



Testing Evaluation Laboratories, Inc.

2002 Wood Court Suite 1 – Plant City, FL 33563

Phone: 813-754-9887

AAMA/WDMA/CSA 101/I.S.2/A440-08
Canadian Supplement A440S1-09

TEST REPORT SUMMARY

Test Report Issued To:

FLEETWOOD WINDOWS AND DOORS
1 Fleetwood Way
Corona, CA 92879

WESTWOOD 250 Impact Resistant Aluminum Casement Windows

| Title | Summary of Results | |
|--|--|--|
| | Specimen 6 | Specimen 12 |
| Primary Product Designator | Class LC- PG65 1067 x 2135 (42 x 84) Type C | Class LC- PG75 1067 x 1829 (42 x 72) Type C |
| Design Pressure | +3112/-3112 Pa (+65.0/- 65.0 psf) | +3112/-3112 Pa (+65.0/- 65.0 psf) |
| Operating Force | Pass | Pass |
| Air Infiltration | See Specimen 1 of Report #TEL 01990817 for these test results | See Specimen 1 of Report #TEL 01990817 for these test results |
| Air Infiltration/Exfiltration (A440S1-09) | See Specimen 1 of Report #TEL 01990817 for these test results | See Specimen 1 of Report #TEL 01990817 for these test results |
| Water Resistance | See Specimen 1 of Report #TEL 01990817 for these test results | See Specimen 1 of Report #TEL 01990817 for these test results |
| Structural Test Pressure | +4668/-4668 Pa (+97.5/- 97.5 psf) | +4668/-4668 Pa (+97.5/- 97.5 psf) |
| Forced Entry | No Entry | No Entry |

Reference should be made to Report No. TEL 01991056 for complete test specimen description and data. For corresponding data regarding ASTM E1886 and ASTM E1996 reference should be made to Report No. TEL 01991057.

For Testing Evaluation Laboratories, Inc.

Vivian K. Wright,
President



Testing Evaluation Laboratories, Inc.

2002 Wood Court Suite 1 – Plant City, FL 33563

Phone: 813-754-9887

AAMA/WDMA/CSA 101/I.S.2/A440-08

Canadian Supplement A440S1-09

Issued to:

FLEETWOOD WINDOWS AND DOORS

1 Fleetwood Way

Corona, CA 92879

IAS Lab Certification Number: TL-299

Report No: TEL 01991056

Test Dates: October 3-5, 2013

Report Date: June 14, 2014

Project Summary: Testing Evaluation Laboratories, Inc. (TEL) was contracted by Fleetwood Windows and Doors to perform tests on the WESTWOOD 250 Casement Windows at TEL's Plant City, FL test facility. *Please see individual specimen results for information regarding the Performance Grade successfully achieved by each specimen.*

Test specimen descriptions and results are reported herein.

Test Specifications: The test specimens were evaluated in accordance with the following:

***AAMA/WDMA/CSA 101/I.S.2/A440-08 and Canadian Supplement A440S1-09
Standard Specification for Windows, Doors and Unit Skylights***

Test Specimen Description:

| | |
|--------------------------|---|
| Series / Model: | Westwood 250 Casement Windows |
| Type: | Aluminum Casement Windows |
| Overall Size: | 1067 mm x 2135 mm (42.00" x 84.00") – Specimen 6 – (X) 1067 mm x 1829 mm (42.00" x 72.00") – Specimen 12 – (X) |
| Daylight Opening: | 840 mm x 1908 mm (33.063" x 75.13") – Specimen 6 – (X) 835 mm x 1424 mm (32.88" x 56.06") – Specimen 12 – (X) |
| Glazing Detail: | See attached drawing number L-7167 for glazing details. |
| Frame Material: | Aluminum |
| Finish: | Mill Finish |

For Tested Elevation, Vertical Cross Sections, Horizontal Cross Sections, Components, Frame Anchoring, Glazing Detail and Bill of Materials See Attached Drawing number L-7167.

Test Results: Specimen 6 – Class LC-PG65 1067 x 2134 (42 x 84) Type C – Aluminum Casement Window (X)

The test results are tabulated as follows:

| <u>Paragraph</u> | <u>Title of Test – Test Method</u> | <u>Results</u> | <u>Allowed</u> |
|-----------------------------|--|----------------|----------------|
| 5.3.1 | Operating Force per ASTM E2068-00 | ** | |
| 5.3.2.1 | Air Infiltration per ASTM E283 @ 75 Pa (1.57 psf) | ** | |
| | Air Infiltration per ASTM E283 @ 299 Pa (6.24 psf) | ** | |
| | Air Exfiltration per ASTM E283 @ 75 Pa (1.57 psf) | ** | |
| | Air Exfiltration per ASTM E283 @ 299 Pa (6.24 psf) | ** | |
| Note #1: | <i>The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-08 (A440S1-09) for air infiltration/exfiltration.</i> | | |
| 5.3.3.2 | Water Resistance per ASTM E547 | | See Note #2 |
| 5.3.4.2 | Uniform Load Structural per ASTM E330 | | See Note #2 |
| Note #2: | <i>The client opted to start at a pressure higher than the minimum required. Those results are listed under "Optional Performance".</i> | | |
| Optional Performance | | | |
| 4.3.2.1 | Water Resistance per ASTM E547 | ** | |
| 5.3.5 | Forced Entry resistance per ASTM F588 | ** | |
| 5.3.6.4.3 | Sash Vertical Deflection Test | ** | |
| 5.3.6.6.2 | Distributed Load Test | ** | |

**** Please see Specimen 1 of report number TEL 01990817 for these test results.**

Specimen 6: Optional Performance – Continued

4.4.2.6 Optional Performance

| Range | Time (seconds) | Load Pa (psf) | Location | Deflection mm (in.) | Allowable mm (in.) |
|--------------------|-------------------|------------------|----------|------------------------|-----------------------|
| Half Test Positive | 30 | 1556 (32.50) | | | |
| Test Positive | 30 | 3112 (65.00) | 1 | 0.762 (0.030) | See Note #3 |
| Half Test Negative | 30 | 1556 (32.50) | | | |
| Test Negative | 30 | 3112 (65.00) | 1 | 0.914 (0.036) | See Note #3 |

Note #3: *The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440-08 (A440S1-09) for this product designation. The deflection data is recorded in this report for special code compliance and information only. See Note #4 for deflection locations.*

| Range | Time (seconds) | Load Pa (psf) | Location | Deflection mm(in.) | Set mm(in.) | Allowable mm(in.) |
|---------------------|-------------------|------------------|----------|-----------------------|----------------|----------------------|
| Half Proof Positive | 10 | 2334 (48.75) | | | | |
| Proof Positive | 30 | 4668 (97.50) | 1 | 0.813 (0.032) | 0.025 (0.001) | 3.810 (0.150) |
| Half Proof Negative | 10 | 2334 (48.75) | | | | |
| Proof Negative | 30 | 4668 (97.50) | 1 | 1.676 (0.066) | 0.305 (0.012) | 3.810 (0.150) |

Note #4: *Deflection/Set for Location 1 measured at center of top rail.*

Test Results: Specimen 12 – Class LC-PG65 1067 x 1829 (42 x 72) Type C – Aluminum Casement Window (X)

The test results are tabulated as follows:

| <u>Paragraph</u> | <u>Title of Test – Test Method</u> | <u>Results</u> | <u>Allowed</u> |
|-----------------------------|--|----------------|----------------|
| 5.3.1 | Operating Force per ASTM E2068-00 | ** | |
| 5.3.2.1 | Air Infiltration per ASTM E283 @ 75 Pa (1.57 psf) | ** | |
| | Air Infiltration per ASTM E283 @ 299 Pa (6.24 psf) | ** | |
| | Air Exfiltration per ASTM E283 @ 75 Pa (1.57 psf) | ** | |
| | Air Exfiltration per ASTM E283 @ 299 Pa (6.24 psf) | ** | |
| Note #1: | <i>The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-08 (A440S1-09) for air infiltration/exfiltration.</i> | | |
| 5.3.3.2 | Water Resistance per ASTM E547 | | See Note #2 |
| 5.3.4.2 | Uniform Load Structural per ASTM E330 | | See Note #2 |
| Note #2: | <i>The client opted to start at a pressure higher than the minimum required. Those results are listed under "Optional Performance".</i> | | |
| Optional Performance | | | |
| 4.3.2.1 | Water Resistance per ASTM E547 | ** | |
| 5.3.5 | Forced Entry resistance per ASTM F588 | ** | |
| 5.3.6.4.3 | Sash Vertical Deflection Test | ** | |
| 5.3.6.6.2 | Distributed Load Test | ** | |

**** Please see Specimen 1 of report number TEL 01990817 for these test results.**

Specimen 12: Optional Performance – Continued

4.4.2.6 Optional Performance

| Range | Time (seconds) | Load Pa (psf) | Location | Deflection mm (in.) | Allowable mm (in.) |
|--------------------|-------------------|------------------|----------|------------------------|-----------------------|
| Half Test Positive | 30 | 1556 (32.50) | | | |
| Test Positive | 30 | 3112 (65.00) | 1 | 1.753 (0.069) | See Note #3 |
| Half Test Negative | 30 | 1556 (32.50) | | | |
| Test Negative | 30 | 3112 (65.00) | 1 | 2.159 (0.085) | See Note #3 |

Note #3: *The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440-08 (A440S1-09) for this product designation. The deflection data is recorded in this report for special code compliance and information only. See Note #4 for deflection locations.*

| Range | Time (seconds) | Load Pa (psf) | Location | Deflection mm(in.) | Set mm(in.) | Allowable mm(in.) |
|---------------------|-------------------|------------------|----------|-----------------------|----------------|----------------------|
| Half Proof Positive | 10 | 2334 (48.75) | | | | |
| Proof Positive | 30 | 4668 (97.50) | 1 | 2.007 (0.079) | 1.245 (0.049) | 3.810 (0.150) |
| Half Proof Negative | 10 | 2334 (48.75) | | | | |
| Proof Negative | 30 | 4668 (97.50) | 1 | 2.845 (0.112) | 1.600 (0.063) | 3.810 (0.150) |

Note #4: *Deflection/Set for Location 1 measured at center of top rail.*

Conditions, Terms, and General Notes Regarding These Tests

The product tested **Has Been** compared to the detailed drawing, bill of materials and fabrication information supplied by the client so named herein. Our analysis, which includes dimensional and component description comparisons, indicate the tested product and engineering information supplied by the client **"Are Equivalent"**. The report and representative samples will be retained for four years from the date of initial test.

These test results were obtained by employing all requirements of the designated test methods with no Deviations unless explicitly noted in test report. The test results and specimen supplied for testing are in compliance with the reference.

The test results are specific to the product tested by this laboratory and of the sample supplied by the client named herein, and they relate to no other product either manufactured by the client, a fabricator of the client or of the client or of installed field performance.


This test report does not constitute certification of this product, but only that the above test results were obtained using the designated test methods and they indicate compliance with the performance requirements (paragraphs as listed) of the above referenced specifications.

Testing Evaluation Laboratories, Inc. makes no opinions or endorsements regarding this product and its performance. This report may not be reproduced or quoted in partial form without the expressed written approval of Testing Evaluation Laboratories, Inc.

