

# **NORTH EAST WINDOWS USA, INC.**

## **COMPUTER SIMULATION REPORT**

**SCOPE OF WORK**

CW390 CASEMENT - NFRC 100/200/500

**REPORT NUMBER**

M9797.01-116-45 R0

**TEST DATE**

01/11/22

**ISSUE DATE**

01/11/22

**RECORD RETENTION END DATE**

01/11/27

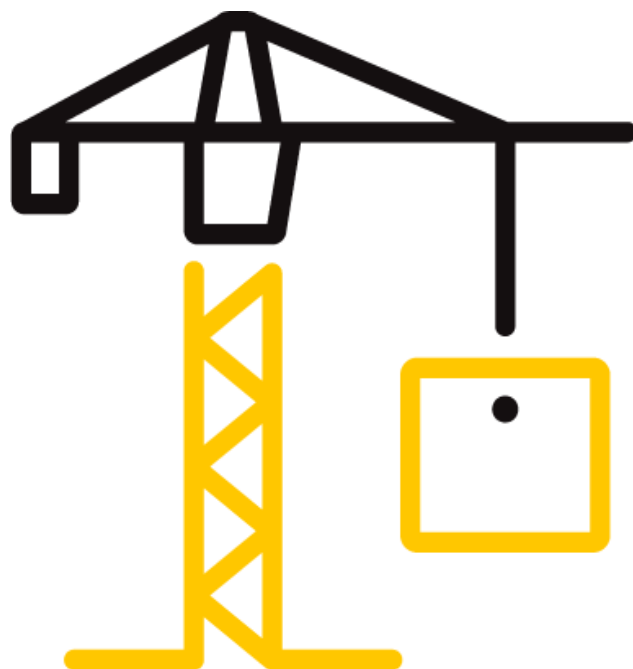
**PAGES**

21

**DOCUMENT CONTROL NUMBER**

RT-R-AMER-Test-4044 (01/16/19)

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## TEST REPORT FOR NORTH EAST WINDOWS USA, INC.

Report No: M9797.01-116-45 R0

Date: 01/11/22

### REPORT ISSUED TO

#### NORTH EAST WINDOWS USA, INC.

One Kees Place

P.O. Box 159

Merrick, New York 11566

### SECTION 1

#### SUMMARY

#### SERIES/MODEL: CW390 Casement

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted to perform U-Factor, Solar Heat Gain Coefficient, Visible Transmittance and Condensation Resistance simulations in accordance with the National Fenestration Rating Council (NFRC).

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends five years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

FOR INTERTEK B&C:

**COMPLETED BY:** Richard A. McVicker III

**TITLE:** Simulation Technician

**SIGNATURE:**

**DATE:** 01/11/22

RAM:ram

**REVIEWED BY:** Eric S. Leitner

**TITLE:** Manager - Simulations  
and Thermal Testing, SIRC

**SIGNATURE:**

**DATE:** 01/11/22

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**SECTION 2**

**TEST METHODS**

The products were evaluated in accordance with the following:

***ANSI/NFRC 100-2020, Procedure for Determining Fenestration Product U-Factors***

***ANSI/NFRC 200-2020, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence***

***NFRC 500-2017, Procedure for Determining Fenestration Product Condensation Resistance Values***

*\*Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening.*

Ratings values included in this report are for submittals to an NFRC-licensed IA and are not meant to be used directly for labeling purposes. Only those values identified on a valid Certificate of Authorization (CA) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. The ratings values were rounded in accordance with NFRC 601, NFRC Unit and Measurement Policy.

Intertek B&C is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications. The values included in this report are not considered in compliance with ANSI/NFRC 100, ANSI/NFRC 200, and/or NFRC 500 unless the associated validation test requirements have been satisfied, as applicable.

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**SECTION 3**

**TEST PROCEDURE**

The total product, including specific frame, spacer, and glass details, was modeled using NFRC approved software.

|                                   |               |
|-----------------------------------|---------------|
| <b>FRAME AND EDGE MODELING</b>    | THERM 7.4.4   |
| <b>CENTER-OF-GLASS MODELING</b>   | WINDOW 7.4.14 |
| <b>TOTAL PRODUCT CALCULATIONS</b> | WINDOW 7.4.14 |
| <b>SPECTRAL DATA LIBRARY</b>      | IGDB 83.0     |

**Modeling Assumptions / Technical Interpretations**

Any modeling assumptions and technical interpretations required to model this product are listed below.

- 1) To prevent air infiltration, tape was applied to all interior sash crack locations.
- 2) Grids did not require modeling per ANSI/NFRC 100-2017 Section 4.2.4.1.D.ii.a

**SECTION 4**

**SIMULATION SPECIMEN DESCRIPTION**

|                       |                       |
|-----------------------|-----------------------|
| <b>SERIES/MODEL</b>   | CW390 Casement        |
| <b>PRODUCT TYPE</b>   | Casement, Single Vent |
| <b>FRAME MATERIAL</b> | VY - Vinyl            |
| <b>SASH MATERIAL</b>  | VY - Vinyl            |
| <b>STANDARD SIZE</b>  | 600mm x 1500mm        |

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**SECTION 4 (Continued)**

**SIMULATION SPECIMEN DESCRIPTION**

| <b>SPACER OPTIONS</b>  |                     |                       |             |
|------------------------|---------------------|-----------------------|-------------|
| <b>TYPE</b>            | <b>PRIMARY SEAL</b> | <b>SECONDARY SEAL</b> | <b>CODE</b> |
| Quanex Duralite Spacer | Butyl Rubber        | -                     | P1-S        |

| <b>GRID OPTIONS</b> |                                     |                     |
|---------------------|-------------------------------------|---------------------|
| <b>GRID SIZE</b>    | <b>GRID TYPE</b>                    | <b>GRID PATTERN</b> |
| 0.188" x 0.625"     | Aluminum Rectangular Grid (Painted) | NFRC Standard       |

| <b>REINFORCEMENT OPTIONS</b> |                 |
|------------------------------|-----------------|
| <b>LOCATION</b>              | <b>MATERIAL</b> |
| -                            | -               |

| <b>GAS FILLING TECHNIQUE</b> |               |
|------------------------------|---------------|
| <b>FILL TYPE</b>             | <b>METHOD</b> |
| 90% Argon                    | Single Probe  |

| <b>EDGE-OF-GLASS CONSTRUCTION</b> |                                   |
|-----------------------------------|-----------------------------------|
| <b>INTERIOR CONDITION</b>         | Flexible Vinyl Fins Against Glass |
| <b>EXTERIOR CONDITION</b>         | Flexible Vinyl Fins Against Glass |

| <b>WEATHERSTRIPPING</b> |                 |                 |
|-------------------------|-----------------|-----------------|
| <b>TYPE</b>             | <b>QUANTITY</b> | <b>LOCATION</b> |
| Mohair                  | 1 Row           | Sash Perimeter  |
| Bulb Gasket             | 2 Rows          | Sash Perimeter  |

| <b>FRAME/SASH MATERIALS FINISH</b> |       |
|------------------------------------|-------|
| <b>INTERIOR</b>                    | Vinyl |
| <b>EXTERIOR</b>                    | Vinyl |

| <b>VALIDATION MATRIX*</b> |                      |
|---------------------------|----------------------|
| <b>PRODUCT LINE</b>       | <b>REPORT NUMBER</b> |
| None                      | -                    |

*\*These products are part of a validation matrix. Only one is required for validation testing.*

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**SECTION 5**

**SPECIALTY PRODUCTS TABLE**

The specialty products method allows the manufacturer to determine the overall product SHGC and VT for any glazing option. The center of glass SHGC and/or VT must be determined using WINDOW 7.4.14. The method calculates overall product SHGC and VT indexed on center of glass properties. All values used in the calculations are truncated to six decimal place precision.

