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**Document Navigation Tips:**

Items listed in the table of contents above are active links that will take you to the corresponding page. The Pella logo on each page is a link back to this table of contents. Bookmarks are also included in this PDF document and are available as an additional navigation option.

**Supporting documents for this product:**

Detailed Product Description (readable using Microsoft Word or other text editing application):

[https://media.pella.com/professional/adm/Vinyl-HS-DS/PellaHurricaneShield\\_SingleHung.rtf?utm\\_source=pdfdoc](https://media.pella.com/professional/adm/Vinyl-HS-DS/PellaHurricaneShield_SingleHung.rtf?utm_source=pdfdoc)

CSI Specs (readable using Microsoft Word or other text editing application):

[https://media.pella.com/professional/adm/Vinyl-CSI\\_Specs/085313\\_HS.rtf?utm\\_source=pdfdoc](https://media.pella.com/professional/adm/Vinyl-CSI_Specs/085313_HS.rtf?utm_source=pdfdoc)

Size Tables (requires appropriate CAD software to read and use):

[https://media.pella.com/professional/adm/Vinyl-HS-DS/CWS-SH-Elev\\_D.dwg?utm\\_source=pdfdoc](https://media.pella.com/professional/adm/Vinyl-HS-DS/CWS-SH-Elev_D.dwg?utm_source=pdfdoc)

CAD cross sections (requires appropriate CAD software to read and use):

[https://media.pella.com/professional/adm/Vinyl-HS-DS/CWS-8100-SH\\_D.dwg?utm\\_source=pdfdoc](https://media.pella.com/professional/adm/Vinyl-HS-DS/CWS-8100-SH_D.dwg?utm_source=pdfdoc)

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The information published in this document is believed to be accurate at the time of publication. However, because we are constantly working to improve our products, specifications are subject to change without notice. Consult your local Pella representative for up-to-date product information.



# Hurricane Shield Series Single-Hung

## Performance Data

| Hurricane Shield Series Single-Hung  |   |
|--|---|
| <b>Sizes</b>   |   |
| Standard Sizes   | S                                       |
| Special Sizes Available Built on 1/8" Increments   | O                                       |
| <b>Frames</b>  |   |
| Nail Fin Only  | O                                       |
| Nail Fin with J-Channel  | O                                       |
| Block  | O                                       |
| Integral 5/8" Flange   | O                                       |
| <b>Performance<sub>1</sub></b>   |   |
| <b>Non-Impact Performance</b>  |   |
| Meets or Exceeds AAMA/WDMA/HVHZ Ratings  | LC PG50 - LC PG60<br>Keystone Certified |
| Air Infiltration<br>(cfm/ft <sup>2</sup> of frame @ 1.57 psf wind pressure.)                   | =<.30 cfm/sq ft.                        |
| Design Pressure  | 50 - 60 psf                             |
| Water Penetration Resistance   | 7.5 - 10.6 psf                          |
| <b>Impact</b>  |   |
| Meets or Exceeds AAMA/WDMA/HVHZ Ratings  | LC PG55 - LC PG70<br>Keystone Certified |
| Air Infiltration<br>(cfm/ft <sup>2</sup> of frame @ 1.57 psf wind pressure.)                   | =<.30 cfm/sq ft.                        |
| Design Pressure  | 55 - 70 psf                             |
| Water Penetration Resistance   | 8.3 - 10.6 psf                          |
| <b>Other Performance Criteria</b>  |   |
| Forced Entry Resistance (Minimum Security Grade) <sub>2</sub>                                  | 10                                      |
| Operating Force (lb) Initiate Motion/Maintain Motion<br>(tested size and glazing) <sub>3</sub> | 30/40                                   |

### Sound Transmission Class and Outdoor-Indoor Transmission Class

| Frame Size Tested <sub>4</sub>                                   | Glazing System            |                          |                          | STC Rating | OITC Rating |
|--|---------------------------|--------------------------|--------------------------|------------|-------------|
|  | Overall Glazing Thickness | Exterior Glass Thickness | Interior Glass Thickness |            |             |
| <b>Single-Hung – Dual Pane Standard Insulating Glass</b>         |                           |                          |                          |            |             |
| 47.25" x 59.25"  | 7/8"                      | 3.175mm                  | 3.175mm                  | 27         | 22          |
| <b>Single-Hung – Dual Pane Impact Laminated Insulating Glass</b> |                           |                          |                          |            |             |
| 47.25" x 59.25"  | 7/8"                      | 3.175mm                  | 7.9375mm                 | 36         | 29          |

S = Standard; O = Optional; (-) = Not Available

(1) Published performance data is for single unit only. See Design Data pages in this section for specific product performance class and grade values.

(2) The higher the level, the greater the product's ability to resist forced entry.

(3) Glazing configurations may result in higher operational forces.

(4) ASTM E 1425 defines standard sizes for acoustical testing. Ratings achieved at that size are representative of all sizes of the same configuration.

The presence of low-e or argon have negligible effect on sound attenuation characteristics.