Testing Evaluation Laboratories, Inc.'s letter, reports, its name or insignia or mark are for the exclusive use of the client so named herein and any other use is strictly prohibited. The report, letters and the name of Testing Evaluation Laboratories, Inc., its seal or mark shall not be used in any circumstance to the general public or in any advertising.

Limitation of liability: Due diligence was used in performing the tests and reporting the results. By acceptance of this report, this client agrees to hold harmless and indemnify Testing Evaluation Laboratories, Inc., its employees and officers and owners against all claims and demands of any kind whatsoever, which arise out of or in any manner connected with the performance of work referred to herein.

Testing Evaluation Laboratories, Inc.



Vivian K. Wright,
President

Revision Log

| Rev No. | Date | Page(s) | Revision(s) |
|---------|-----------|---------|-----------------------|
| 0 | 6/14/2014 | NA | Original Report Issue |

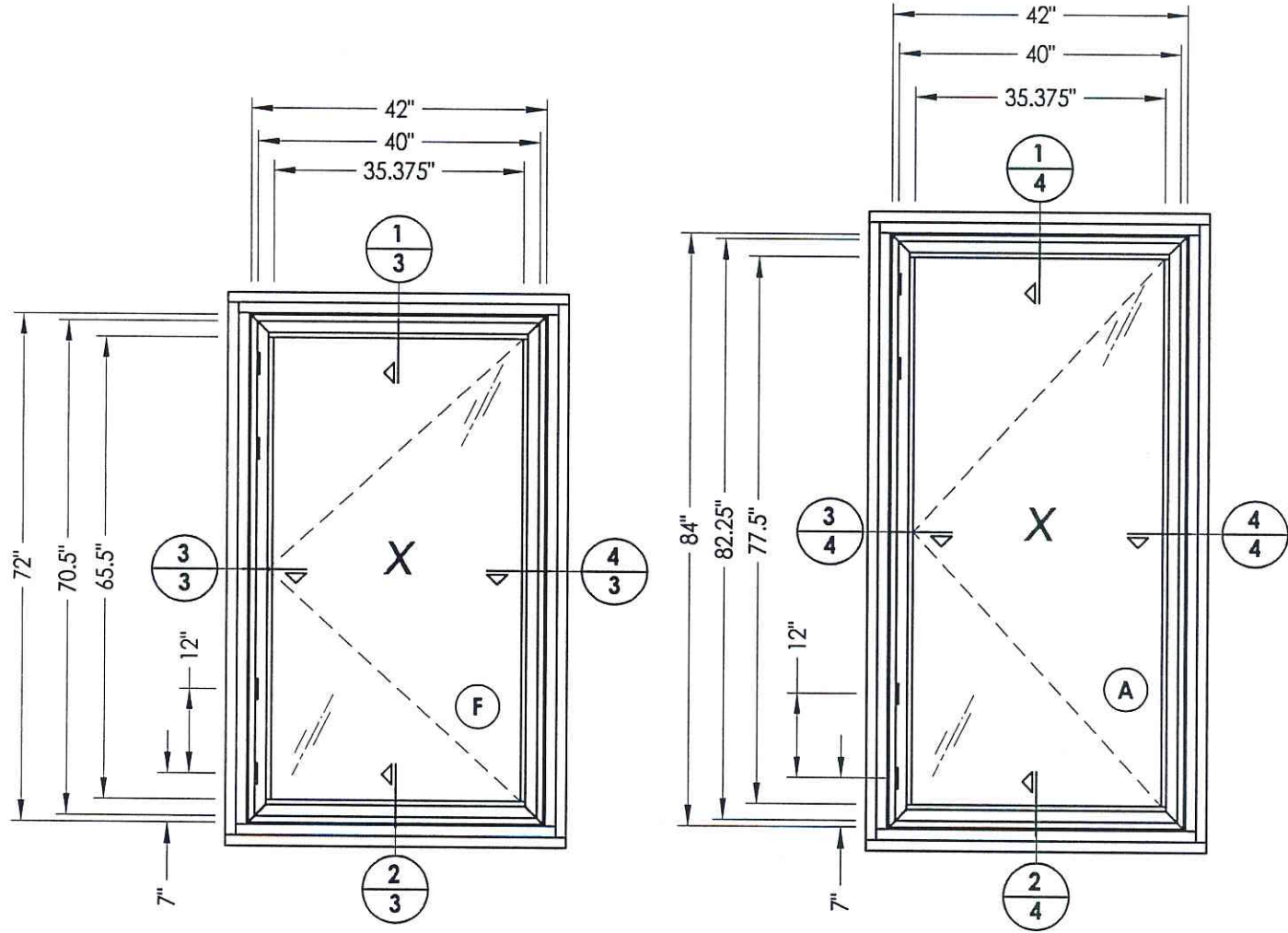
| TABLE OF CONTENTS | |
|-------------------|--|
| SHEET # | DESCRIPTION |
| 1 | Table of contents |
| 2 | Test elevation |
| 3 | Horizontal and vertical cross sections |
| 4 | Horizontal and vertical cross sections |
| 5 | Frame anchoring |
| 6 | Frame anchoring |
| 7 | Components |
| 8 | Glazing details |
| 9 | Bill of materials |

Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991036
 Date 6-14-14 Verified by gw



DATE: 6/14/14
 SCALE: N.T.S.
 DWG. BY: JK
 CHK. BY: LFS
 DRAWING NO.:
 L-7167
 SHEET 1 OF 9

| | |
|---|-----------|
| PRODUCT: | |
| FLEETWOOD Westwood 250 CASEMENT WINDOW | |
| PART OR ASSEMBLY: | |
| TABLE OF CONTENTS | |
| NO. | DATE |
| BY | REVISIONS |

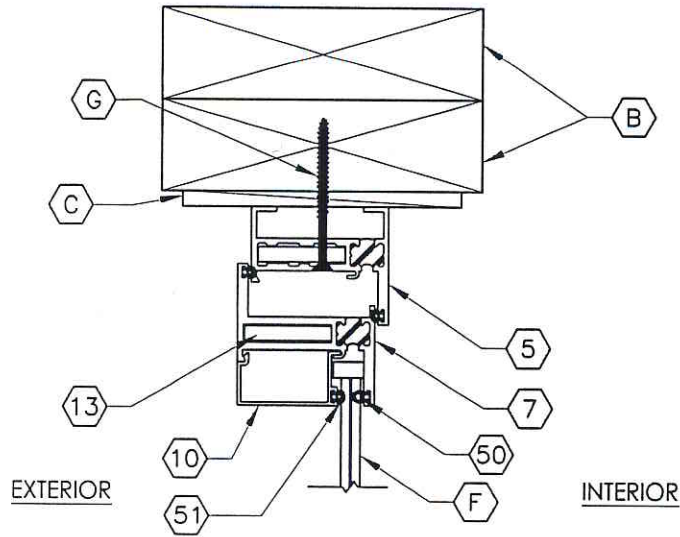


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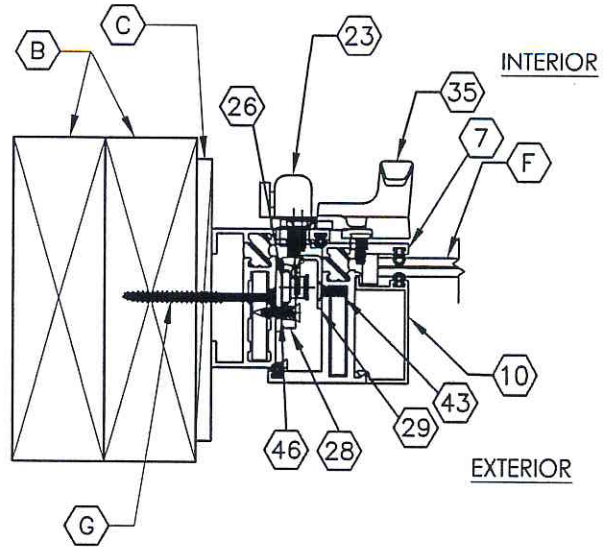
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Testing Evaluation Laboratories inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by JW

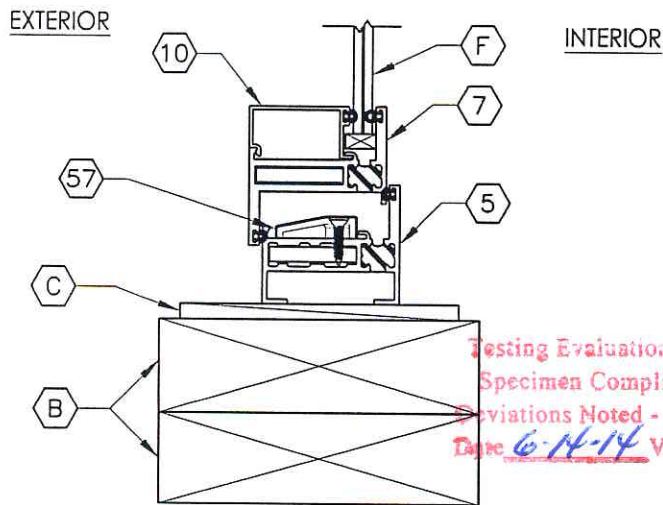
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| PART OR ASSEMBLY: | | TEST ELEVATION | |
| NO. | DATE | REVISIONS | BY |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| RW BUILDING CONSULTANTS, INC. 813.659.9197 | | | |
| DATE: 6/14/14 | | | |
| SCALE: N.T.S. | | | |
| DWG. BY: JK | | | |
| CHK. BY: LFS | | | |
| DRAWING NO.: L-7167 | | | |
| SHEET 2 OF 9 | | | |



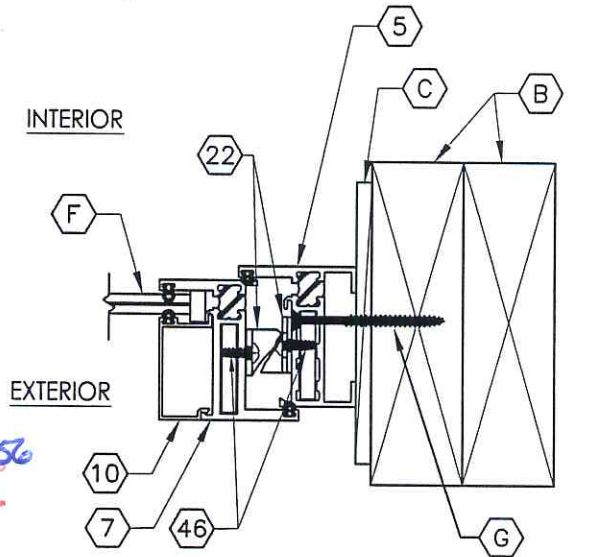
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3 VERTICAL CROSS SECTION



