

NORTHEAST WINDOWS USA, INC TEST REPORT

SCOPE OF WORK

AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON CW 390 SERIES PROJECT OUT CASEMENT WINDOW

REPORT NUMBER

M6795.01-525

TEST DATES

07/21/21 - 07/23/21

ISSUE DATE

01/13/22

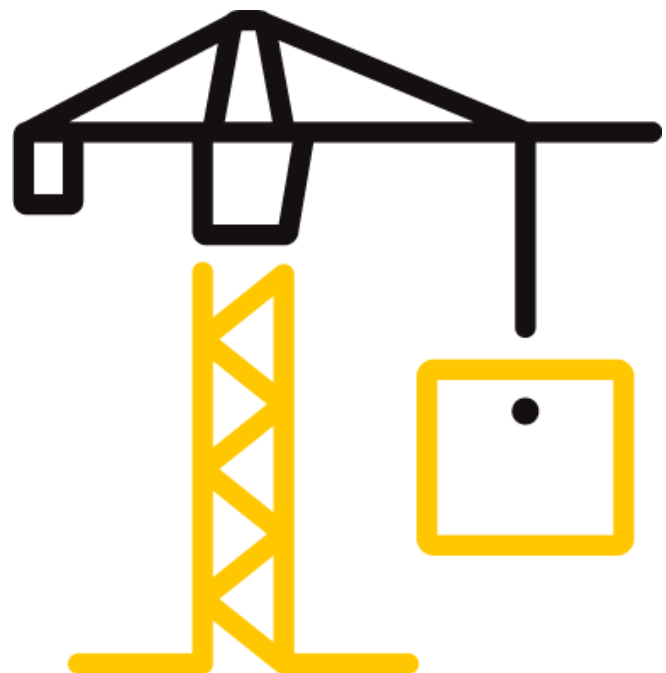
PAGES

17

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-2804 (01/15/21)

© 2017 INTERTEK



TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

REPORT ISSUED TO

NORTHEAST WINDOWS USA, INC

One Kees Place
Merrick, NY 11566

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Northeast Windows USA, Inc. to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their CW-390 Casement Window. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the test facility in Farmingdale, NY. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

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 four 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.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

| | | | |
|----------------------|-----------------------|---------------------|------------------------|
| COMPLETED BY: | Kevin McNeil | REVIEWED BY: | Brian Philcrantz, FMPC |
| TITLE: | Technician, Team Lead | TITLE: | Regional Manager |
| SIGNATURE: | | SIGNATURE: | |
| DATE: | 01/13/22 | DATE: | 01/13/22 |

KM:BP

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

SECTION 2

SUMMARY OF TEST RESULTS

| TITLE | RESULTS |
|--|--|
| AAMA/WDMA/CSA 101/I.S.2/A440-17 | Class LC-PG50 826 x 1537 (32.5 x 60.5) C |
| Design Pressure | ±2394 Pa (±50.0 psf) |
| Air Infiltration | <0.1 L/s/m ² (<0.01 cfm/ft ²) |
| Canadian Air Infiltration/Exfiltration Level | A3 |

Reference must be made to Intertek B&C Report No. M6795.01-525, dated 01/13/22 for complete test specimen description and detailed test results.

SECTION 3

TEST SPECIFICATION(S)/METHOD(S)

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-17- *North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA 205-15, *In-Plant Testing Guidelines for Manufacturers and Independent Laboratories*

ASTM E283-04(2012), *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E330/E330M-14, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E547-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference*

ASTM E2068-00(2016), *Standard Test Method for Determination of Operating Force of Sliding Windows and Doors*¹

ASTM F588-17, *Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact*

TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

SECTION 4

MATERIAL SOURCE/INSTALLATION

The specimen was selected by Intertek B&C personnel. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of four years from the test completion date.