# Hurricane Shield Series Single-Hung

## Features and Options

|  | Hurricane Shield Series Single-Hung |  | Hurricane Shield Series Single-Hung |
|--|-------------------------------------|--|-------------------------------------|
| <b>Glazing (Insulating Glass)</b>            |                                     | <b>Interior / Exterior Color</b>   |                                     |
| <b>Glazing Type</b>                          |                                     | White Interior/White Exterior  | S                                   |
| Dual-pane insulating glass                   | S                                   | Bronze Interior/Bronze Exterior  | O                                   |
| <b>Insulated Glass Options / Low-E Types</b> |                                     | White Interior/ Black Exterior   | O                                   |
| Advanced Low-E                               | O                                   | White Interior/ Bronze Exterior  | O                                   |
| Turtle Glass                                 | O                                   | <b>Hardware</b>  |                                     |
| SunDefense™ Low-E                            | O                                   | Color matched hardware   | S                                   |
| <b>Glass Configuration</b>                   |                                     | <b>Sash Locks</b>  |                                     |
| Standard Insulating Glass                    | S                                   | Autolock   | S                                   |
| Non-Impact Laminated Glass                   | O                                   | <b>Screens</b>   |                                     |
| Impact Laminated Glass                       | O                                   | InView™ Screens  | S                                   |
| <b>Additional Glazing Options</b>            |                                     | <b>Grilles</b>   |                                     |
| Annealed glass                               | S                                   | <b>Grilles-Between-the-Glass</b>   |                                     |
| Tempered glass                               | O                                   | 3/4" Contour   | O                                   |
| Obscure glass <sup>1</sup>                   | O                                   | 5/8" flat  | O                                   |
| Neat Glass                                   | O                                   | 1" Contour   | O                                   |
| Bronze Tint                                  | O                                   | Grille Patterns: Traditional, Prairie, Top Row, Custom - Equally Divided | O                                   |
| Gray Tint                                    | O                                   | <b>Exterior Applied Grille with Grilles-Between-the-Glass</b>            |                                     |
| Blue Tint                                    | O                                   | 7/8" Contour Applied with 1" Contour GBG                                 | O                                   |
| <b>Gas Fill/ High Altitude</b>               |                                     | Grille Patterns: Traditional, Prairie, Custom - Equally Divided          | O                                   |
| Argon  | S                                   |  |                                     |
| <b>SASH</b>                                  |                                     |  |                                     |
| Integrated Dual Lift Rail                    | S                                   |  |                                     |
| Aluminum Sash Reinforcement                  | S                                   |  |                                     |
| Recessed Pressure Prevention Sash            | S                                   |  |                                     |

S = Standard; O = Optional

(1) Contact your local Pella sales representative for current offering.



# Hurricane Shield Series Single-Hung

## Glazing Performance - Total Unit

| Glazing Thickness  | Type of Glazing   | NFRC Certified Product # | Glass (mm) |         | Gap Fill | Performance Values <sup>1</sup> |      |      |    | Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown |           |                     |          |   |   |   |  |  |  |
|--|---|--------------------------|------------|---------|----------|---------------------------------|------|------|----|--|-----------|---------------------|----------|---|---|---|--|--|--|
|  |   |                          | Ext.       | Int.    |          | U-Factor                        | SHGC | VLT  | CR | U. S.  |           | Canada <sup>2</sup> |          |   |   |   |  |  |  |
|  |   |                          |            |         |          |                                 |      |      |    | Zone   |           | ER                  | Zone     |   |   |   |  |  |  |
| <b>Vent - Dual Pane Single-Hung Window - Low-E Glazing</b> |   |                          |            |         |          |                                 |      |      |    | <b>N</b>   | <b>NC</b> | <b>SC</b>           | <b>S</b> |   |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG                                      | K-274                    | 3.175      | 3.175   | Argon    | 0.31                            | 0.21 | 0.49 | 52 |  |           |                     |          | S |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.31                            | 0.19 | 0.44 | 52 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG                                      | K-274                    | 4.7625     | 4.7625  | Argon    | 0.31                            | 0.21 | 0.49 | 52 |  |           |                     |          | S |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.32                            | 0.19 | 0.43 | 52 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG - Impact Laminated                   | K-274                    | 3.175      | 7.9375  | Argon    | 0.30                            | 0.21 | 0.49 | 53 |  | NC        | SC                  |          | S |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.31                            | 0.19 | 0.42 | 53 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG - Impact Laminated - Gray Interlayer | K-274                    | 3.175      | 7.9375  | Argon    | 0.30                            | 0.21 | 0.33 | 53 |  | NC        | SC                  |          | S |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.31                            | 0.19 | 0.29 | 53 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG - Impact Laminated                   | K-274                    | 4.7625     | 7.9375  | Argon    | 0.32                            | 0.21 | 0.46 | 52 |  |           |                     |          | S |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.33                            | 