3
3 HORIZONTAL CROSS SECTION



2
3 VERTICAL CROSS SECTION



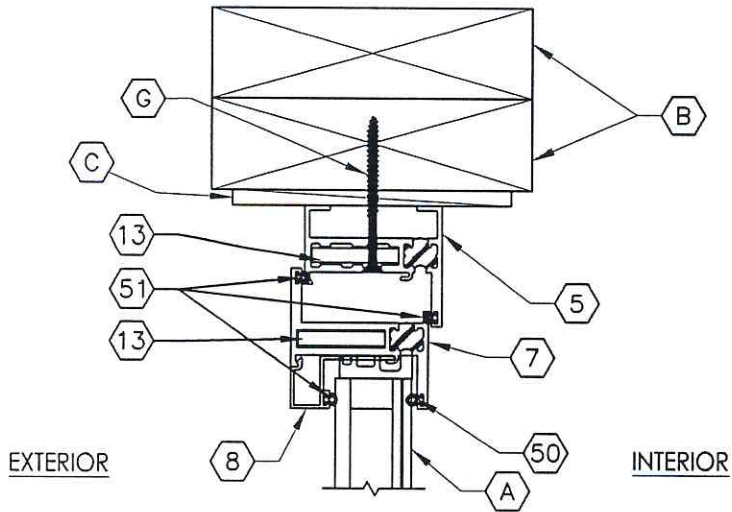
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3 HORIZONTAL CROSS SECTION

Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by gwo

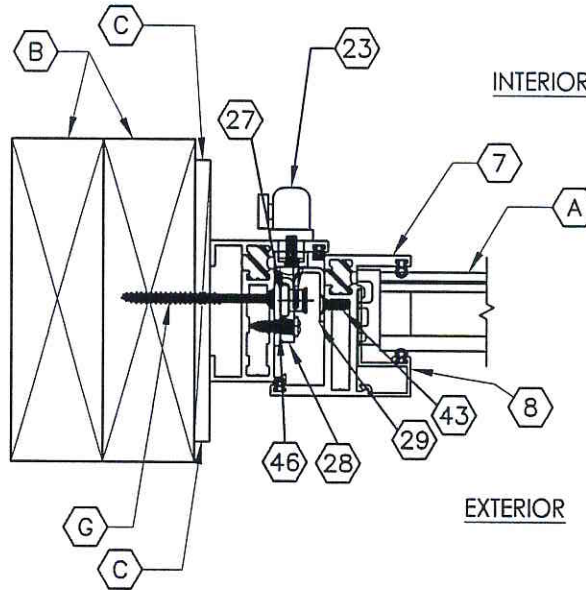
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| PART OR ASSEMBLY: | | HORIZONTAL AND VERTICAL CROSS SECTIONS | |
| NO. | DATE | BY | REVISIONS |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| DATE: 6/14/14 | | | |
| SCALE: N.T.S. | | | |
| DWG. BY: JK | | | |
| CHK. BY: LFS | | | |
| DRAWING NO.: | | | |
| L-7167 | | | |
| SHEET <u>3</u> OF <u>9</u> | | | |

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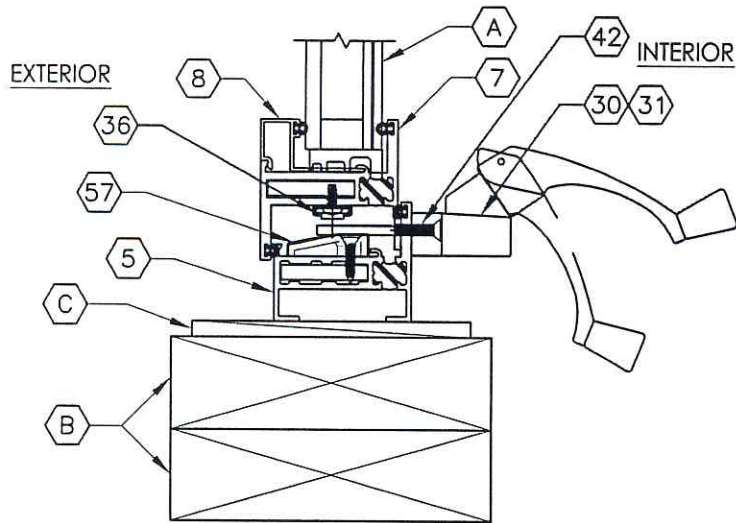
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 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991036
 Date 6-14-14 Verified by gjo



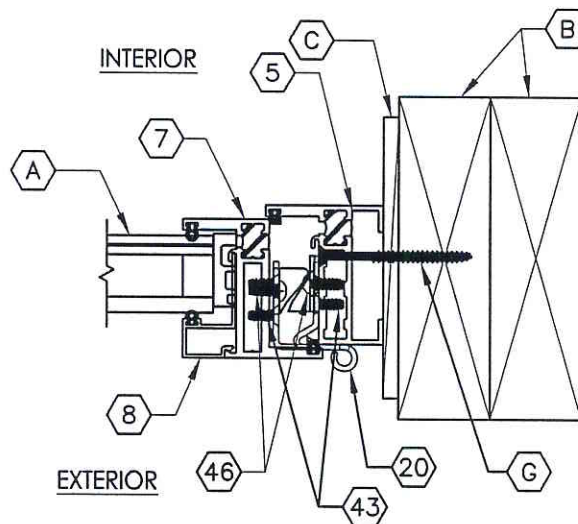
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4 VERTICAL CROSS SECTION




3
4 HORIZONTAL CROSS SECTION



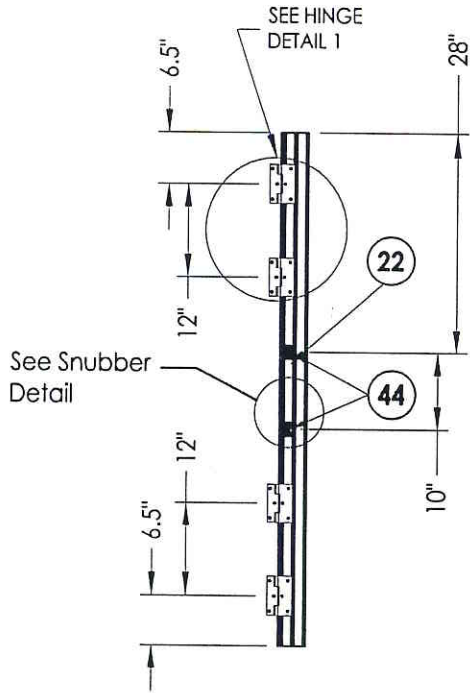
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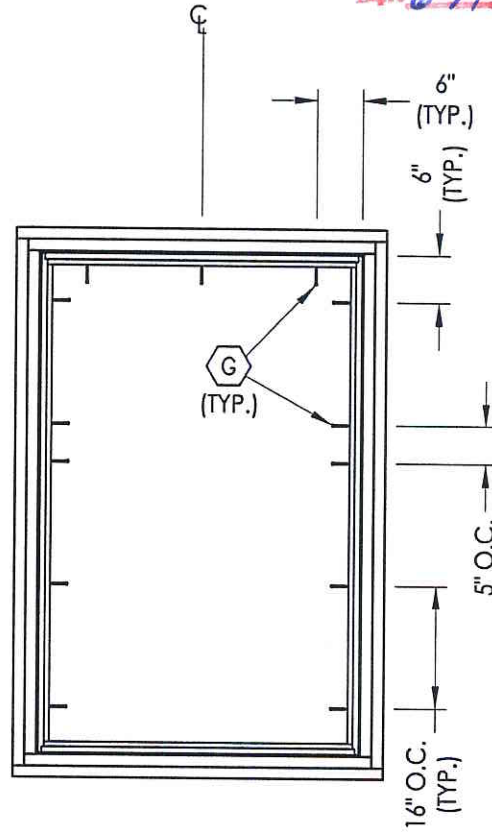
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4 HORIZONTAL CROSS SECTION

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| PART OR ASSEMBLY: | | HORIZONTAL AND VERTICAL CROSS SECTIONS | |
| NO. | DATE | BY | REVISIONS |
| | | | |
| | | | |
| | | | |
| | | | |
|  RW BUILDING CONSULTANTS, INC. 813.659.9197 | | | |
| DATE: 6/14/14 | | | |
| SCALE: N.T.S. | | | |
| DWG. BY: JK | | | |
| CHK. BY: LFS | | | |
| DRAWING NO.: | | | |
| L-7167 | | | |
| SHEET <u>4</u> OF <u>9</u> | | | |

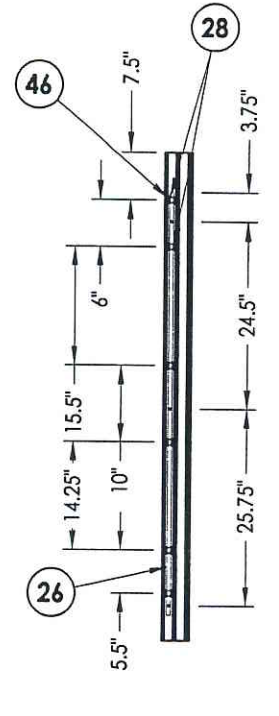
Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by gwo



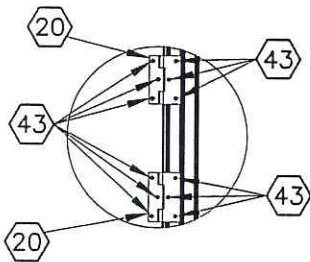
SNUBBER JAMB



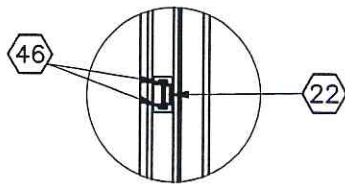
FRAME ANCHORING
2X buck construction



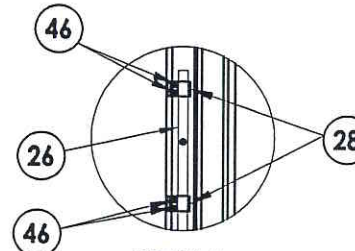
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Locking Points (3)



