

**STAFF REPORT 02/17/2021 MEETING**

**PREPARED BY: J. ROSS**

**APPLICATION NUMBER: #21-7098**

**ADDRESS: 4221 CASS (STUBER AND STONE BUILDING)**

**HISTORIC DISTRICT: WILLIS-SELDEN**

**APPLICANT: RICHARD KNAPP (OWNER OF UNIT # 300 AND HOA PRESIDENT)**

**DATE OF COMPLETE APPLICATION: 01/20/2021**

**DATE OF STAFF SITE VISIT: 01/29/2021**

**SCOPE: REPLACE WINDOW AT NORTH/SIDE ELEVATION, SECOND STORY; REPLACE CONCRETE LINTELS**

### **EXISTING CONDITIONS**

Per the City of Detroit, Historic Designation Advisory Board:

The Stuber-Stone & Company Building was erected in 1916. This Sullivanesque building was erected by A. J. Smith Construction Company. It is a large, two-story, rough brick and reinforced concrete building with terra cotta ornament, rectangular in shape, measuring 100 feet wide by 150 feet deep. The roof is flat. The façade is vertically divided into five bays by two-story brick piers. The storefront windows and windows on the north elevation appear to have been replaced in the early 1990s with windows that reflect the form of the building's original windows. A wide spandrel and cornice encompass the second-story windows. Among other decorative elements, the cornice features gargoyles in the form of lions bearing shields. The building served as a Columbia Motors 13 dealership until that firm went bankrupt in 1923. This building was individually listed on the National Register of Historic Places in 1996.

Original wood windows remain at the building's east elevation, second story. All other windows/fenestration are aluminum and were installed in the 1990s. Specifically, black aluminum storefronts are located at the east elevation, first story. North elevation windows are large, industrial-type, multiple-lite, black aluminum windows. The windows at the first story on the north elevation are fixed, 96-lite units, while each window at the second story features a fixed, 64-lite panel which tops four, eight-lite awning windows. Per the applicant, the structure of the second-story windows consists of four 5-ft wide by 10-ft tall sections, with 5-ft wide operable awnings at the bottom of each section. The glass is double paned, 13-inch by 18-inch rectangles separated by an aluminum grid. The grid is approximately 1-inch wide and square shaped facing into the condominium and 7/8-inch wide, cove shaped on the outward facing side. See the below photo of the building from 1996, which indicates that the existing aluminum windows were installed in an effort to replicate the original/historic steel sash, likely due to the owner's application for tax credits to support the building's late 1990s rehabilitation. Also, re: the north elevation, note that the current window openings at the first story are much larger than the historic window openings and the window openings at Units #300 and #400 at the second story were added during the 1990s building rehabilitation. The building currently includes retail uses on the first floor and 14 residential units at the second story.



Stuber-Stone Bldg. #1

4221-4229 Cass, **NORTH ELEVATION**, NRHP photo depicting appearance in 1996. The current windows at Units #300 and #400 are at this location



4221-4229 Cass, **NORTH ELEVATION**, current elevation. The current windows at Units #300 and #400 are at this location

## PROPOSAL

With the current submission includes the following work items, per the applicant:

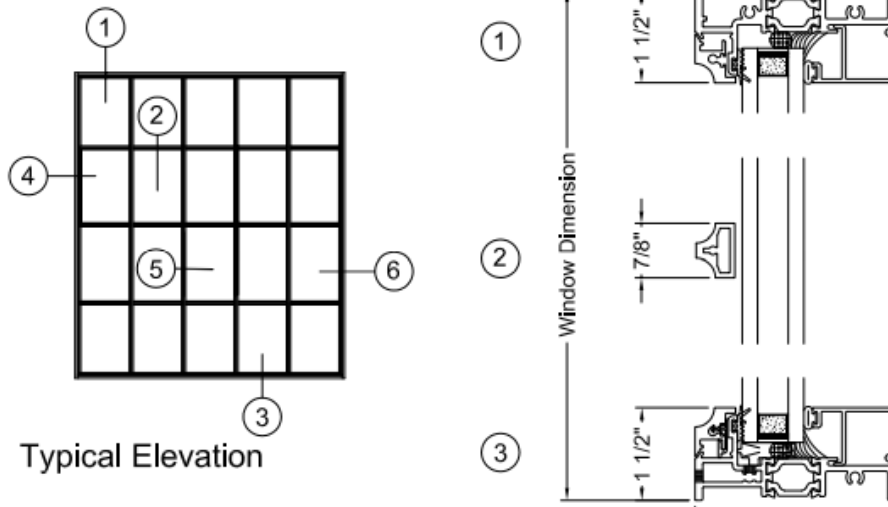
- At Unit #300 and #400, undertake concrete repairs to the structural header beam spanning above the windows

according to the following:

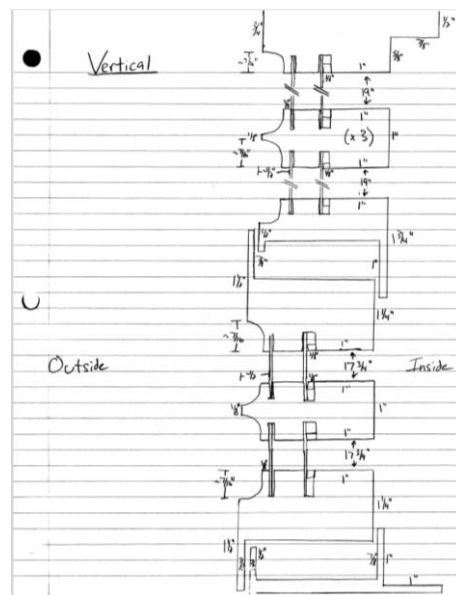
- Sawcut and hammer out all delaminated concrete from the bottom of the beam. Dispose of all debris.
  - Form up the areas, clean existing steel if needed, and install reinforcement.
  - Pour back concrete (*King MS-S6*), finish, and cure to match the existing area.
  - Perform any necessary rout and seal / epoxy injections (*Sikadur-35 Hi-Mod LV*) to the topside (existing section) of concrete beam.
- The non-historic, aluminum window at Unit #400 will be reinstalled after the concrete repairs are completed. The non-historic, aluminum window at Unit #300 will be replaced with a new aluminum window of the same lite configuration and operation, finish color as the existing. The new windows will be an EFCO 590x Black Kynar Painted Historical Series commercial grade aluminum window series with clear Low "E" safety tempered insulated glass and simulated divided lite (muntins applied to the glass's exterior surface). The new system will be 4 bays wide to match the existing, along with 4 operable awning windows

### **STAFF OBSERVATIONS AND RESEARCH**

- Per the above photo, the current second-story, north elevation window opening and accompanying aluminum sash at Unit #300 were added during the 1990s rehabilitation
- A review of the 1996 photo revealed that the design/lite configuration of the current second-story, north elevation window at Unit #300 closely matches the building's historic windows
- The applicant has stated that he wishes to replace the existing window at Unit #300 because "...the structural integrity of the aluminum frame has been compromised, likely due to the stress of the failing concrete header above the window structure. The unit is sagging and separating from the concrete. The movement of the frame has caused misalignment with the operable awnings, creating gaps between the awning and the fixed frame. Further, most of seals between the double paned rectangle windows have failed allowing condensation between the pieces of glass." To support this statement, he has provided condition reports from both Ram Construction and Desai Nasr Engineers (see attached).
- The applicant has stated that the manufacturer of the current windows at the building is unknown. He and his contractor (Window Diverse Services) therefore investigated a number of multiple manufacturers in order to identify window that most closely replicates the existing. The new window will be an EFCO 590x Black Kynar Painted Historical Series commercial grade aluminum window series with clear Low "E" safety tempered insulated glass and simulated divided lite (muntins applied to the glass's exterior surface) which will be custom made to match the existing as closely as possible.
- The building's windows are over 20 years old. The applicant has stated that a number of the windows are beginning to show signs of failure. As he is the president of the homeowner's association, he has stated that any new windows will be installed according to the specifications of the proposed new windows, if approved by the Commission.
- It is staff's opinion that the dimensions/profile of the new windows are generally close to the existing. However, the muntins proposed for the new window will have a slightly different shape (~~triangular~~) thicker-flared shape than the muntins at the current window (~~curved/flared~~ flat curve)



Proposed new window details



Existing window details

## ISSUES

- The window proposed for replacement is not historic-age and was installed in an opening that was added in late 1990s. It is therefore staff's opinion that the window itself is not character-defining. However, as the design of the existing window was based upon the that of the building's original industrial sash, features such as the number of lites/panes, the amount of visible glass/the size of the lites/panes and the dimensions of the unit's members are the aspects of the window that contribute to the building's historic character. The new window adequately replicates these features. However, because the muntins of the new window proposed for Unit #300 will have a different shape than the muntins of the existing window, the new window will present a slightly different appearance when compared to the existing windows at the building's other condo units. The new window shall be installed at the side elevation, second story. Staff

believes that the difference will in the shape/sitelines of the muntins will be imperceptible when viewed from the public right-of-way. Also, as noted above, the applicant has stated that the current specs will be followed as the building's remaining windows are replaced.

- The new window will have Low "E" glass. Staff is unclear if the new window's glass will be clear and not reflective, in keeping with the building's other fenestration.

## **RECOMMENDATION**

### Section 21-2-73, Certificate of Appropriateness

It is staff's opinion that the proposal should qualify for a Certificate of Appropriateness (COA). Staff therefore recommends that the Commission approve a COA for the proposed application, as it meets the Secretary of the Interior's Standards and conforms to the Willis-Selden Historic District's Elements of Design, with the condition that the window's glazing shall be clear/shall not be tinted or reflective and that the staff be granted the authority to improve the installation of replacement windows at the building as long as they meet the current proposal's specifications.



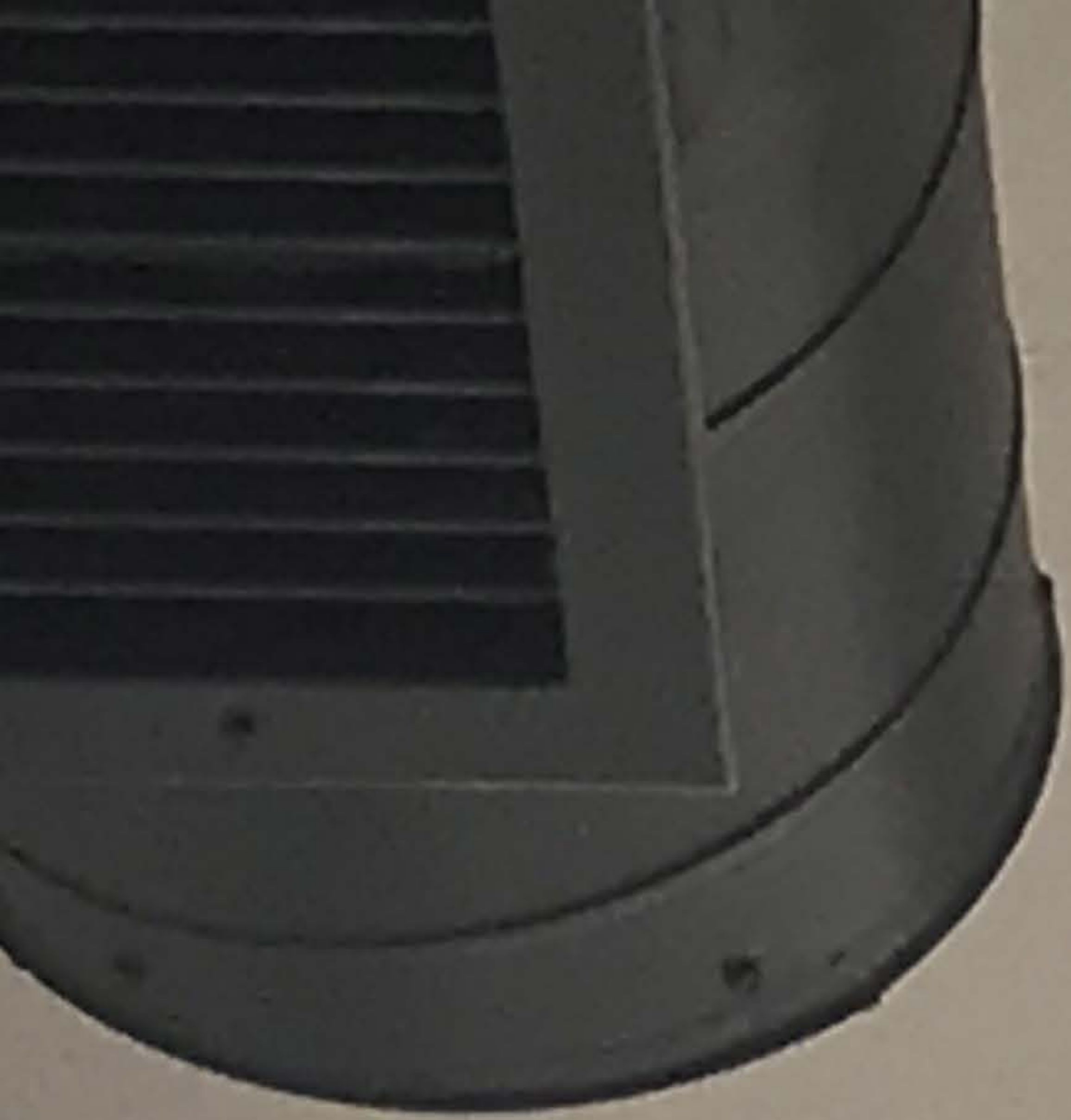
















COBB'S  
BAR + RESTAURANT

Cass  
Willis W

COBB'S  
BAR + RESTAURANT  
4201 CASS  
DETROIT MI 48201

SPREAD DETROIT  
SPREAD FOOD SPREAD HAPPINESS SPREAD LOVE

MIDTOWN MARKET

MIDTOWN MARKET

FLO FLO

HOME TO MIDTOWN  
MAINTENANCE BROS  
DETROIT

READ DETROIT  
SPREAD HAPPINESS SPREAD LOVE

MIDTOWN MARKET



GRAND OPENING  
MIDTOWN MARKET

UBER-STON  
LOFTS

Planned Parenthood

STUBBS-STONE & CO. BROS.



Parenthood

Planned Parenthood

Unit 300

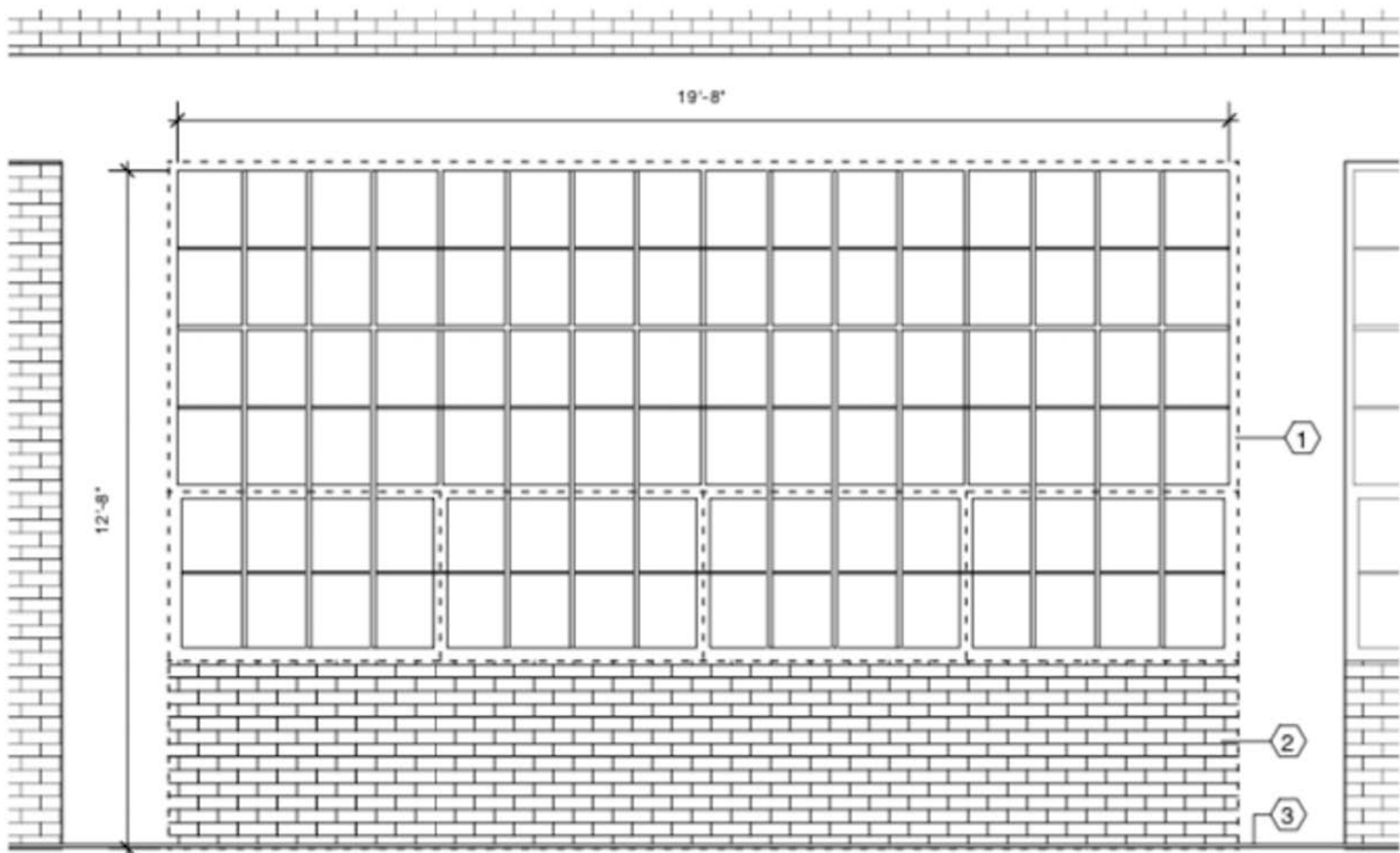
Unit 400

VEHICLES  
WILL BE TOWED  
AT OWNER'S  
RISK  
SAVING & SAVING  
313-842-7800

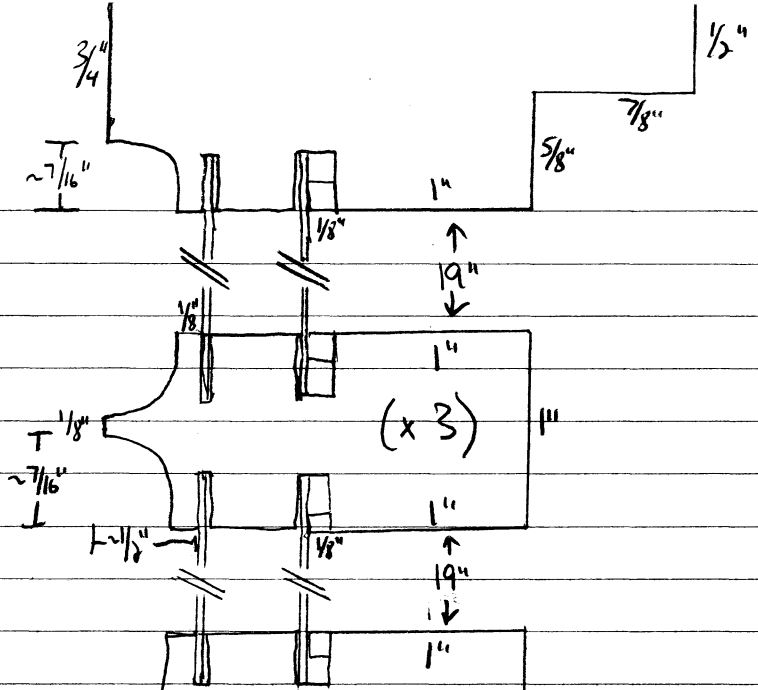






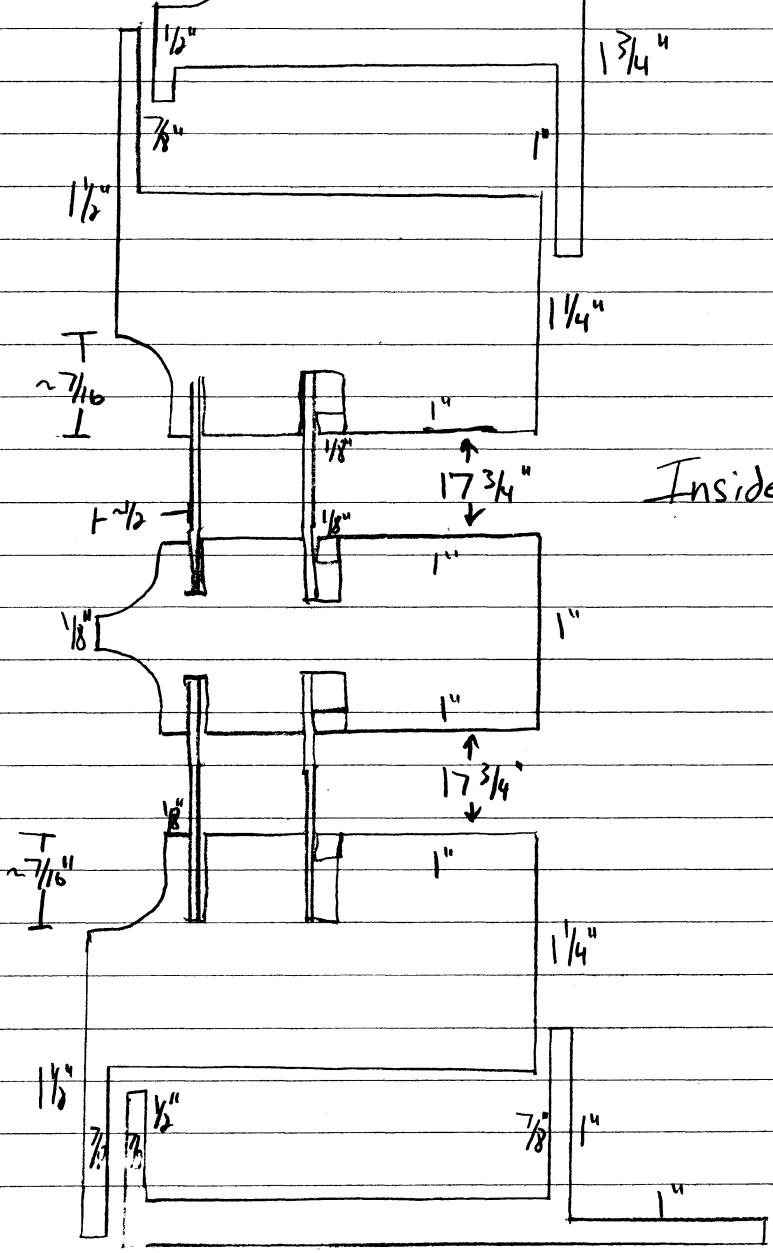


Vertical



Outside

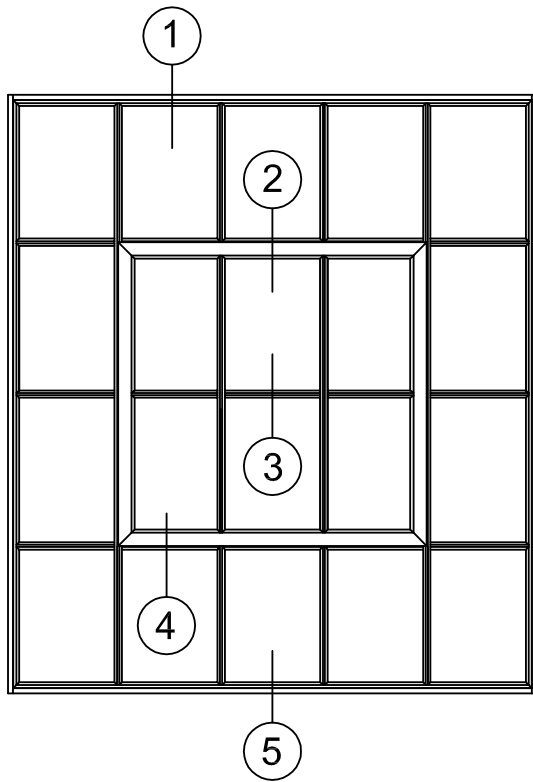
Inside



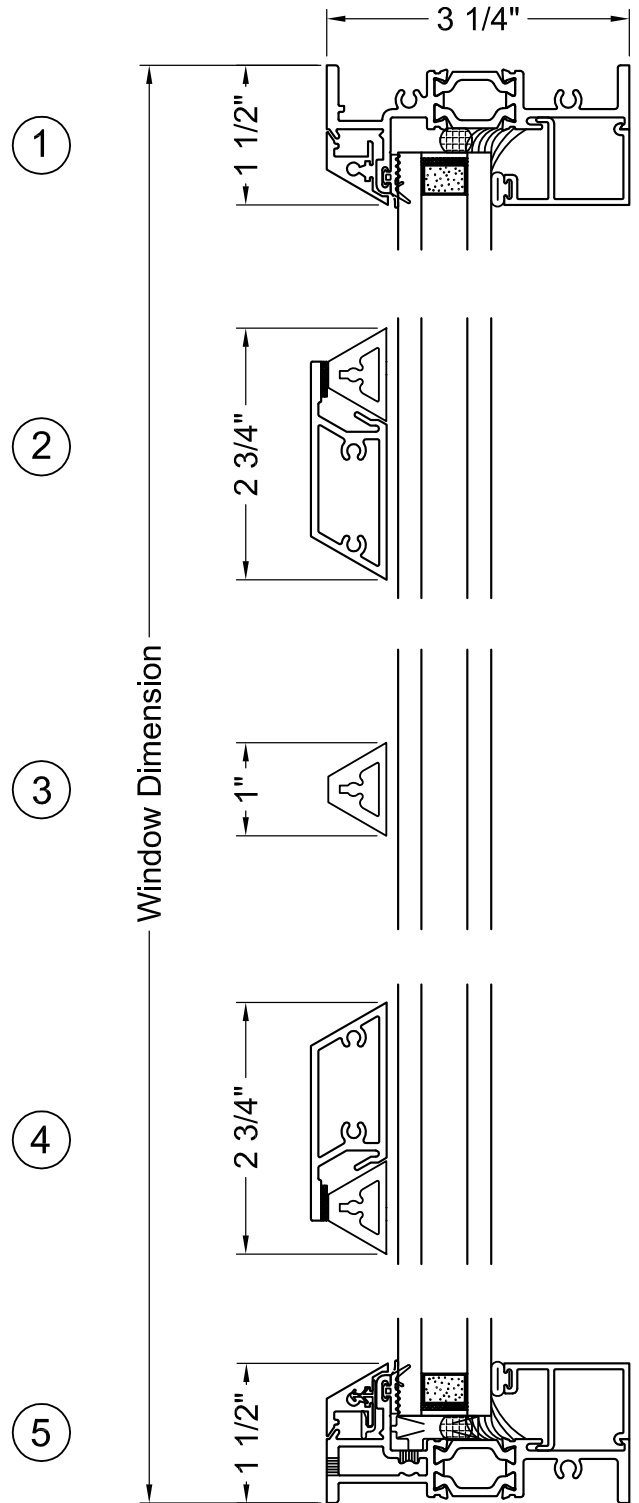


**BEVEL GRID DETAILS..... 4 - 18**  
**COVE GRID DETAILS ..... 19 - 31**  
**T GRID DETAILS..... 32 - 44**  
**MEETING RAILS..... 45**  
**STACK DETAILS..... 46**  
**MULLION DETAILS..... 47**  
**PANNING DETAILS..... 48**  
**SUBFRAME DETAILS..... 49**  
**MISCELLANEOUS DETAILS..... 50**

EFCO reserves the right to change configurations without prior notice when deemed necessary for product improvement. For specific product applications, consult your EFCO representative.



Typical Elevation



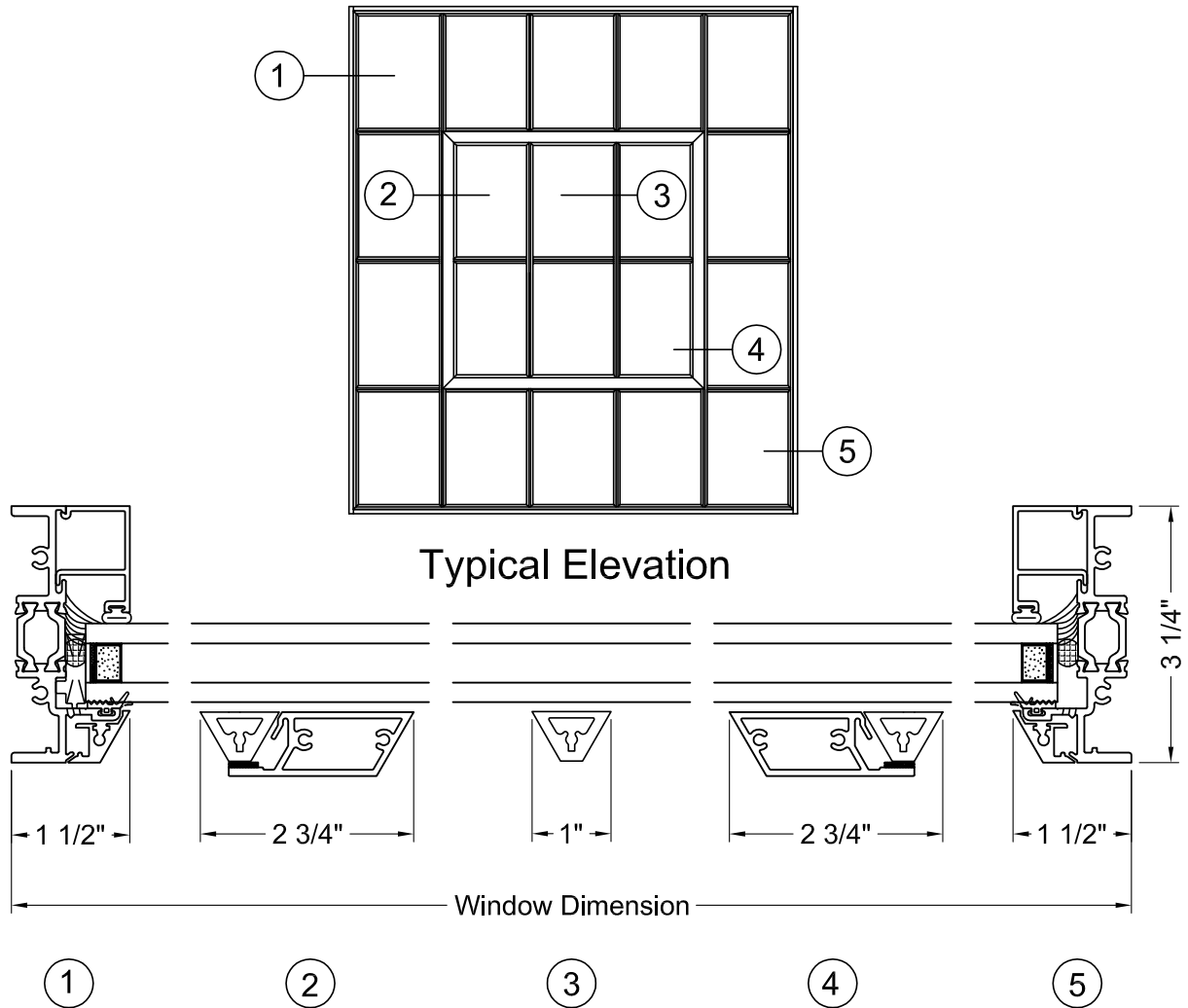
Note: Faux vent configuration is only available with beveled grid at this time. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"



