



# CAMBRIDGE HISTORICAL COMMISSION

831 Massachusetts Avenue, 2<sup>nd</sup> Fl., Cambridge, Massachusetts 02139  
Telephone: 617 349 4683 TTY: 617 349 6112  
E-mail: histcomm@cambridgema.gov URL: www.cambridgema.gov/Historic

RECEIVED

JUL 16 2018

CAMBRIDGE HISTORICAL COMMISSION

## APPLICATION FOR CERTIFICATE

1. The undersigned hereby applies to the Cambridge Historical Commission for a Certificate of **(check one box)**:  Appropriateness,  Nonapplicability, or  Hardship, in accordance with Chapter 40C of the Massachusetts General Laws and/or Chapter 2.78 of the Municipal Code.

2. Address of property:  , Cambridge, Massachusetts

3. Describe the proposed alteration(s), construction or demolition in the space provided below: (An additional page can be attached, if necessary).

3rd Floor Window replacement Proposal, 18 Windows:

- Proposed replacement of 8 Pella insert replacement windows, 5 of which are visible from the street, with higher quality Marvin inserts or Tilt Pac windows.
- Proposed replacement of 4 Pella wood replacement sash kits, one of which is visible from the street, with higher quality Marvin inserts or Tilt Pac windows.
- Proposed replacement of 6 original windows, none of which are visible from the street, with higher quality Marvin inserts or Tilt Pac windows.

See enclosed Window Survey Form for further detail.

We are providing three replacement window options for consideration. The owner's preference is for the Marvin Clad Ultimate Insert windows for all 3rd floor locations except for the roundtop window visible from the street in which the existing, original window will remain.

I certify that the information contained herein is true and accurate to the best of my knowledge and belief. **The undersigned also attests that he/she has read the statements printed on the reverse.**

Name of Property Owner of Record:

Mailing Address:

Telephone/Fax:  E-mail:

Signature of Property Owner of Record: YIN LI  
(Required field; application will not be considered complete without property owner's signature)

Name of proponent, if not record owner:

Mailing Address:

Telephone/Fax:  E-mail:

(for office use only):

Date Application Received: 7/16/18 Case Number: 3977 Hearing Date: 8/9/18

Type of Certificate Issued: \_\_\_\_\_ Date Issued: \_\_\_\_\_

**Instructions for Completing this Application:**

An application must be filed with the Cambridge Historical Commission (CHC) before work begins. Twelve (12) copies of the application should be attached to twelve (12) copies of supplementary material such as sketches, scale drawings, site plans, specifications, or photographs sufficient to enable the CHC to understand the details of the work proposed and to make a determination on the application. Plans no larger than 11" x 17" are preferred. Please submit reduced copies of plans if originals are of a larger dimension. Do not use spiral bindings, plastic covers, or heavy stock (these will be removed prior to mailing). Double sided copies are encouraged to save paper and postage. See our website or call for a list of meeting dates and deadlines.

The CHC staff welcomes advance inquiries for interpretations or advice. Please call 617/349-4683.

An application is considered incomplete without accompanying plans and drawings. The CHC reserves the right to determine an application incomplete at the time of hearing the application if it determines that the plans, drawings and other information submitted are not sufficient to enable it to determine whether to grant or deny a certificate.

Owners are urged to appear before the CHC in person or to designate an agent to act for them. The CHC will deem the agent to be authorized by the owner to make decisions regarding the extension or waiver of the period within which the CHC is otherwise required to make a determination on the application. All meetings are open to the public.

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**Administration of Historic Districts, Landmarks, and Protected Properties:**

The administration of historic districts and landmarks is guided by the provisions of Ch. 40C of the Mass. General Laws and by Ch. 2.78 of the Code of the City Of Cambridge. Other properties may also be subject to CHC jurisdiction including properties with conditional variances and properties governed by individual preservation restrictions.

Any new construction, alteration of exterior architectural features, or demolition within an historic district or on the premises of a protected property or a designated landmark must be reviewed by the CHC. No building permit for such work on a protected property, designated landmark, or property within a historic district may be issued by the Inspectional Services Department until a certificate has been issued. The CHC must approve the alteration or construction of all structures, including signs, fences, walls, terraces, walks, driveways, light fixtures and the like, which are "open to view from a public street, public way, public park or public body of water," whether or not a building permit is required, and must approve changes in exterior color for properties within a historic district or as otherwise agreed.

Prior to each hearing, the CHC staff will take slides or digital photographs of the subject property in daylight with ordinary camera equipment for the purpose of documenting the publicly visible conditions of buildings and exterior architectural features for the CHC and the public to view at the hearing. More information can be provided on request.

The CHC issues three types of certificates. A Certificate of Appropriateness will be issued when the CHC has determined that the construction or alteration will be appropriate for or compatible with the preservation or protection of the historic district, designated landmark, or other protected property. A Certificate of Nonapplicability may be issued when an application does not involve an exterior feature, or when the exterior feature is not then subject to CHC review. A Certificate of Hardship may be issued when failure to approve an otherwise inappropriate project would involve substantial hardship to the applicant and the CHC determines that the project can be accomplished without substantial detriment to the purposes of the district, preservation restriction, or landmark designation.

The CHC considers each application on its own merits, and does not apply specific architectural guidelines. Landscaping with plant materials is not subject to CHC review unless it is planned in conjunction with alterations or new construction. The CHC must approve projects that are not incongruous with the historic aspects or the architectural characteristics of the protected property, landmark, or historic district.

**Print Form**

Application #: \_\_\_\_\_  
 Applicant Name: David Madden, SBH Construction

Address: 26 New St, Cambridge MA 02138  
 Date Received: \_\_\_\_\_

## Window Survey Form

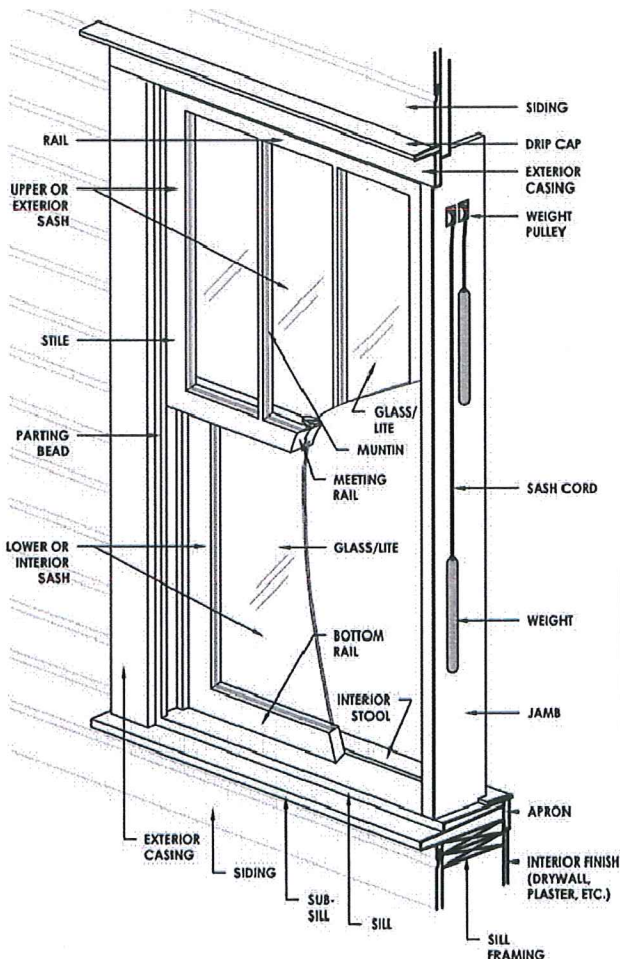
Have?

**Basic Requirements**

- Photographs or drawings of each elevation of the structure, with all window openings on each elevation numbered
- Photographs of each numbered window opening proposed for replacement
- Condition evaluation of each windows (see reverse)
- Proposed window design (sash, casement, fixed, etc.), pattern (1-over-1, 2-over-1, etc.), materials (wood, vinyl, clad, etc.), etc. *Specify if different for certain openings.*
- Proposed product information that includes company's depiction or photograph of actual proposed product
- Other \_\_\_\_\_

**IF REPAIRING WINDOWS, YOU DO NOT NEED TO COMPLETE THIS FORM.**

1. Using photographs or elevation drawings, assign a number to ALL WINDOW OPENINGS on the structure. If using photos, they need to show the ENTIRE elevation. Windows in pairs or groupings should be assigned *separate* numbers. Windows in dormers and small fixed windows should also be included, but not door sidelights or transoms associated with a door.
2. Describe condition of window under the same number on the back of this sheet. Describe the specific issues and conditions of EACH window in detail, referring to the specific parts (see diagram below). Additional close-up photographs showing evidence of the window condition **MUST** be provided to better document problem areas.



