IN PANEL HEAD AND SILL. ALL TWO-PANEL UNITS REVERSIBLE BEFORE OR AFTER INSTALLATION.

**WEATHER-STRIPPING:**

SLIDING PANEL DOUBLE WEATHER-STRIPPED WITH POLYPROPYLENE PILE WITH A MYLAR FIN SEAL RUNNING DOWN THE CENTRE OF THE PILE TO FORM A DOUBLE PERIMETER SEAL. COMPLETE PERIMETER OF FIXED PANEL SEALED WITH VINYL WEATHER-STRIPPING.

**HARDWARE:**

POSITIVE ACTION, HEAVY DUTY SECURITY LATCH, SAFETY ACTIVATED TO ELIMINATE KEEPER BREAKAGE. HIGH IMPACT DIE-CAST WITH BAKED ALUMINUM FINISH AND CUSTOM WOOD-GRAIN HANDLE. TWO-WAY ADJUSTABLE STEEL KEEPER. BUMPER STOP FOR ALL SLIDING PANELS. SLIDING PANELS EQUIPPED WITH TWO STEEL CADMIUM-PLATED TANDEM BALL BEARING, WEATHER SEALED ADJUSTABLE ROLLERS AT BOTTOM ( FOUR WHEELS PER PANEL ). ALL SCREWS SELF-TAPPING, EITHER PLATED OR STAINLESS STEEL. HIGH-IMPACT DIE-CAST POSITION AND SECURITY LOCK OPTIONAL - DOUBLE-LOCKS DOOR IN A FULL LOCK POSITION AND ALSO IN 5° OPEN POSITION. CYLINDER LOCK AVAILABLE AS AN OPTIONAL EXTRA.

**FINISH:**

ALUMINUM SECTION PRE-TREATED WITH A SPECIAL FIVE-STAGE CHROMATE UNDERCOATING, THEN PAINTED WITH AN ELECTROSTATIC BAKED-ON BROWN OR WHITE ENAMEL PAINT FINISH. FRAME SILL MILL FINISH.

CONTINUED...

**SCREEN:**

FRAMES OF TUBULAR ALUMINUM EXTRUSION FITTED WITH 18 x 14 MESH REVERSIBLE FIBERGLASS INSECT SCREEN CLOTH HELD BY VINYL SPLINE. SPRING-LOADED ROLLERS WITH END ADJUSTMENT SCREWS MOUNTED ON EACH END OF THE HEAD & SILL RAILS. POSITIVE ACTION SPRING BOLT LOCK, EXTRUDED INSIDE HANDLE AND AN INTEGRAL EXTRUDED OUTSIDE PULL. SCREEN MEETING RAIL JAMB PROVIDED WITH EXTRUDED INTERLOCK TO INTERLOCK WITH FIXED PANEL MEETING RAIL. SCREENS SHALL BE FURNISHED BY THE MANUFACTURER AT EXTRA COST.

**GLAZING:**

NOMINAL 1" TEMPERED SEALED INSULATING GLASS WITH INSULATING AIR SPACE BETWEEN LITES OF TEMPERED SAFETY GLASS.

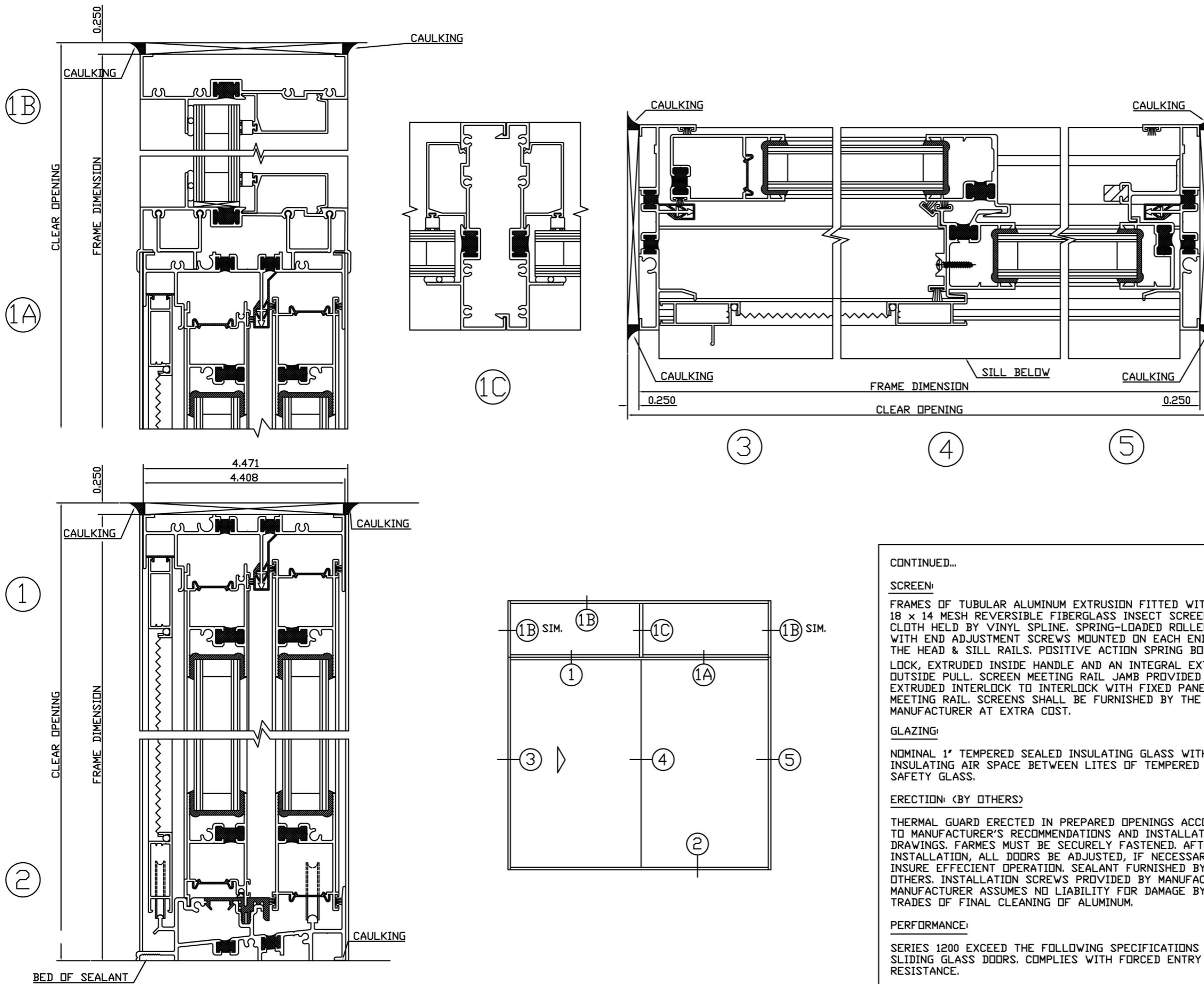
**ERECTION: (BY OTHERS)**

THERMAL GUARD ERECTED IN PREPARED OPENINGS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION DRAWINGS. FARMES MUST BE SECURELY FASTENED. AFTER INSTALLATION, ALL DOORS BE ADJUSTED, IF NECESSARY, TO INSURE EFFICIENT OPERATION. SEALANT FURNISHED BY OTHERS. INSTALLATION SCREWS PROVIDED BY MANUFACTURER. MANUFACTURER ASSUMES NO LIABILITY FOR DAMAGE BY THE TRADES OF FINAL CLEANING OF ALUMINUM.

**PERFORMANCE:**

SERIES 1200 EXCEED THE FOLLOWING SPECIFICATIONS FOR SLIDING GLASS DOORS. COMPLIES WITH FORCED ENTRY RESISTANCE.

APPROVED BY CANADIAN CONSTRUCTION MATERIALS CENTRE (CCMC). MEETS SPECIFICATIONS OF CAN/CGSB-82.1-M89 (A2, B2, C3, D1, E3, F1).



**1200 SERIES OX SLIDING DOOR ASSEMBLY  
SPECIFICATIONS AND DETAILS**

REV. NO.	DESCRIPTION	BY	DATE





## Series 1200 HC40 Sliding Metal Doors

### SECTION 08160 - Sliding Metal Doors & Grilles

#### PART 1 - GENERAL

##### 1.01 SECTION INCLUDES

- A. Material: Aluminum Sliding Glass Door as on the drawings and specified in this section.
- B. Installation: labor, tools, and material needed to install aluminum sliding doors.
- C. Glass and glazing.

##### 1.04 RELATED SECTIONS - Section 07900 - Sealants

##### 1.05 REFERENCES

- A. AAMA - American Architectural Manufacturers Association
  1. AAMA/NWWDA 101/I.S.2-97 "Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors"
  2. AAMA 502-02 "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"
  3. AAMA 611-98 "Voluntary Specification for Anodized Architectural Aluminum"
  4. AAMA 701-00 "Voluntary Specification for Pile Weatherstripping"
  5. AAMA 800-92 "Voluntary Specifications and Test Methods for Sealants"
  6. AAMA 902-99 "Voluntary Specification for Sash Balances"
  7. AAMA 910-93 "Voluntary 'Life Cycle' Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors"
  8. AAMA 1503-98 "Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections"
  9. AAMA 2603-02 "Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels"
  10. AAMA 2604-02 "Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels"
  11. AAMA 2605-02 "Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels"
  12. AAMA CW-10-97 "Care and Handling of Architectural Aluminum from Shop to Site"
- B. ASTM - American Society for Testing and Materials
  1. ASTM E 90-97 "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions"
  2. ASTM E 283-99 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"
  3. ASTM E 330-97 "Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference"
  4. ASTM E 331-00 "Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference"
  5. ASTM E 774-00 "Specification for Sealed Insulating Glass Units"

##### 1.06 SYSTEM DESCRIPTION

- A. AAMA Designation: HC-40.
- B. Doors: 4- 9/16" frame depth; extruded aluminum with integral structural polyurethane thermal break shrouded at frame exterior for maximum thermal efficiency; equal-leg frame; finish factory-applied; frames and sash factory-assembled.
- C. Configuration: Sliding Glass Door
- D. Glazing: moving and fixed panels to be factory assembled. Glass shall be ¾" sealed double glazing. All glass to be tempered. Glass is set in flexible, vinyl glazing channel, reusable for replacing glass.

##### 1.07 PERFORMANCE REQUIREMENTS

- A. Conformance to HC-40 specifications in AAMA/NWWDA 101/I.S.2-97 when tests are performed on the prescribed 3'10" x 6'10" minimum test size with the following test results:
  1. Air Infiltration: maximum .3 cfm/square foot when tested per ASTM E 283-99 at a static air pressure difference of 1.57 psf.
  2. Water Penetration: no uncontrolled water leakage when tested per ASTM E 331-00 at a static air pressure difference of 4.5 psf.
  3. Uniform Structural: window to be operable, and maximum .4% permanent deformation per member when tested per ASTM E 330-97 at a static air pressure difference of 45 psf.
- B. Thermal testing per AAMA 1503-98, at the prescribed 6'0" x 6'10" test size glazed with 3/4" insulating glass made with 1/8" clear and 1/8" hard coat low E lites and with the following test results:
  1. Thermal Transmittance: maximum .46 BTU/HR/SQ.FT/F U value.

##### 1.08 SUBMITTALS

- A. Shop drawings: window location chart; typical window elevations; details of assemblies, hardware, and glazing details for factory-glazed units.
- B. Product data: manufacturer's specifications and test reports from an AAMA-accredited laboratory.
- C. Samples: each specified finish for aluminum; other samples as requested.

##### 1.09 QUALITY ASSURANCE

- A. Submit for prebid approval ten days prior to bid opening a sample window representing the bid window except for color and valid test reports from an AAMA-accredited laboratory conforming to test results in Paragraph 1.07.
- B. Acceptance will be by addendum only as no verbal approvals will be allowed.

### Section 08160 Sliding Metal Doors & Grilles



## Series 1200 HC40 Sliding Metal Doors

- C. Submit bid on prequalified products in prebid written addendum. Bidder must identify manufacturer and model of product on which the bid is based.
- D. Furnish a valid AAMA "Notice of Product Certification" indicating that the windows for the project conform to AAMA/NWWDA 101/I.S.2-97.
- E. Furnish visible, permanent IGCC certification labels for the CBA rating level on double insulating glass units.
- F. Manufacturer's warranties:
  - 1. Windows: warrant for one year against defects in material or workmanship under normal use.
  - 2. Insulating glass units: warrant seal for five years against visual obstruction from film formation or moisture collection between internal glass surfaces, excluding that caused by glass breakage or abuse.
  - 3. Paint finish: PPG Polycron™ organic finish conforming to AAMA 2603-02: warrant for five years against chipping, peeling, or cracking.

1.10 DELIVERY, STORAGE, AND HANDLING - Handle and protect windows and accessories in accordance with AAMA CW-10-97 until project completion.

### **PART 2 - PRODUCTS**

#### **2.01 MANUFACTURERS**

- A. Champion Window and Door Corp.
- B. Other acceptable manufacturers who have demonstrated a successful history of manufacturing for **\*5\*** years equivalent products:
  - 1. *\*Enter appropriate information as required\**
  - 2. *\*Enter appropriate information as required\**

#### **2.02 MATERIALS**

- A. Aluminum extrusions: produced from commercial quality 6063-T5 alloy; free from defects impairing strength and durability.
- B. Hardware: Adjustable wheel assemblies shall be corrosive resistant steel, ball bearing type. Locking hardware consists of a clam type latch
- C. Weatherstrip: exterior and interior frame perimeter and meeting stiles shall be weatherstripped with fin type pile. Adjustable interlock end seals are provided

#### **2.03 FABRICATION**

- A. Frame: members fastened with two stainless steel screws per joint; factory-sealed with sealant conforming to AAMA 800-92.
- B. Panels: panel members shall be aluminum extrusions with poured polyurethane thermal-breaks that separate yet bind together, the interior and exterior aluminum panel framing. The thermal-break panel separators of extruded, rigid, PVC are used.

#### **2.04 DOUBLE INSULATING GLASS UNITS**

- A. Performance
  - 1. Dual-seal durability: conformance to ASTM E 774-00; visible, permanent IGCC certification label for CBA rating level.
- B. Exterior glass lite
  - 1. Thickness: 1/8"
  - 2. Tint: clear
  - 3. Type: Tempered
  - 4. Coating: Low E coating on surface number 2
- C. Interior glass lite
  - 1. Thickness: 1/8"
  - 2. Tint: clear
  - 3. Type: Tempered

#### **2.05 FINISH ON ALUMINUM EXTRUSIONS**

- A. Application: on clean extrusions free from serious surface blemishes; on exposed surfaces visible when installed product's operating sash are closed.
- B. Coating: PPG Polycron™ with acrylic resin; thermosetting.
- C. Quality standard: conforming to AAMA 2603-02, including 1 year Florida exposure and 1500 hours humidity tests.
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: electrostatic spray and oven bake by approved applicator.
- F. Coating quantity: one color coat.
- G. Dry film thickness: minimum .6 mils on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards.

#### **(2.06 INSTALLATION ACCESSORIES)**

- A. Material: extruded aluminum; nominal .062" wall; with exposed surfaces finished to match window color and finish performance; concealed fasteners; required weatherseals; designed for unrestricted expansion and contraction.
- B. Exterior: (wrap around panning;) (preset panning;) (two-piece mullion cover;) (two-piece head and jamb receptor with thermal break;) (subsill with thermal break and end dams;) (sill cover;) (slip-on expanders).
- C. Interior: (two-piece snap trim;) (stool cover).
- D. Mullions: with thermal break; (stack;) (offset stack;) (three-piece).

## **Section 08160 Sliding Metal Doors & Grilles**



## Series 1200 HC40 Sliding Metal Doors

### PART 3 - EXECUTION

3.01 PREPARATION - Prepare openings to be in tolerance, plumb, level, provide for secure anchoring, and in accordance with approved shop drawings.

#### 3.02 INSTALLATION

- A. Install windows in accordance with manufacturer's recommendations and approved shop drawings with skilled craftspeople who have demonstrated a successful history of installing windows for \*5\* years.
- B. Provide required support and securely fasten and set windows plumb, square, and level without twist or bow.
- C. Apply sealant per sealant manufacturer's recommendations at joints, wipe off excess, and leave exposed sealant surfaces clean and smooth.

#### (3.03 FIELD TESTING)

- A. Test installed units in conformance with AAMA 502-02 minimum requirements for air and water infiltration with the window manufacturer, contractor, and owner present.
- B. Select test units as directed by the owner's representative and use an AAMA-accredited laboratory provided by the owner or contractor.

3.04 ADJUSTING AND CLEANING - Adjust windows as necessary for smooth and weathertight operation, and leave windows clean and free of construction debris.

END OF SECTION



# General Options

## Panning

### Square

2 7/8 x 2 3/4" Preset Head
2 3/8" x 3 1/8" Preset Jamb
2 3/8" x 4 5/8" Preset Head/Sill
3/4 x 2 1/2" Head/Jamb/Sill
3/4 x 4 1/2" Head/Jamb/Sill
2 x 2" Head/Jamb/Sill
2 x 2 1/2" Head/Jamb/Sill
2 x 3" Head/Jamb/Sill
3 x 3 1/2" Head/Jamb/Sill
4 x 3 1/2" Head/Jamb/Sill

### Landmark\*

1 5/8 x 2 1/2" Head/Jamb/Sill
2 7/8 x 3 3/4" Head/Jamb
3 7/8 x 3 1/2" Sill
3 x 2 3/4" Head/Jamb/Sill
3 x 4" Head/Jamb/Sill
3 x 2 3/4" Head/Jamb/Sill
3 x 3" Head/Jamb/Sill
3 x 2 3/8" Head/Jamb
3 1/4 x 3 7/8" Sill
3 7/8 x 2 7/8" Head/Jamb/Sill
1/2 x 1/4" Panning Cover
2 7/8 x 4 1/2" Head/Jamb
3 7/8 x 5 3/8" Sill
3 1/2 x 4 1/2" Head/Jamb
3 7/8 x 4 3/4" Sill
4 x 4 1/4" Head/Jamb
4 1/8 x 5 1/8" Sill

\*Landmark profiles vary w/sizes

\*Custom profiles available

## Finishes<sup>1</sup>

Duracron  
50% Kynar  
70% Kynar  
Anodized  
Two-Tone

<sup>1</sup> Standard paint finishes vary according to product.

<sup>1</sup> Custom colors available

## Grids<sup>2</sup>

Internal Grids

External Grids w/ select products

Landmark grid 5/8" or 13/16"

<sup>2</sup> Custom grid configurations are available.

## Curving

### Elliptical, Round Top, Trapezoid

2510 Fixed  
4710 Fixed  
5710 Fixed  
6510 Fixed  
7510 Fixed  
9510 Fixed

### Single-Hung w/integrated curved top

6500 Curved-Top





## Acoustic Products

Product	Operation	FrameDepth	CommercialRating	Heavy CommercialRating	ArchitecturalRating	Rating(s)*	Rating (s)*
2500	Tilt Double Hung	3-1/4"	H-C45	-	-	30	35
5000/5045 Series	Projected/Casement	2-1/2" & 4-1/2"	-	AP/C-HC85:100	AP/C-AW85:120	30; 33; 34; 36	38; 42; 43; 46
6500	Tilt Double Hung	4-1/8"	-	-	H-AW55	30; 31; 34	33; 36; 37
7500	Sliding	4-1/8"	-	-	HS-AW65	27; 30; 32	33; 34; 35
8000	Window Wall	4-1/2"	-	C-HC70	C-AW70	Custom as Requested	Custom as Requested
9000	Tilt Double Hung	3-1/4"	H-C70	-	-	32	37
9500	Tilt Double Hung	3-1/4"	-	H-HC50	H-AW50	30	33

\* All OITC and STC rated products are manufactured with special glass configurations



# Glazing Options

Dual sealed insulated units  
 Argon gas standard with Lo E  
 Stainless steel spacers (except wire glass, spandrel, and various odd shapes)

<u>Model</u>	<u>Standard Glass</u>
1000	
2000	7/8" Insulated glass unit
2400	1/8" Clear in and out (cannot be tempered or used in larger applications)
2500	
2510	
3000	
3000	7/8" Insulated glass unit 1/8" Clear in and out
4000/4710	1" Insulated glass unit 1/8" Clear in and out
5000/5710	
5045	
6500/6800	15/16" Insulated glass unit 1/8" Clear in and out
6510	
7500/7510	
6200	1" Insulated glass unit ¼" Glass or Lexan (in or out)
8000	1" Insulated glass unit 1/4" Clear in and out
9000	7/8" Insulated glass unit 1/8" Clear in and out
9500	
9510	
9100	7/8" Operable insulated sash 1" Nonoperable insulated sash 1/8" Clear in and out
400/500 Door	1" Insulated glass unit 1/8" Clear tempered in and out
400/500 Transom	1 1/8" Insulated glass unit 3/16" Clear in and out
1200 Sliding Door	1" Insulated glass unit 1/8" Clear tempered in and out

<u>Optional Glass</u>
<b>1/8" Glass:</b> Lo E (soft coat or hard coat) Tinted colors available
<b>3/16" Glass:</b> Lo E (soft coat or hard coat) Frosted/Obscured Tinted colors available
<b>1/4" Glass:</b> Lo E (soft coat or hard coat) Clear wire Frosted wire Laminated Spandrel glass (all colors): Paint or ceramic Fritz Tinted colors available
<b>Optional on all windows:</b> Insulated panels Tempered glass Louvers (available on 2510,4710,5710,6510,7510, 8010)

**- LIMITED WARRANTY -**



W I N D O W   A N D   D O O R

The owners and employees of Champion Window and Door Corporation are dedicated to producing the highest quality products and providing a level of service that is unrivaled in the industry. In addition to delivering products that are manufactured with outstanding workmanship, Champion is dedicated to servicing its products beyond the delivery date. Champion's warranties are specific to each job, and this warranty pertains to the job specified below and includes the following terms:

**Champion's products carry a limited warranty period of five (5) years from date of delivery.**

**Glazing carries a limited warranty on defects and seal failures of Ten (10) years\*.**

**Finish – the limited warranty period is dependent on the finish itself:**

- *Champion's limited warranty on Duracron finish is five (5) years.*
- *Champion's limited warranty on Acrynar (Kynar 50%) finish is five (10) years.*
- *Champion's limited warranty on Duranar (Kynar 70%) finish is five (15) years.*

Warranties on Champion's products are provided to the original dealer only, and pertain solely to products within the specified AAMA test size. Additionally, warranties may not be in effect unless the project is fully paid for. This warranty does not apply to circumstances beyond the company's control, such as; accidents, misuse, or natural causes. The warranty only applies to material costs and not labor costs.

\*Glazing warranties depend on the vendor used. Please contact Champion regarding any specific project.