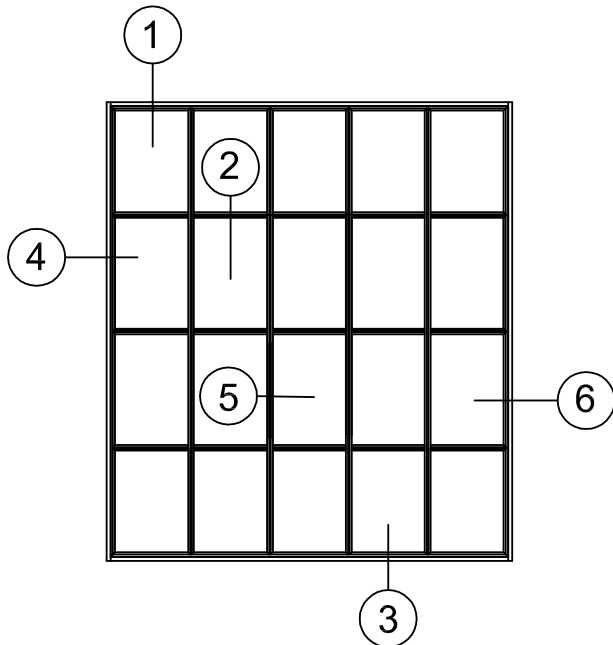
# 590X 3-1/4" Steel Replica Window

## Faux Vent - Vertical Details

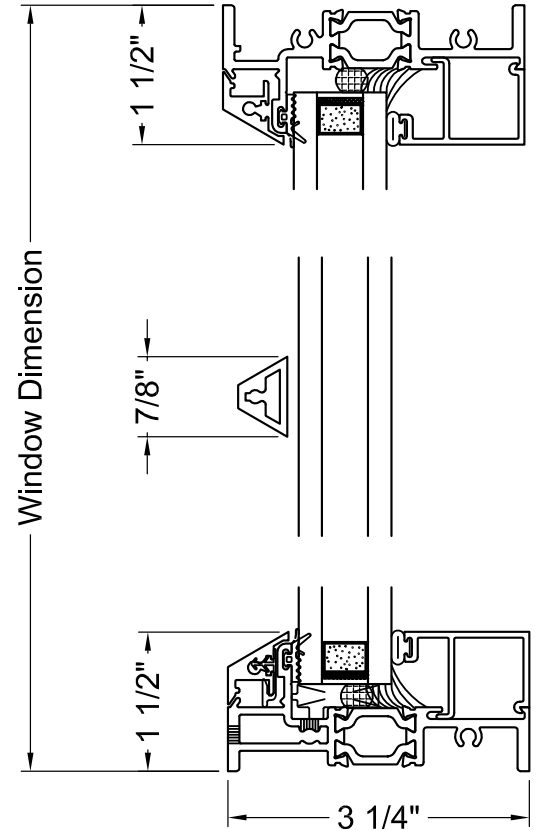
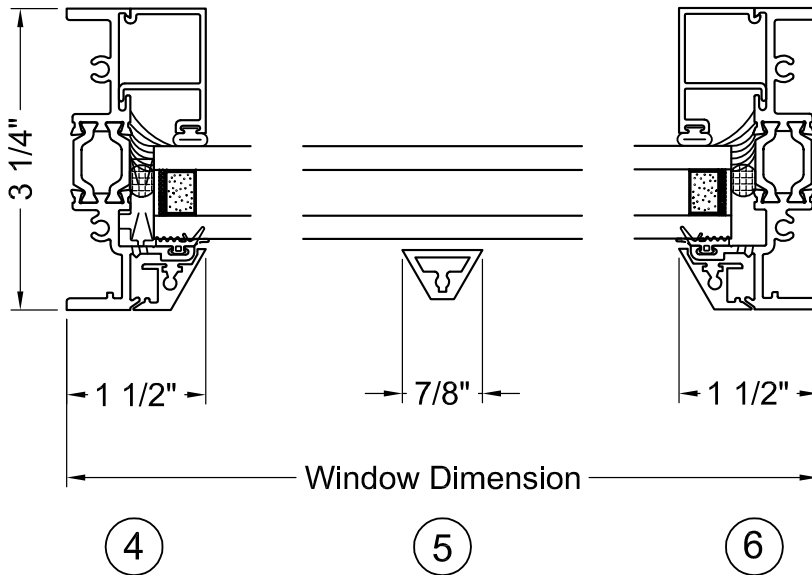


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Typical Elevation



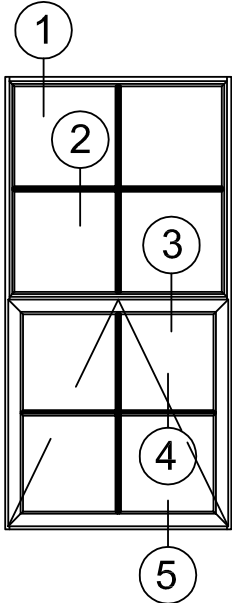
Note: Multiple configurations available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"

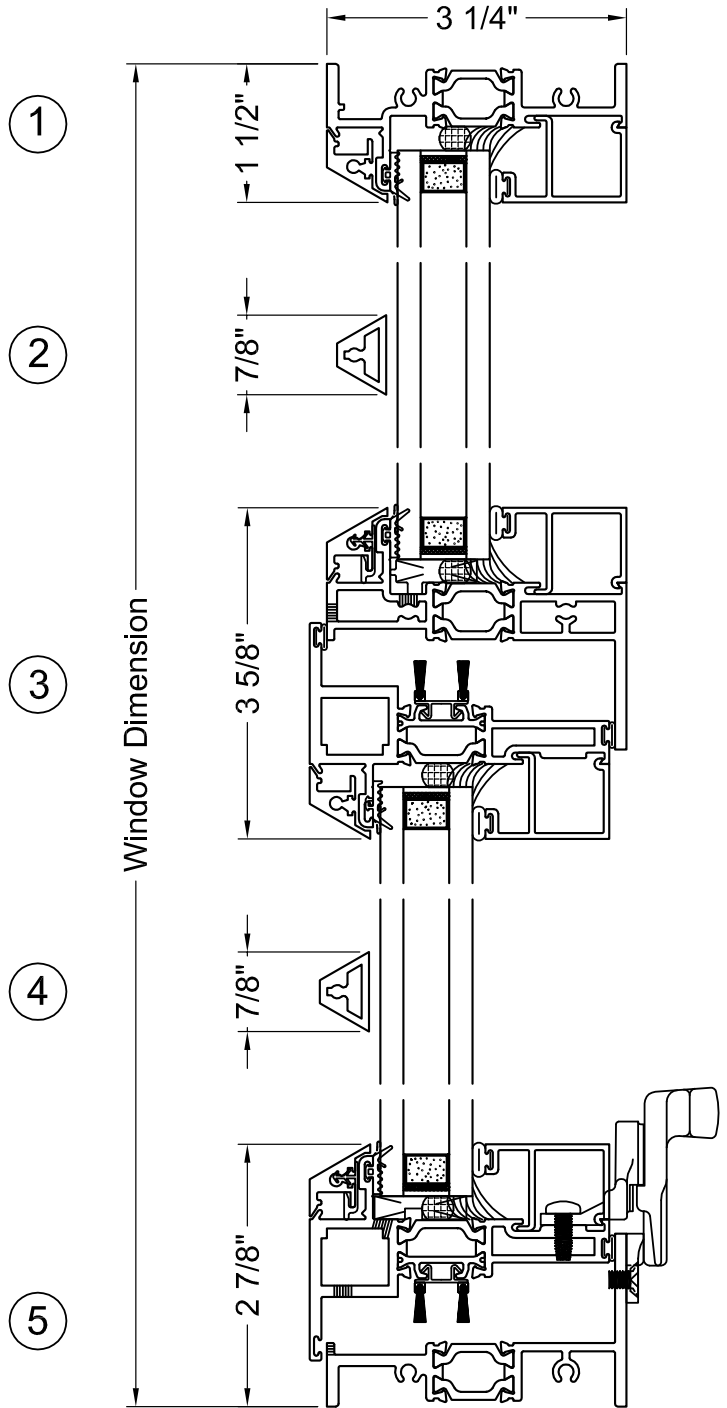


# 590X 3-1/4" Steel Replica Window

FX/PO - Horizontal Details



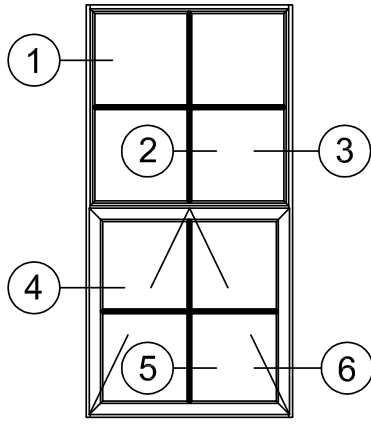
Typical Elevation



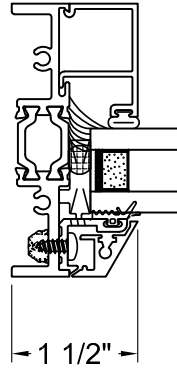
Scale: 6" = 1'-0"

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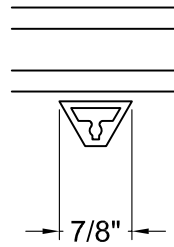




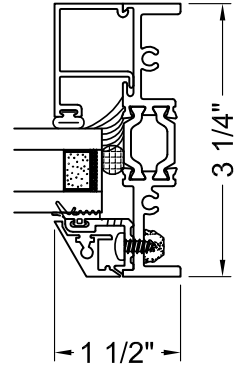
Typical Elevation



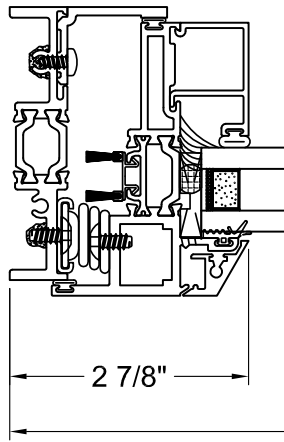
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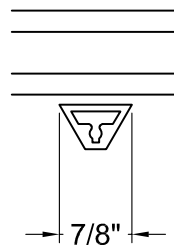
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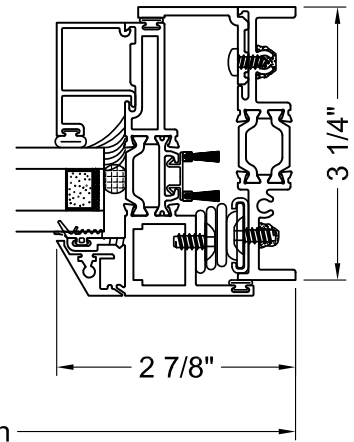
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6

Window Dimension

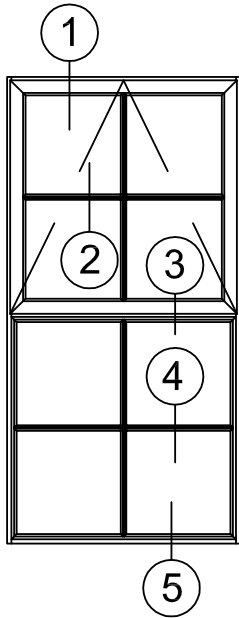
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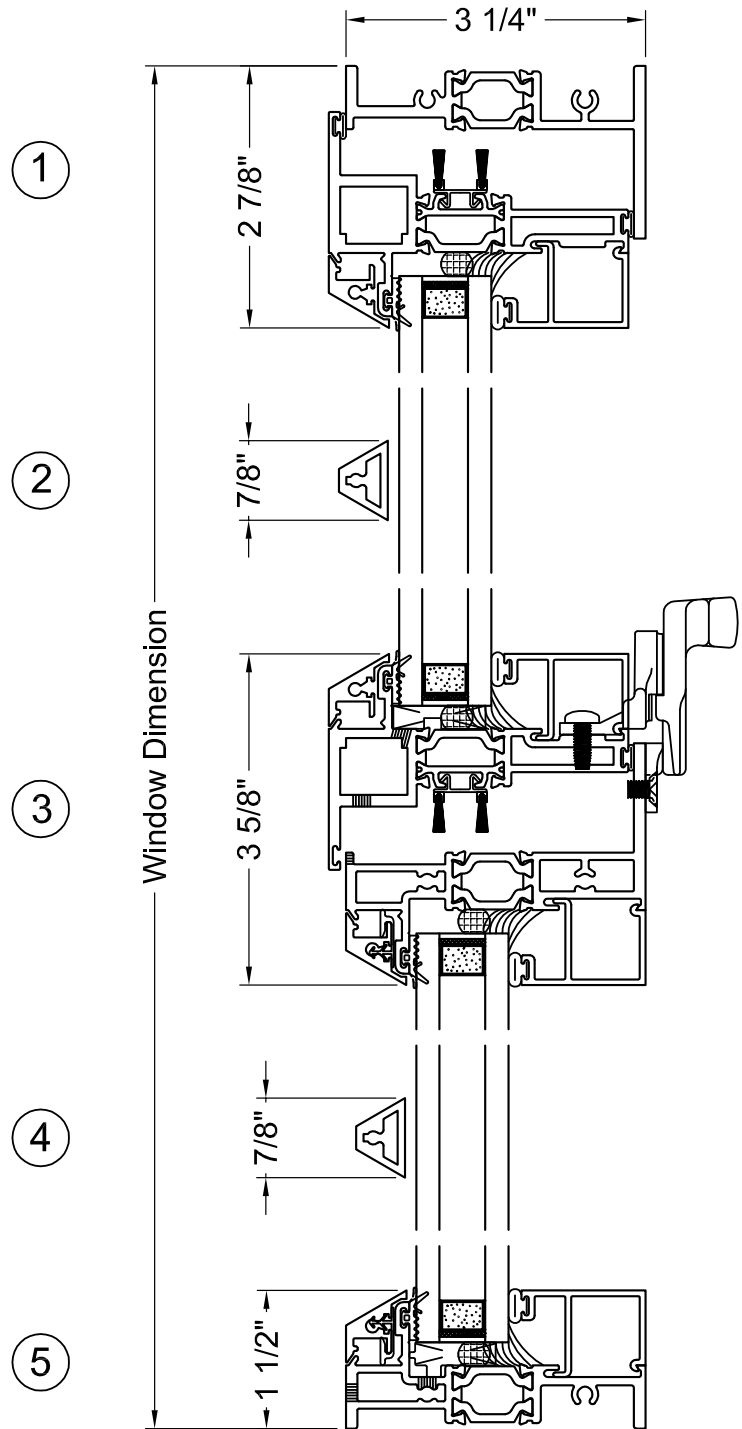


# 590X 3-1/4" Steel Replica Window

PO/FX - Horizontal Details

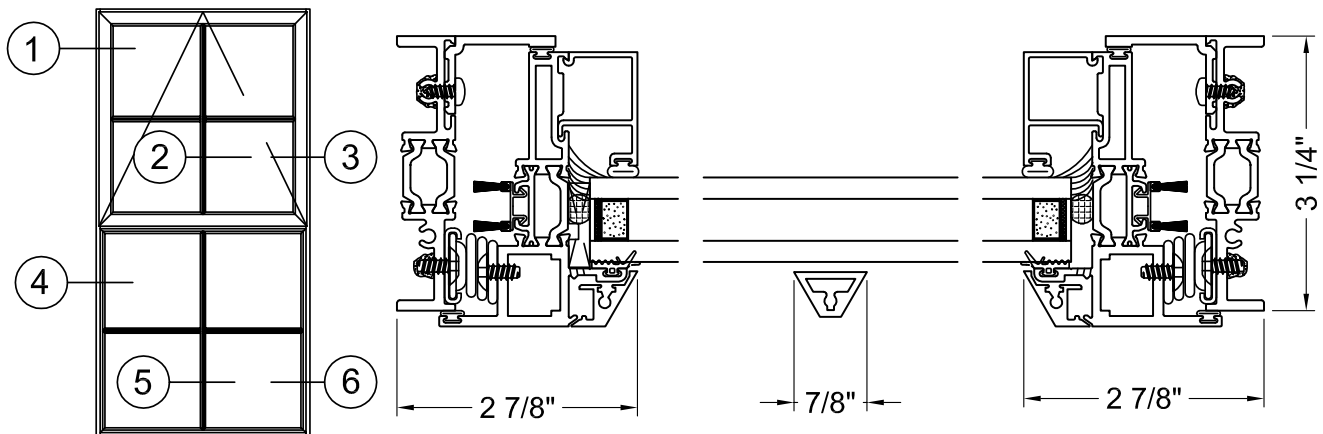


Typical Elevation

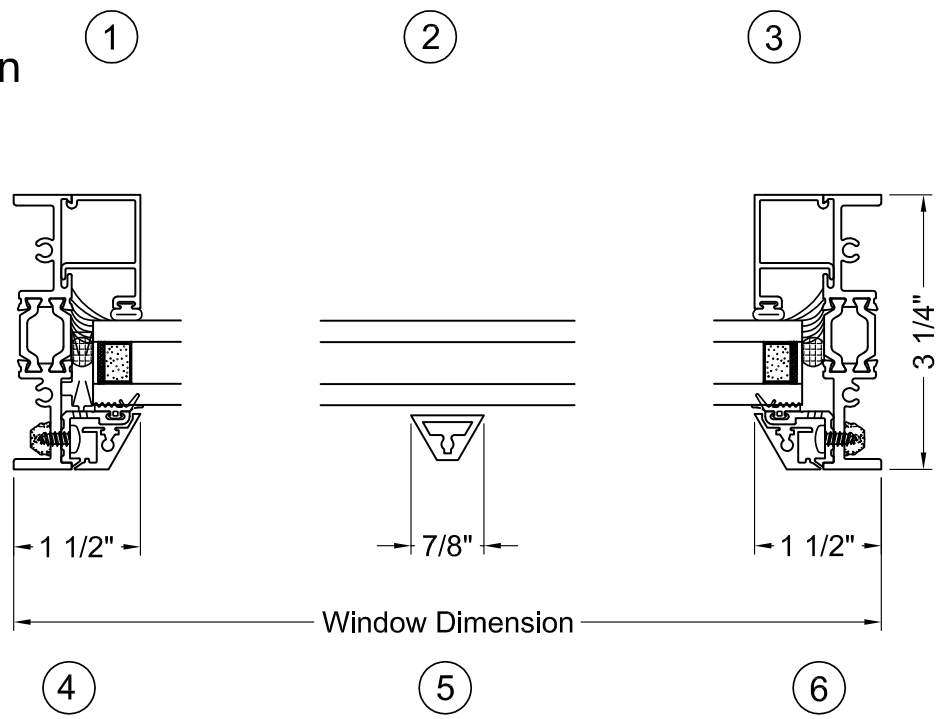


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Typical Elevation



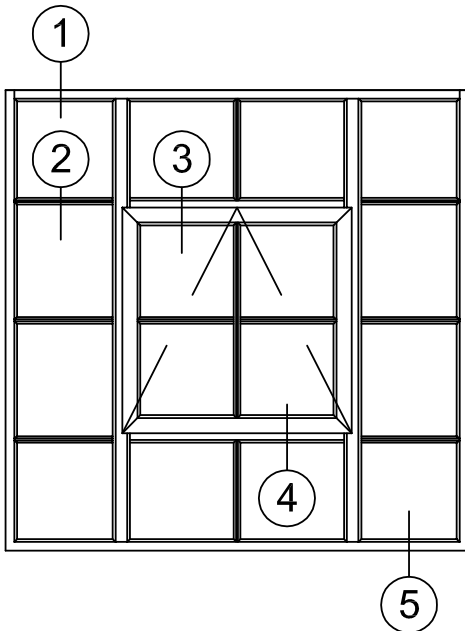
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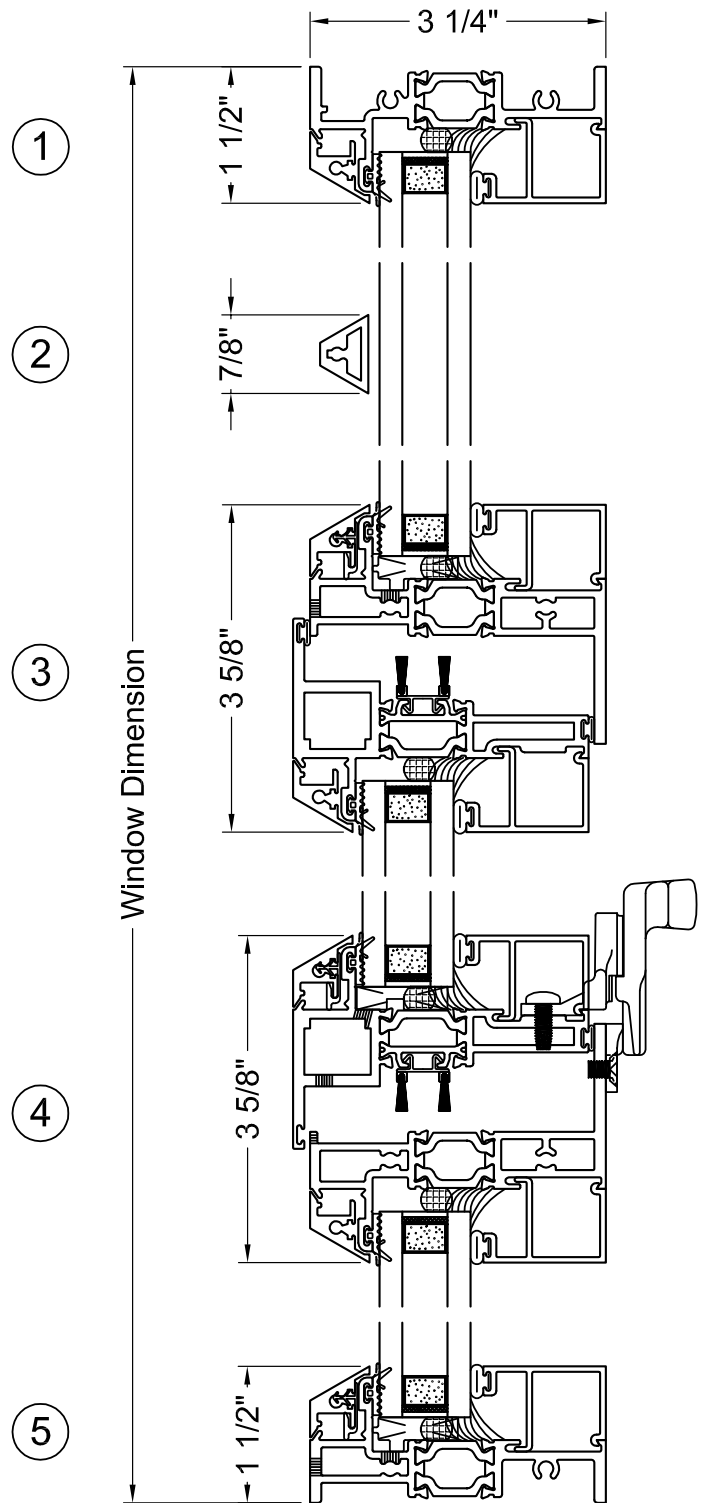


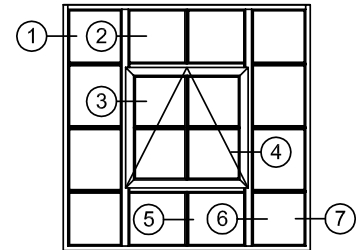
# 590X 3-1/4" Steel Replica Window

## Floating Vent - Horizontal Details



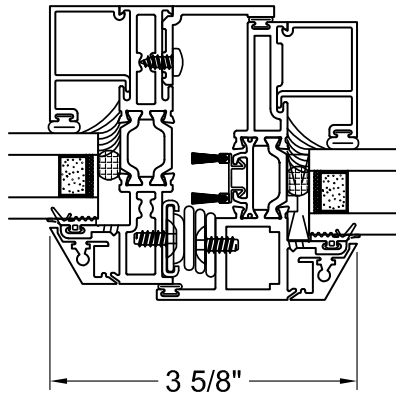
Typical Elevation



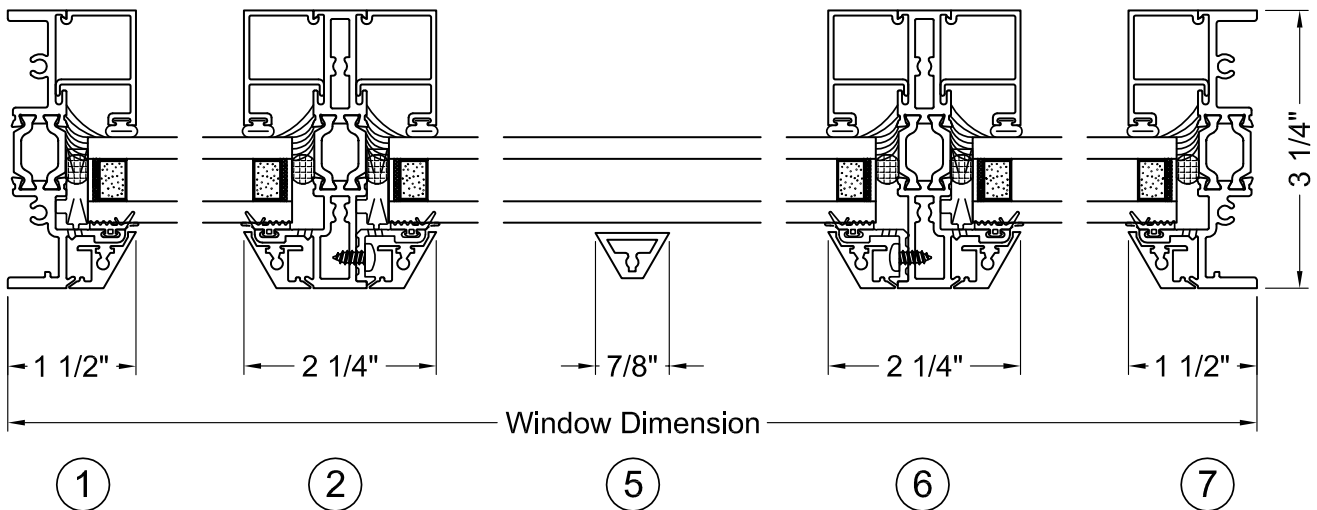
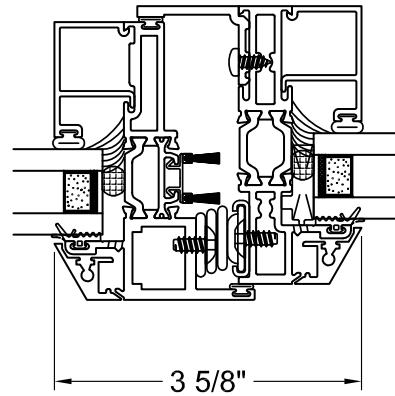


Typical Elevation

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4



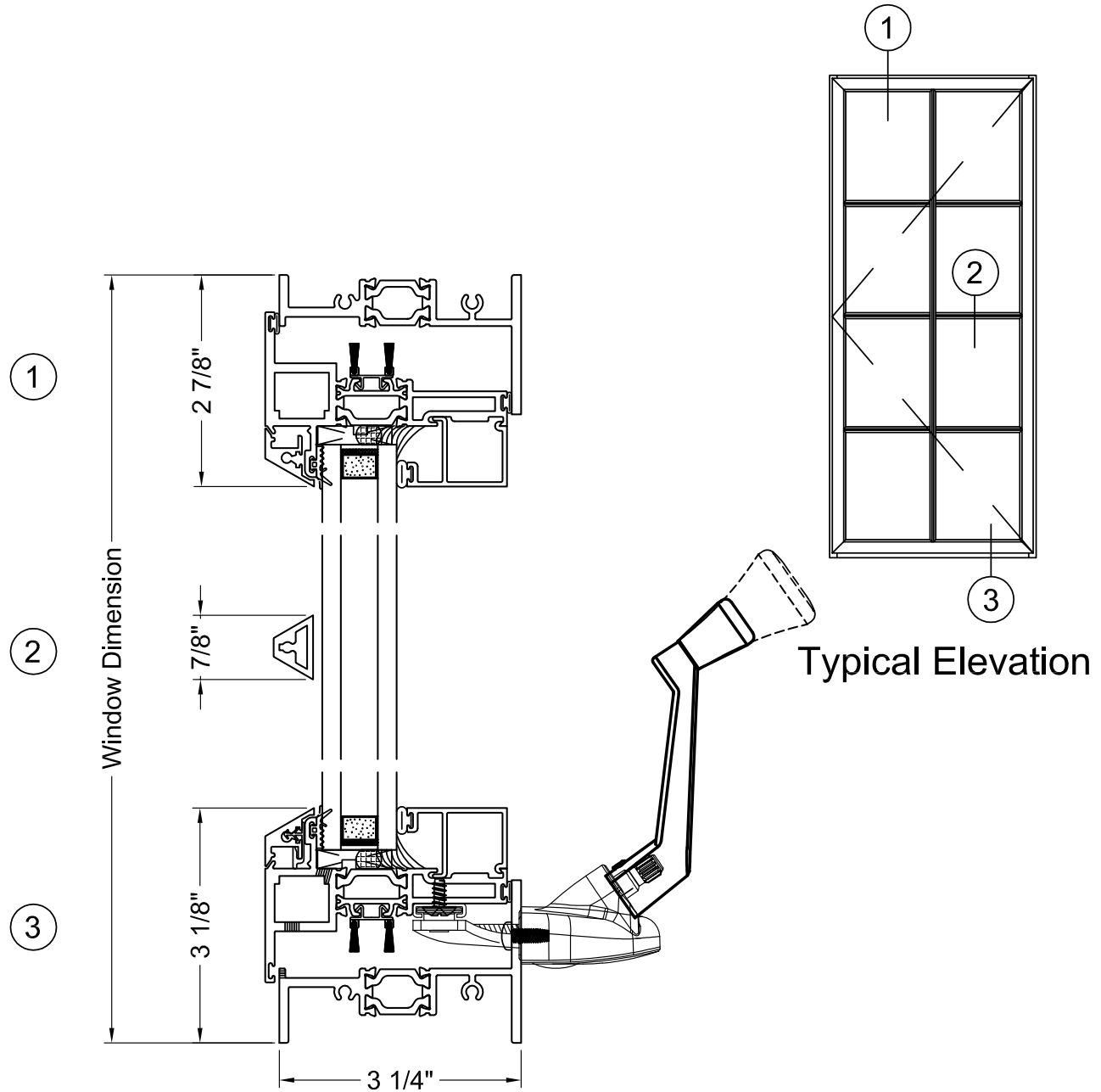
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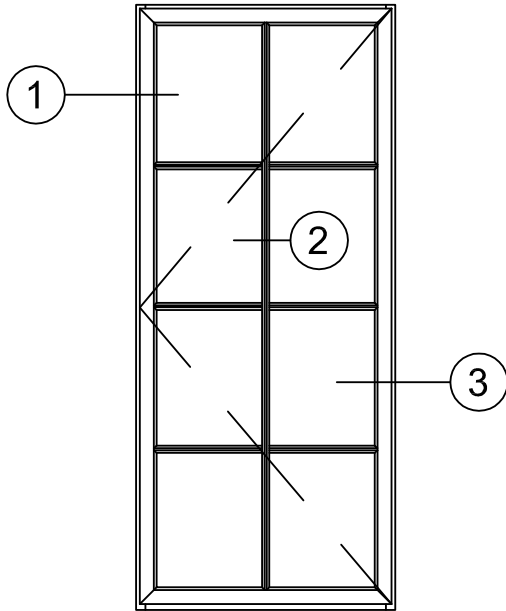
# 590X 3-1/4" Steel Replica Window

## Outswing Casement - Horizontal Details

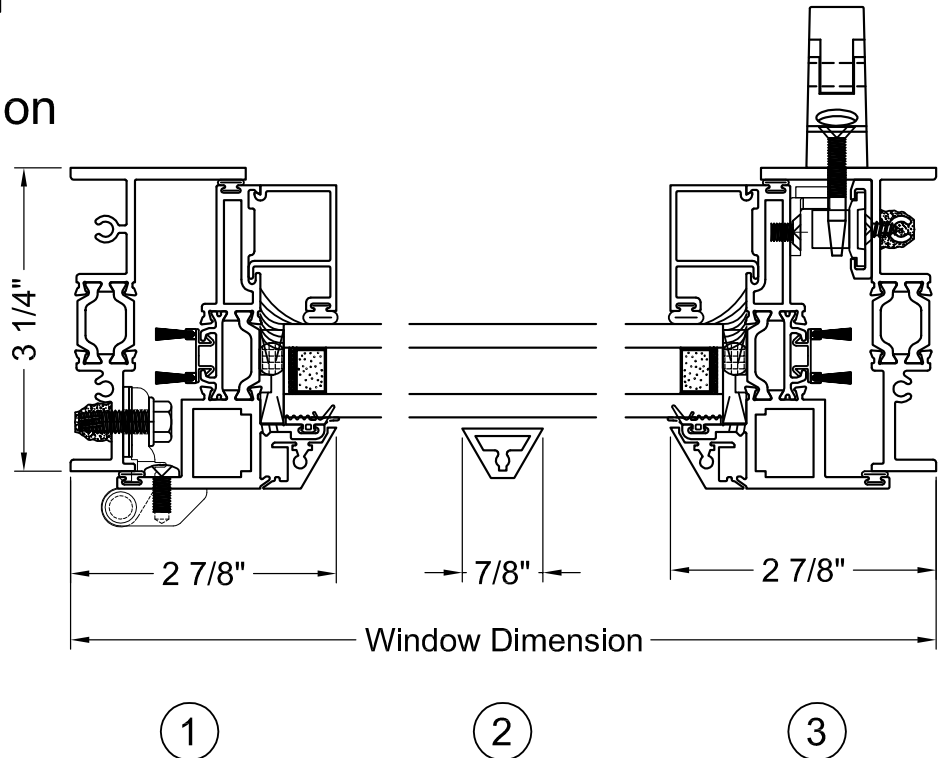


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Note: Multiple configurations and hardware options available. Contact your EFCO representative for more information.