0.17 | 0.42 | 52 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG - Impact Laminated - Gray Interlayer | K-274                    | 4.7625     | 7.9375  | Argon    | 0.32                            | 0.21 | 0.32 | 52 |  |           |                     |          | S |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.33                            | 0.19 | 0.29 | 52 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG - Impact Laminated                   | K-274                    | 4.7625     | 11.1125 | Argon    | 0.38                            | 0.22 | 0.46 | 47 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG - Impact Laminated - Gray Interlayer | K-274                    |            |         |          | 0.38                            | 0.20 | 0.26 | 47 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG - Non-Impact Laminated               | K-274                    | 3.175      | 4.7625  | Argon    | 0.31                            | 0.21 | 0.48 | 53 |  |           |                     |          | S |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.31                            | 0.19 | 0.43 | 53 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | SunDefense™ Low-E IG - Non-Impact Laminated               | K-274                    | 4.7625     | 6.35    | Argon    | 0.31                            | 0.21 | 0.48 | 52 |  |           |                     |          | S |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.32                            | 0.19 | 0.43 | 52 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | Advanced Low-E IG   | K-274                    | 3.175      | 3.175   | Argon    | 0.32                            | 0.28 | 0.53 | 51 |  |           |                     |          |   |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.32                            | 0.26 | 0.47 | 51 |  |           |                     |          |   |   |   |  |  |  |
| 7/8"   | Advanced Low-E IG   | K-274                    | 4.7625     | 4.7625  | Argon    | 0.31                            | 0.28 | 0.52 | 52 |  |           |                     |          |   | S |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.32                            | 0.25 | 0.46 | 52 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Advanced Low-E IG - Impact Laminated                      | K-274                    | 3.175      | 7.9375  | Argon    | 0.31                            | 0.28 | 0.52 | 53 |  |           |                     |          |   | S |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.32                            | 0.25 | 0.46 | 52 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Advanced Low-E IG - Impact Laminated                      | K-274                    | 4.7625     | 6.35    | Argon    | 0.31                            | 0.28 | 0.52 | 52 |  |           |                     |          |   | S |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.33                            | 0.25 | 0.46 | 52 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Advanced Low-E IG - Impact Laminated                      | K-274                    | 4.7625     | 7.9375  | Argon    | 0.32                            | 0.28 | 0.51 | 52 |  |           |                     |          |   | S |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.34                            | 0.25 | 0.45 | 52 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Advanced Low-E IG - Impact Laminated                      | K-274                    | 4.7625     | 11.1125 | Argon    | 0.39                            | 0.28 | 0.50 | 47 |  |           |                     |          |   |   |   |  |  |  |
| 7/8"   | Advanced Low-E IG - Non-Impact Laminated                  | K-274                    | 3.175      | 4.7625  | Argon    | 0.31                            | 0.28 | 0.52 | 53 |  |           |                     |          |   |   | S |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.31                            | 0.25 | 0.46 | 53 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Advanced Low-E IG - Non-Impact Laminated                  | K-274                    | 4.7625     | 6.35    | Argon    | 0.31                            | 0.28 | 0.52 | 52 |  |           |                     |          |   |   | S |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.33                            | 0.25 | 0.46 | 52 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Turtle Glass IG   | K-274                    | 3.175      | 3.175   | Argon    | 0.32                            | 0.14 | 0.29 | 52 |  |           |                     |          |   | S |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.32                            | 0.13 | 0.26 | 52 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Turtle Glass IG   | K-274                    | 4.7625     | 4.7625  | Argon    | 0.31                            | 0.14 | 0.29 | 52 |  |           |                     |          |   | S |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.32                            | 0.13 | 0.26 | 52 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Turtle Glass IG - Impact Laminated                        | K-274                    | 3.175      | 7.9375  | Argon    | 0.30                            | 0.14 | 0.29 | 53 |  | NC        | SC                  |          | S |   |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.32                            | 0.13 | 0.25 | 53 |  |           |                     |          | S |   |   |  |  |  |
| 7/8"   | Turtle Glass IG - Impact Laminated                        | K-274                    | 4.7625     | 7.9375  | Argon    | 0.32                            | 0.15 | 0.28 | 52 |  |           |                     |          |   | S |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.34                            | 0.13 | 0.25 | 52 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Turtle Glass IG - Impact Laminated                        | K-274                    | 4.7625     | 11.1125 | Argon    | 0.38                            | 0.15 | 0.28 | 47 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Turtle Glass IG - Non-Impact Laminated                    | K-274                    | 3.175      | 4.7625  | Argon    | 0.31                            | 0.14 | 0.29 | 53 |  |           |                     |          |   | S |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.31                            | 0.13 | 0.26 | 53 |  |           |                     |          |   | S |   |  |  |  |
| 7/8"   | Turtle Glass IG - Non-Impact Laminated                    | K-274                    | 4.7625     | 6.35    | Argon    | 0.31                            | 0.14 | 0.29 | 52 |  |           |                     |          |   | S |   |  |  |  |
|  | with Grilles-Between-the-Glass                            |                          |            |         |          | 0.32                            | 0.13 | 0.26 | 52 |  |           |                     |          |   | S |   |  |  |  |