The specimen was installed into a Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/4" shim space and the exterior perimeter of the specimen was sealed to the test buck. Installation of the tested product was performed by the client.

| LOCATION | ANCHOR DESCRIPTION | ANCHOR SPACING |
|------------------------|--------------------|------------------|
| Perimeter nailing fin. | 1.5" Roofing nail | Every other hole |

SECTION 5

LIST OF OFFICIAL OBSERVERS

| NAME | COMPANY |
|------------------|--------------|
| Michael Hendriks | Intertek B&C |

TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

SECTION 6

TEST SPECIMEN DESCRIPTION

Product Type: Casement Window, project out

Series/Model: CW-390

Product Size: 32" x 60"

Test Specimen

| OVERALL AREA: | WIDTH | | HEIGHT | |
|--|-------------|--------|-------------|--------|
| | millimeters | inches | millimeters | inches |
| 1.2 m ² (13.3 ft ²) | | | | |
| Overall size | 813 | 32 | 1524 | 60 |
| Exterior vent | 784 | 30-7/8 | 1495 | 58-7/8 |

Frame Construction:

| MEMBER | MATERIAL | DESCRIPTION |
|-------------|-----------|-------------|
| All members | Rigid PVC | Extruded |

| | JOINERY TYPE | DETAIL |
|-------------|--------------|---------------|
| All corners | Mitered | Thermo welded |

Vent Construction:

| MEMBER | MATERIAL | DESCRIPTION |
|-------------|-----------|------------------------|
| All members | Rigid PVC | Extruded Thermo welded |

| | JOINERY TYPE | DETAIL |
|-------------|--------------|------------------|
| All corners | Mitered | Thermally welded |

Reinforcement: *No reinforcement was utilized.*

Weatherstripping:

| DESCRIPTION | QUANTITY | LOCATION |
|-------------------------------|----------|-----------------------------------|
| T backed center fin wool pile | 1 row | Vent full exterior perimeter edge |
| Hollow bulb wedge gasket | 1 row | Vent full exterior perimeter edge |
| Hollow bulb wedge gasket | 1 row | Frame DLO Exterior meets vent |

TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

| GLASS TYPE | SPACER TYPE | INTERIOR LITE | EXTERIOR LITE | GLAZING METHOD |
|------------|--------------------|--------------------------|--------------------------|--|
| 7/8" IG | Quanex Duralite | Annealed 3.2 MM Thick | Annealed 3.2 MM Thick | Interior wet glaze with dual durometer gasket/PVC glazing beads inside |

| LOCATION | QUANTITY | DAYLIGHT OPENING | | GLASS BITE |
|----------|----------|------------------|-----------------|------------|
| | | millimeters | inches | |
| Vent | 1 | 654 x 1368 | 25-3/4 x 53-7/8 | 1/2" |

Drainage: *No drainage was utilized.*

Hardware:

| DESCRIPTION | QUANTITY | LOCATION |
|---|----------|---|
| Multipoint lock system with 3 locking points | 1 | Frame, locking stile |
| Crank handle, scissor arm actuator | 1 | Handle attached to sill, scissor attached to bottom rail of vent |
| Snubbers | 3 sets | One male on vent stile, one male on frame jamb per set |

TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

SECTION 7

TEST RESULTS

The temperature during testing was 27°C (81°F) The results are tabulated as follows:

| TITLE OF TEST | RESULTS | ALLOWED | NOTE |
|--|--|--|------|
| Operating Force, per ASTM E2068 | Initiate Motion: 31 N (7 lbf) Maintain Motion: 40 N (9 lbf) Latches: 22 N (5 lbf) | 60 N (13.49 lbf) max 30 N (6.74 lbf) max 100 N (22.48 lbf) max | |
| Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf) | <0.1 L/s/m ² (<0.01 cfm/ft ²) | 1.5 L/s/m ² (0.3 cfm/ft ²) max. | 1, 2 |
| Canadian Air Infiltration/Exfiltration Level | A3 | N/A | |
| Water Penetration, per ASTM E547 at 360 Pa (7.52 psf) | Pass | No leakage | |
| Uniform Load Deflection, per ASTM E330 Deflections taken at top rail +1920 Pa (+40.10 psf) -1920 Pa (-40.10 psf) | 0.5 mm (0.02") 4.8 mm (0.19") | Report only | 3, 4 |
| Uniform Load Structural, per ASTM E330 Permanent set taken at meeting rail +2880 Pa (+60.15 psf) -2880 Pa (-60.15 psf) | 0.5 mm (0.02") 0.5 mm (0.02") | 4.3 mm (0.17") max. 4.3 mm (0.17") max. | 3, 4 |
| Forced Entry Resistance, per ASTM F588, Type: B - Grade: 10 | Pass | No entry | |
| Thermoplastic Corner Weld | Pass | Meets as stated | |
| Sash Vertical Deflection 200 N (45 lbf) | 11.9 mm (0.47") | 15.7 mm (0.62") max. | |
| Distributed Load 300 Pa (6.27 psf) | Pass | No damage | |

TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

Test Specimen:

| TITLE OF TEST | RESULTS | ALLOWED | NOTE |
|--|---------|------------|------|
| OPTIONAL PERFORMANCE | | | |
| Water Penetration, per ASTM E547 at 580 Pa (12.11 psf) | Pass | No leakage | |

Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: Test Date 07/21/21 / Time: 10:29 AM (Air Note Only)

Note 3: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.



Total Quality. Assured.

145 Sherwood Avenue
Farmingdale, New York 11735

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

TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

SECTION 8

ALTERATIONS #1

No alterations were required.



Total Quality. Assured.

145 Sherwood Avenue
Farmingdale, New York 11735

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

TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

SECTION 9

CONCLUSION

The specimen tested successfully met the performance requirements for a Class LC-PG50 826 x 1537 (32.5 x 60.5)-C rating.



Total Quality. Assured.

145 Sherwood Avenue
Farmingdale, New York 11735

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

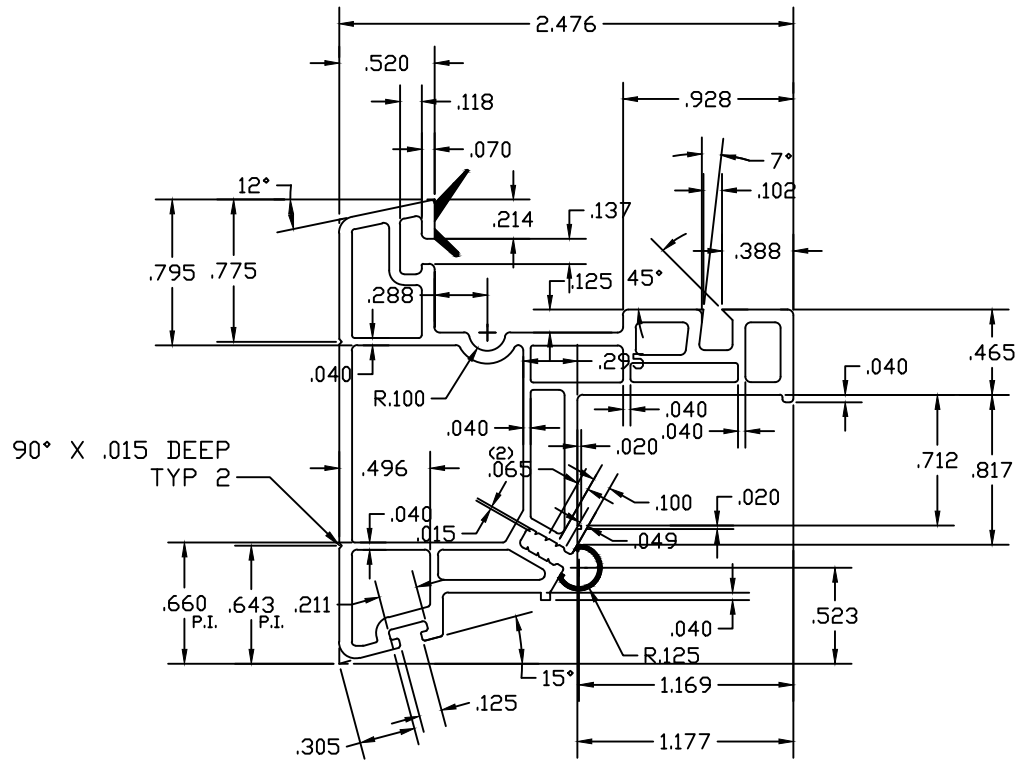
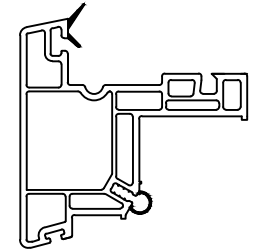
TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