Approved By: \_\_\_\_\_

*T. Muraco*  
Tony Muraco, CEO

**- Quality Products and Service since 1952 -**



## **Accessories Contents**

[Standard Accessories](#)

[Mullion Cover & Base](#)

[H/Tie Mullions](#)

[3-Piece Mullion](#)

[Receptor-Sub Sill/Anchors](#)

[Stool Covers/Sill Covers](#)

[Panning](#)

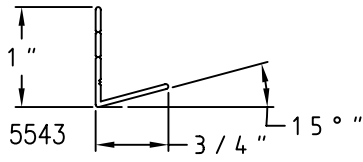
[Snap-Trim](#)

[Screens](#)

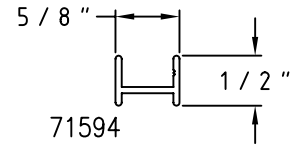
140 Eileen Way \* Syosset, NY 11791 \*T: 516-921-6200 \* Fax: 516-921-6370

[www.championwindows.com](http://www.championwindows.com)

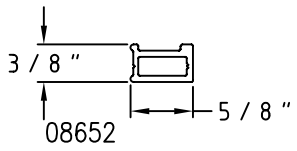
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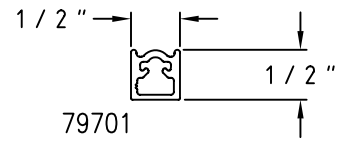
(A01) Sill Angle



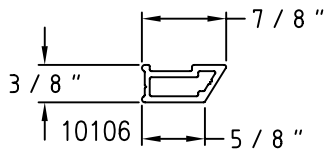
(A06) Child Guard Hollow



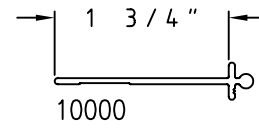
(A02) Landmark Frame



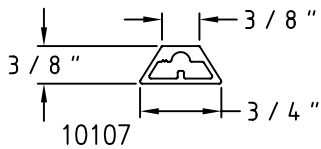
(A07) Child Guard Channel



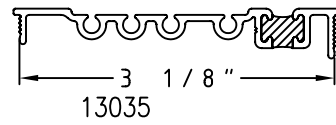
(A03) Bevel Landmark Frame



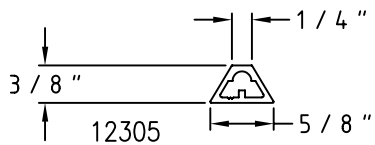
(A08) Nailing Fin



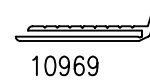
(A04) 7/8" Landmark Grid Large



(A09) Nailing Fin Adapter

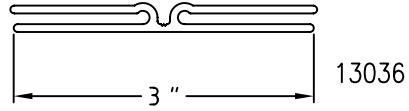
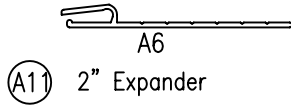


(A05) 5/8" Landmark Grid

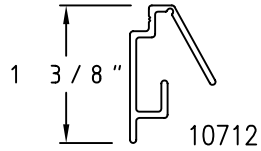


(A10) 1" Expander

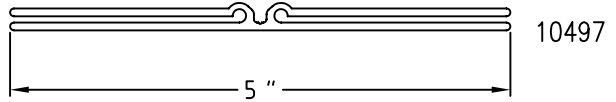
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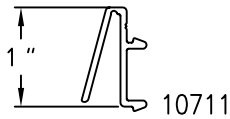
A17 3" Dual Expander



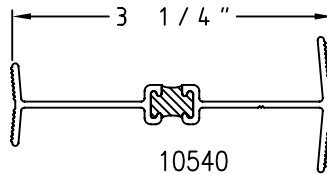
A12 Caulk Return Head



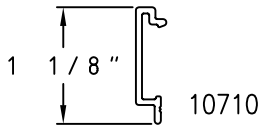
A18 5" Dual Expander



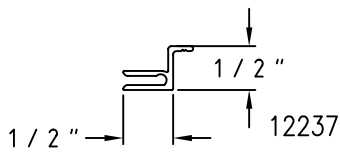
A13 Caulk Return Jamb



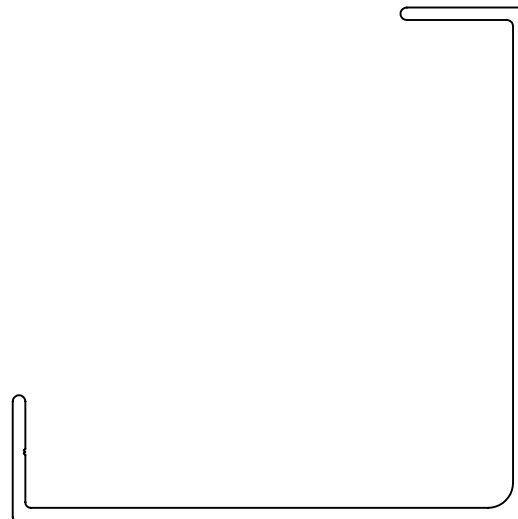
A19 10 Degree Tie in Mullion



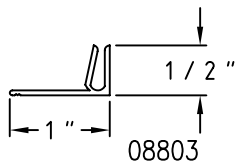
A14 Caulk Return Cover



A15 Caulk Stop with Return



A20 5 1/8" x 5 1/8" Corner Post Cover

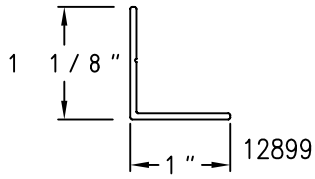


A16 1" Caulk Return

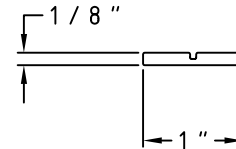
# Champion Series Accessories

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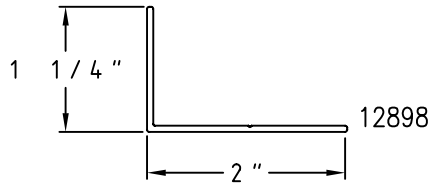
Sheet 3 of 5



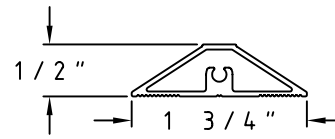
(A21) 1 1/8" x 1" Unequal Angle



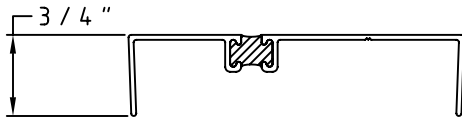
(A26) 1/8" x 1" Flat Muntin



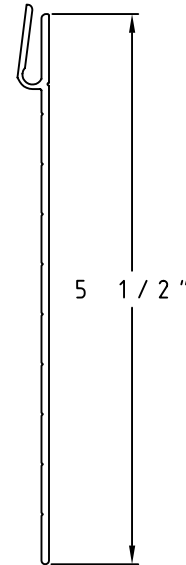
(A22) 1 1/4" x 2" Unequal Angle



(A27) 1 3/4" Bevel Muntin

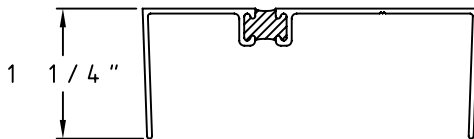


(A23) 3/4" x 3 3/8" Head Expander

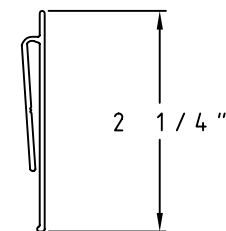


12526

(A28) 5 1/2" Expander

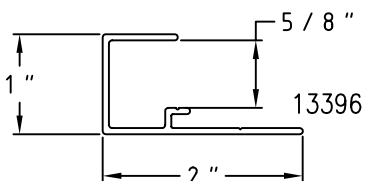


(A24) 1 1/4" x 3 3/8" Head Expander



14952

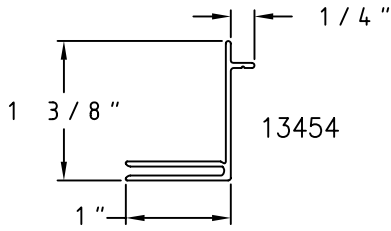
(A29) 2 1/4" Expander



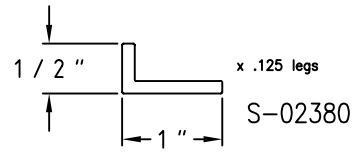
(A25) Sheet Rock Receptor

Champion Series Accessories

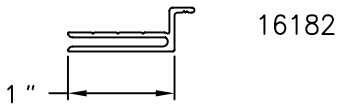
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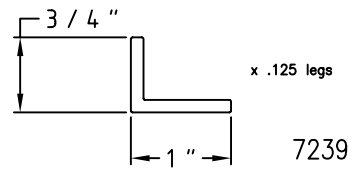
(A30) Caulk 1" x 1 3/8" w/1/4" return



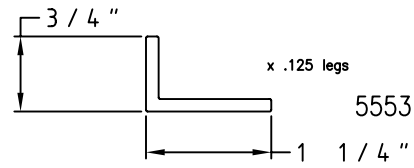
(A33) 1/2" x 1" Unequal Angle



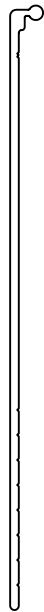
(A31) Caulk 1" w/1/4" return



(A34) 3/4" x 1" Unequal Angle

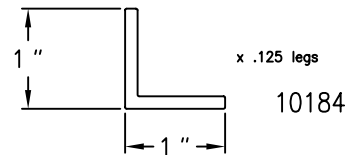


(A35) 3/4" x 1 1/4" Unequal Angle

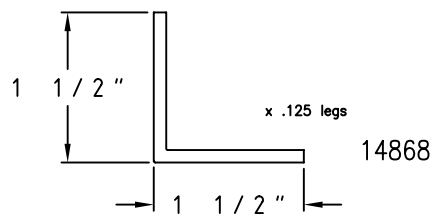


10289

(A32) Nailfin Anchor Strap



(A36) 1" x 1" Angle

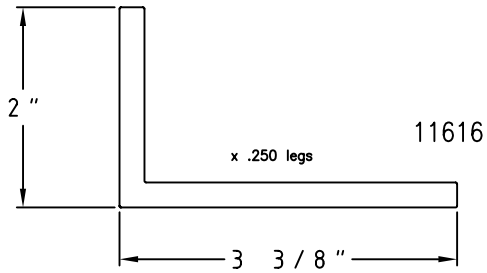


(A37) 1 1/2" x 1 1/2" Angle

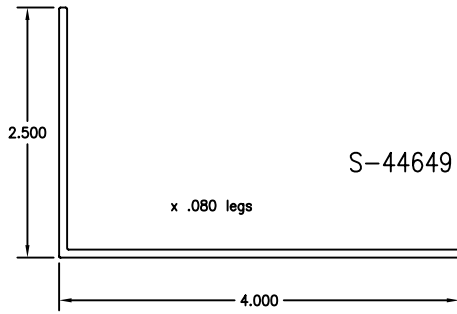


# Champion Series Accessories

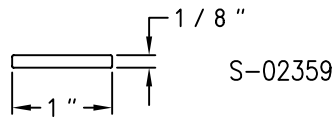
SCALE: HALF



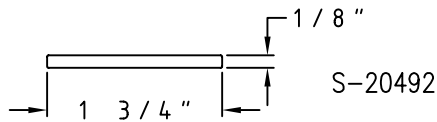
(A38) 2" x 3 3/8" Unequal Angle



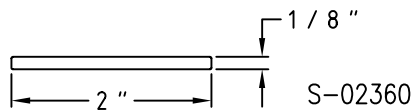
(A39) 2 1/2" x 4" Unequal Angle



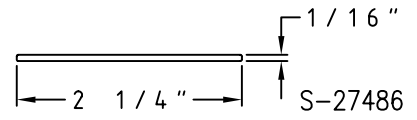
(A40) 1" x 1/8" Flat Bar



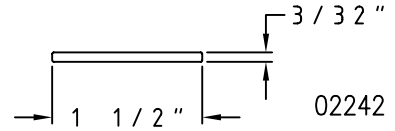
(A41) 1 3/4" x 1/8" Flat Bar



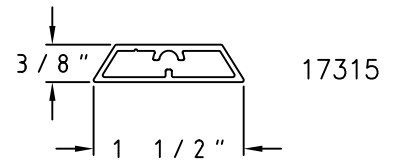
(A42) 2" x 1/8" Flat Bar



(A43) 2 1/4" x 1/16" Flat Bar



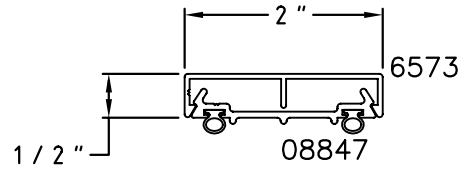
(A44) 1 1/2" x 3/32" Flat Bar



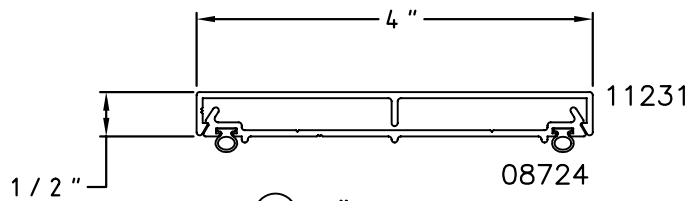
(A45) 1 1/2" 3/8" Muntin

# Champion Mullion Series

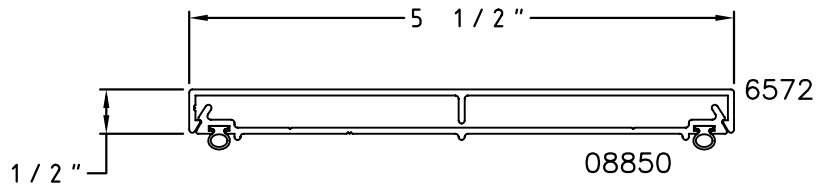
SCALE: HALF



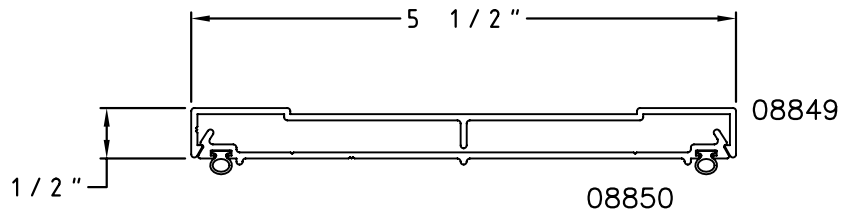
(M01) 2" Mullion



(M02) 4" Mullion



(M03) 5 1/2" Mullion



(M04) 5 1/2" Mullion Colonial

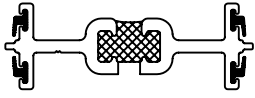
Champion Mullion Series

FOR ORDERING PURPOSES REFER TO THE CAP AS: A  
AND THE PRESSURE PLATE AS: B

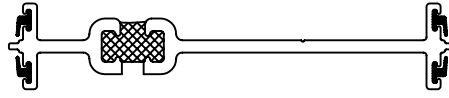
# Champion Series Tie-in & H-Mullions

SCALE: HALF

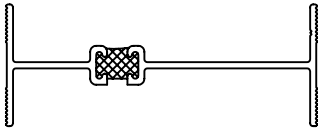
Sheet 1 of 1



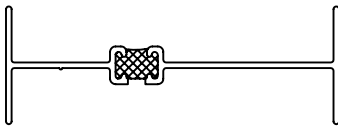
12073  
FOR 2 1/2" WINDOWS



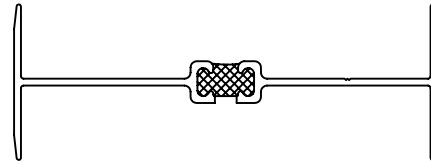
19209  
FOR 4 1/2" WINDOWS



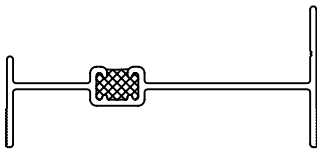
11015  
Tie-in Mullion for 3 1/4" Window



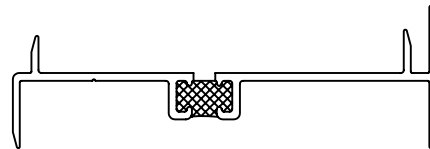
11585  
H-Mullion for 3 1/4" Window



9776  
H-Mullion for 4 1/8" Window



11016  
Stack Mullion for 3 1/4" Window

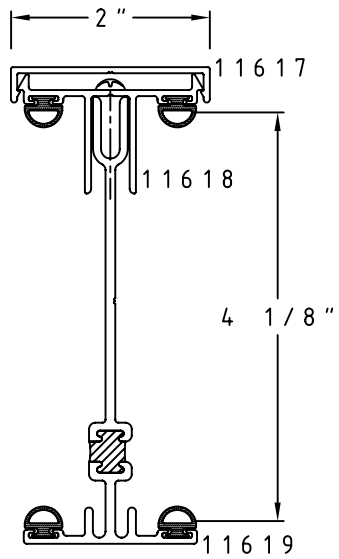


10940  
Stack Mullion for 4 1/8" Window

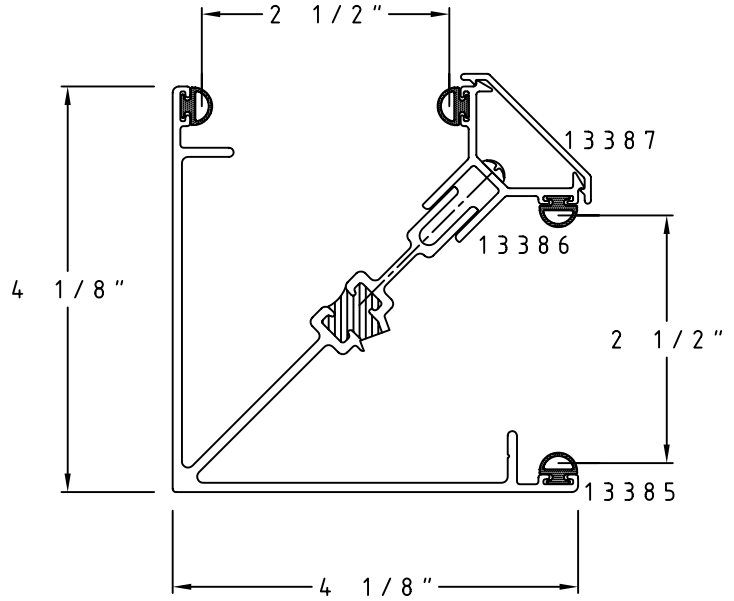
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# Champion Series 3 PC Mullion

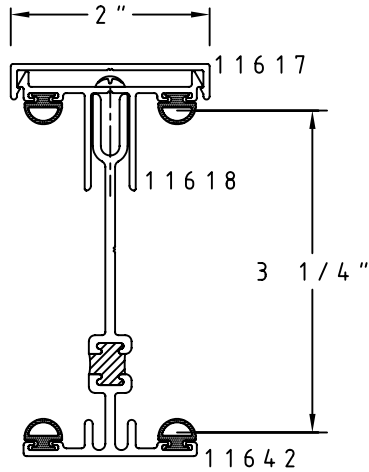
SCALE: HALF



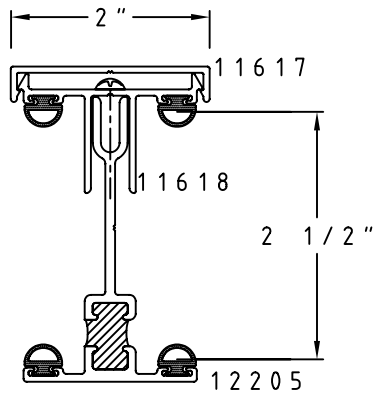
(M05) Used for 4 1/8" Series Windows



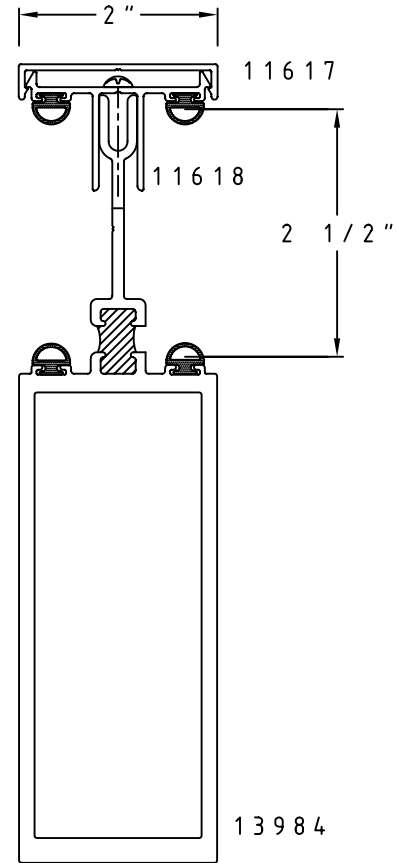
(M08) Used for 2 1/2" Series Windows



(M06) Used for 3 1/4" Series Windows



(M07) Used for 2 1/2" Series Windows

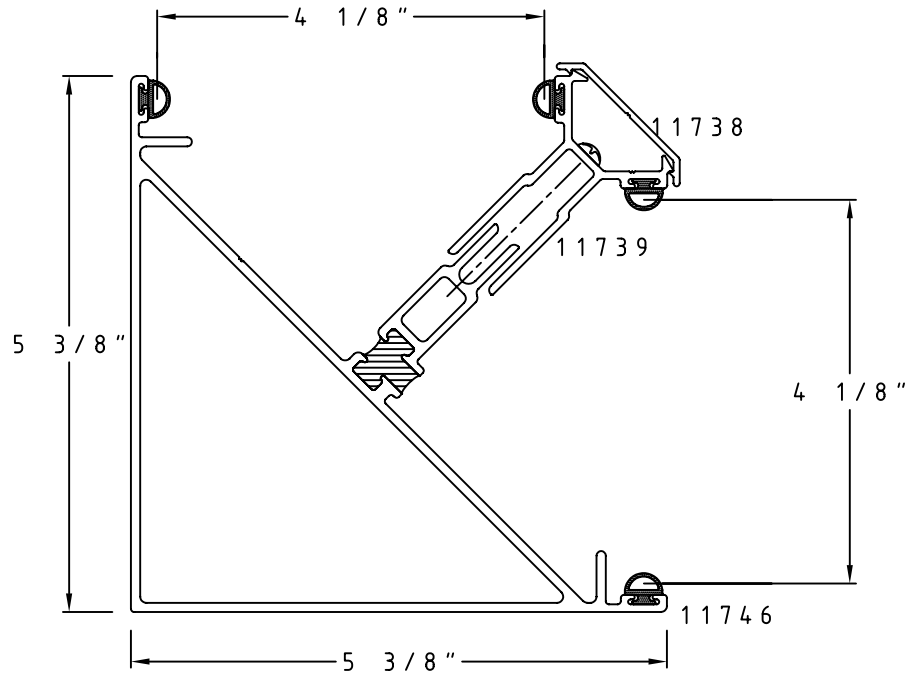


(M09) Used for 2 1/2" Series Windows

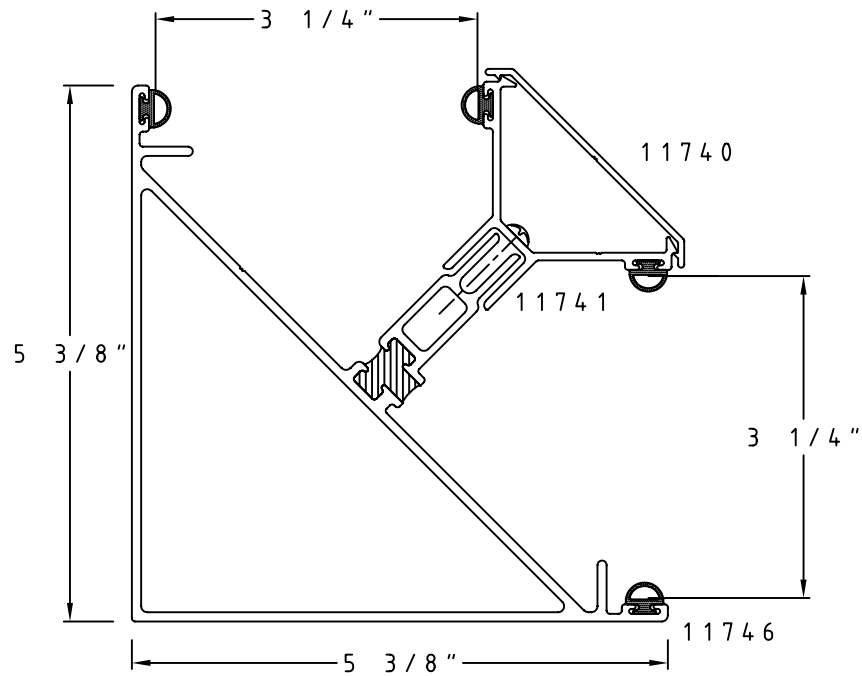
FOR ORDERING PURPOSES, REFER TO THE CAP AS: A  
THE PRESSURE PLATE AS: B, AND THE MULLION AS: C

# Champion Series 3 PC Mullion

SCALE: HALF



(M13) Used for 4 1/8" Series Windows



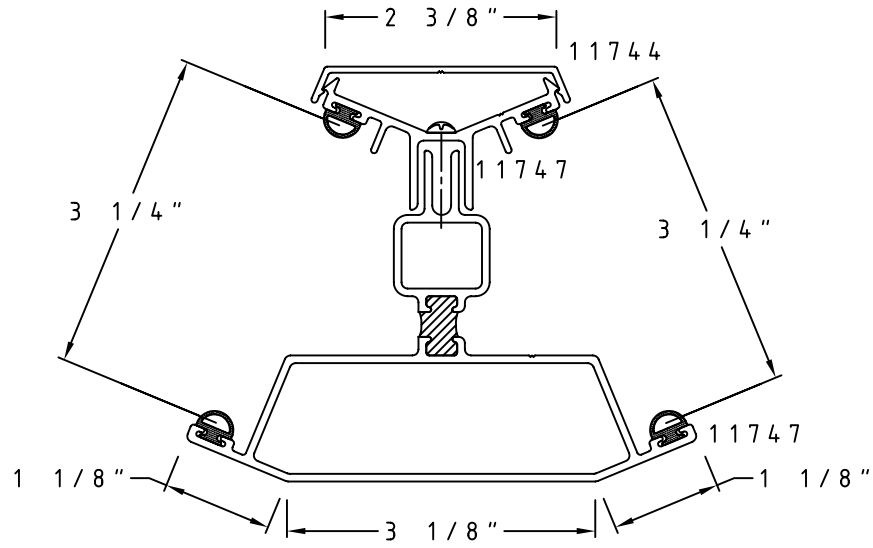
(M10) Used for 3 1/4" Series Windows

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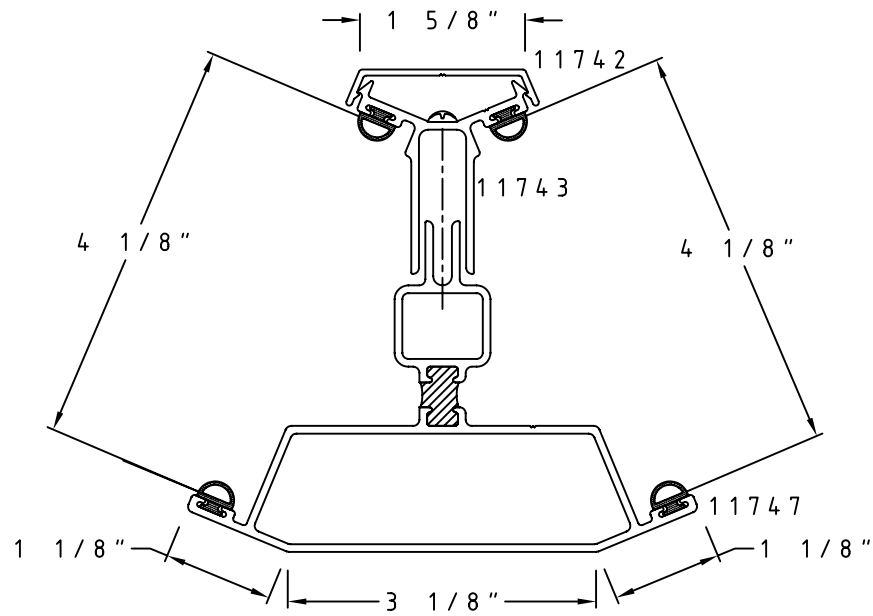
FOR ORDERING PURPOSES, REFER TO THE CAP AS: A  
THE PRESSURE PLATE AS: B, AND THE MULLION AS: C