|              | No Dividers | Dividers < 1 | Dividers > 1 |
|--------------|-------------|--------------|--------------|
| <b>SHGC0</b> | 0.005501    | 0.007610     | 0.009614     |
| <b>SHGC1</b> | 0.660704    | 0.598805     | 0.540025     |
| <b>VT0</b>   | 0.000000    | 0.000000     | 0.000000     |
| <b>VT1</b>   | 0.655203    | 0.591195     | 0.530412     |

$$SHGC = SHGC0 + SHGCc (SHGC1 - SHGC0)$$

$$VT = VT0 + VTc (VT1 - VT0)$$

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### SECTION 6

### SIMULATION RESULTS

| TOTAL PRODUCT CALCULATIONS (CW390 Casement) |                              |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|---|------------------------------|------------------|-----------------------|--|-----------------------|------------------|-----------------------|--|-------------------|------------------------------|--------|-----------|
| Option Number                               | Pane Thickness 1 (in)        | Gap Width 1 (in) | Pane Thickness 2 (in) | Gap Width 2 (in)   | Pane Thickness 3 (in) | Gap Width 3 (in) | Pane Thickness 4 (in) | Gap Fill   | Low-e (Surface #) | Tint                         | Spacer | Grid Type |
|   | U-Factor (Btu/Hr-Ft2-F)      |                  |                       | Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1) |                       |                  |                       | Visible Transmittance (VT) Grids (None / <1 / >=1) |                   | Condensation Resistance (CR) |        |           |
| 1   | CS36/ARG/CLR (SS/SS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.090                        | 0.689            | 0.086                 |  |                       |                  |                       | ARG90  | 0.027(#2)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.24 / 0.22                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.40                               |                   | CR 65                        |        |           |
| 2   | CS36/ARG/CLR (DS/DS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.128                        | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.027(#2)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.24 / 0.22                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.39                               |                   | CR 64                        |        |           |
| 3   | CS28/ARG/CLR (SS/SS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.087                        | 0.689            | 0.086                 |  |                       |                  |                       | ARG90  | 0.023(#2)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.19 / 0.17                                     |                       |                  |                       | VT(N/<1) 0.42 / 0.38                               |                   | CR 65                        |        |           |
| 4   | CS28/ARG/CLR (DS/DS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.125                        | 0.625            | 0.123                 |  |                       |                  |                       | ARG90  | 0.021(#2)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.19 / 0.17                                     |                       |                  |                       | VT(N/<1) 0.41 / 0.37                               |                   | CR 64                        |        |           |
| 5   | CLR/ARG/CS36 (SS/SS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.086                        | 0.689            | 0.090                 |  |                       |                  |                       | ARG90  | 0.027(#3)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.32 / 0.29                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.40                               |                   | CR 65                        |        |           |
| 6   | CLR/ARG/CS36 (DS/DS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.123                        | 0.625            | 0.128                 |  |                       |                  |                       | ARG90  | 0.027(#3)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.31 / 0.29                                     |                       |                  |                       | VT(N/<1) 0.44 / 0.39                               |                   | CR 64                        |        |           |
| 7   | CLR/ARG/CS28 (SS/SS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.086                        | 0.689            | 0.087                 |  |                       |                  |                       | ARG90  | 0.023(#3)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.26 / 0.24                                     |                       |                  |                       | VT(N/<1) 0.42 / 0.38                               |                   | CR 65                        |        |           |
| 8   | CLR/ARG/CS28 (DS/DS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.123                        | 0.625            | 0.125                 |  |                       |                  |                       | ARG90  | 0.021(#3)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.26 / 0.24                                     |                       |                  |                       | VT(N/<1) 0.41 / 0.37                               |                   | CR 65                        |        |           |
| 9   | 7036/ARG/CLR (SS/SS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.090                        | 0.689            | 0.090                 |  |                       |                  |                       | ARG90  | 0.036(#2)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.26 / 0.23                                     |                       |                  |                       | VT(N/<1) 0.46 / 0.42                               |                   | CR 64                        |        |           |
| 10  | 7036/ARG/CLR (DS/DS) 7/8" IG |                  |                       |  |                       |                  |                       |  |                   |                              |        |           |
|   | 0.117                        | 0.625            | 0.117                 |  |                       |                  |                       | ARG90  | 0.036(#2)         | CL                           | P1-S   | N,G       |
|   | U-Factor 0.25                |                  |                       | SHGC(N/<1) 0.26 / 0.23                                     |                       |                  |                       | VT(N/<1) 0.46 / 0.41                               |                   | CR 64                        |        |           |

## TEST REPORT FOR NORTH EAST WINDOWS USA, INC.

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### SECTION 6 (Continued)

### SIMULATION RESULTS

| TOTAL PRODUCT CALCULATIONS (CW390 Casement) |   |                  |                       |  |                       |                  |                       |  |                   |                                    |        |           |
|---|---|------------------|-----------------------|--|-----------------------|------------------|-----------------------|--|-------------------|------------------------------------|--------|-----------|
| Option Number                               | Pane Thickness 1 (in)                   | Gap Width 1 (in) | Pane Thickness 2 (in) | Gap Width 2 (in)   | Pane Thickness 3 (in) | Gap Width 3 (in) | Pane Thickness 4 (in) | Gap Fill   | Low-e (Surface #) | Tint                               | Spacer | Grid Type |
|   | U-Factor<br>(Btu/Hr-Ft <sup>2</sup> -F) |                  |                       | Solar Heat Gain Coefficient<br>(SHGC)<br>Grids (None / <1 / >=1) |                       |                  |                       | Visible Transmittance<br>(VT)<br>Grids (None / <1 / >=1) |                   | Condensation<br>Resistance<br>(CR) |        |           |
| 11  | CLR/ARG/7036 (SS/SS) 7/8" IG            |                  |                       |  |                       |                  |                       |  |                   |                                    |        |           |
|   | 0.090                                   | 0.689            | 0.090                 |  |                       |                  |                       | ARG90  | 0.036(#3)         | CL                                 | P1-S   | N,G       |
|   | U-Factor 0.25                           |                  |                       | SHGC(N/<1) 0.33 / 0.30   |                       |                  |                       | VT(N/<1) 0.46 / 0.42                                     |                   | CR 64                              |        |           |
| 12  | CLR/ARG/7036 (DS/DS) 7/8" IG            |                  |                       |  |                       |                  |                       |  |                   |                                    |        |           |
|   | 0.117                                   | 0.625            | 0.117                 |  |                       |                  |                       | ARG90  | 0.036(#3)         | CL                                 | P1-S   | N,G       |
|   | U-Factor 0.25                           |                  |                       | SHGC(N/<1) 0.33 / 0.30   |                       |                  |                       | VT(N/<1) 0.46 / 0.41                                     |                   | CR 64                              |        |           |