Typical Elevation



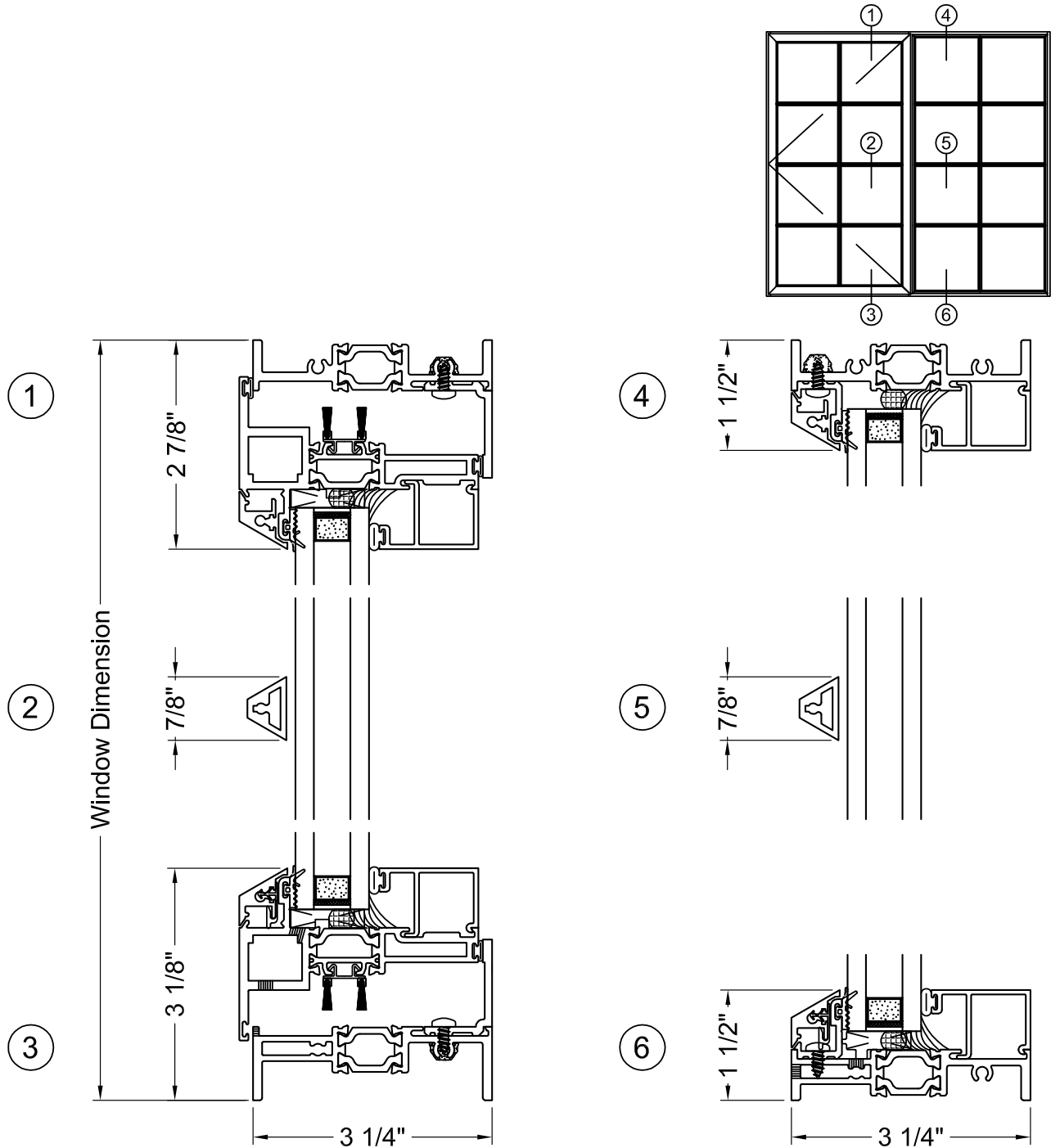
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# 590X 3-1/4" Steel Replica Window

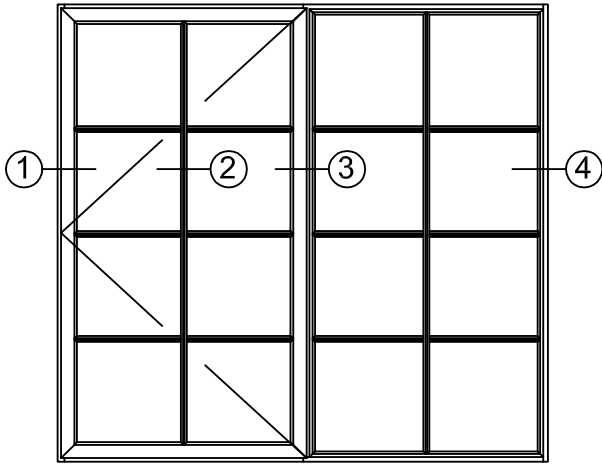
Outswing Casement | Fixed - Horizontal Details



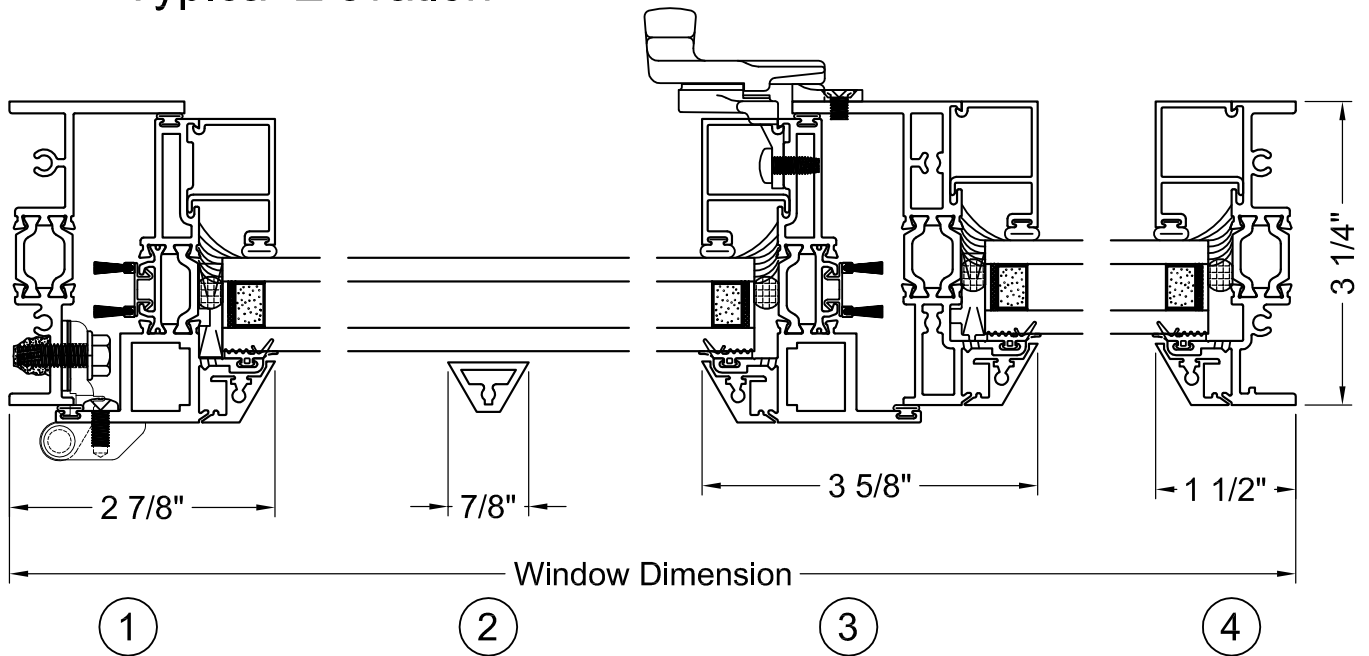
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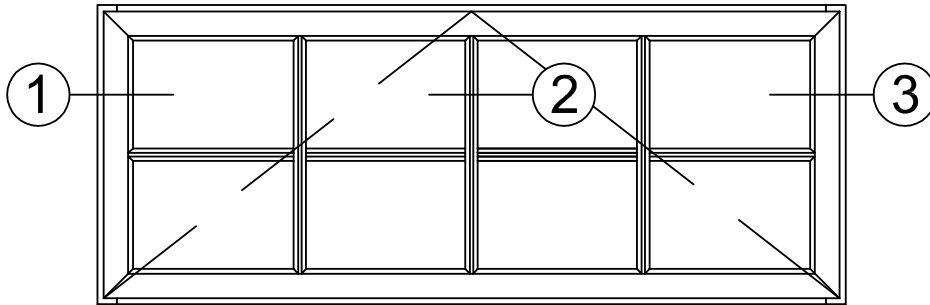


Typical Elevation



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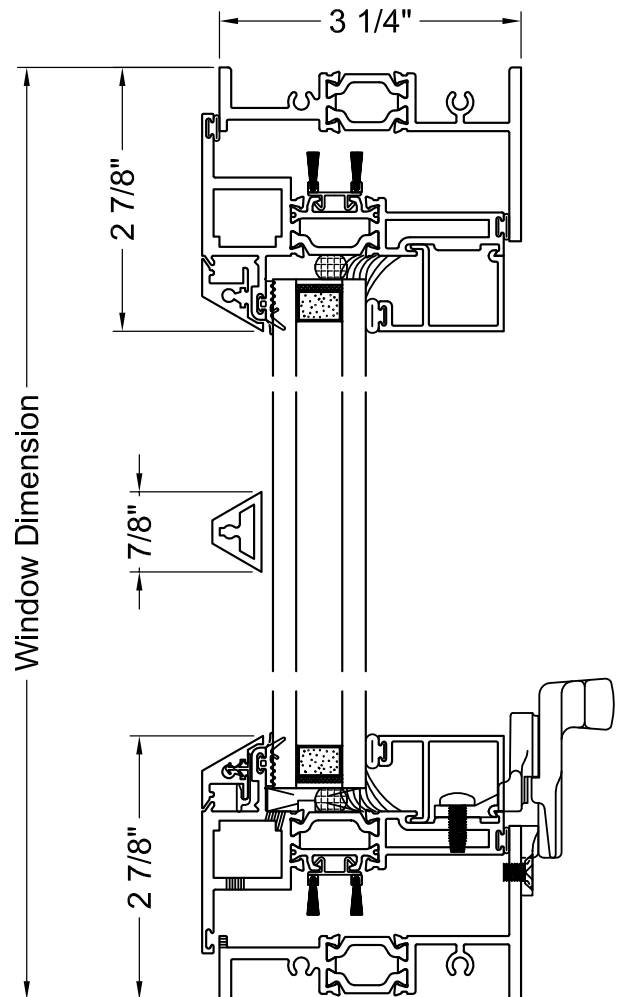


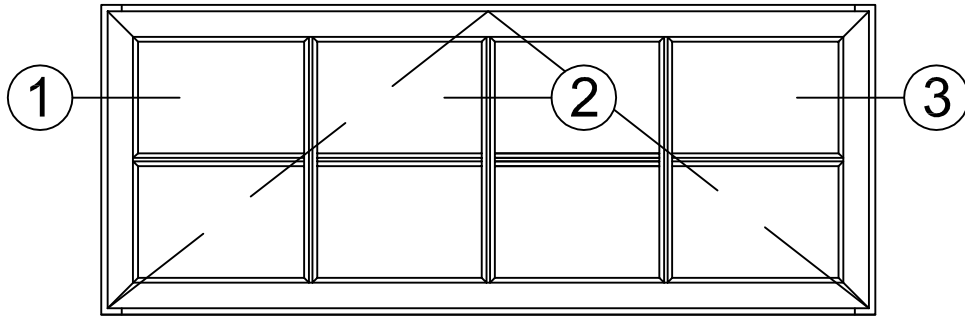
Typical Elevation

1

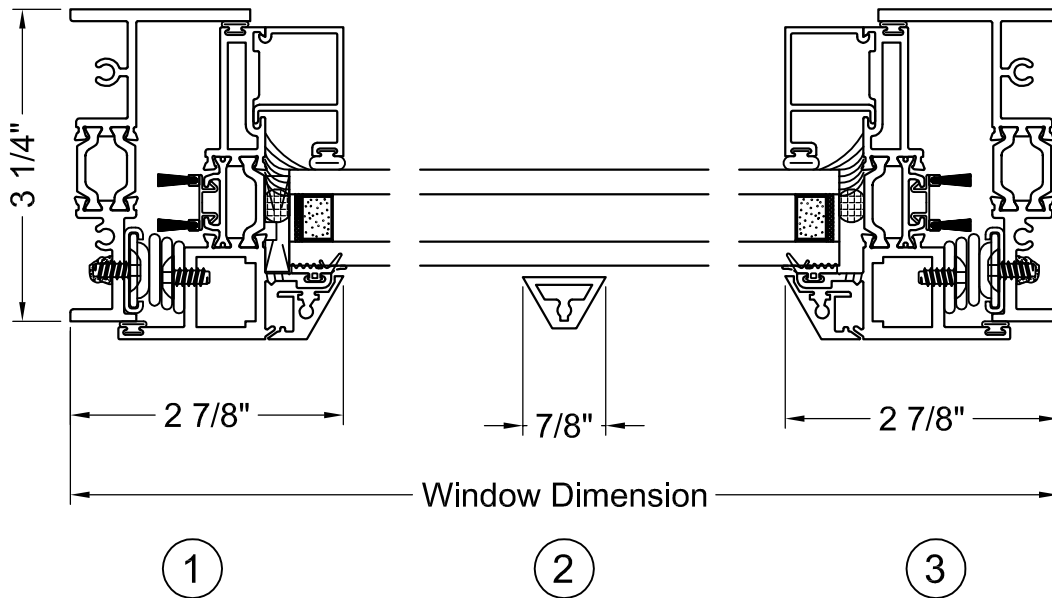
2

3





Typical Elevation



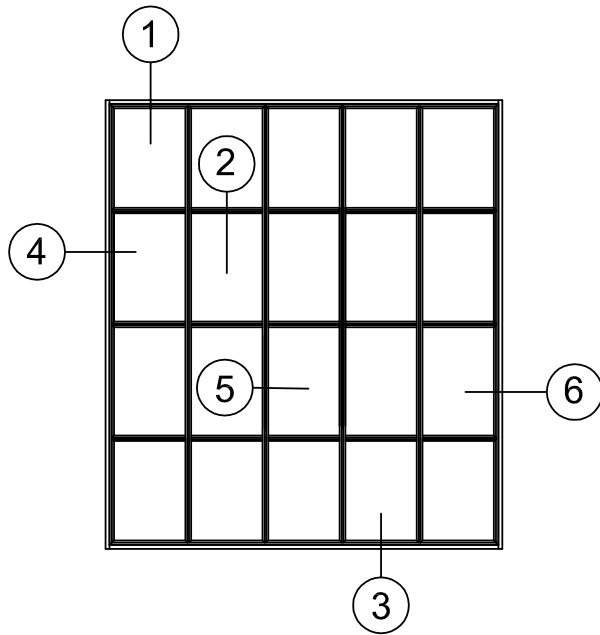
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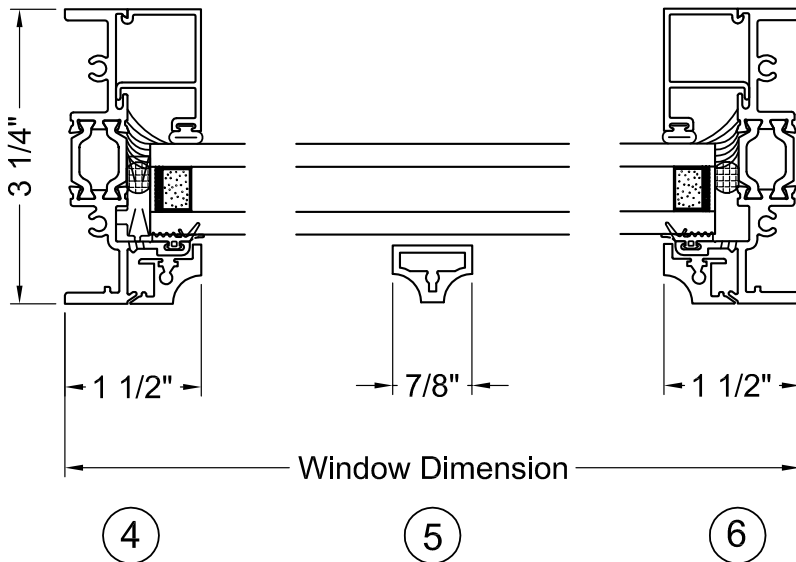
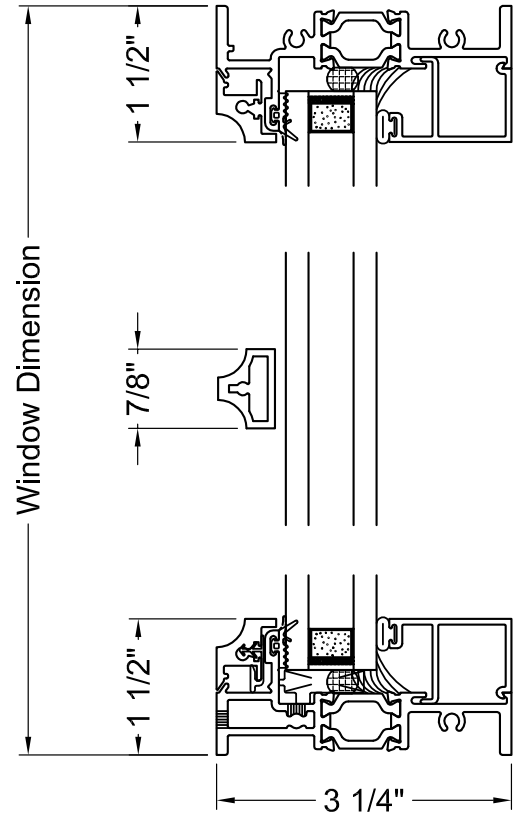


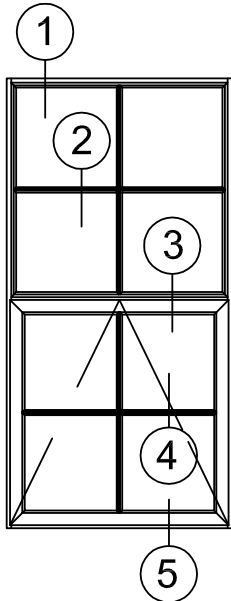
# 590X 3-1/4" Steel Replica Window

Fixed Window - Details

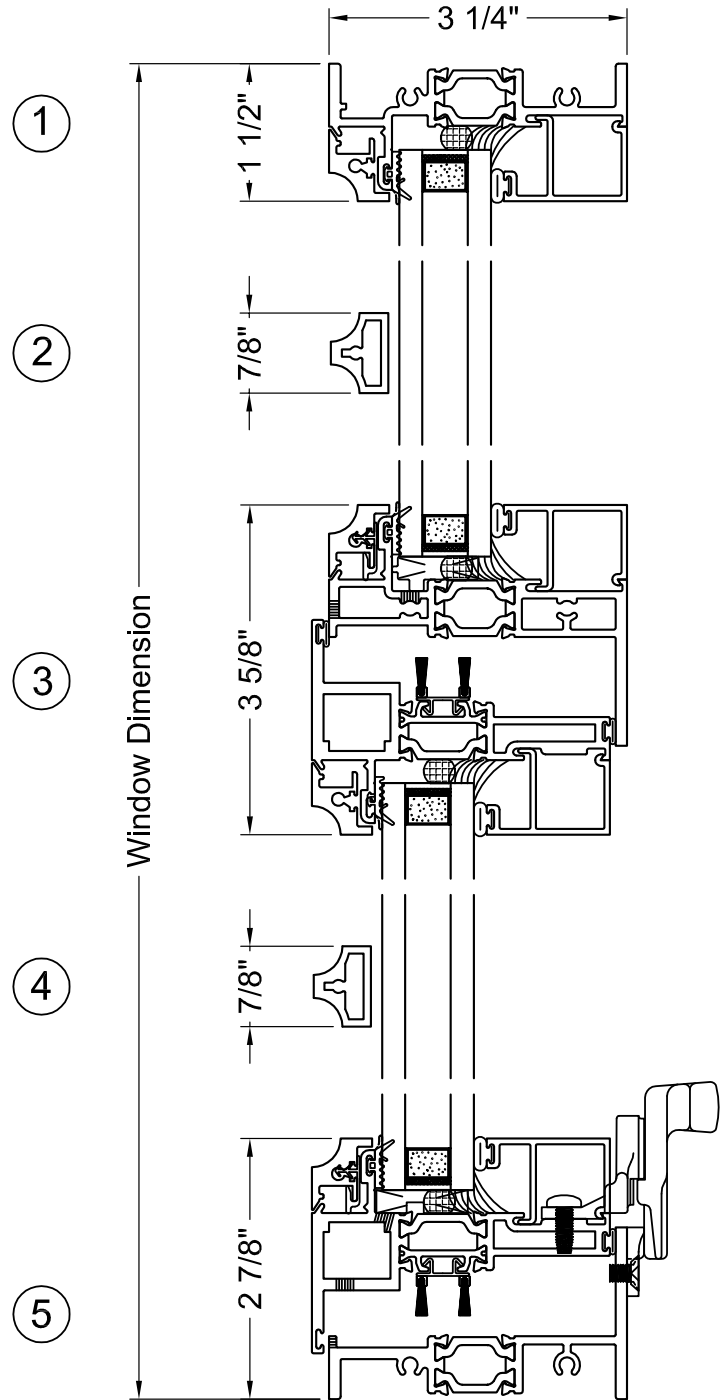


Typical Elevation





Typical Elevation



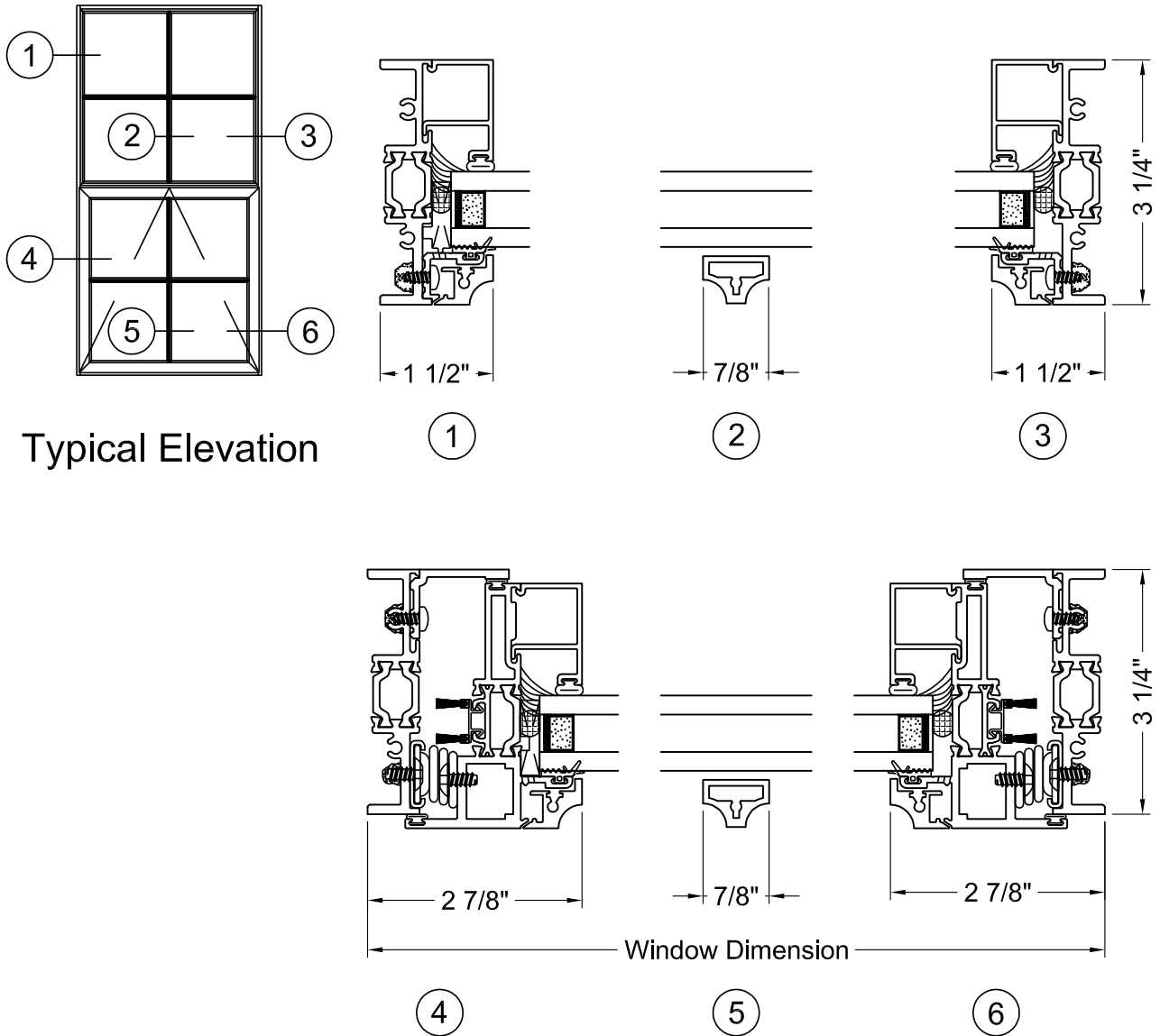
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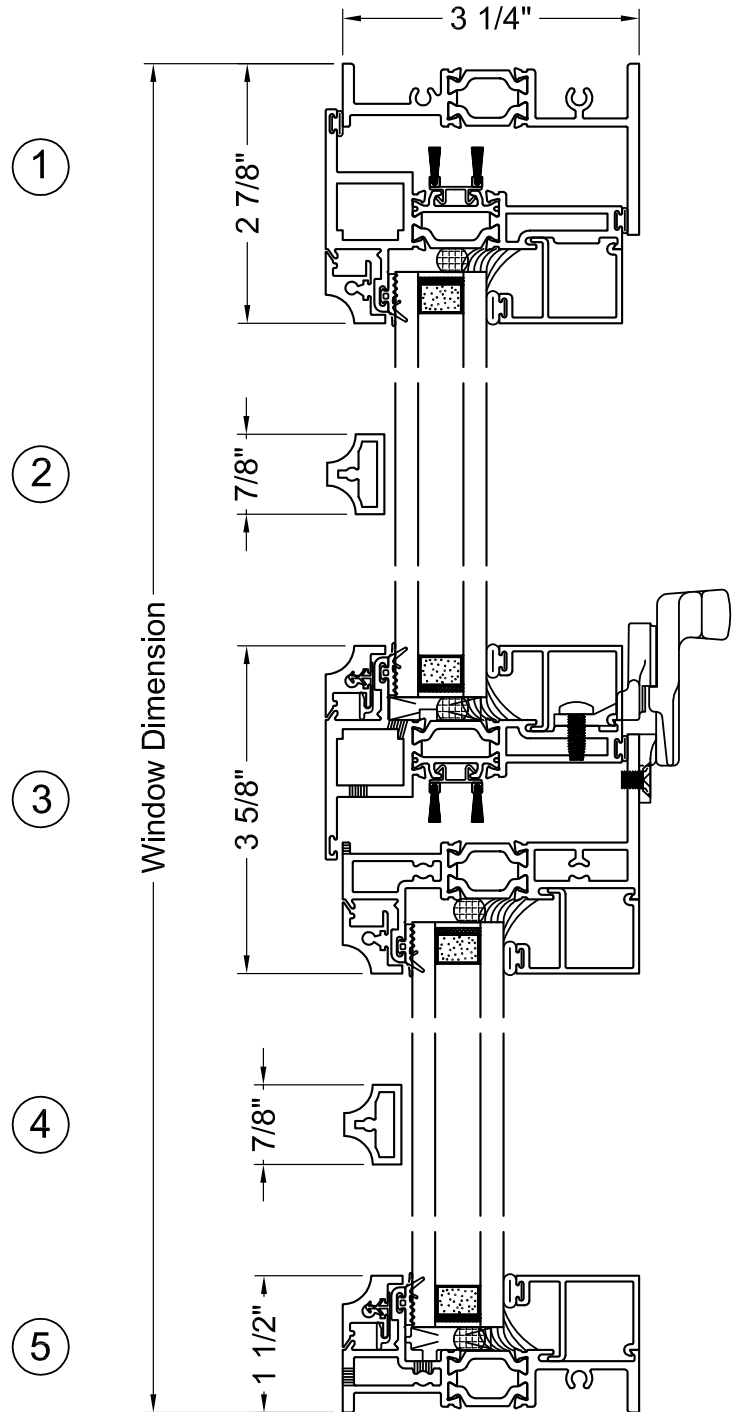
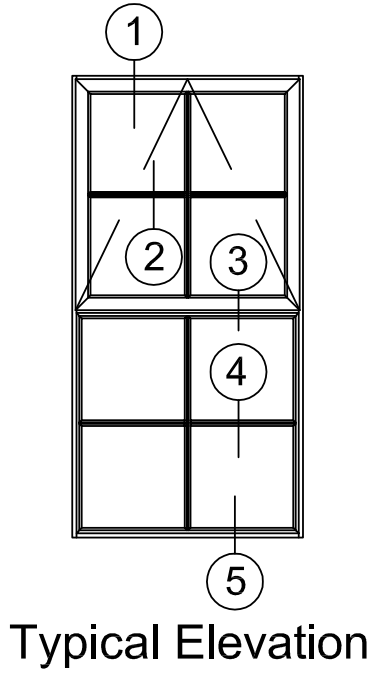


# 590X 3-1/4" Steel Replica Window

FX/PO - Vertical Details



Typical Elevation



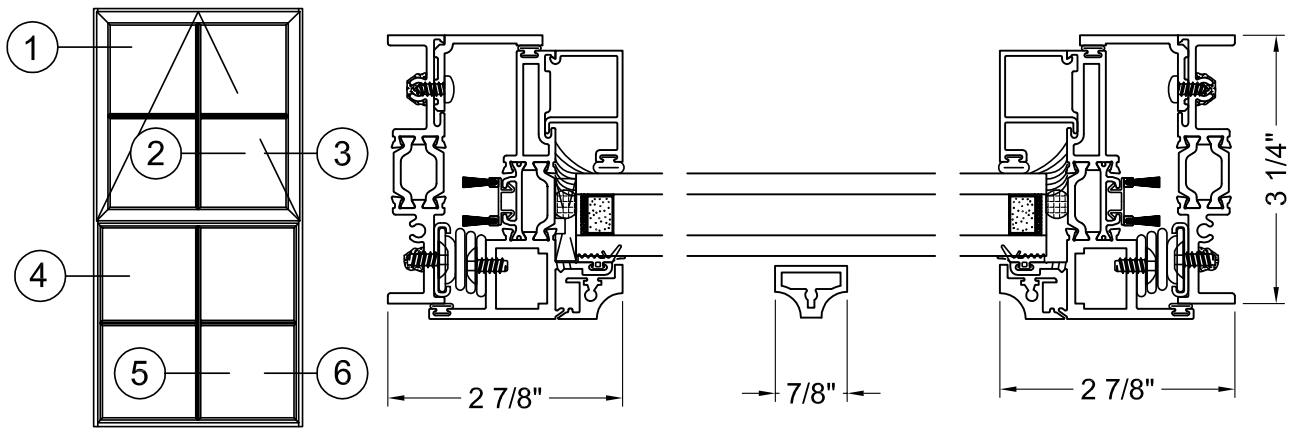
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Scale: 6" = 1'-0"



# 590X 3-1/4" Steel Replica Window

PO/FX - Vertical Details

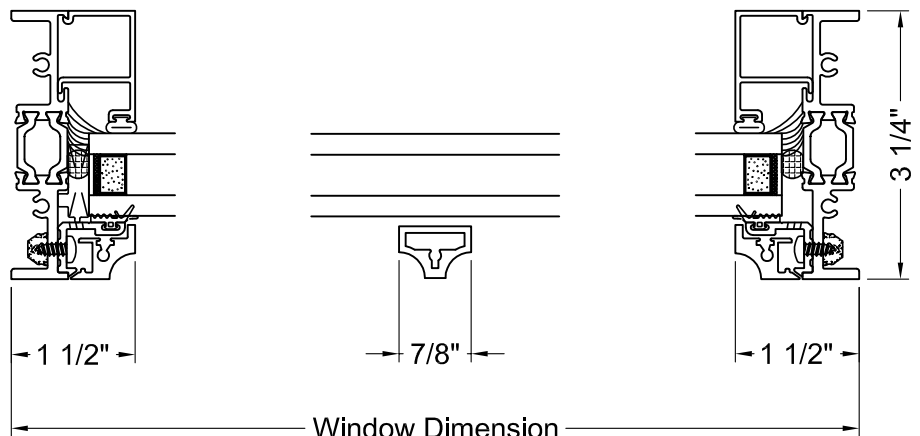


Typical Elevation

1

2

3



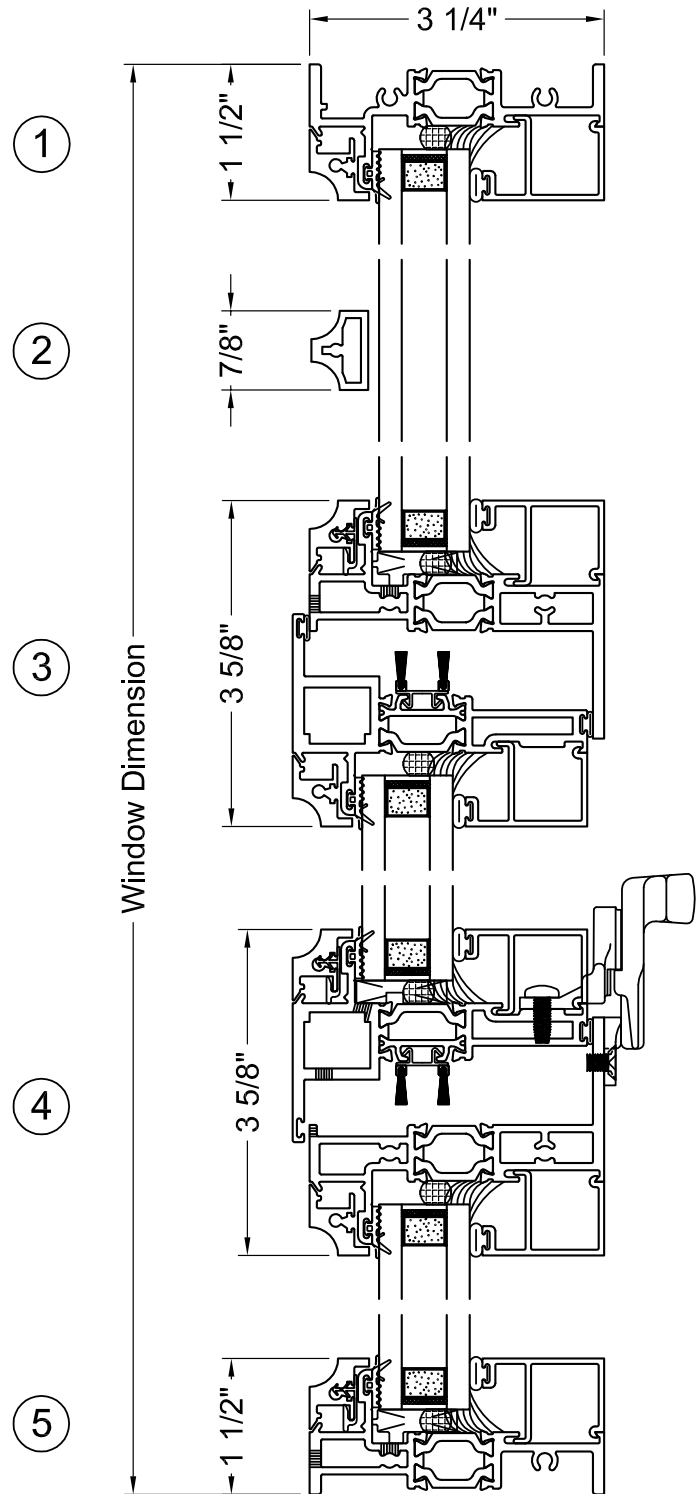
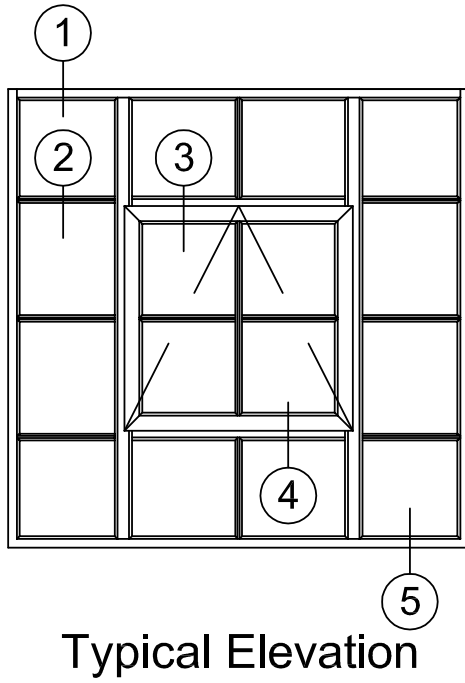
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Window Dimension