# Champion Series 3 PC 135° Mullion

SCALE: HALF



(M11) Used for 3 1/4" Series Windows

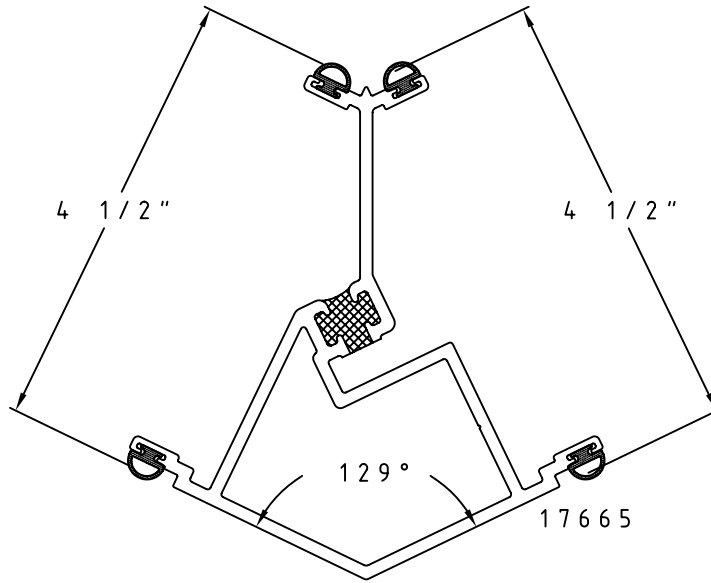


(M12) Used for 4 1/8" Series Windows

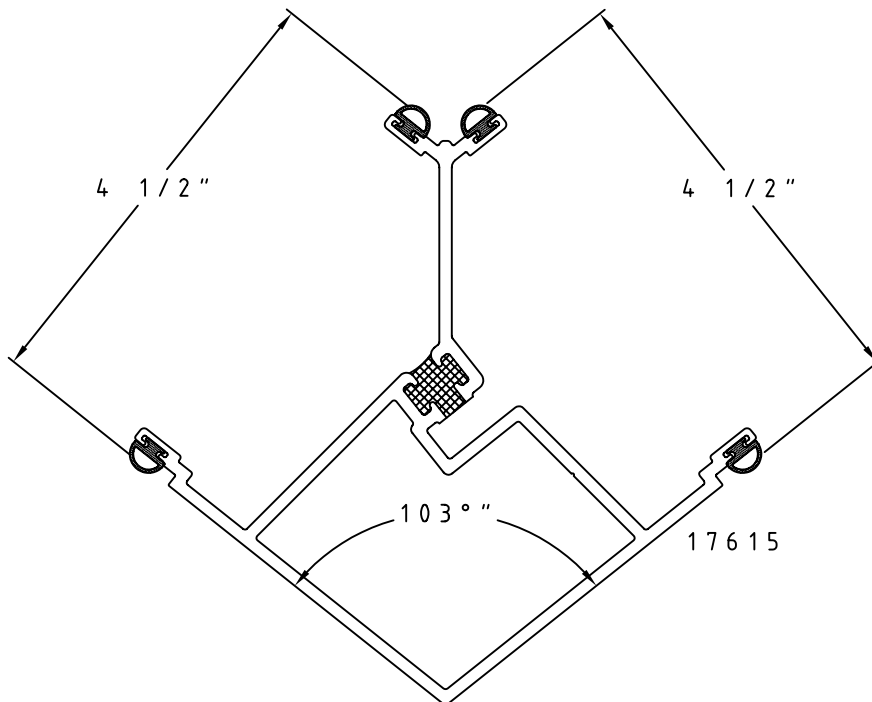
FOR ORDERING PURPOSES, REFER TO THE CAP AS: A  
THE PRESSURE PLATE AS: B, AND THE MULLION AS: C

# Champion Series Special Angle Mullion

SCALE: HALF

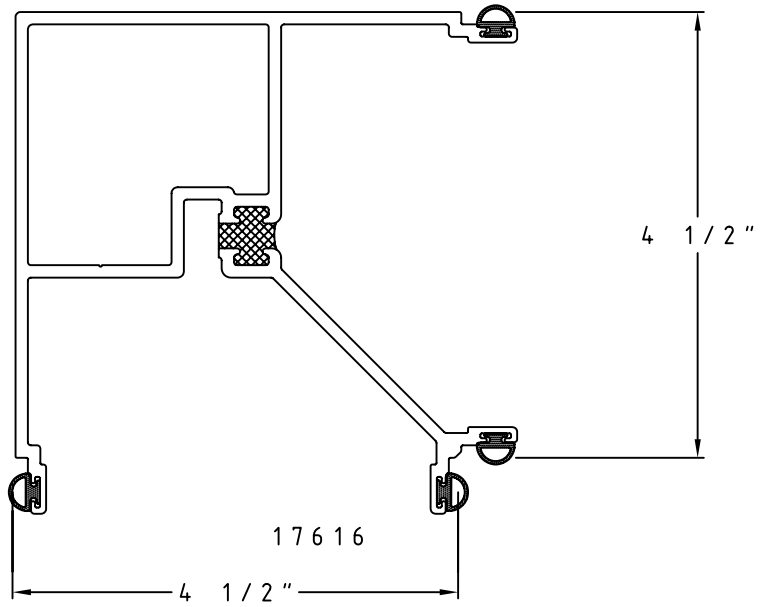


(M14) Used for  $4\ 1/2''$  Series Windows

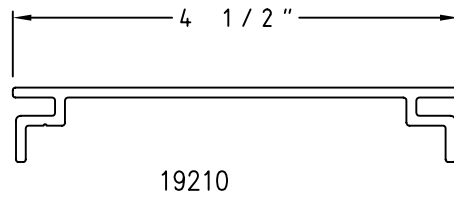


(M15) Used for  $4\ 1/2''$  Series Windows

SCALE: HALF



(M16) Used for 4 1/2" Series Windows



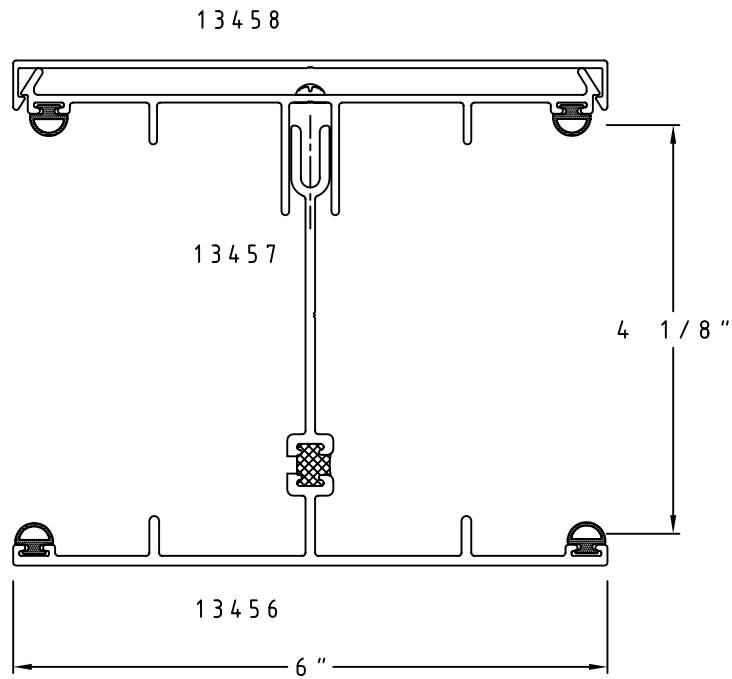
(M17) 4 1/2" Spread Mullion



# Champion 3 pc mullion

SCALE: HALF

Sheet 6 of 7



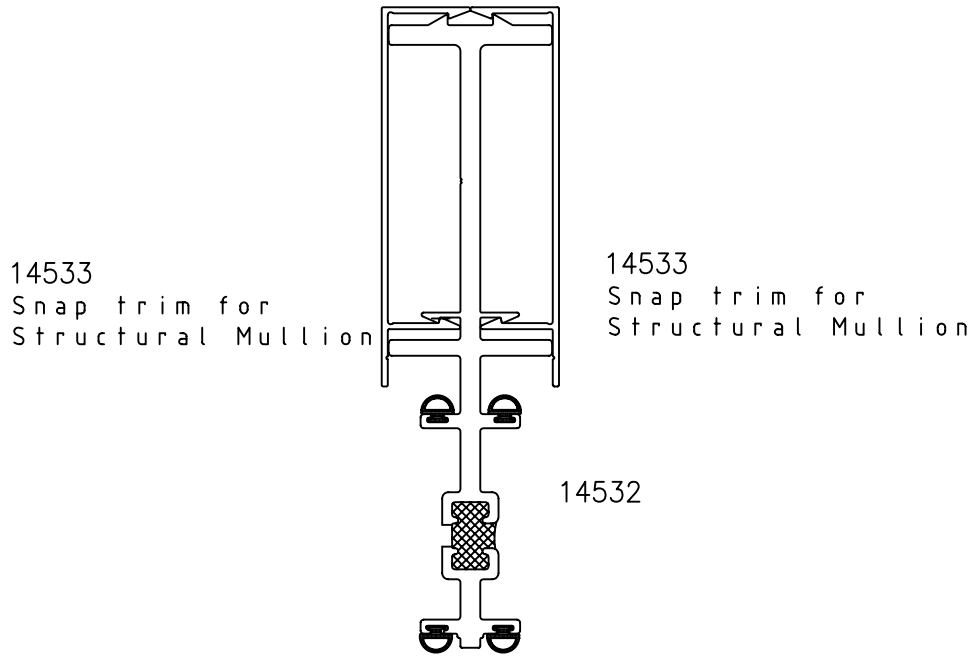
(M18) 6" Tee, Plate and cover for 4 1/8" window

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FOR ORDERING PURPOSES, REFER TO THE CAP AS: A  
THE PRESSURE PLATE AS: B, AND THE MULLION AS: C

# Champion Structural Mullion w/Snap trim

SCALE: HALF



14533  
Snap trim for  
Structural Mullion

14533  
Snap trim for  
Structural Mullion

14532

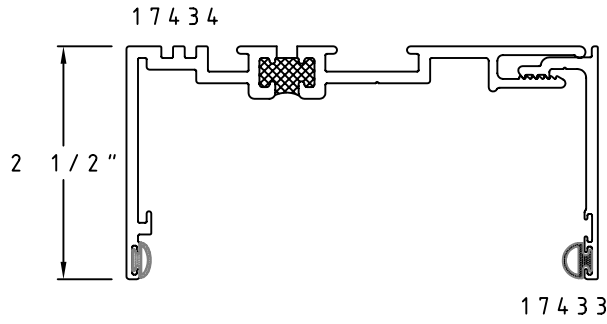
(M19)

Structural Mullion w/Snap trim  
For 2½" window

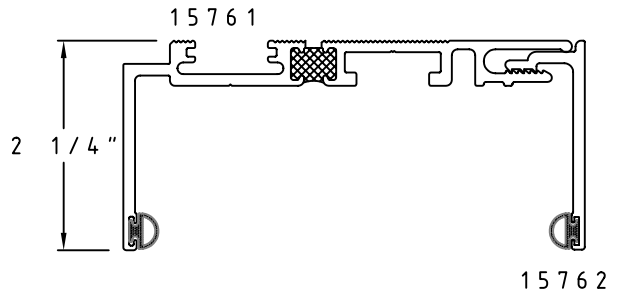
# Champion Receptor/Sub Sill

SCALE: HALF

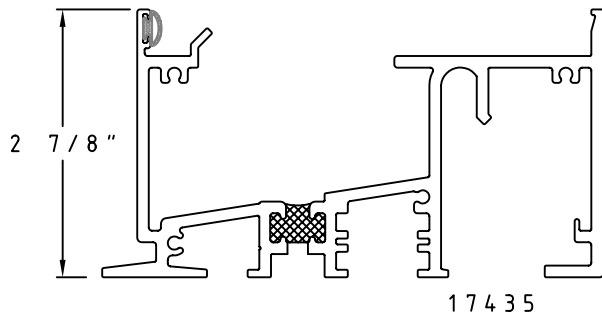
Sheet 1 of 5



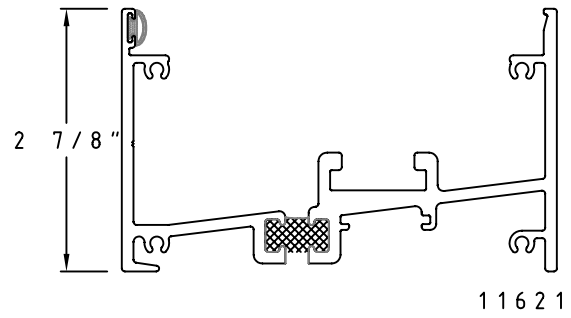
(R10) 4 1/2" Receptor



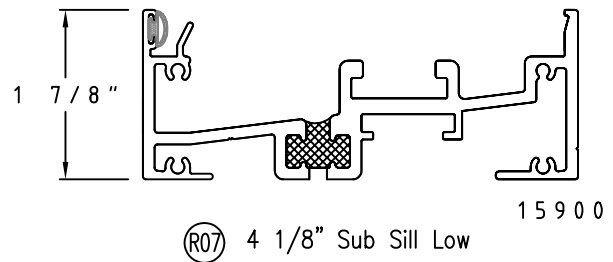
(R01) 4 1/8" Receptor



(R11) 4 1/2" Sub Sill



(R04) 4 1/8" Sub Sill



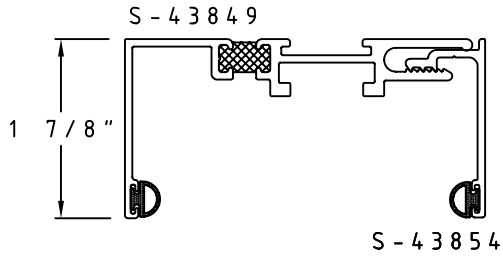
(R07) 4 1/8" Sub Sill Low

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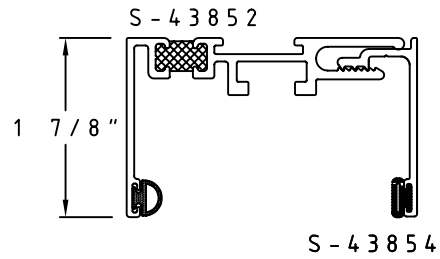
# Champion Receptor/Sub Sill

SCALE: HALF

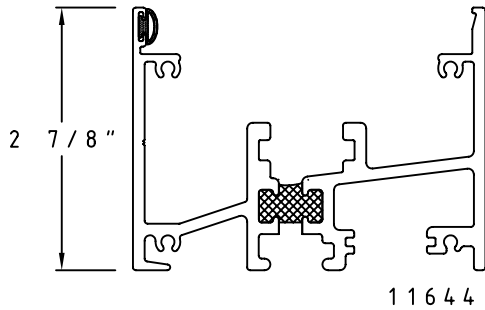
Sheet 2 of 5



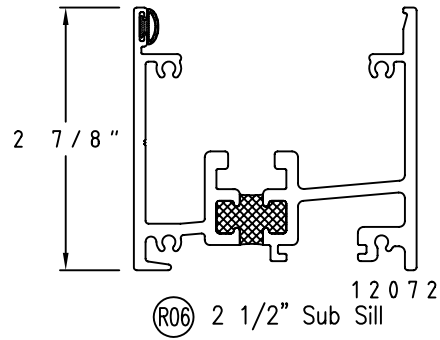
(R02) 3 1/4" Receptor



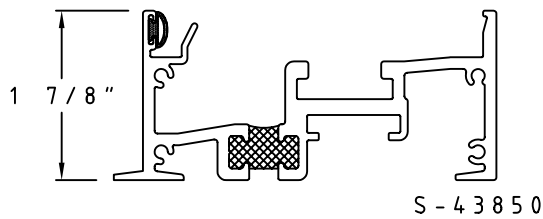
(R03) 2 1/2" Receptor



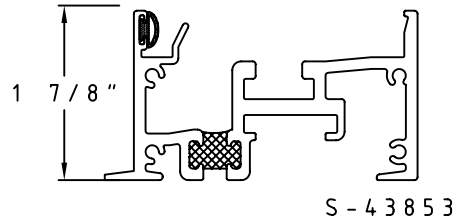
(R05) 3 1/4" Sub Sill



(R06) 2 1/2" Sub Sill



(R08) 3 1/4" Sub Sill Low



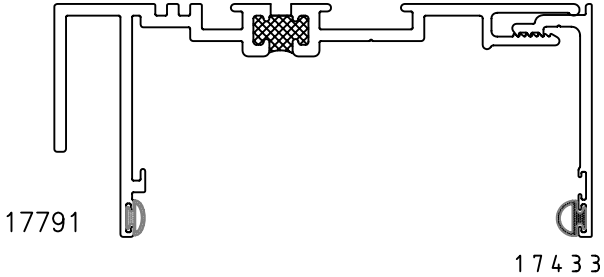
(R09) 2 1/2" Sub Sill Low

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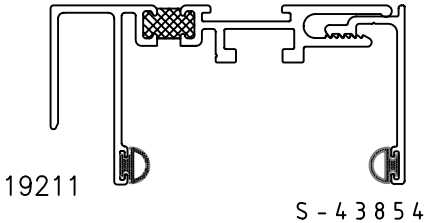
# Champion Receptor/Sub Sill

SCALE: HALF

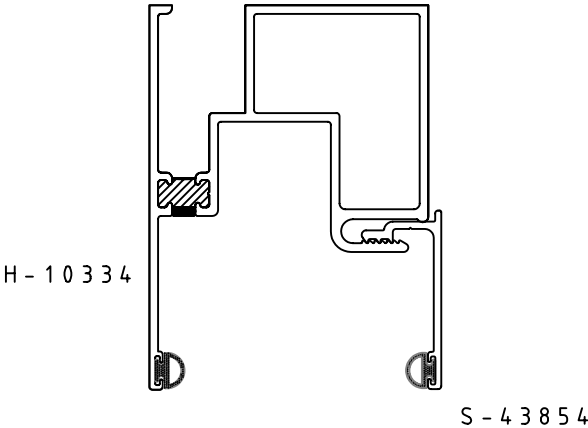
Sheet 3 of 5



(R12) 4 1/2" Receptor w/Slab cover Leg



(R13) 2 1/2" Receptor w/Slab Cover Leg



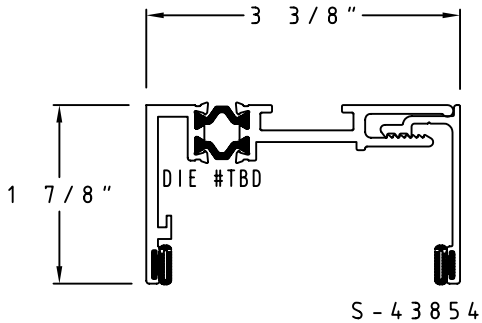
(R14) 2 1/2" Receptor Extended Jamb

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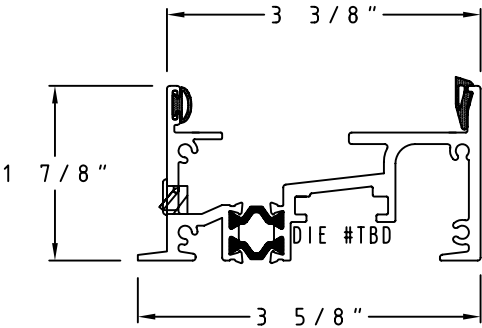
# Champion Receptor/Sub Sill

SCALE: HALF

Sheet 3 of 5



(R15) 2 7/8" Receptor

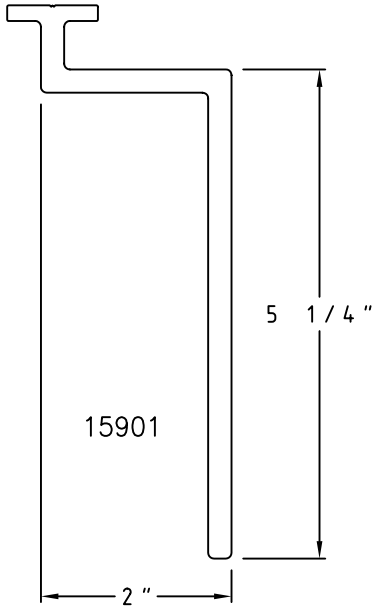


(R16) 2 7/8" Sub Sill

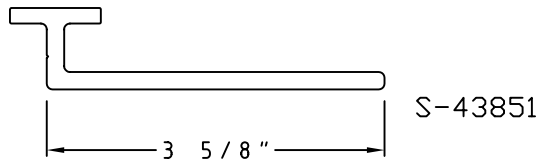
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# Champion Receptor/Sub Sill Slide In Anchors

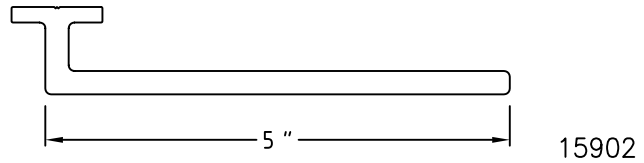
SCALE: HALF



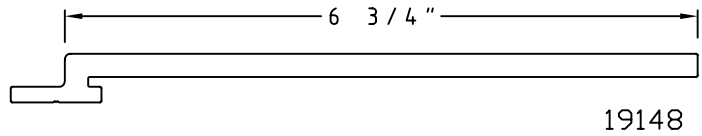
(R17) Sub Sill "L" Shape  
2" x 5 1/4"  
Use on R07, R08, R09, R11, R16



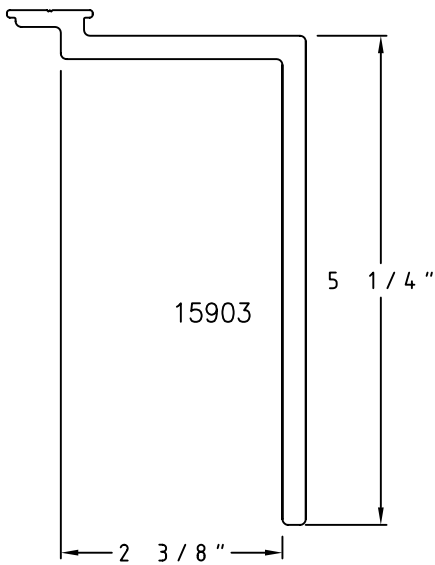
(R19) Sub Sill Anchor 3 5/8"  
Use on R07, R08, R09, R11, R16



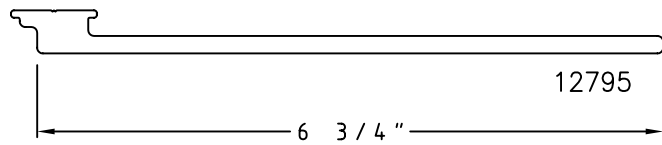
(R20) Sub Sill Anchor 5"  
Use on R07, R08, R09, R11, R16



(R21) 4 1/2" Receptor Slide In Anchor  
Use on R10, R12, R15



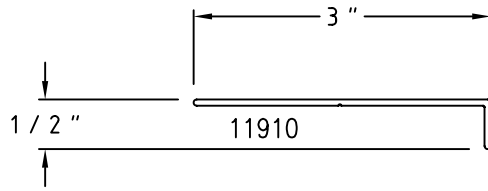
(R18) Sub Sill Projected "L" Shape  
2 3/8" x 5 1/4"  
Use on R05, R06



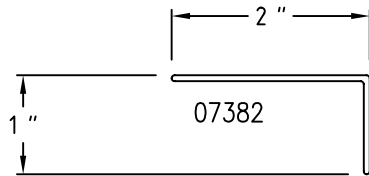
(R22) Receptor Projected Slide In Anchor  
Use on R10, R12