The Commission's evaluation and recommendation is based on deterioration/damage to the window unit, and associated trim.

**PLEASE NOTE:** Broken glass, windows with broken sash cords, windows that do not open, energy efficiency, draftiness, noise intrusion, and windows that are painted or screwed shut are **NOT** grounds for approving replacement. These can all be addressed through repair and/or the addition of a storm window.

Total number of window openings on the structure <u>3<sup>rd</sup> Floor</u>	19
Number of historic windows on the structure <u>3<sup>rd</sup> Floor</u>	6
Number of existing replacement/non-historic windows - <u>3<sup>rd</sup> Floor</u>	13
Number of windows completely missing	0
Totally number of windows proposed for replacement	18

*- Round top original window facing Brattle St. (Window #18) to remain.*

Application #: \_\_\_\_\_  
Applicant Name: David Madden, S&H Construction

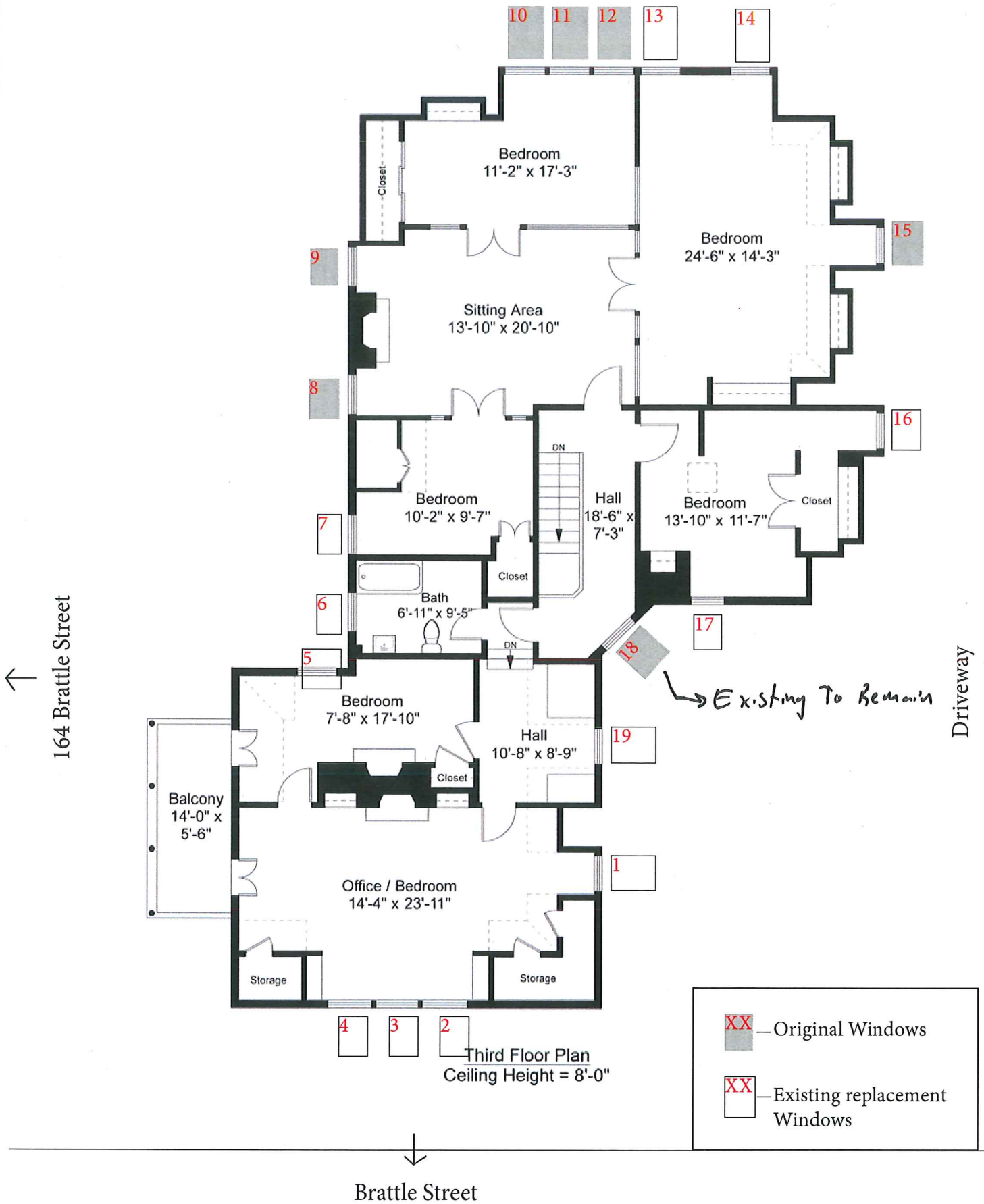
Address: 26 New St, Cambridge MA 02138  
Date Received: \_\_\_\_\_

## Window Survey Form - 168 Brattle St.

Window #	Condition Notes
1	See Attached Schedule
2	
3	
4	
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16	
17	
18	
19	
20	
21	

Window #	Condition Notes
22	
23	
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35	
36	
37	
38	
39	
40	
41	
42	

Rear Parking Area



Gong Residence - 168 Brattle Street  
Window Survey

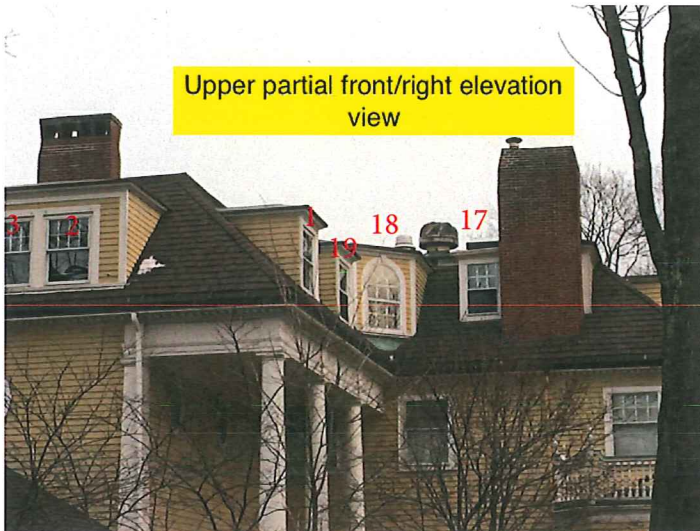
- 1) Insert replacement window. Manufacturer Pella, insulated glass with removeable vinyl snap-in grille, muntin width 3/4", 8 over 1, exterior is clad, interior is wood, vinyl jamb liner. Estimate 15-20 years old.
- 2) Insert replacement window. Manufacturer Pella, insulated glass with removeable vinyl snap-in grille, muntin width 3/4", 8 over 1, exterior is clad, interior is wood, vinyl jamb liner. Estimate 15-20 years old.
- 3) Insert replacement window. Manufacturer Pella, insulated glass with removeable vinyl snap-in grille, muntin width 3/4", 8 over 1, exterior is clad, interior is wood, vinyl jamb liner. Estimate 15-20 years old.
- 4) Insert replacement window. Manufacturer Pella, insulated glass with removeable vinyl snap-in grille, muntin width 3/4", 8 over 1, exterior is clad, interior is wood, vinyl jamb liner. Estimate 15-20 years old.
- 5) Insert replacement window. Manufacturer Pella, insulated glass with removeable vinyl snap-in grille, muntin width 3/4", 8 over 1, exterior is clad, interior is wood, vinyl jamb liner. Estimate 15-20 years old.
- 6) Insert replacement window. Manufacturer Pella, insulated glass with removeable vinyl snap-in grille, muntin width 3/4", 8 over 1, exterior is clad, interior is wood, vinyl jamb liner. Estimate 15-20 years old.
- 7) Insert replacement window. Manufacturer Pella, insulated glass with removeable vinyl snap-in grille, muntin width 3/4", 8 over 1, exterior is clad, interior is wood, vinyl jamb liner. Estimate 15-20 years old.
- 8) Original wood sash, weight and cord window, single pane, true divided light. 6 over 1, muntin width 1 1/2"
- 9) Original wood sash, weight and cord window, single pane, true divided light. 6 over 1, muntin width 1 1/2"
- 10) Original wood sash, weight and cord window, single pane, true divided light. 6 over 1, muntin width 1 1/2"
- 11) Original wood sash, weight and cord window, single pane, true divided light. 6 over 1, muntin width 1 1/2"
- 12) Original wood sash, weight and cord window, single pane, true divided light. 6 over 1, muntin width 1 1/2"
- 13) Pella wood replacement sash kits, vinyl jamb liner, insulated glass, removeable snap-in grille. Estimated 15-20 years old.
- 14) Pella wood replacement sash kits, vinyl jamb liner, insulated glass, removeable snap-in grille, muntin width 1 1/2", 6 over 1. Estimated 15-20 years old.
- 15) Original wood sash, weight and cord window, single pane, true divided light.
- 16) Pella wood replacement sash kits, vinyl jamb liner, insulated glass, removeable snap-in grille, muntin width 1 1/2", 6 over 1. Estimated 15-20 years old.
- 17) Pella wood replacement sash kits, vinyl jamb liner, insulated glass, removeable snap-in grille, muntin width 1 1/2", 6 over 1. Estimated 15-20 years old.
- 18) Original wood sash arch window, weight and cord window, single pane, true divided light. Not proposing replacement.
- 19) Insert replacement window. Manufacturer Pella, insulated glass with removeable snap-in grille, muntin width 3/4", 8 over 1, exterior is clad, interior is wood, vinyl jamb liner. Estimate 15-20 years old.



