



CITY OF ST. PETERSBURG, FLORIDA
PLANNING AND DEVELOPMENT SERVICES DEPARTMENT
URBAN PLANNING AND HISTORIC PRESERVATION DIVISION

STAFF REPORT

Community Planning and Preservation Commission Certificate of Appropriateness Request

Report to the Community Planning and Preservation Commission from the Urban Planning and Historic Preservation Division, Planning and Development Services Department, for Public Hearing and Executive Action scheduled for **October 11, 2022, beginning at 2:00 p.m.**, in Council Chambers of City Hall, 175 Fifth St. N., St. Petersburg, Florida. Everyone is encouraged to view the meetings on TV or online at <https://www.stpete.org/connect-with-us/stpete-tv.php>.

According to Planning & Development Services Department records, no Commission member or his or her spouse has a direct or indirect ownership interest in real property located within 2,000 linear feet of real property contained with the application (measured in a straight line between the nearest points on the property lines). All other possible conflicts should be declared upon the announcement of the item.



Case No.:	22-90200100
REQUEST:	Review of a Certificate of Appropriateness application for the replacement of four wood windows with vinyl sash windows in existing openings.
OWNERS:	Paul G. Macas and Connie B. Macas
APPLICANT:	West Shore Home
ADDRESS:	2145 4 th Avenue North
LEGAL DESCRIPTION:	BRONX BLK 4, LOT 14

PARCEL ID NO.: 24-31-16-11808-004-0140
LOCAL LANDMARK: Kenwood Section –Southeast Kenwood Local Historic District

Historical Context and Significance

The house and detached garage at 2145 4th Ave N ("the subject property") were constructed in 1925 in the Craftsman style. The one-story house was noted in the 1994 survey for its decorative beam extensions with gabled brackets. The house has one-over-one, wood, double hung sash windows, which appear to be original to the structure.

Project Description and Review

Project Description

COA application 22-90200100 proposes the replacement of four wood, one-over-one, double-hung sash windows on the west elevation of the property with vinyl, impact windows in the same configuration – one-over-one double hung sash windows.



Figure 1: Window proposed to be replaced.

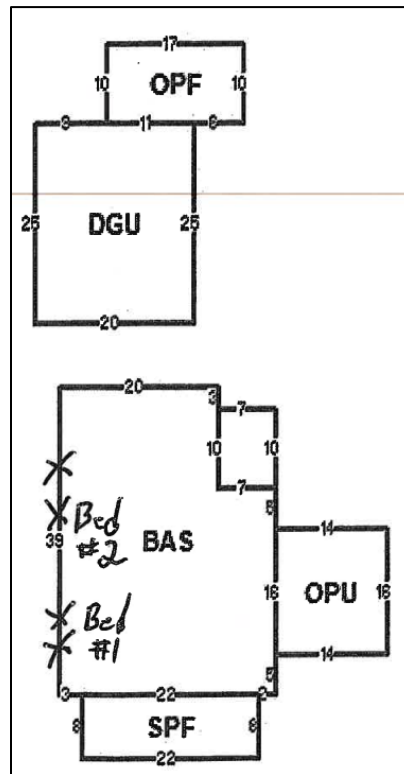


Figure 2: Site plan showing the windows to be replaced on the west elevation.

General Criteria for Granting Certificates of Appropriateness and Staff Findings

1. *The effect of the proposed work on the landmark or the property upon which such work is to be done.*

Partially Consistent

The proposal will not substantially affect the integrity of the Southeast Kenwood Local Historic District. However, the replacement of original and historic windows and doors will slightly diminish the subject property’s integrity of materials and workmanship.

The proposed windows are a different material than the extant original windows, but the configuration/design and operation will be retained.

2. *The relationship between such work and other structures on the landmark site or other property in the historic district.*

Consistent

The replacement windows replicate historic openings and therefore appropriately retain the district's overall rhythm.

3. *The extent to which the historic, architectural, or archaeological significance, architectural style, design, arrangement, texture and materials of the local landmark or the property will be affected.*

Generally Consistent

This application proposes to replace original one-over-one windows with new vinyl impact windows that will replicate the historic design and arrangement of the original windows.