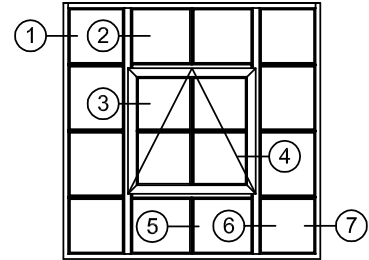
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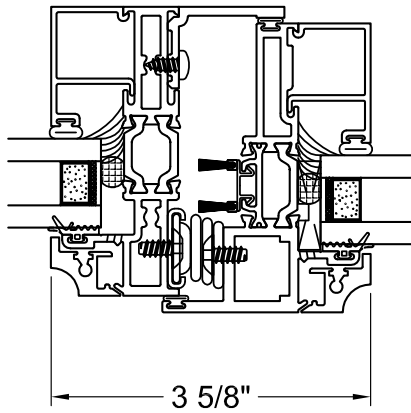
# 590X 3-1/4" Steel Replica Window

## Floating Vent - Vertical Details

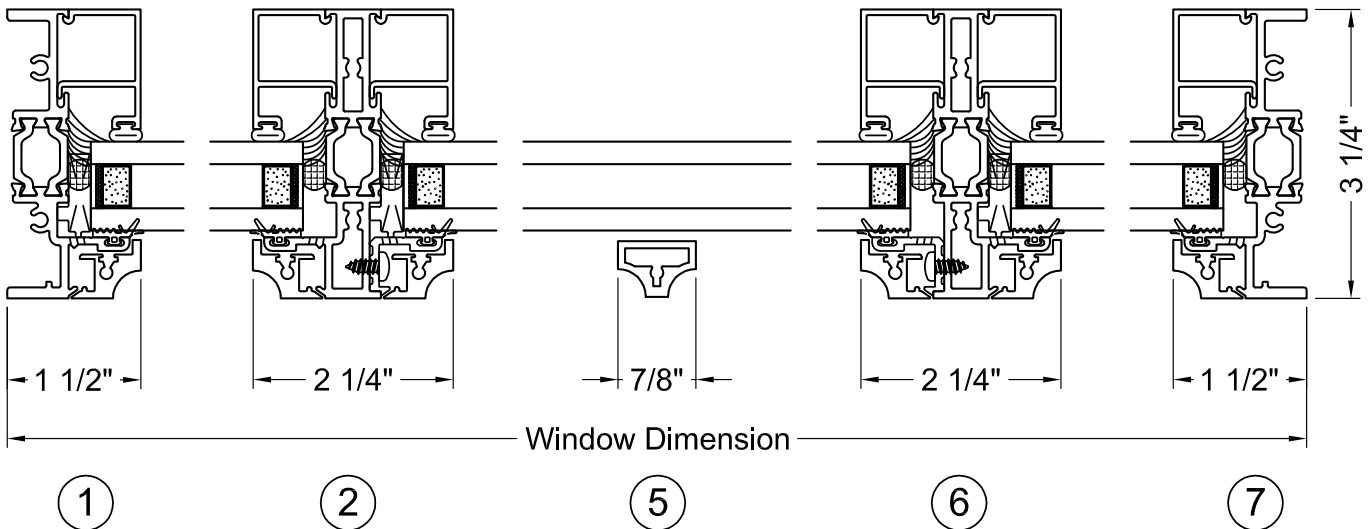
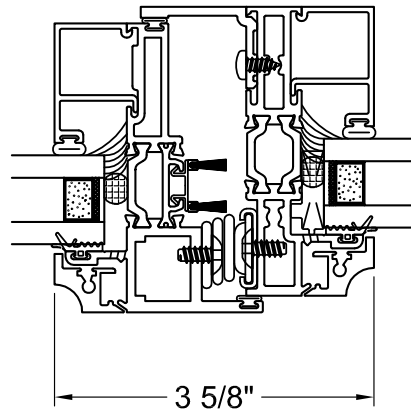


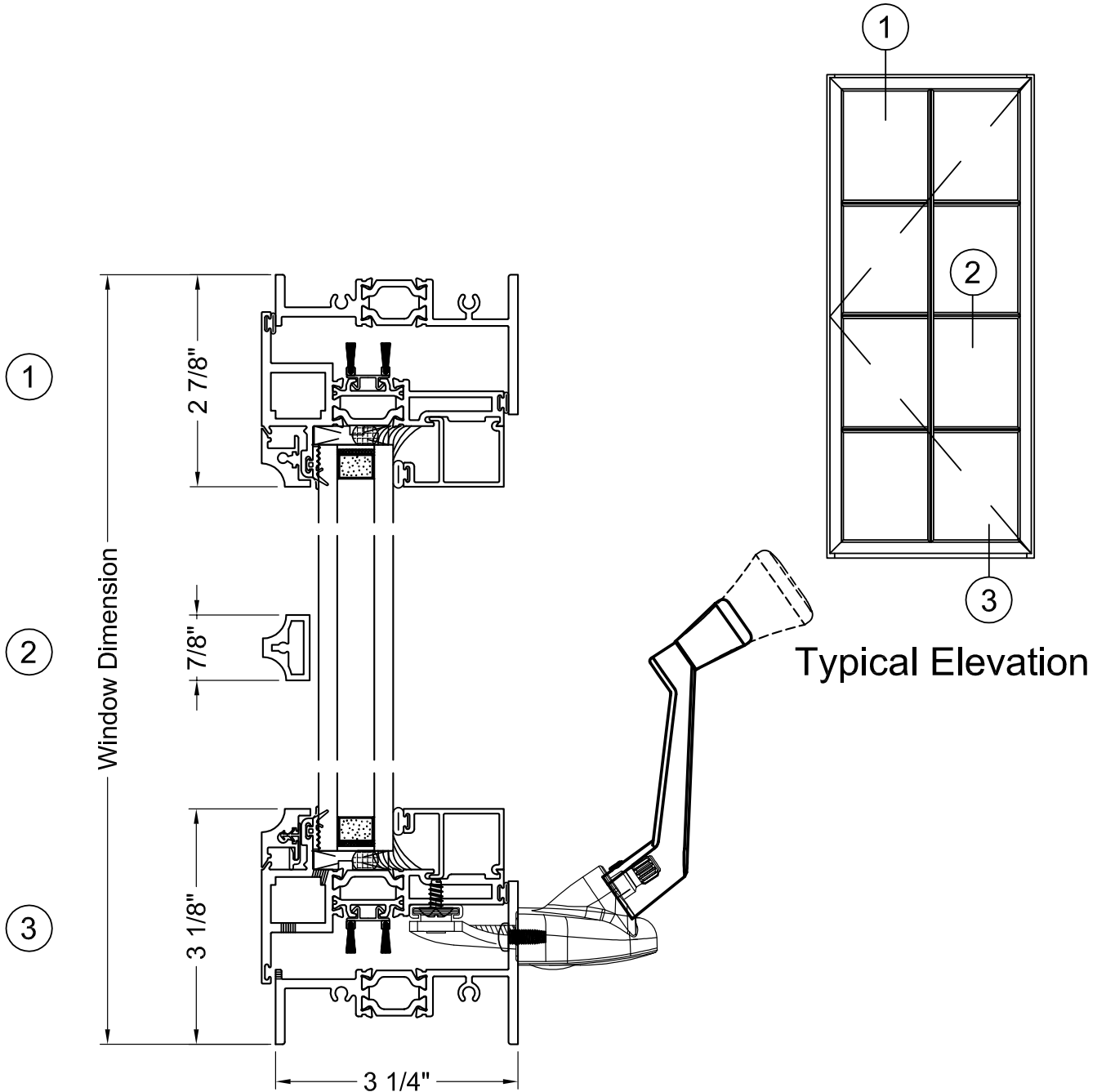
Typical Elevation

3



4





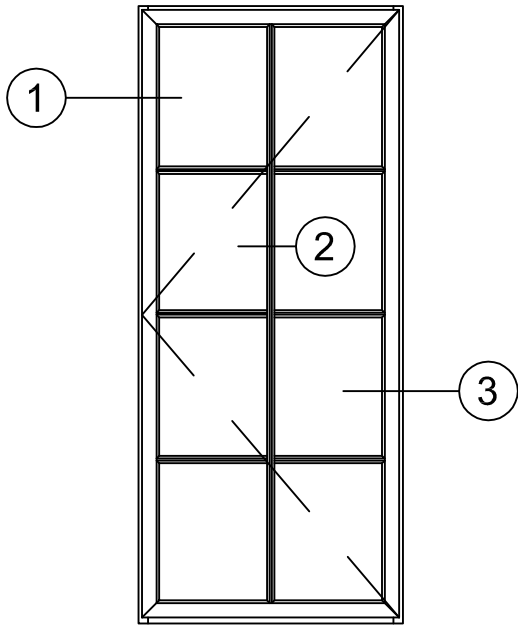
Note: Multiple configurations and hardware options available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"

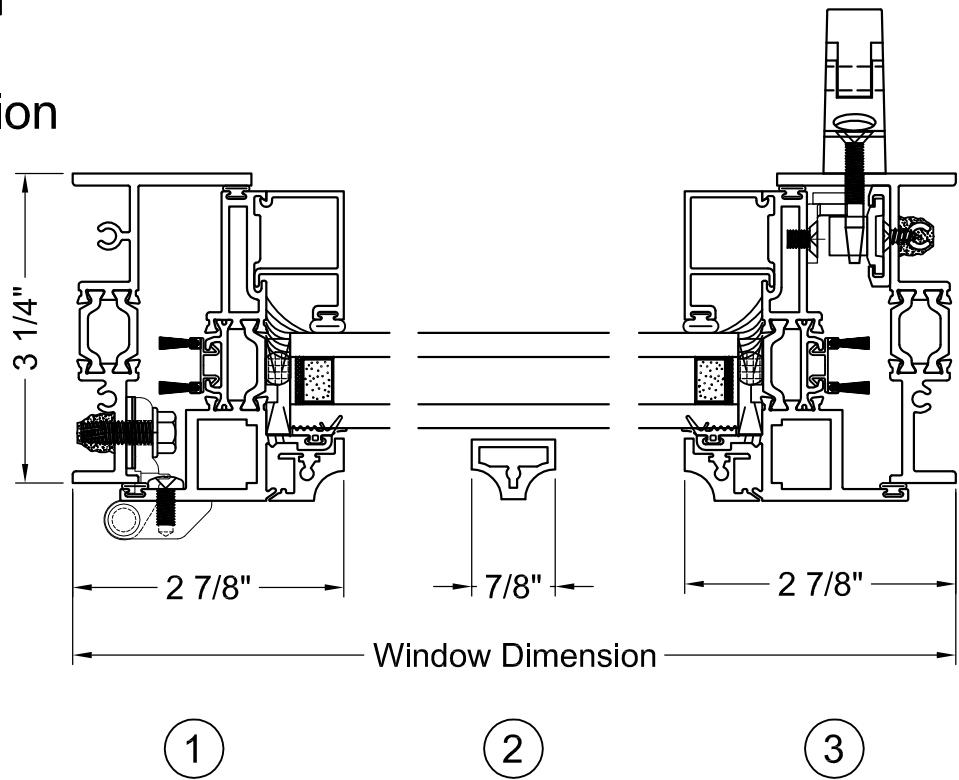


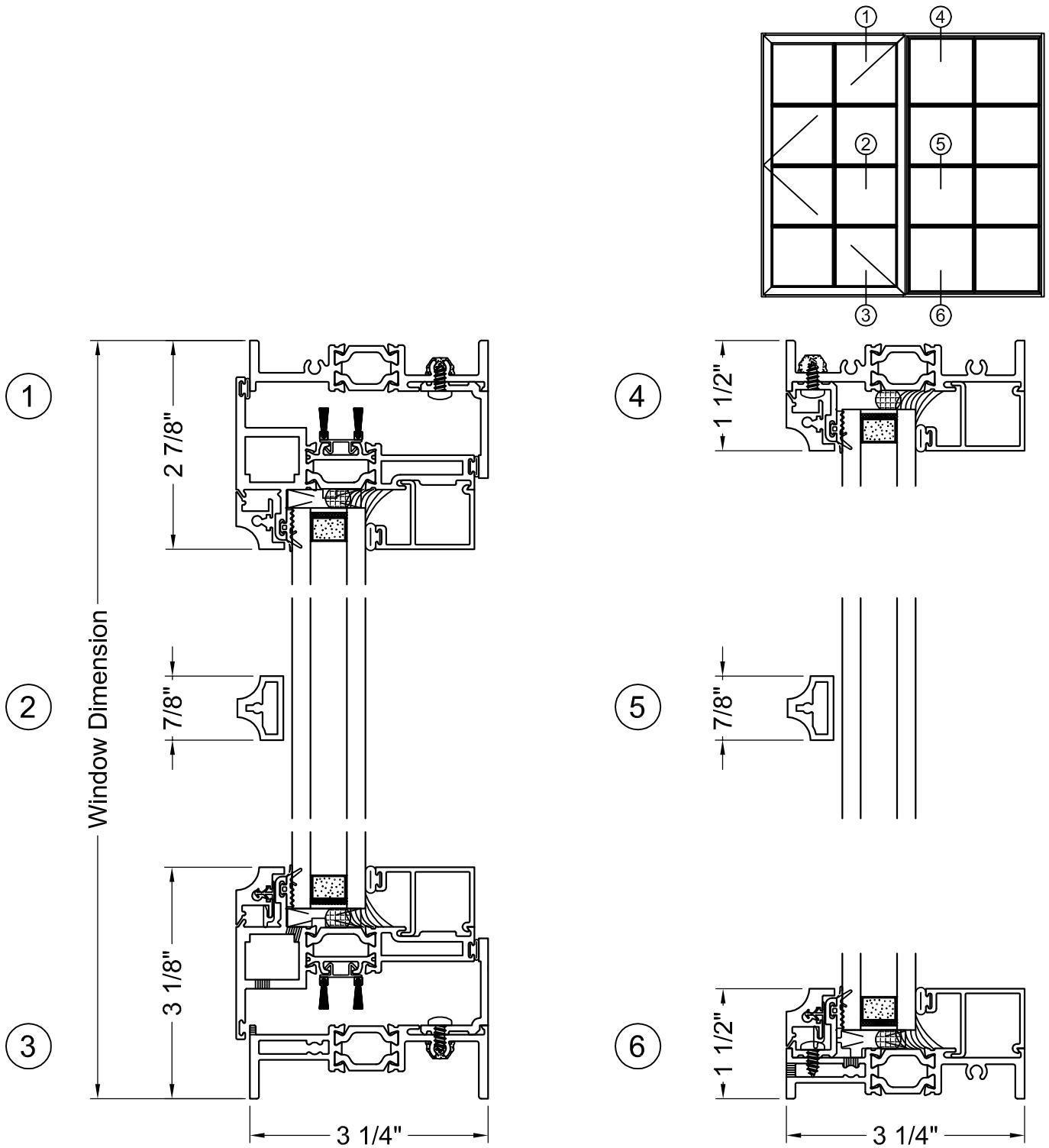
# 590X 3-1/4" Steel Replica Window

## Outswing Casement - Vertical Details



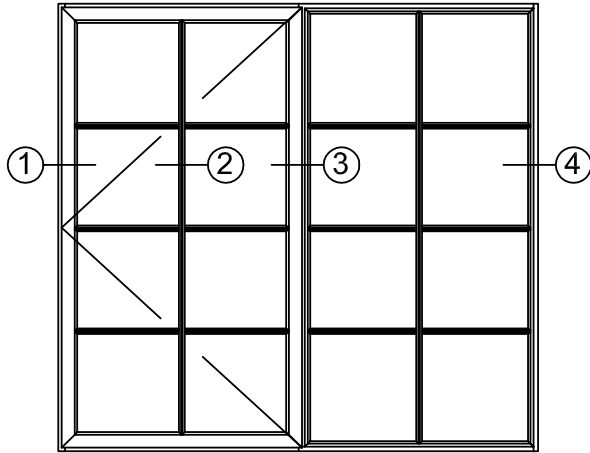
Typical Elevation



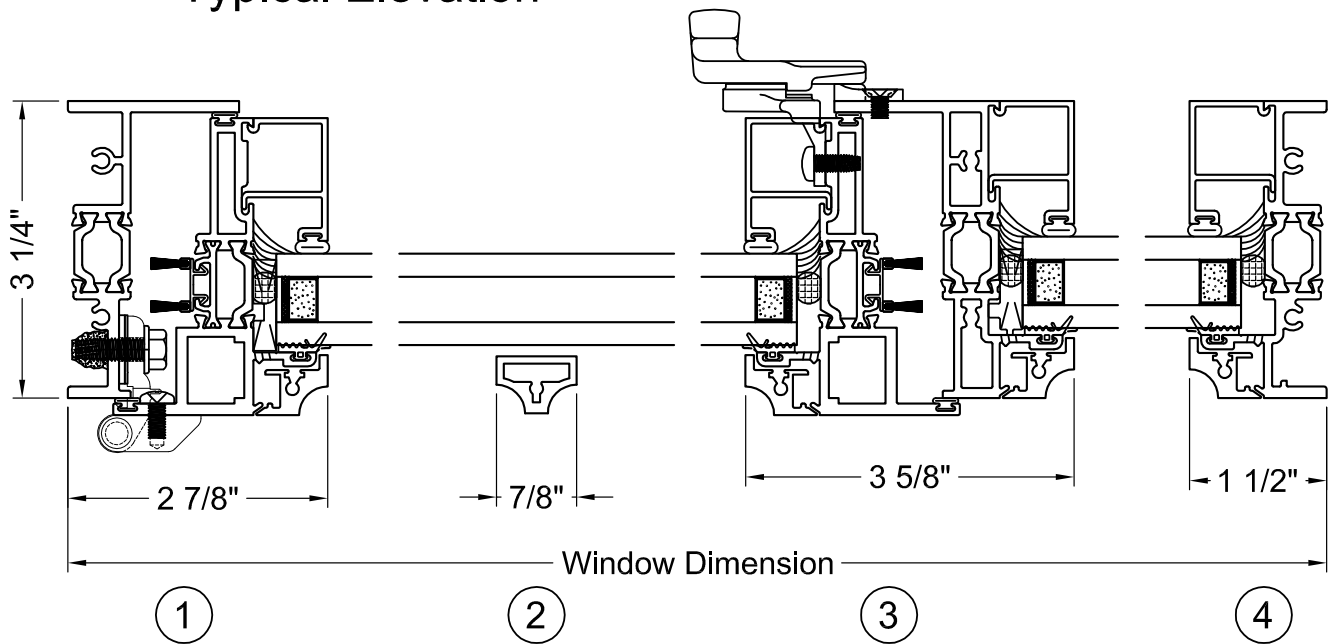


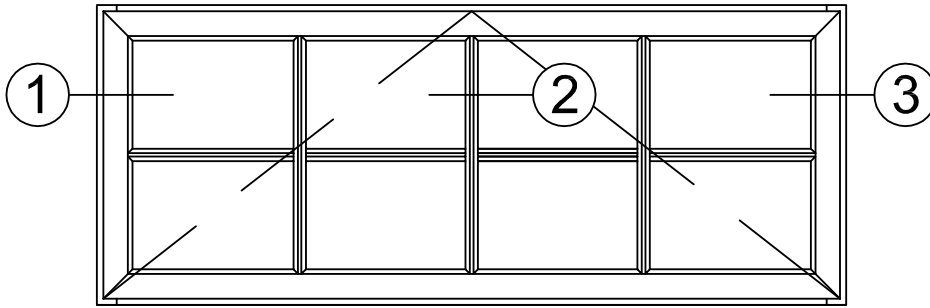
Note: Multiple configurations and hardware options available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"



Typical Elevation



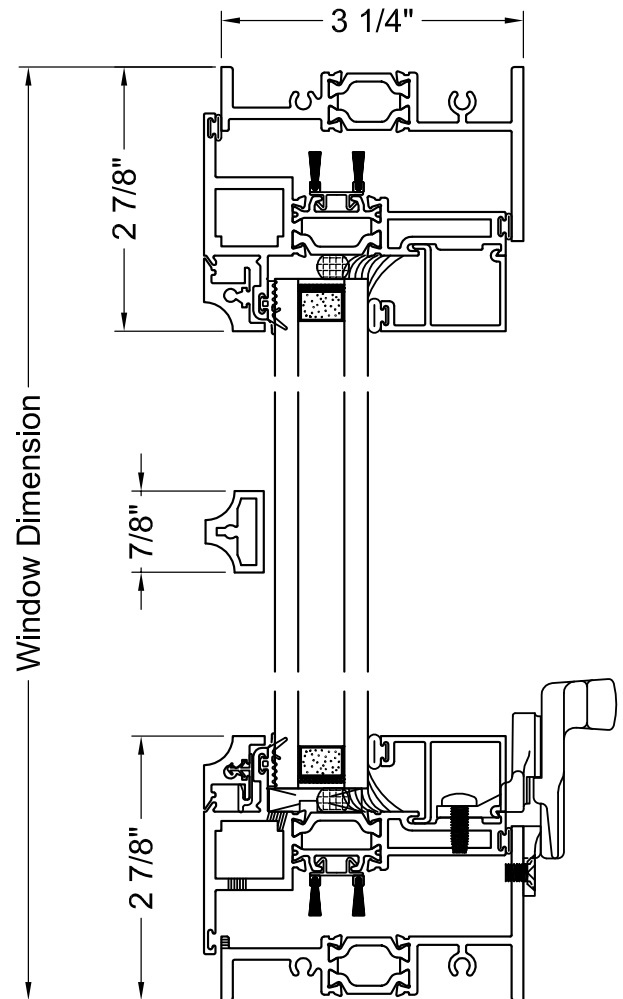


Typical Elevation

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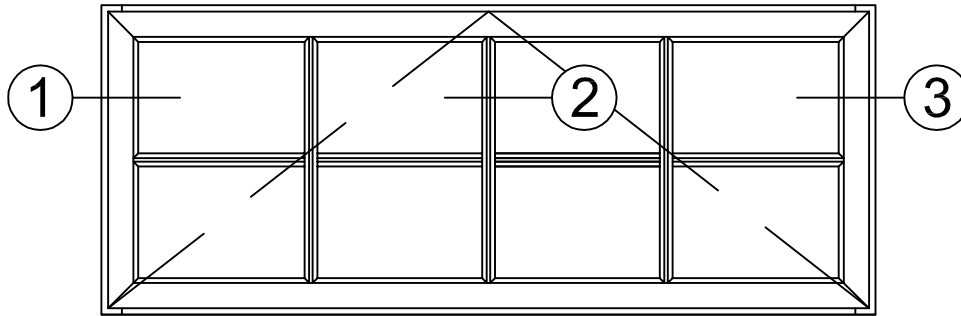
2

3

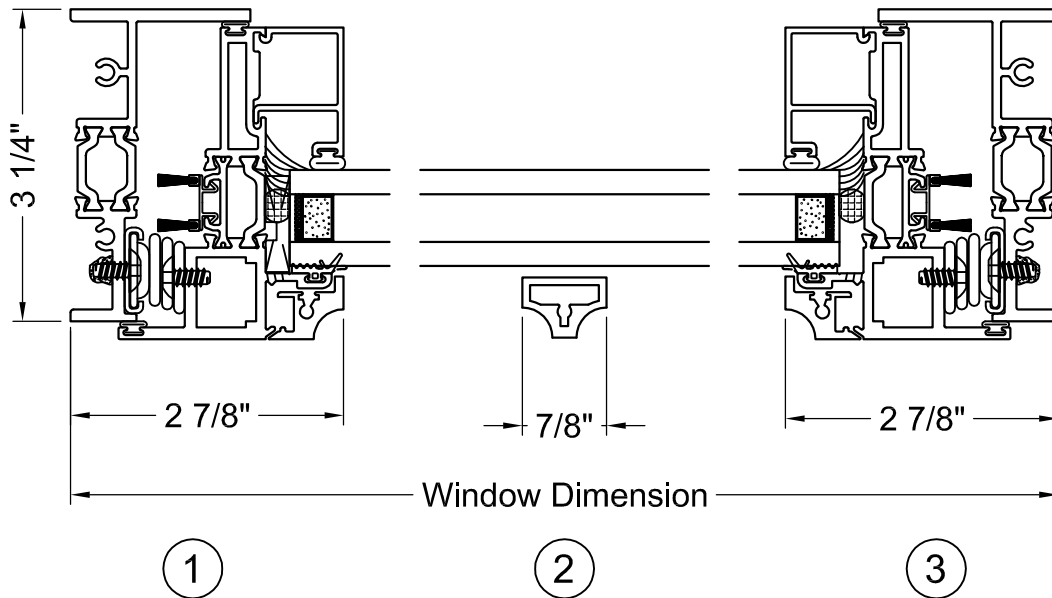


Note: Multiple configurations and hardware options available. Contact your EFCO representative for more information.

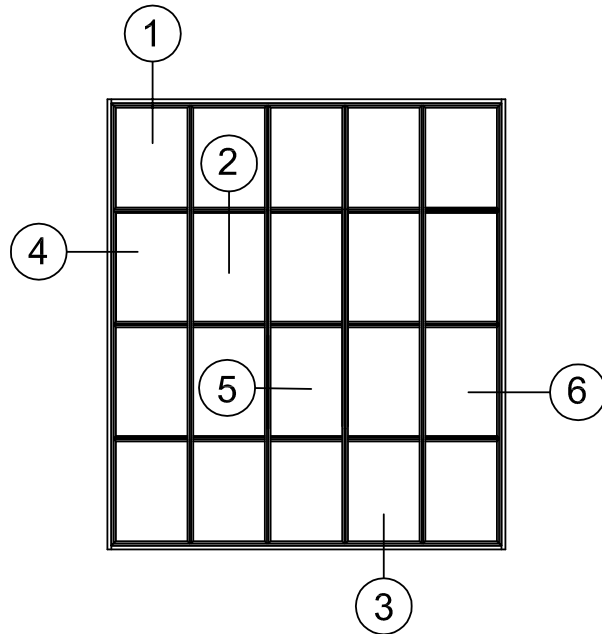
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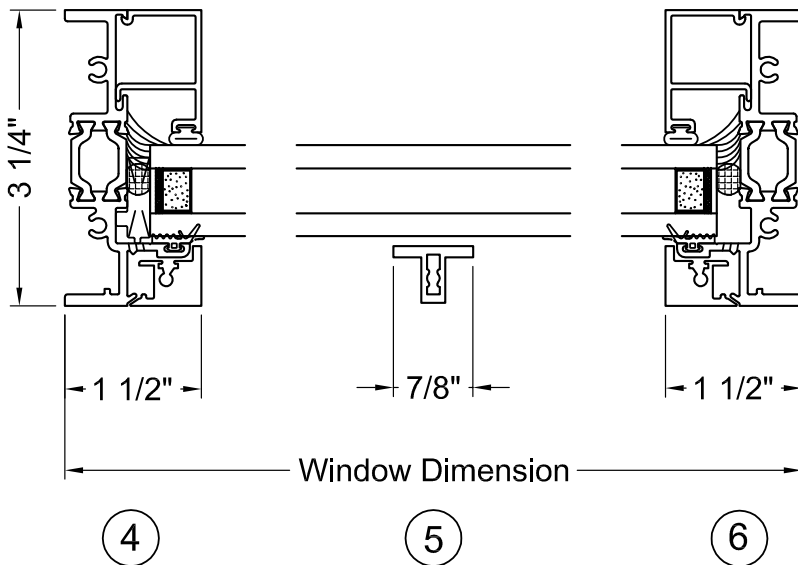
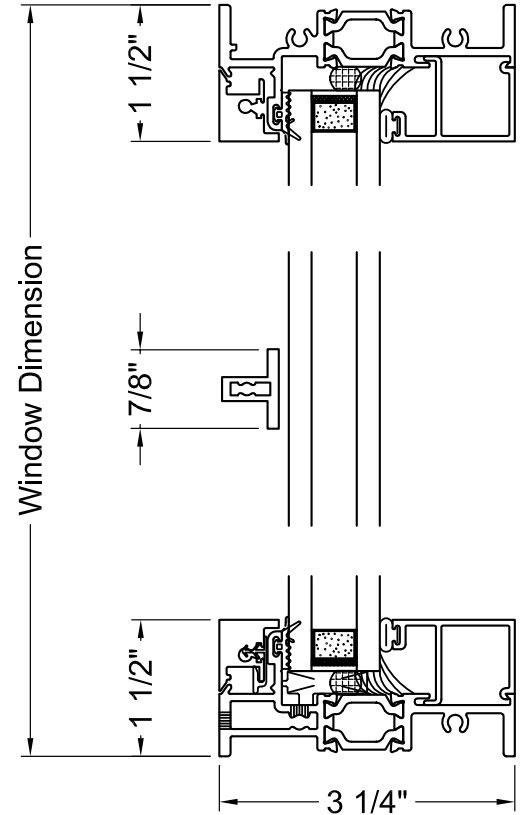
Typical Elevation







Typical Elevation



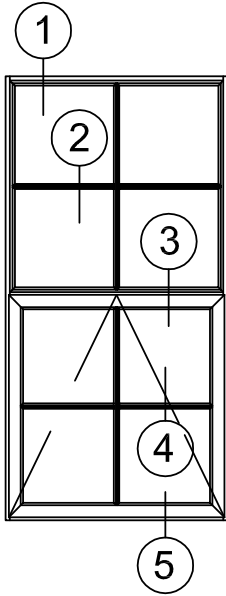
Note: Multiple configuration options available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"