# Champion Stool Covers/Sill Covers

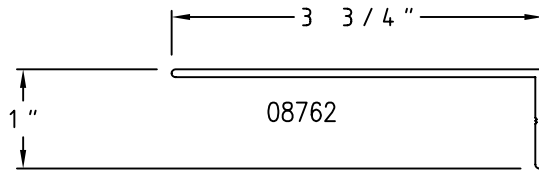
SCALE: HALF



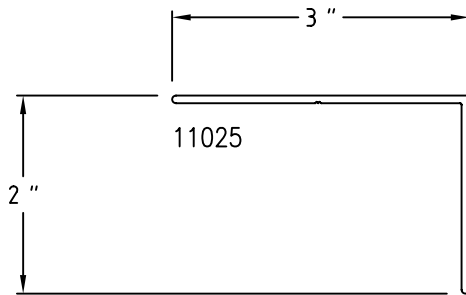
SC1 1/2" x 3" x 0.062" Stool Cover



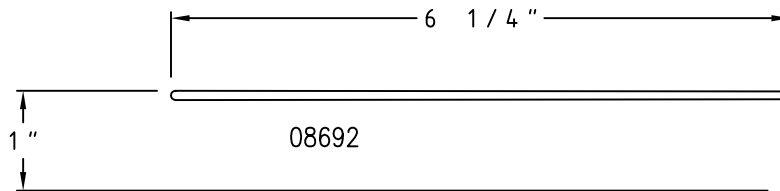
SC2 1" x 2" x 0.060" Stool Cover



SC3 1" x 3 3/4" x 0.078" Stool Cover



SC4 2" x 3" x 0.078" Stool Cover

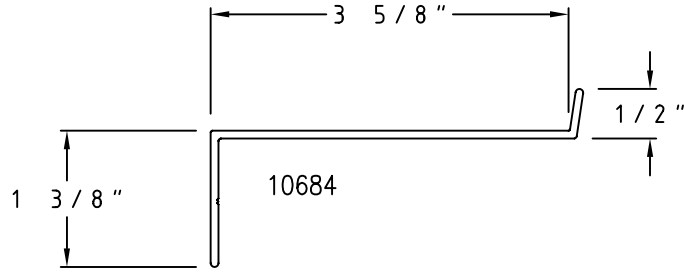


SC5 1" x 6 1/4" x 0.078" Stool Cover

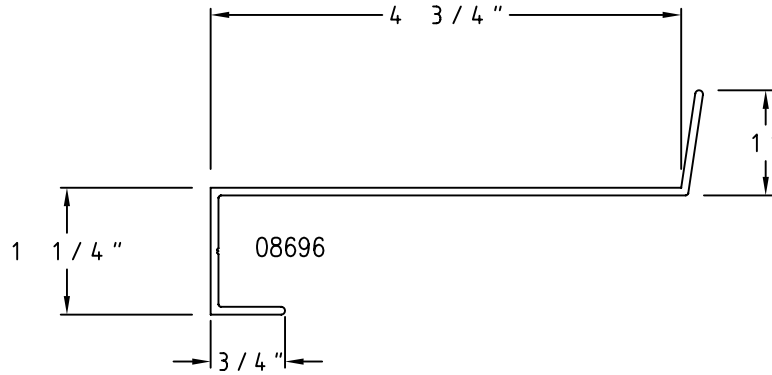


# Champion Stool Covers/Sill Covers

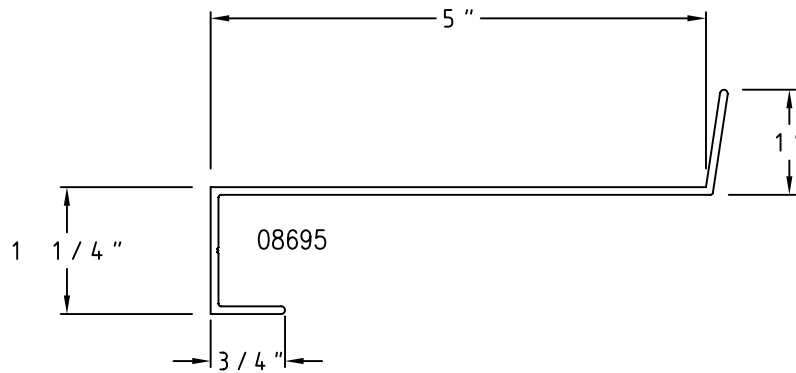
SCALE: HALF



SC6  $1 \frac{3}{8}$ " x  $3 \frac{5}{8}$ " x 0.078" Sill Cover



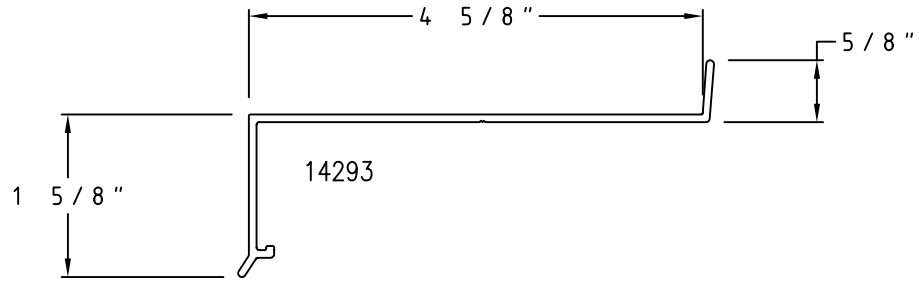
SC7  $1 \frac{1}{4}$ " x  $4 \frac{3}{4}$ " x 0.078" Sill Cover



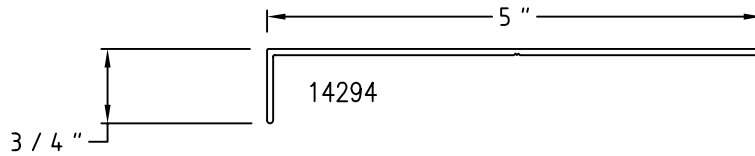
SC8  $1 \frac{1}{4}$ " x 5" x 0.078" Sill Cover

# Champion Stool Covers/Sill Covers

SCALE: HALF



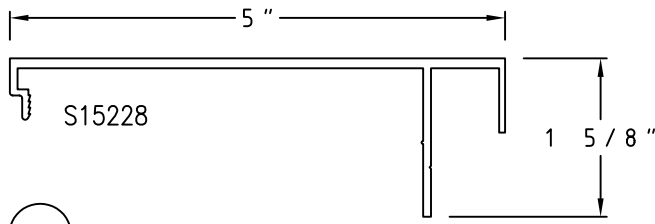
(SC9) 1 5/8" x 4 5/8" x 0.078" Sill Cover



(SC10) 3/4" x 5" x 0.062" Stool Cover

# Champion Stool Covers/Sill Covers

SCALE: HALF

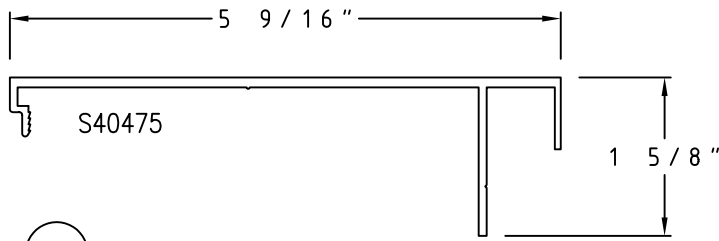


(SC11) 1 5/8" x 5" x 0.125" Stool Cover

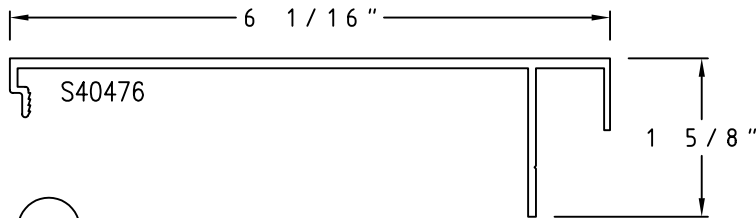


S40472

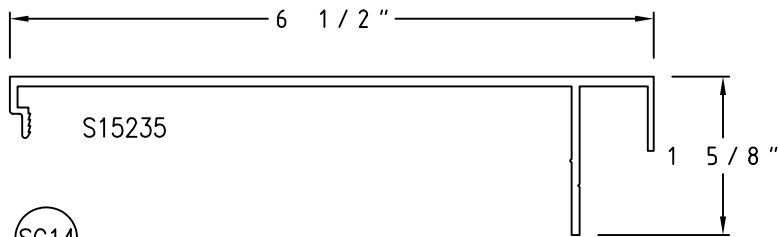
(SC17) STOOL CLIP



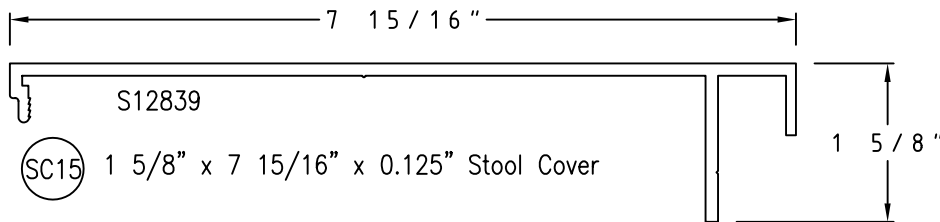
(SC12) 1 5/8" x 5 9/16" x 0.125" Stool Cover



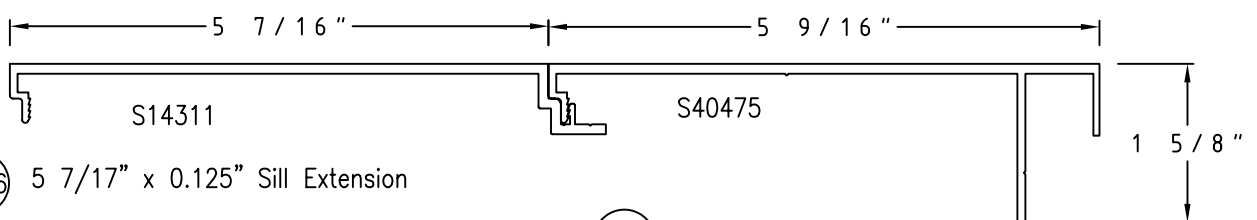
(SC13) 1 5/8" x 6 1/16" x 0.125" Stool Cover



(SC14) 1 5/8" x 6 1/2" x 0.125" Stool Cover



(SC15) 1 5/8" x 7 15/16" x 0.125" Stool Cover



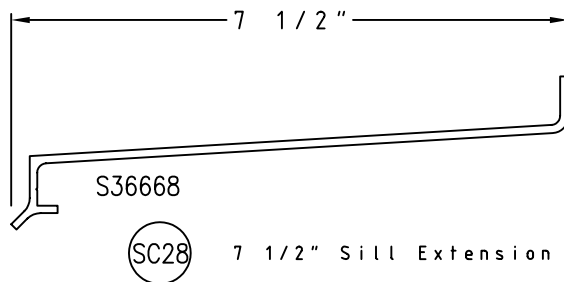
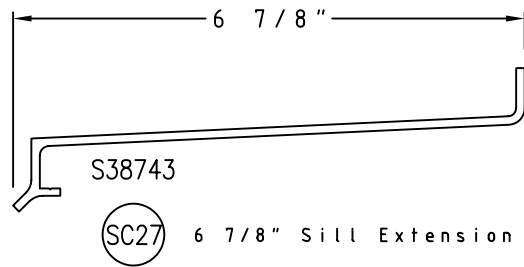
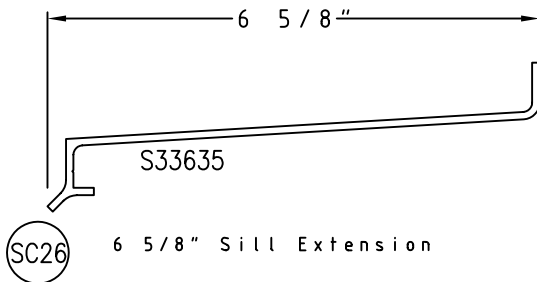
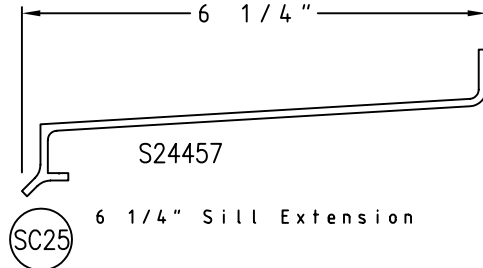
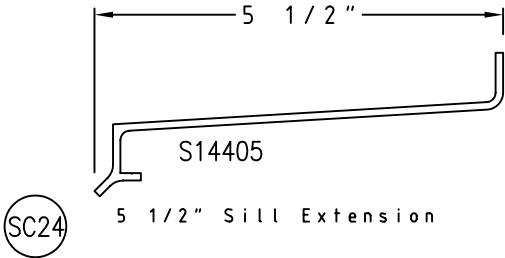
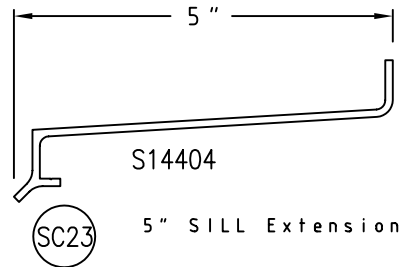
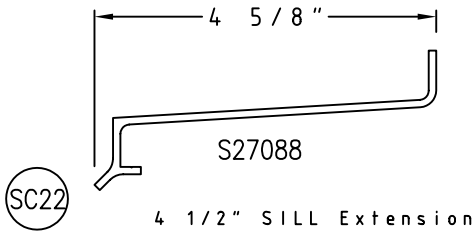
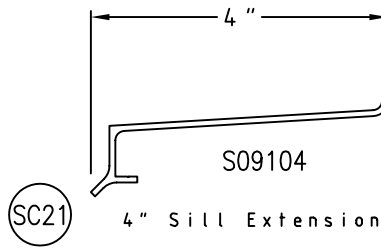
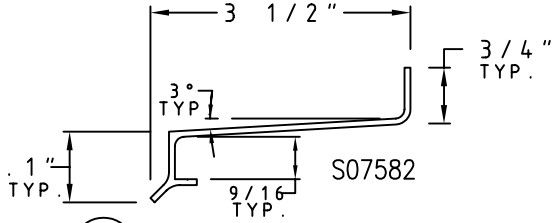
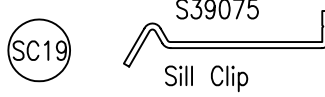
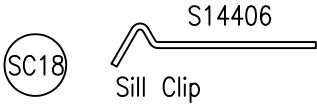
(SC16) 5 7/16" x 0.125" Sill Extension