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**SECTION 7**

**DRAWINGS / BILL OF MATERIALS**

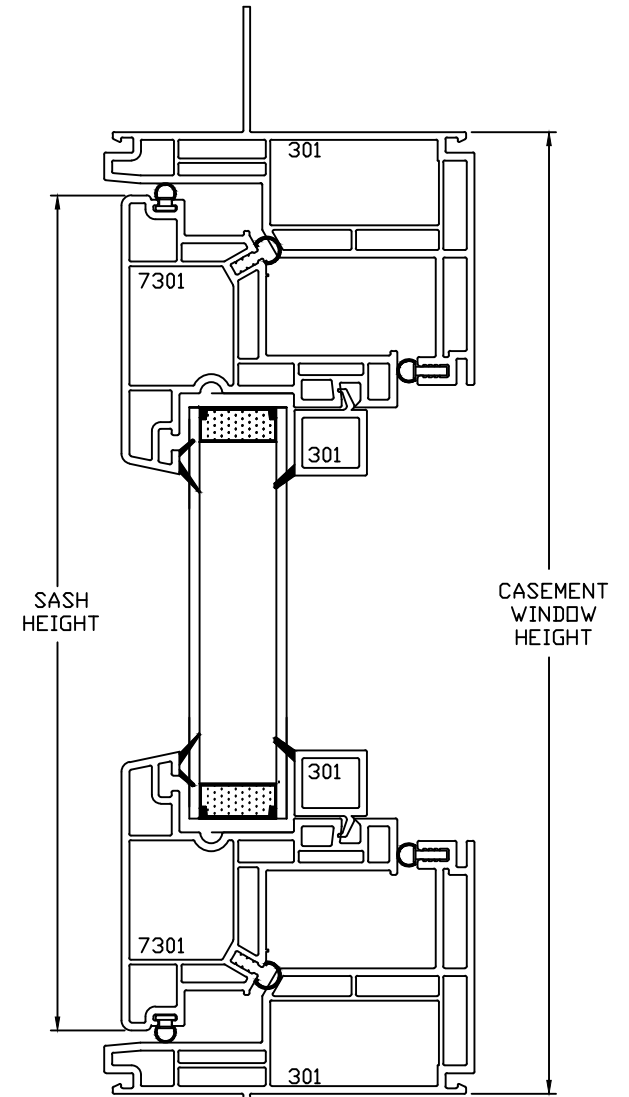
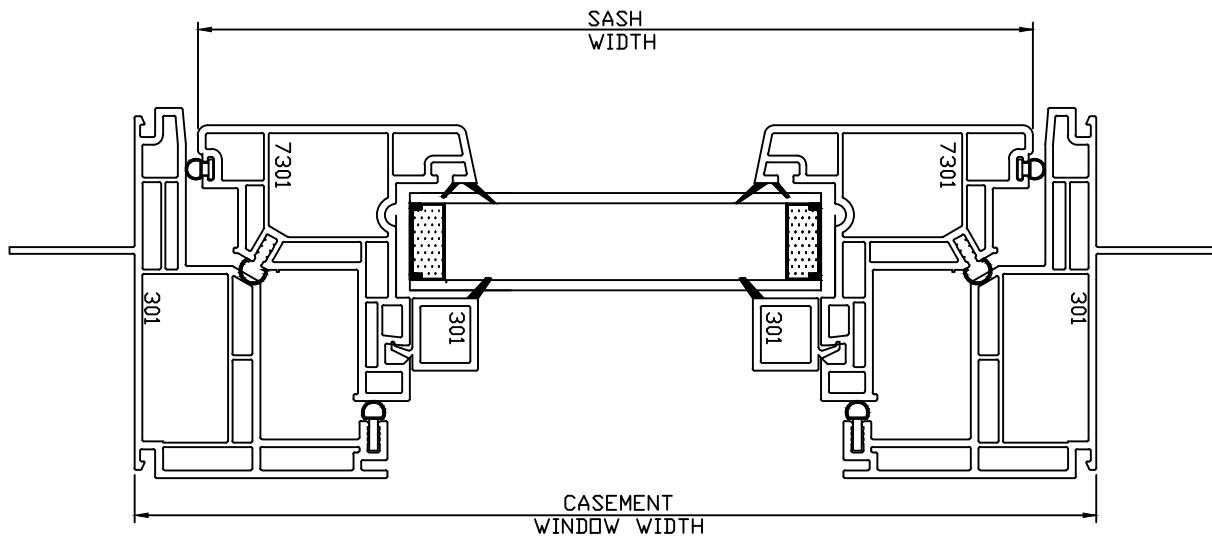
The drawings which follow have been reviewed by Intertek B&C and are representative of the simulation results reported herein. Any deviations are documented herein or on the drawings.



Report #: M9797-116-45

Date: 1/11/2022

Verified by: *Rick A. Smith*



DO NOT SCALE DRAWING

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☒ LOCATION FOR IMPACT TEST  
SPECIFICATION—LENGTHS TO 3/8"

ALLOWABLE BOW MAX. 1" PER 14'  
ANGULARITY TO BE ± 1/2°

DRAWN FOR

BY **DDS** DESIGNS

"OUR NAME SAYS IT ALL"

- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK
- 3) UNSPECIFIED WALLS
- 4) BREAK ALL CORNERS.....R
- 5) AREA ..... SQ.IN
- 6) WT/FT ..... LBS/FT

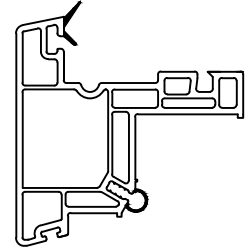
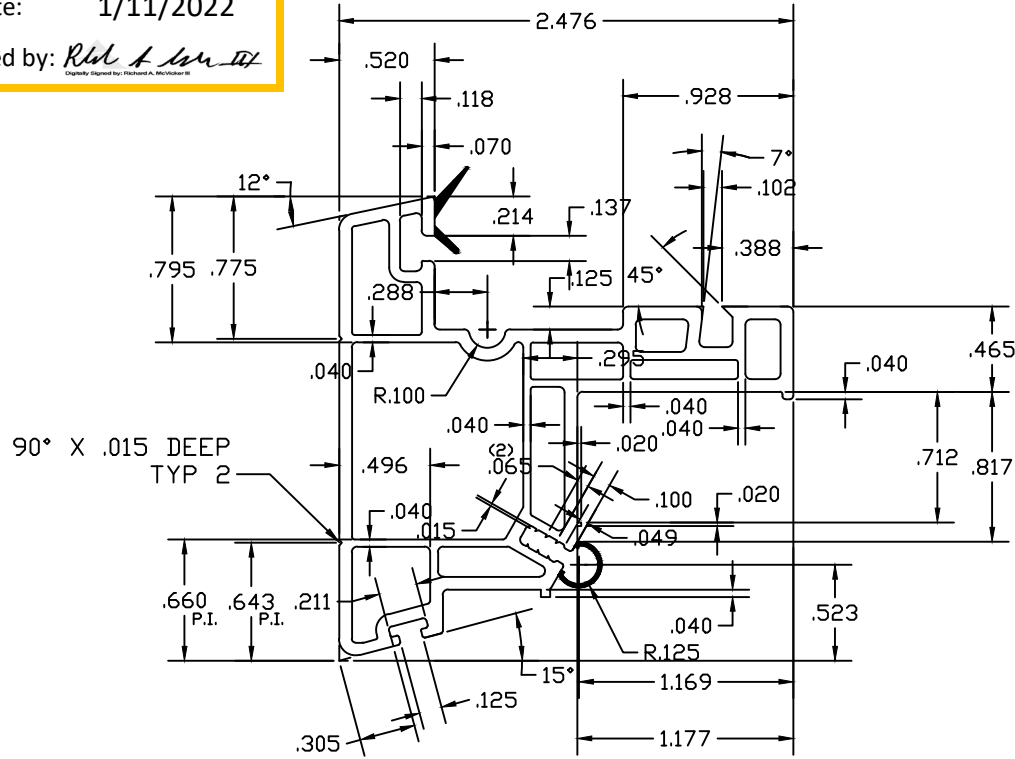
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| DWN BY<br>DDS                              | SCALE | DATE<br>02/28/12 | CHKD BY | APPD BY |
| COMPUTER NO                                |       |                  |         |         |
| DWG NO CW390 CROSS SECTION                 |       |                  |         |         |



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Date: 1/11/2022

Verified by: *Rick A. Smith*



DO NOT SCALE DRAWING

☒ LOCATION FOR IMPACT TEST SPECIFICATION—LENGTHS TO 3/8"

ALLOWABLE BOW MAX. 1" PER 14' ANGULARITY TO BE ± 1/2°

TOLERANCES— .XX ± .010 .XXX ± .005

DRAWN FOR

BY DDS DESIGNS

"OUR NAME SAYS IT ALL"

- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK
- 3) UNSPECIFIED WALLS \_\_\_\_\_
- 4) BREAK ALL CORNERS .015 R
- 5) AREA SQ.IN.
- 6) WT/FT LBS/FT

| TITLE CASEMENT SASH |       |          |         |         |
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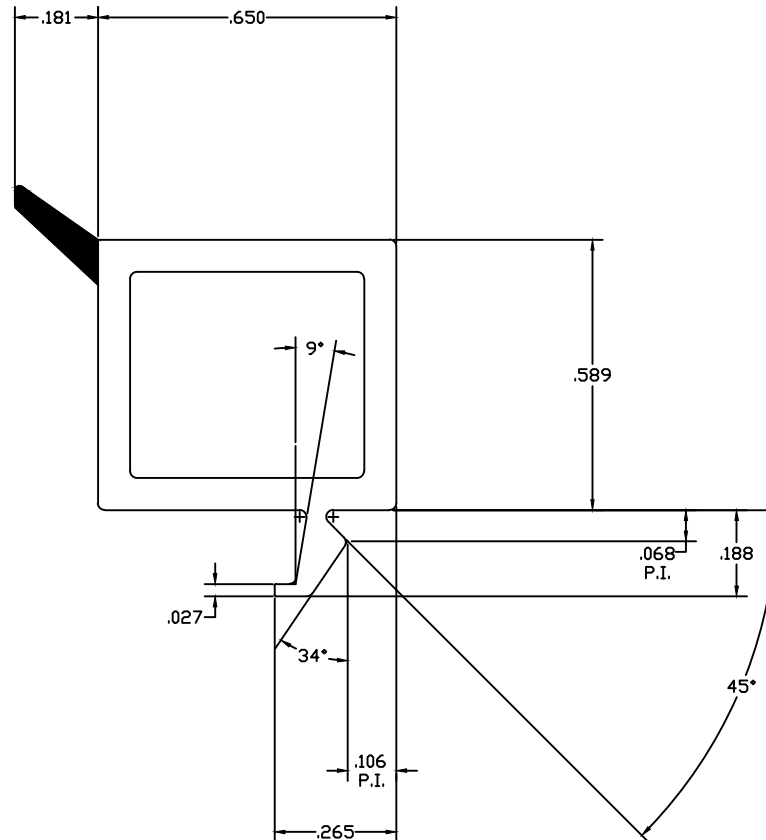
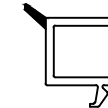
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Report #: M9797-116-45

Date: 1/11/2022

Verified by: *Richard A. McVicker III*  
Digitally Signed by: Richard A. McVicker III



DO NOT SCALE DRAWING

LOCATION FOR IMPACT TEST SPECIFICATION—LENGTHS TO 3/8" ALLOWABLE BOW MAX. 1" PER 14' ANGULARITY TO BE ± 1/2°

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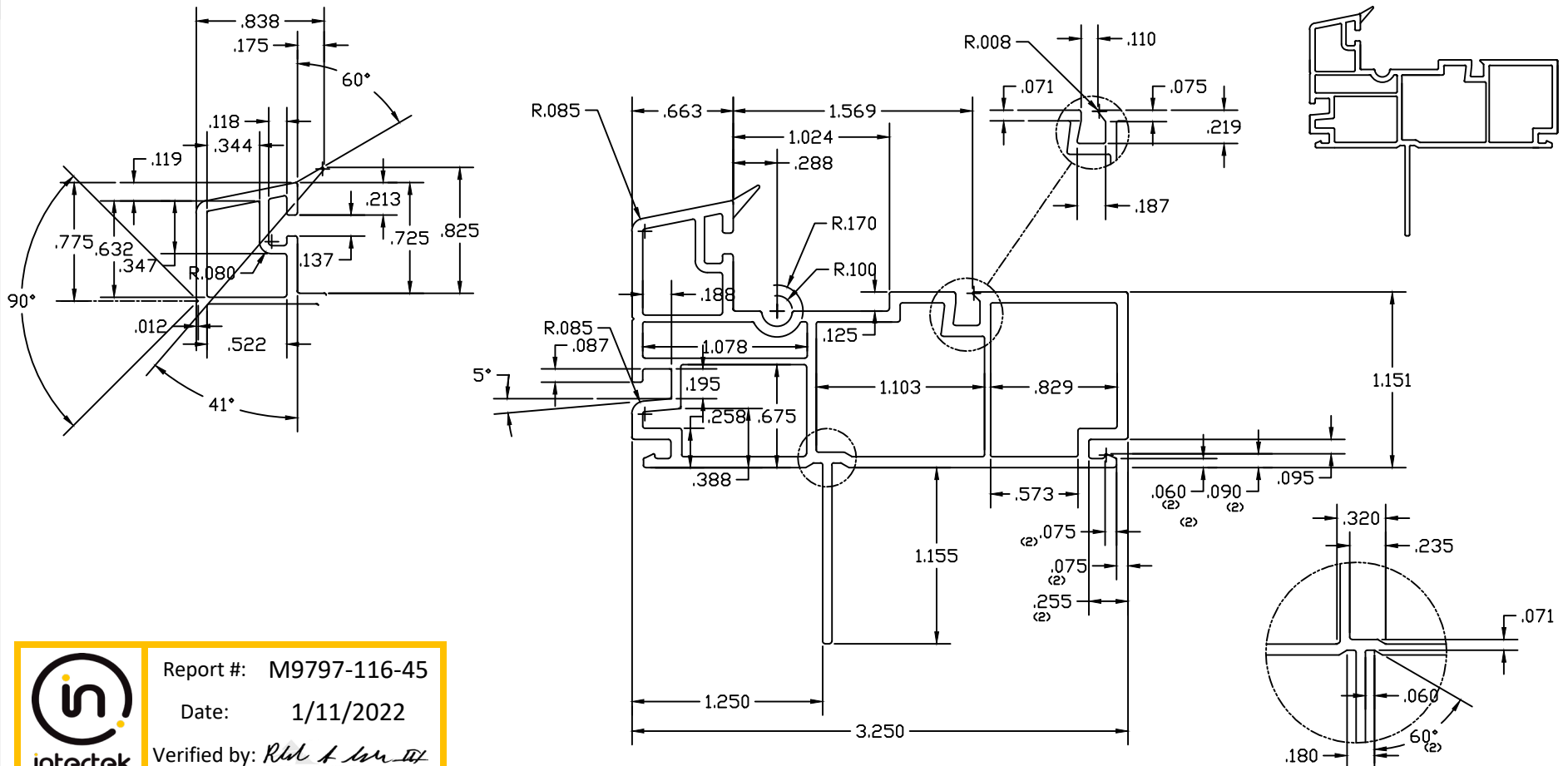
BY DDS DESIGNS  
 "OUR NAME SAYS IT ALL"


- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK ~~2x2x2~~
- 3) UNSPECIFIED WALLS
- 4) BREAK ALL CORNERS .015
- 5) AREA SQ.IN.
- 6) WT/FT LBS/FT

TITLE GLAZING BEAD



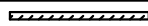
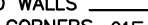
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| DWG NO                     |              | 304              |         |         |

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 Report #: M9797-116-45  
 Date: 1/11/2022  
 Verified by: *Richard A. McVicker*  
Digitally Signed by: Richard A. McVicker

DO NOT SCALE DRAWING

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|--|--|--|--|--|---|--|---|
|  |  |  |  |  | <input checked="" type="checkbox"/> LOCATION FOR IMPACT TEST<br>SPECIFICATION—LENGTHS TO 3/8"   | ALLOWABLE BOW MAX. 1" PER 14'<br>ANGULARITY TO BE ± 1/2°   | TOLERANCES— .XX ± .010<br>.XXX ± .005   |
|  |  |  |  |  | DRAWN FOR<br> BY  "OUR NAME SAYS IT ALL" | 1) MATERIAL RIGID PVC<br>2) CAPSTOCK <br>3) UNSPECIFIED WALLS <br>4) BREAK ALL CORNERS .015 R<br>5) AREA SQ.IN.<br>6) WT/FT LBS/FT | TITLE PICTURE WINDOW MAIN FRAME<br>WIDE<br>DWN BY: DDS<br>SCALE: 2:1<br>DATE: 03 19 19<br>CHKD BY:<br>APPD BY:<br>COMPUTER NO:<br>DWG NO: 322 |