Driveway Elevation



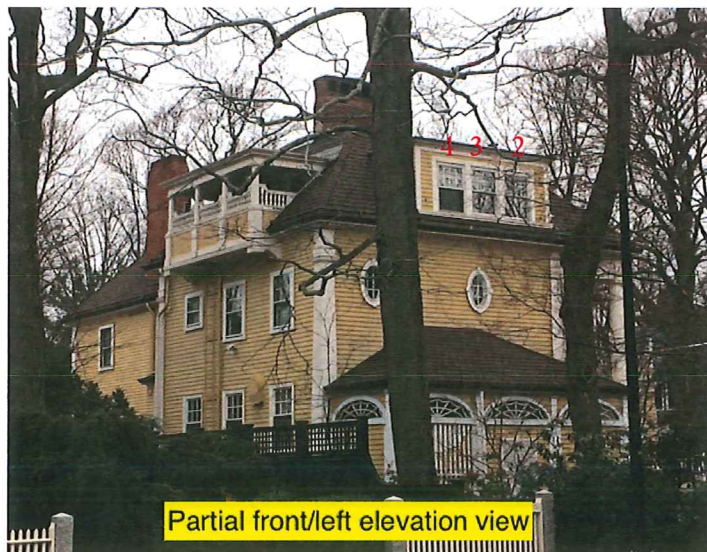
Driveway Elevation, Cont'd



Street Elevation



Street Elevation



Partial front/left elevation view



Rear Elevation



Window 1



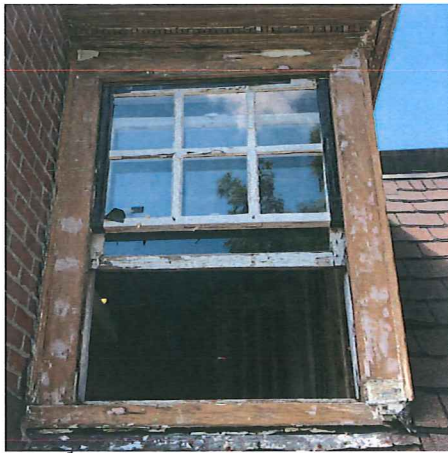
Window 2,3,4



Window 5



Window 6,7



Window 8



Window 9



Window 10



Window 11





Window 12



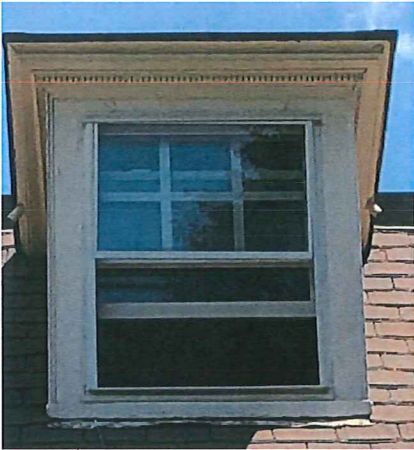
Window 13



Window 14



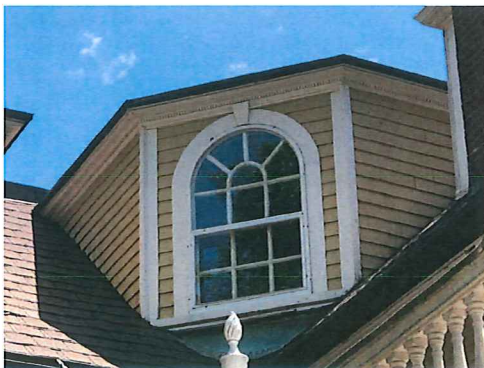
Window 15



Window 16



Window 17

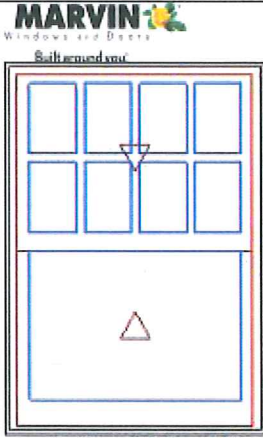


Window 18, To Remain



Window 19

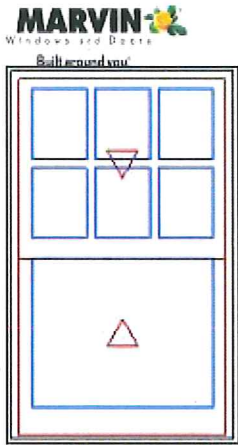
Replacement Option 1: Marvin Clad Insert



As Viewed From The Exterior

Entered As: IO  
 IO 35 1/8" X 48 7/8"  
**Egress Information**  
 Width: 31 1/2" Height: 19 5/32"  
 Net Clear Opening: 4.19 SqFt  
**Performance Information**  
 U-Factor: 0.3  
 Solar Heat Gain Coefficient: 0.24  
 Visible Light Transmittance: 0.4  
 Condensation Resistance: 56  
 CPD Number: MAR-N-73-02828-00001  
 ENERGY STAR: NC, SC, S

Stone White Clad Exterior  
 Primed Pine Interior  
 Clad Ultimate Insert Double Hung  
 Inside Opening 35 1/8" X 48 7/8"  
 8 Degree Frame Bevel  
 Glass Add For All Sash/Panels  
**Top Sash**  
 Stone White Clad Sash Exterior  
 Primed Pine Sash Interior  
 IG  
 Tempered Low E2 w/Argon  
 Stainless Perimeter and Spacer Bar  
 1 1/8" SDL - With Spacer Bar - Stainless  
 Rectangular - Special Cut 4W2H  
 Stone White Clad Ext - Primed Pine Int  
 Ovolo Interior Glazing Profile  
**Bottom Sash**  
 Stone White Clad Sash Exterior  
 Primed Pine Sash Interior  
 IG - 1 Lite  
 Tempered Low E2 w/Argon  
 Stainless Perimeter Bar  
 Ovolo Interior Glazing Profile  
 White Sash Lock  
 White Jamb Hardware  
 Aluminum Screen  
 Stone White Surround  
 Charcoal Fiberglass Mesh  
 \*\*\*Screen/Combo Ship Loose  
 3 1/4" Jamb