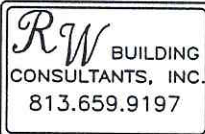
HINGE DETAIL



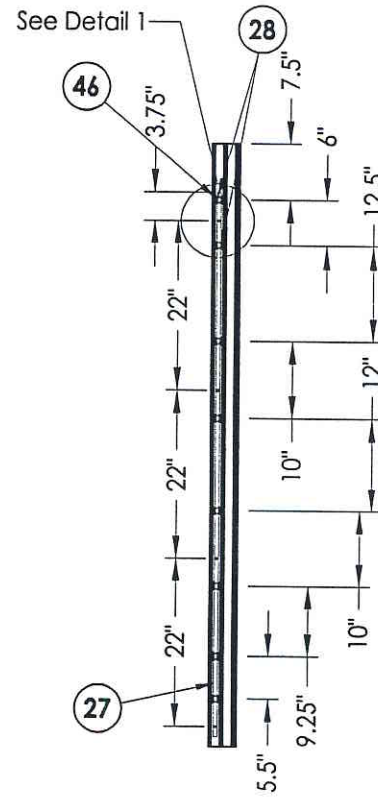
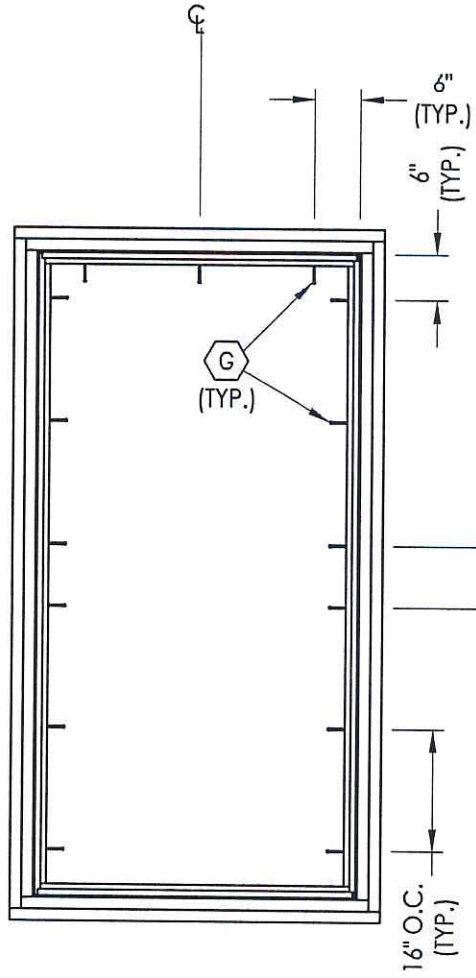
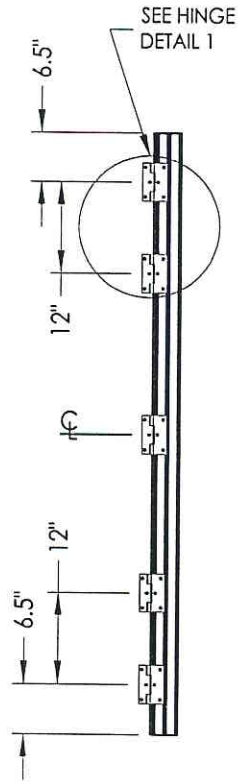
SNUBBER DETAIL



DETAIL 1

| | | | |
|---|------|---|-----------|
| PRODUCT: | | FLEETWOOD Westwood 250 CASEMENT WINDOW | |
| PART OR ASSEMBLY: | | FRAME ANCHORING | |
| NO. | DATE | BY | REVISIONS |
| | | | |
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|  | | | |
| DATE: 6/14/14 | | | |
| SCALE: N.T.S. | | | |
| DWG. BY: JK | | | |
| CHK. BY: LFS | | | |
| DRAWING NO.: L-7167 | | | |
| SHEET 5 OF 9 | | | |

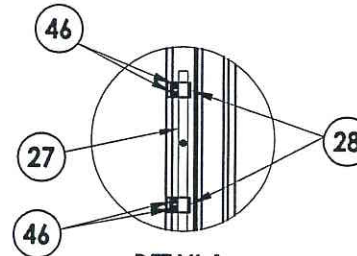
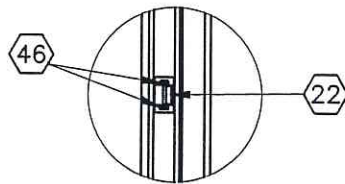
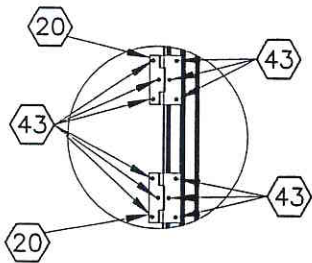
Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by *gjd*



HINGE JAMB

FRAME ANCHORING
2X buck construction

LOCK JAMB
Locking Points (4)



HINGE DETAIL

SNUBBER DETAIL

DETAIL 1

PRODUCT:

FLEETWOOD
Westwood 250 CASEMENT WINDOW

PART OR ASSEMBLY:

FRAME ANCHORING

| NO. | DATE | BY |
|-----------|------|----|
| REVISIONS | | |
| | | |
| | | |
| | | |
| | | |
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RW BUILDING
CONSULTANTS, INC.
813.659.9197

DATE: 6/14/14

SCALE: N.T.S.

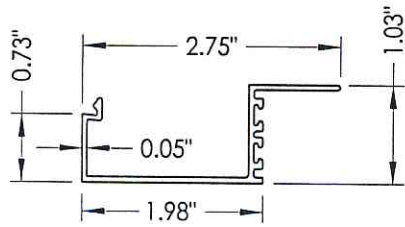
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CHK. BY: LFS

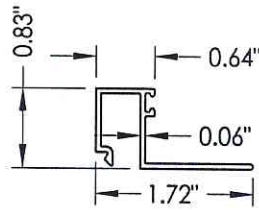
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L-7167

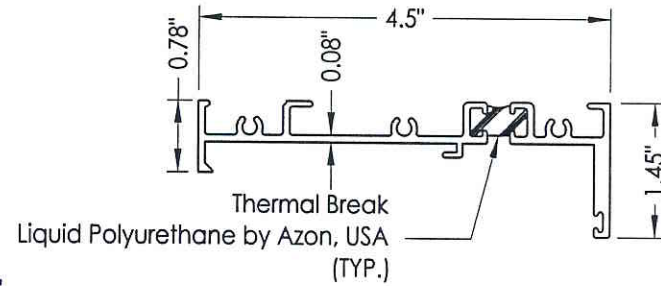
SHEET 6 OF 9



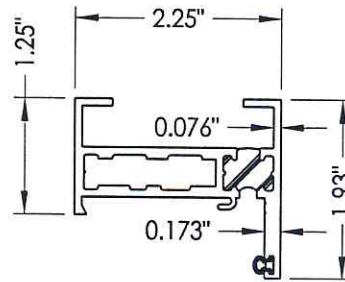
14 INSERT STOP
011448



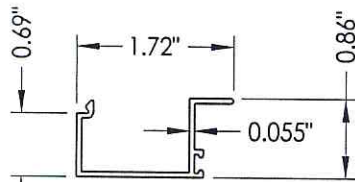
8 GLASS STOP 1-1/4"
901487



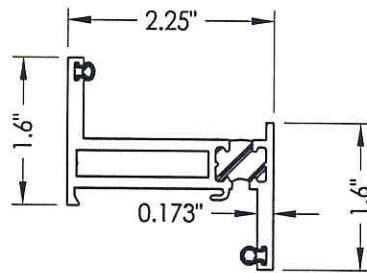
2 KONA BLOCK FRAME
011239



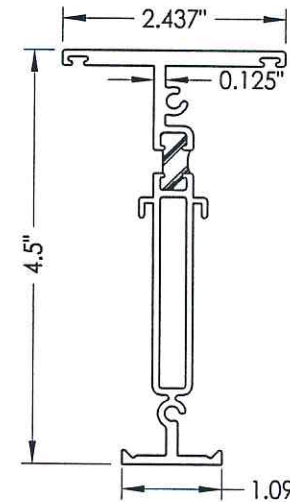
5 BLOCK FRAME
5278C1



10 GLASS STOP 5/16\", 7/16"
007930



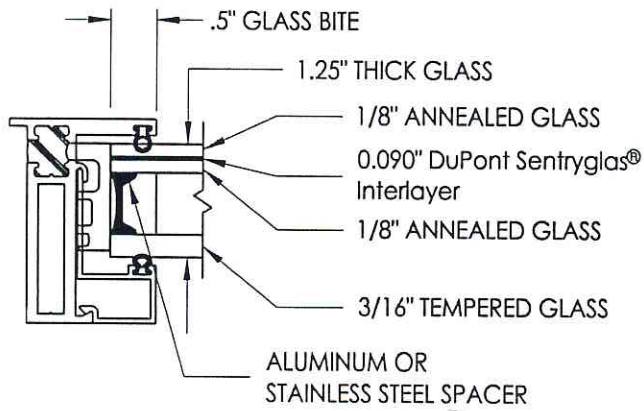
7 ZEE BAR (PANEL)
H006733



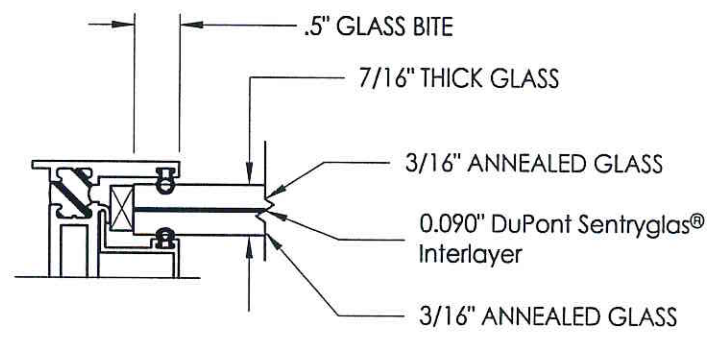
4 MULLION
H011241

Testing Evaluation Laboratories Inc
Specimen Complies with Drawing
Deviations Noted - TEL # 01991056
Date 6-14-14 Verified by gw

| | | | |
|------------------------|------|---|-----------|
| PRODUCT: | | FLEETWOOD Westwood 250 CASEMENT WINDOW | |
| PART OR ASSEMBLY: | | COMPONENTS | |
| NO. | DATE | BY | REVISIONS |
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| | | | |
| DATE: 6/14/14 | | | |
| SCALE: N.T.S. | | | |
| DWG. BY: JK | | | |
| CHK. BY: LFS | | | |
| DRAWING NO.: L-7167 | | | |
| SHEET 7 OF 9 | | | |



A GLAZING DETAIL



F GLAZING DETAIL


Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by gw

| | | | |
|----------------------------|------|---|----|
| PRODUCT: | | FLEETWOOD Westwood 250 CASEMENT WINDOW | |
| PART OR ASSEMBLY: | | COMPONENTS AND GLAZING DETAILS | |
| NO. | DATE | REVISIONS | BY |
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| | | | |
| DATE: 6/14/14 | | | |
| SCALE: N.T.S. | | | |
| DWG. BY: JK | | | |
| CHK. BY: LFS | | | |
| DRAWING NO.: L-7167 | | | |
| SHEET <u>8</u> OF <u>9</u> | | | |