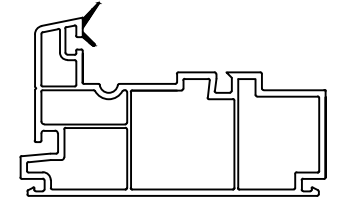
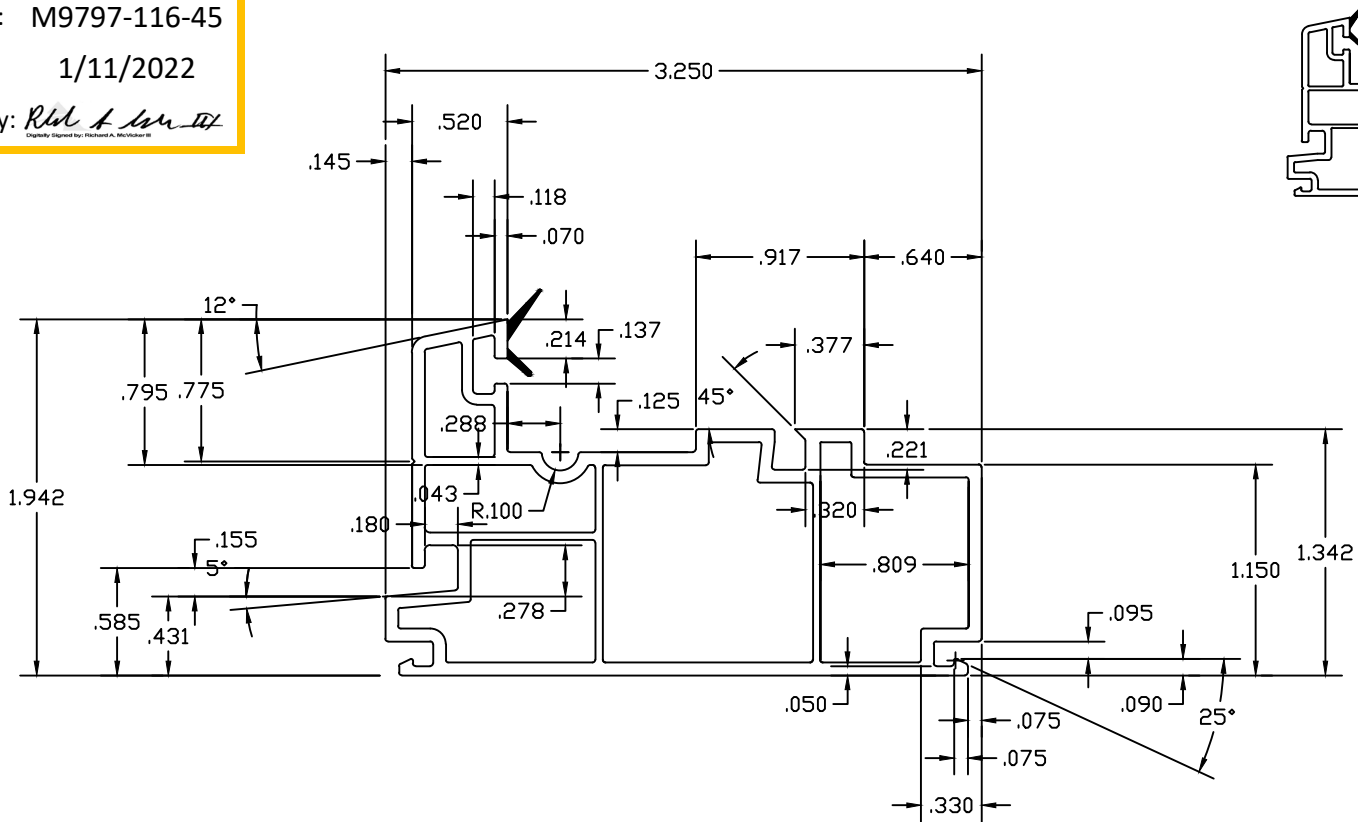
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Report #: M9797-116-45

Date: 1/11/2022

Verified by: *Richard A. McVicker III*



DO NOT SCALE DRAWING

☒ LOCATION FOR IMPACT TEST  
SPECIFICATION—LENGTHS TO 3/8"

ALLOWABLE BOW MAX. 1" PER 14'  
ANGULARITY TO BE ± 1/2°

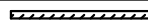
TOLERANCES— .XX ± .010  
.XXX ± .005

DRAWN FOR



BY **DDS** DESIGNS

"OUR NAME SAYS IT ALL"

- 1) MATERIAL RIGID PVC
- 2) CAPSTOCK 
- 3) UNSPECIFIED WALLS \_\_\_\_\_
- 4) BREAK ALL CORNERS .015 R
- 5) AREA SQ.IN.
- 6) WT/FT LBS/FT

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| TITLE PICTURE WINDOW MAIN FRAME NARROW |              |                |         |         |
| DWN BY<br>DDS                          | SCALE<br>2:1 | DATE<br>4 8 19 | CHKD BY | APPD BY |
| COMPUTER NO                            |              |                |         |         |
| DWG NO 352                             |              |                |         |         |

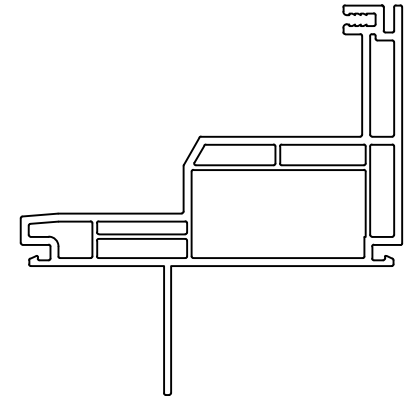
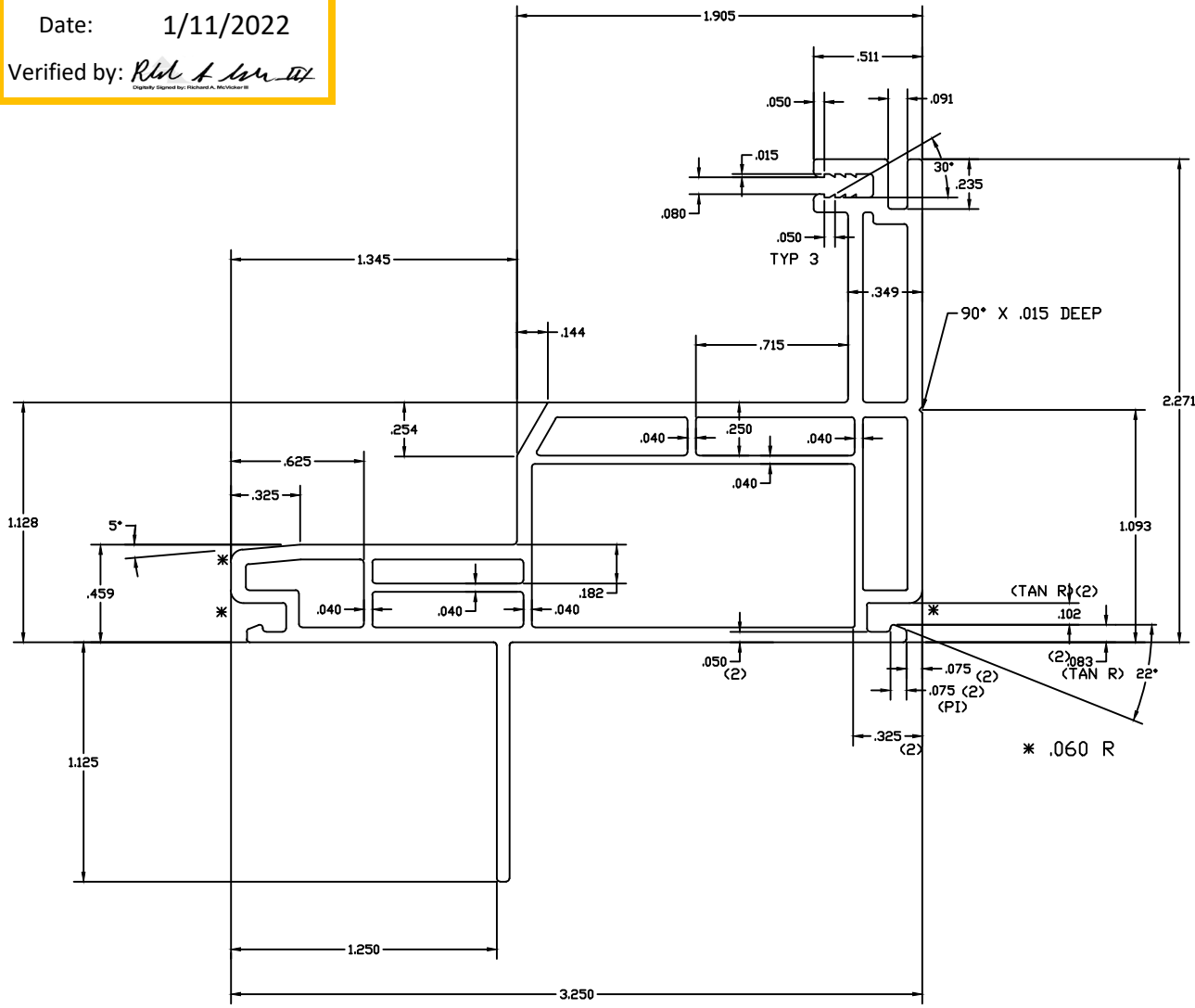
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Report #: M9797-116-45