4. *Whether the denial of a Certificate of Appropriateness would deprive the property owner of reasonable beneficial use of his or her property.*

**Information
not provided**

5. *Whether the plans may be reasonably carried out by the applicant.*

Consistent There is no indication that the applicant cannot carry out the proposal.

6. *A COA for a noncontributing structure in a historic district shall be reviewed to determine whether the proposed work would negatively impact a contributing structure or the historic integrity of the district. Approval of a COA shall include any conditions necessary to mitigate or eliminate negative impacts.*

**Not
applicable** The subject property is listed as a contributing property.

Additional Guidelines for Window Replacement

The City's historic preservation office, State of Florida Division of Historic Resources, and U.S. Department of Interior Technical Preservation Services can provide additional information relating to window repair and replacement for individual landmark buildings and properties within local historic districts. While preservation and repair of historic windows is often preferable, property owners may replace windows provided that each replacement window meets the following criteria:

1. *Impact resistance. The replacement window and glass shall be impact resistant;*

Consistent The windows will be impact resistant, per information provided by the application.

2. *Energy performance. The replacement window shall be Energy Star qualified for southern climate zones;*

Consistent

3. *Depth in wall. The replacement window shall be setback into the wall the same distance as the historic window;*

**Information
Not Provided**

4. *Frame size, shape and exterior trim. The replacement window shall be the same size and shape as the historic window and opening. Historic openings shall not be altered in size. Existing, exterior trim shall be retained, where practicable;*

Consistent The applicant is not proposing to change the window openings.

5. *Configuration. The replacement window shall have the same light configuration as the historic window. If the historic window configuration cannot be determined, the replacement window configuration shall be appropriate to the architectural style of the subject building;*

Consistent The one-over-one configuration will be replicated in the new windows.

6. *Proportions. The replacement window shall have the same visual qualities of the historic window, where commercially reasonable:*
- a. *Muntins and mullions. Where provided, muntins and mullions shall have the same dimensions and profile of the historic muntins and mullions.*
 - b. *Stiles. For hung windows, stiles shall align vertically and be the same width at the upper and lower sashes.*
 - c. *Top, meeting and bottom rails, and blind stop. The top, meeting and bottom rails of a hung window, including the corresponding blind stop, shall have the same dimensions and profile of the historic window.*

Consistent

7. *Finish. The finished surface and appearance shall match the historic window, where practicable.*

Inconsistent The window frames are vinyl, which is a visually modern material.

Summary of Findings, Certificate of Appropriateness Review

Staff evaluation yields a finding of the following criteria being met by the proposed project:

- General Criteria for Granting Certificates of Appropriateness: 4 of 5 relevant criteria fully or partially satisfied.
- Additional Guidelines for Window Replacement: 5 of 7 relevant criteria met.

Staff Recommendation

Based on a determination of general consistency with Chapter 16, City Code of Ordinances, staff recommends that the Community Planning and Preservation Commission **approve with conditions** the Certificate of Appropriateness request for the alteration of the property at 2145 4th Ave N, a contributing property to the Kenwood Section – Southeast Kenwood Local Historic District, subject to the following:

1. Windows will be installed to be setback within the wall plane and feature a reveal of approximately 3 inches, to match the window reveal on the other extant historic windows on the house.
2. The exterior casing, drip edge, and trim shall be preserved and reinstalled after window installation.
3. A historic preservation final inspection is required.
4. All other necessary permits shall be obtained. Any additional work shall be presented to staff for determination of the necessity of additional COA approval.
5. This approval will be valid for 24 months from the date of this hearing, with an expiration date of October 11, 2024.