SECTION 10 DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.



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

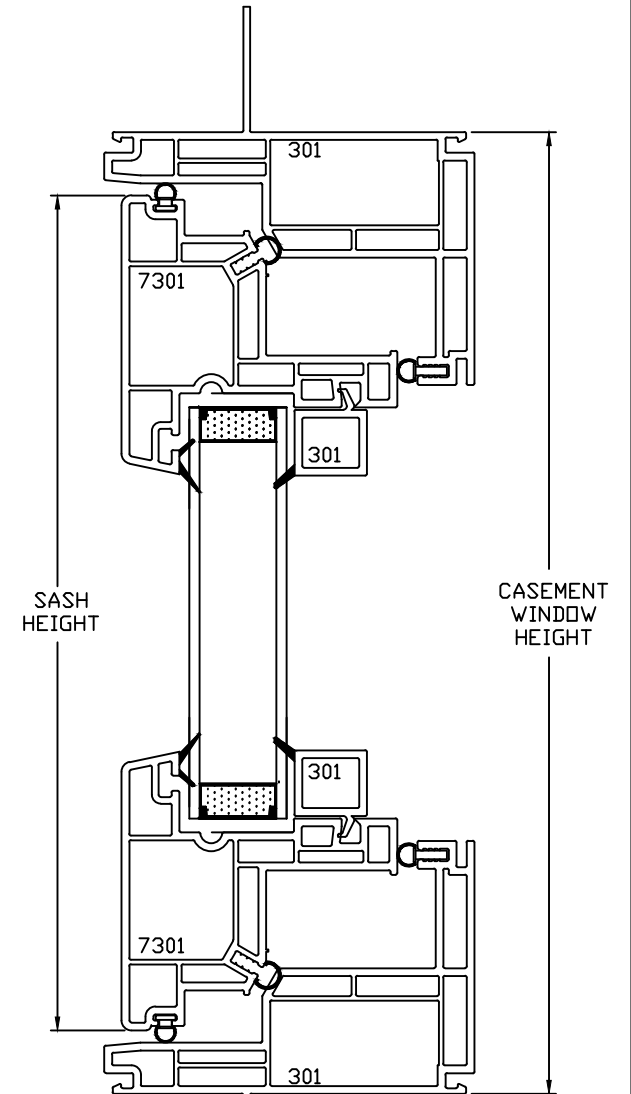
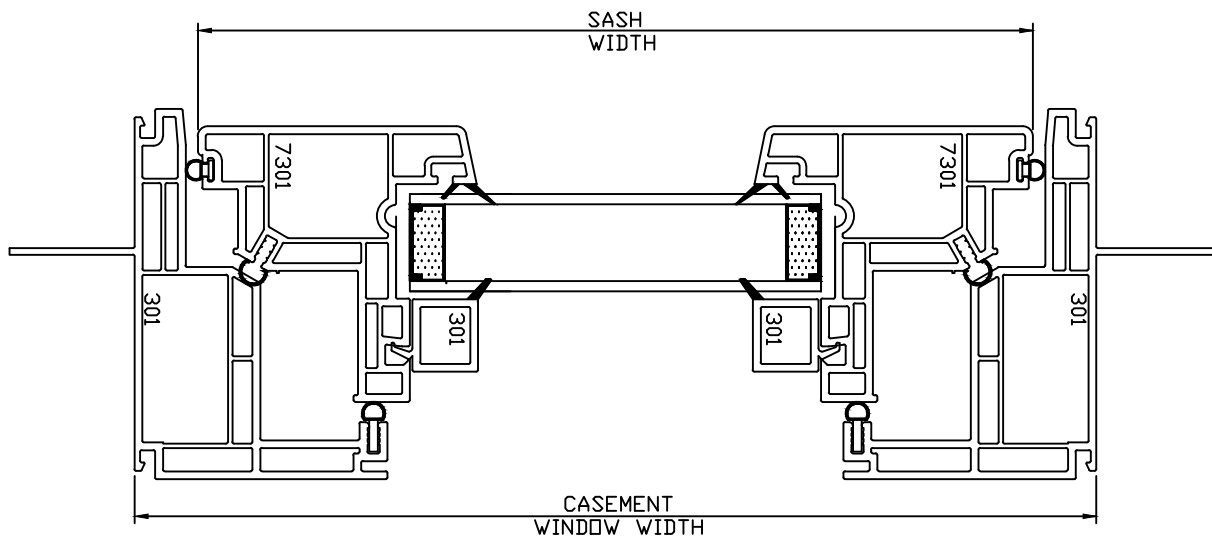
TITLE CASEMENT SASH