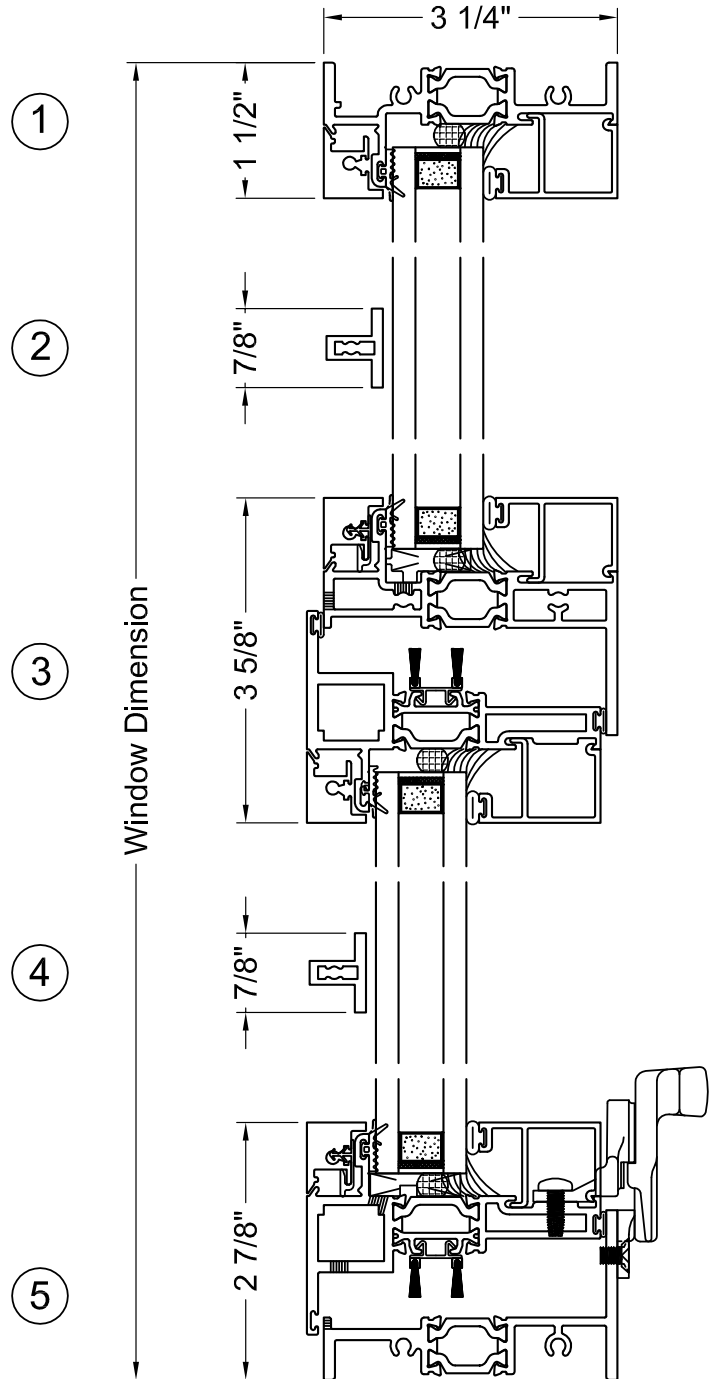


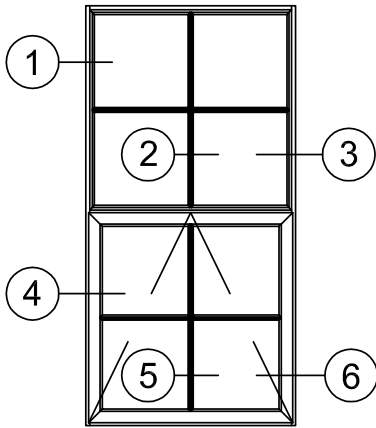
# 590X 3-1/4" Steel Replica Window

FX/PO - Horizontal Details

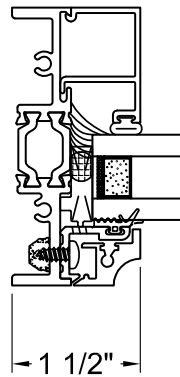


Typical Elevation

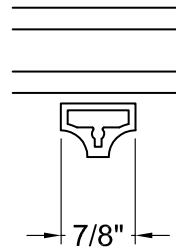




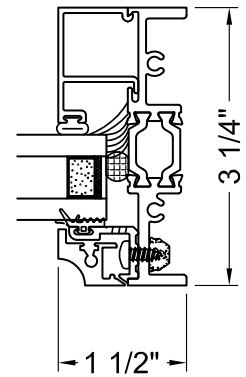
Typical Elevation



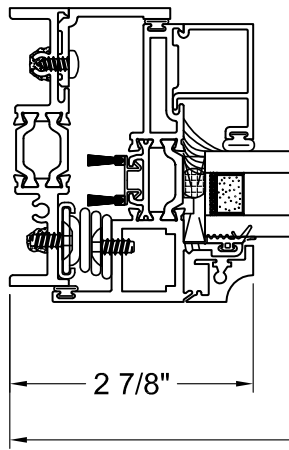
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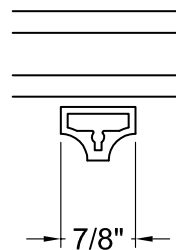
2



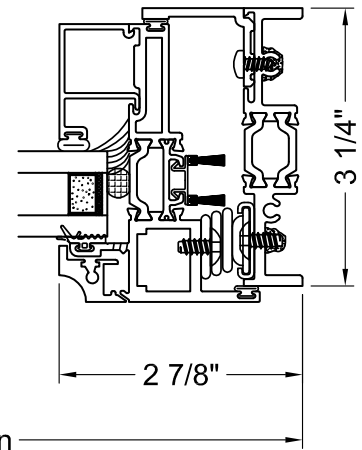
3



4



5



6

Window Dimension

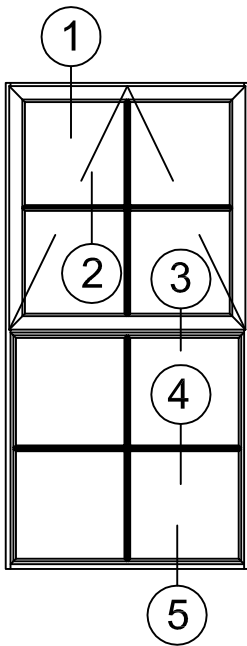
Note: Multiple configuration options available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"

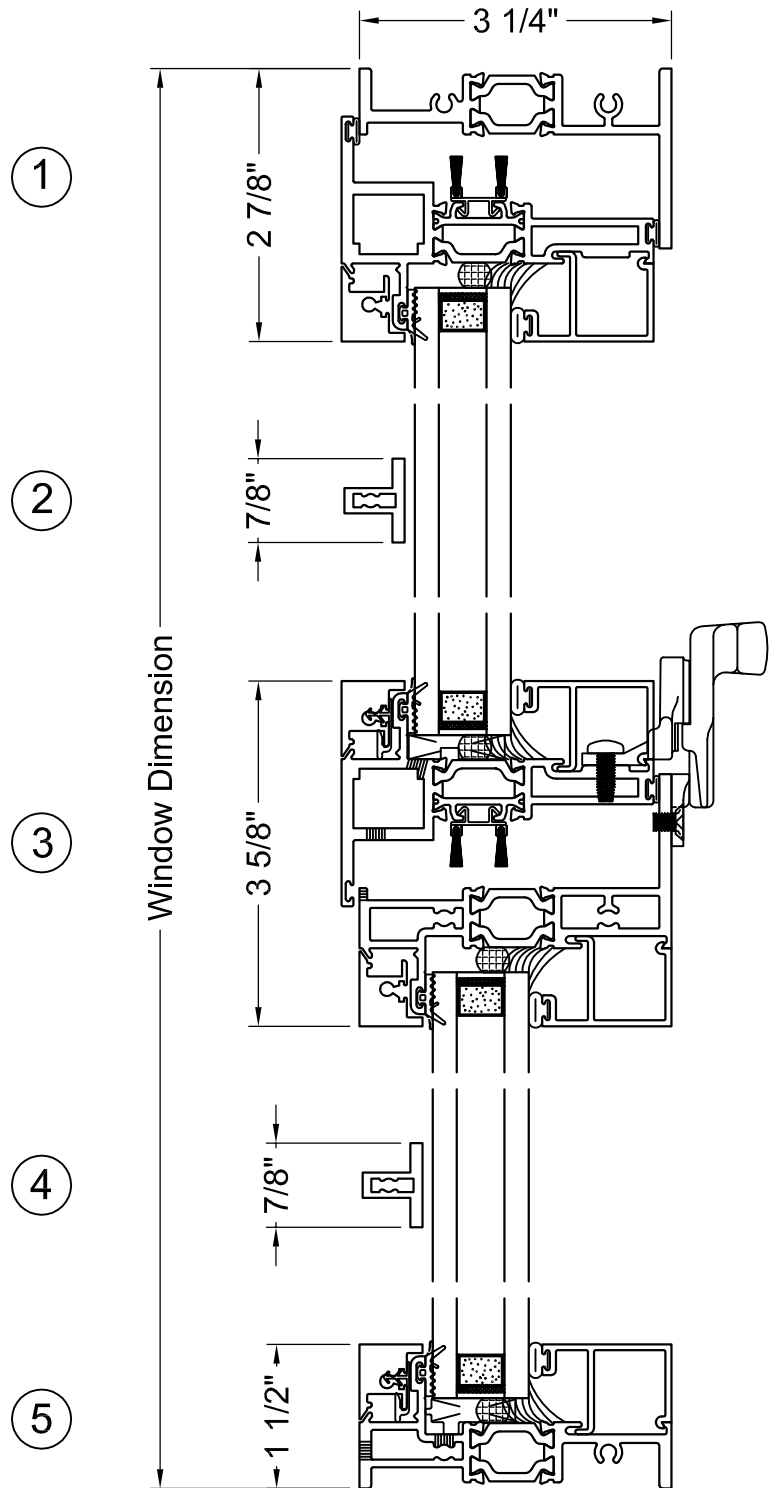


# 590X 3-1/4" Steel Replica Window

PO/FX - Horizontal Details

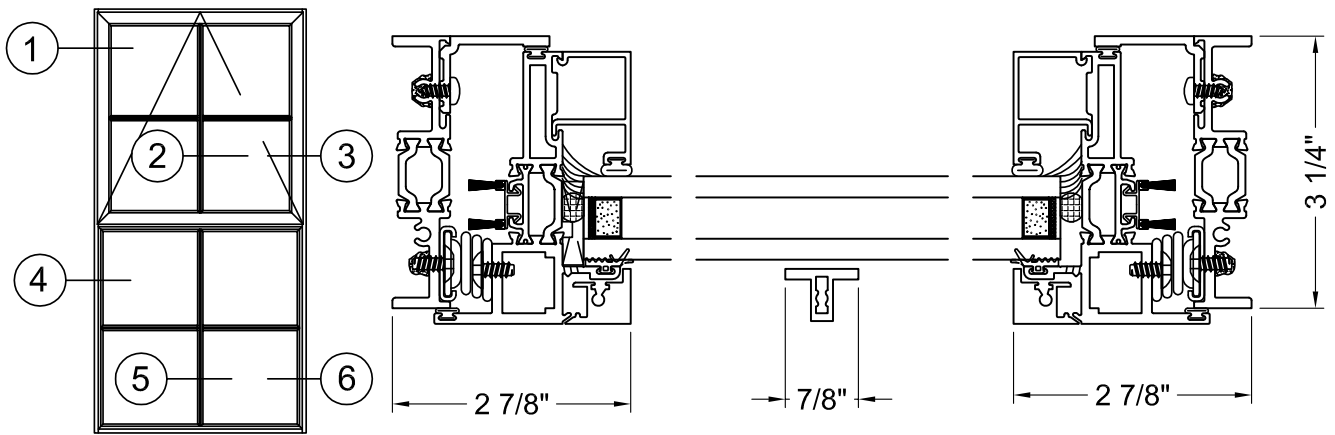


Typical Elevation

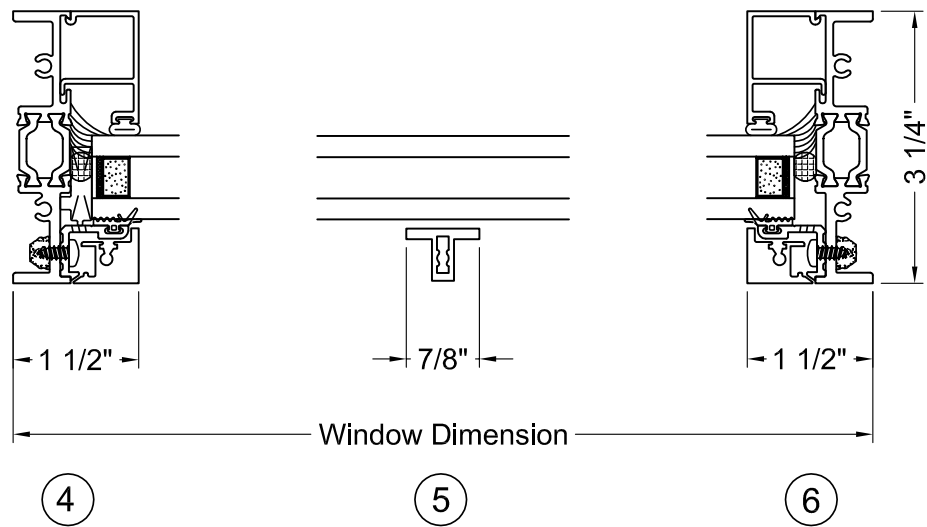


Scale: 6" = 1'-0"

Note: Multiple configurations and hardware options available. Contact your EFCO representative for more information.



Typical Elevation



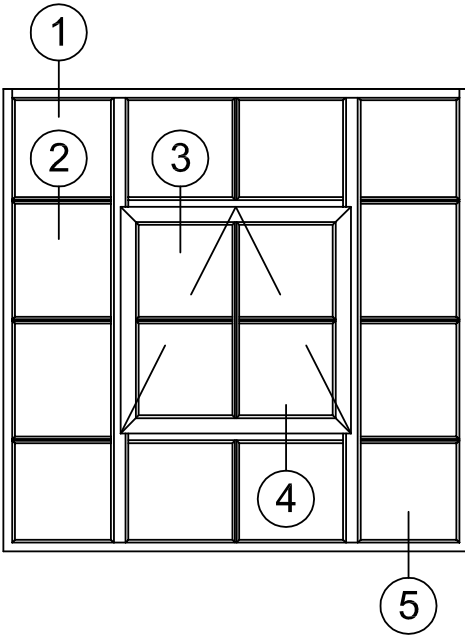
Note: Multiple configuration options available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"

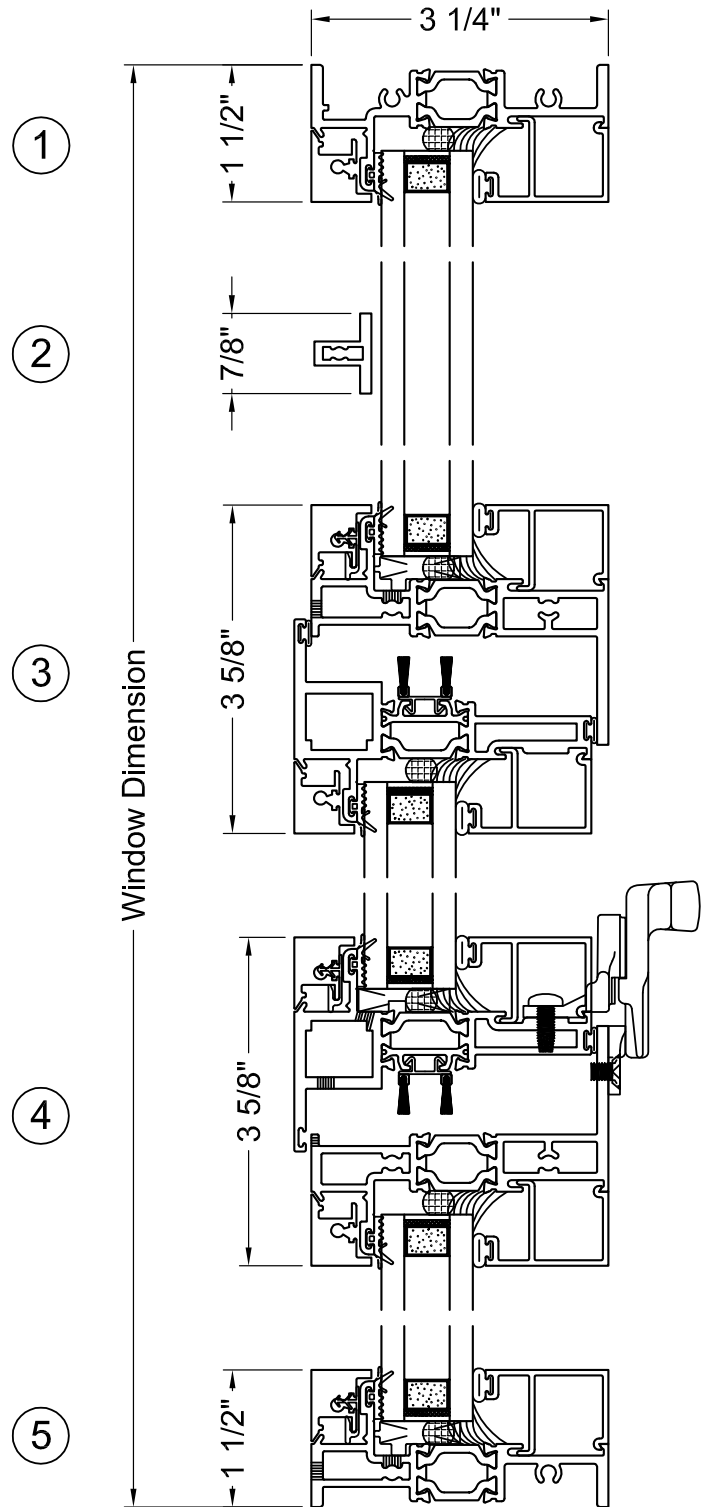


# 590X 3-1/4" Steel Replica Window

## Floating Vent - Horizontal Details

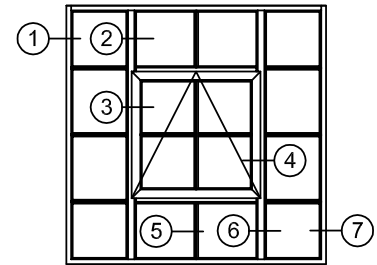


Typical Elevation



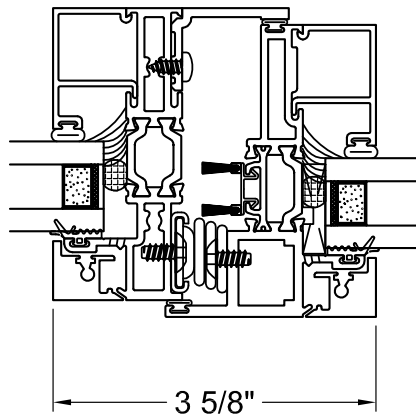
Scale: 6" = 1'-0"

Note: Multiple configurations and hardware options available. Contact your EFCO representative for more information.

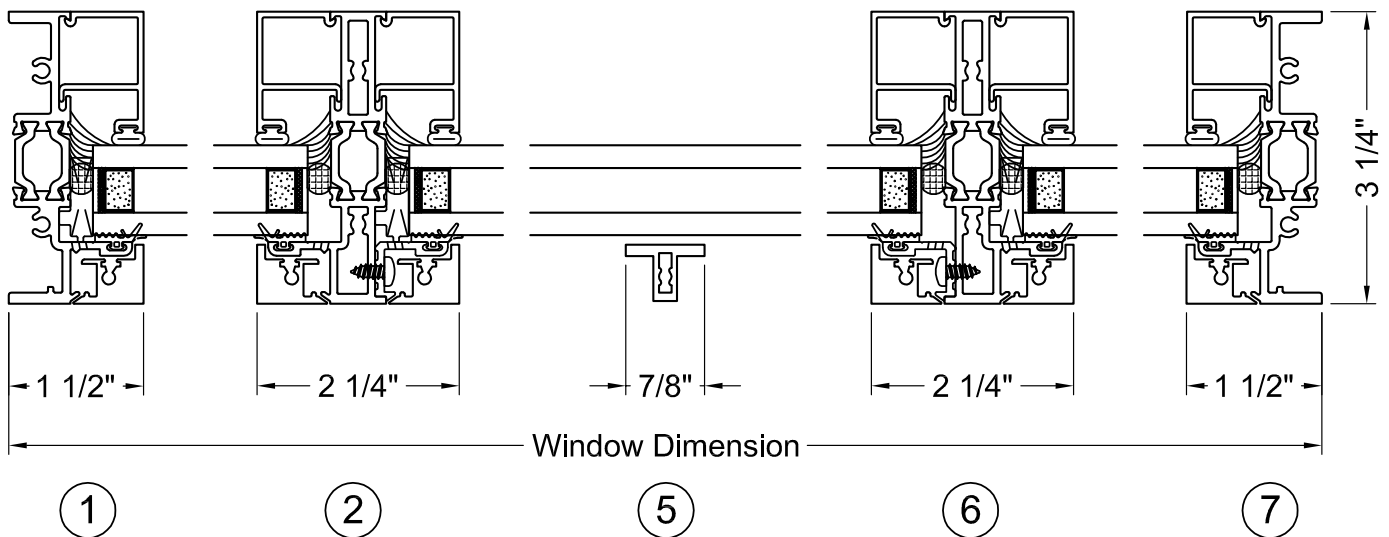
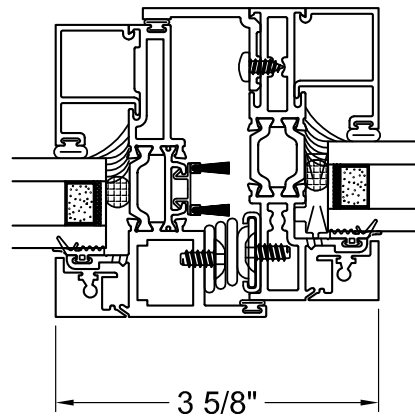


Typical Elevation

3



4



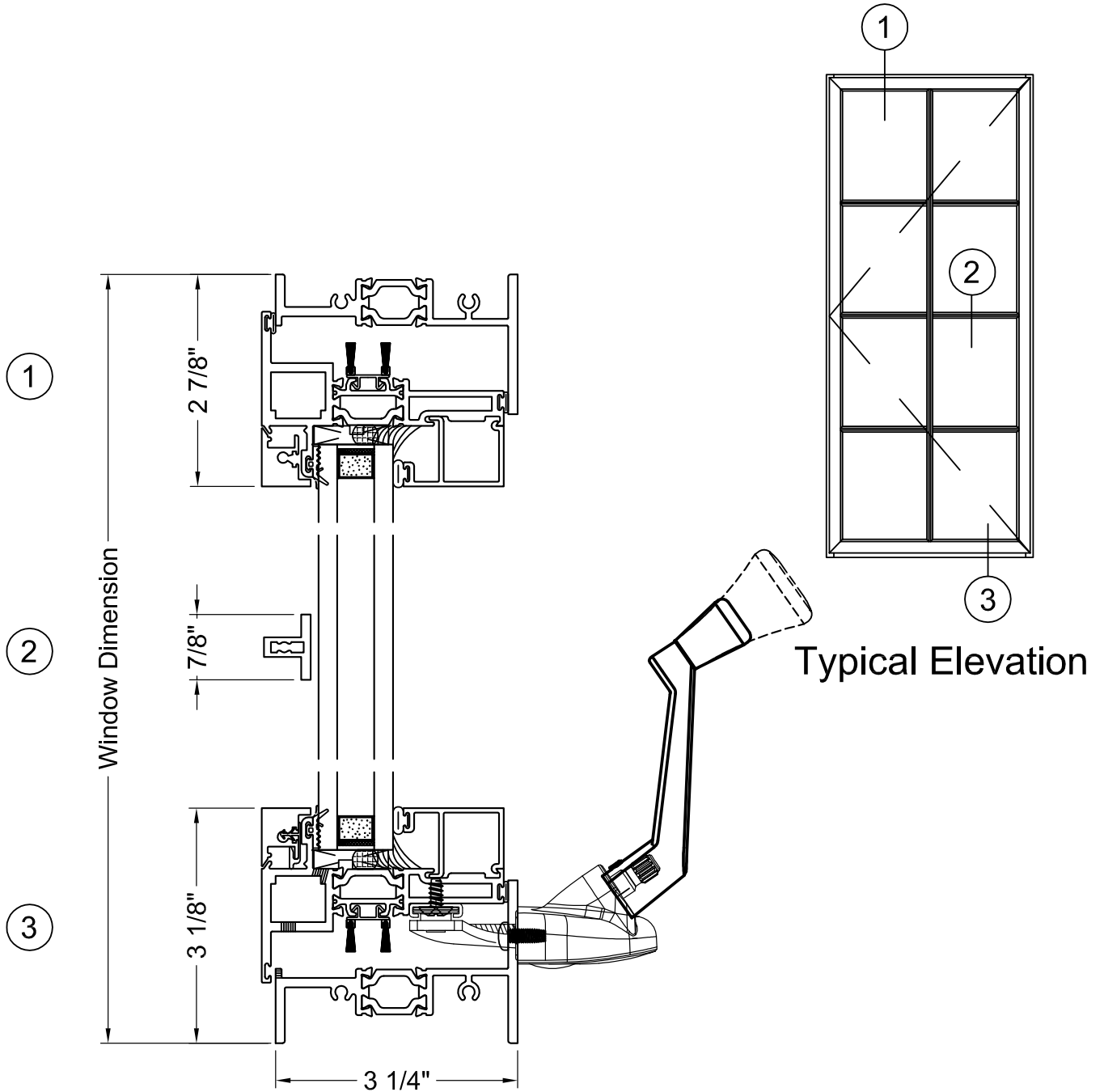
Note: Multiple configuration options available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"



# 590X 3-1/4" Steel Replica Window

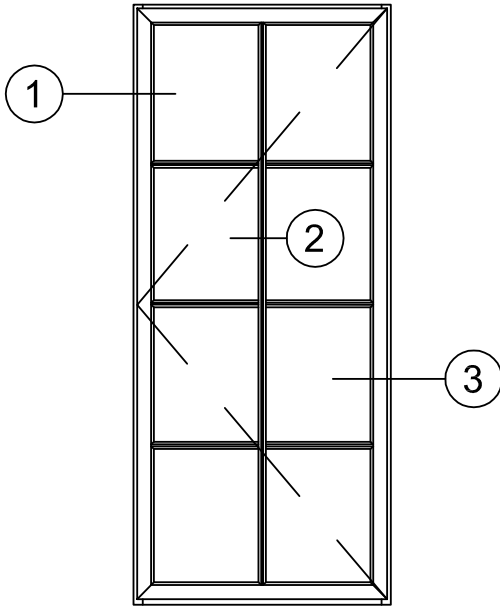
## Outswing Casement - Horizontal Details



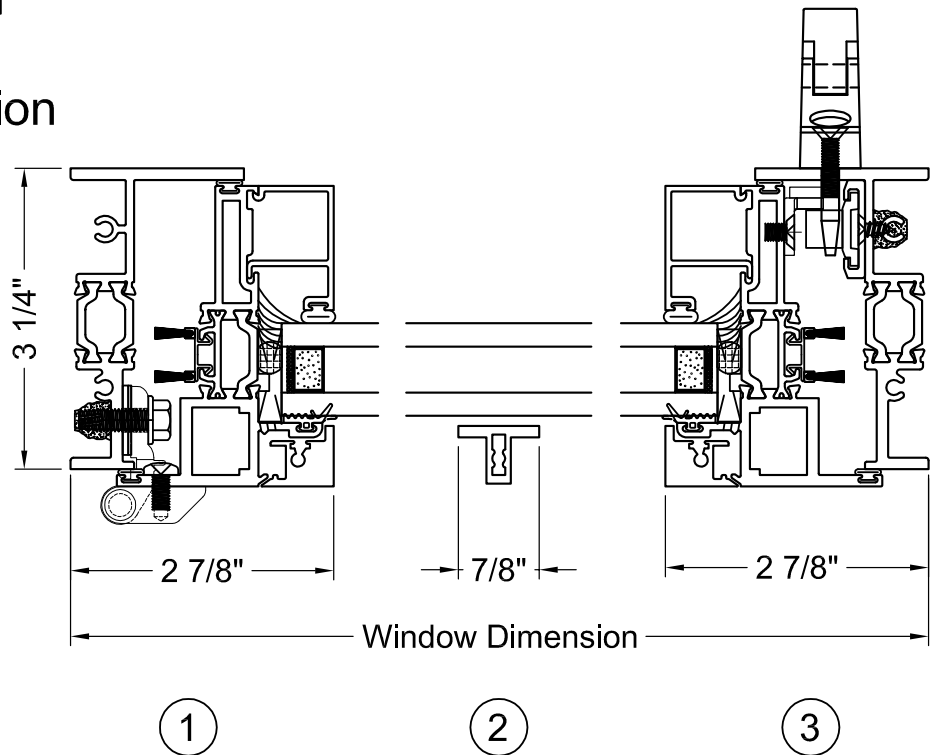
Scale: 6" = 1'-0"

Note: Multiple configurations and hardware options available. Contact your EFCO representative for more information.





Typical Elevation



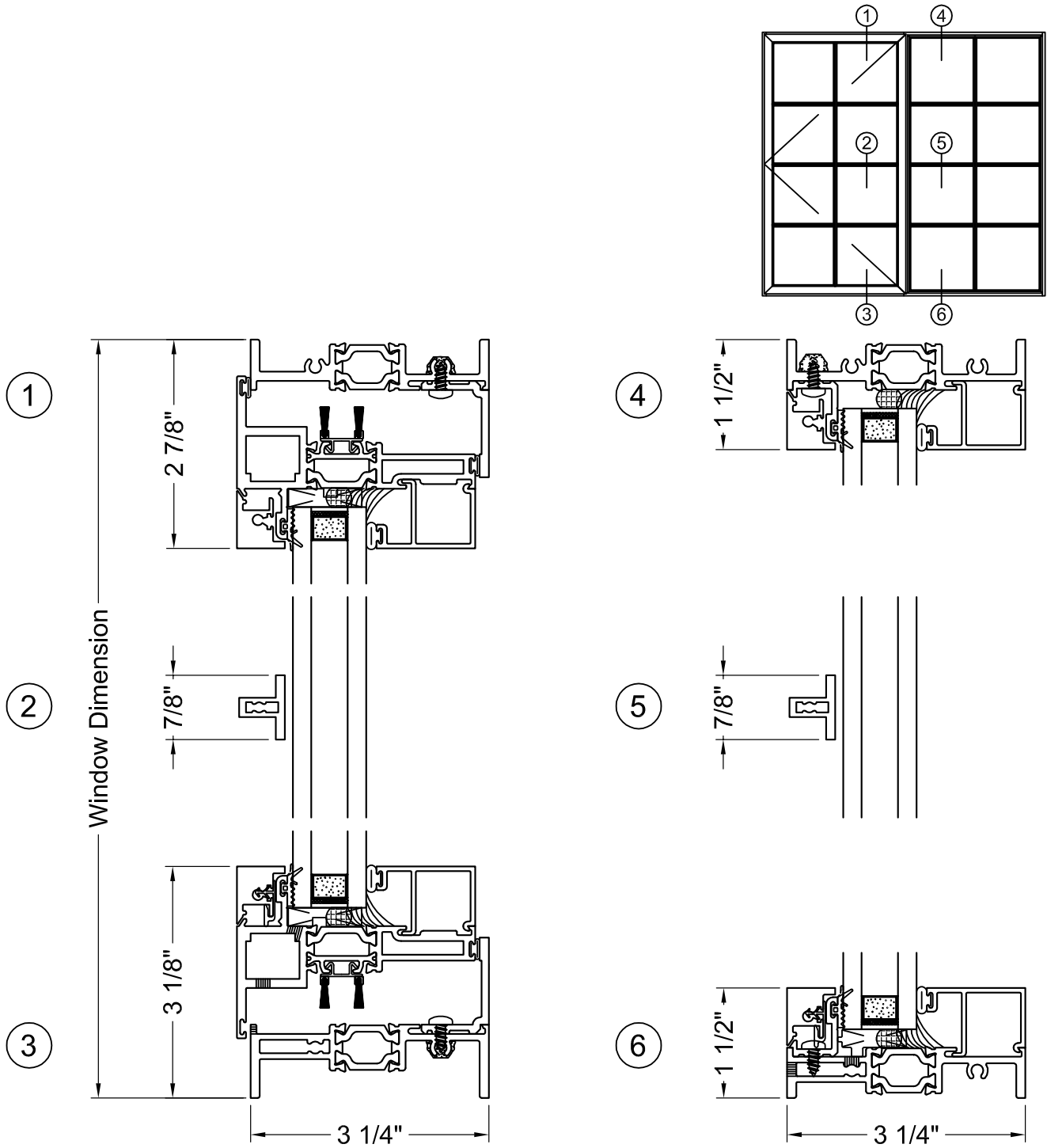
Note: Multiple configuration options available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"



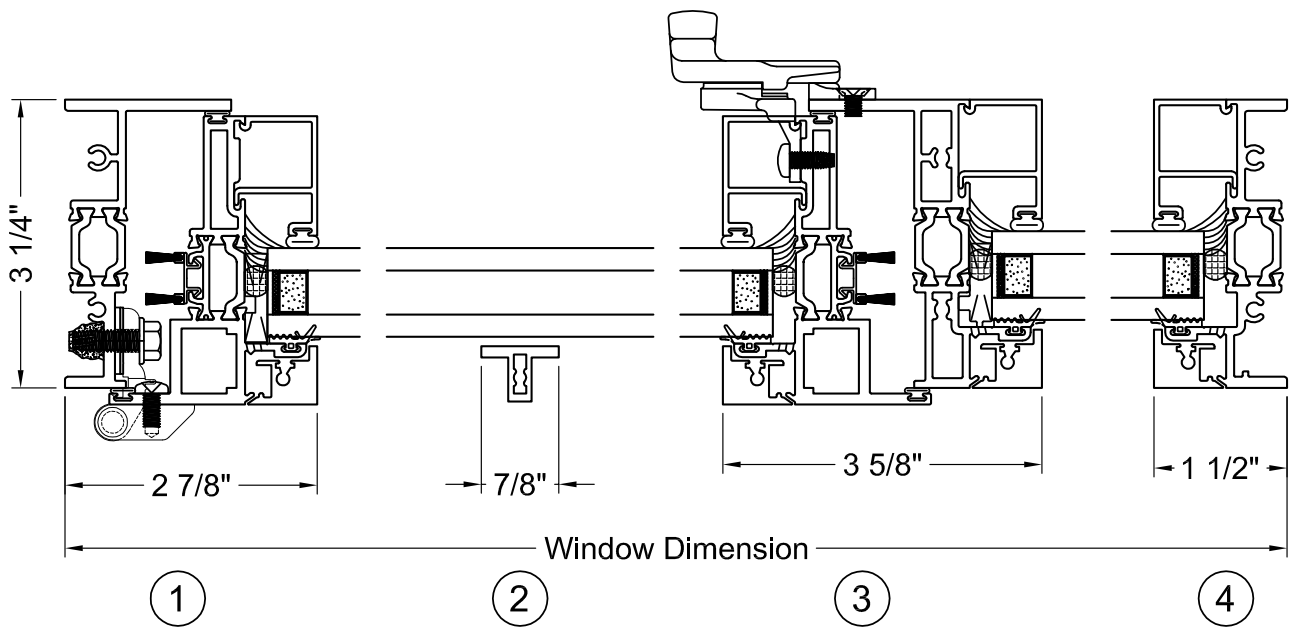
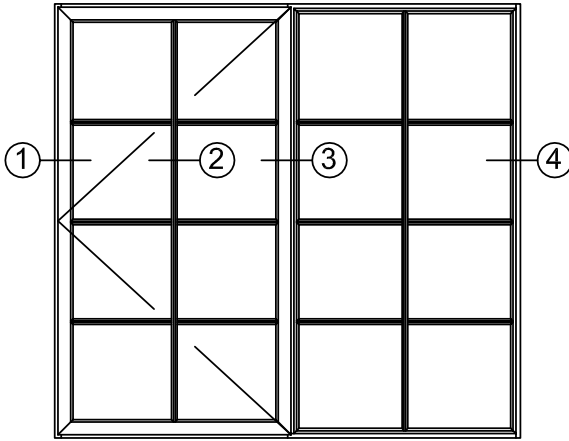
# 590X 3-1/4" Steel Replica Window

Outswing Casement | Fixed - Horizontal Details



Scale: 6" = 1'-0"

Note: Multiple configurations and hardware options available. Contact your EFCO representative for more information.