Report Prepared By:



10/04/2022

Kelly Perkins, Historic Preservationist II
Urban Planning and Historic Preservation Division
Planning and Development Services Department

Date

Report Approved By:



10/04/2022

Derek S. Kilborn, Manager
Urban Planning and Historic Preservation Division
Planning and Development Services Department

Date

Appendix A:

Application 22-90200100



CERTIFICATE OF APPROPRIATENESS

APPLICATION

All applications are to be filled out completely and correctly. The application shall be submitted to the City of St. Petersburg's Planning and Development Services Department, located on the 8th floor of the Municipal Services Building, One Fourth Street North, St. Petersburg, Florida. Laura Duvekot, Historic Preservationist II, (727) 892-5451 or Laura.Duvekot@stpete.org

GENERAL INFORMATION

2145 4th Ave N St. Pete FL 33713
 Property Address

Kenwood
 Historic District / Landmark Name

Paul & Connie Macas
 Owner's Name

2145 4th Ave N St. Pete FL 33713
 Owner's Address, City, State, Zip Code

Ernest Oozco Permit Agent for Best Shore Home
 Authorized Representative (Name & Title), if applicable

3845 Gateway Centre Blvd #300 Pinellas Park FL 33782
 Representative's Address, City, State, Zip Code

84-31-16-11808-004-0140
 Parcel Identification No.

88-07000546
 Corresponding Permit Nos.

787-698-8596
 Property Owner's Daytime Phone No.

Owner's Email

727-205-1957
 Representative's Daytime Phone No.

FLPermitting@BestShoreHome.com
 Representative's Email

APPLICATION TYPE (Check applicable)		TYPE OF WORK (Check applicable)	
<input type="checkbox"/> Addition	<input type="checkbox"/> Window Replacement	<input type="checkbox"/> Repair Only	
<input type="checkbox"/> New Construction	<input type="checkbox"/> Door Replacement	<input type="checkbox"/> In-Kind Replacement	
<input type="checkbox"/> Demolition	<input type="checkbox"/> Roof Replacement	<input type="checkbox"/> New Installation	
<input type="checkbox"/> Relocation	<input type="checkbox"/> Mechanical (e.g. solar)	<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:			

AUTHORIZATION

By signing this application, the applicant affirms that all information contained within this application packet has been read and that the information on this application represents an accurate description of the proposed work. The applicant certifies that the project described in this application, as detailed by the plans and specifications enclosed, will be constructed in exact accordance with aforesaid plans and specifications. Further, the applicant agrees to conform to all conditions of approval. It is understood that approval of this application by the Community Planning and Preservation Commission in no way constitutes approval of a building permit or other required City permit approvals. Filing an application does not guarantee approval.

- NOTES:**
- 1) It is incumbent upon the applicant to submit correct information. Any misleading, deceptive, incomplete or incorrect information may invalidate your approval.
 - 2) To accept an agent's signature, a notarized letter of authorization from the property owner must accompany the application.

Signature of Owner: _____ Date: _____

Signature of Representative: _____ Date: 7/20/2022



CERTIFICATE OF APPROPRIATENESS

APPLICATION

COA #

All applications are to be filled out completely and correctly. The application shall be submitted to the City of St. Petersburg's Planning and Development Services Department by emailing directly to Historic Preservationists Laura Duvekot (Laura.Duvekot@stpete.org) or Kelly Perkins (Kelly.Perkins@stpete.org).

PROPOSED SCOPE OF WORK

Please provide a detailed description of the proposed work, organized according to the COA Matrix. Include information such as materials, location, square footage, etc. as applicable. Attach supplementary material as needed.

Building or Site Feature	Photo No.	Proposed Work
		Removed & Replace 4 Impact Windows 52/52 on the 2 Bedrooms on the left side of the home



Product Approval
 USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > [Application Detail](#)



<p>FL #</p> <p>Application Type</p> <p>Code Version</p> <p>Application Status</p>	<p>FL17407-R6</p> <p>Revision</p> <p>2020</p> <p>Approved</p> <p>*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.</p>
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Comments

Archived

<p>Product Manufacturer</p> <p>Address/Phone/Email</p>	<p>Regency Plus Inc</p> <p>2000 Locust Gap Highway</p> <p>Mount Carmel, PA 17851</p> <p>(570) 339-3374</p> <p>tony@cwbyrpi.com</p>
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17407.1