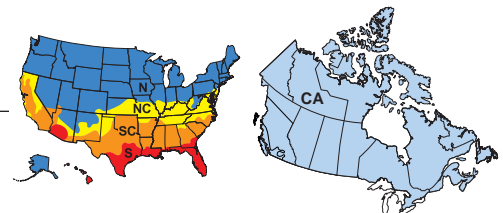
R-Value = 1/U-Factor  
 SHGC = Solar Heat Gain Coefficient  
 VLT % = Visible Light Transmission  
 CR = Condensation Resistance  
 ER = Canadian Energy Rating

(1) Glazing performance values are calculated based on NFRC 100, NFRC 200 and NFRC 500. ENERGY STAR® values are updated to 2016 (Version 6) criteria.

(2) The values shown are based on Canada's updated ENERGY STAR® 2020 initiative.

Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown.

See the Product Performance section for more detailed information or visit [www.energystar.gov](http://www.energystar.gov) for Energy Star guidelines.





# Hurricane Shield Series Single-Hung

## Glazing Performance - Total Unit

| Glazing Thickness   | Type of Glazing                  | NFRC Certified Product # | Glass (mm) |         | Gap Fill | Performance Values <sup>1</sup> |      |      |     | Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown |           |                     |          |           |
|---|----------------------------------|--------------------------|------------|---------|----------|---------------------------------|------|------|-----|--|-----------|---------------------|----------|-----------|
|   |                                  |                          | Ext.       | Int.    |          | U-Factor                        | SHGC | VLT  | CR  | U. S.  |           | Canada <sup>2</sup> |          |           |
|   |                                  |                          |            |         |          |                                 |      |      |     | Zone   | ER        | Zone                | ER       | Zone      |
| <b>Vent - Dual Pane Single-Hung Window - Tinted Glazing</b> |                                  |                          |            |         |          |                                 |      |      |     | <b>N</b>   | <b>NC</b> | <b>SC</b>           | <b>S</b> | <b>CA</b> |
| 7/8"  | Bronze IG                        | K-274                    | 3.175      | 3.175   | Argon    | 0.47                            | 0.48 | 0.47 | 43  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.47                            | 0.43 | 0.42 | 43  |  |           |                     |          |           |
| 7/8"  | Bronze IG                        | K-274                    | 4.7625     | 4.7625  | Argon    | 0.46                            | 0.43 | 0.4  | 42  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.46                            | 0.38 | 0.36 | 42  |  |           |                     |          |           |
| 7/8"  | Bronze IG - Impact Laminated     | K-274                    | 3.175      | 7.9375  | Argon    | 0.45                            | 0.46 | 0.45 | 43  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.46                            | 0.41 | 0.40 | 43  |  |           |                     |          |           |
| 7/8"  | Bronze IG - Impact Laminated     | K-274                    | 4.7625     | 7.9375  | Argon    | 0.46                            | 0.41 | 0.39 | 43  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.47                            | 0.36 | 0.35 | 42  |  |           |                     |          |           |
| 7/8"  | Bronze IG - Impact Laminated     | K-274                    | 4.7625     | 11.1125 | Argon    | 0.49                            | 0.40 | 0.38 | 40  |  |           |                     |          |           |
| 7/8"  | Bronze IG - Non-Impact Laminated | K-274                    | 3.175      | 4.7625  | Argon    | 0.46                            | 0.46 | 0.46 | 43  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.46                            | 0.41 | 0.41 | 43  |  |           |                     |          |           |
| 7/8"  | Bronze IG - Non-Impact Laminated | K-274                    | 4.7625     | 6.35    | Argon    | 0.46                            | 0.42 | 0.40 | 42  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.47                            | 0.37 | 0.35 | 42  |  |           |                     |          |           |
| 7/8"  | Gray IG                          | K-274                    | 3.175      | 3.175   | Argon    | 0.47                            | 0.46 | 0.43 | 43  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.47                            | 0.41 | 0.38 | 43  |  |           |                     |          |           |
| 7/8"  | Gray IG                          | K-274                    | 4.7625     | 4.7625  | Argon    | 0.46                            | 0.39 | 0.34 | 42  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.46                            | 0.35 | 0.31 | 42  |  |           |                     |          |           |
| 7/8"  | Gray IG - Impact Laminated       | K-274                    | 3.175      | 7.9375  | Argon    | 0.45                            | 0.44 | 0.41 | 43  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.46                            | 0.39 | 0.37 | 43  |  |           |                     |          |           |
| 7/8"  | Gray IG - Impact Laminated       | K-274                    | 4.7625     | 7.9375  | Argon    | 0.46                            | 0.38 | 0.34 | 43  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.47                            | 0.34 | 0.30 | 42  |  |           |                     |          |           |
| 7/8"  | Gray IG - Impact Laminated       | K-274                    | 4.7625     | 11.1125 | Argon    | 0.49                            | 0.37 | 0.33 | 40  |  |           |                     |          |           |
| 7/8"  | Gray IG - Non-Impact Laminated   | K-274                    | 3.175      | 4.7625  | Argon    | 0.46                            | 0.44 | 0.42 | 43  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.46                            | 0.4  | 0.37 | 43  |  |           |                     |          |           |
| 7/8"  | Gray IG - Non-Impact Laminated   | K-274                    | 4.7625     | 6.35    | Argon    | 0.46                            | 0.38 | 0.34 | 42  |  |           |                     |          |           |
|   | with Grilles-Between-the-Glass   |                          |            |         |          | 0.47                            | 0.34 | 0.31 | 42  |  |           |                     |          |           |
| 7/8"  | Blue IG                          | K-274                    | 3.175      | 3.175   | Argon    | 0.48                            | 0.48 | 0.63 | N/A |  |           |                     |          |           |
| 7/8"  | Blue IG - Impact Laminated       | K-274                    | 3.175      | 7.9375  | Argon    | 0.48                            | 0.47 | 0.68 | N/A |  |           |                     |          |           |

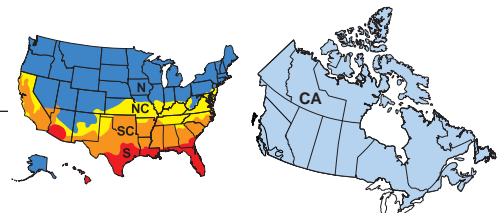
R-Value = 1/U-Factor  
 SHGC = Solar Heat Gain Coefficient  
 VLT % = Visible Light Transmission  
 CR = Condensation Resistance  
 ER = Canadian Energy Rating

(1) Glazing performance values are calculated based on NFRC 100, NFRC 200 and NFRC 500. ENERGY STAR® values are updated to 2016 (Version 6) criteria.

(2) The values shown are based on Canada's updated ENERGY STAR® 2020 initiative.

Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown.

See the Product Performance section for more detailed information or visit [www.energystar.gov](http://www.energystar.gov) for Energy Star guidelines.

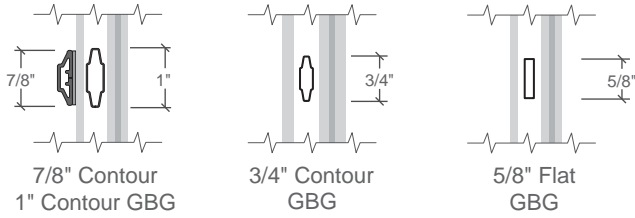




Grilles

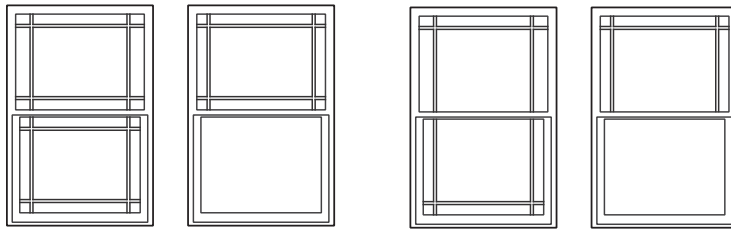
Grille Profiles

Grilles-Between-the-Glass



Grille Patterns

Prairie Lite Patterns



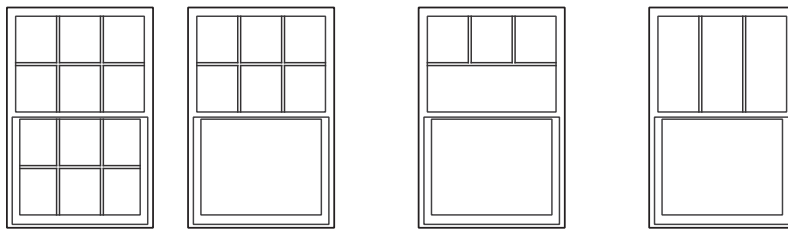
9-Lite Prairie

6-Lite Prairie

Prairie

- Specify upper or both sash
- Approximately 4" from edge of sash to center of bar
- Minimum actual glass is 13"

Other Available Patterns



Traditional

Top Row

Custom - Equally Divided

Traditional

- Specify upper or both sash
- Specify number of lites
- Grilles must be equally divided on visible glass
- Minimum 6" x 6" center-to-center

Top Row

- Standard visible glass to separator bar must be  $\leq 1/2$  upper actual glass

For traditional patterns, see size tables.