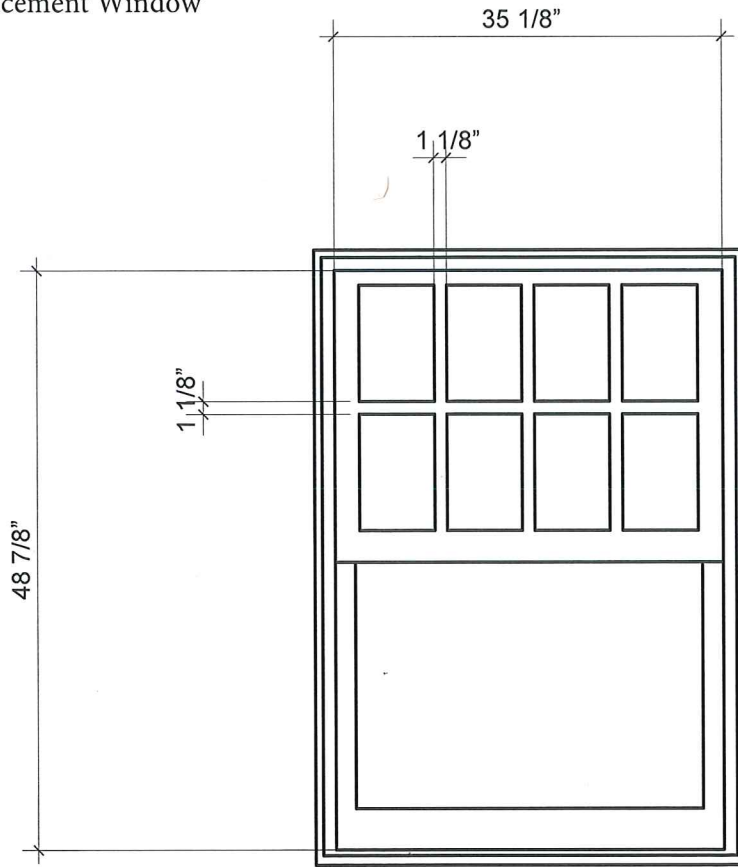


As Viewed From The Exterior

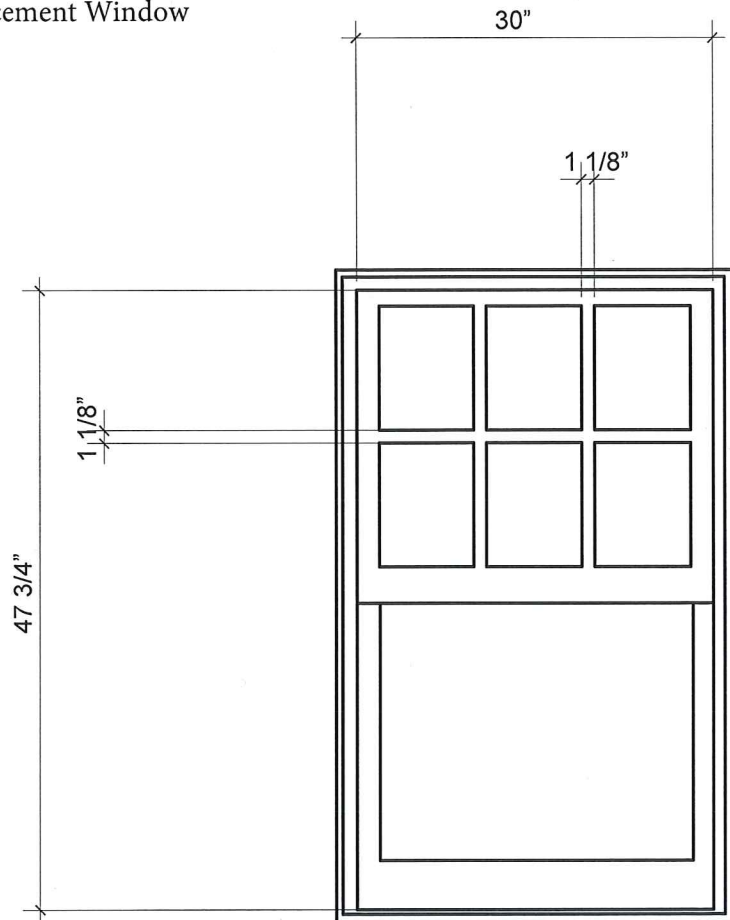
Entered As: IO  
 IO 30" X 47 3/4"  
**Egress Information**  
 Width: 26 3/8" Height: 18 19/32"  
 Accepted:

Stone White Clad Exterior  
 Primed Pine Interior  
 Clad Ultimate Insert Double Hung  
 Inside Opening 30" X 47 3/4"  
 8 Degree Frame Bevel  
**Top Sash**  
 Stone White Clad Sash Exterior  
 Primed Pine Sash Interior  
 IG  
 Low E2 w/Argon  
 Stainless Perimeter and Spacer Bar  
 1 1/8" SDL - With Spacer Bar - Stainless  
 Rectangular - Special Cut 3W2H  
 Stone White Clad Ext - Primed Pine Int  
 Ovolo Interior Glazing Profile  
**Bottom Sash**  
 Stone White Clad Sash Exterior  
 Primed Pine Sash Interior  
 IG - 1 Lite  
 Low E2 w/Argon  
 Stainless Perimeter Bar  
 Ovolo Interior Glazing Profile  
 White Sash Lock

8 over 1 Replacement Window



6 over 1 Replacement Window



## Clad Insert Double Hung

### Unit Features

Clad Ultimate Insert Double Hung: CINDH

Clad Ultimate Transom Windows: CINDHT

Clad Ultimate Picture Windows: CINDHP

#### Frame:

- Frame depth is 3 1/4" (83)
- Sill thickness, head and side jambs are 21/32" (17) with 1 5/16" (33) wide composite jambs.
- Sill options available: 8 degree or 14 degree bevel at the bottom or a flat sill with 1 5/32" (29) thickness.

#### Sash:

- Nominal sash thickness: 1 5/8" (41) with 11/16" (18) insulating glass. For Tri-pane glass, 1 7/8" (48) sash is required with 7/8" (22) glazing.
- Picture sash thickness: 2" (51) with 1" (25) glass.
- Operating sash are removable for cleaning.
- Incorporates traditional wide bottom rail in bottom sash - 3 9/16" (90).
- Single Hung conversion kits available. Cottage and oriel sash configuration available.

#### Hardware:

- Sash lock and keeper: Open style crescent cam lock with sash release lever, surface mounted. Color: Satin Taupe. Optional colors: Bronze, White, Brass, Antique Brass, Satin Chrome, Satin Nickel and Oil Rubbed Bronze.
- Balance system: block and tackle coil spring.
- The jamb track is a vinyl extrusion. Color: Beige. Optional color: White.

#### Weather Strip:

- Jamb weather strip is a foam type weather strip which seals against both the bottom sash and top sash stiles.
- Top sash has a weather strip on the check rail that seals to the bottom sash check rail when the sash lock is engaged.
- The top rail seals against a weather strip on the head jamb parting stop.
- The bottom sash has a weather strip on the bottom of the lower rail which seals against the sill.

#### Insect Screens:

- Standard Screen is roll formed aluminum.
- Aluminum screen: Full Screen standard, half screen optional.
- Aluminum surround to match exterior frame clad color.
- Screen mesh: Standard is Charcoal Fiberglass. Optional: Charcoal High Transparency Fiberglass Mesh, Charcoal Aluminum Wire, Black Aluminum Wire, Bright Aluminum Wire, or Bright Bronze Aluminum Wire.
- Optional Double Hung Magnum Screen, extruded aluminum screen.

#### Glass and Glazing:

- Glazing method: Insulating
- Glazing seal: Silicone bedding on the interior, acrylic foam adhesive tape on the exterior
- Standard glass is insulating Low E2 Argon or Air.
- Insulating glass will be altitude adjusted with capillary tubes for higher elevations. Argon gas is not available for elevations that require capillary tubes.