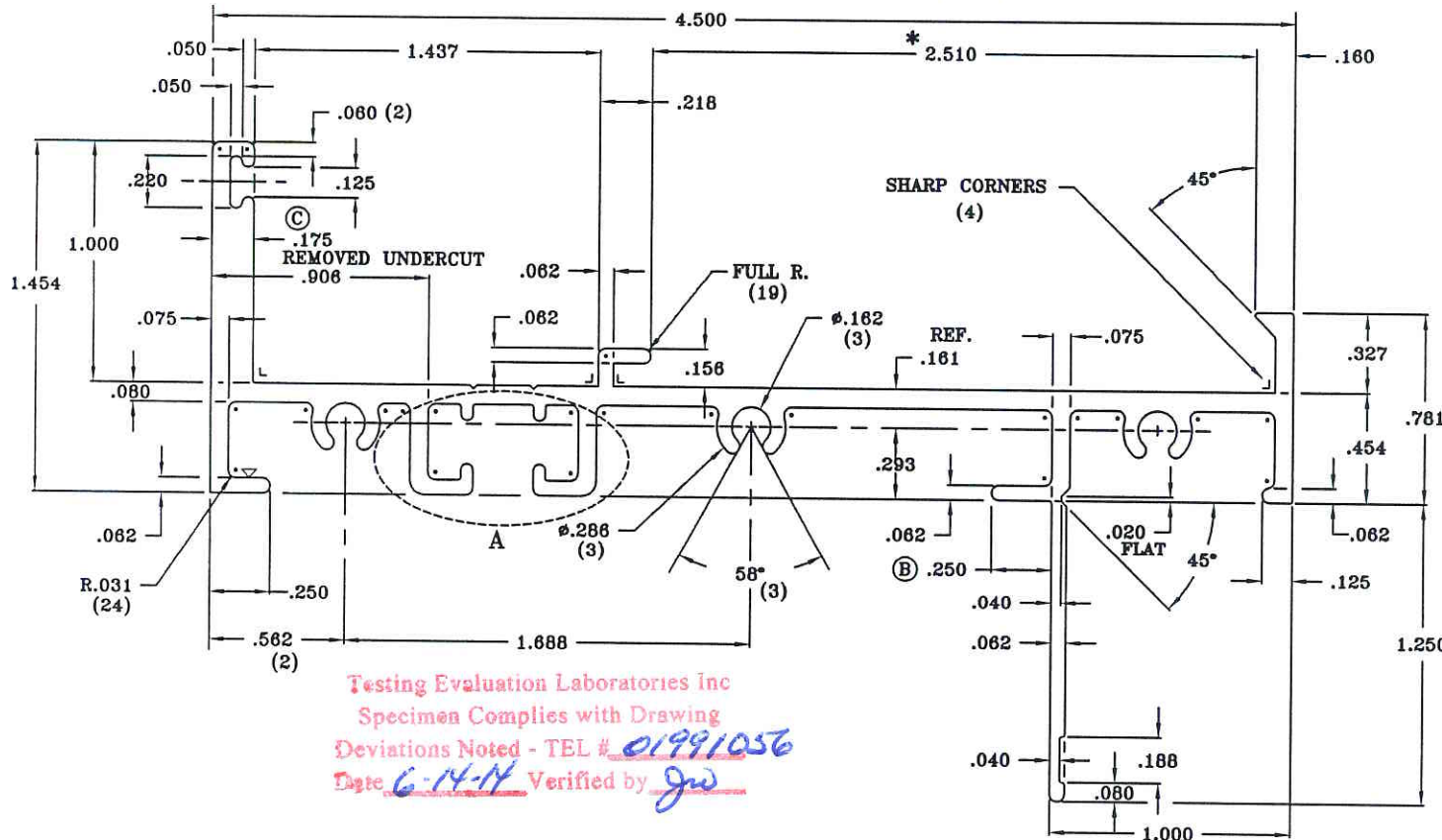
| BILL OF MATERIALS | | |
|-------------------|---------------------------------------|--------------|
| ITEM # | DESCRIPTION | MATERIAL |
| B | 2X BUCK SG >= 0.55 | WOOD |
| C | 1/4" MAX. SHIM SPACE | - |
| G | #10 x 2" PFH WOOD SCREW | STEEL |
| 2 | KONA BLOCK FRAME | 6063-T6 ALUM |
| 4 | MULLION | 6063-T6 ALUM |
| 5 | WESTWOOD BLOCK FRAME | 6063-T6 ALUM |
| 7 | WESTWOOD ZEE BAR (PANEL) | 6063-T6 ALUM |
| 8 | GLASS STOP (1-1/4") | 6063-T6 ALUM |
| 10 | GLASS STOP (7/16") | 6063-T6 ALUM |
| 13 | CORNER KEY | ALUM |
| 14 | INSERT STOP | ALUM |
| 20 | SS. BUTT HINGE | SS |
| 21 | 4 BAR HINGE | SS |
| 22 | SNUBBER | ZINC ALLOY |
| 23 | MULTIPOINT LOCK HANDLE | SS |
| 26 | 3 POINTS LOCKING BAR | SS |
| 27 | 4 POINTS LOCKING BAR | SS |
| 28 | TIE BAR GUIDE | PLASTIC |
| 29 | KEEPER | SS |
| 30 | CASEMENT ROTOR GEAR 13.5" | SS |
| 35 | CAM HANDLE / STRIKE PLATE | SS |
| 36 | CASEMENT SS. TRACK | SS |
| 40 | #10 X 1" PPH SMS | STEEL |
| 42 | MACHINE SCREW NO 10-32, FHP .75" | STEEL |
| 43 | SCREW NO 10, UFHP .5" | STEEL |
| 44 | SCREW NO 8, PHP, .50" | STEEL |
| 46 | SCREW NO 8, FHP, .750" | STEEL |
| 47 | MACHINE SCREW NO 10-32, PHP .5" | STEEL |
| 48 | BACK UP NUTS | STEEL |
| 50 | BULB VINYL (EPDM 70 DUROMETER)-TREMCO | - |

| | | |
|----|---|---|
| 51 | MINI BULB VINYL(EPDM 70 DUROMETER)-TREMCO | - |
| 52 | WOOD BLOCK .750" X 1.250" | - |
| 53 | ALUMINUM BLOCK .750" X 1.250" | - |
| 54 | PVC BLOCK .750" X 1.250" | - |
| 55 | SETTING BLOCK | - |
| 56 | SETTING BLOCK 4" x 1/4" x 1" | - |
| 57 | PIVOT SHIM | - |
| 58 | WOOD BLOCK .50" X 1.250" | - |
| 59 | ALUMINUM BLOCK .50" X 1.250" | - |
| 60 | PVC BLOCK .50" X 1.250" | - |
| 61 | SETTING BLOCK 4" x 1/8" x 1" | - |

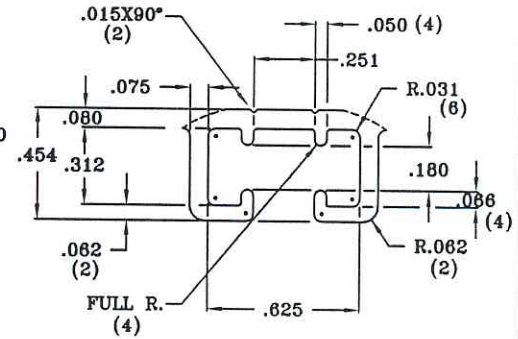
Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by gw

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|---|--|-----|------|-----------|----|
| PRODUCT: FLEETWOOD Westwood 250 CASEMENT WINDOW | PART OR ASSEMBLY: BILL OF MATERIALS | NO. | DATE | REVISIONS | BY |
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| DATE: 6/14/14 | | | | | |
| SCALE: N.T.S. | | | | | |
| DWG. BY: JK | | | | | |
| CHK. BY: LFS | | | | | |
| DRAWING NO.: L-7167 | | | | | |
| SHEET 9 OF 9 | | | | | |

FITS WITH PART# FILE 27177, FILE 27179, & FILE 27180



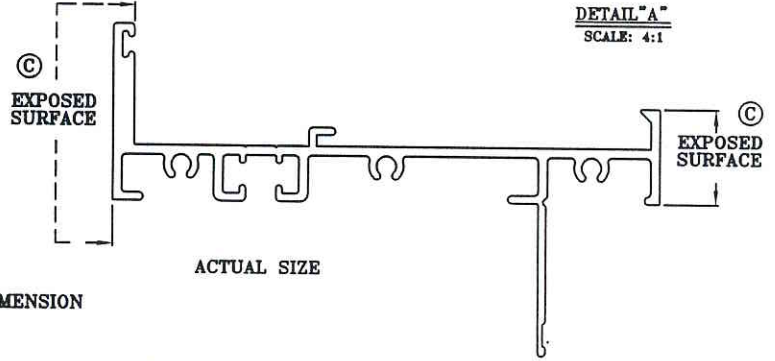
THMAL FILL AREA = .193 SQ. IN.



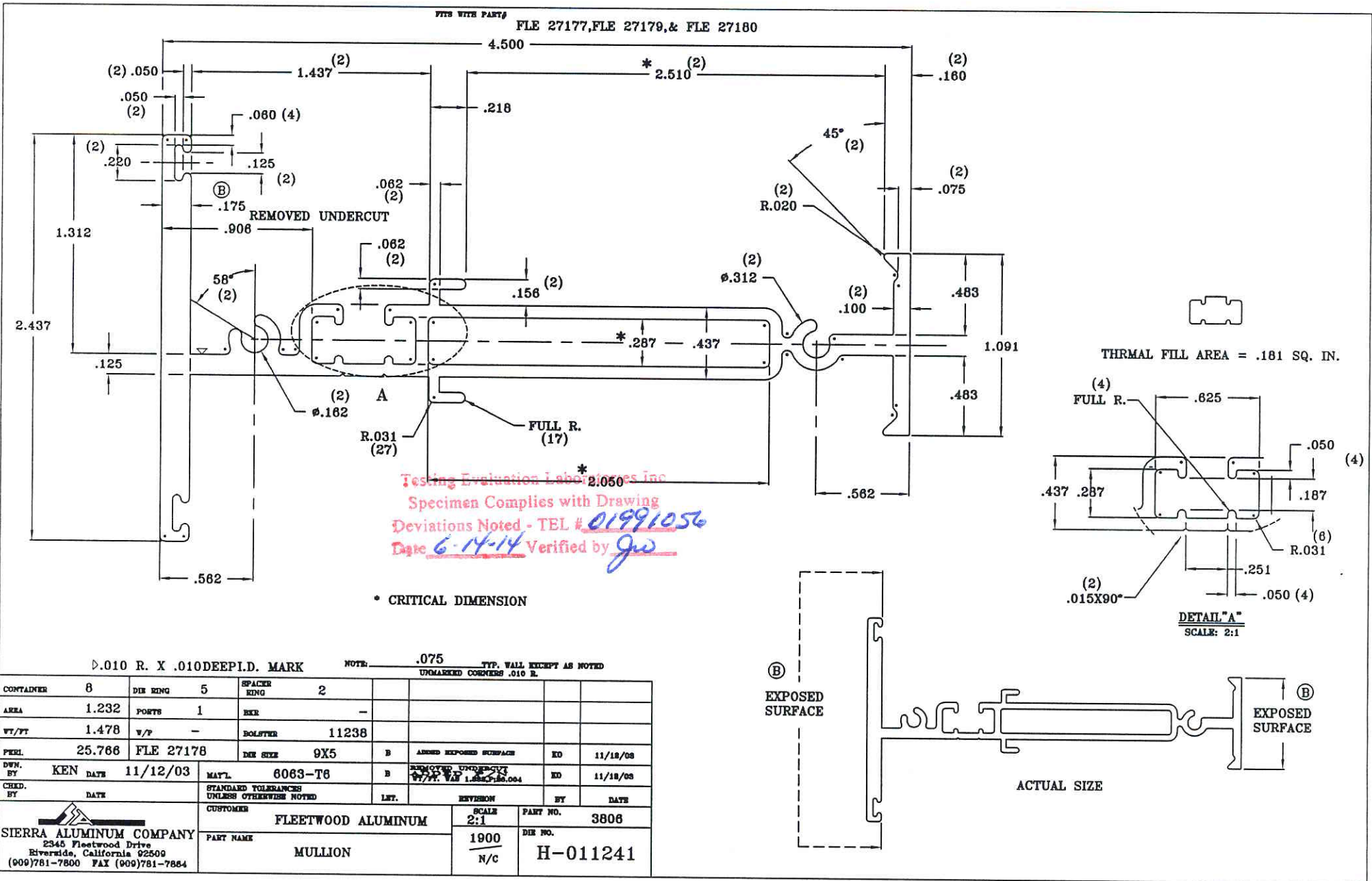
Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by jw

D.010 R. X .010DEP.I.D. MARK NOTE: .075 TYP. WALL EXCEPT AS NOTED UNMARKED CORNERS .010 R.