# Hurricane Shield Series Single-Hung

## Size Tables

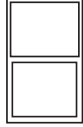
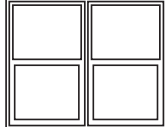
|                    | (610)<br>(597) | (711)<br>(699) | (813)<br>(800) | (914)<br>(902) | (1 016)<br>(1 003) | (1 118)<br>(1 105) | (1 219)<br>(1 207) |
|--------------------|----------------|----------------|----------------|----------------|--------------------|--------------------|--------------------|
| Opening            | 2' 0"          | 2' 4"          | 2' 8"          | 3' 0"          | 3' 4"              | 3' 8"              | 4' 0"              |
| Frame              | 23 1/2"        | 27 1/2"        | 31 1/2"        | 35 1/2"        | 39 1/2"            | 43 1/2"            | 47 1/2"            |
| (711)<br>(699)     | 2-0/2-4        | 2-4/2-4        | 2-8/2-4        | 3-0/2-4        | 3-4/2-4            | 3-8/2-4            | 4-0/2-4            |
| (914)<br>(902)     | 2-0/3-0        | 2-4/3-0        | 2-8/3-0        | 3-0/3-0        | 3-4/3-0            | 3-8/3-0            | 4-0/3-0            |
| (1 118)<br>(1 105) | 2-0/3-8        | 2-4/3-8        | 2-8/3-8        | 3-0/3-8        | 3-4/3-8            | 3-8/3-8            | 4-0/3-8            |
| (1 219)<br>(1 207) | 2-0/4-0        | 2-4/4-0        | 2-8/4-0        | 3-0/4-0        | 3-4/4-0            | 3-8/4-0            | 4-0/4-0            |
| (1 321)<br>(1 308) | 2-0/4-4        | 2-4/4-4        | 2-8/4-4        | 3-0/4-4        | 3-4/4-4            | 3-8/4-4            | 4-0/4-4            |
| (1 524)<br>(1 511) | 2-0/5-0        | 2-4/5-0        | 2-8/5-0        | 3-0/5-0        | 3-4/5-0            | 3-8/5-0            | 4-0/5-0            |
| (1 829)<br>(1 816) | 2-0/6-0        | 2-4/6-0        | 2-8/6-0        | 3-0/6-0        | 3-4/6-0            | 3-8/6-0            | 4-0/6-0            |



# Hurricane Shield Series Single-Hung

## Special Sizes and Dimensions

Listed sizes are the minimum and maximum manufacturable sizes. Please reference the Florida Building & Product Approval site, Texas Department of Insurance site, or your local rep for specific sizing based on needed performance.

|              |  | 1-Wide Vent Unit  |                                  | Integral 2-Wide Vent Unit Composite   |   |                        |                          |
|--------------|--|---|----------------------------------|---|---|------------------------|--------------------------|
|              |  |  |                                  |  |   |                        |                          |
|              |  | MINIMUM   | MAXIMUM                          | MINIMUM   | MAXIMUM   | Equal Sash Glass Ratio | Contemporary Glass Ratio |
| Equal Sash   |  | 13-1/2" W x 21" H<br>(343 x 533)  | 52" W x 74" H<br>(1 321 x 1 880) | 27" W x 21" H<br>(686 x 533)  | 48 Ft <sup>2</sup> (4.46 m <sup>2</sup> )<br>74-1/8" W x 72" H<br>(1 883 x 1 829) | 50 : 50                | 60 : 40                  |
|              |  | 13-1/2" W x 21" H<br>(343 x 533)  | 52" W x 96" H<br>(1 321 x 2 438) | 27" W x 21" H<br>(686 x 533)  | 74-1/8" W x 72" H<br>(1 883 x 1 829)  |                        |                          |
| Contemporary |  | 13-1/2" W x 21" H<br>(343 x 533)  | 52" W x 96" H<br>(1 321 x 2 438) | 27" W x 21" H<br>(686 x 533)  | 74-1/8" W x 72" H<br>(1 883 x 1 829)  |                        |                          |
|              |  | 13-1/2" W x 21" H<br>(343 x 533)  | 52" W x 96" H<br>(1 321 x 2 438) | 27" W x 21" H<br>(686 x 533)  | 74-1/8" W x 72" H<br>(1 883 x 1 829)  |                        |                          |

### General Notes:

- Rough Opening—Frame Dimension + 1/2". Tip to Tip Dimension = Frame Dimension +1.25"
- Keep frame dimensions to the nearest 1/8" increment
- 2-Wide units are composites with multiple windows in one frame with integral mullions

### Glass Formulas

|             |              | Actual Glass Width                        | Actual Glass Height                                  | Visible Glass Width | Visible Glass Height |
|-------------|--------------|---|--|---------------------|----------------------|
| Single Unit | Equal Sash   | AUGW=FW - 3.217<br>ALGW=FW - 5.75         | AUGH or ALGH = (FH ÷ 2) - 3.043                      | AGW - 1"            | AGH - 1"             |
|             | Contemporary |   | AUGH = (FH X .6) - 2.899<br>ALGH = (FH X .4) - 3.187 |                     |                      |
| 2-Wide      | Equal Sash   | AUGW=(FW÷2) - 3.217<br>ALGW=(FW÷2) - 5.75 | AUGH or ALGH = (FH ÷ 2) - 3.043                      | AGW - 1"            | AGH - 1"             |
|             | Contemporary |   | AUGH = (FH X .6) - 2.899<br>ALGH = (FH X .4) - 3.187 |                     |                      |

#### KEY:

AGW = Actual Glass Width  
 AGH = Actual Glass Height  
 ALGH = Actual Lower Glass Height  
 AUGH = Actual Upper Glass Height  
 FW = Frame Width

FH = Frame Height  
 VGW = Visible Glass Width  
 VGH = Visible Glass Height





## Detailed Product Descriptions

### Frame

- Overall frame depth: 3" on all frame types.
- Frame members are mitered and heat fused to provide a fully welded corner assembly. Sill is fitted with weeps.
- Frame: [1" setback for nail fin for 2" wall depth] [Block frame for 3" wall depth] [Integral 5/8" flange for 2-13/16" wall depth].
- Interior and exterior frame surfaces are extruded rigid PVC.