| | | | | |
|---------------|--------------|------------------|---------|---------|
| DWN BY DDS | SCALE 2:1 | DATE 10-20-12 | CHKD BY | APPD BY |
|---------------|--------------|------------------|---------|---------|

COMPUTER NO

DWG NO 7352

| | | | |
|-----|----------|----|------|
| NO. | REVISION | BY | DATE |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



DO NOT SCALE DRAWING

| | | | |
|-----|----------|----|------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| NO. | REVISION | BY | DATE |

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

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

DRAWN FOR

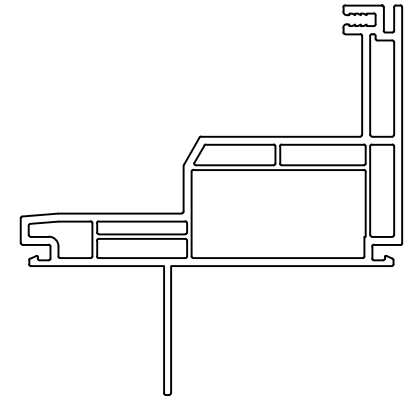
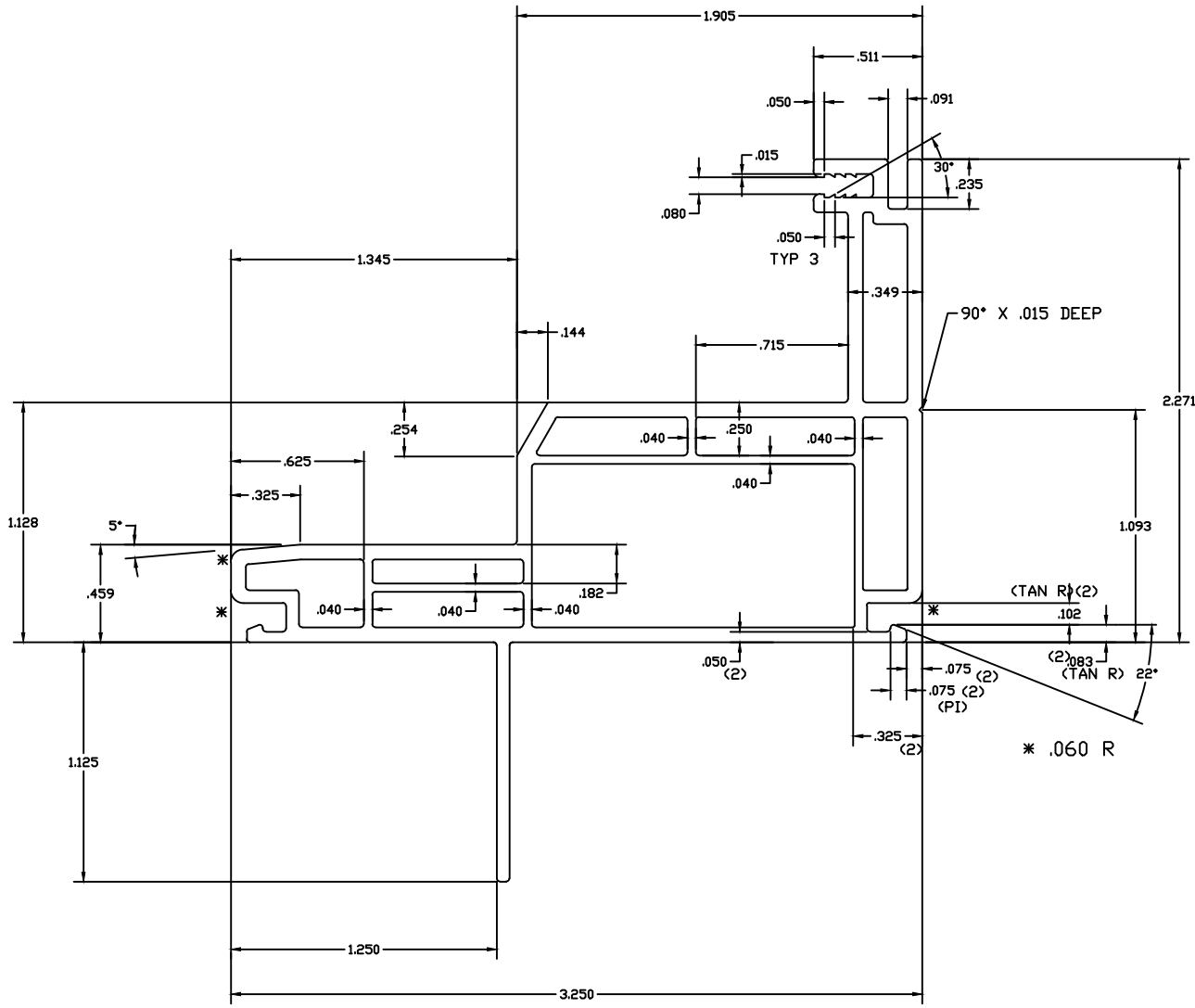
BY DDS
DESIGNS