<p>Authorized Signature</p>	<p>Tony Procopio</p> <p>tony@cwbyrpi.com</p>
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<p>Technical Representative</p> <p>Address/Phone/Email</p>	<p>Joe Korzeniecki</p> <p>2000 Locust Gap Hwy.</p> <p>Mount Carmel, SD 17851</p> <p>(570) 339-3374</p> <p>joek@window-pros.info</p>
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<p>Quality Assurance Representative</p> <p>Address/Phone/Email</p>	<p>Joe Korzeniecki</p> <p>2000 Locust Gap Hwy.</p> <p>Mount Carmel, PA 17851</p> <p>(570) 339-3374</p> <p>joek@window-pros.info</p>
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<p>Category</p> <p>Subcategory</p>	<p>Windows</p> <p>Double Hung</p>
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<p>Compliance Method</p>	<p>Certification Mark or Listing</p>
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<p>Certification Agency</p> <p>Validated By</p>	<p>National Accreditation & Management Institute</p> <p>National Accreditation & Management Institute</p>
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<p>Referenced Standard and Year (of Standard)</p>	<table border="0"> <tr> <td><u>Standard</u></td> <td style="text-align: right;"><u>Year</u></td> </tr> <tr> <td>AAMA/WDMA/CSA 101/I.S.2/A440</td> <td style="text-align: right;">2008</td> </tr> <tr> <td>AAMA/WDMA/CSA 101/I.S.2/A440</td> <td style="text-align: right;">2011</td> </tr> <tr> <td>ASTM E1886</td> <td style="text-align: right;">13a</td> </tr> <tr> <td>ASTM E1996</td> <td style="text-align: right;">12a</td> </tr> </table>	<u>Standard</u>	<u>Year</u>	AAMA/WDMA/CSA 101/I.S.2/A440	2008	AAMA/WDMA/CSA 101/I.S.2/A440	2011	ASTM E1886	13a	ASTM E1996	12a
<u>Standard</u>	<u>Year</u>										
AAMA/WDMA/CSA 101/I.S.2/A440	2008										
AAMA/WDMA/CSA 101/I.S.2/A440	2011										
ASTM E1886	13a										
ASTM E1996	12a										

<p>Equivalence of Product Standards</p> <p>Certified By</p>	<p>Florida Licensed Professional Engineer or Architect</p> <p><u>FL17407_R6_Equiv_EERN02524_Rev2_FL17407_6814_DH_ss.pdf</u></p>
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Product Approval Method Method 1 Option A

Date Submitted 11/06/2020
Date Validated 11/06/2020
Date Pending FBC Approval
Date Approved 11/15/2020

Summary of Products

FL #	Model, Number or Name	Description
17407.1	Series 6814 Double Hung Window	Series 6814 Impact Vinyl Tilt Double Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +50/-50 Other:		Certification Agency Certificate FL17407_R6_C_CAC_NI012161-R2.pdf Quality Assurance Contract Expiration Date 09/30/2024 Installation Instructions FL17407_R6_II_RPLS0067_Rev0_6814_DH_ss.pdf Verified By: Robert J. Amoruso, PE FL PE No. 49752 Created by Independent Third Party: Yes Evaluation Reports FL17407_R6_AE_PERNo2524_Rev2_FL17407_6814_DH_ss.pdf Created by Independent Third Party: Yes

[Back](#) [Next](#)

Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

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Product Approval Accepts:



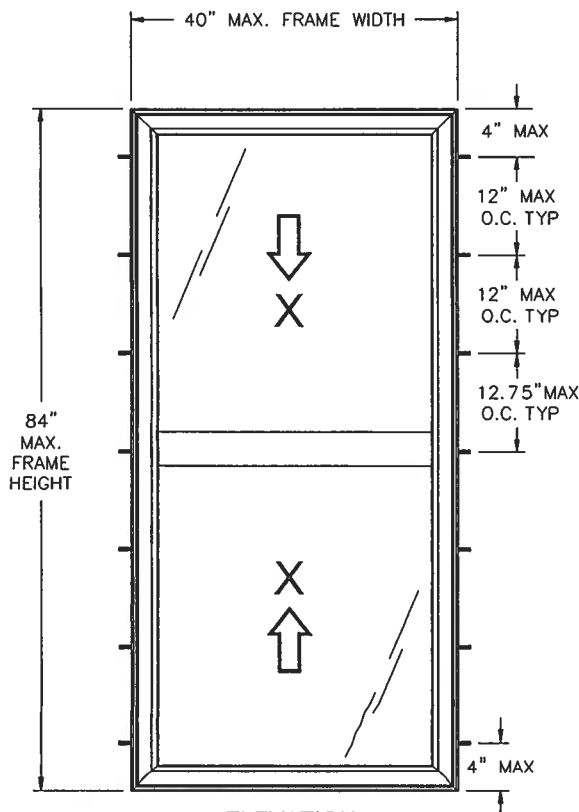
Credit Card
Safe



REGENCY PLUS, INC.