### Sash

- Sash members are extruded, rigid PVC.
- Sash members are mitered and heat-fused to provide a fully welded corner assembly.
- Includes a dual, integral extruded sash lift as standard.
- Contains sealed insulating glass.

### Weatherstripping

- Sash is weatherstripped around the sash perimeter with a fin-type, pile weatherstrip.

### Glazing System

- Quality float glass complying with ASTM C 1036.
- Exterior face-glazed sealed insulating glass.
- Dual-Pane insulating glass [[annealed] [tempered]] [[Advanced] [Turtle Glass] [SunDefense™] [Neat, SunDefense], [Obscure, SunDefense] Low-E coated [with Argon]] [Obscure] [Gray], [Blue], [Bronze].

### Interior / Exterior

- Window frame and sash members are [[White] [Bronze] with integral color extruded throughout the profiles] [[Bronze] [Black] exterior, white integral on interior. Exterior, consisting of a solar reflective coating exceeding AAMA 613 test requirements, with White integral color extruded throughout the profiles on the interior].
- All exposed PVC surfaces are smooth, glossy and uniform in appearance.

### Hardware

- Block and tackle balances are concealed within the frame and are connected to the sash. Balance release clips to remove the sash are located in the upper jambs of the unit.
- All fasteners are corrosion-resistant material compatible with PVC.
- Locks are factory-installed, zinc die cast, self-aligning, [AutoLocks] located on the checkrail. Two sash locks are installed on units with 35-1/2" or greater frame width.
- Hardware finish is [White] [Matte Black].

### Screens

- Set in aluminum frame and fitted to exterior of window.
- Screen frame finish is baked enamel, color to match exterior
- Screens are secured with metal tabs.
- InView™ Screens
  - Black vinyl coated 18/18 mesh fiberglass screen cloth complying with SMA1201.
  - Black vinyl coated 18/16 mesh fiberglass screen cloth complying with ASTM D 3656 and SMA1201.

### Optional Products

#### Grilles

- Grilles-Between-the-Glass
  - Dual-Pane Insulating glass contains [[3/4"] [1"] contoured] [5/8" flat] aluminum grilles permanently installed between two panes of glass.
  - Patterns are [Traditional] [6-Lite Prairie] [9-Lite Prairie] [Top Row<sup>1</sup>].
  - Interior grille color matches interior frame.
  - Exterior grille color matches exterior frame.
- Exterior Applied Grille with Grilles-Between-the-Glass.
  - 7/8" grilles permanently bonded to the exterior of glass with 1" contour grilles permanently installed between two panes of glass.
  - Patterns are [Traditional] [6-Lite Prairie] [9-Lite Prairie].
  - Grilles match color of interior and exterior frame.

#### Hardware

- Optional limited opening hardware available for vent units in [White] [Matte Black] extruded vinyl to match the unit; nominal 3-3/4" opening.
- Optional window opening control device available for field installation. Device allows window to open less than 4" with normal operation, with a release mechanism that allows the sash to open completely. Complies with ASTM F2090-10.

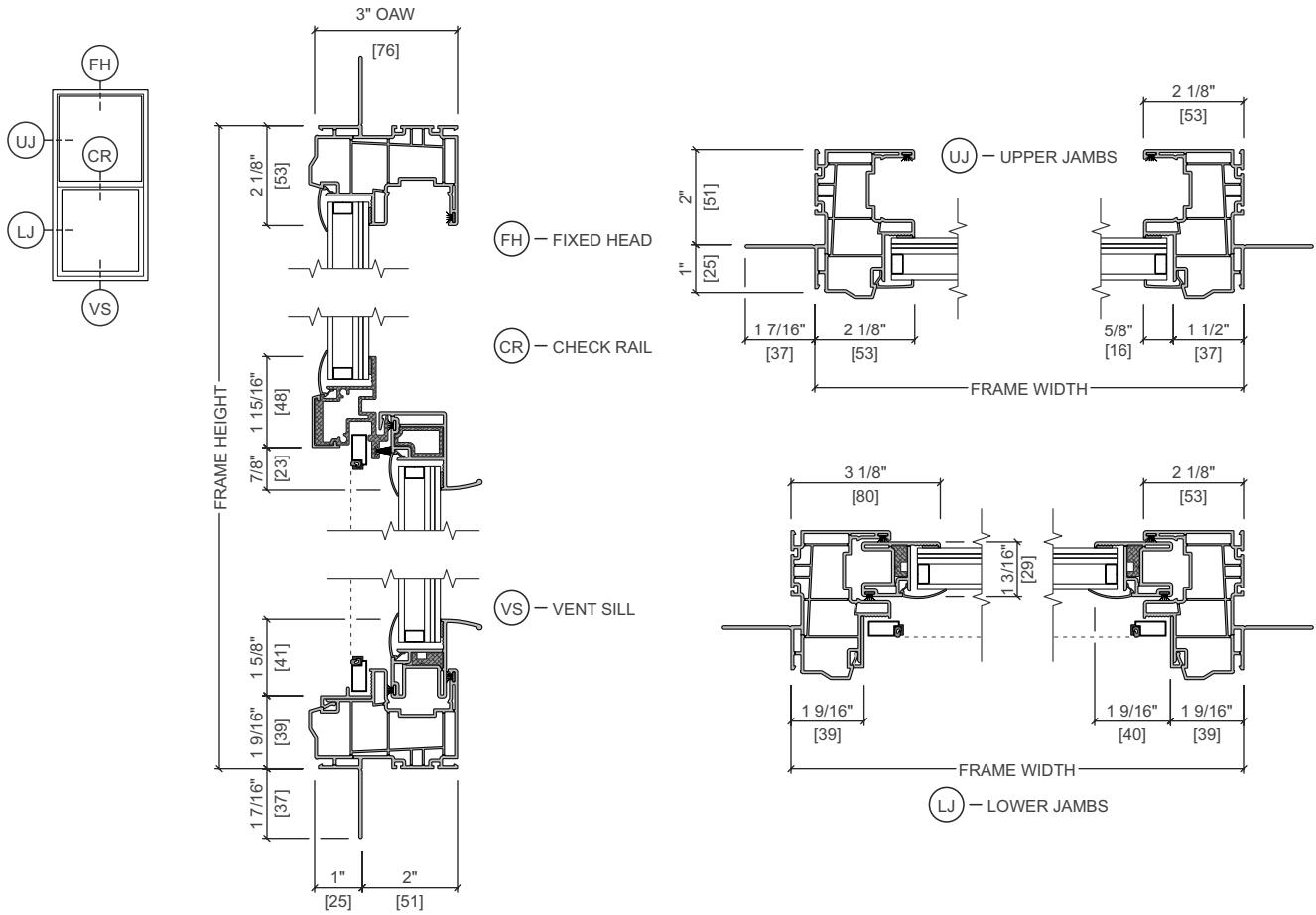
(1) Top Row is only available with 5/8" flat grilles between-the-glass