(SC12) 1 5/8" x 5 9/16" x 0.125" Stool Cover

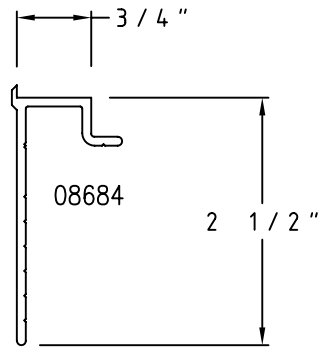
# Champion Stool Covers/Sill Covers

SCALE: HALF

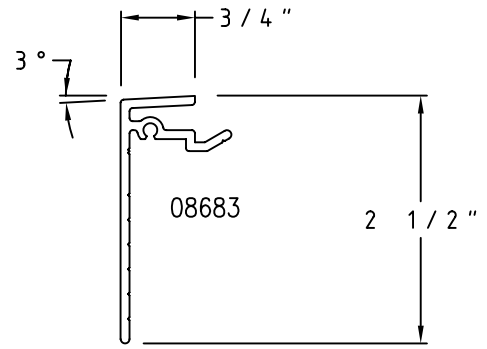
Sheet 5 of 5



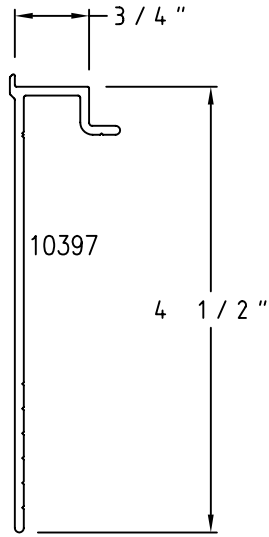
Champion Stool Covers / Sill Covers



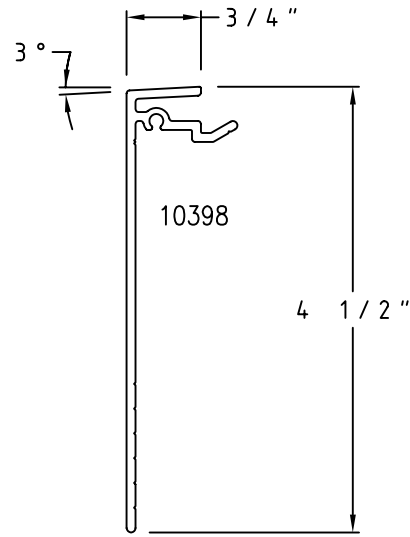
(P01) 3/4" x 2 1/2" Jamb



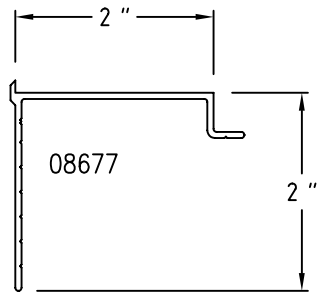
(P04) 3/4" x 2 1/2" Head/Sill



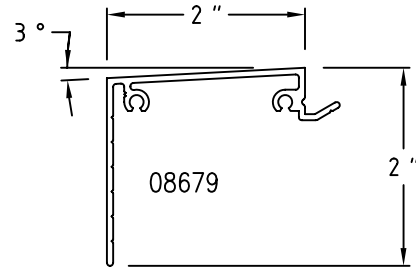
(P02) 3/4" x 4 1/2" Jamb



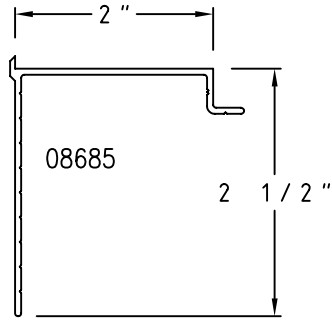
(P05) 3/4" x 4 1/2" Head/Sill



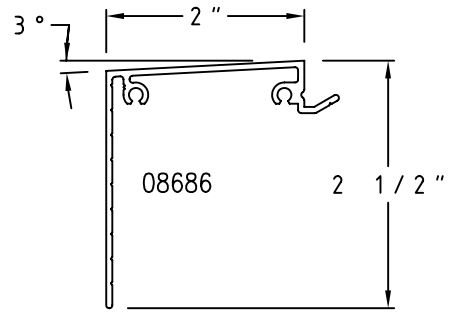
(P03) 2" x 2" Jamb



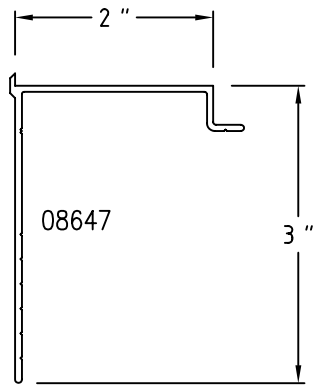
(P06) 2" x 2" Head/Sill



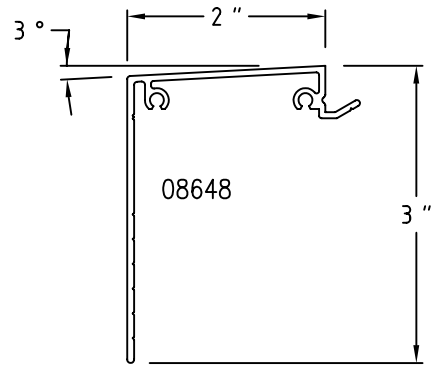
(P07) 2" x 2 1/2" Jamb



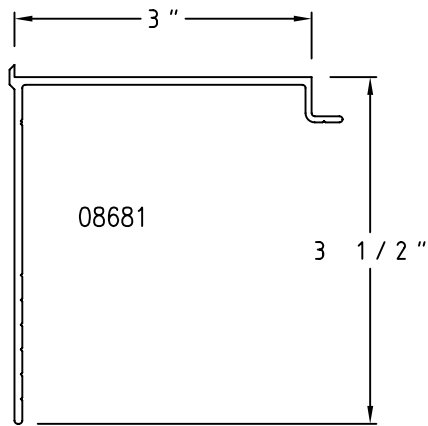
(P10) 2" x 2 1/2" Head/Sill



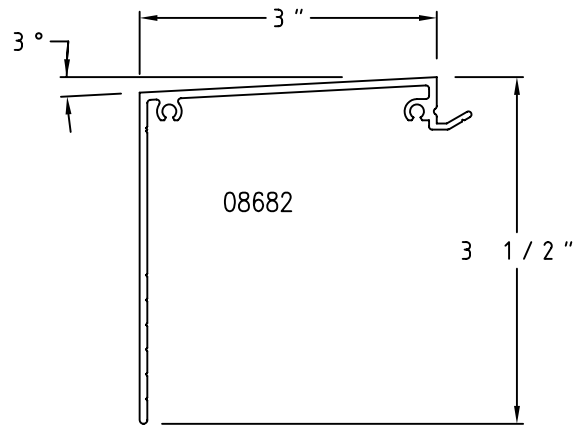
(P08) 2" x 3" Jamb



(P11) 2" x 3" Head/Sill

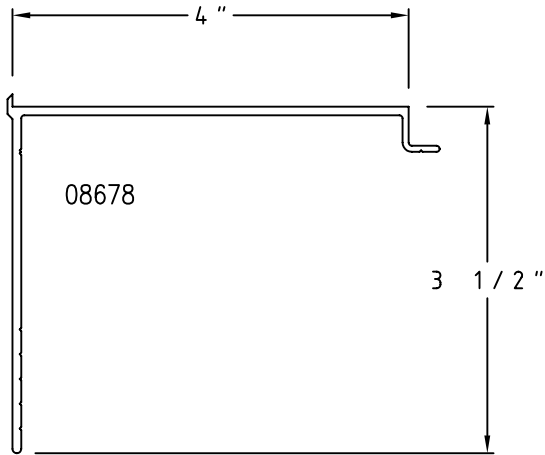


(P09) 3" x 3 1/2" Jamb

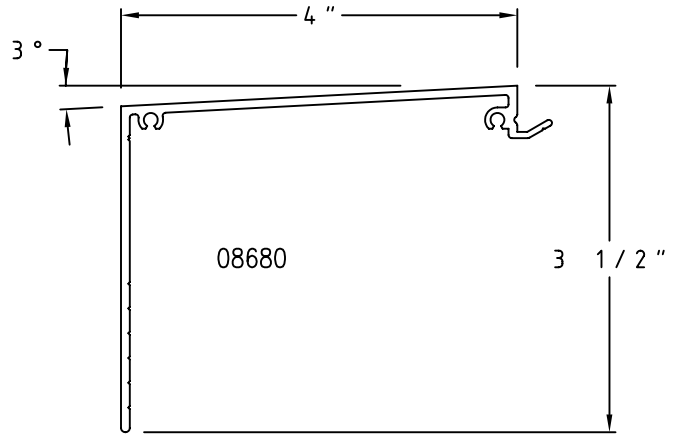


(P12) 3" x 3 1/2" Head/Sill

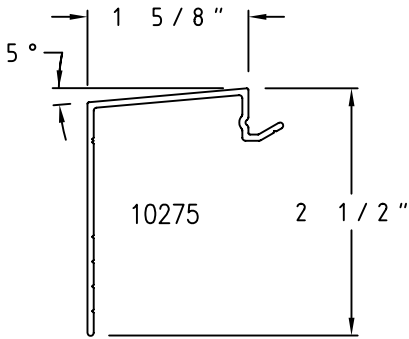
SCALE: HALF



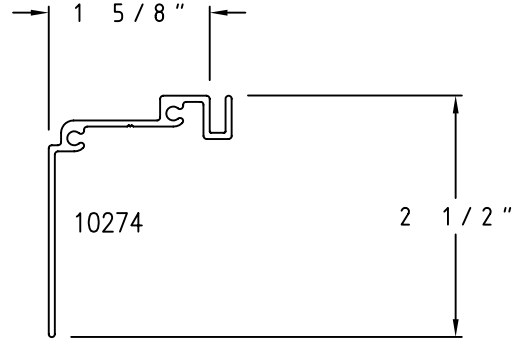
(P13) 4" x 3 1/2" Jamb



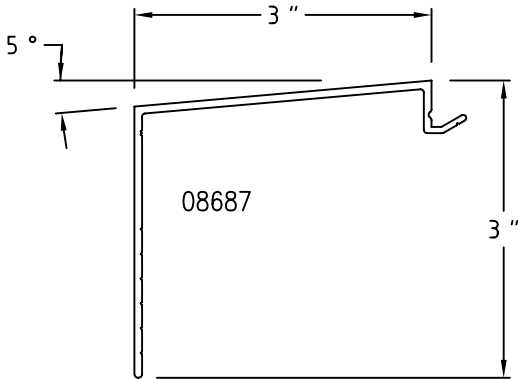
(P16) 4" x 3 1/2" Head/Sill



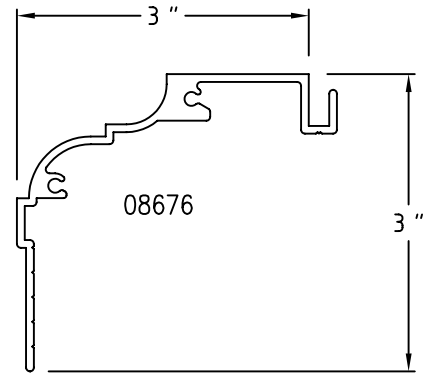
(P14) Small Landmark Sill



(P17) Small Landmark Head/Jamb

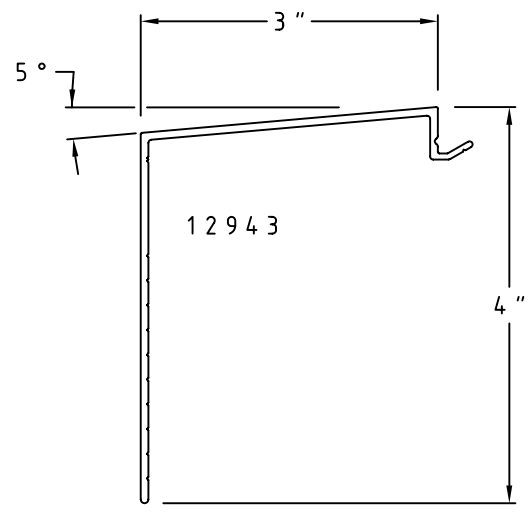


(P15) Landmark Sill

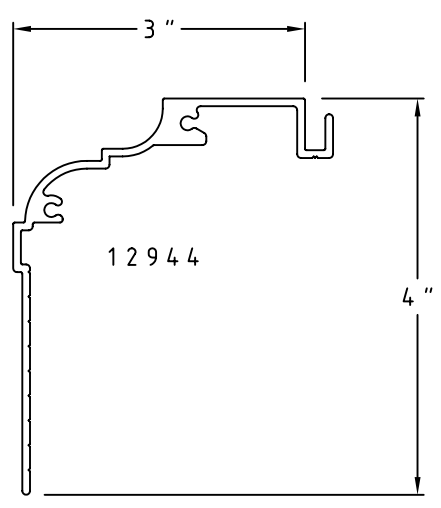


(P18) Landmark Head/Jamb

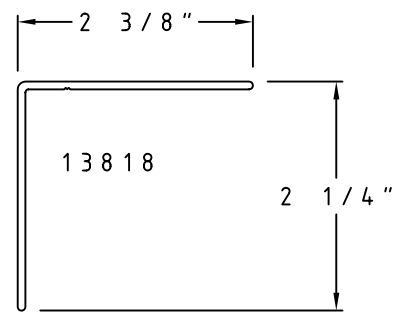
SCALE: HALF



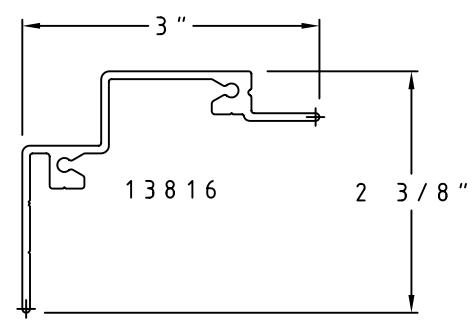
(P19) 3" x 4" Historical Sill



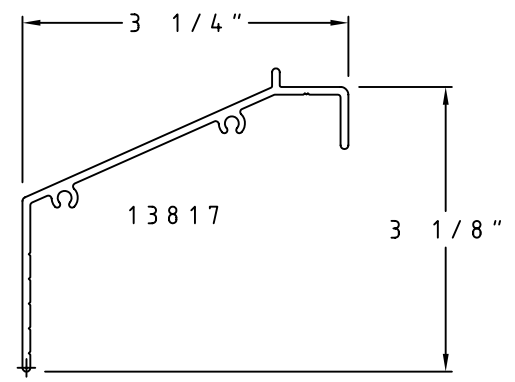
(P22) 3" x 4" Historical Head/Jamb



(P20) 2 3/8" x 2 1/4" Jamb



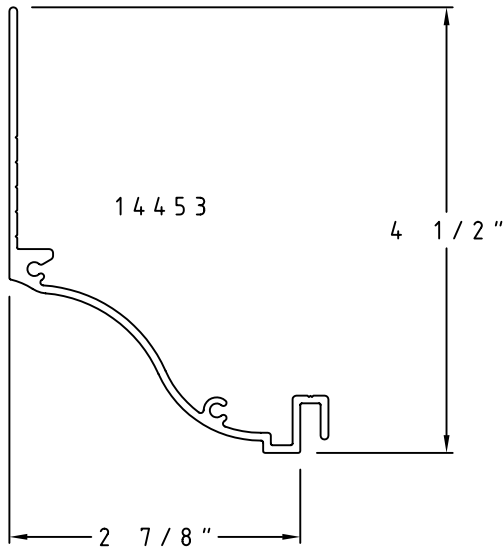
(P23) 3" x 2 3/8" Head



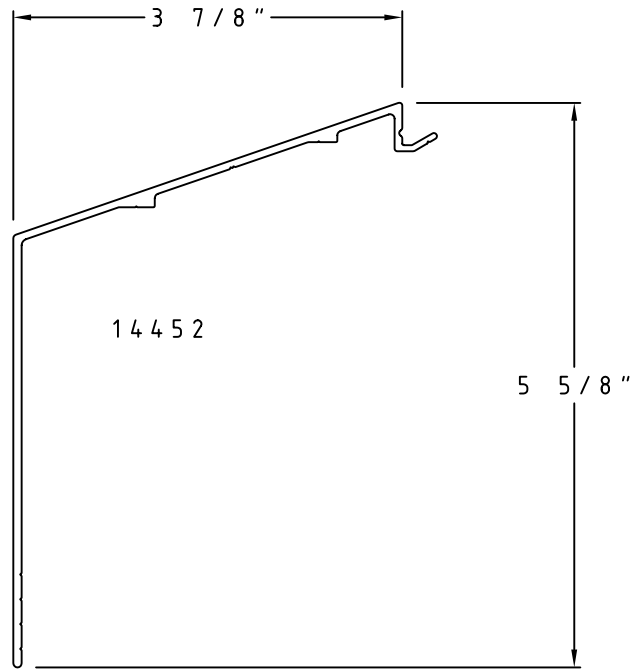
(P24) 3 1/4" x 3 1/8" Sill



SCALE: HALF



(P26) 2 7/8" x 4 1/2" Historical Head/Jamb

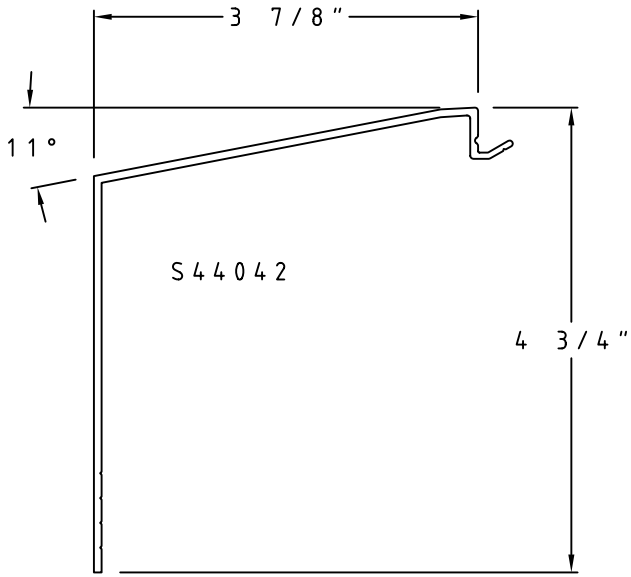


(P27) 3 7/8" x 5 5/8" Historical SILL

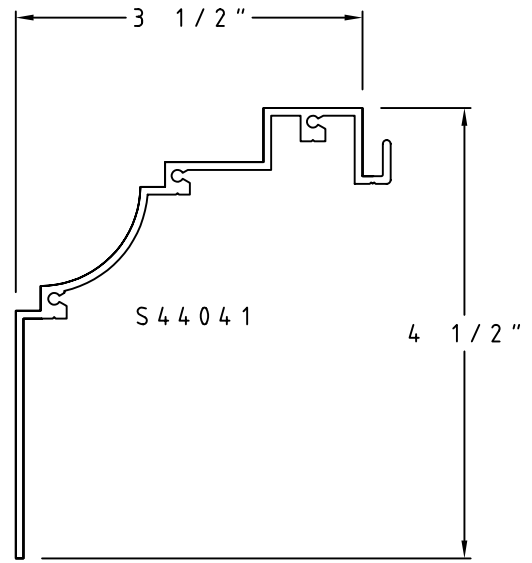
# Champion Panning

SCALE: HALF

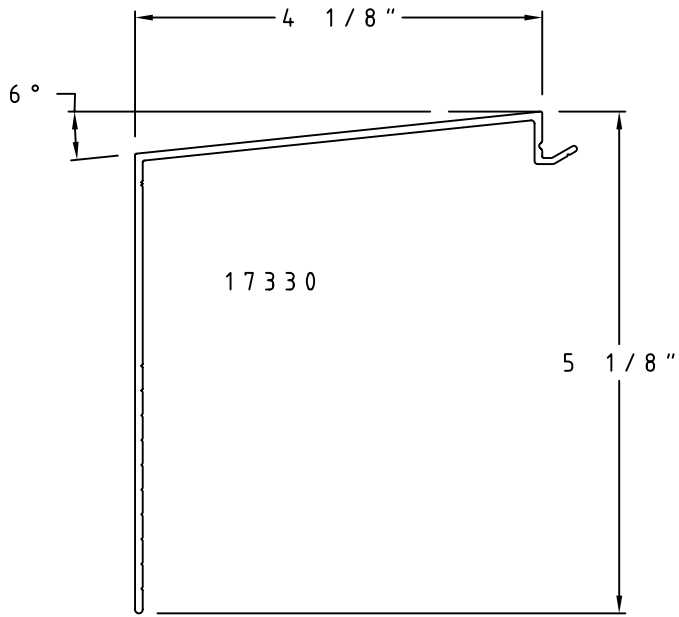
Sheet 6 of 11



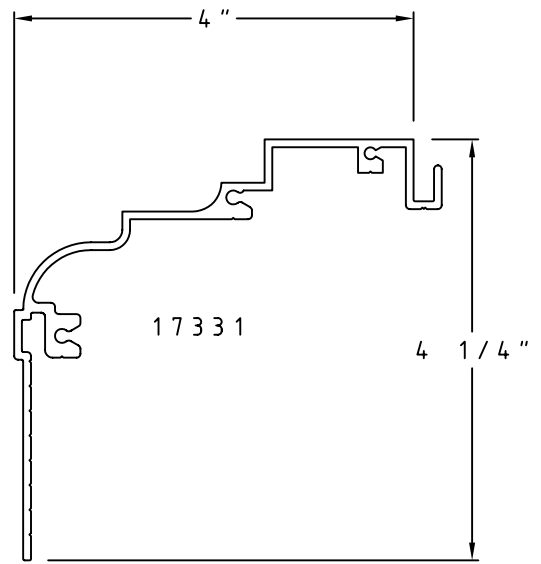
(P28) 3 7/8" x 4 3/4" SILL



(P29) 3 1/2" x 4 1/2" Head/Jamb

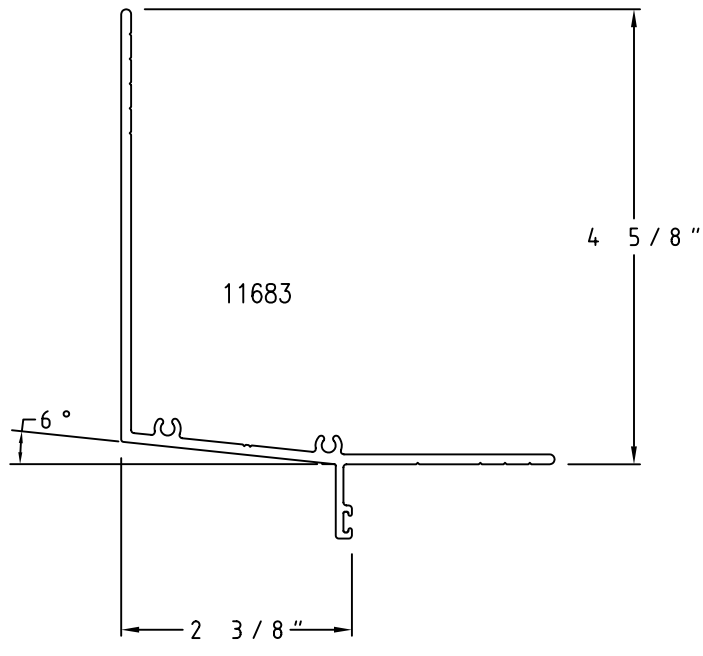


(P30) 4 1/8" x 5 1/8" SILL

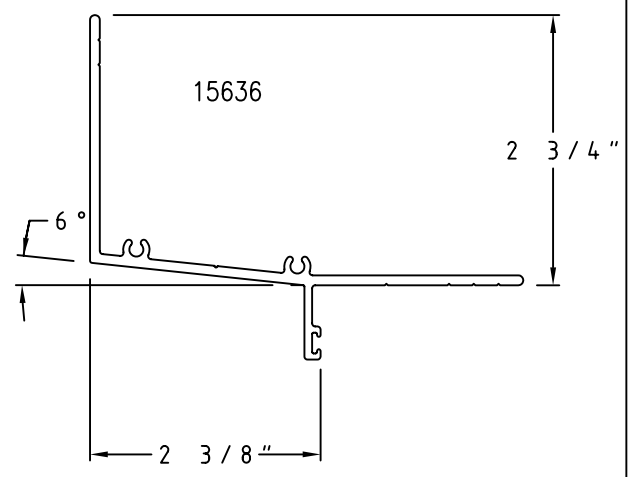


(P31) 4" x 4 1/4" Head/Jamb

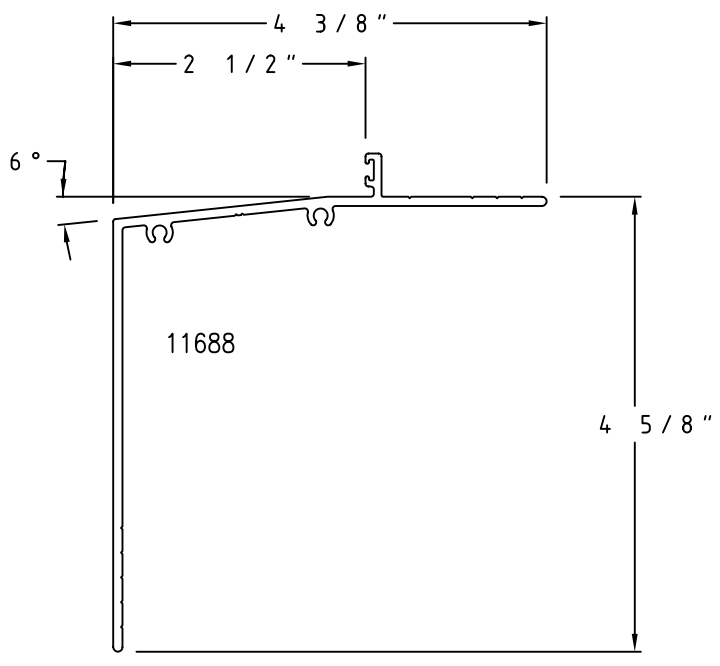
SCALE: HALF



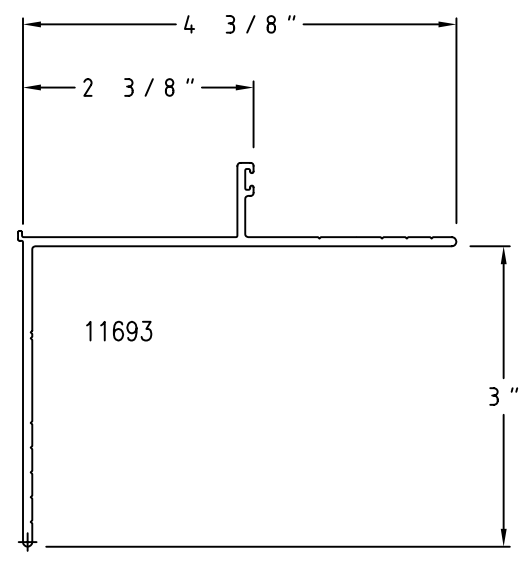
(P32) 2 3/8" x 4 5/8" Pre-Set Head



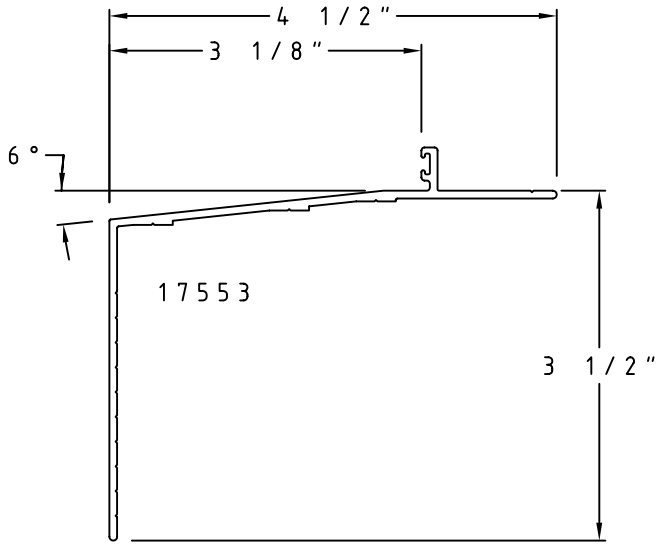
(P33) 2 3/8" x 2 3/4" Pre-sSet Head



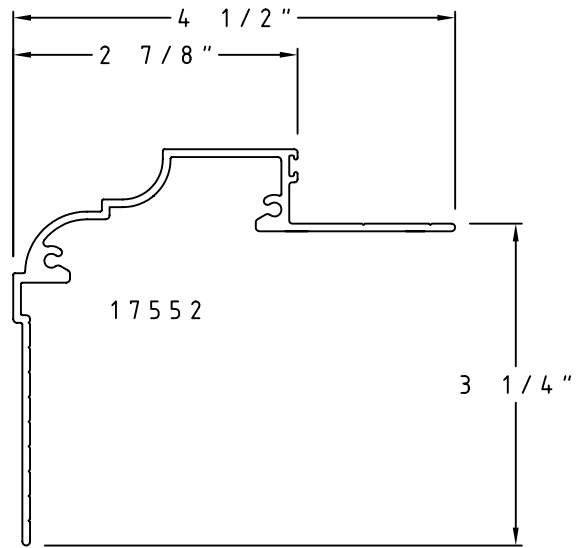
(P34) 2 1/2" x 4 5/8" Pre-Set Sill



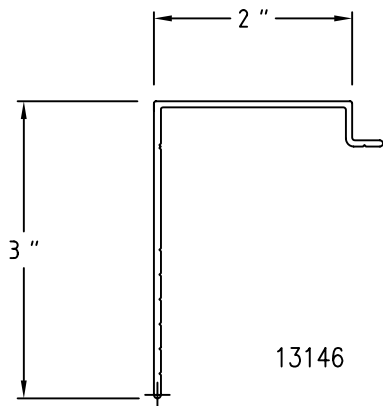
(P35) 2 3/8" x 3 1/8" Pre-set Jamb



Ⓟ P36 3 1/8" x 3 1/2" SILL

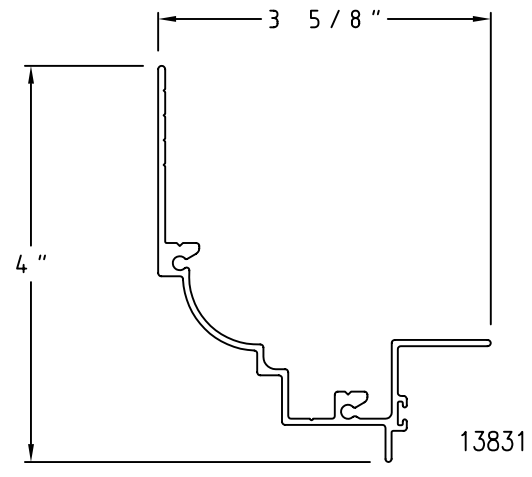


Ⓟ P37 2 7/8" x 3 1/4" Head/Jamb

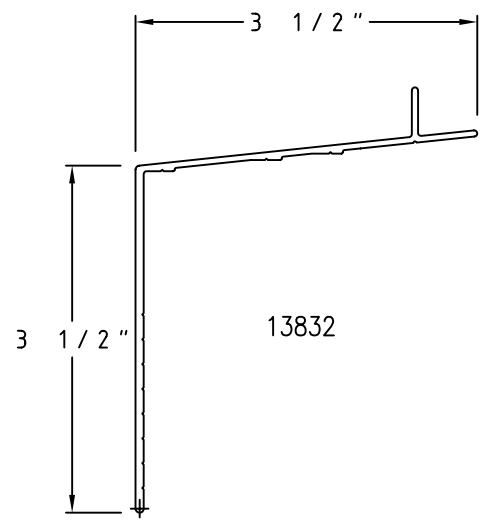


Ⓟ P38 2" x 3" Jamb New

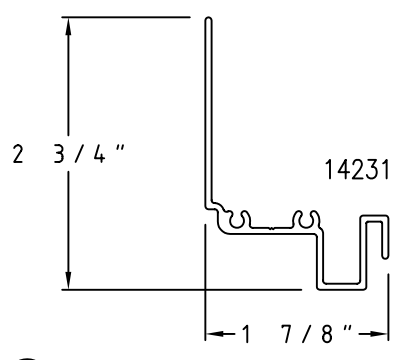
SCALE: HALF



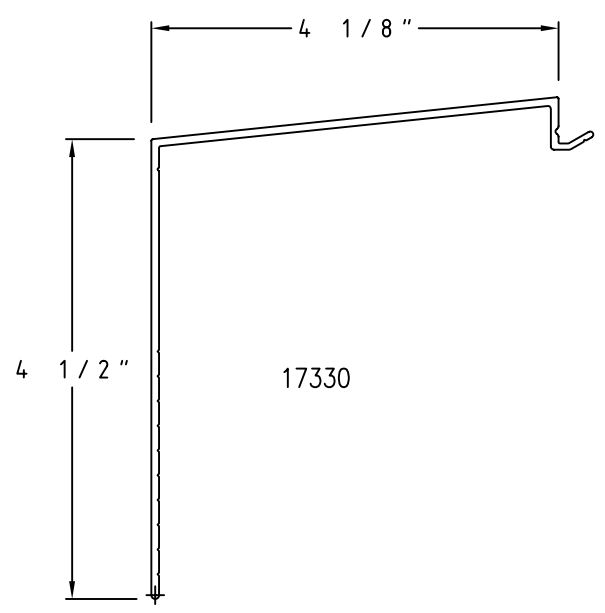
(P39) 3 5/8" x 4" Special Landmark Hd/Jamb



(P40) 3 1/2" x 3 1/2" Special Landmark Sill



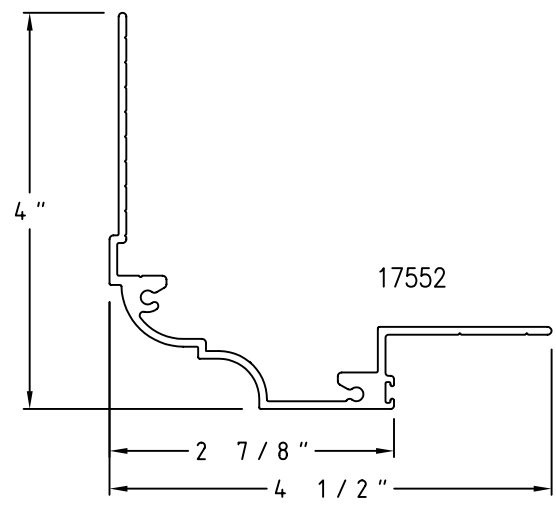
(P41) 1 7/8" x 2 3/4" Landmark Hd/Jamb



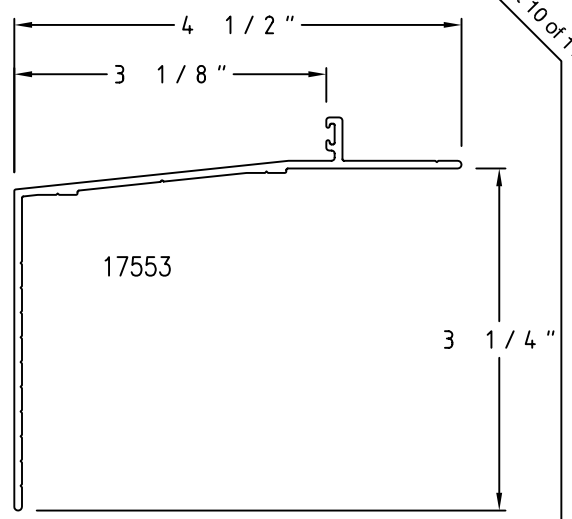
(P42) 4 1/8" x 4 1/2" Landmark Sill

# Champion Panning

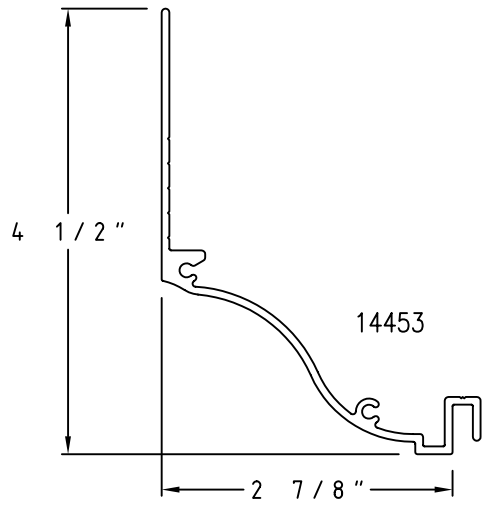
SCALE: HALF



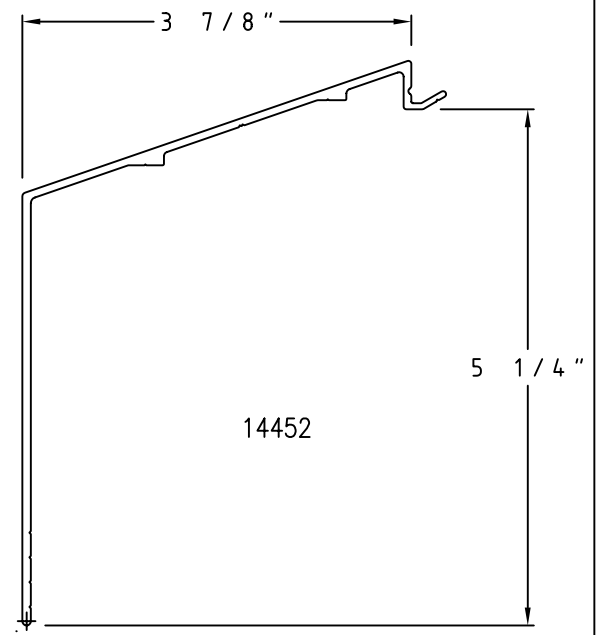
(P43) 4 1/2" x 4" Preset Head/Jamb



(P44) 4 1/2" x 3 1/4" Sill

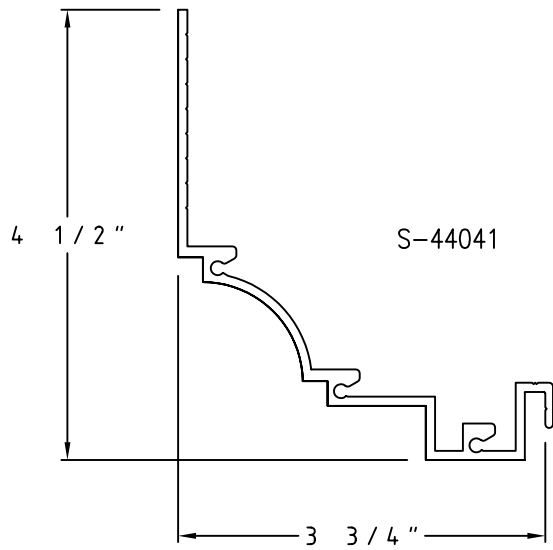


(P45) 3" x 2 3/4" Head/Jamb

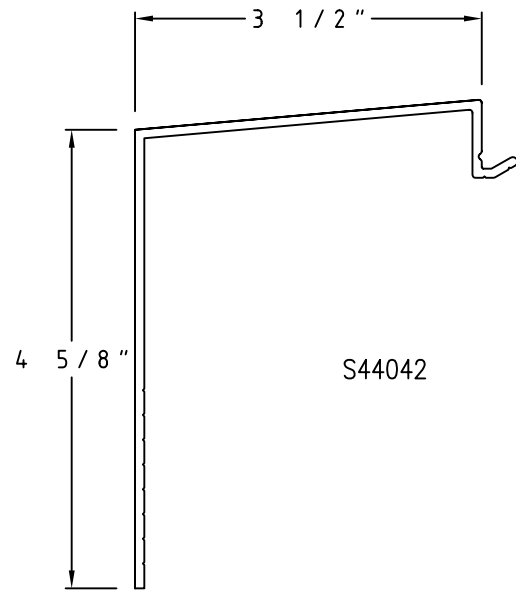


(P46) 3" x 2 3/4" Head/Jamb

SCALE: HALF



(P47) 3 3/4" x 4 1/2" Landmark Head/Jamb

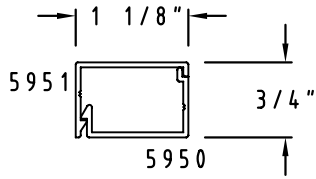


(P48) 3 1/2" x 4 5/8" Landmark Sill

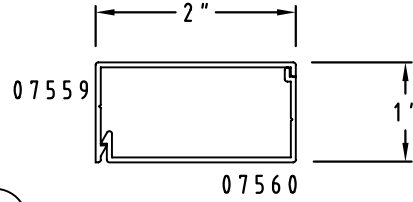
# Champion Snap Trim

SCALE: HALF

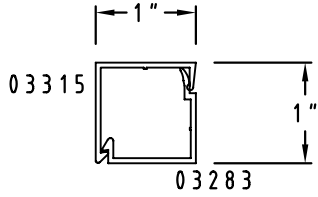
Sheet 1 of 6



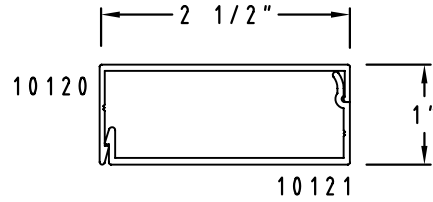
ST1 1 1/8" x 3/4"