SERIES 6814 IMPACT VINYL TILT DOUBLE HUNG WINDOW

INSTALLATION ANCHORAGE DETAILS



ELEVATION
EXTERIOR VIEW

NOTES:

1. MAXIMUM TOP SASH SIZE: 36-1/8" X 40" WITH D.L.O. 33-3/4" X 36-7/8".
2. MAXIMUM BOTTOM SASH SIZE: 37-3/16" X 40-15/16" WITH D.L.O. 33-3/4" X 36-7/8".
3. 1" X 1/4" WEEP HOLES LOCATED AT SILL FACE 1-1/2" FROM EACH END.
4. 1-1/4" X 5/16" WEEP HOLE WITH PLASTIC COVER LOCATED AT EXTERIOR SILL FACE 3-1/2" FROM EACH END.

HARDWARE SCHEDULE

A.	(2) METAL CAM-TYPE SWEEP LOCK 11-1/4" FROM EACH END INTERIOR MEETING RAIL
B.	(2) METAL KEEPER IN EXTERIOR MEETING RAIL AT LOCK POSITIONS
C.	(1) 4-COIL SPRING BALANCE SYSTEM AT EACH JAMB TRACK
D.	(1) DIE-CAST PIVOT BAR AT EACH END OF BOTTOM RAIL
E.	(1) STEEL BAR REINFORCEMENT AT STILES
F.	(1) GALVANIZED STEEL TUBE AT RAILS

NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE EXCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
2. WOOD FRAMING, 2X WOOD BUCK, METAL FRAMING AND CONCRETE/MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND CONCRETE/MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. 1X BUCK OVER CONCRETE/MASONRY IS OPTIONAL. WHERE 1X BUCKS ARE USED, INSTALLATION ANCHORS WILL PASS THROUGH WINDOW FRAME AND 1X BUCK INTO CONCRETE/MASONRY SUBSTRATE. WHERE 1X BUCK IS NOT USED, INSTALLATION ANCHORS WILL PASS THROUGH WINDOW FRAME INTO CONCRETE/MASONRY SUBSTRATE. DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4. THE PRODUCT SHOWN HEREIN HAS BEEN TESTED TO THE FOLLOWING BY NATIONAL CERTIFIED TESTING LABORATORIES, YORK, PA:
 - 4.1. NCTL-110-17044-1, DATED 9/30/14 TO AAMA/WDMA/CSA 1011.S.2/A440-05/08/11.
 - 4.2. NCTL-110-17044-2, DATED 9/30/14 TO ASTM E1886-02/04/05/13A AND ASTM E1996-02/04/06/09/12A.
5. MATERIAL:
 - 5.1. FRAME: EXTRUDED RIGID PVC.
 - 5.2. REINFORCEMENT: GALVANIZED STEEL TUBE - ALL SASH RAIL MEMBERS. GALVANIZED STEEL BAR - ALL SASH STILE MEMBERS.
6. GLAZING:
 - 6.1. GLAZING DETAIL AS TESTED: 7/8" NOMINAL O.A. IGU COMPRISED OF FROM EXTERIOR TO INTERIOR - LAMI LITE OF 1/8" ANNEALED GLASS x 0.090" KURARAY AMERICA TROSIFOL PVB INTERLAYER x 1/8" ANNEALED GLASS, DESICCANT STEEL SPACER, 1/8" TEMPERED SACRIFICIAL LITE, INTERIOR GLAZED WITH SIKAFLEX 552 BACK-BEDDING (OR EQUIVALENT), TWO (2) LEAF DUAL DUROMETER BACK-BEDDING AND A SNAP-IN TWO (2) LEAF DUAL DUROMETER GLAZING BEAD WITH 7/16" GLASS BITE.
 - 6.2. AS TESTED GLAZING MEETS ASTM E1300-09a FOR THE DESIGN CONDITIONS SHOWN IN THIS PRODUCT APPROVAL DOCUMENT.
 - 6.3. ALTERNATE GLAZING MEETING THE REQUIREMENTS OF AAMA/WDMA/CSA 1011.S.2/A440 SHALL BE ALLOWED PER ASTM E1300.
7. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
8. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
9. FOR ANCHORING INTO CONCRETE/MASONRY USE 3/16" HEX HEAD TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/2" MINIMUM EMBEDMENT INTO CONCRETE WITH 1 1/8" MINIMUM EDGE DISTANCE AND 1" MINIMUM EMBEDMENT INTO MASONRY WITH 2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
10. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 PAN HEAD WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/8" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 3/4" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
11. FOR ANCHORING INTO METAL STRUCTURE USE #10 PAN OR HEX HEAD SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL WITH 3/4" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
12. ALL FASTENERS TO BE CORROSION RESISTANT.
13. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:
 - 13.1. WOOD - MINIMUM SPECIFIC GRAVITY (G) OF 0.42 (NON-HVHZ)
 - 13.2. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI
 - 13.3. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, MEDIUM WEIGHT WITH DENSITY > 117 PCF
 - 13.4. METAL STRUCTURE: STEEL 18GA (0.0428"), 33KSI OR ALUMINUM 6063-T5 0.048" THICK MINIMUM