# Hurricane Shield Series Single-Hung

## Unit sections - Nail Fin



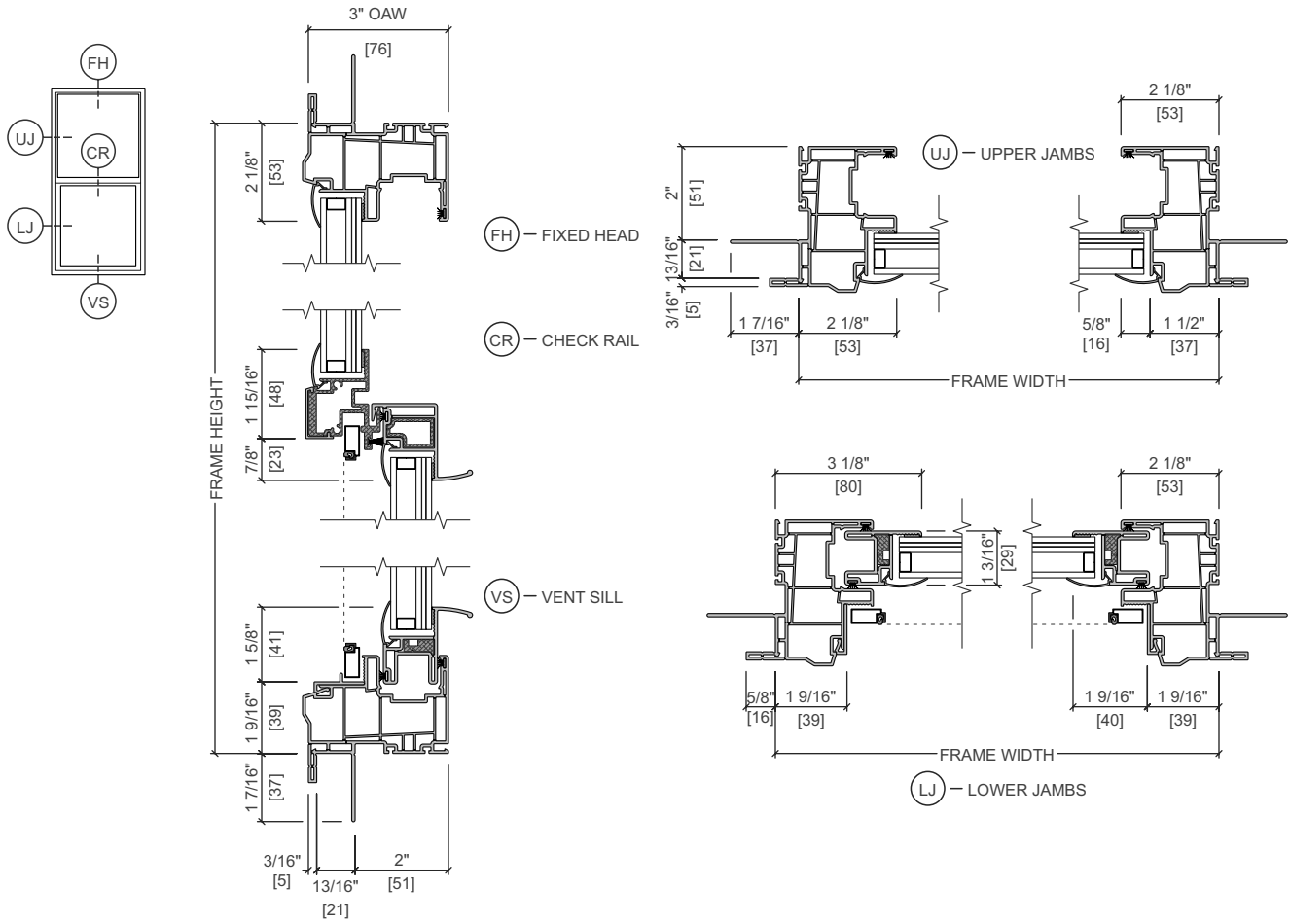
Scale 3" = 1' 0"

All dimensions are approximate.