Date: 1/11/2022

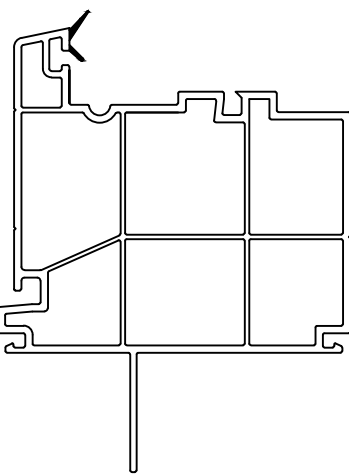
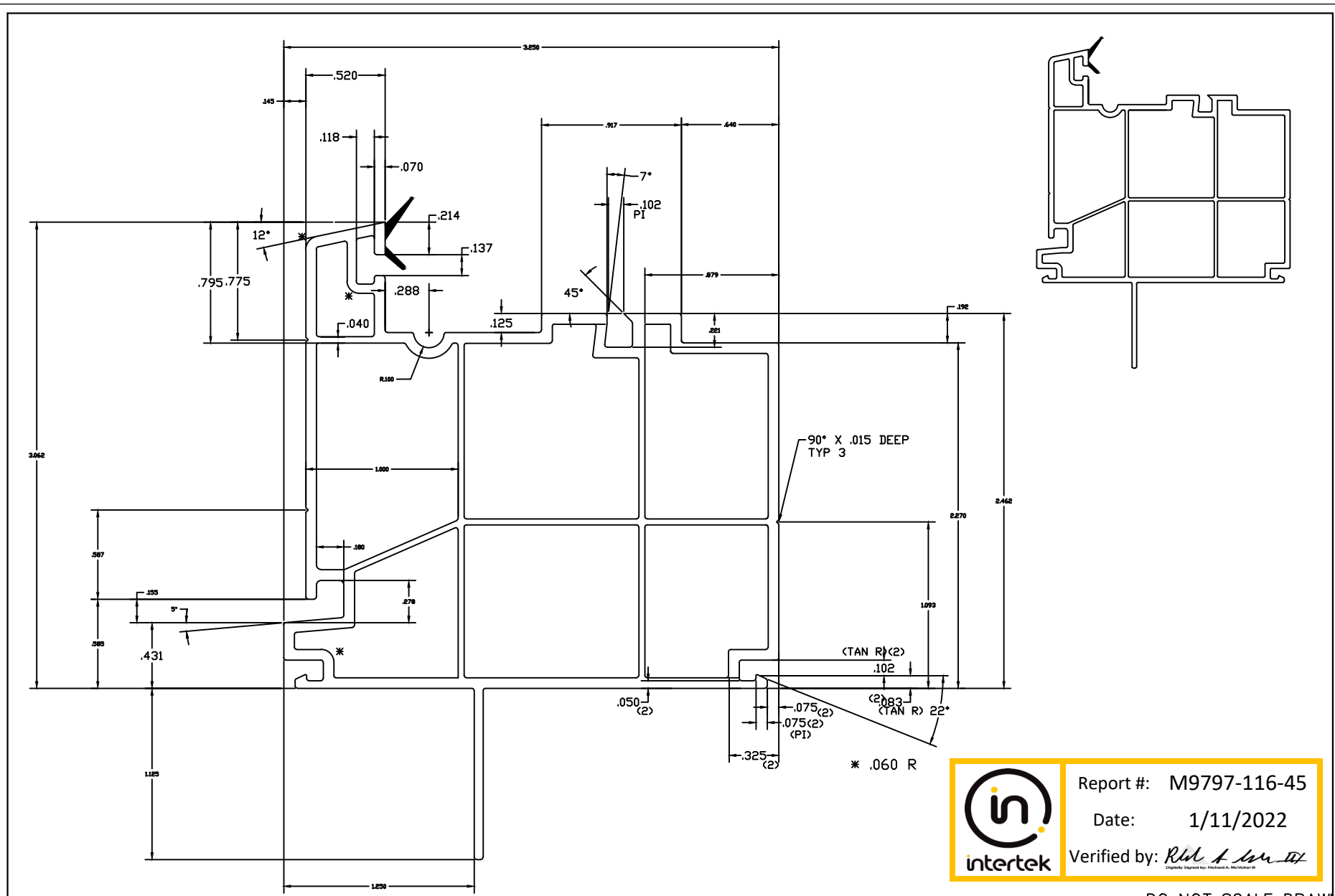
Verified by: *Red A. Smith*  
Digitally signed by Red A. Smith



DO NOT SCALE DRAWING

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| LOCATION FOR IMPACT TEST SPECIFICATION—LENGTHS TO 3/8" |  | ALLOWABLE BOW MAX. 1" PER 14' ANGULARITY TO BE ± 1/2°   |  |
| DRAWN FOR<br>  |  | 1) MATERIAL RIGID PVC<br>2) CAPSTOCK<br>3) UNSPECIFIED WALLS<br>4) BREAK ALL CORNERS .015 R<br>5) AREA SQ. IN.<br>6) WT/FT LBS/FT |  |
| BY<br>   |  | TITLE CASEMENT MAIN FRAME   |  |
| "OUR NAME SAYS IT ALL"                                 |  | DWN BY DDS    SCALE 2:1    DATE 10/20/12    CHKD BY    APPD BY  |  |
|  |  | COMPUTER NO   |  |
|  |  | DWG NO 7301   |  |



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Report #: M9797-116-45  
 Date: 1/11/2022  
 Verified by: *Red & Sun*  
Digitally Signed by Richard A. McMoran