#### Optional Glass

- Low E1 Argon or Air, Low E3 Argon or Air, Clear, Laminated, Tempered, Obscure, Bronze tint, Gray tint, Reflective Bronze, decorative glass options.
- 7/8" or 1" Tripane Low E1 outer piece and Low E1 Argon inner piece
- 7/8" or 1" Tripane Low E1 outer piece and Low E1 Krypton-Argon inner piece
- 7/8" or 1" Tripane Low E2 outer piece and Low E2 Argon inner piece
- 7/8" or 1" Tripane Low E2 outer piece and Low E2 Krypton-Argon inner piece
- 7/8" or 1" Tripane Low E3 outer piece and Low E1 Argon inner piece
- 7/8" or 1" Tripane Low E3 outer piece and Low E1 Krypton-Argon inner piece

## Clad Insert Double Hung

### Unit Features

#### CE Optional Glass

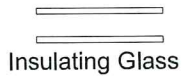
- Glazing method: Insulating
- Glazing seal: Silicone glazed
- Standard Glass is 11/16" (18) insulating Low E2 Argon or air
- Optional dual glazing available: Low E1 Argon or air, Low E3 Argon or air, Low E2/ERS Argon or air, Low E2/ERS Argon or air, Clear, Laminated Clear, tints, tempered and sandblasted
- 7/8" (22) or 1" (25) Tripane glass types: Low E1/E1 Argon or Krypton-Argon, Low E2/E2 Argon or Krypton-Argon, Low E3/E1 Argon or Krypton-Argon
- Glass panes available in 3, 4, and 6 mm thicknesses
- Laminated panes available in 7.0 and 7.8 mm thicknesses
- Glazing will be altitude adjusted for higher elevations, Argon, Argon-Krypton, and Krypton gas not included

#### Accessories:

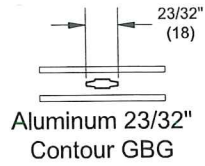
- Installation Accessories
  - Factory installed vinyl sill fin (8 degree sill option only)
  - Two (2) 5/16" - #10 x 2 1/2" jamb jack screws
  - Four (4) #7 x 2" Phillips pan-head installation screws
  - Two (2) jamb liner check rail pads
  - Two (2) color matched clad jamb plugs (exterior).
  - Two (2) wood flat head plugs (interior).
- Sash Lifts
  - High pressure zinc die-cast.
  - Color: Satin Taupe. Optional colors: Bronze, White, Brass, Antique Brass, Satin Chrome, Satin Nickel and Oil Rubbed Bronze.
- Aluminum Extrusions
  - Profiles: Frame Expander, Extruded Panning, Mullion covers as indicated by drawings.
  - Finish: Fluoropolymer modified acrylic topcoat applied over primer. Available in standard, select, and custom colors.

# Clad Insert Double Hung

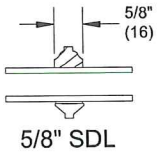
## Standard Divided Lite Option



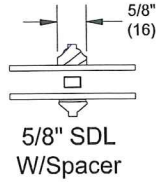
Insulating Glass



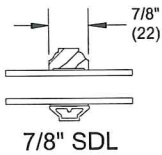
Aluminum 23/32"  
Contour GBG



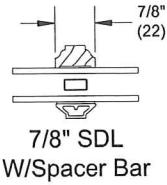
5/8" SDL



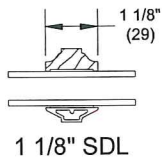
5/8" SDL  
W/Spacer



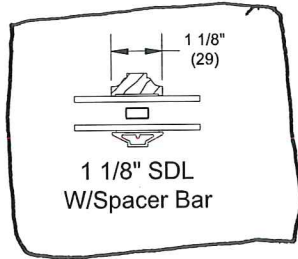
7/8" SDL



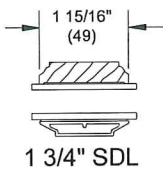
7/8" SDL  
W/Spacer Bar



1 1/8" SDL



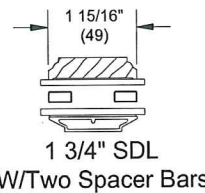
1 1/8" SDL  
W/Spacer Bar



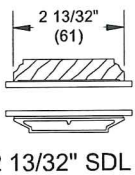
1 3/4" SDL



1 3/4" SDL  
W/One Spacer Bar



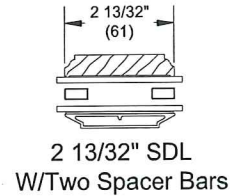
1 3/4" SDL  
W/Two Spacer Bars



2 13/32" SDL



2 13/32" SDL  
W/One Spacer Bar

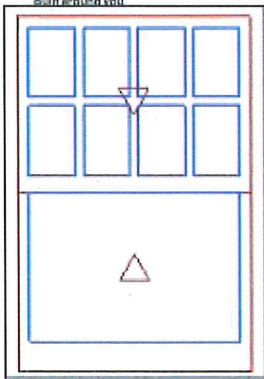


2 13/32" SDL  
W/Two Spacer Bars

Replacement Option 2: Marvin Wood Insert



Baltimore, MD



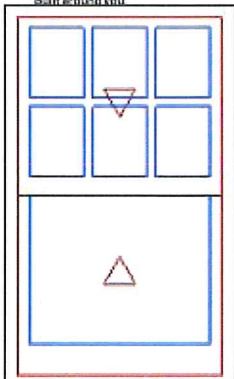
As Viewed From The Exterior

Entered As: IO  
 IO 35 1/8" X 48 7/8"  
**Egress Information**  
 Width: 31 3/16" Height: 18 53/64"  
 Net Clear Opening: 4.08 SqFt  
**Performance Information**  
 U-Factor: 0.29  
 Solar Heat Gain Coefficient: 0.24  
 Visible Light Transmittance: 0.4  
 Condensation Resistance: 57  
 CPD Number: MAR-N-364-02191-00001  
 ENERGY STAR: NC, SC, 5

Primed Pine Exterior  
 Primed Pine Interior  
 Wood Ultimate Insert Double Hung  
 Inside Opening 35 1/8" X 48 7/8"  
 8 Degree Frame Bevel  
 Glass Add For All Sash/Panels  
**Top Sash**  
 Primed Pine Sash Exterior  
 Primed Pine Sash Interior  
 IG  
 Tempered Low E2 w/Argon  
 Stainless Perimeter and Spacer Bar  
 1 1/8" SDL - With Spacer Bar - Stainless  
 Rectangular - Special Cut 4W2H  
 Primed Pine Ext - Primed Pine Int  
 Ovolo Exterior Glazing Profile  
 Ovolo Interior Glazing Profile  
**Bottom Sash**  
 Primed Pine Sash Exterior  
 Primed Pine Sash Interior  
 IG - 1 Lite  
 Tempered Low E2 w/Argon  
 Stainless Perimeter Bar  
 Ovolo Exterior Glazing Profile  
 Ovolo Interior Glazing Profile  
 White Sash Lock  
 White Jamb Hardware  
 Aluminum Screen  
 Stone White Surround  
 Charcoal Fiberglass Mesh  
 \*\*\*Screen/Combo Ship Loose  
 4 9/16" Jamb



Baltimore, MD



As Viewed From The Exterior

Entered As: IO  
 IO 30" X 47 3/4"  
**Egress Information**  
 Width: 26 1/16" Height: 18 17/64"

Accepted:

Primed Pine Exterior  
 Primed Pine Interior  
 Wood Ultimate Insert Double Hung  
 Inside Opening 30" X 47 3/4"  
 8 Degree Frame Bevel  
**Top Sash**  
 Primed Pine Sash Exterior  
 Primed Pine Sash Interior  
 IG  
 Low E2 w/Argon  
 Stainless Perimeter and Spacer Bar  
 1 1/8" SDL - With Spacer Bar - Stainless  
 Rectangular - Special Cut 3W2H  
 Primed Pine Ext - Primed Pine Int  
 Ovolo Exterior Glazing Profile  
 Ovolo Interior Glazing Profile  
**Bottom Sash**  
 Primed Pine Sash Exterior  
 Primed Pine Sash Interior  
 IG - 1 Lite  
 Low E2 w/Argon  
 Stainless Perimeter Bar  
 Ovolo Exterior Glazing Profile

Processed on: 6/20/2018 11:48:30 AM

## Unit Features

Wood Ultimate Insert Double Hung: WINDH

Wood Ultimate Insert Double Hung Transom: WINDHT

Wood Ultimate Insert Double Hung Picture: WINDHP

*NOTE: Wood Ultimate Insert Double Hung Transom and Wood Ultimate Insert Double Hung Picture are not available with CE mark.*

### Frame:

- Depth is 4 9/16" (116)
- 1 1/16" (17) thick at head and side jambs, 1" (25) at sill which has an 8° bevel
- Optional flat sill that is 1 7/16" (37)

### Sash:

- Sash thickness for operable units and transom: 1 5/8" (41). Sash thickness for a picture unit is 1 5/8 (41) or 2" (51).
- Operating sash are removable for cleaning, service and finishing.
- Incorporates traditional wide bottom rail in bottom sash - 3 9/16" (90).
- Single Hung conversion kits available. Cottage and Oriel sash configuration available.