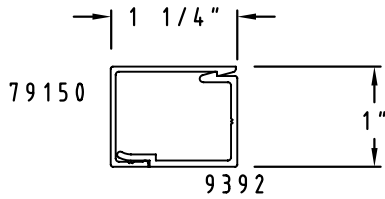
ST6 2" x 1"



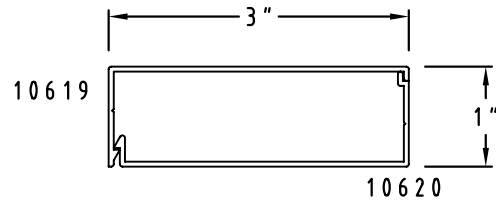
ST2 1" x 1"



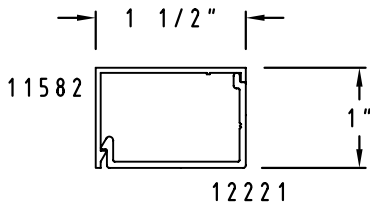
ST7 2 1/2" x 1"



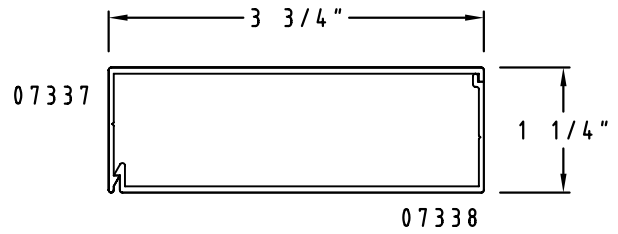
ST3 1 1/4" x 1"



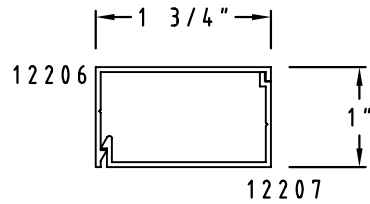
ST8 3" x 1"



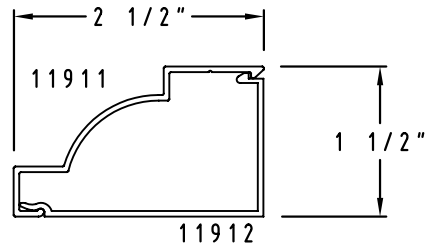
ST4 1 1/2" x 1"



ST9 3 3/4" x 1 1/4"



ST5 1 3/4" x 1"



ST10 2 1/2" x 1 1/2"

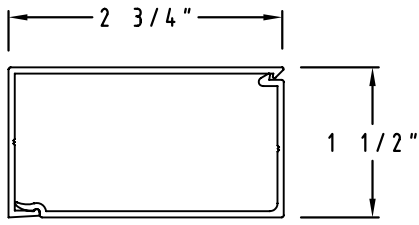
Champion Snap Trim



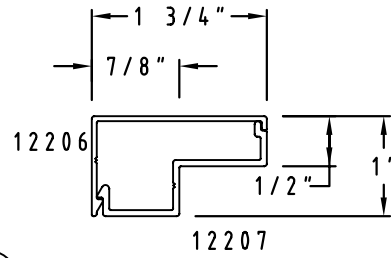
# Champion Snap Trim

SCALE: HALF

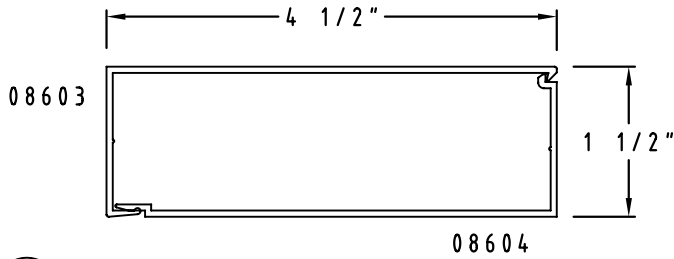
Sheet 2 of 6



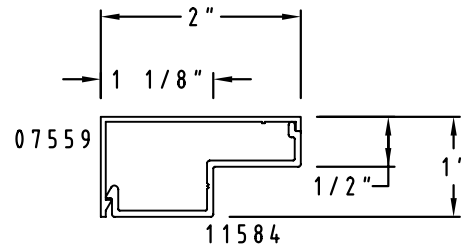
ST11 2 3/4" x 1 1/2"



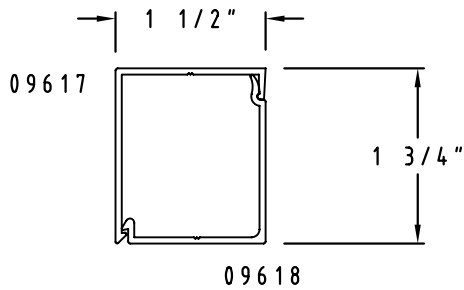
ST15 1 3/4" x 1" with Step Clip



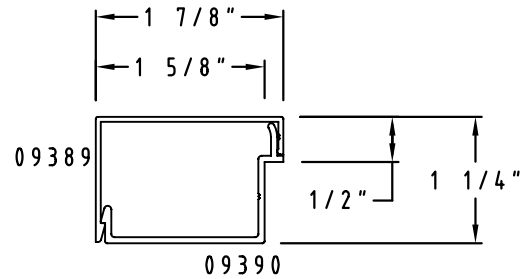
ST12 4 1/2" x 1 1/2"



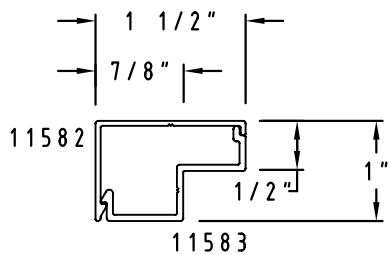
ST16 2" x 1" with Step Clip



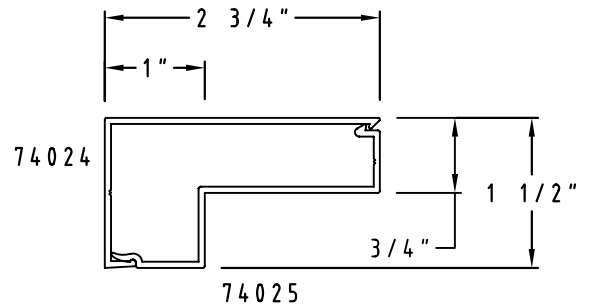
ST13 1 1/2" x 1 3/4"



ST17 1 7/8" x 1 1/4"



ST14 1 1/2" x 1" with Step Clip



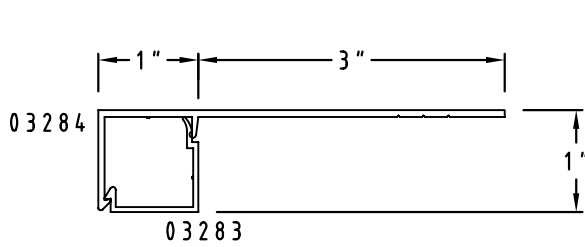
ST18 2 3/4" x 1 1/2" with Step Clip

Champion Snap Trim

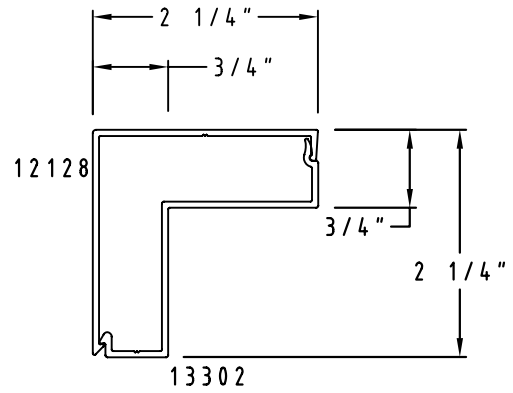
# Champion Snap Trim

SCALE: HALF

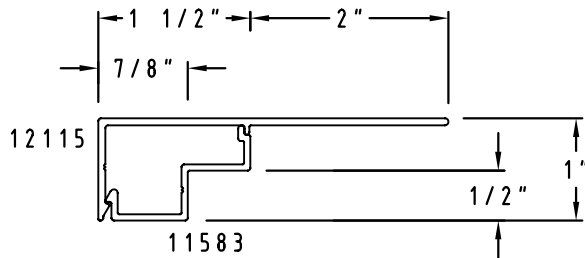
Sheet 3 of 6



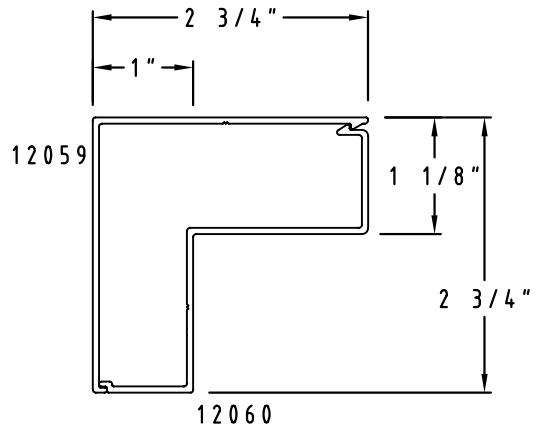
ST19 1" x 1" with 3" Leg



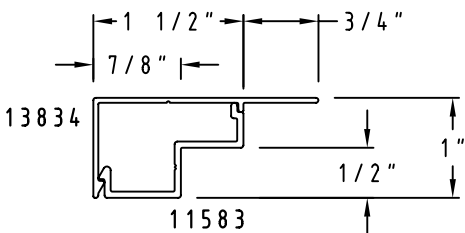
ST23 2 1/4" x 2 1/4" with Step Clip



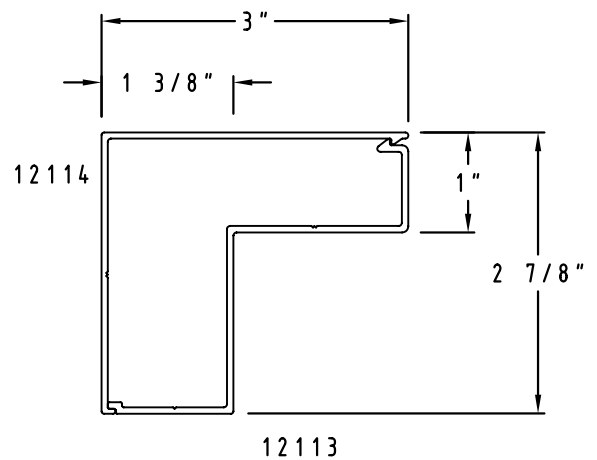
ST20 1 1/2" x 1" with 2" Leg and Step Clip



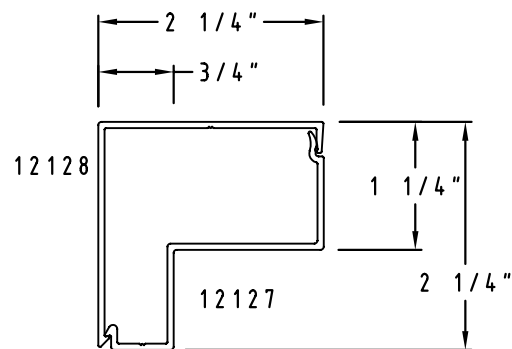
ST24 2 3/4" x 2 3/4" with Step Clip



ST21 1 1/2" x 1" with 3/4" Leg and Step Clip



ST25 3" x 2 7/8" with Step Clip



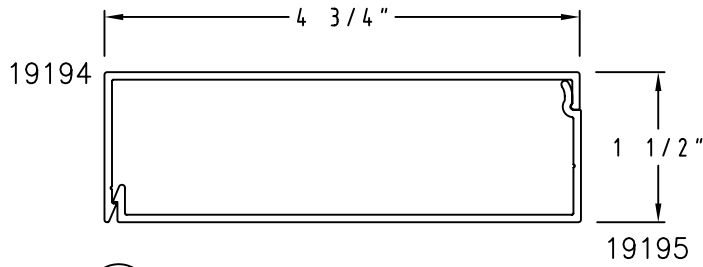
ST22 2 1/4" x 2 1/4" with Step Clip

Champion Snap Trim

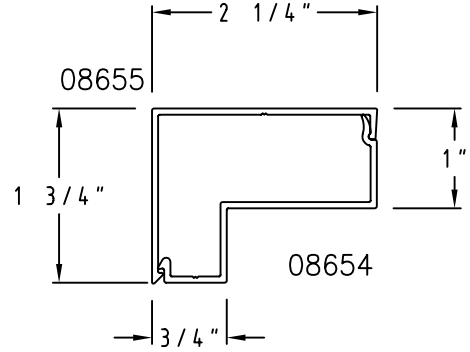
# Champion Snap Trim

SCALE: HALF

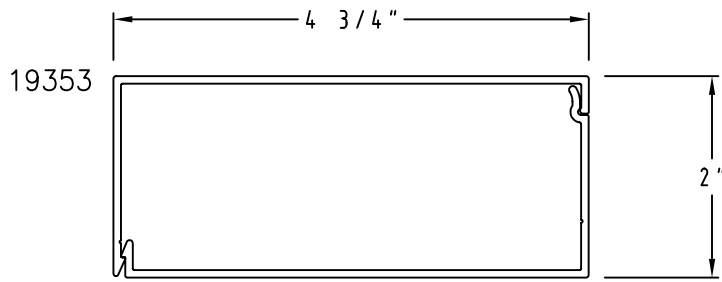
Sheet 4 of 6



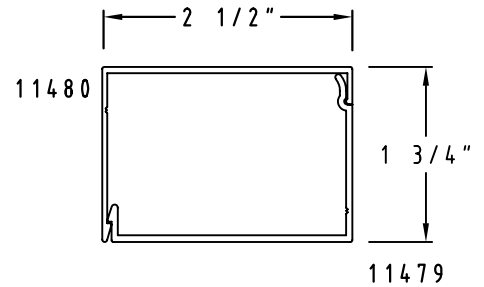
ST26 4 3/4" x 1 1/2"



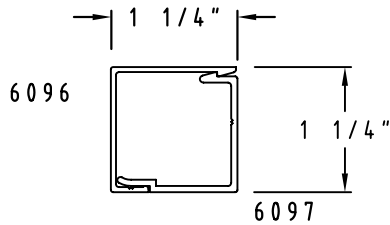
ST30 2 1/4" x 1 3/4" with Step Clip



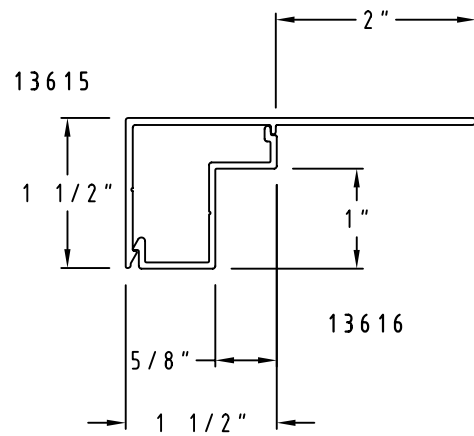
ST27 4 3/4" x 2"



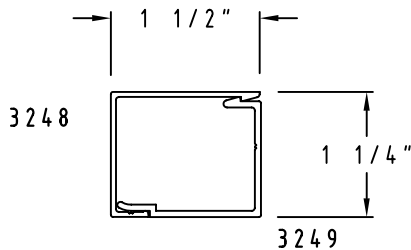
ST31 2 1/2" x 1 3/4"



ST28 1 1/4" x 1 1/4"



ST32 1 1/2" x 1 1/2" with 2" Leg with Step Clip



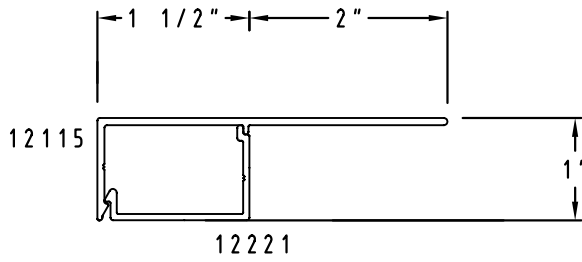
ST29 1 1/2" x 1 1/4"

Champion Snap Trim

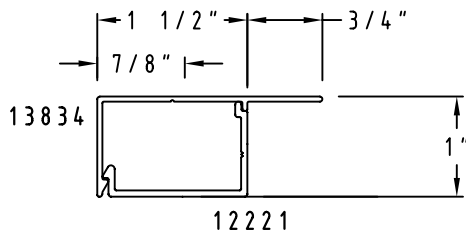
# Champion Snap Trim

SCALE: HALF

Sheet 5 of 6



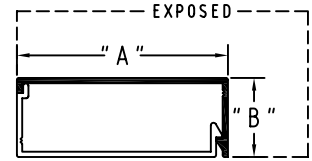
ST33 1 1/2" x 1" with 2" Leg and Regular Clip



ST34 1 1/2" x 1" with 3/4" Leg and Regular Clip

# Champion Snap Trim

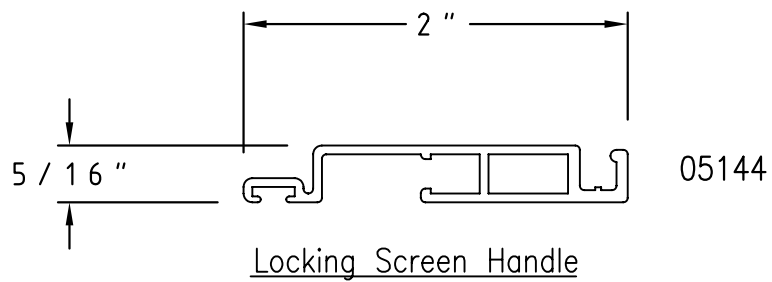
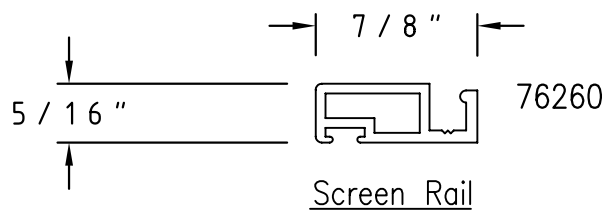
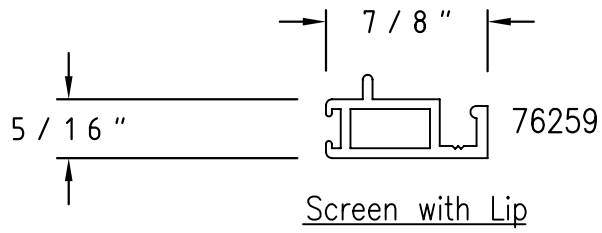
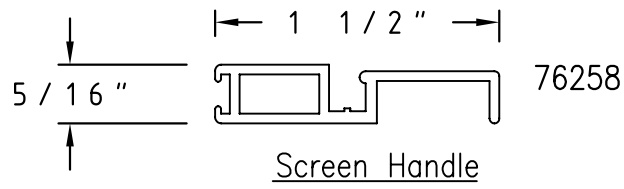
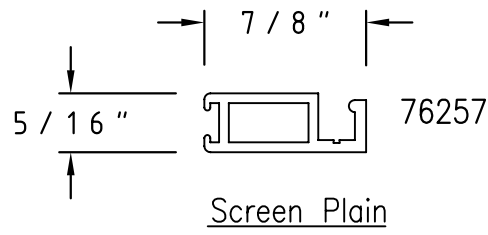
SCALE: HALF  
NON-STOCK SNAP TRIM



"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"
1"	X 1 1/2"	1 1/4"	X 1 3/4"	1 1/2"	X 1 1/2"	1 3/4"	X 1 3/4"
1"	X 1 3/4"			1 1/2"	X 3/4"	1 3/4"	X 2 1/4"
1"	X 3 3/8"			1 1/2"	X 1 1/2"	1 3/4"	X 2 1/2"
1"	X 3 7/16"			1 1/2"	X 2 1/4"		
1"	X 3 3/4"			1 1/2"	X 2 1/2"		
1"	X 4"			1 1/2"	X 4"		
"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"
2"	X 3/4"	2 1/4"	X 1"	2 3/8"	X 1"	2 1/2"	X 3/4"
2"	X 1 3/8"	2 1/4"	X 2"			2 1/2"	X 1 1/2"
2"	X 1 1/2"					2 1/2"	X 1 3/4"
2"	X 2"						
"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"
2 3/4"	X 3/4"	2 7/8"	X 1"	3"	X 1 1/2"	3 1/4"	X 3/4"
2 3/4"	X 1 3/4"			3"	X 2"		
"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"
3 7/16"	X 7/8"	3 1/2"	X 1 1/2"	4 5/8"	X 3/4"		
3 7/16"	X 1"	3 1/2"	X 2"	4 5/8"	X 1 1/2"		
"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"

# Champion Series Screens

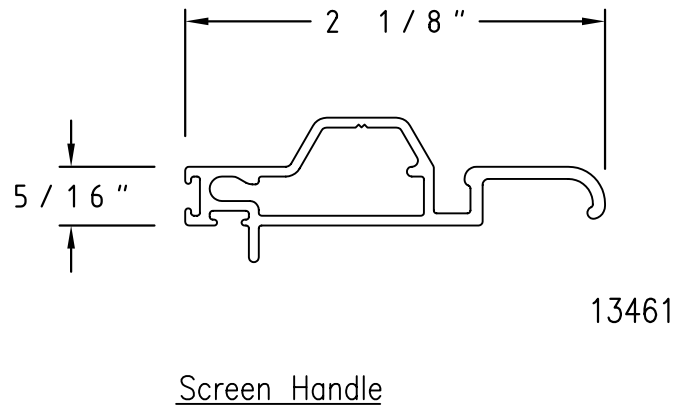
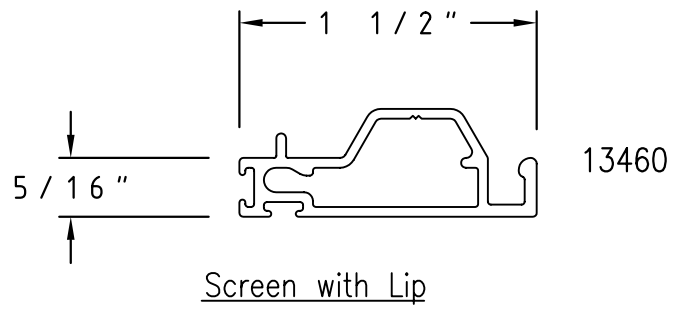
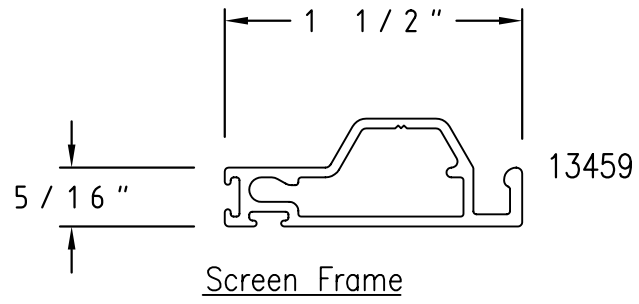
SCALE: 1:1