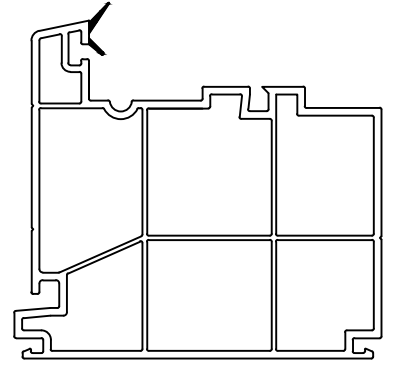
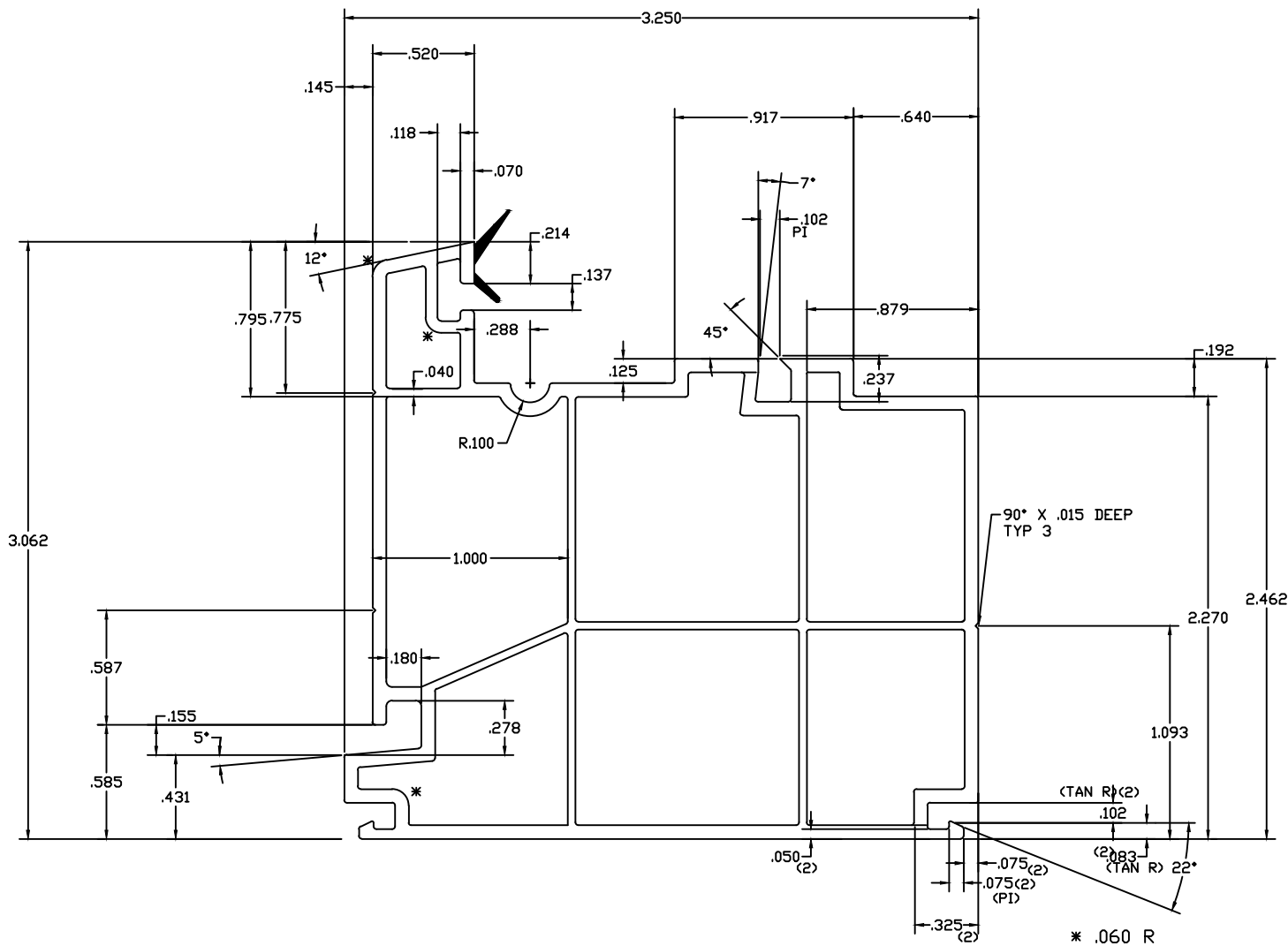
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| <input checked="" type="checkbox"/> LOCATION FOR IMPACT TEST<br>SPECIFICATION-LENGTHS TO 3/8"  | ALLOWABLE BOW MAX. 1" PER 14'<br>ANGULARITY TO BE ± 1/2°  | TITLE CASEMENT MAIN FRAME |              |                  |         |         |
| DRAWN FOR<br><br>BY<br><br>DDS<br>DESIGNS<br>"OUR NAME SAYS IT ALL" | 1) MATERIAL RIGID PVC<br>2) CAPSTOCK .....<br>3) UNSPECIFIED WALLS .....<br>4) BREAK ALL CORNERS .015 R<br>5) AREA ..... SQ. IN.<br>6) WT/FT ..... LBS/FT | DWN BY<br>DDS             | SCALE<br>2:1 | DATE<br>10/20/12 | CHKD BY | APPD BY |
| COMPUTER NO  |   | DWG NO 7322               |              |                  |         |         |







Report #: M9797-116-45  
 Date: 1/11/2022  
 Verified by: *Robt. A. ...*

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| <input checked="" type="checkbox"/> LOCATION FOR IMPACT TEST SPECIFICATION—LENGTHS TO 3/8" |  | ALLOWABLE BOW MAX. 1" PER 14' ANGULARITY TO BE ± 1/2° |  |
| DRAWN FOR<br>BY<br>DDS DESIGNS<br>"OUR NAME SAYS IT ALL"                                   | 1) MATERIAL RIGID PVC<br>2) CAPSTOCK<br>3) UNSPECIFIED "WALLS"<br>4) BREAK ALL CORNERS .015 R<br>5) AREA SQ.IN.<br>6) WT/FT LBS/FT |   | TITLE PICTURE WINDOW MAIN FRAME WIDE REPLACEMENT |
|  | DWN BY<br>DDS  | SCALE<br>2:1  | DATE<br>10/20/12                                 |