### Hardware:

- Sash lock and keeper: Open style crescent cam lock with sash release lever, surface mounted. Color: Satin Taupe. Optional colors: Bronze, White, Brass, Antique Brass, Satin Chrome, Satin Nickel and Oil Rubbed Bronze.
- Balance system: block and tackle coil spring.
- The jamb track is a vinyl extrusion. Color: Beige. Optional color: White.

### Weather Strip:

- Jamb weather strip is a foam type weather strip which seals against both the bottom sash and top sash stiles.
- Top sash has a weather strip on the check rail that seals to the bottom sash check rail when the sash lock is engaged.
- The top rail seals against a weather strip on the head jamb parting stop.
- The bottom sash has a weather strip on the bottom of the lower rail which seals against the sill.

### Insect Screens:

- Aluminum screen: Full screen standard, half screen optional. Colors available: Pebble Gray, Bahama Brown, Evergreen, Bronze, Stone White, Ebony, Cobalt Blue, Wineberry, Coconut Cream, Hampton Sage, Cashmere, Arctic White, Cumulus Gray, Desert Beige, Sherwood Green, Sierra White, Cadet Gray, Cascade Blue, or French Vanilla.
- Screen mesh: Standard is Charcoal Fiberglass. Optional: Charcoal High Transparency Fiberglass Mesh, Charcoal Aluminum Wire, Black Aluminum Wire, Bright Aluminum Wire, or Bright Bronze Aluminum Wire.
- Screens have an aluminum crossbar on glass heights of 20" (508) and taller.
- Optional Double Hung Magnum Screen, extruded aluminum.

### Glass:

- Glazing seal: Silicone glazed.
- Standard glass is insulating Low E2 Argon or Air.
- Insulating glass will be altitude adjusted with capillary tubes for higher elevations. Argon gas is not available for elevations that require capillary tubes.

### Optional Glass

- Low E1 Argon or Air, Low E3 Argon or Air, Clear, Tempered, Laminated, Obscure, Bronze tint, Gray tint, Reflective Bronze, Decorative glass options or clear.
- ADL glazing options not available with Argon

### Optional Glass- WINDP only

- Tripane Low E1 outer piece and Low E1 Argon inner piece
- Tripane Low E1 outer piece and Low E1 Krypton-Argon inner piece
- Tripane Low E2 outer piece and Low E2 Argon inner piece
- Tripane Low E2 outer piece and Low E2 Krypton-Argon inner piece
- Tripane Low E3 outer piece and Low E1 Argon inner piece
- Tripane Low E3 outer piece and Low E1 Krypton-Argon inner piece



## Unit Features

### CE Optional Glazing:

- Glazing method: Insulating
- Glazing seal: Silicone glazed
- Standard glass is insulating Low E2 Argon or air
- Optional dual glazing available: Low E1 Argon or air, Low E3 Argon or air, Low E2/ERS argon or air, Low E3/ERS Argon or air, clear, laminated clear and tints, tempered, sandblasted
- Glass panes available in 3 and 4 mm thicknesses
- Laminated panes available in 7.0 and 7.8 mm thicknesses
- Glazing will be altitude adjusted for higher elevations, Argon, Argon-Krypton, and Krypton gas not included

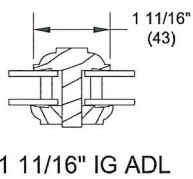
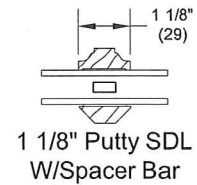
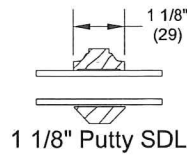
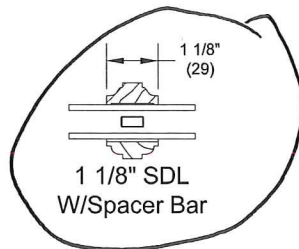
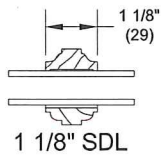
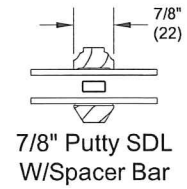
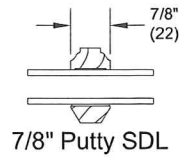
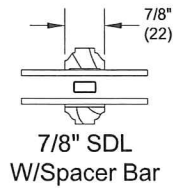
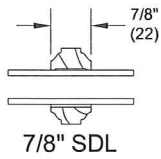
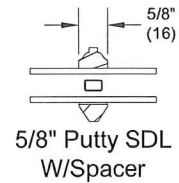
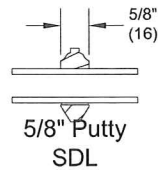
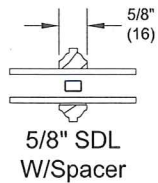
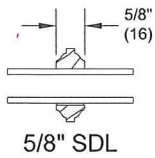
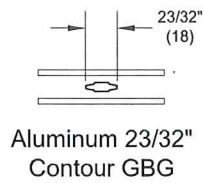
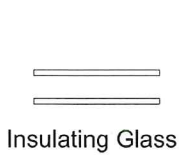
### Accessories:

- Installation Accessories
  - Factory installed vinyl sill fin (8 degree sill option only)
  - Two (2) 5/16" - #10 x 2 1/2" jamb jack screws
  - Four (4) #7 x 2" Phillips pan-head installation screws
  - Two (2) jamb liner check rail pads
  - Two (2) wood flat head plugs (interior).
- Sash Lifts
  - High pressure zinc die-cast.
  - Color: Satin Taupe. Optional colors: Bronze, White, Brass, Antique Brass, Satin Chrome, Satin Nickel and Oil Rubbed Bronze.

### CE Mulling Options:

- Muller assemblies up to 70 3/4" (1797) x 80 3/8" (2042) as 1H x multi-width
- Muller assemblies with 1" (25) LVL or 3/8" (10) aluminum mull reinforcement up to 124 7/8" (3172) x 100 3/8" (2550) as a multi-wide or multi-high assembly

Standard Insulating Glass Divided Lite Options



NOTE: ADL is not available with CE mark.

# Wood Ultimate Insert Double Hung

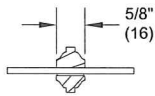
## Standard Single Glaze Divided Lite Options



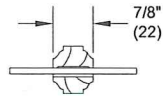
Single Glaze



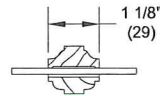
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W/ Energy Panel



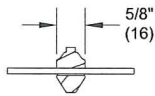
5/8" SDL



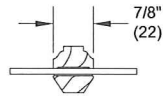
7/8" SDL



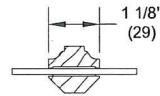
1 1/8" SDL



5/8" Putty SDL



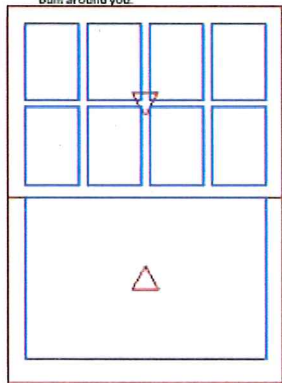
7/8" Putty SDL



1 1/8" Putty SDL

NOTE: Single Glaze and ADL are not available with CE mark.