# Hurricane Shield Series Single-Hung

## Unit sections - Nail Fin with J-Channel



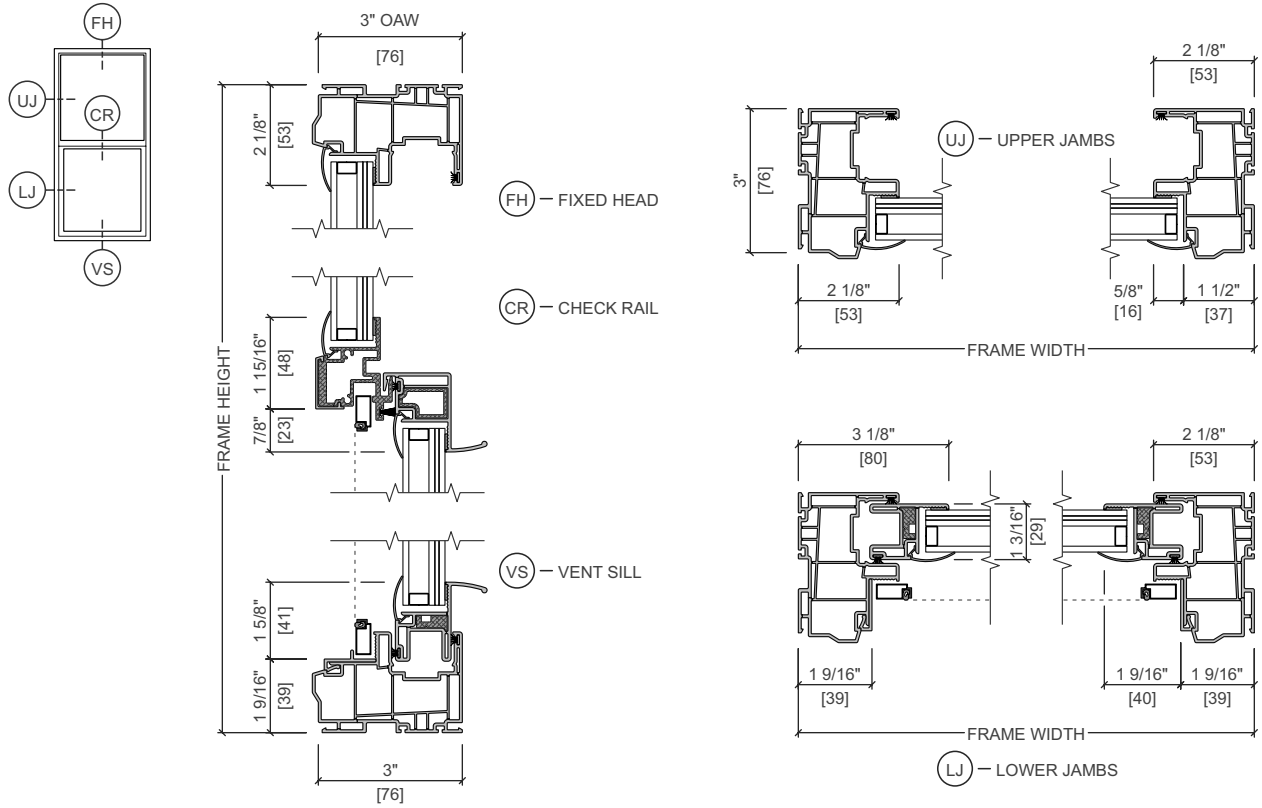
Scale 3" = 1' 0"

All dimensions are approximate.



# Hurricane Shield Series Single-Hung

## Unit sections - Block Frame



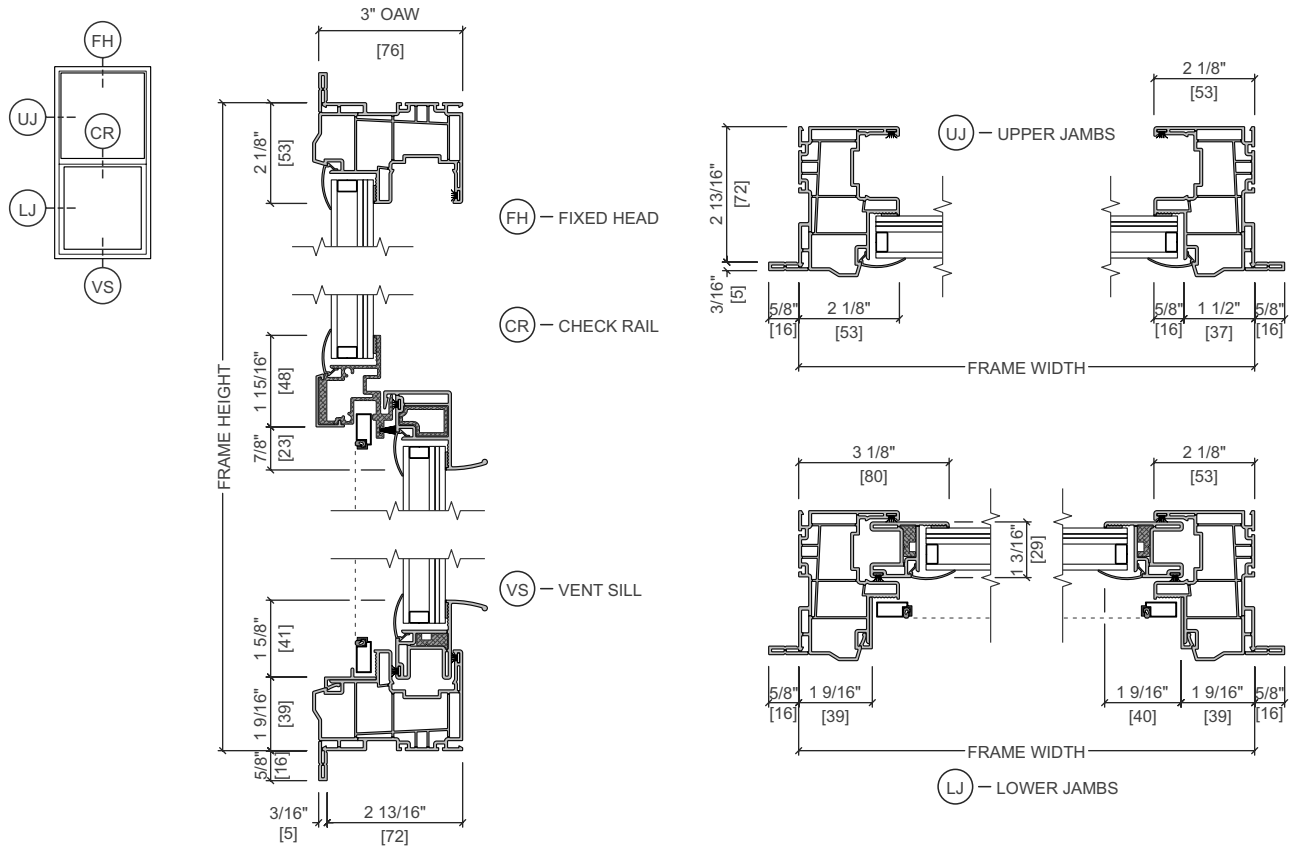
Scale 3" = 1' 0"

All dimensions are approximate.



# Hurricane Shield Series Single-Hung

## Unit sections - Flush Flange



Scale 3" = 1' 0"

All dimensions are approximate.