"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

TITLE CW390
WELD MAIN FRAME/WELDED SASH

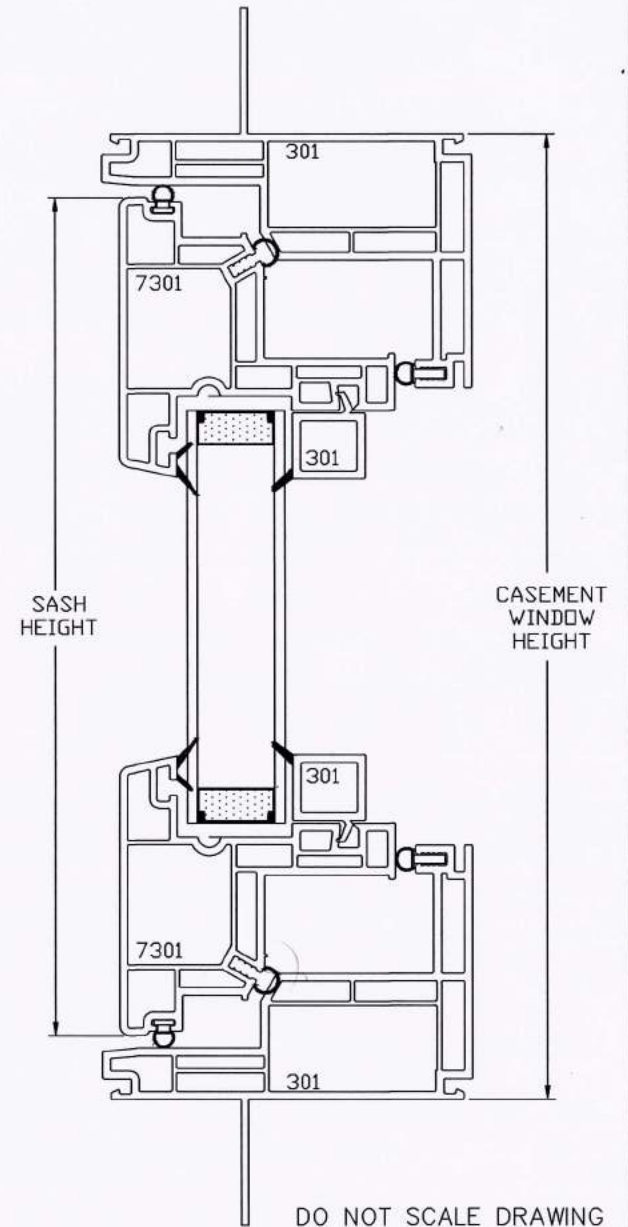
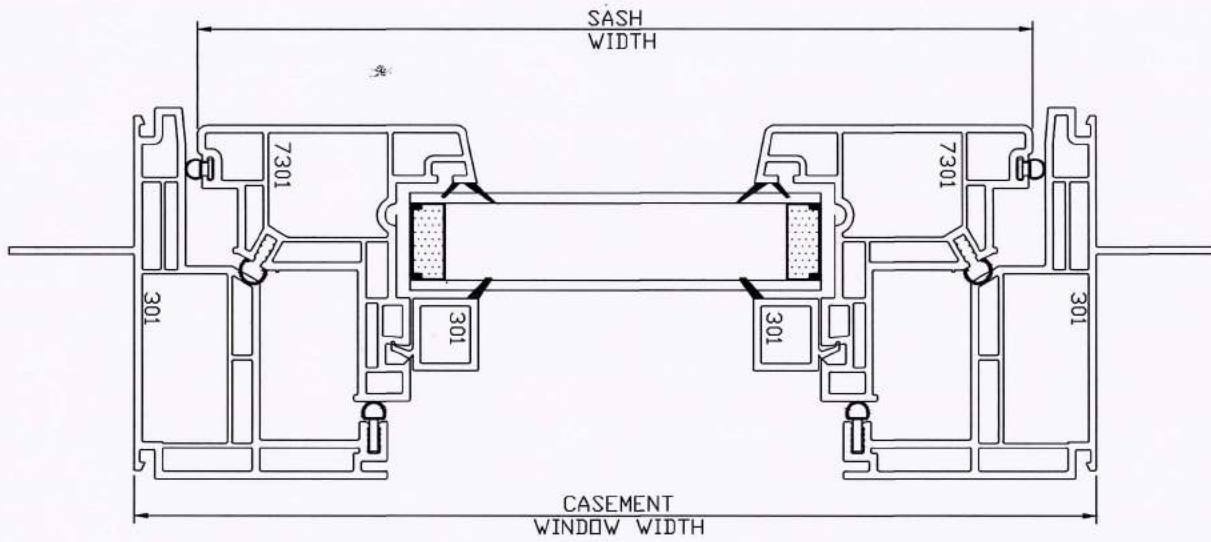
| | | | | |
|----------------------------|-------|------------------|---------|---------|
| DWN BY DDS | SCALE | DATE 02/28/12 | CHKD BY | APPD BY |
| COMPUTER NO | | | | |
| DWG NO CW390 CROSS SECTION | | | | |



DO NOT SCALE DRAWING

| | | | |
|-----|----------|----|------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| NO. | REVISION | BY | DATE |

| | | | |
|---|---|--|---------------------------|
| LOCATION FOR IMPACT TEST SPECIFICATION—LENGTHS TO 3/8" | | ALLOWABLE BOW MAX. 1" PER 14' ANGULARITY TO BE ± 1/2° | |
| DRAWN FOR QUALITY LINEALS 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 MAIN FRAME |
| | DWN BY DDS | SCALE 2:1 | DATE 1020/12 |