# Champion Series Screens

Sheet 2 of 2

SCALE: 1:1



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## **Frame-Dependant Accessories Contents**

[2 1/2" Accessories](#)

[2 7/8" Accessories](#)

[3 1/4" Accessories](#)

[4 1/8" Accessories](#)

[4 1/2" Accessories](#)

140 Eileen Way \* Syosset, NY 11791 \*T: 516-921-6200 \* Fax: 516-921-6370

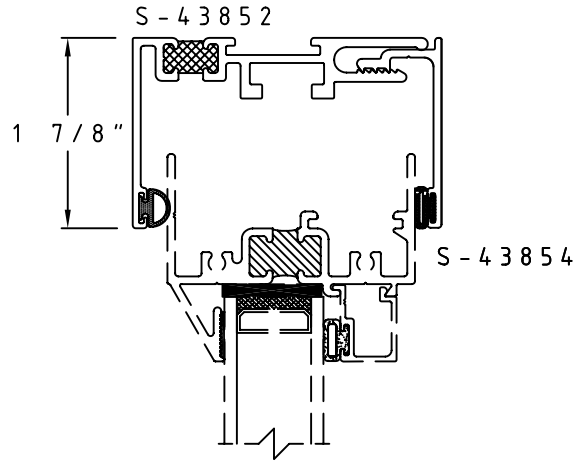
[www.championwindows.com](http://www.championwindows.com)



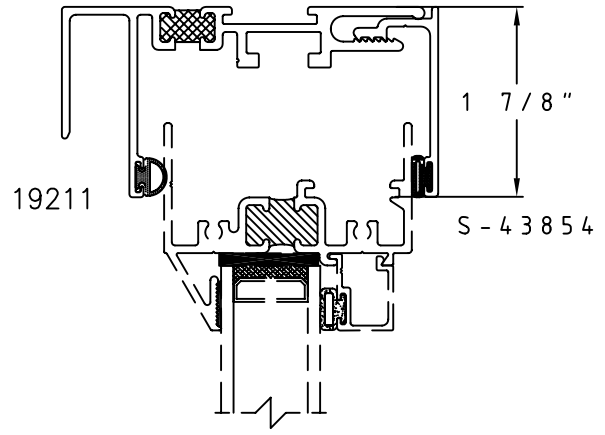
# Champion-Frame Depth Dependant Accessories-2 1/2"

SCALE: HALF

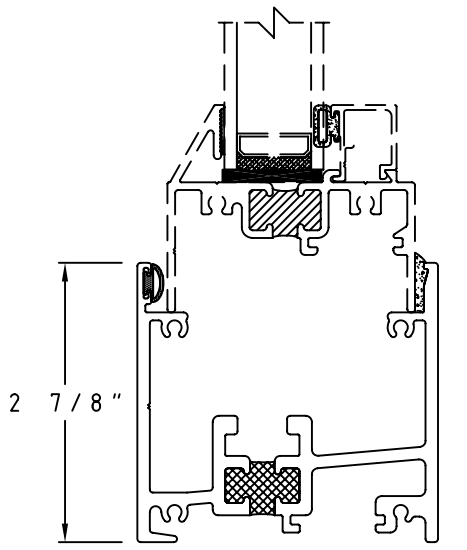
Sheet 1 of 4



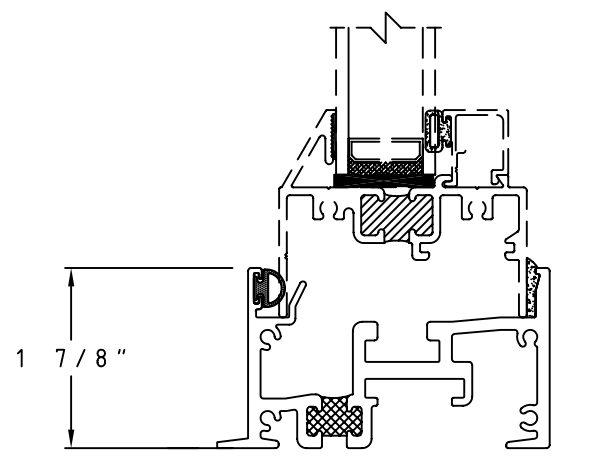
(R03) 2 1/2" Receptor



(R13) 2 1/2" Receptor w/Slab Cover Leg



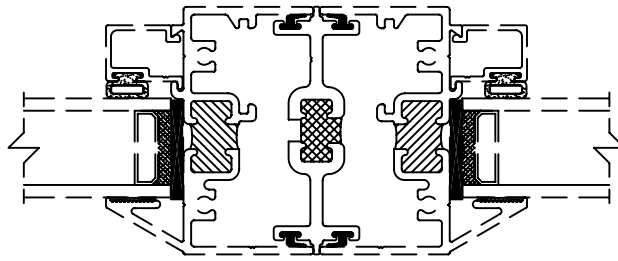
(R06) 2 1/2" Sub Sill



(R09) 2 1/2" Sub Sill Low

Champion Frame Depth Dependant Accessories

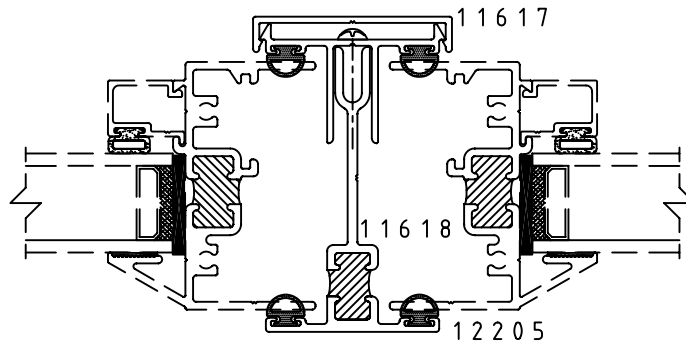
SCALE: HALF



(M20)

12073

H MULLION FOR 2 1/2" WINDOWS



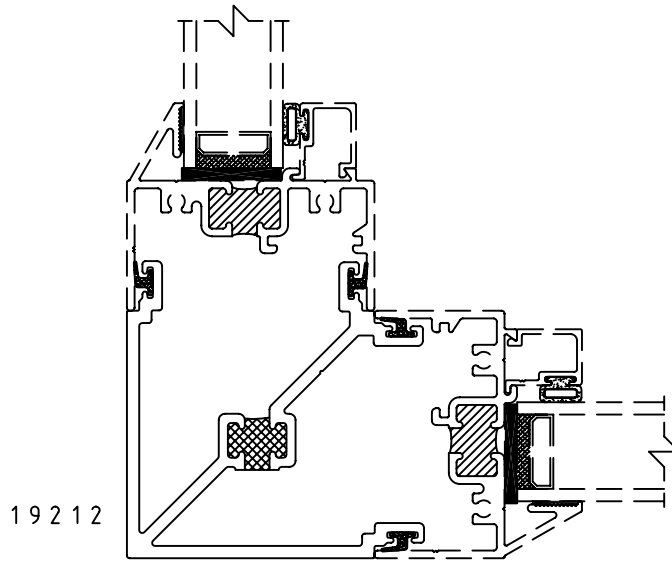
(M07)

Used for 2 1/2" Series Windows

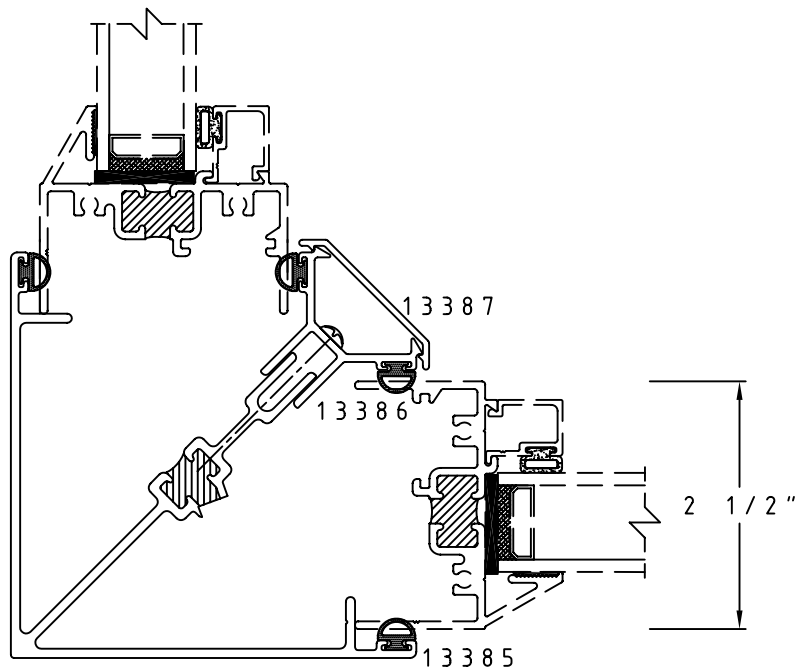
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FOR ORDERING PURPOSES, REFER TO THE CAP AS: A  
THE PRESSURE PLATE AS: B, AND THE MULLION AS: C

SCALE: HALF



(M20) Used for 2 1/2" Series Windows

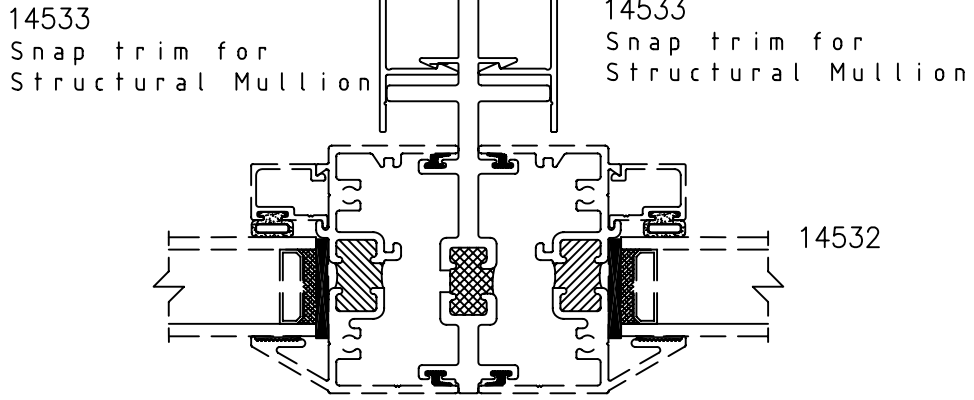


(M08) Used for 2 1/2" Series Windows

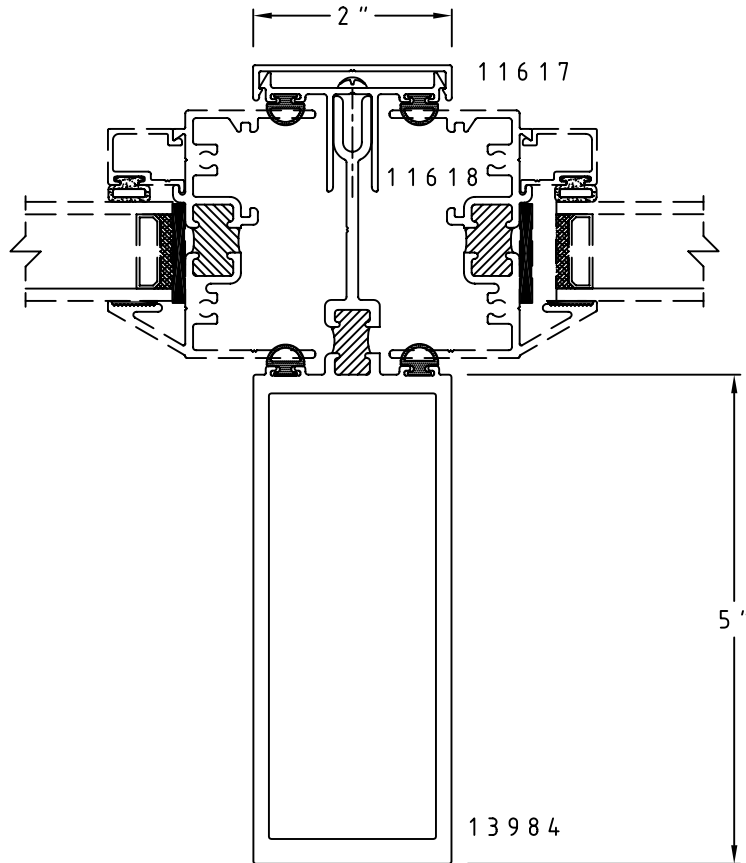
FOR ORDERING PURPOSES, REFER TO THE CAP AS: A  
THE PRESSURE PLATE AS: B, AND THE MULLION AS: C

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SCALE: HALF



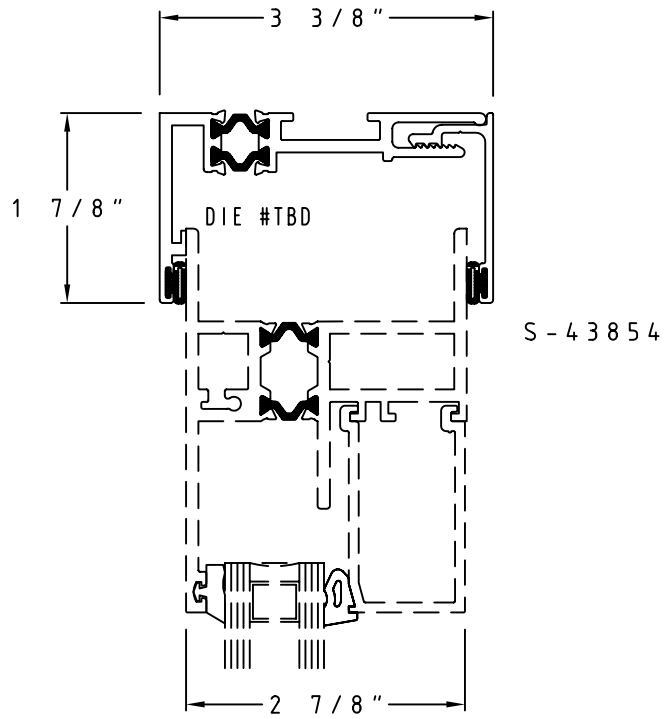
(M19) Structural Mullion w/Snap trim  
For 2 1/2" window



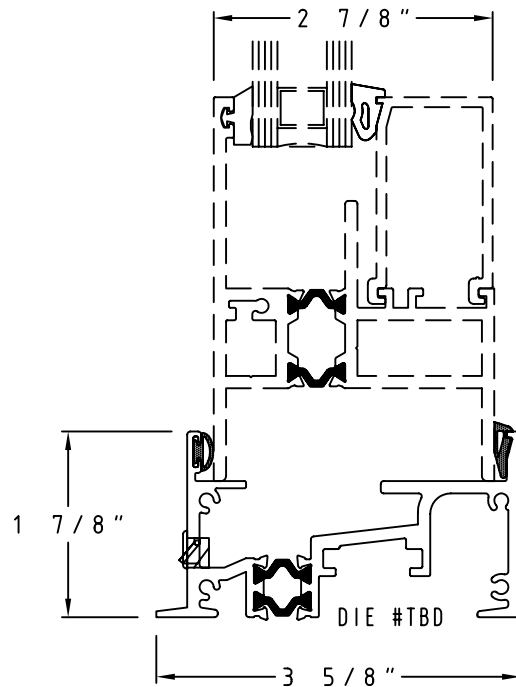
(M09) Used for 2 1/2" Series Windows

FOR ORDERING PURPOSES, REFER TO THE CAP AS: A  
THE PRESSURE PLATE AS: B, AND THE MULLION AS: C

SCALE: HALF

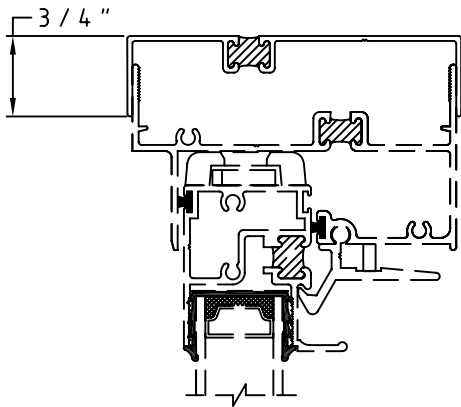


(R15) 2 7/8" Receptor

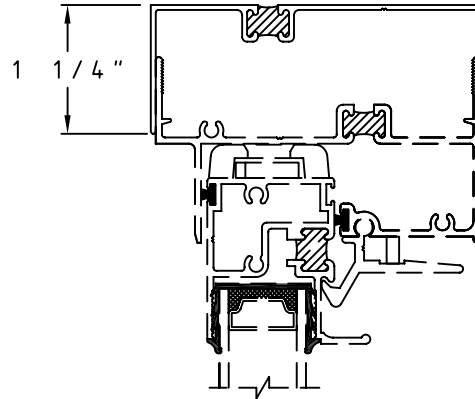


(R16) 2 7/8" Sub Sill

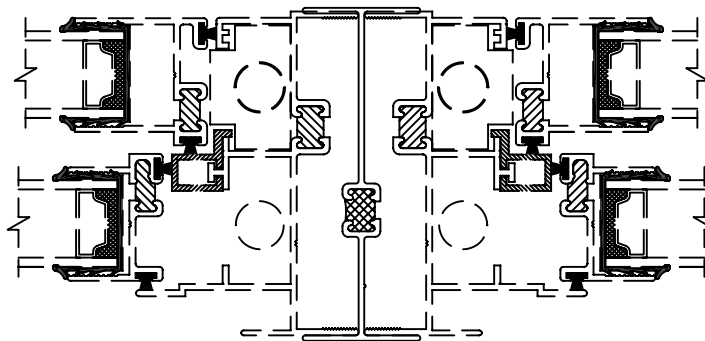
SCALE: HALF



(A23) 3/4" x 3 3/8" Head Expander



(A24) 1 1/4" x 3 3/8" Head Expander

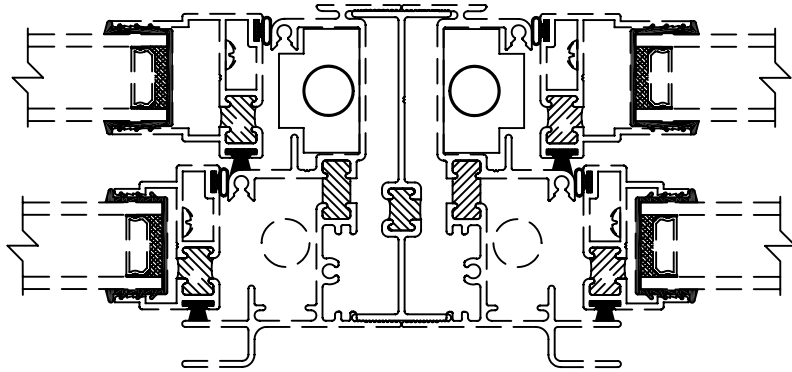


(M23)

11585

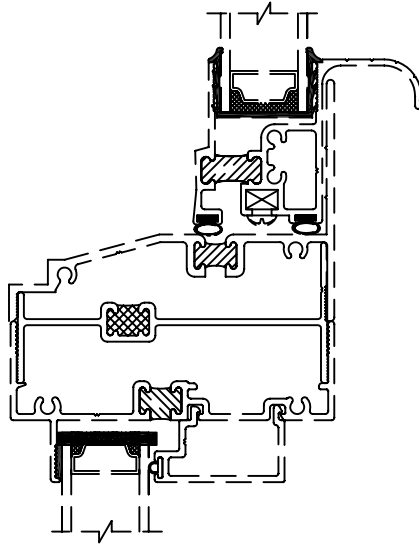
H-Mullion for 3 1/4" Window

SCALE: HALF



(M22) 11015

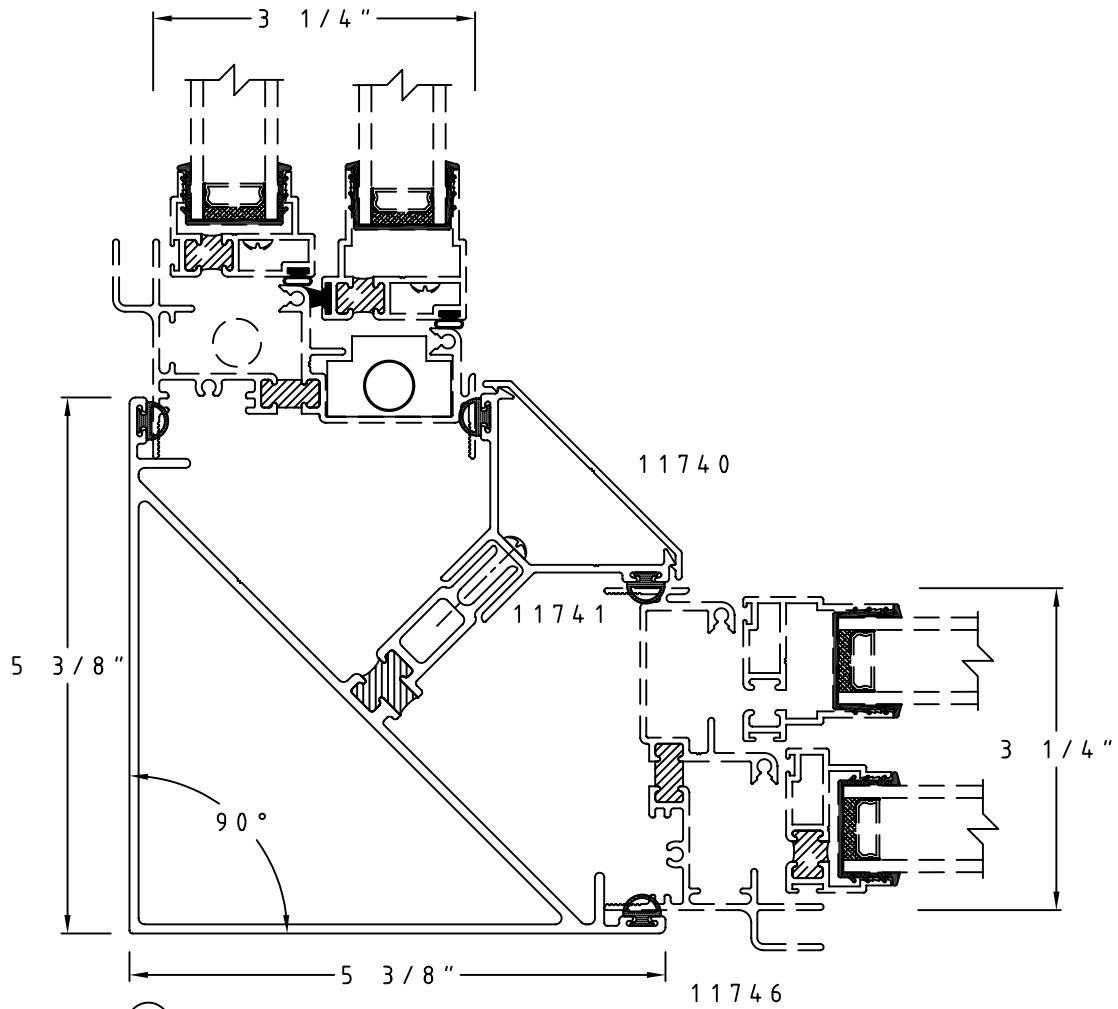
Tie-in Mullion for 3/4" Window



(M25)