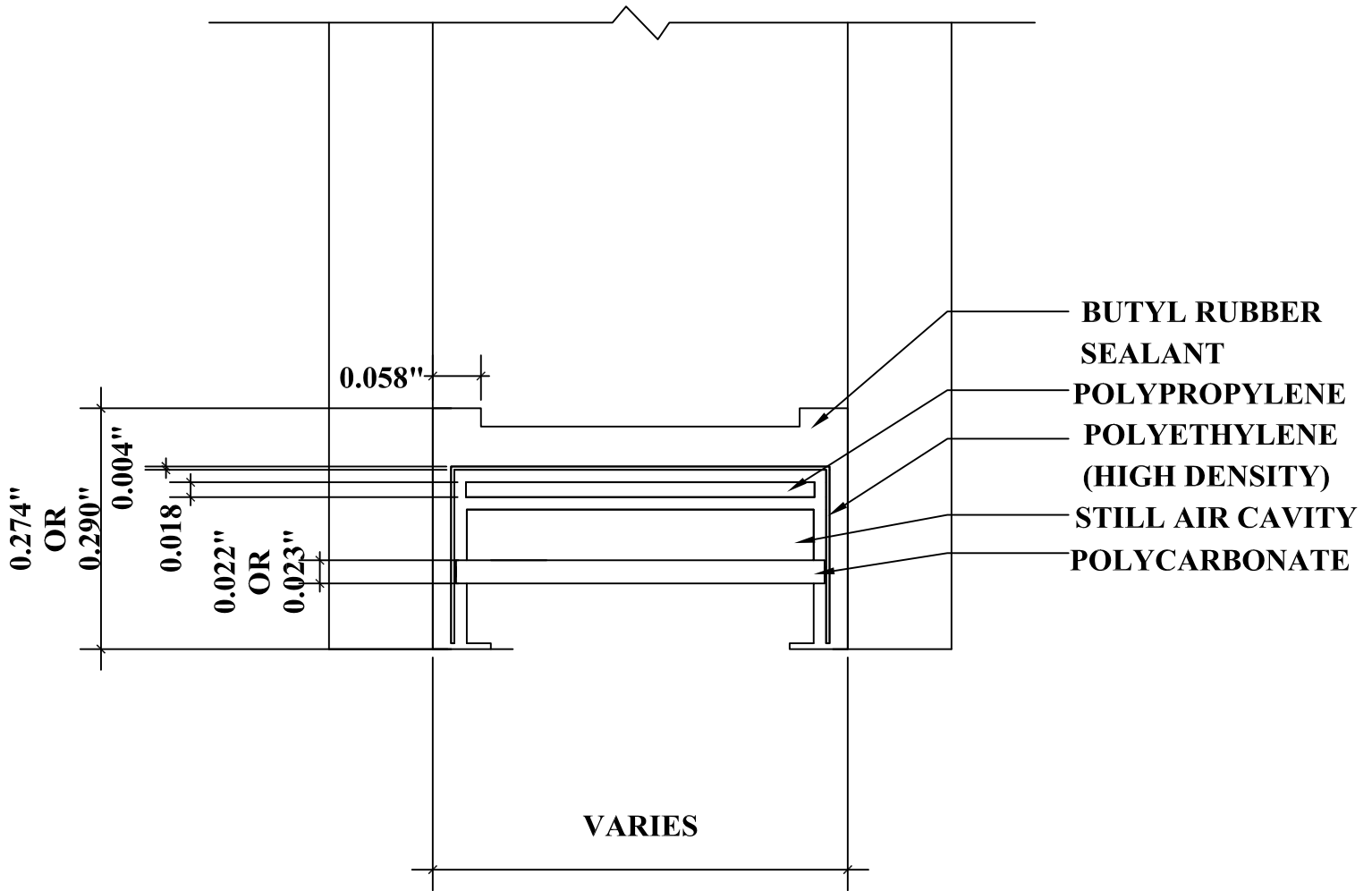


Report #: M9797-116-45

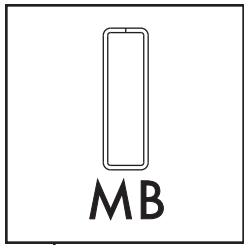
Date: 1/11/2022

Verified by: *Richard A. McVicker*

Digitally signed by: Richard A. McVicker



DETAIL FOR THERMAL MODELING OF  
QUANEX DURALITE SPACER (P1-S)



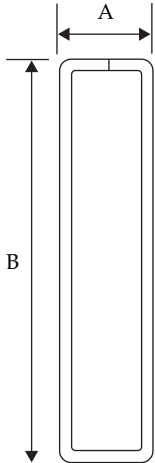
Report #: M9797-116-45

Date: 1/11/2022

Verified by: *Richard A. McVicker III*  
Digitally Signed by: Richard A. McVicker III

## Muntin Bar

Aluminum: Painted, ~~Mill Finish, Clear & Color In™ Anodized~~



### TOLERANCE

A, ± .005 (.127mm)

B, ± .005 (.127mm)

### SPECIAL NOTICE

#### Cleaning and Handling of Muntin Bar

We recommend muntin bar to be wiped clean before installation into an insulating glass unit. A household grade liquid cleaner may be used for this purpose.

To avoid breakdown of painted surfaces, do not use M.E.K., Triethane, Alcohol or like substances for the cleaning of painted muntin bar.

When machining and processing muntin bar in your plant, keep saw tables and work areas free of saw cut filings to avoid scratching the painted surfaces.

### Packaging Information

| Muntin Bar Size          | Part #   | Pieces Per Shipping Carton<br>12' 8" Lengths | Lineal Feet Per Shipping Carton<br>12' 8" Lengths |
|--------------------------|----------|--|---|
| 1/8 x .610               | 219697   | 200  | 2533  |
| 3/16 x 9/16 <sup>†</sup> | 119320   | 150  | 1900  |
| 3/16 x .610 <sup>†</sup> | 119705   | 125  | 1583  |
| 3/16 x 5/8 <sup>†</sup>  | 120874   | 125  | 1583  |
| 3/16 x 3/4               | 122909   | 110  | 1393  |
| 3/16 x 13/16             | 123618   | 110  | 1393  |
| 3/16 x 1                 | 123823   | 85   | 1076  |
| 1/4 x 9/16               | 119427   | 135  | 1710  |
| 1/4 x 5/8 <sup>†</sup>   | 121410   | 120  | 1520  |
| 1/4 x 3/4                | 123063   | 95   | 1203  |
| 1/4 x 13/16              | 215017   | 95   | 1203  |
| 1/4 x 1                  | 123836   | 70   | 887   |
| 1/4 x 1 1/4              | 123856   | 51   | 646   |
| 5/16 x 1                 | 210318   | 60   | 684   |
| 3/8 x 5/8                | 121468   | 90   | 1140  |
| 3/8 x 3/4                | 123088   | 75   | 950   |
| 3/8 x 13/16              | 215016   | 70   | 887   |
| 3/8 x 7/8                | 123797   | 55   | 697   |
| 3/8 x 1                  | 201968   | 55   | 696   |
| 3/8(.375) x 3/8          | 205591   | 140  | 1773  |
| 7/16 x 3/8               | 119016   | 115  | 1457  |
| 7/16 x 3/8               | 216500** | 115  | 1457  |
| 7/16 x 1/2               | 213045   | 88   | 1115  |
| 7/16 x 5/8 <sup>Δ</sup>  | 214621   | 65   | 823   |
| 1/2 x 3/4 <sup>*</sup>   | 201043   | 50   | 633   |
| 1/2 x 1                  | 203710   | 40   | 506   |

### Specification In Inches

| Muntin Bar Size           | A    | B     |
|---------------------------|------|-------|
| 1/8 x .610                | .125 | .610  |
| 3/16 x 9/16 <sup>†</sup>  | .187 | .551  |
| 3/16 x .610 <sup>†</sup>  | .187 | .610  |
| 3/16 x 5/8 <sup>†</sup>   | .187 | .630  |
| 3/16 x 3/4 <sup>†</sup>   | .187 | .775  |
| 3/16 x 13/16 <sup>†</sup> | .187 | .801  |
| 3/16 x 1                  | .187 | 1.000 |
| 1/4 x 9/16                | .235 | .562  |
| 1/4 x 5/8 <sup>†</sup>    | .235 | .625  |
| 1/4 x 3/4                 | .235 | .765  |
| 1/4 x 13/16               | .235 | .801  |
| 1/4 x 1                   | .235 | 1.000 |
| 1/4 x 1 1/4               | .235 | 1.250 |
| 5/16 x 1                  | .312 | 1.000 |
| 3/8 x 5/8 <sup>†</sup>    | .325 | .625  |
| 3/8 x 3/4                 | .325 | .750  |
| 3/8 x 13/16               | .325 | .801  |
| 3/8 x 7/8                 | .325 | .875  |
| 3/8 x 1                   | .325 | 1.000 |
| 3/8(.375) x 3/8           | .375 | .375  |
| 7/16 x 3/8                | .438 | .375  |
| 7/16 x 3/8                | .438 | .375  |
| 7/16 x 1/2                | .438 | .500  |
| 7/16 x 5/8 <sup>Δ</sup>   | .438 | .625  |
| 1/2 x 3/4 <sup>*</sup>    | .500 | .750  |
| 1/2 x 1                   | .500 | 1.000 |

Part numbers shown are standard white color.

Material thickness: .0185

<sup>†</sup> Available in tutone. Please see Color Selection Chart located in front of catalog.

<sup>Δ</sup> Part number shown is Dark Bronze Anodized Color.

<sup>\*</sup> Part number shown is Clear Anodized. <sup>\*\*</sup>Part number shown is white welded.

Note: Available in pre-cut lengths and pre-notched; tutone and post-painted. Custom colors also available.



Total Quality. Assured.

130 Derry Court  
York, Pennsylvania 17406

Telephone: 717-764-7700  
Facsimile: 717-764-4129  
www.intertek.com/building

**TEST REPORT FOR NORTH EAST WINDOWS USA, INC.**

Report No: M9797.01-116-45 R0

Date: 01/11/22

**SECTION 8**

**REVISION LOG**

| <b>REVISION #</b> | <b>DATE</b> | <b>PAGES</b> | <b>REVISION</b>        |
|-------------------|-------------|--------------|------------------------|
| .01R0             | 01/11/22    | All          | Original Report Issued |