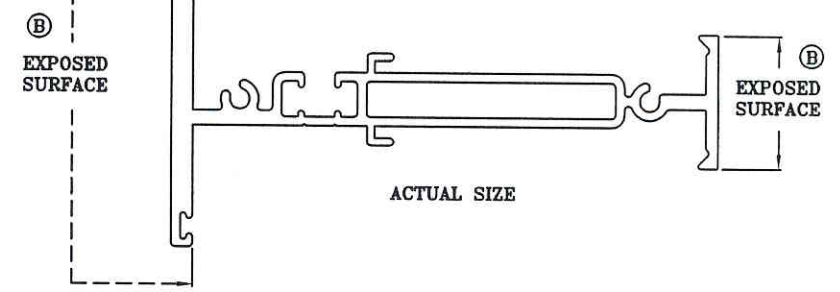
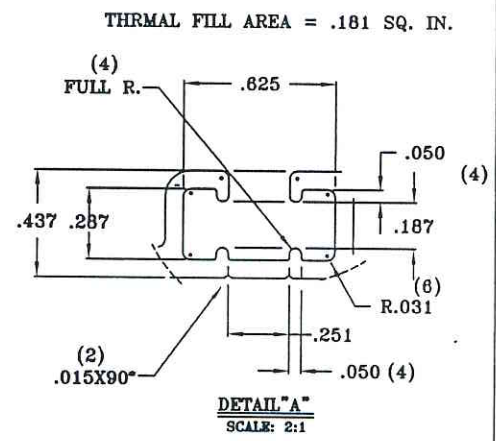
| | | | | | | | | | |
|--|--------|--------------------|----------|--|---------|----------|---|----|----------|
| CONTAINER | 7/8 | DIE RING | 5 | SPACER RING | 2 | | | | |
| AREA | .921 | PORTS | 1 | EEK | 11238 | | | | |
| WT/WT | 1.105 | V/P | POCKET | BOLSTER | 11238 | C | ADDED MISSING DIM. TO PART NAME | ED | 11/18/08 |
| PKEL | 22.854 | FLE 27176 | DIE SIZE | 9X2 | | C | REMOVED UNDERCUT WT/WT WAS 1.087,P:83.097 | ED | 11/18/08 |
| DWN. BY | KEN | DATE | 11/12/03 | MAT'L | 6063-T6 | B | ADDED MISSING DIM. | ED | 7/23/01 |
| CHKD. BY | | DATE | | STANDARD TOLERANCES UNLESS OTHERWISE NOTED | | LET. | REVISION | BY | DATE |
| SIERRA ALUMINUM COMPANY | | FLEETWOOD ALUMINUM | | SCALE | 2:1 | PART NO. | 3805 | | |
| 2345 Fleetwood Drive Riverside, California 92509 (909)781-7800 FAX (909)781-7864 | | PART NAME | | 930 | N/C | DIE NO. | 011239 | | |
| | | 4.500 FRAME BLOCK | | | | | | | |

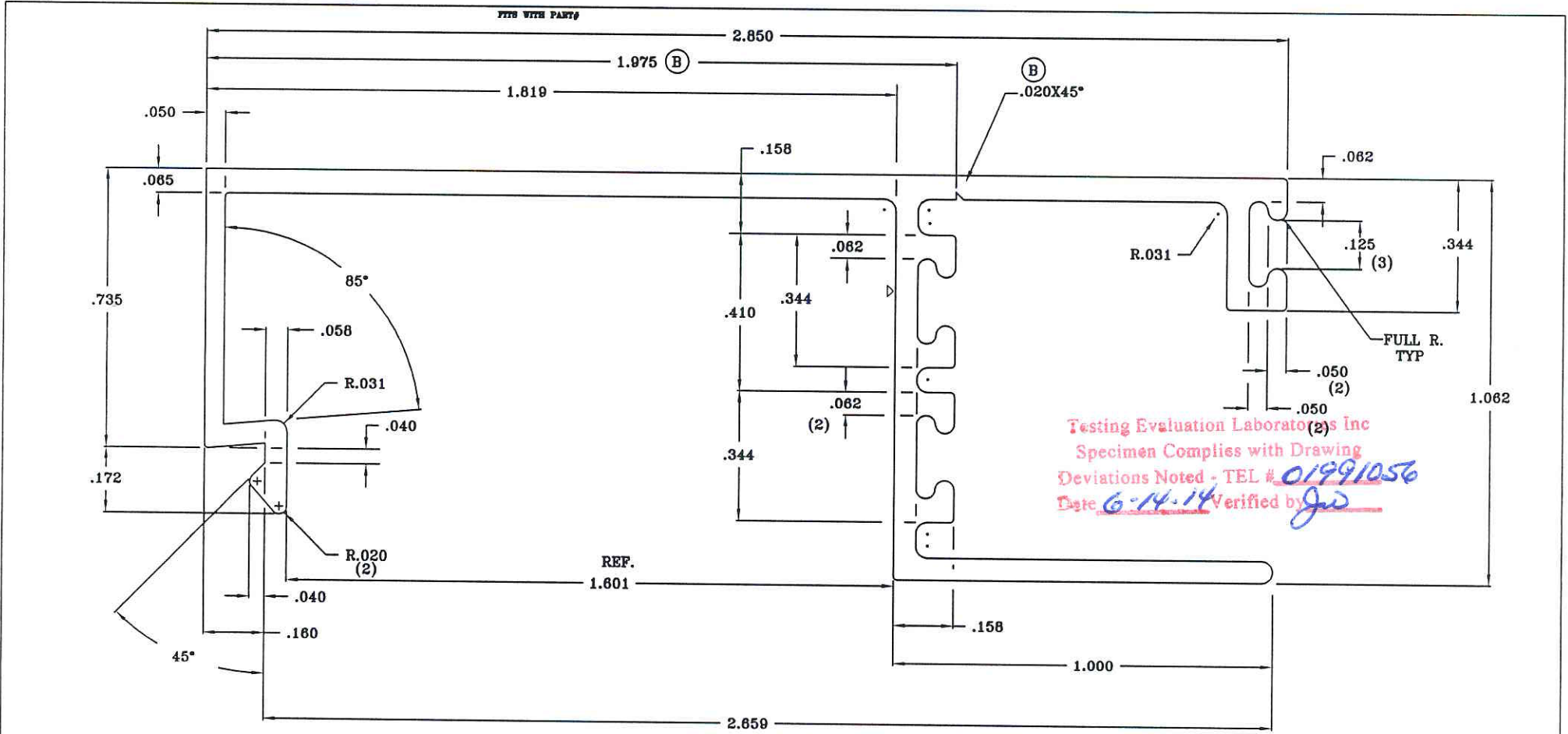


* CRITICAL DIMENSION



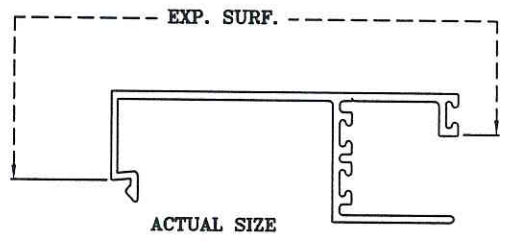
Testing Evaluation Laboratories Inc
Specimen Complies with Drawing
Deviations Noted - TEL # 01991056
Date 6-14-14 Verified by *JW*



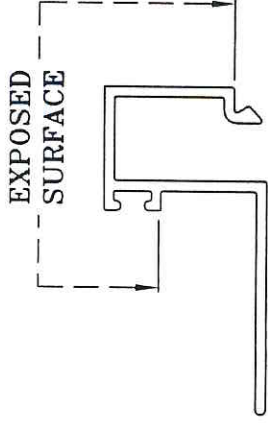


0.010 R. X .010 DEEPL.D. MARK NOTE: .058 TYP. WALL THICKNESS AS NOTED
 UNMARKED CORNERS .010 R.

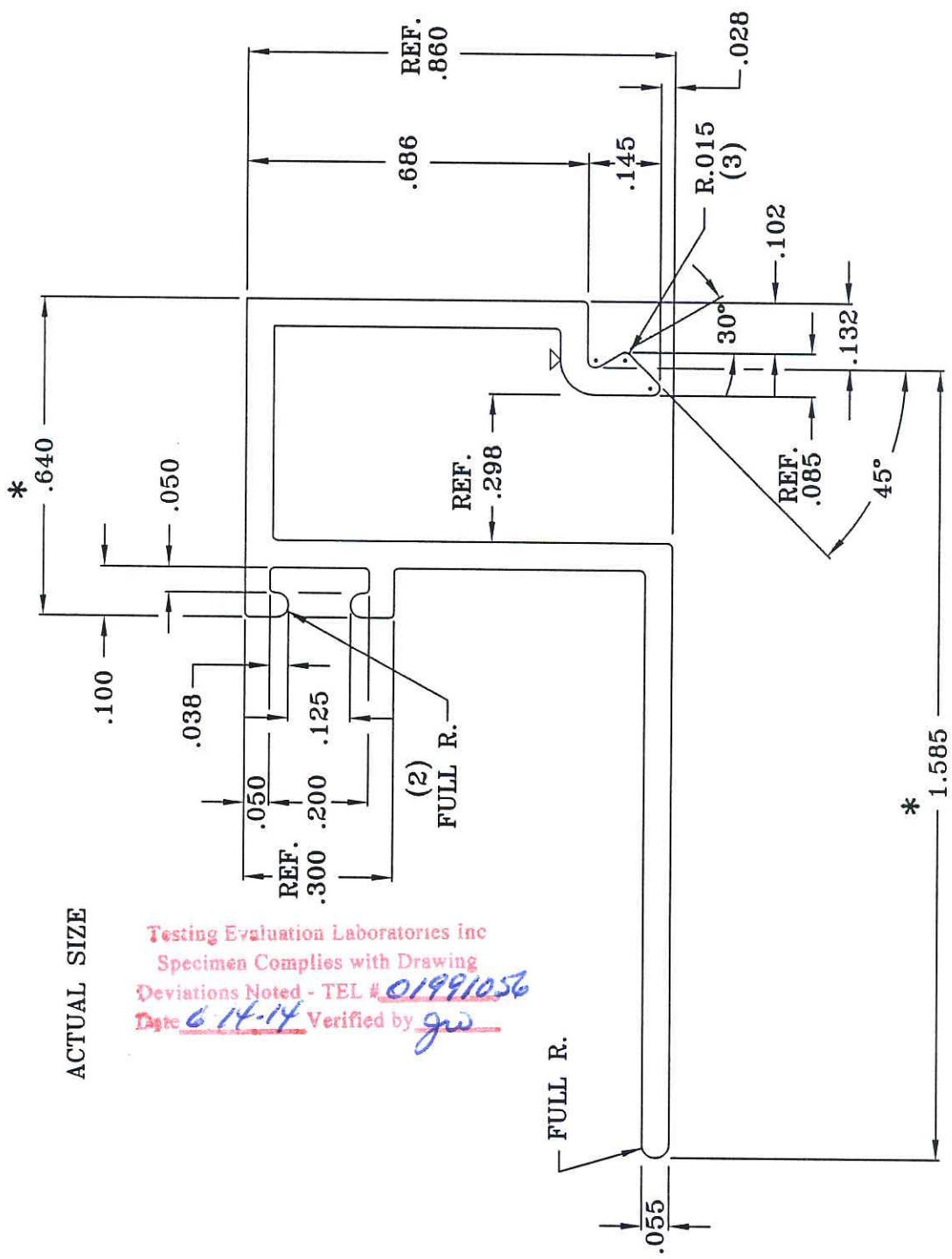
| | | | | | | | | | |
|---|--------|----------|---------|--|---------|--------------|-------------------|----|---------|
| CONTAINER | 8 | DIE KING | 5 | SPACER KING | 2 | | | | |
| AREA | .415 | POSTS | 3 | HEEL | 011448 | | | | |
| WT./FT | .498 | W/P | POCKET | BOLSTER | 3-8 | | | | |
| PERL. | 13.469 | FLE | 28807 | DIE SIZE | 9X2 | | | | |
| DWN. BY | KEN | DATE | 4/24/02 | MAT'L. | 6063-T6 | B | RELOCATE .000X45° | ED | 9/28/08 |
| CHD. BY | | DATE | | STANDARD TOLERANCES UNLESS OTHERWISE NOTED | | LET. | REVISION | BY | DATE |
| SIERRA ALUMINUM COMPANY 2345 Fleetwood Drive Riverside, California 92509 (909)781-7800 FAX (909)781-7884 | | | | CUSTOMER FLEETWOOD ALUMINUM | | SCALE 4:1 | PART NO. 3811 | | |
| | | | | PART NAME GLASS STOP | | N/C | DIE NO. 011448 | | |