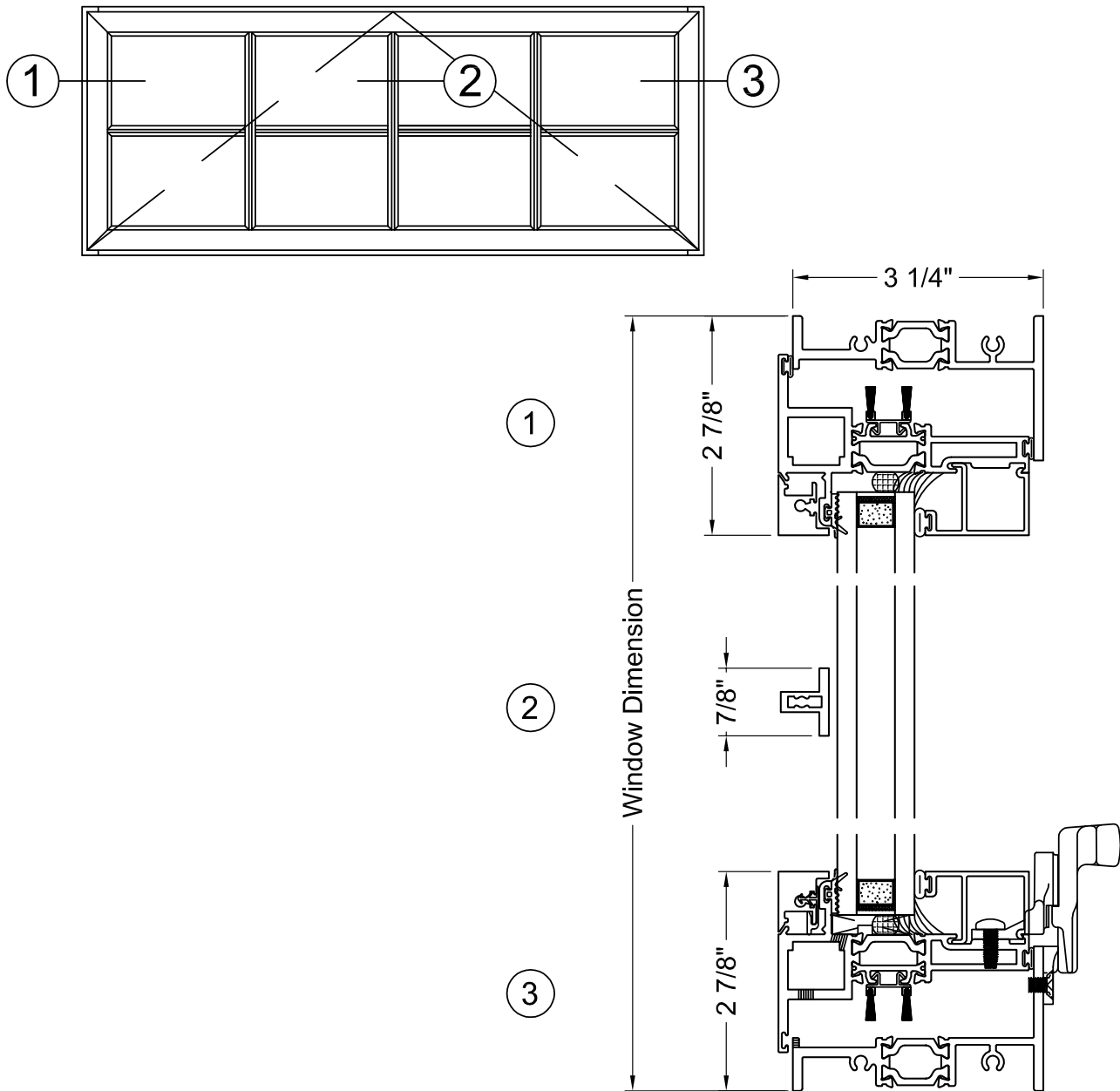
Note: Multiple configuration options available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"



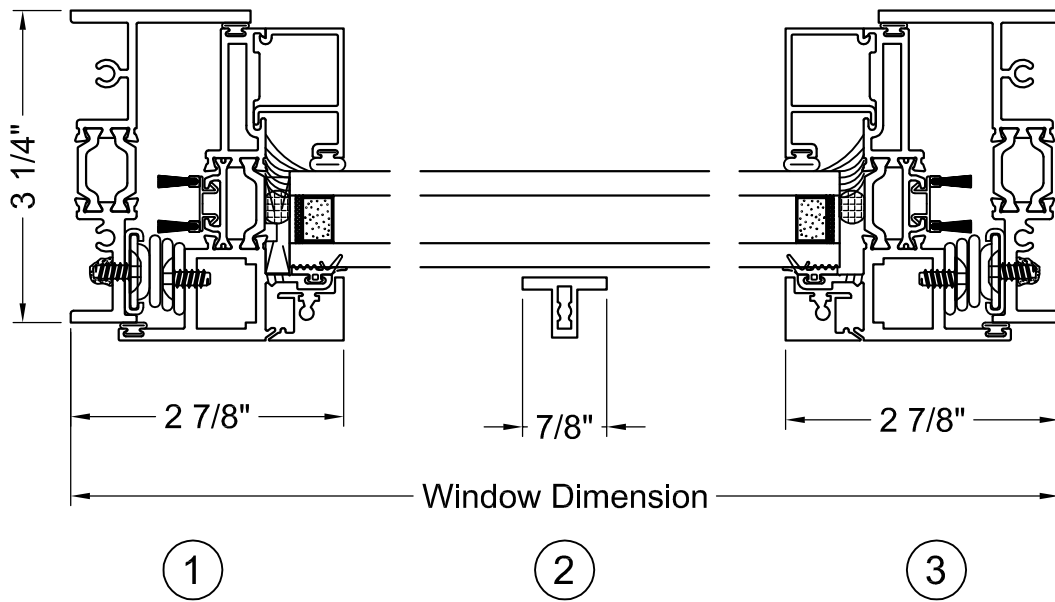
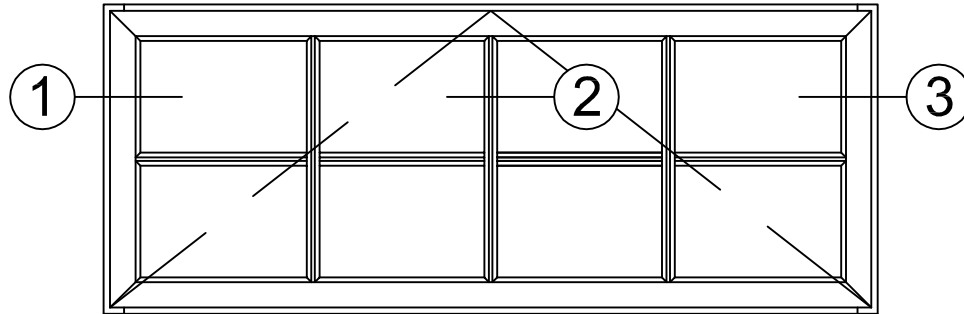
# 590X 3-1/4" Steel Replica Window

## Project Out - Horizontal Details



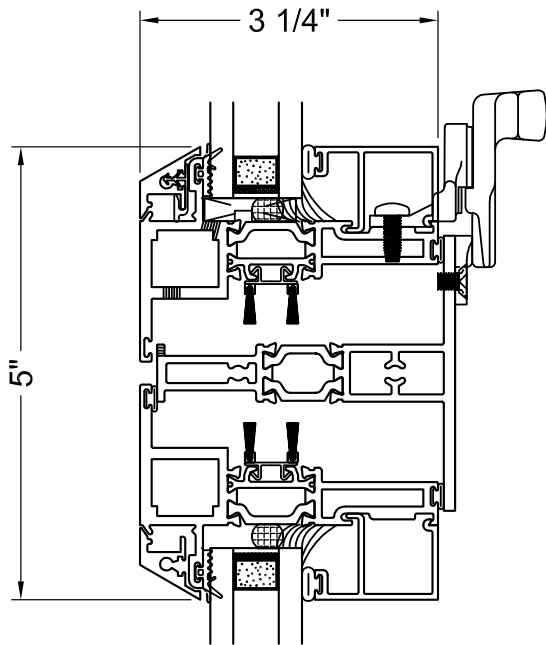
Scale: 6" = 1'-0"

Note: Multiple configurations and hardware options available. Contact your EFCO representative for more information.

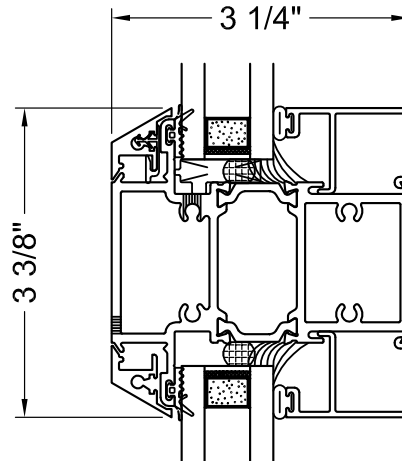


Note: Multiple configuration options available. Contact your EFCO representative for more information.

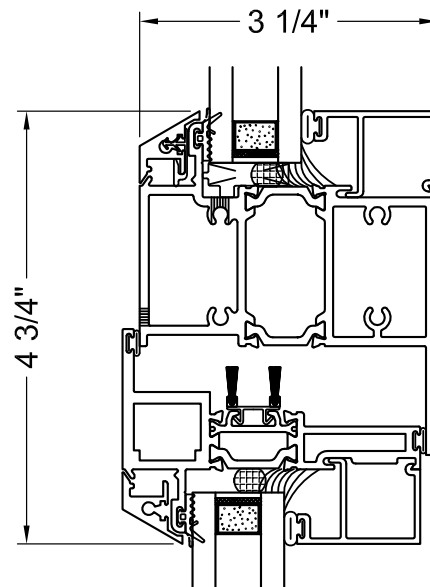
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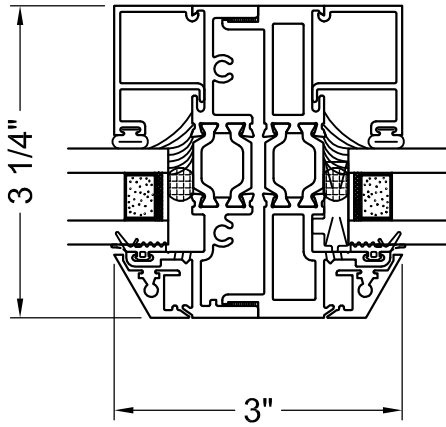
PO / PO Meeting Rail



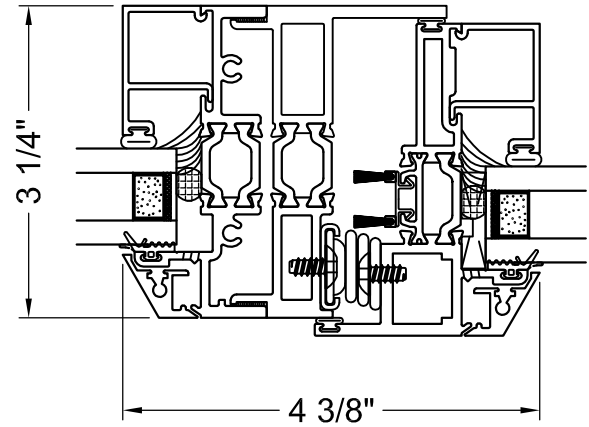
Wide FX / FX Meeting Rail



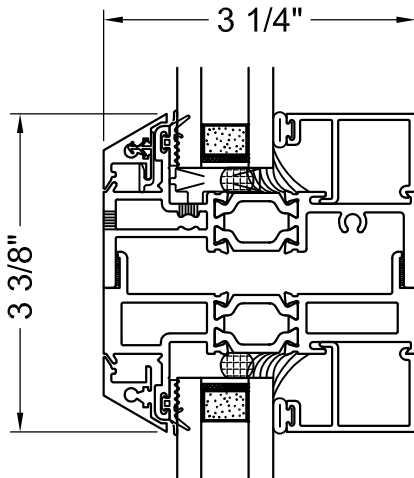
Wide FX / PO Meeting Rail



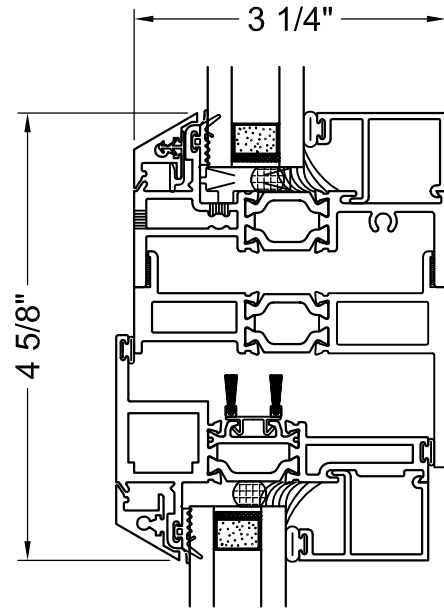
Stack FX | FX



Stack Fixed | PO



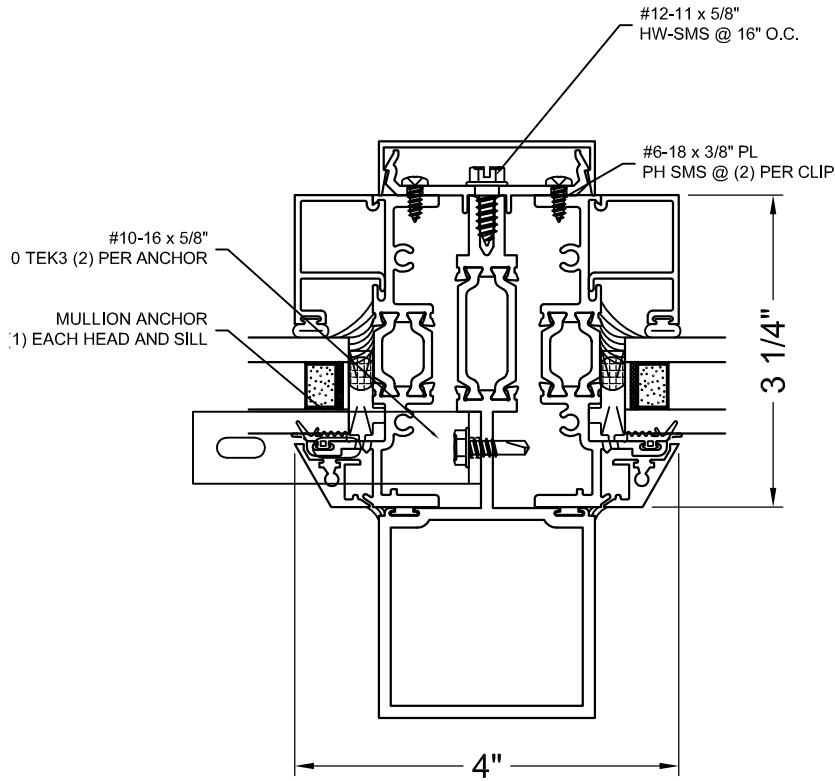
Stack FX / FX



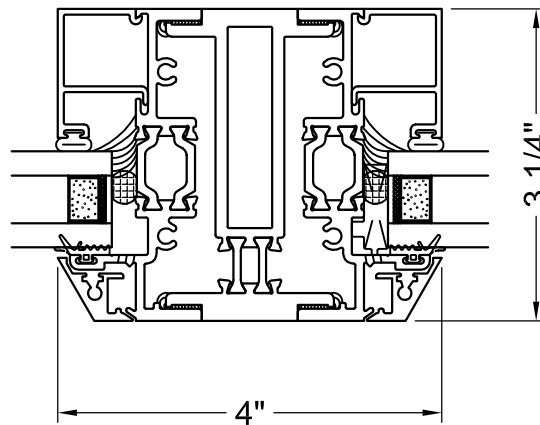
Stack Fixed / PO

Note: Multiple stack options available. Contact your EFCO representative for more information.

Scale: 6" = 1'-0"

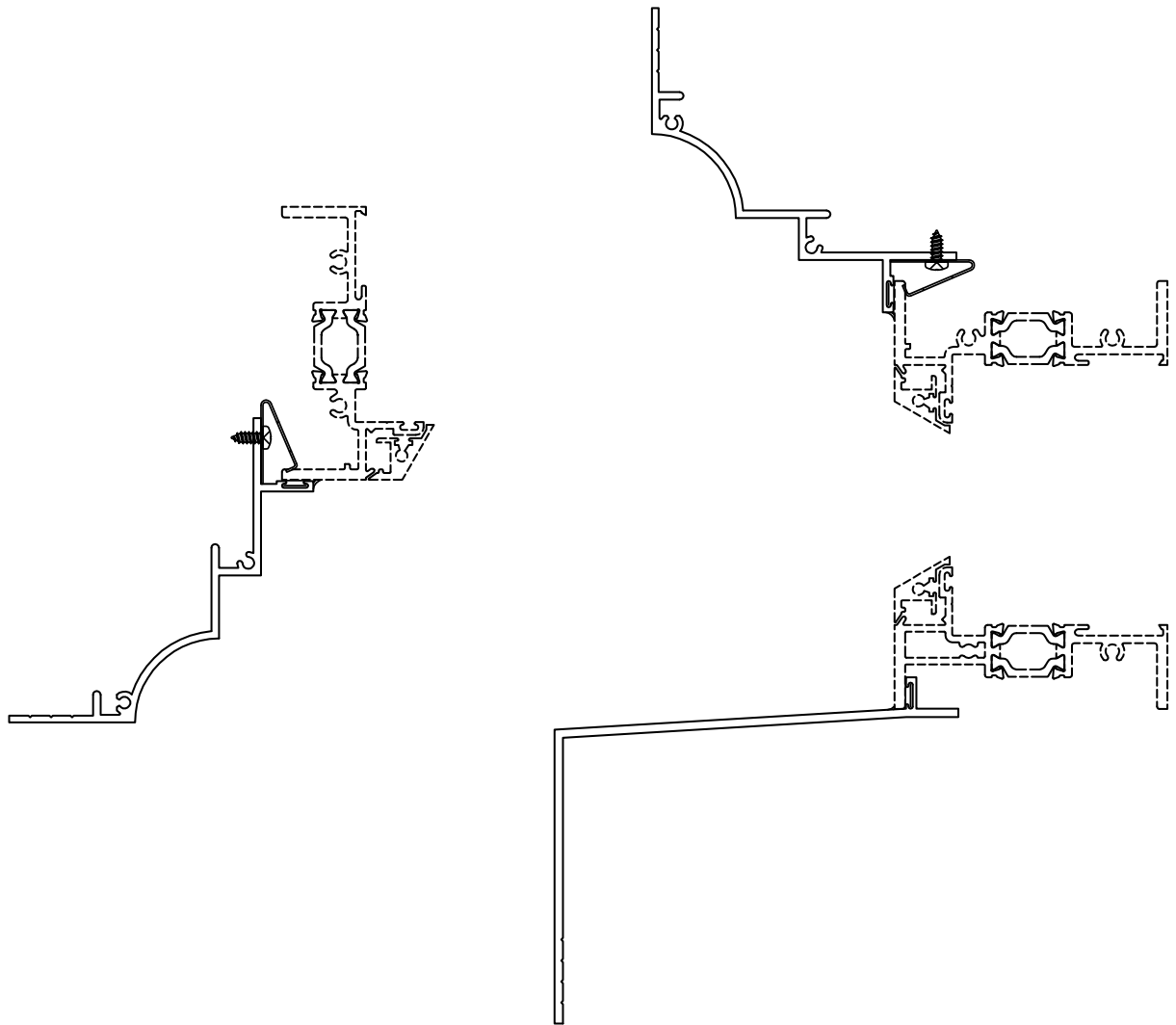


### 3-Piece Mullion



### Stacking Mullion





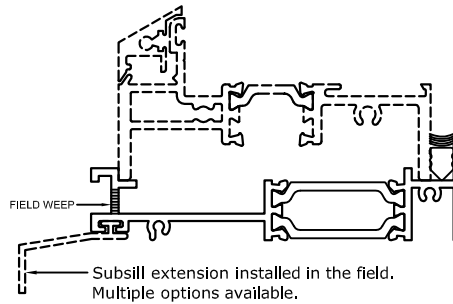
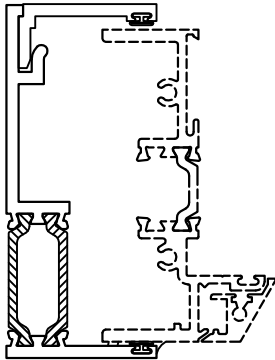
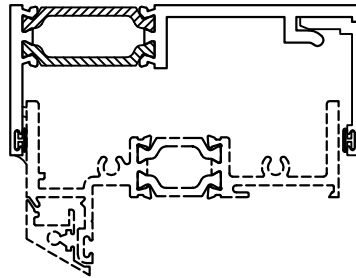
Note: Multiple panning options available. Contact your EFCO representative for more information.

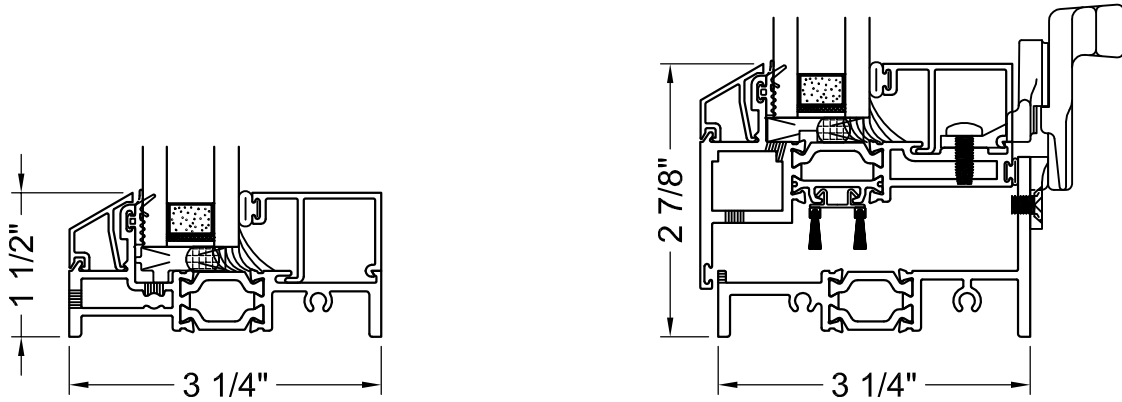
Scale: 6" = 1'-0"



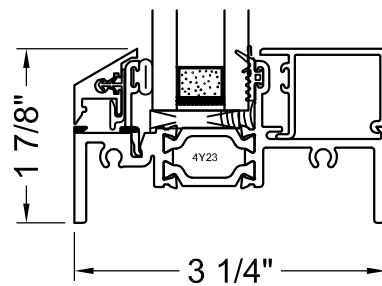
# 590X 3-1/4" Steel Replica Window

## Subframe (Receptor) Details





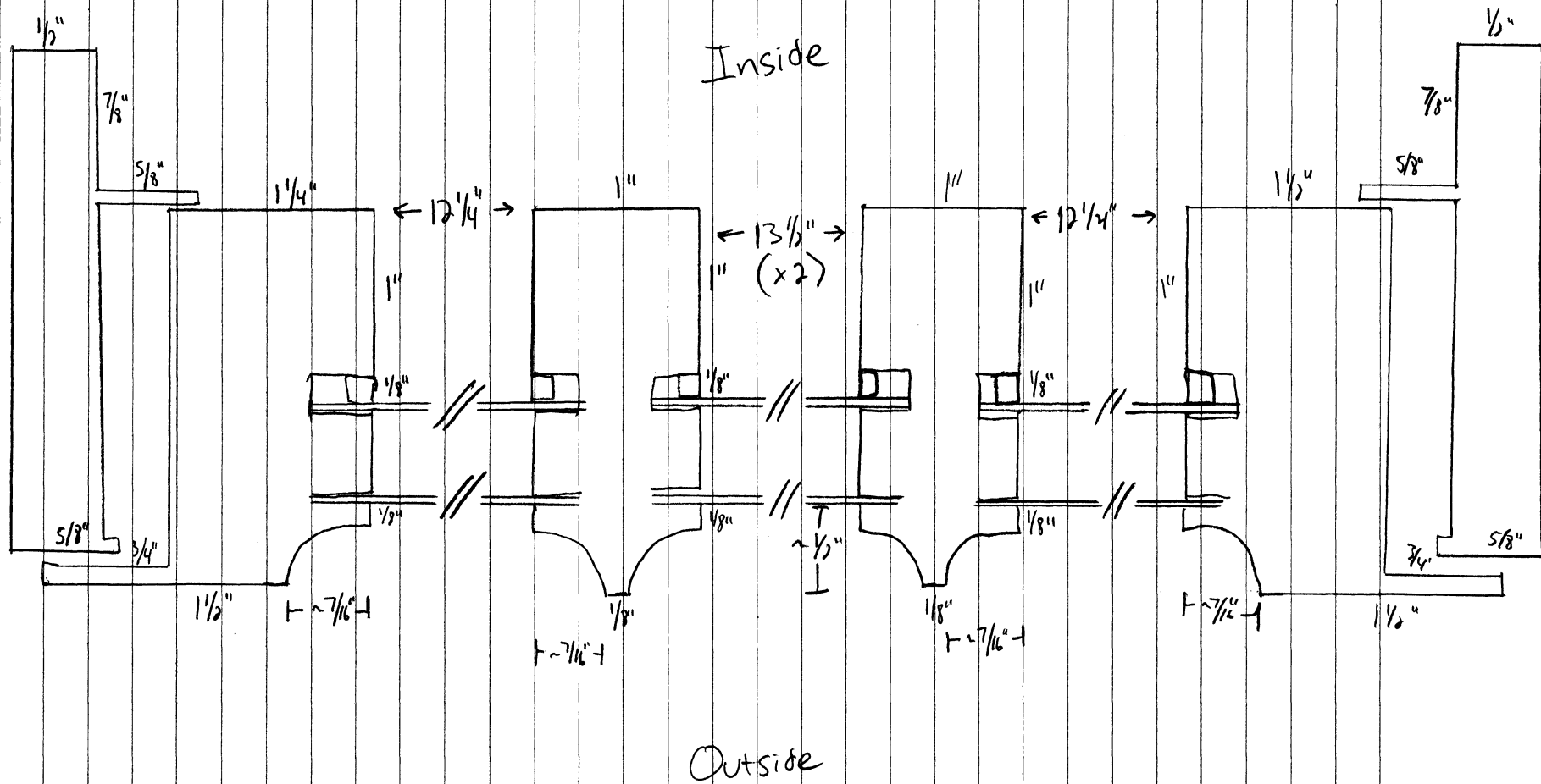
Perimeter Grid Only



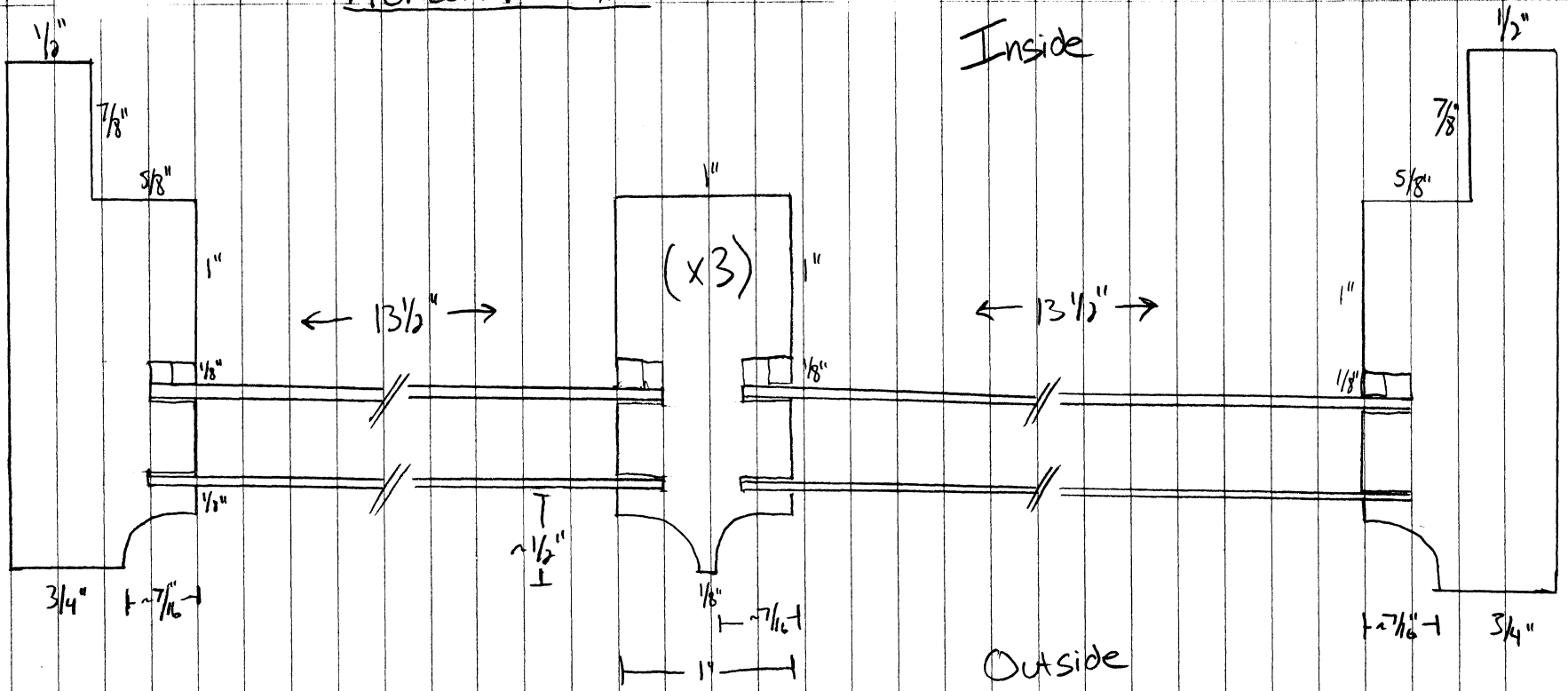
OG Frame

Scale: 6" = 1'-0"

# Horizontal-Operable Window



Horizontal - Fixed



## **Stuberstone Lofts Condominium**

4221 Cass Ave

Detroit MI 48201

Willis-Selden Historic District

Concrete and Window repair project

Submitted by: Robert Knapp, HOA president and Unit 300 owner

### **Project Overview**

The StuberStone Lofts Condominium building is located in the Willis-Selden historical district of Detroit at 4221 Cass Ave. The building is a commercial building over 100-years-old. It was converted into 14 residential units on the second floor and business space on the ground floor in the late 1990s. As to be expected with a structure of this age, the building is showing wear.

The current application is in regard to alterations required for two residential units in the Stuberstone Loft building; Unit 300 and Unit 400 (see Pic 1. for units' location in building). Unit 300 requires concrete repairs to a structural header beam spanning above the window along with replacement of the window structure. Unit 400 requires concrete repairs to the structural header beam spanning above the window. In other words, the project has two parts: concrete header repair (unit 300 and 400) and window replacement (unit 300).

### **Concrete Headers (Unit 300 and Unit 400)**

#### Photographs of building

See Pics 1-4

#### Detailed photographs of work

Unit 300: See Pics 5-8

Unit 400: See Pics 9-11

#### Description of existing conditions

The concrete header beams in units 300 and 400 of Stuber-Stone Lofts are currently in poor condition. There are signs of cracking / spalling of the concrete in several areas. RAM will be utilizing King MS-S6 as the concrete patching material and Sikadur-35 Hi-Mod LV for crack injection. Please see the attached product data sheets (Doc 1,2).

For a detailed description of issues to the concrete headers, please refer to the field observation report by Desai Nasr Engineers (Doc 3) and the delamination survey performed by Pullman SST (Doc 4).

### Description of project

The project consists of concrete header beam repair, not replacement. Please see next section for the scope of work which should provide a detailed description of this project. Additionally, once the concrete beams are repaired, they will be painted to match the original color.