# Replacement Option 3: Marvin Wood Tilt Pac



As Viewed From The Exterior

Entered As: SO  
Accepted:

- Primed Pine Exterior
- Primed Pine Interior
- Wood Double Hung Tilt Pac
- Sash Opening 41 3/4" X 57"
- Top Sash
  - Primed Pine Sash Exterior
  - Primed Pine Sash Interior
  - IG
    - Low E2 w/Argon
  - Black Perimeter and Spacer Bar
  - 1 1/8" SDL - With Spacer Bar - Black
  - Rectangular - Special Cut 4W2H
  - Primed Pine Ext - Primed Pine Int
  - Ovolo Exterior Glazing Profile
- Bottom Sash
  - Primed Pine Sash Exterior
  - Primed Pine Sash Interior
  - IG - 1 Lite
    - Low E2 w/Argon
  - Black Perimeter Bar

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## Unit Features

Wood Tilt Pac: WTP

Wood Magnum Tilt Pac: WMTP

*NOTE: CE mark not available on Wood Tilt Pac or Wood Magnum Tilt Pac.*

### Sash:

- Double Hung Tilt Pac
  - Sash thickness: 1 5/16" (33)
  - Top rail width: 2 15/32" (63)
  - Bottom rail width: 3 3/4" (95)
  - Stile width: 1 25/32" (45)
- Magnum Double Hung Tilt Pac
  - Sash thickness: 1 3/4" (44)
  - Top rail width: 2 1/4" (57)
  - Bottom rail width: 3 1/2" (89)
  - Stile width: 2 1/4" (57)
  - Bottom rail bevel 14 degrees
- Removable exterior glazing stops

### Hardware:

- Lock: high pressure zinc die-cast cam lock and keeper
  - Optional keyed lock
  - Two locks on glass sizes of 36" (914) and wider
  - Color: Satin Taupe
    - Optional: Bronze, White, Plated Brass, Antique Brass, Satin Chrome, Oil Rubbed Bronze, Satin Nickel, Polished Chrome
- Double Hung Tilt Pac balance system: coil spring block and tackle with nylon cord and fiber filled nylon clutch
- Double Hung Magnum Tilt Pac: double coil spring block and tackle with nylon cord and fiber filled nylon clutch
- Jamb track: vinyl extrusion, foam backing
  - Color: Beige or White
- Sash retainer plate: standard for magnum units, optional for double hung - polycarbonate theroplastic
  - Color: Bronze or White
- Optional sash lifts: high pressure zinc die-cast
  - Color: Satin Taupe
    - Optional: Bronze, White or Brass

### Weather Strip:

- Double Hung weather strip: dual durometer double leaf at check rail; bulb type dual durometer weather strip at bottom rail
- Double Hung Magnum weather strip: continuous leaf weather strip at head jamb parting stop which seals against top sash; dual durometer double leaf at check rail; bulb type dual durometer weather strip at bottom rail
- Color: beige

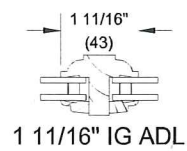
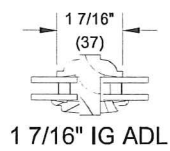
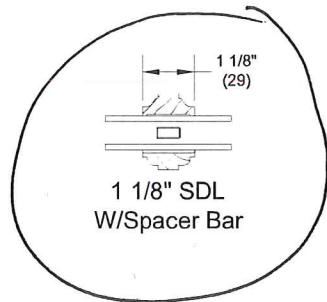
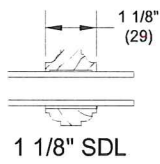
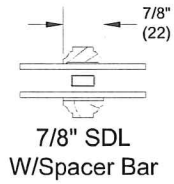
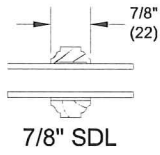
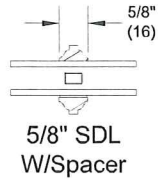
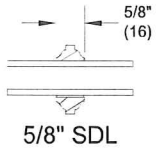
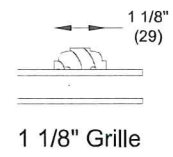
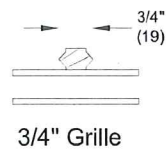
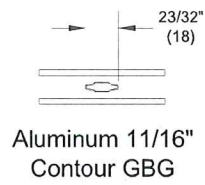
### Insect Screens:

- Full sized wood screen is standard
  - Optional wood half screen, or aluminum full or half screen
  - All screens are shipped loose
  - Aluminum screen colors: Pebble Gray, Bahama Brown, Evergreen, Bronze, Stone White, Ebony, Wineberry, Coconut Cream, Hampton Sage, Cashmere, Sierra White, Cadet Gray, or Cascade Blue Screen Mesh: Charcoal fiberglass
  - Optional Screen Mesh: Charcoal Aluminum Wire, Black Aluminum Wire, Bright Aluminum Wire, Bright Bronze Wire or Charcoal High Transparency (CH Hi-Tran) fiberglass

### Glass and Glazing:

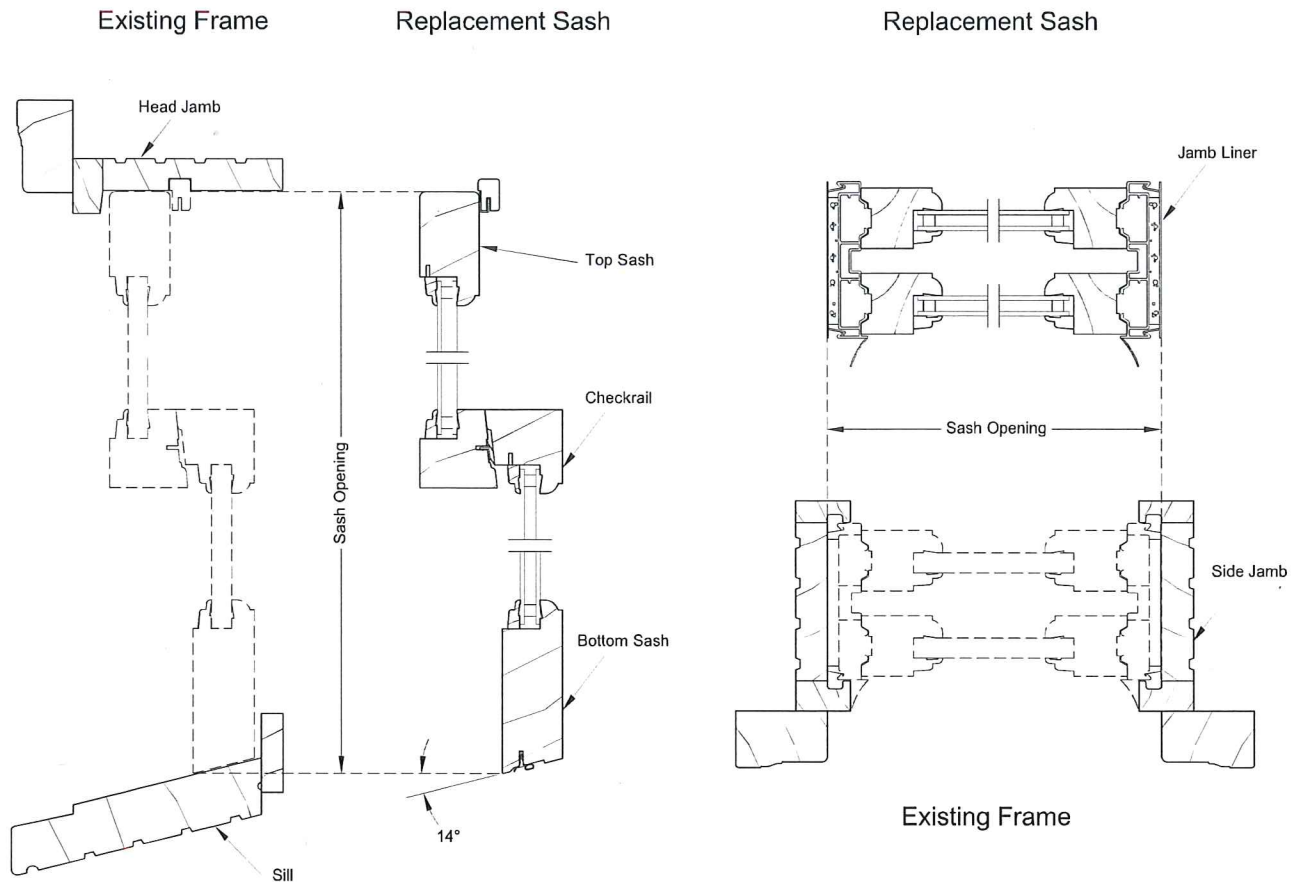
- Glazing method: single glaze, single glazed with energy panel or hermetically sealed insulated glass
- Glazing seal: silicone glazed
- Standard glass is insulating Low E2 Argon or Air
- Optional glazing available: Low E1 Argon or without Argon, Low E3 Argon or without Argon, clear, tints, tempered, obscure, decorative glass options
- Insulated glass will be altitude adjusted for higher elevations, Argon gas not included
- ADL glazing options not available with Argon.