11016  
Stack Mullion for 3/4" Window

SCALE: HALF



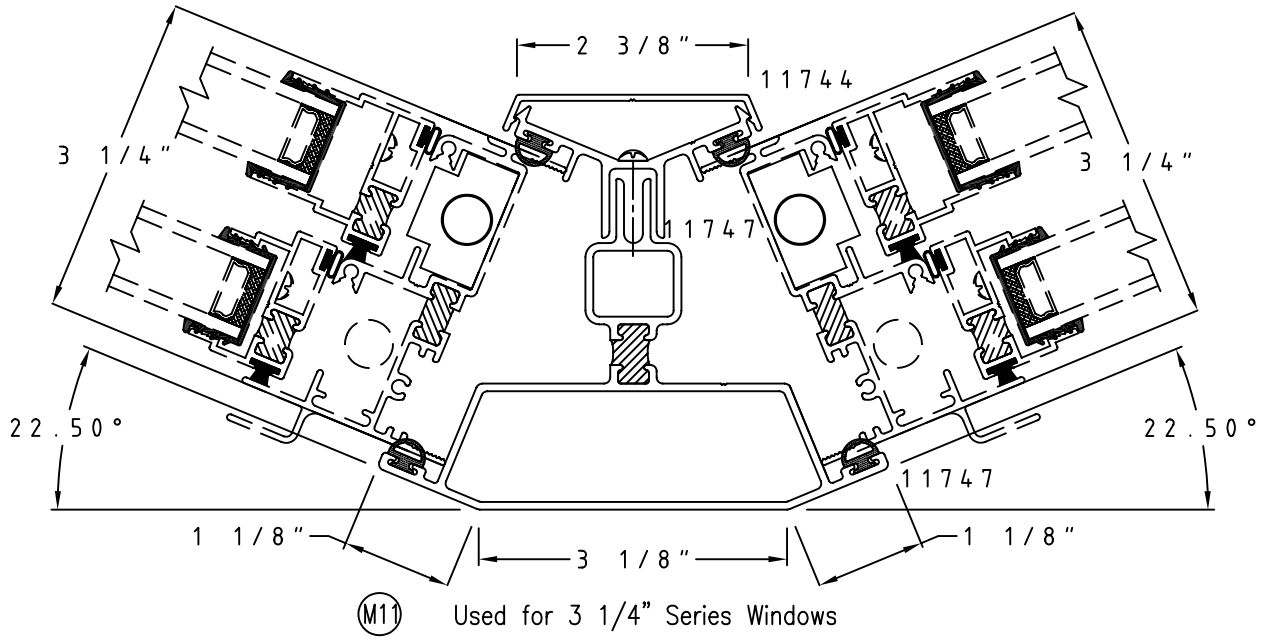
(M10) Used for 3 1/4" Series Windows

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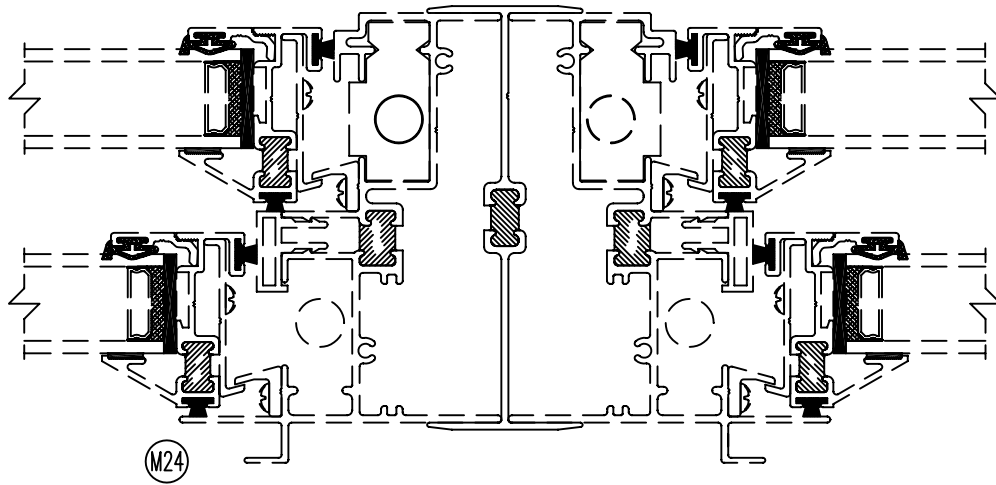
# Champion-Frame Depth Dependant Accessories-3 1/4"

SCALE: HALF



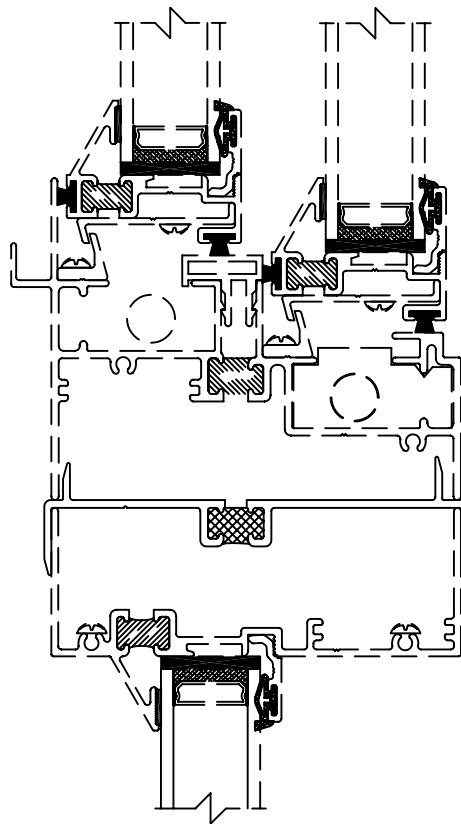
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H-Mullion for 4 1/8" Window

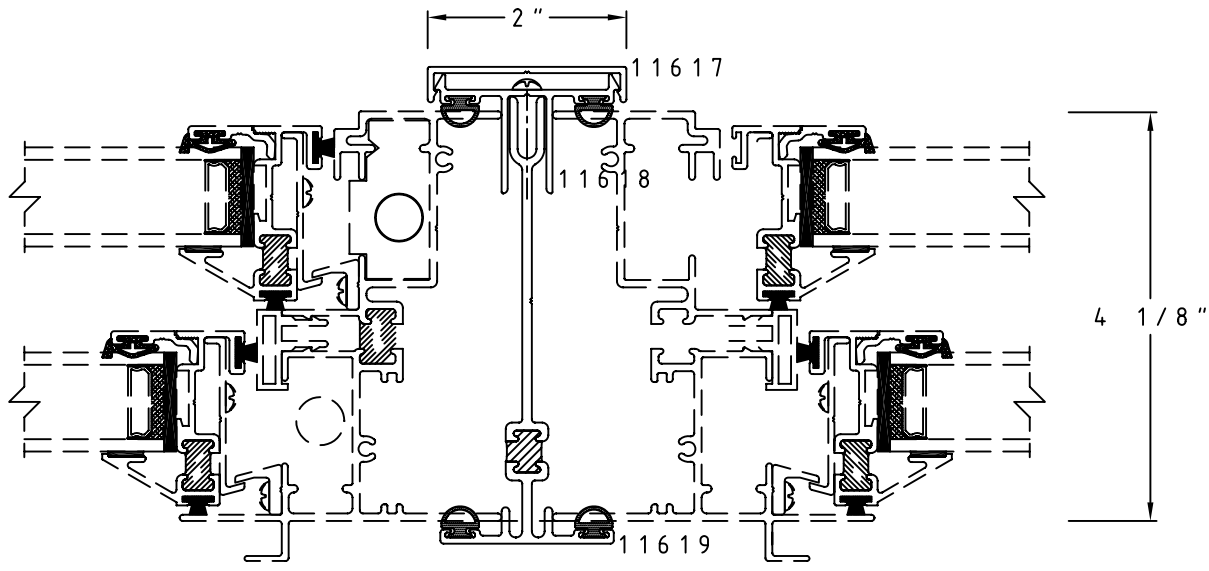


10940

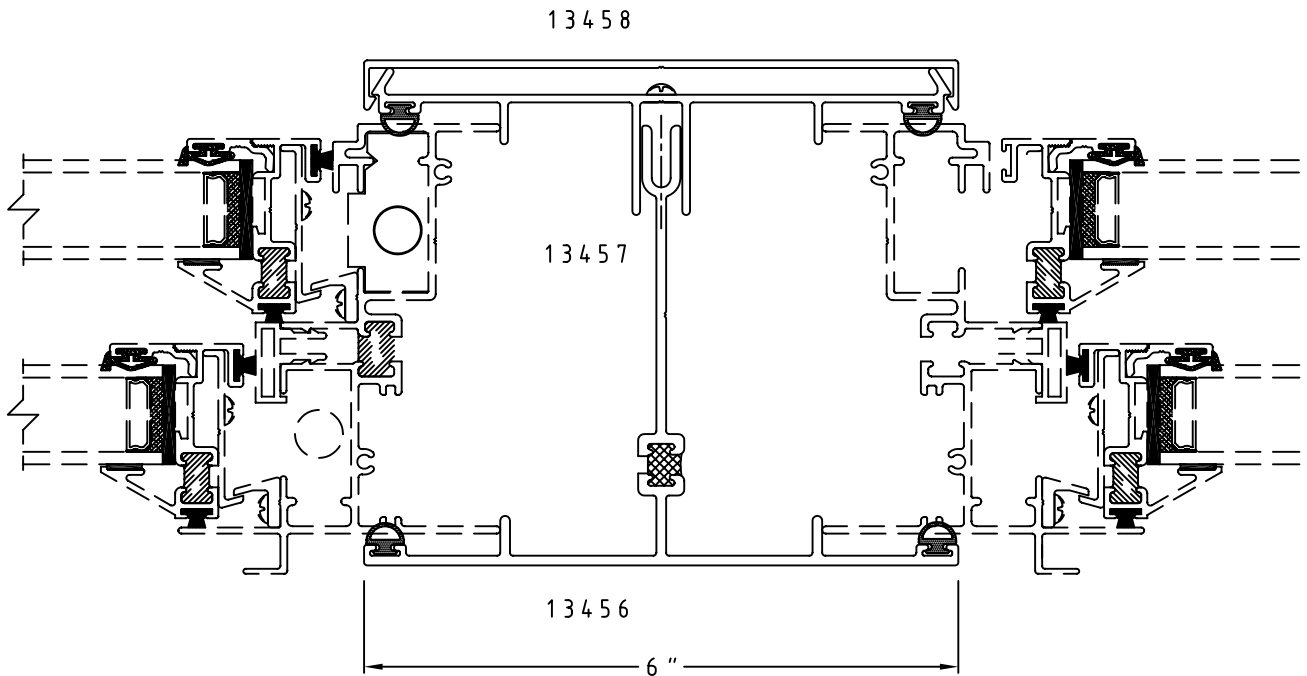
Stack Mullion for 4 1/8" Window

# Champion-Frame Depth Dependant Accessories-4 1/8"

SCALE: HALF



(M05) Used for 4 1/8" Series Windows

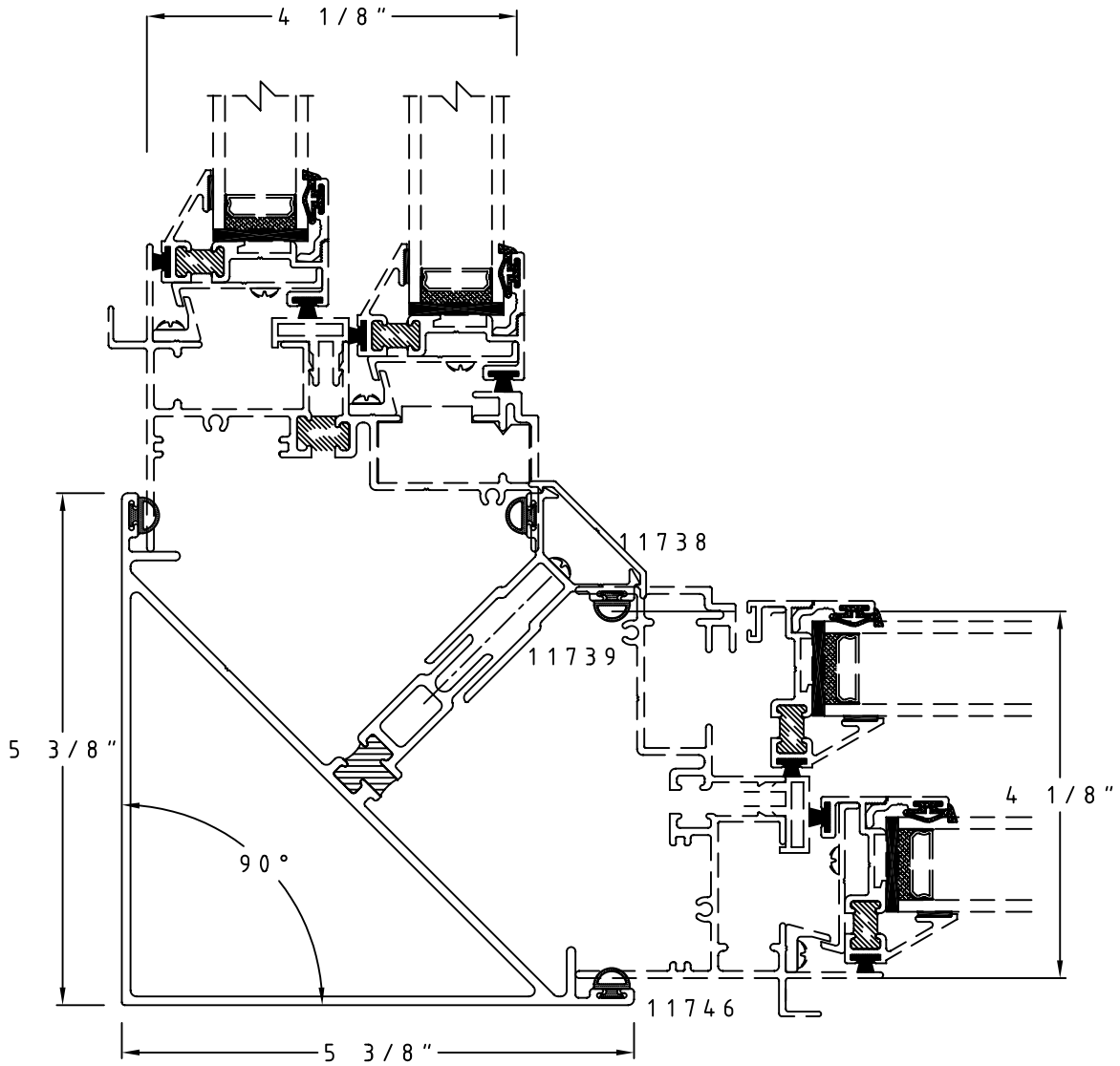


(M18) 6" Tee, Plate and cover for 4 1/8" window

# Champion-Frame Depth Dependant Accessories-4 1/8"

Sheet 3 of 4

SCALE: HALF

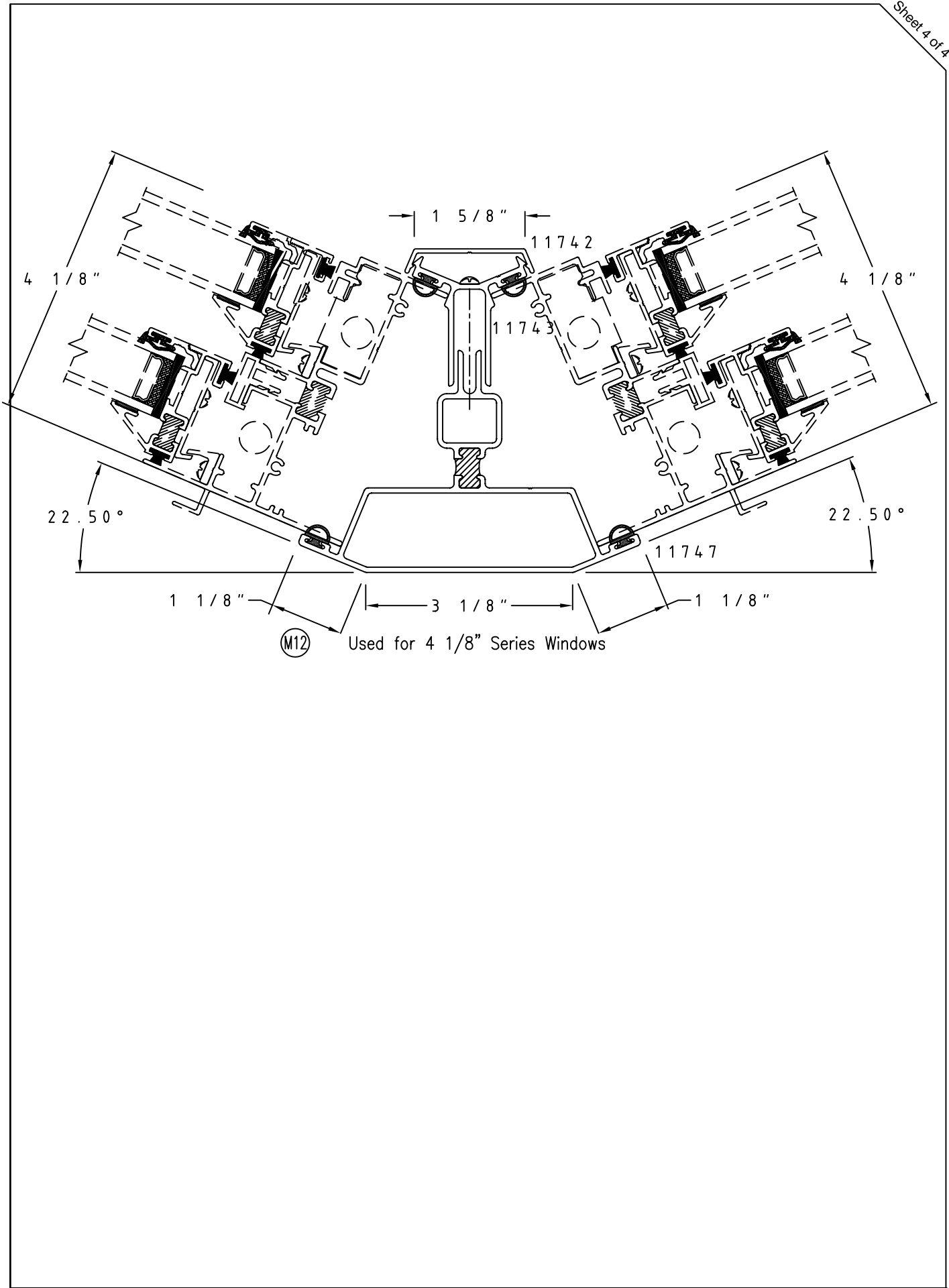


(M13) Used for 4 1/8" Series Windows

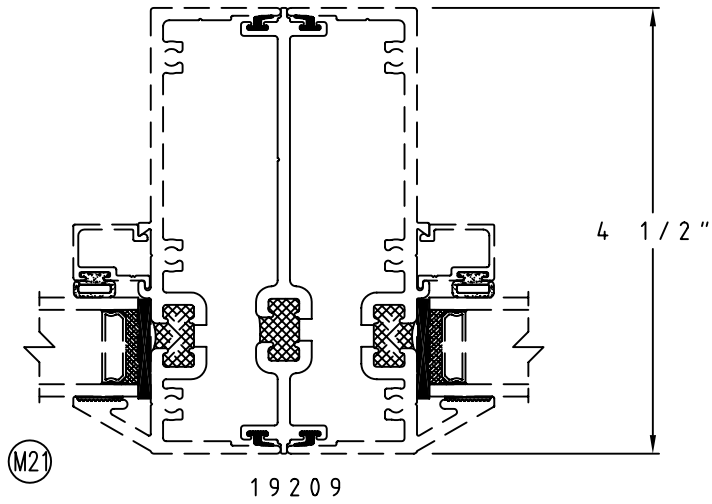
Champion Frame Depth Dependant Accessories

# Champion-Frame Depth Dependant Accessories-4 1/8"

Sheet 4 of 4

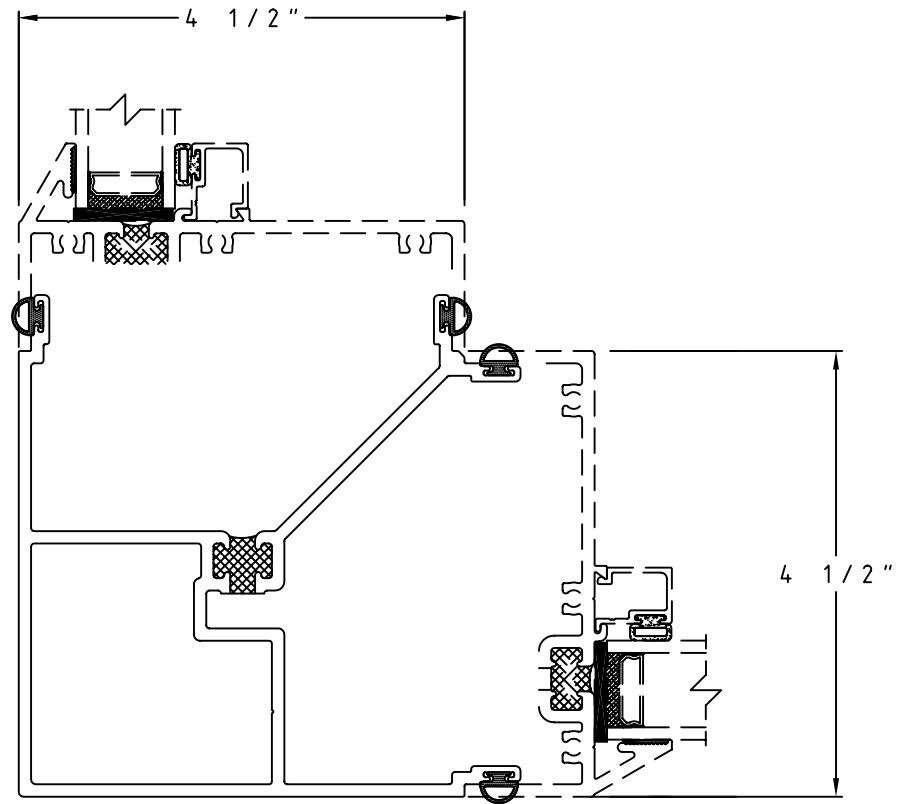


SCALE: HALF



19209

H MULLION FOR 4 1/2" WINDOWS

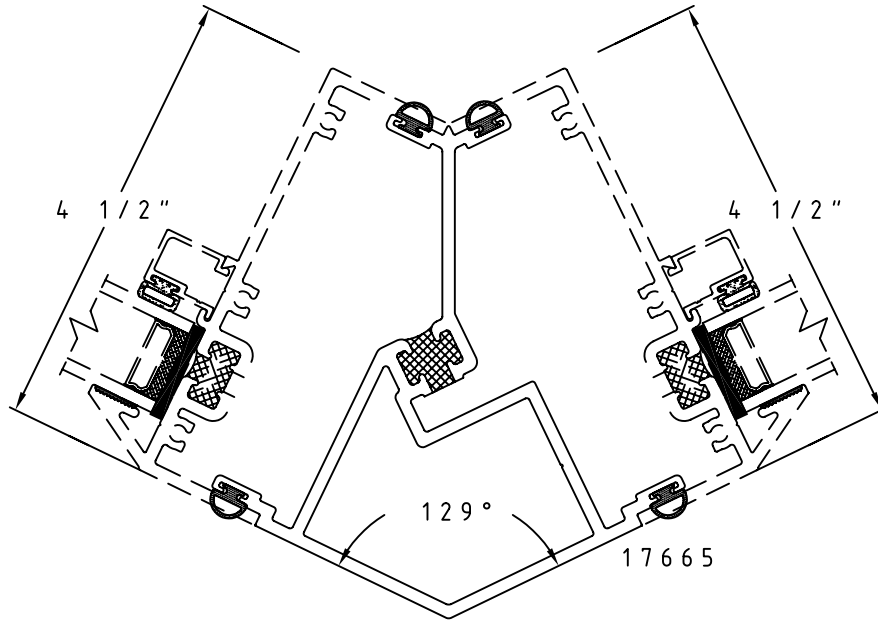


17616

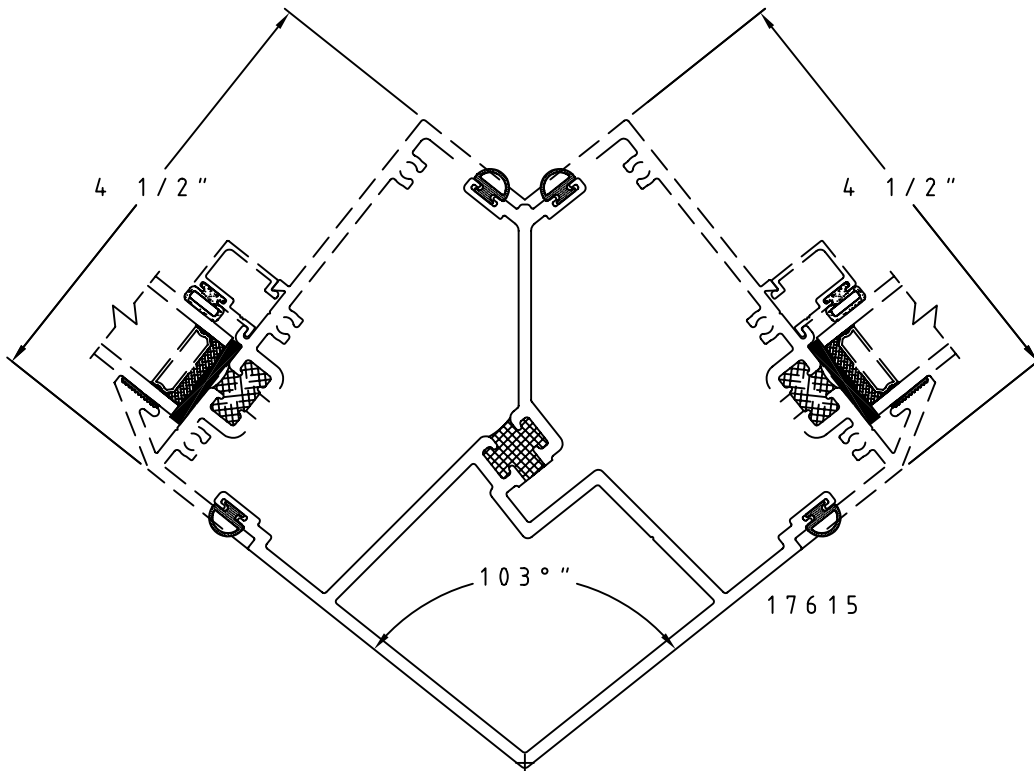
M16

Used for 4 1/2" Series Windows

SCALE: HALF



(M14) Used for 4 1/2" Series Windows



(M15) Used for 4 1/2" Series Windows