DO NOT SCALE DRAWING

| | | | |
|-----|----------|----|------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| NO. | REVISION | BY | DATE |

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

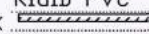
ALLOWABLE BOW MAX. 1" PER 14'
ANGULARITY TO BE ± 1/2°

DRAWN FOR

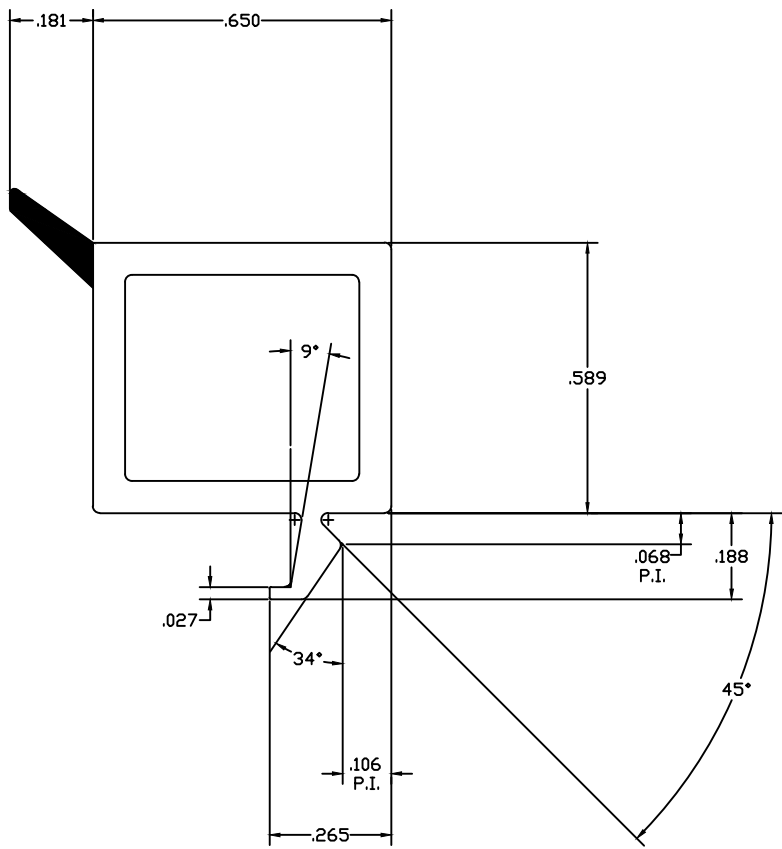
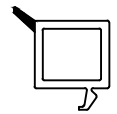


BY  DDS DESIGNS

"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

| | | | | |
|--|-------|------------------|---------|---------|
| TITLE CW390 WELD MAIN FRAME/WELDED SASH | | | | |
| DWN BY DDS | SCALE | DATE 02/28/12 | CHKD BY | APPD BY |
| COMPUTER NO | | | | |
| DWG NO CW390 CROSS SECTION | | | | |



DO NOT SCALE DRAWING

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 .015
- 5) AREA SQ.IN.
- 6) WT/FT LBS/FT

TITLE GLAZING BEAD

| | | | | |
|----------------------------|--------------|------------------|---------|---------|
| DWN BY DDS ^R | SCALE 2:1 | DATE 10/28/12 | CHKD BY | APPD BY |
| COMPUTER NO | | | | |
| DWG NO | | 304 | | |

| | | | |
|-----|----------|----|------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| NO. | REVISION | BY | DATE |



Total Quality. Assured.

145 Sherwood Avenue
Farmingdale, New York 11735

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

TEST REPORT FOR NORTHEAST WINDOWS USA, INC

Report No.: M6795.01-525

Date: 01/13/22

SECTION 11

REVISION LOG

| REVISION # | DATE | PAGES | REVISION |
|------------|----------|-------|-----------------------|
| 0 | 01/13/22 | N/A | Original Report Issue |