**Divided Lite Options**



**Tilt Pac Measurements**

Scale: 3" = 1'0"



**Instructions:**

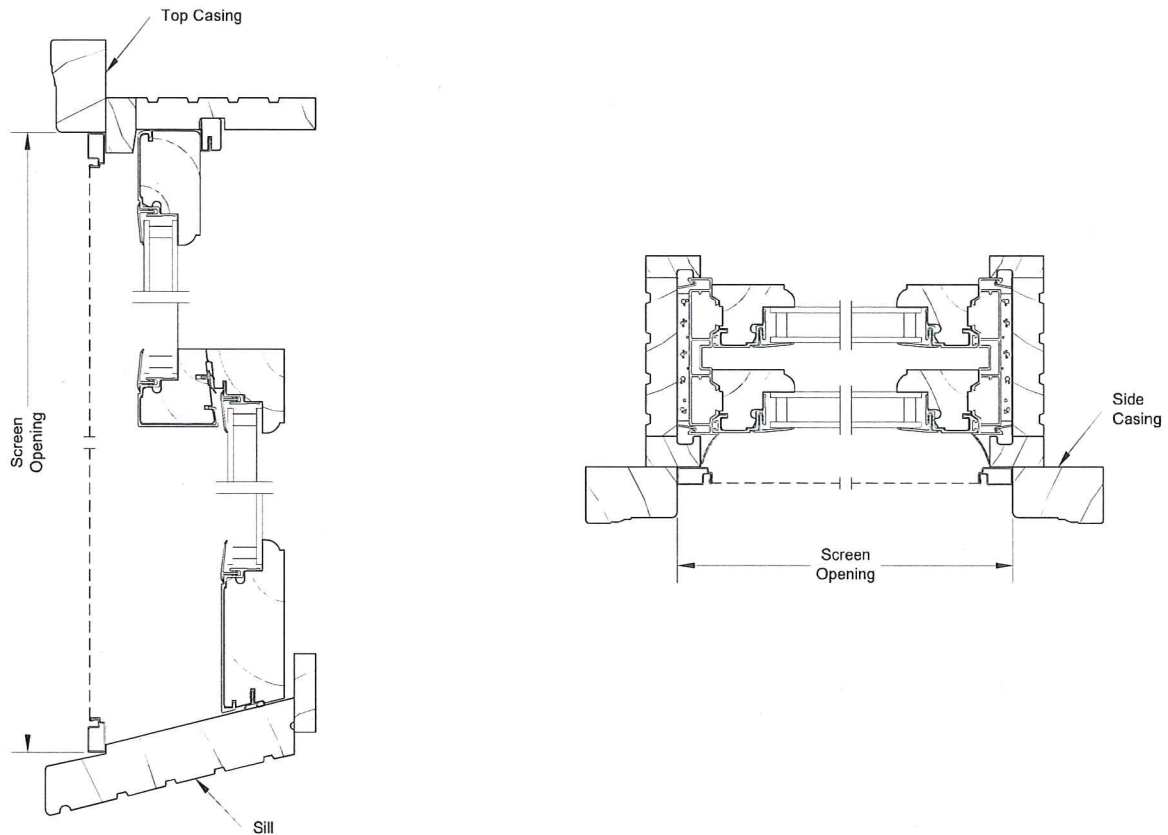
Follow these steps to measure an opening for Tilt Pac Replacement Sash

1. To find the sash opening height:  
If the old window has Wood blocks holding the top sash in place, remove them. Lower the top sash for measuring clearance, then measure the height of the window from where the top sash meets the head jamb to where the bottom sash meets the sill when the bottom sash is fully closed.
2. To find the sash opening width:  
Take an inside measurement of the frame from jamb to jamb.
3. To find the sill angle:  
Raise the bottom sash and place a carpenter's protractor on the sill, the angle will register. Marvin's standard bottom rail is 14 degrees, other angles must be specified.

**NOTE:** Double Hung sash shown above. Instructions and measuring locations apply to Single Hung, Magnum Double / Single Hung sash.

## Tilt Pac Full Screen Measurements

Scale: 3" = 1'0"



### Instructions:

To insure a proper screen fit, it is recommended to order a screen after the Tilt Pac installation.

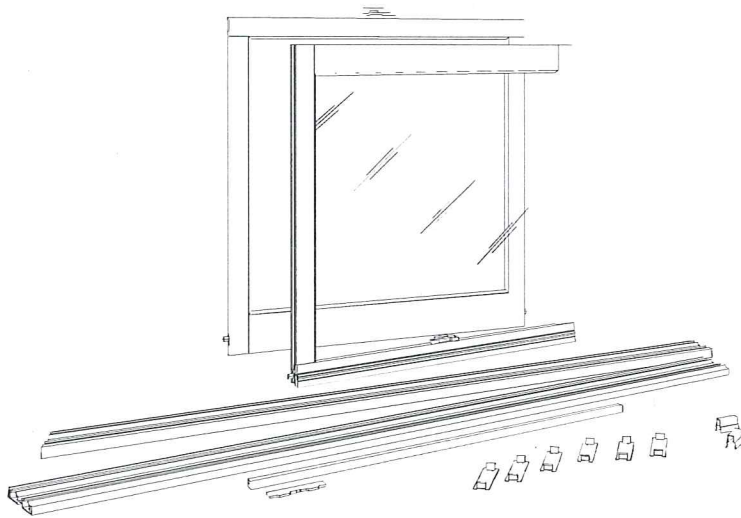
1. To find the screen opening height:  
Measure from the top casing to the edge of where the screen will rest at the sill, minus  $\frac{3}{32}$  (2) for the outside measurement (OSM) of the screen height.
2. To find the screen opening width:  
Measure from the inside edge of the side casing to the inside edge of the opposite side casing, minus  $\frac{1}{8}$  (3) for the outside measurement (OSM) of the screen width.

**NOTE:** Double Hung sash and screen are shown above. Instruction and measuring locations apply to Single Hung, Magnum Double Hung/Single Hung Sash. Screen measuring instructions also apply to Combination Storm/Screen measurement. Standard angle on combination bottom rails is 14 degrees, other angles must be specified.



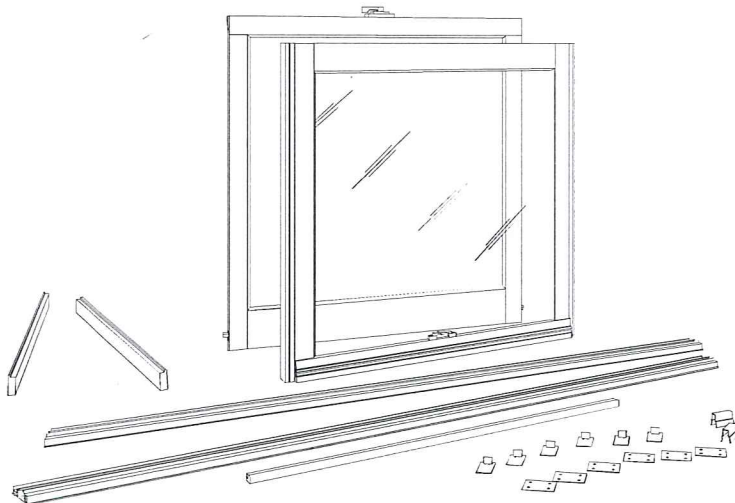
**Double Hung Tilt Pac Parts List**

Double Hung Tilt Pac



- A. Top Sash
- B. Bottom Sash
- C. Cam Pivots
- D. Left vinyl Jamb Liner
- E. Right vinyl Jamb Liner
- F. Head Jamb Part Stop
- G. Two Plastic Sash Stops
- H. Metal Brackets (quantity varies)
- I. Two foam gaskets

Single Hung Tilt Pac



- A. Top Sash
- B. Bottom Sash
- C. Cam Pivots
- D. Left Vinyl Jamb Liner
- E. Right Vinyl Jamb Liner
- F. Head Jamb Part Stop
- G. Two Plastic Sash Stops
- H. Metal Brackets (quantity varies)
- I. Stationary Sash Bracket (quantity varies)
- J. Sash Filler
- K. Sash Opening Filler