### Detailed scope of work

- Mobilize the site with all necessary equipment, labor and materials.
- Hang plastic on the inside of the unit to help protect against debris and outdoor elements, as well as the exterior of the window below to prevent damage from falling debris.
- Coordinate with window subcontractor to schedule the removal of the window prior to addressing the concrete beam header.
- Sawcut and hammer out all delaminated concrete from the bottom of the beam. Dispose of all debris.
- Form up the areas, clean existing steel if needed, and install reinforcement.
- Pour back concrete (*King MS-S6*), finish, and cure to match the existing area.
- Perform any necessary rout and seal / epoxy injections (*Sikadur-35 Hi-Mod LV*) to the topside (existing section) of concrete beam.
- Coordinate with window subcontractor to install existing or new window (preference of owner).
- Cleanup all remaining debris and demobilize from site.

### Brochure/Cut sheet

See Doc. 1,2 for materials

See Doc 5 for contract with RAM construction for above work

## **Window Structure replacement (Unit 300)**

### Photographs of building

See Pics 1-4

### Detailed photographs

See Pics 5-8, 12

### Description of existing conditions

Each of the north facing condominiums at the Stuberstone Lofts has a 20-ft wide by 10-ft tall opening closed in by a commercial warehouse style aluminum framed window system (Pic 1). The existing windows are approximately 40 years old, per the best guess of multiple glazing contractors.

The window structure consists of four 5-ft wide by 10-ft tall sections, with 5-ft wide operable awnings at the bottom of each section. The glass is double paned, 13-inch by 18-inch

rectangles separated by an aluminum grid. The grid is approximately 1-inch wide and square shaped facing into the condominium and 7/8-inch wide, cove shaped on the outward facing side (Pic 12).

Likely due to the stress of the failing concrete header above the window structure in Unit 300 (Pic 6,7), the structural integrity of the aluminum frame has been compromised. The unit is sagging and separating from the concrete. The movement of the frame has caused misalignment with the operable awnings, creating gaps between the awning and the fixed frame. Further, most of seals between the double paned rectangle windows have failed allowing condensation between the pieces of glass.

Finally, due to the age of the windows and the materials used at the time, the current structure is extremely energy inefficient. In cold months, a large temperature gradient can be felt inside the condominium nearing the windows, to the point of frost formation inside during extreme cold temperatures. Considering the window structure is the entire north boundary of the condominium, a significant amount of energy and money is being wasted due to this inefficiency.

#### Description of project

A glazing contractor will remove the window structures from both Units 300 and 400 to allow RAM construction to repair the concrete headers as above. The window in unit 400 will be reinstalled, as it remains in a reasonable condition. Due to the issues explained in the previous section, new EFCO 590X Historical Series commercial grade windows matching the current window aesthetics will be installed.

After investigating options with multiple manufacturers for a system most similar to the current windows, with the assistance of a glazing contractor, the EFCO 590x Black Kynar Painted Historical Series (Doc 6.) commercial grade aluminum window series with clear Low "E" safety tempered insulated glass was selected as the closest match. The new system will be 4 bays wide to match the existing, along with 4 operable vent windows, and an applied historical grid on the exterior of glass (Doc 6. Pg 19).

In addition to remedying the structural issues as outlined in the previous section, the new windows will be significantly more energy efficient. See Doc 7. for thermal reports from EFCO on the 590X system.

#### Detailed scope of work

- Remove two existing window walls complete at 2nd floor North, store on site for re-install at a later date.
- Re-install existing windows at 2nd floor after all masonry header restoration has been completed. Re-install new window wall system purchased by owner.
- Provide all necessary trims, sealants, fasteners, and material man lift to perform our work.



Brochure/Cut sheet

See Doc 6 for description of product/materials

See Doc 8 for contract with Daniels Glass Inc.

**Stuber Stone Lofts – Concrete Header Beam  
Delamination Survey**

**June 18<sup>th</sup>, 2020**

Prepared for:

**Mr. Robert Knapp**  
4221 Cass Ave. Apt 300  
Detroit, MI 48201

Prepared by:

**Pullman SST**  
280 West Jefferson  
Trenton, MI 48183

## **Introduction:**

Per the request and authorization granted by Mr. Rob Knapp, PULLMAN SST, Inc. (Pullman) has completed a delamination survey for the concrete beam header at the Stuber Stone Loft's housing complex. The purpose of this survey was to evaluate the existing condition of the concrete beam and develop recommendations/prioritization for the recommended repairs in the future for each unit. The following information contained in this report summarizes our observations and provides recommendations for your consideration.

## **Structure Description:**

The Stuber–Stone Loft building was built in 1916. It is a two-story brick commercial building measuring 100 feet by 150 feet. The main facade is divided into five bays two-story piers, with three wider bays containing storefronts in the center. The first and second floors are divided by a wide decorative spandrel beam. On the second floor, each of the bays contains a bank of tall, narrow, windows, with nine in the central bay, four in the narrower entry bays, and six in the outer bays. The concrete beams located on the North side of the building have deteriorated over time, resulting a need for a survey to further assess the damage

## **Delamination Survey:**

Nick Poddam, Geoff Gabala, John Hamblin and Codey Hamblin (Pullman), visited the site on Friday, June 5<sup>th</sup>, 2020 to perform the delamination survey. The Pullman team performed a detailed sounding survey of the concrete beam header using a hammer. Pullman noted the extents of unsound and delaminated concrete to estimate the anticipated repair quantities. The insides of the units were visually inspected for large defects to preserve the concrete condition. The following is a summary of pertinent observations and findings, including a brief synopsis for each unit with close-up photos, as well as an anticipated quantity/prioritization chart at the end of the report. For reference, Square Feet is denoted by (SF) and lineal feet is denoted by (LF).

Please feel free to reach out with any further questions regarding the report.



**Nick Poddam**  
**Pullman SST, Inc.**  
Project Engineer  
C: (734) 775-9181

**Unit #300:**

Unit #300 was visually inspected from the interior and hammer sounded from the exterior. During the survey, we noted severe deterioration at the entire bottom of the beam (above the window), with moderate damage observed at the surrounding concrete members (beam below window and adjacent column 300/400). This includes widespread cracking and spalling concrete. Large crack separation at bottom of beam. No steel reinforcement was visible but it should be assumed that the crack has developed from steel corrosion and a structural repair is required. Pullman recommends fixing these areas to eliminate falling debris hazards (both inside and outside) and the potential for growth of the deteriorated areas.



**Unit #400:**

Unit #400 was visually inspected from the interior and hammer sounded from the exterior. During the survey, we noted severe deterioration at majority of the bottom of the beam (above the window). Large crack separation at bottom of beam. No steel reinforcement was visible but it should be assumed that the crack has developed from steel corrosion and a structural repair is required. Pullman recommends fixing these areas to eliminate falling debris hazards (both inside and outside) and the potential for growth of the deteriorated areas.



**Unit #500:**

Unit #500 was not visually inspected from the interior, but was hammer sounded from the exterior. During the survey, we noted a small amount of deterioration at an area of the bottom of the beam (above the window). A small amount of crack separation at bottom of beam. No steel reinforcement was visible. Pullman recommends fixing these areas early to stop the potential for growth of the deteriorated areas.



**Unit #600:**

Unit #600 was visually inspected from the interior and hammer sounded from the exterior. During the survey, we noted an area of severe delamination at a location near the bottom of the beam (above the window). No large crack separation was visible; however, there were several locations of small cracks near the damaged concrete. Pullman recommends fixing these areas to eliminate falling debris hazards (both inside and outside) and the potential for growth of the deteriorated areas.



## **Unit #700:**

Unit #700 was visually inspected from the interior and from the exterior, landscaping prohibited lift access at this unit. Based on the condition assessment of the adjacent units, we noted several similar small locations where the concrete has started to deteriorate near the bottom of the beam (above the window). No large crack separation was visible; however, there were several locations of small cracks near the damaged concrete. Pullman recommends fixing these areas to eliminate falling debris hazards (both inside and outside) and the potential for growth of the deteriorated areas.

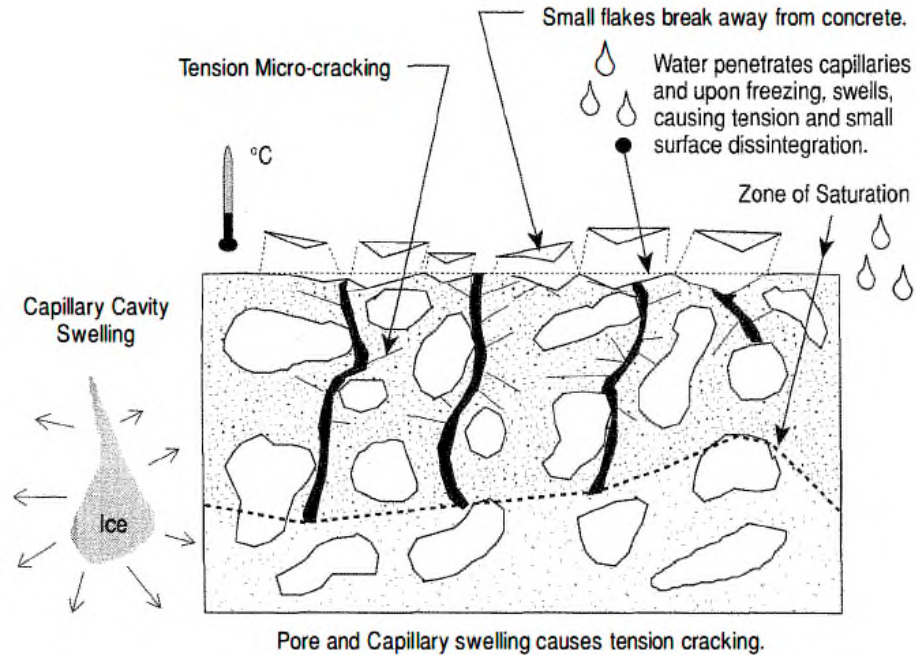
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## **Cause Analysis:**

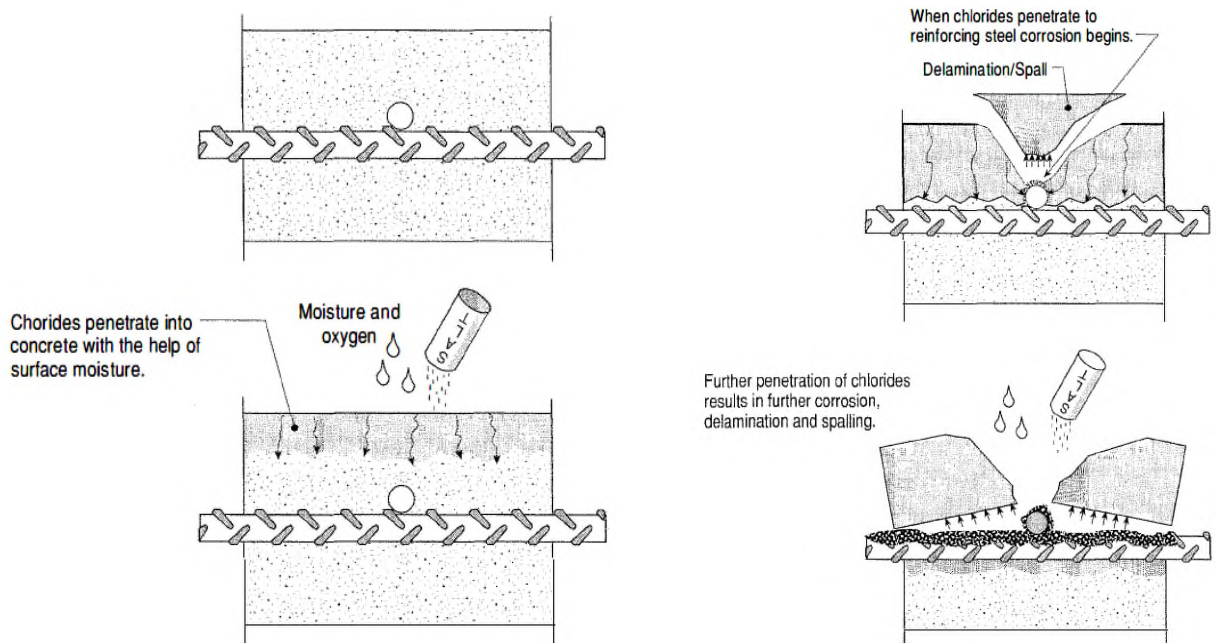
Pullman's delamination survey identified localized areas of concrete deterioration across the concrete structure. Based on our field observations, there has been a significant amount of deterioration occurring at the Northern-most section of the building. While we could not determine a specific anomaly for this location, it is certain that all these locations have been exposed to moisture for a long period of time. These conditions have promoted localized freeze-thaw damage to the concrete materials, and if corrective action is not taken in the future, it will eventually lead to promoting corrosion of the embedded steel reinforcement once open to the elements.

The extent of deterioration varies by each unit. While some specific areas display a large amount of deterioration, no reinforcement steel was discovered during the delamination survey. Exterior concrete structures are extremely susceptible to deterioration due to their exposure to moisture, deicing salts, and temperature changes. In this case, the primary cause of concrete deterioration across the dock is freeze-thaw disintegration. Freeze-thaw disintegration or deterioration takes place when freezing and thawing temperature cycles occur within the concrete and when porous concrete starts to absorb water through its capillary openings. Freeze-thaw damage is commonly seen as scaling of the top of the concrete's surface, caused by small-to medium sized flakes that break away from concrete. Freeze-thaw deterioration generally occurs on horizontal surfaces that are exposed to water, or on vertical surfaces that are at the water line in submerged portions of structures. The freezing water contained in the pore structure expands as it is converted into ice. The expansion causes localized tension forces that fracture the surrounding concrete matrix. The fracturing occurs in small pieces, working from the outer surfaces inward, creating shallow depressions along the concrete surface.





The damage caused by freeze-thaw damage can eventually lead to more harmful causes of concrete deterioration by eventually exposing reinforcement steel and enhancing the corrosion process. Often, this corrosion is accelerated by exposure to moisture, chloride contamination and carbonation. The volume of steel corrosion byproduct (i.e. rust) is up to ten times larger than the steel, and the forces incurred when the embedded steel corrodes causes concrete distress in the form of cracks, delamination, or spalls within the concrete.



**Repair Findings and Pullman’s Recommendation:**

## Stuber-Stone Lofts - 4221 Cass Ave

Location	Type of Repair		Notes	Priority Risk (LOW, MED, HIGH)	Priority Rank (1 - 5)
	Concrete Beam Repair	Rout and Seal Cracks			
#300	20 SF (12" Depth)	25 LF	Additional 12 SF (12" Depth) repair at Beam below window and 8 SF (6" Depth) of repair at Column between 300/400. Rout and Seal Allowance is Typical	High	1 (Worst Condition)
#400	16 SF (12" Depth)	25 LF	No additional concrete repairs. Rout and Seal Allowance is Typical	High	2
#500	12 SF (6" Depth)	25 LF	Additional 12 SF (6" Depth) of repair at Column between 500/600. Rout and Seal Allowance is Typical	Low	5 (Best Condition)
#600	20 SF (12" Depth)	25 LF	No additional concrete repairs. Rout and Seal Allowance is Typical	Medium	3
#700	20 SF (12" Depth)	25 LF	No additional concrete repairs. Rout and Seal Allowance is Typical	Medium	4

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## FIELD OBSERVATION REPORT

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*Date:* March 31, 2020 (REV April 10, 2020)      *Project:* Stuberstone Lofts  
Concrete Headers  
*From:* Glen L. Spangler      *Client Project No.:* -  
*To:* Robert Knapp      *DNCE Project No.:* 9819-03  
*Company:* -

*Phone:*      *Fax:*

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Observation Information:      Date: 02/11/2020 @ 430 PM

Persons Present:      Glen Spangler (IMEG) Robert Knapp

### Observations:

Robert and I visited 4 units at the above location, Units 100, Unit 300, Unit 400 and Unit 600, due to reports of cracked concrete around the windows. We were also able to observe the exterior of Units 200, 500 and 700.

#### Unit 100

No issues were found around the windows

#### Unit 300

Item No.1:      There is cracking/spalling at the bottom of the beam over the window.

Refer to Photos No. 1, 2 & 3

Suggested repair:      Remove delaminated concrete, clean corroded reinforcing steel. The reinforcing steel will need to be evaluated for section loss to determine if additional reinforcement is required. Apply SIKA Armatec 110 EpoCem to resteel. Replace removed concrete with repair mortar (Xypex MEGA MIX II, hand applied). Shoring may be required.

Item No. 2:      On the exterior of the building, for the beams both above and below of the windows, there are cracks that appear to have been previously repaired by just filling them with joint sealant. Refer to Photos 4 & 5.

Suggested repair:      Route out cracks. Inject with structural crack repair. If concrete is delaminated, remove delaminated concrete, clean corroded reinforcing steel. Replace removed concrete with repair mortar.

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## FIELD OBSERVATION REPORT

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*Date:* March 31, 2020

*From:* Glen L. Spangler

*Project:* Stuberstone Lofts  
Concrete Headers

*Client Project No.:* \_

*DNCE Project No.:* 9819-03

### Unit 400

Item No.3: There is cracking/spalling at the bottom of the beam over the window.

Refer to Photos No. 6 & 7

Suggested repair: Remove delaminated concrete, clean corroded reinforcing steel. The reinforcing steel will need to be evaluated for section loss to determine if additional reinforcement is required. Apply SIKA Armatec 110 EpoCem to resteel. Replace removed concrete with repair mortar (Xypex MEGA MIX II, hand applied). Shoring may be required.

Item No. 4: On the exterior of the building, for the beams both above the windows, there are cracks that appear to have been previously repaired by just filling them with joint sealant. Refer to Photos 8 & 9.

Suggested repair: Route out cracks. Inject with structural crack repair (SIKADUR 35 HI-MOD LV, Cap seal with SIKADUR HI-MOD GEL). If concrete is delaminated, remove delaminated concrete, clean corroded reinforcing steel. Replace removed concrete with repair mortar.

### Unit 600

Item No.5: On the exterior of the building, for the beams above the windows, there is some spall  
Refer to Photos 10 & 11.

Suggested repair: Route out cracks. Inject with structural crack repair (SIKADUR 35 HI-MOD LV, Cap seal with SIKADUR HI-MOD GEL). If concrete is delaminated, Remove delaminated concrete, clean corroded reinforcing steel. The reinforcing steel will need to be evaluated for section loss to determine if additional reinforcement is required. Apply SIKA Armatec 110 EpoCem to resteel. Replace removed concrete with repair mortar (Xypex MEGA MIX II, hand applied). Shoring may be required.

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## FIELD OBSERVATION REPORT

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*Date:* March 31, 2020

*From:* Glen L. Spangler

*Project:* Stuberstone Lofts  
Concrete Headers

*Client Project No.:* \_

*DNCE Project No.:* 9819-03

### Unit 700

No issues were found around the windows inside.

Item No. 6: On the exterior of the building, for the beam above the windows, there are cracks that appear to have been previously repaired by just filling them with joint sealant. Refer to Photo 12.

Suggested repair: Route out cracks. Inject with structural crack repair (SIKADUR 35 HI-MOD LV, Cap seal with SIKADUR HI-MOD GEL). If concrete is delaminated, Remove delaminated concrete, clean corroded reinforcing steel. The reinforcing steel will need to be evaluated for section loss to determine if additional reinforcement is required. Apply SIKA Armatec 110 EpoCem to resteel. Replace removed concrete with repair mortar (Xypex MEGA MIX II, hand applied). Shoring may be required.

Please note, if existing windows are to be replaced with a new window system, they should be designed to take minor movements.

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## FIELD OBSERVATION REPORT

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*Date:* March 31, 2020

*From:* Glen L. Spangler

*Project:* Stuberstone Lofts  
Concrete Headers

*Client Project No.:* .

*DNCE Project No.:* 9819-03



Photo No. 1 – Unit 300



Photo No. 2 – Unit 300

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## FIELD OBSERVATION REPORT

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*Date:* March 31, 2020

*From:* Glen L. Spangler

*Project:* Stuberstone Lofts  
Concrete Headers

*Client Project No.:* .

*DNCE Project No.:* 9819-03



Photo No.3 – Unit 300



Photo No. 4 – Exterior above Unit 300

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## FIELD OBSERVATION REPORT

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*Date:* March 31, 2020

*From:* Glen L. Spangler

*Project:* Stuberstone Lofts  
Concrete Headers

*Client Project No.:* .

*DNCE Project No.:* 9819-03



Photo No. 5 – Exterior below Unit 300



Photo No. 6 – Unit 400



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## FIELD OBSERVATION REPORT

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*Date:* March 31, 2020

*From:* Glen L. Spangler

*Project:* Stuberstone Lofts  
Concrete Headers

*Client Project No.:* .

*DNCE Project No.:* 9819-03



Photo No. 7 – Unit 400



Photo No. 8 – Exterior Unit 400

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## FIELD OBSERVATION REPORT

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*Date:* March 31, 2020

*From:* Glen L. Spangler

*Project:* Stuberstone Lofts  
Concrete Headers

*Client Project No.:* \_

*DNCE Project No.:* 9819-03



Photo No. 9 – Exterior above Unit 400



Photo No. 10 – Exterior Above Unit 600

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## FIELD OBSERVATION REPORT

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*Date:* March 31, 2020

*From:* Glen L. Spangler

*Project:* Stuberstone Lofts  
Concrete Headers

*Client Project No.:* .

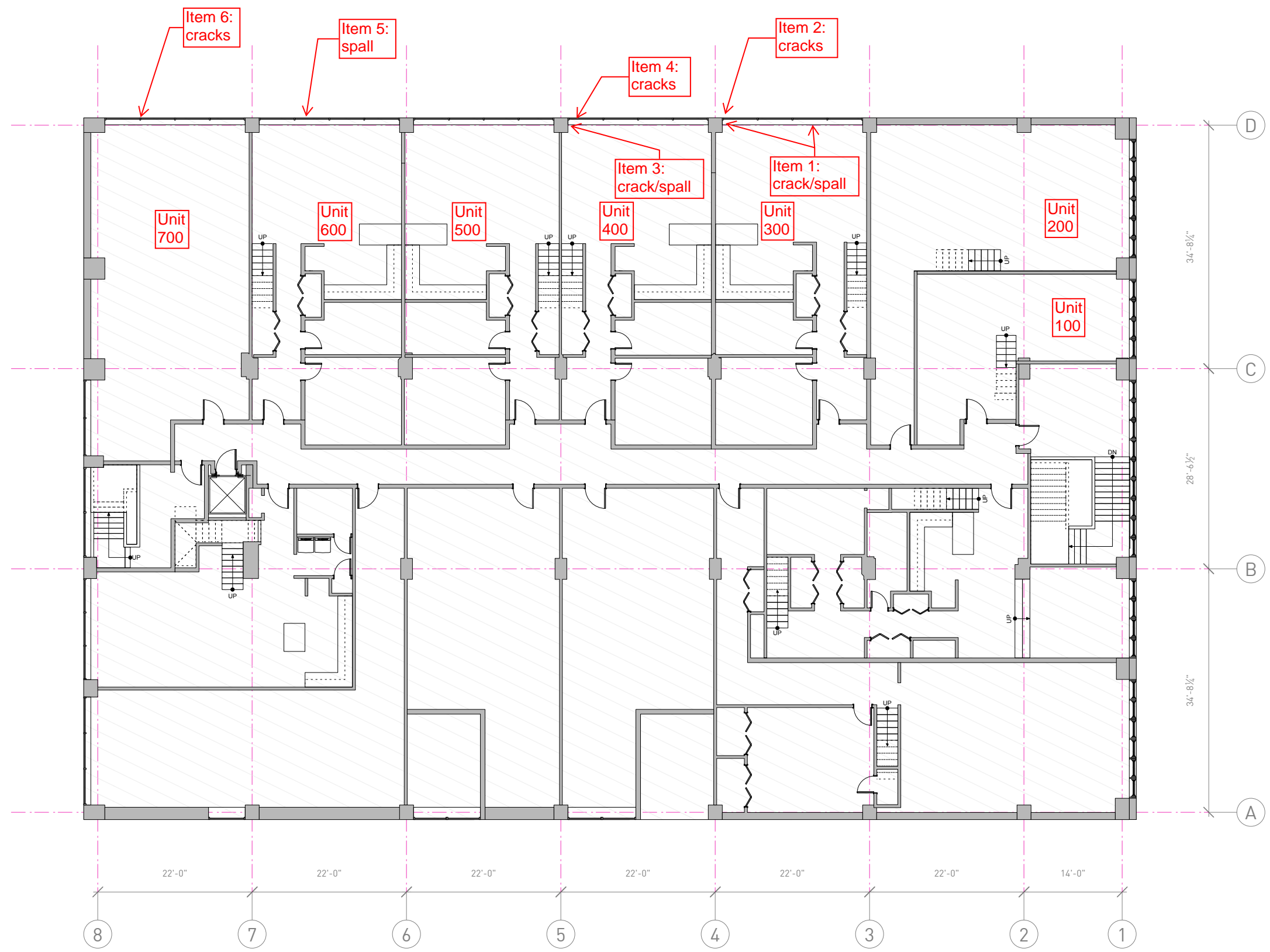
*DNCE Project No.:* 9819-03



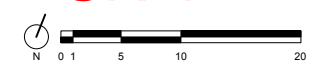
Photo No. 11 – Exterior Above Unit 600



Photo No. 12 – Exterior Unit 700



# SK-1





September 30, 2020

Stuberstone Lofts  
4221 Cass Ave  
Detroit, MI 48201

Attention: Mr. Robert Knapp

Re: Stuberstone Loft  
Concrete Repairs  
4221 Cass Ave  
Detroit, MI

Dear Mr. Knapp:

Per your request, our firm proposes to furnish all labor, material and equipment necessary to complete the following items.

**Unit 300**

- Mobilize the site with all necessary equipment, labor and materials.
- Hang plastic on the inside of the unit to help protect against debris and outdoor elements, as well as the exterior of the window below to prevent damage from falling debris.
- Coordinate with window subcontractor to schedule the removal of the window prior to addressing the concrete beam header.
- Sawcut and hammer out all delaminated concrete from the bottom of the beam. Dispose of all debris.
- Form up the areas, clean existing steel if needed, and install reinforcement.
- Pour back concrete, finish, and cure to match the existing area.
- Perform any necessary rout and seal / epoxy injections to the topside (existing section) of concrete beam.
- Coordinate with window subcontractor to install existing or new window (preference of owner).
- Cleanup all remaining debris and demobilize from site.

**All of the above discussed work will be completed for the sum of:.....\$19,925.00**

***Notes:***

- This quote / pricing includes all subcontractor costs and coordination.
- This quote assumes contractor will be given a section of secured parking lot to store windows, construction equipment / materials, and a dumpster.
- This quote excludes moving furniture or any other property in the way of our work area.

**Unit 400**

- Mobilize the site with all necessary equipment, labor and materials.
- Hang plastic on the inside of the unit to help protect against debris and outdoor elements, as well as the exterior of the window below to prevent damage from falling debris.
- Coordinate with window subcontractor to schedule the removal of the window prior to addressing the concrete beam header.
- Sawcut and hammer out all delaminated concrete from the bottom of the beam. Dispose of all debris.
- Form up the areas, clean existing steel if needed, and install reinforcement.
- Pour back concrete, finish, and cure to match the existing area.
- Perform any necessary rout and seal / epoxy injections to the topside (existing section) of concrete beam.
- Coordinate with window subcontractor to install existing or new window (preference of owner).
- Cleanup all remaining debris and demobilize from site.

**All of the above discussed work will be completed for the sum of:.....\$19,925.00**

***Notes:***

- This quote / pricing includes all subcontractor costs and coordination.
- This quote assumes contractor will be given a section of secured parking lot to store windows, construction equipment / materials, and a dumpster.
- This quote excludes moving furniture or any other property in the way of our work area.

We look forward to hearing from you soon, and it will be our pleasure to assist in any way that we can. If you wish to discuss, please feel free to contact me at any time.

Sincerely,

RAM Construction Services of Michigan, Inc.



Robert A. Mazur

RAM/ns/20-054

# PRODUCT DATA SHEET

## Sikadur<sup>®</sup>-35 Hi-Mod LV

HIGH MODULUS, LOW VISCOSITY, HIGH STRENGTH EPOXY GROUTING/SEALING/BINDER ADHESIVE

### PRODUCT DESCRIPTION

Sikadur<sup>®</sup>-35 Hi-Mod LV is a 2-component, 100 % solids, moisture-tolerant, low-viscosity, high-strength, multipurpose, epoxy resin adhesive. It conforms to the current ASTM C-881, Types I, II, and IV, Grade-1, Class C\* and AASHTO M-235 specifications.

\*except for gel time

### USES

Sikadur<sup>®</sup>-35 Hi-Mod LV may only be used by experienced professionals.

- Pressure-injection of cracks in structural concrete, masonry, wood, etc.
- Gravity-feed of cracks in horizontal concrete and masonry.
- Epoxy resin binder for epoxy mortar patching and overlay of interior, horizontal surfaces.
- Seal interior slabs and exterior above-grade slabs from water, chlorides, and mild chemical attack; also improves wearability.

### CHARACTERISTICS / ADVANTAGES

- Super low viscosity.
- Convenient easy mix ratio A:B = 2:1 by volume.
- Unique, high-strength, structural adhesive for “can’t dry” surfaces.
- Deep penetrating and tenacious bonding of cracks in structural concrete.
- High-early-strength developing adhesive.
- Excellent chemical resistance in flooring systems.

### PRODUCT INFORMATION

<b>Packaging</b>	3 gal. (11 L) units; 1 gal. (3.8 L) units; 12 fl. oz. (355 ml) units, 12/case
<b>Color</b>	Clear, amber
<b>Shelf Life</b>	2 years in original, unopened containers.
<b>Storage Conditions</b>	Store dry at 40–95 °F (4–35 °C). Condition material to 65–75 °F (18–24 °C) before using.
<b>Viscosity</b>	Approx. 375 cps.

# TECHNICAL INFORMATION

## Compressive Strength

### Neat

	40 °F (4 °C)	73 °F (23 °C)	90 °F (32 °C)	(ASTM D-695) 50 % R.H.
4 hours	-	-	-	
8 hours	-	180 psi (1.2 MPa)	3,200 psi (22.1 MPa)	
16 hours	-	4,500 psi (31.1 MPa)	6,300 psi (43.5 MPa)	
1 day	-	6,000 psi (41.4 MPa)	9,100 psi (62.8 MPa)	
3 days	4,000 psi (27.6 MPa)	10,700 psi (73.8 MPa)	10,500 psi (72.5 MPa)	
7 days	6,800 psi (46.9 MPa)	11,000 psi (75.9 MPa)	10,500 psi (72.5 MPa)	
14 days	10,300 psi (71.1 MPa)	12,000 psi (82.8 MPa)	10,500 psi (72.5 MPa)	
28 days	12,400 psi (85.6 MPa)	13,000 psi (89.7 MPa)	10,500 psi (72.5 MPa)	

### Epoxy Mortar (1: 5)

	40 °F (4 °C)	73 °F (23 °C)	90 °F (32 °C)	(ASTM D-695) 50 % R.H.
4 hours	-	-	800 psi (5.5 MPa)	
8 hours	-	-	4,100 psi (28.3 MPa)	
16 hours	-	400 psi (2.8 MPa)	5,700 psi (39.3 MPa)	
1 day	120 psi (0.8 MPa)	5,000 psi (34.5 MPa)	6,900 psi (47.6 MPa)	
3 days	6,200 psi (42.8 MPa)	6,800 psi (46.9 MPa)	7,000 psi (48.3 MPa)	
7 days	6,300 psi (43.5 MPa)	7,900 psi (54.5 MPa)	8,800 psi (60.7 MPa)	
14 days	6,800 psi (46.9 MPa)	8,500 psi (58.7 MPa)	8,800 psi (60.7 MPa)	
28 days	7,000 psi (48.3 MPa)	8,600 psi (59.3 MPa)	8,800 psi (60.7 MPa)	

## Modulus of Elasticity in Compression

	Neat	Mortar	(ASTM D-695) 73 °F (23 °C) 50 % R.H.
7 days	3.2 x 10 <sup>5</sup> psi (2,200 MPa)	-	
28 days	-	8.1 x 10 <sup>5</sup> psi (5,600 MPa)	

## Flexural Strength

	Neat	Mortar	(ASTM D-790) 73 °F (23 °C) 50 % R.H.
14 day	14,000 psi (96,6 MPa)	2,200 psi (15,2 MPa)	

## Modulus of Elasticity in Flexure

	Neat	Mortar	(ASTM D-790) 73 °F (23 °C) 50 % R.H.
14 days	3.7 x 10 <sup>5</sup> psi (2,600 MPa)	9.5 X 10 <sup>5</sup> (6,500 MPa)	



<b>Tensile Strength</b>		<b>Neat</b>	<b>Mortar</b>	(ASTM D-638) 73 °F (23 °C) 50 % R.H.
	7 days	8,900 psi (61.4 MPa)	840 psi (5.8 MPa)	
<b>Tensile Modulus of Elasticity</b>		<b>Neat</b>	<b>Mortar</b>	(ASTM D-638) 73 °F (23 °C) 50 % R.H.
	14 days	4.1 X 10 <sup>5</sup> psi (2800 MPa)	7.6 X 10 <sup>5</sup> psi (5200 MPa)	
<b>Elongation at Break</b>		<b>Neat</b>	<b>Mortar</b>	(ASTM D-638) 73 °F (23 °C) 50 % R.H.
	7 day	5.4 %	0.3 %	
<b>Tensile Adhesion Strength</b>	2 days	(moist cure)	4,000 psi (27.6 MPa)	(ASTM C-882): Hardened concrete to hardened concrete 73 °F (23 °C) 50 % R.H.
	14 days	(moist cure)	2,900 psi (20.0 MPa)	
	2 days	(dry cure)	2,800 psi (19.3 MPa)	
<b>Shear Strength</b>		<b>Neat</b>	<b>Mortar</b>	(ASTM D-732) 73 °F (23 °C) 50 % R.H.
	14 days	5,100 psi (35,2 MPa)	2,300 psi (15.9 MPa)	
<b>Heat Deflection Temperature</b>		<b>Neat</b>	<b>Mortar</b>	(ASTM D-648) [fiber stress loading = 264 psi (1.8 MPa)]
	7 day	124 °F (51 °C)	129 °F (54 °C)	
<b>Water Absorption</b>	7 days		0.27 %	(ASTM D-570) 73 °F (23 °C) 50 % R.H.