FITS WITH PART #



ACTUAL SIZE



Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by gw

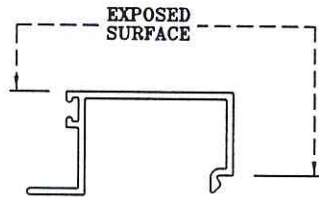
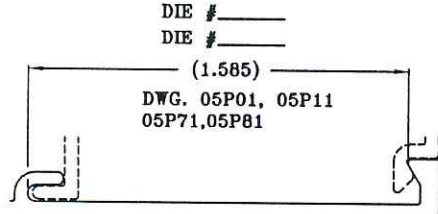
* CRITICAL DIMENSION

>.010 R. X .010DEEPI.D. MARK

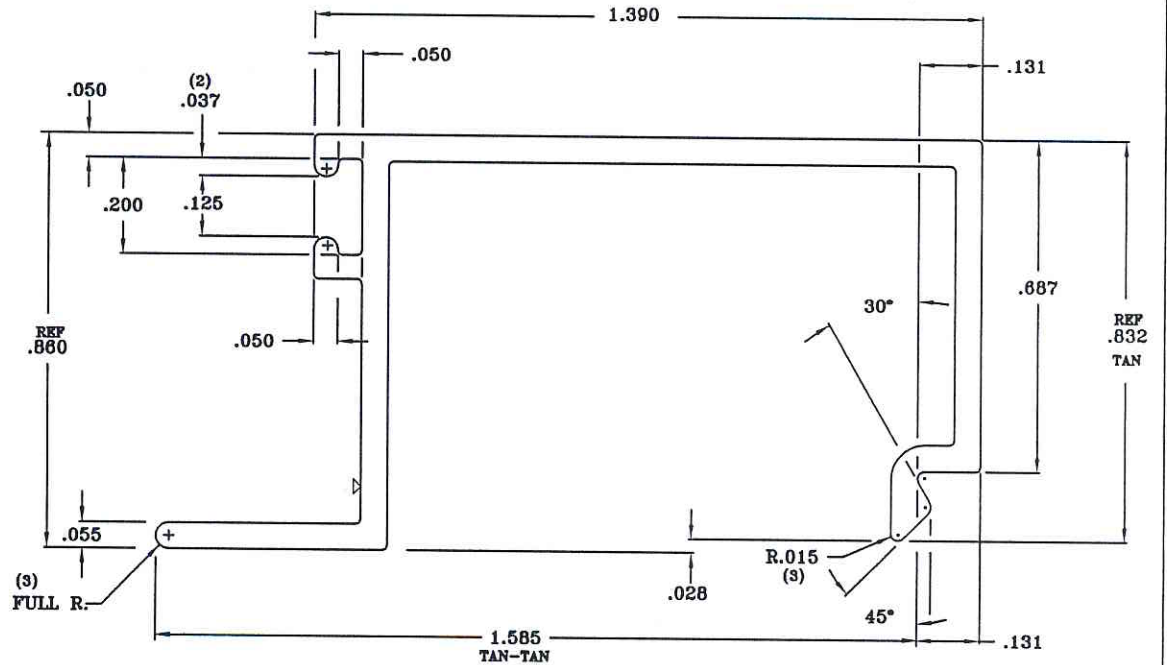
NOTE: .055 TYP. WALL EXCEPT AS NOTED
 UNMARKED CORNERS .010 R.

| | | | | | |
|---------------------------------|-------|----------|---------------------------|--|---------|
| CONTAINER | 7 | DIE RING | 5 | SPACER RING | 2 |
| AREA | .202 | PORTS | 4 | BKR | 901487 |
| WT/FT | .242 | W/P | POCKET | BOLSTER | STD-4 |
| PERI. | 7.360 | FLE33161 | | DIE SIZE | 9X2 |
| DWN. BY | KEN | DATE | 3/12/04 | MAT'L | 6063-T6 |
| CHKD. BY | | DATE | | STANDARD TOLERANCES UNLESS OTHERWISE NOTED | |
| SIERRA ALUMINUM COMPANY | | | CUSTOMER | | |
| 2345 Fleetwood Drive | | | FLEETWOOD WINDOWS & DOORS | | |
| Riverside, California 92509 | | | PART NAME | | |
| (909)781-7800 FAX (909)781-7864 | | | SCALE 2:1 | | |
| | | | REVISION | | |
| | | | BY | | |
| | | | DATE | | |
| | | | PART NO. 05P12 | | |
| | | | DIE NO. 901487 | | |

FIGS WITH PARTS



ACTUAL SIZE



▷.010 R. X .010HIGH I.D. MARK

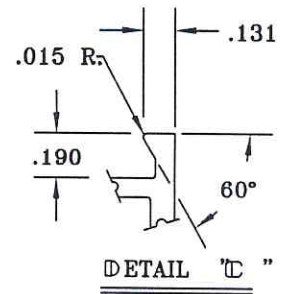
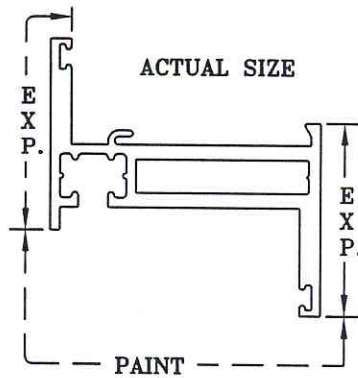
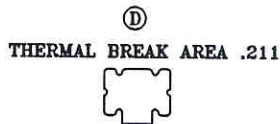
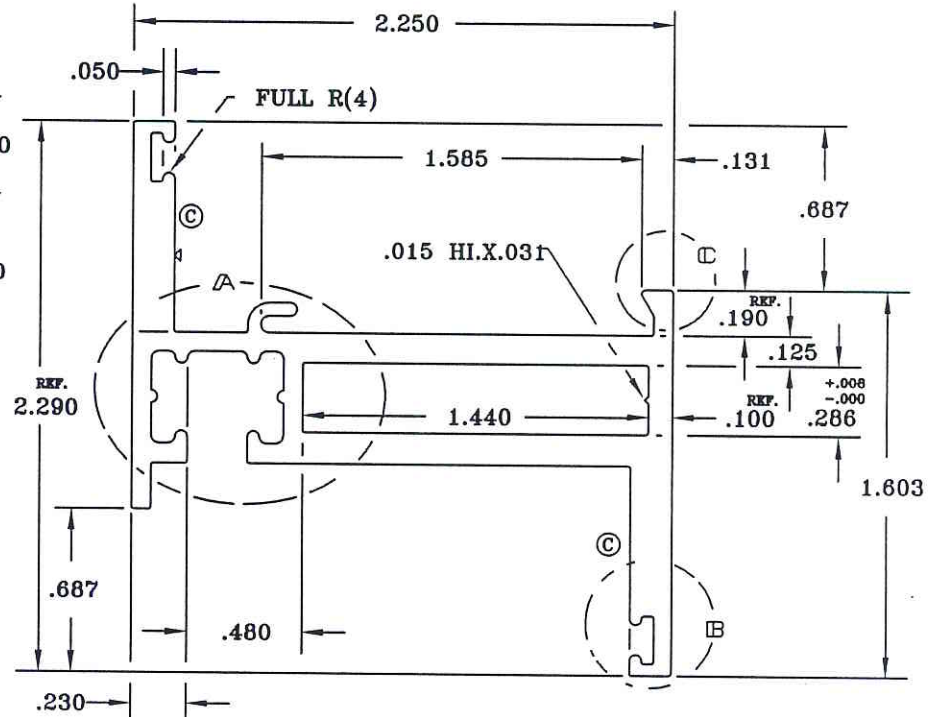
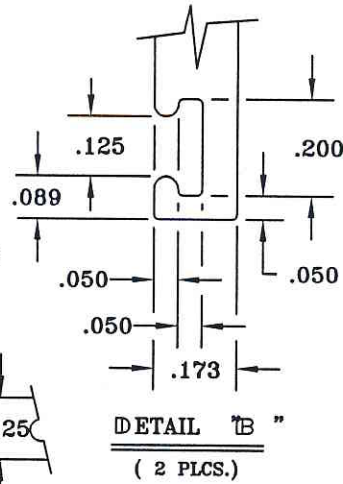
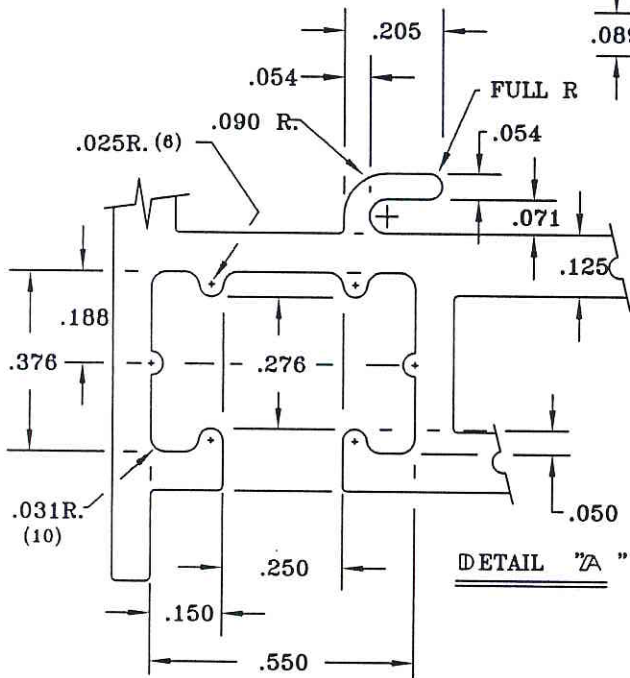
NOTE: .055 TYP. WALL EXCEPT AS NOTED
 UNMARKED CORNERS .010 R.