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	Component "A": Component "B" = 2:1 by volume.			
<b>Coverage</b>	1 gal. yields 231 in <sup>3</sup> of adhesive and grout. 1 gal. of adhesive, when mixed with 5 gal. by loose volume of oven-dried aggregate, yields approximately 808.5 in <sup>3</sup> of epoxy mortar.			
<b>Pot Life</b>	Approx. 25 minutes (mass of 60 grams)			
<b>Cure Time</b>	<b>Tack-Free Time</b>	<b>40 °F (4 °C)</b>	<b>73 °F (23 °C)</b>	<b>95 °F (35 °C)</b>
	(3-5 mils) Neat	14–16 hours	3–3.5 hours	1.5–2 hours

# APPLICATION INSTRUCTIONS

## SUBSTRATE PREPARATION

Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles and disintegrated materials.

**Concrete** - Blast clean, shot blast or use other approved mechanical means to provide an open roughened texture.

**Steel** - Should be cleaned and prepared thoroughly by blast cleaning.

## MIXING

Proportion 1 part Component 'B' to 2 parts Component 'A' by volume into a clean pail. Mix thoroughly for 3 minutes with Sika Paddle on low-speed (400–600 rpm) drill until uniformly blended. Mix only that quantity that can be used within its pot life. To prepare an epoxy mortar, slowly add 4–5 parts by loose volume of an oven-dried aggregate to 1 part of the mixed Sikadur®-35 Hi-Mod LV and mix until uniform in consistency.

## APPLICATION METHOD / TOOLS

**To gravity feed cracks** - Blow vee-notched crack clean with oil-free compressed air. Pour neat Sikadur®-35 Hi-Mod LV into vee-notched crack. Continue placement until completely filled. Seal underside of slab prior to filling if cracks reflect through.

**To pressure-inject cracks** - Use automated injection equipment or manual method. Set appropriate injection ports based on system used. Seal ports and crack with Sikadur® 31, Hi-Mod Gel or Sikadur® 33. When the epoxy adhesive seal has cured, inject Sikadur®-35 Hi-Mod LV with steady pressure. Consult Technical Service for additional information.

**To seal slabs** - Spread neat Sikadur®-35 Hi-Mod LV over slab. Allow penetration. Remove excess to prevent surface film. Seal interior slabs and above-grade exterior slabs only.

**For an epoxy mortar** - Prime prepared surface with neat Sikadur®-35 Hi-Mod LV. Place prepared epoxy mortar before primer becomes tack-free. Place the epoxy mortar using trowels. Compact and level with vibrating screed or trowels. Finish with finishing trowel. Sikadur®-35 Hi-Mod LV mortar is for interior use only.

## LIMITATIONS

- Minimum substrate and ambient temperature 40°F (4°C).
- Do not thin with solvents. Consult Technical Service at 800-933-7452.
- Use oven-dried aggregate only.
- Maximum epoxy mortar thickness is 1.5 in. (38 mm) per lift.
- Epoxy mortar is for interior use only.
- Do not seal exterior slabs on grade.

- Minimum age of concrete must be 21–28 days, depending on curing and drying conditions, for mortar and to seal slabs.
- Porous substrates must be tested for moisture-vapor transmission prior to application.
- Not for injection of cracks under hydrostatic pressure at the time of application.
- Do not inject cracks greater than 1/4 in. (6 mm) Consult Technical Service.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## OTHER RESTRICTIONS

## ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

## LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at [usa.sika.com](http://usa.sika.com) or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or

replacement of this product exclusive of any labor costs.  
**NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 1-800-933-7452.

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**Sika Mexicana S.A. de C.V.**  
Carretera Libre Celaya Km. 8.5  
Fracc. Industrial Balvanera  
Corregidora, Queretaro  
C.P. 76920  
Phone: 52 442 2385800  
Fax: 52 442 2250537



Product Data Sheet  
Sikadur®-35 Hi-Mod LV  
August 2018, Version 01.01  
020204030010000189

Sikadur-35Hi-ModLV-en-US-(08-2018)-1-1.pdf



MS-S6 is a high performance, multi-purpose, pre-packaged, concrete repair material. It is a pre-blended, synthetic fibre-reinforced, pre-packaged, high performance, cementitious, concrete repair material containing Portland cement, silica fume, air-entraining admixture, 6 mm (¼ inch) stone and other carefully selected components.

#### FEATURES & BENEFITS

- Air-entrainment provides superior resistance to freeze-thaw cycling and salt-scaling resistance
- Properties similar to conventional concrete, thus offering excellent compatibility to parent concrete
- Excellent durability
- Reduced bleeding
- Improved resistance to sulphate attack
- Very low permeability
- Low shrinkage
- Excellent bond to parent concrete without requiring a bonding agent
- Compatible with integral, pre-applied and/or post-applied corrosion inhibitors\*
- Designed with natural normal-density non-reactive fine and coarse aggregates to eliminate potential alkali-aggregate reactivity (AAR)
- All KING products are manufactured using ISO 9001:2015 Certified Processes

\*For more information regarding the use of a corrosion inhibitor in conjunction with MS-S6, please contact your KING Technical Representative.

#### OPTIONAL FEATURES & BENEFITS

##### CORROSION INHIBITOR

##### MS-S6 CI

- Corrosion inhibitor protects steel reinforcing and other metals embedded in concrete from corrosion induced by carbonation or chlorides
- Pre-blended corrosion inhibitor provides the correct dosage to enhance corrosion protection

#### USES

- Partial depth rehabilitation of concrete slabs, in parking garages, balconies, bridge decks and/or any concrete structures
- Minimum application thickness for MS-S6 is 25 mm (1 inch)
- For full depth repair or for repair edges longer than 1 m (3 ft), refer to MS-S10
- New concrete construction, especially areas subject to freeze-thaw cycles and high salt (chloride) environments

#### PROCEDURES

**Surface Preparation:** All surfaces to be in contact with MS-S6 must be free from dust, oil, grease or any other foreign substances that may interfere with the bond of the material. Remove all delaminated or unsound concrete providing a roughened surface and a minimum of 25 mm (1 inch) clearance behind any corroded reinforcing steel. The perimeter of the repair area should be saw-cut a minimum of 20 mm (¾ inch). Clean the area to be repaired with potable water, leaving the concrete saturated but free of standing water (SSD).

**Mixing:** Place 75% of required water into mixer and slowly introduce entire bag of MS-S6. Add balance of required water slowly while mixer is running, not exceeding maximum recommended volume of water. **Maximum recommended volume of water is 2.6 L (0.7 US gallon) per 30 KG (66 lb) bag.** Continue mixing for a minimum of 3 minutes and stop only when material has obtained a consistent homogeneous mix.

**Placing:** Mix and substrate temperatures should be maintained between 5 °C (40 °F) and 30 °C (86 °F), until the material has reached final set. Do not place MS-S6 when ambient temperature is below 5 °C (40 °F). Refer to ACI 306, "Guide to Cold Weather Concreting". In warm weather, ice water may be used to cool mix temperature and avoid short working time. When ambient temperature is above 30 °C (86 °F), refer to ACI 305, "Guide to Hot Weather Concreting".

Place material uniformly and consolidate by forcing it down to the surface of the parent concrete and around the underside of the rebar using a concrete vibrator, a steel trowel, a wood float or by rodding the material following ACI 309 R "Guide to Consolidating Concrete", without causing segregation. Ensure material has filled all voids and completely encapsulated any exposed rebar in the area to be repaired. For slab finishing, the use of a wood or magnesium float is recommended.

#### CURING

Curing is essential to optimize physical properties of the concrete and minimize plastic shrinkage. Cure immediately after material has reached initial set in accordance with ACI 308 "Guide to Curing Concrete". Continuously moist cure for a minimum period of 7 days. Alternatively, moist cure for a minimum period of 24 hours and apply a curing compound that complies with ASTM C 309. Curing is particularly critical in rapid moisture loss conditions such as high temperatures, high winds and low humidity.

#### TECHNICAL DATA

The following data is representative of typical values achievable under laboratory conditions. Results in the field may vary.

##### MASS DENSITY

**ASTM C 39** 2310 kg/m<sup>3</sup> (144 lb/ft<sup>3</sup>)

##### COMPRESSIVE STRENGTH

###### ASTM C 39

**1 Day** 15 MPa (2175 psi)  
**3 Day** 25 MPa (3625 psi)  
**7 Day** 35 MPa (5075 psi)  
**28 Day** 45 MPa (6500 psi)

##### FLEXURAL STRENGTH

###### ASTM C 78

**7 Day** 7 MPa (1015 psi)  
**28 Day** 12 MPa (1750 psi)

##### MODULUS OF ELASTICITY

###### ASTM C 469

**28 Day** 29.4 GPa (4.3 x 10<sup>6</sup> psi)

##### AIR CONTENT

**ASTM C 457** 4.0-9.0%

## BOND STRENGTH BY SLANT SHEAR

### ASTM C 882

1 Day	7.4 MPa (1070 psi)
7 Day	19.4 MPa (2810 psi)

## UNIAXIAL DRYING SHRINKAGE

### ASTM C 157

28 Day	350 µm/m
56 Day	500 µm/m

## FREEZE-THAW RESISTANCE

ASTM C 666	98% (Excellent durability factor)
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## SALT-SCALING RESISTANCE

### ASTM C 672

50 Cycles	< 0.1 kg/m <sup>2</sup> (0.02 lb/ft <sup>2</sup> )
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## CHLORIDE ION PENETRABILITY

ASTM C 1202	350 Coulombs
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## YIELD

30 KG (66 lb) bag contains approximately 0.014 m<sup>3</sup> (0.5 ft<sup>3</sup>).

## PACKAGING

MS-S6 is normally packaged in 30 KG (66 lb) triple-lined bags and polywrapped on wooden pallets. All KING products can be custom packaged to suit specific job requirements.

## STORAGE AND SHELF LIFE

Material should be stored in a dry, covered area, protected from the elements. Unopened bags have a shelf life of 12 months.

## SAFETY PROCEDURES

MS-S6 contains Portland cement. Normal safety-wear such as rubber gloves, dust mask and safety glasses used to handle conventional cement based products should be worn. Safety Data Sheets are available upon request.

**Warranty:** This product is designed to meet the performance specifications outlined in this product data sheet. If the product is used in conditions for which it was not intended, or applied in a manner contrary to the written recommendations contained in the product data sheet, the product may not reach such performance specifications. The foregoing is in lieu of any other warranties, representations or conditions, expressed or implied, including, but not limited to, implied warranties or conditions of merchantable quality or fitness for particular purposes, and those arising by statute or otherwise in law or from a course of dealing or usage of trade. [REV.0010\_2458717.5]

**STAFF REPORT 02/17/2021 MEETING**

**PREPARED BY: J. ROSS**

**APPLICATION NUMBER: #21-7098**

**ADDRESS: 4221 CASS (STUBER AND STONE BUILDING)**

**HISTORIC DISTRICT: WILLIS-SELDEN**

**APPLICANT: RICHARD KNAPP (OWNER OF UNIT # 300 AND HOA PRESIDENT)**

**DATE OF COMPLETE APPLICATION: 01/20/2021**

**DATE OF STAFF SITE VISIT: 01/29/2021**

**SCOPE: REPLACE WINDOW AT NORTH/SIDE ELEVATION, SECOND STORY; REPLACE CONCRETE LINTELS**

### **EXISTING CONDITIONS**

Per the City of Detroit, Historic Designation Advisory Board:

The Stuber-Stone & Company Building was erected in 1916. This Sullivanesque building was erected by A. J. Smith Construction Company. It is a large, two-story, rough brick and reinforced concrete building with terra cotta ornament, rectangular in shape, measuring 100 feet wide by 150 feet deep. The roof is flat. The façade is vertically divided into five bays by two-story brick piers. The storefront windows and windows on the north elevation appear to have been replaced in the early 1990s with windows that reflect the form of the building's original windows. A wide spandrel and cornice encompass the second-story windows. Among other decorative elements, the cornice features gargoyles in the form of lions bearing shields. The building served as a Columbia Motors 13 dealership until that firm went bankrupt in 1923. This building was individually listed on the National Register of Historic Places in 1996.

Original wood windows remain at the building's east elevation, second story. All other windows/fenestration are aluminum and were installed in the 1990s. Specifically, black aluminum storefronts are located at the east elevation, first story. North elevation windows are large, industrial-type, multiple-lite, black aluminum windows. The windows at the first story on the north elevation are fixed, 96-lite units, while each window at the second story features a fixed, 64-lite panel which tops four, eight-lite awning windows. Per the applicant, the structure of the second-story windows consists of four 5-ft wide by 10-ft tall sections, with 5-ft wide operable awnings at the bottom of each section. The glass is double paned, 13-inch by 18-inch rectangles separated by an aluminum grid. The grid is approximately 1-inch wide and square shaped facing into the condominium and 7/8-inch wide, cove shaped on the outward facing side. See the below photo of the building from 1996, which indicates that the existing aluminum windows were installed in an effort to replicate the original/historic steel sash, likely due to the owner's application for tax credits to support the building's late 1990s rehabilitation. Also, re: the north elevation, note that the current window openings at the first story are much larger than the historic window openings and the window openings at Units #300 and #400 at the second story were added during the 1990s building rehabilitation. The building currently includes retail uses on the first floor and 14 residential units at the second story.



Stuber-Stone Bldg. #1

4221-4229 Cass, **NORTH ELEVATION**, NRHP photo depicting appearance in 1996. The current windows at Units #300 and #400 are at this location



4221-4229 Cass, **NORTH ELEVATION**, current elevation. The current windows at Units #300 and #400 are at this location

## PROPOSAL

With the current submission includes the following work items, per the applicant:

- At Unit #300 and #400, undertake concrete repairs to the structural header beam spanning above the windows

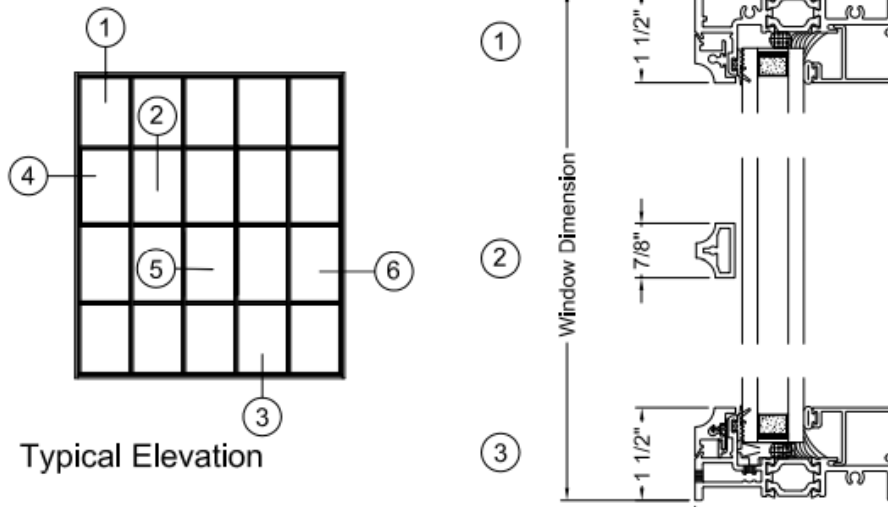
according to the following:

- Sawcut and hammer out all delaminated concrete from the bottom of the beam. Dispose of all debris.
  - Form up the areas, clean existing steel if needed, and install reinforcement.
  - Pour back concrete (*King MS-S6*), finish, and cure to match the existing area.
  - Perform any necessary rout and seal / epoxy injections (*Sikadur-35 Hi-Mod LV*) to the topside (existing section) of concrete beam.
- The non-historic, aluminum window at Unit #400 will be reinstalled after the concrete repairs are completed. The non-historic, aluminum window at Unit #300 will be replaced with a new aluminum window of the same lite configuration and operation, finish color as the existing. The new windows will be an EFCO 590x Black Kynar Painted Historical Series commercial grade aluminum window series with clear Low "E" safety tempered insulated glass and simulated divided lite (muntins applied to the glass's exterior surface). The new system will be 4 bays wide to match the existing, along with 4 operable awning windows

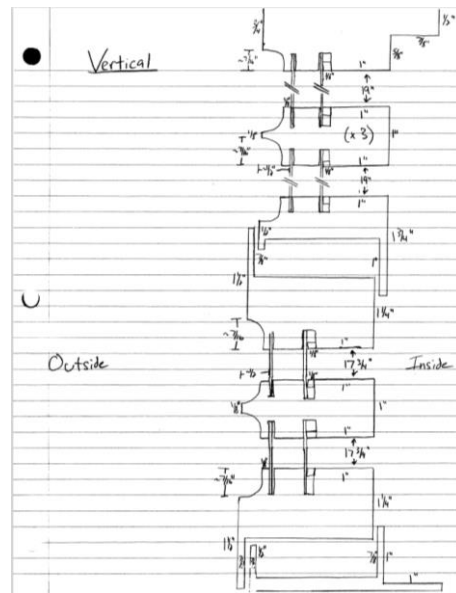
### **STAFF OBSERVATIONS AND RESEARCH**

- Per the above photo, the current second-story, north elevation window opening and accompanying aluminum sash at Unit #300 were added during the 1990s rehabilitation
- A review of the 1996 photo revealed that the design/lite configuration of the current second-story, north elevation window at Unit #300 closely matches the building's historic windows
- The applicant has stated that he wishes to replace the existing window at Unit #300 because "...the structural integrity of the aluminum frame has been compromised, likely due to the stress of the failing concrete header above the window structure. The unit is sagging and separating from the concrete. The movement of the frame has caused misalignment with the operable awnings, creating gaps between the awning and the fixed frame. Further, most of seals between the double paned rectangle windows have failed allowing condensation between the pieces of glass." To support this statement, he has provided condition reports from both Ram Construction and Desai Nasr Engineers (see attached).
- The applicant has stated that the manufacturer of the current windows at the building is unknown. He and his contractor (Window Diverse Services) therefore investigated a number of multiple manufacturers in order to identify window that most closely replicates the existing. The new window will be an EFCO 590x Black Kynar Painted Historical Series commercial grade aluminum window series with clear Low "E" safety tempered insulated glass and simulated divided lite (muntins applied to the glass's exterior surface) which will be custom made to match the existing as closely as possible.
- The building's windows are over 20 years old. The applicant has stated that a number of the windows are beginning to show signs of failure. As he is the president of the homeowner's association, he has stated that any new windows will be installed according to the specifications of the proposed new windows, if approved by the Commission.
- It is staff's opinion that the dimensions/profile of the new windows are generally close to the existing. However, the muntins proposed for the new window will have a slightly different shape (~~triangular~~) thicker-flared shape than the muntins at the current window (~~curved/flared~~ flat curve)





Proposed new window details



Existing window details

## ISSUES

- The window proposed for replacement is not historic-age and was installed in an opening that was added in late 1990s. It is therefore staff's opinion that the window itself is not character-defining. However, as the design of the existing window was based upon the that of the building's original industrial sash, features such as the number of lites/panes, the amount of visible glass/the size of the lites/panes and the dimensions of the unit's members are the aspects of the window that contribute to the building's historic character. The new window adequately replicates these features. However, because the muntins of the new window proposed for Unit #300 will have a different shape than the muntins of the existing window, the new window will present a slightly different appearance when compared to the existing windows at the building's other condo units. The new window shall be installed at the side elevation, second story. Staff

believes that the difference will in the shape/sitelines of the muntins will be imperceptible when viewed from the public right-of-way. Also, as noted above, the applicant has stated that the current specs will be followed as the building's remaining windows are replaced.

- The new window will have Low "E" glass. Staff is unclear if the new window's glass will be clear and not reflective, in keeping with the building's other fenestration.

## **RECOMMENDATION**

### Section 21-2-73, Certificate of Appropriateness

It is staff's opinion that the proposal should qualify for a Certificate of Appropriateness (COA). Staff therefore recommends that the Commission approve a COA for the proposed application, as it meets the Secretary of the Interior's Standards and conforms to the Willis-Selden Historic District's Elements of Design, with the condition that the window's glazing shall be clear/shall not be tinted or reflective and that the staff be granted the authority to improve the installation of replacement windows at the building as long as they meet the current proposal's specifications.

THIS IS A 3-PAGE FORM - ALL INFORMATION IS REQUIRED FOR PROJECT REVIEW

# HISTORIC DISTRICT COMMISSION PROJECT REVIEW REQUEST

City of Detroit - Planning & Development Department  
2 Woodward Avenue, Suite 808  
Detroit, Michigan 48226

Date: 12/27/2020

## PROPERTY INFORMATION

ADDRESS: \_\_\_\_\_ AKA: \_\_\_\_\_

HISTORIC DISTRICT: \_\_\_\_\_

SCOPE OF WORK:  Windows/Doors  Roof/Gutters/Chimney  Porch/Deck  Landscape/Fence/Tree/Park  General Rehab  
(Check ALL that apply)  New Construction  Demolition  Addition  Other: \_\_\_\_\_

## APPLICANT IDENTIFICATION

Property Owner/Homeowner  Contractor  Tenant or Business Occupant  Architect/Engineer/Consultant

NAME: \_\_\_\_\_ COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_ MOBILE: \_\_\_\_\_ EMAIL: \_\_\_\_\_

## PROJECT REVIEW REQUEST CHECKLIST

Please attach the following documentation to your request:

**\*PLEASE KEEP FILE SIZE OF ENTIRE SUBMISSION UNDER 30MB\***

- Completed Building Permit Application (highlighted portions only)
- ePLANS Permit Number (only applicable if you've already applied for permits through ePLANS)
- Photographs of ALL sides of existing building or site
- Detailed photographs of location of proposed work (photographs to show existing condition(s), design, color, & material)
- Description of existing conditions (including materials and design)
- Description of project (if replacing any existing material(s), include an explanation as to why replacement--rather than repair--of existing and/or construction of new is required)
- Detailed scope of work (formatted as bulleted list)
- Brochure/cut sheets for proposed replacement material(s) and/or product(s), as applicable

### NOTE:

Based on the scope of work, additional documentation may be required.

See [www.detroitmi.gov/hdc](http://www.detroitmi.gov/hdc) for scope-specific requirements.

Upon receipt of this documentation, staff will review and inform you of the next steps toward obtaining your building permit from the Buildings, Safety Engineering and Environmental Department (BSEED) to perform the work.

**SUBMIT COMPLETED REQUESTS TO [HDC@DETROITMI.GOV](mailto:HDC@DETROITMI.GOV)**

# P2 - BUILDING PERMIT APPLICATION

Date: \_\_\_\_\_

## PROPERTY INFORMATION

Address: \_\_\_\_\_ Floor: \_\_\_\_\_ Suite#: \_\_\_\_\_ Stories: \_\_\_\_\_

AKA: \_\_\_\_\_ Lot(s): \_\_\_\_\_ Subdivision: \_\_\_\_\_

Parcel ID#(s): \_\_\_\_\_ Total Acres: \_\_\_\_\_ Lot Width: \_\_\_\_\_ Lot Depth: \_\_\_\_\_

Current Legal Use of Property: \_\_\_\_\_ Proposed Use: \_\_\_\_\_

Are there any existing buildings or structures on this parcel?  Yes  No

## PROJECT INFORMATION

Permit Type:  New  Alteration  Addition  Demolition  Correct Violations

Foundation Only  Change of Use  Temporary Use  Other: \_\_\_\_\_

Revision to Original Permit #: \_\_\_\_\_ (Original permit has been issued and is active)

Description of Work (Describe in detail proposed work and use of property, attach work list)

MBC use change  No MBC use change

Included Improvements (Check all applicable; these trade areas require separate permit applications)

HVAC/Mechanical  Electrical  Plumbing  Fire Sprinkler System  Fire Alarm

### Structure Type

New Building  Existing Structure  Tenant Space  Garage/Accessory Building

Other: \_\_\_\_\_ Size of Structure to be Demolished (LxWxH) \_\_\_\_\_ cubic ft.

Construction involves changes to the floor plan?  Yes  No

(e.g. interior demolition or construction to new walls)

Use Group: \_\_\_\_\_ Type of Construction (per current MI Bldg Code Table 601) \_\_\_\_\_

Estimated Cost of Construction \$ \_\_\_\_\_ By Contractor \$ \_\_\_\_\_ By Department

### Structure Use

Residential-Number of Units: \_\_\_\_\_  Office-Gross Floor Area \_\_\_\_\_  Industrial-Gross Floor Area \_\_\_\_\_

Commercial-Gross Floor Area: \_\_\_\_\_  Institutional-Gross Floor Area \_\_\_\_\_  Other-Gross Floor Area \_\_\_\_\_

Proposed No. of Employees: \_\_\_\_\_ List materials to be stored in the building: \_\_\_\_\_

**PLOT PLAN SHALL BE submitted on separate sheets and shall show all easements and measurements (must be correct and in detail). SHOW ALL streets abutting lot, indicate front of lot, show all buildings, existing and proposed distances to lot lines.** (Building Permit Application Continues on Next Page)

### For Building Department Use Only

Intake By: \_\_\_\_\_ Date: \_\_\_\_\_ Fees Due: \_\_\_\_\_ DngBld?  No

Permit Description: \_\_\_\_\_

Permit #: \_\_\_\_\_ Current Legal Land Use: \_\_\_\_\_ Proposed Use: \_\_\_\_\_

Permit#: \_\_\_\_\_ Date Permit Issued: \_\_\_\_\_ Permit Cost: \$ \_\_\_\_\_

Zoning District: \_\_\_\_\_ Zoning Grant(s): \_\_\_\_\_

Lots Combined?  Yes  No (attach zoning clearance)

Revised Cost (revised permit applications only) Old \$ \_\_\_\_\_ New \$ \_\_\_\_\_

Structural: \_\_\_\_\_ Date: \_\_\_\_\_ Notes: \_\_\_\_\_

Zoning: \_\_\_\_\_ Date: \_\_\_\_\_ Notes: \_\_\_\_\_

Other: \_\_\_\_\_ Date: \_\_\_\_\_ Notes: \_\_\_\_\_



## IDENTIFICATION (All Fields Required)

### Property Owner/Homeowner

Property Owner/Homeowner is Permit Applicant

Name: Robert Knapp Company Name: \_\_\_\_\_

Address: 4221 Cass Ave Apt 300 City: Detroit State: MI Zip: 48201

Phone: 586-709-1473 Mobile: 586-709-1473

Driver's License #: K510 745 067 648 Email: RobertAKnappJr@gmail.com

### Contractor

Contractor is Permit Applicant

Representative Name: \_\_\_\_\_ Company Name: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: (734) 464-3800 Mobile: (248) 504-8860 Email: \_\_\_\_\_

City of Detroit License #: 2102221596

## TENANT OR BUSINESS OCCUPANT

Tenant is Permit Applicant

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

## ARCHITECT/ENGINEER/CONSULTANT

Architect/Engineer/Consultant is Permit Applicant


Name: \_\_\_\_\_ State Registration#: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Mobile: \_\_\_\_\_ Email: \_\_\_\_\_

## HOMEOWNER AFFIDAVIT (Only required for residential permits obtained by homeowner.)

I hereby certify that I am the legal owner and occupant of the subject property and the work described on this permit application shall be completed by me. I am familiar with the applicable codes and requirements of the City of Detroit and take full responsibility for all code compliance, fees and inspections related to the installation/work herein described. I shall neither hire nor sub-contract to any other person, firm or corporation any portion of the work covered by this building permit.

Print Name: Robert A Knapp Jr Signature:  Date: \_\_\_\_\_  
(Homeowner)

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_ A.D. \_\_\_\_\_ County, Michigan

Signature: \_\_\_\_\_ My Commission Expires: \_\_\_\_\_  
(Notary Public)

## PERMIT APPLICANT SIGNATURE

I hereby certify that the information on this application is true and correct. I have reviewed all deed restrictions that may apply to this construction and am aware of my responsibility thereunder. I certify that the proposed work is authorized by the owner of the record and I have been authorized to make this application as the property owner(s) authorized agent. Further I agree to conform to all applicable laws and ordinances of jurisdiction. **I am aware that a permit will expire when no inspections are requested and conducted within 180 days of the date of issuance or the date of the previous inspection and that expired permits cannot be**

Print Name: \_\_\_\_\_ Signature:  Date: \_\_\_\_\_  
(Permit Applicant)

Driver's License #: \_\_\_\_\_ Expiration: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_ A.D. \_\_\_\_\_ County, Michigan

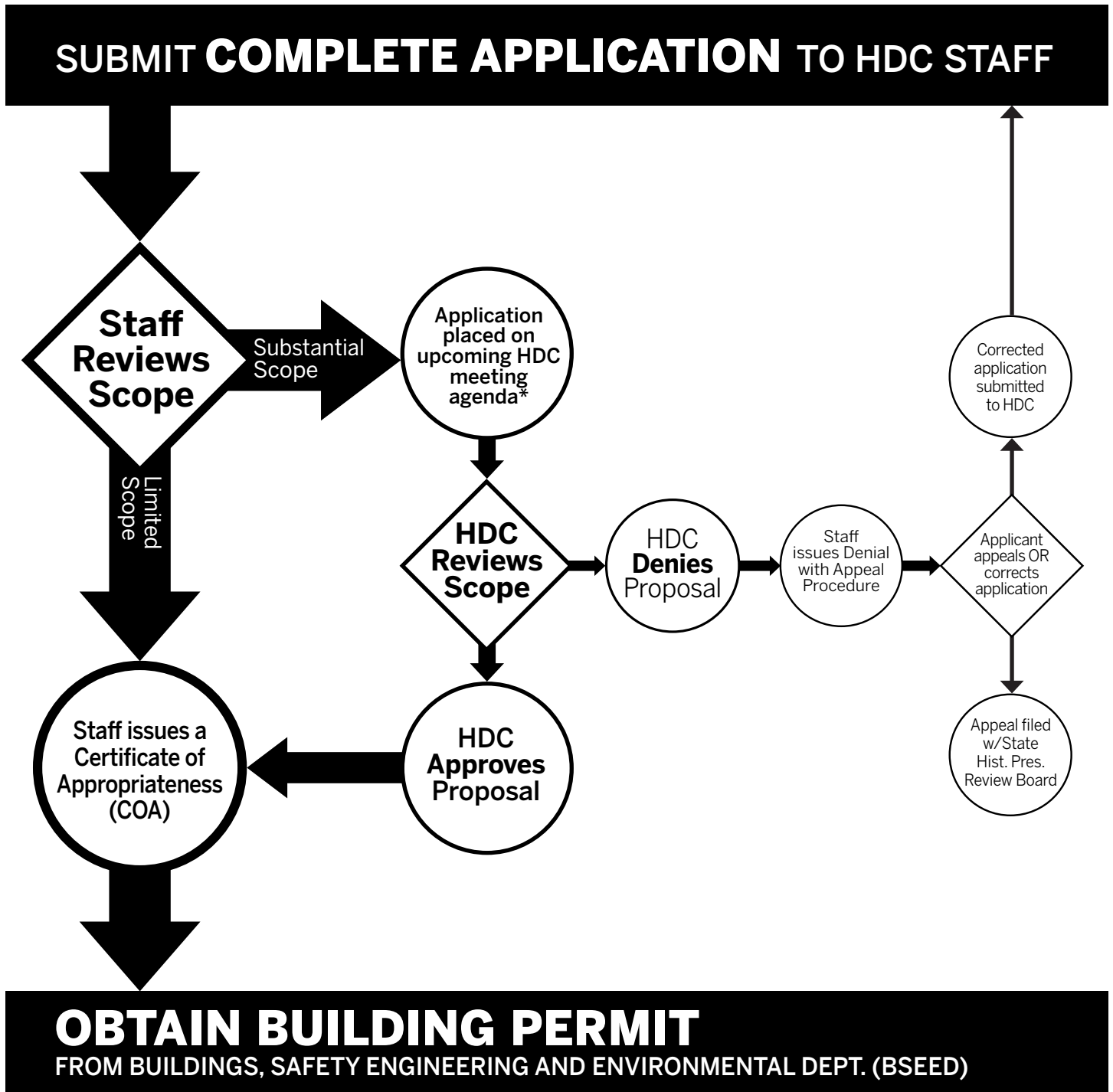
Signature: \_\_\_\_\_ My Commission Expires: \_\_\_\_\_  
(Notary Public)

**Section 23a of the state construction code act of 1972, 1972PA230, MCL 125.1523A, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who are to perform work on a residential building or a residential structure. Visitors of Section 23a are subject to civil fines.**

This application can also be completed online. Visit [detroitmi.gov/bseed/elaps](http://detroitmi.gov/bseed/elaps) for more information.



# HISTORIC DISTRICT COMMISSION REVIEW & PERMIT PROCESS



\* THE COMMISSION MEETS REGULARLY AT LEAST ONCE PER MONTH, TYPICALLY ON THE SECOND WEDNESDAY OF THE MONTH. (SEE WEBSITE FOR MEETING SCHEDULE/AGENDAS)

FIND OUT MORE AT [www.detroitmi.gov/hdc](http://www.detroitmi.gov/hdc)