| | | | | | | | | | |
|---|-------|----------|---------|---|---------|--------------|-------------------|----------|--------|
| CONTAINER | 7 | DIE RING | 4 | SPACER RING | 3 | | | | |
| AREA | .202 | POINTS | 4 | HEX | 2372 | | | | |
| WT/PT | .242 | W/P | - | BOLSTER | 4-9 | | | | |
| FERR | 7.337 | FLE9686 | | DIE SIZE | 9x1 | | | | |
| DWN. BY | HILDA | DATE | 6/03/94 | MAT'L | 6063-T6 | | | | |
| CHEK. BY | | DATE | | STANDARD TOLERANCES UNLESS OTHERWISE NOTED | LET. | REVISION | BY | DATE | |
| SIERRA ALUMINUM COMPANY 2345 Fleetwood Drive Riverside, California 92509 (909)781-7800 FAX (909)781-7884 | | | | CUSTOMER FLEETWOOD ALUMINUM PRODUCTS PART NAME GLASS STOP 1/2" ...5000 | | SCALE 4:1 | PART NO. 05P08 | DEN. NO. | 007930 |

Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by *gaw*

FITS WITH PARTS

Testing Evaluation Laboratories Inc
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6/14/14 Verified by gw



0.010 R. X .010 DEEP I.D. MARK

NOTE: .080 STP. WALL EXCEPT AS NOTED UNMARKED CORNERS .010 R.

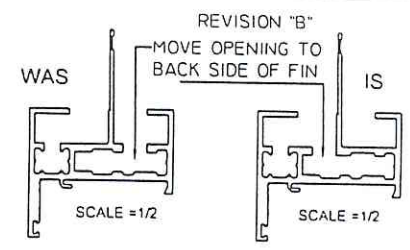
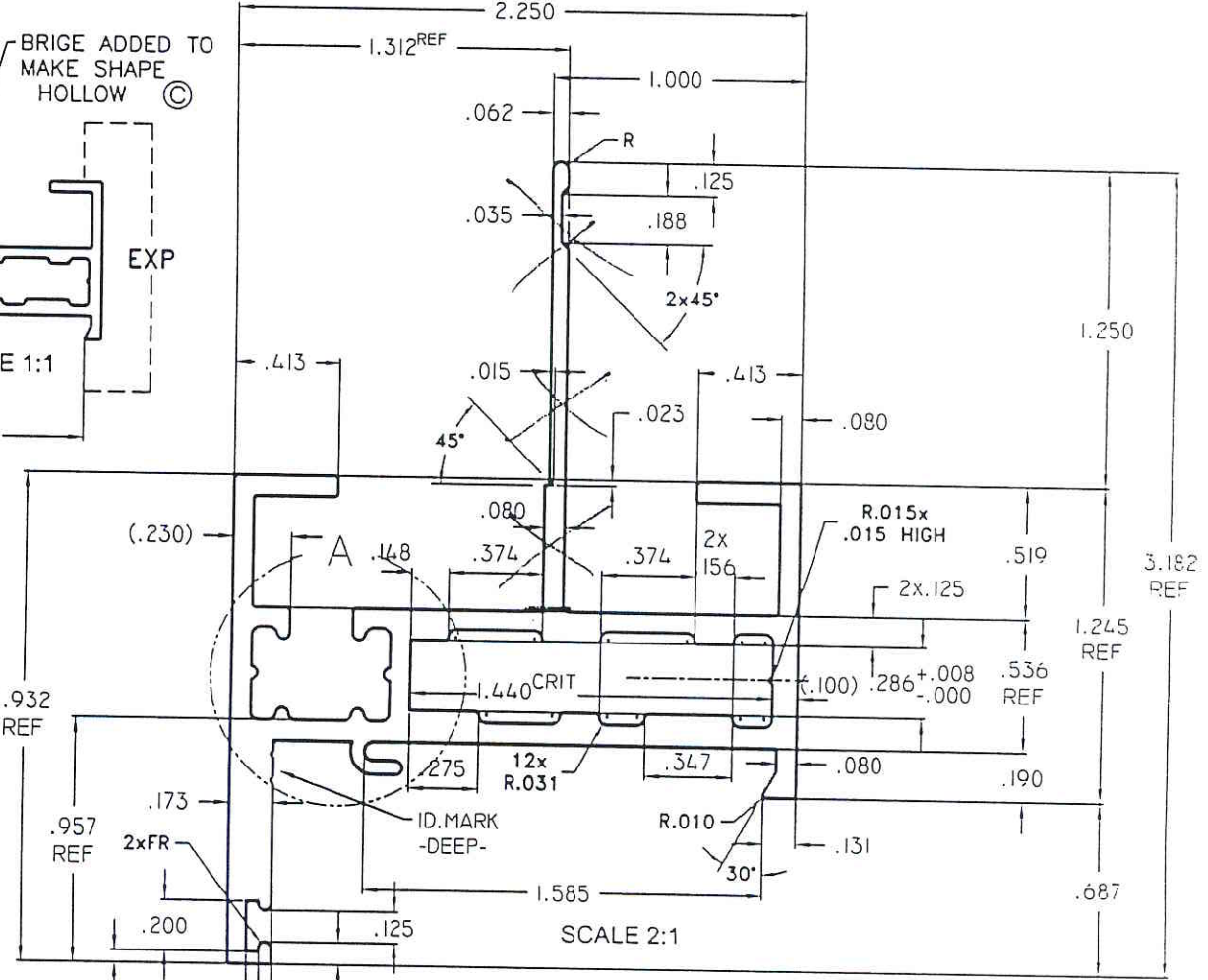
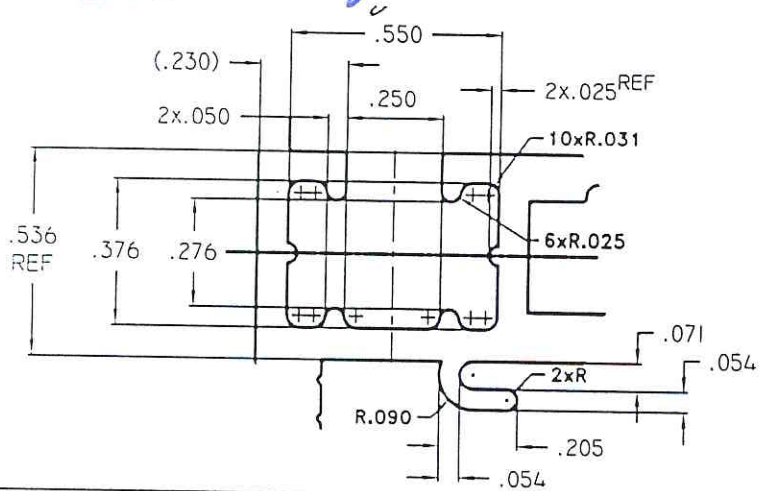
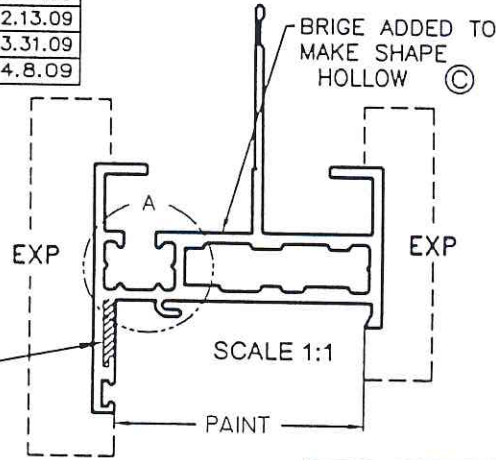
| | | | | | | | | |
|---|----------|-------------|---------|---|---------|--------------|---|---------------------|
| CONTAINER | DIR RING | SPACER RING | | | | | | |
| AREA | .897 | POSTS | 1 | REK | - | | | |
| WT/PT | 1.078 | V/P | - | BOLSTER | 1-2 | D | ADD THERMAL BREAK AREA | TAS 8/21/05 |
| PERL | 18.078 | FLEE6042 | | DIR SIZE | 9X5 | C | REMOVED UNDERCUTS WT/PT. WAS .978,P16.435 | ED 3/14/08 |
| DRN. BY | Waldo | DATE | 3/14/03 | MATL | 6063-T6 | B | REMOVED .185 STEP WT/PT. WAS 1.006,P16.418 | ED 7/16/08 |
| CHEK. BY | | DATE | | STANDARD TOLERANCES UNLESS OTHERWISE NOTED | | LET. | REVISION | BY |
| SIERRA ALUMINUM COMPANY 2345 Fleetwood Drive Riverside, California 92509 (909)781-7800 FAX (909)781-7864 | | | | CUSTOMER FLEETWOOD ALUMINUM PRODUCTS, INC. | | SCALE 3:1 | PART NO. 05P11 | DIR NO. H-006733 |
| | | | | PART NAME ZEE BAR | | | | |

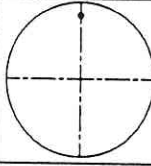
CUSTOMER: FLEETWOOD ALUMINUM PART NAME: 5000 INSIDE GLAZE PERIM. (NAIL-ON)
 PART NUMBER: 05P88

| EV | REVISIONS | BY | DATE |
|----|--|----|---------|
| | MATERIAL ADDED-SEE ACTUAL SIZE | CD | 3.11.03 |
| | SEE BELOW | CD | 2.13.09 |
| | NOW A HOLLOW DIE/.413 WAS .625/R.031(12) WAS R.031(10) | CD | 3.31.09 |
| 1 | REDRAWN | CD | 4.8.09 |

TB CAVITY TYPE CC
 AREA SQ" .210
 VOLUME CUBIC"/FT. 2.520

Testing Evaluation Laboratories, Inc.
 Specimen Complies with Drawing
 Deviations Noted - TEL # 01991056
 Date 6-14-14 Verified by *gjo*



| | | |
|---|-------------------------|--|
| UNMARKED WALLS: .080 | UNMARKED CORNERS: R.010 | UNMARKED FILLETS: R.010 |
| LESS OTHERWISE SPECIFIED, STANDARD ALUMINUM ASSOCIATION TOLERANCES APPLY • FRONTIER ID. MARK: TWO .010 R x .100 APART | | |
| REA .927 | PRESS 4 |  Frontier Aluminum Corp. 2480 Railroad St. Corona, Ca Ph: (951) 735-1770 Fax 735-1895 http://www.frontier-aluminum.com |
| T/FT 1.113 | PORTS 11x7-2H | |
| TRI. 21.012 | W/P HOLLOW | |
| CTOR 19 | BKR. HOLLOW | |
| C.D. 3.57 | BOL STD-2 | |
| AW: 0201/92 | RATIO: PRESS 1: | CLASS HOLLOW |
| | PRESS 2: | 17.205 |
| | PRESS 3: | ALLOY & TEMPER 6063-T6 |
| | | DIE NO. 5278 |
| | | REV. C1 |