TABLE OF CONTENT	
SHEET	DESCRIPTION
1	ELEVATION, ANCHORING AND NOTES
2	INSTALLATION DETAILS

DESIGN PRESSURE RATING (PSF)	IMPACT RATING
+50.0/-50.0	LARGE AND SMALL MISSILE IMPACT

WIND ZONE 4, MISSILE LEVEL D

PROJECT #417-0906

REGENCY PLUS, INC.
2000 LOCUST GAP HIGHWAY
MT. CARMEL, PA 17851

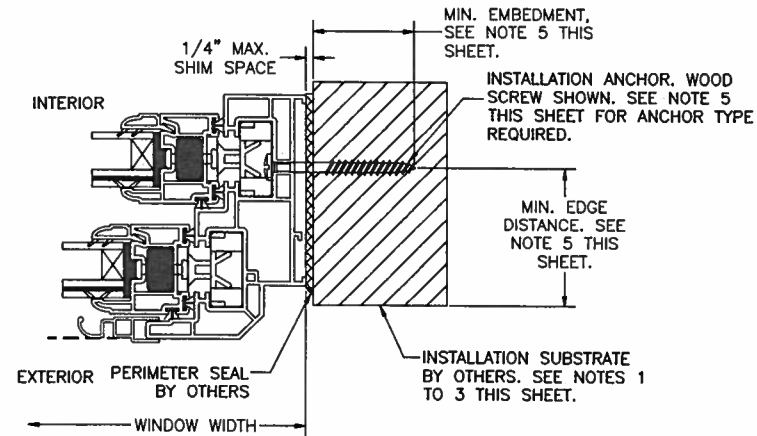
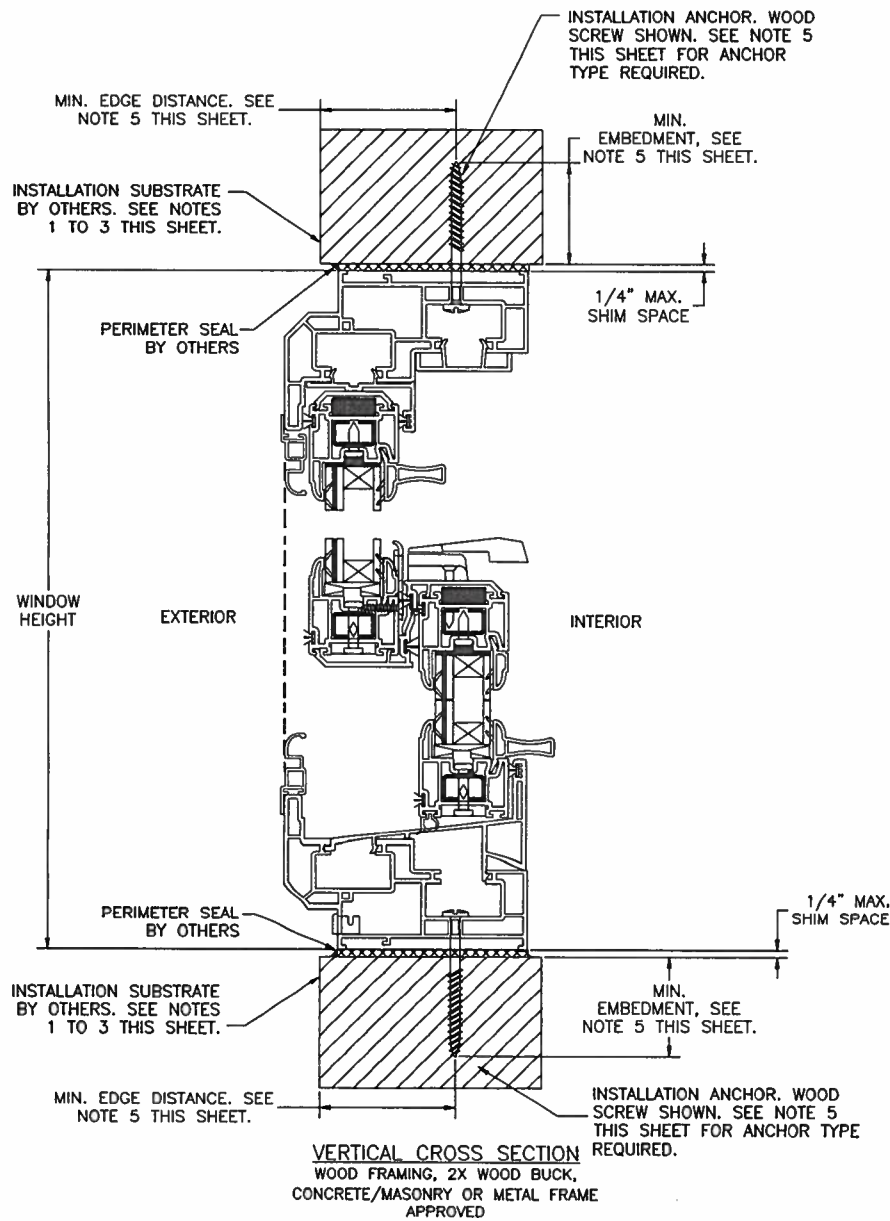
DATE: 1/11/18
DRAWING NO: RPLS0067
SHEET: 1 OF 2

TITLE: SERIES 6814 IMPACT VINYL TILT DOUBLE HUNG WINDOW
ELEVATION, ANCHORING AND NOTES

DRAWN BY: RJA
SCALE: N.T.S.
REV: -

Digitally signed
by Robert J
Amoroso
Date: 2018.02.02
13:38:41 -05'00'

PTC Product Design Group, LLC
PO Box 520775
Longwood, FL 32752-0775
321-490-1788 info@pto-corp.com
FBPE Certificate of Authorization
No. 25935



HORIZONTAL (JAMB) CROSS SECTION

WOOD FRAMING, 2X WOOD BUCK,
CONCRETE/MASONRY OR METAL FRAME
APPROVED

INSTALLATION NOTES:

1. APPROVED INSTALLATION SUBSTRATES INCLUDE THE FOLLOWING:
 - 1.1. WOOD FRAMING
 - 1.2. STEEL STUD FRAMING AND
 - 1.3. CONCRETE AND/OR MASONRY
2. SUBSTRATE OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND CONCRETE/MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. 1X BUCK OVER CONCRETE/MASONRY IS OPTIONAL. WHERE 1X BUCK IS NOT USED, DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
5. SUBSTRATE ANCHORING METHODS:
 - 5.1. FOR ANCHORING INTO CONCRETE/MASONRY USE 3/16" HEX HEAD TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/2" MINIMUM EMBEDMENT INTO CONCRETE WITH 1 1/8" MINIMUM EDGE DISTANCE AND 1" MINIMUM EMBEDMENT INTO MASONRY WITH 2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
 - 5.2. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 PAN HEAD WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/8" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 3/4" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
 - 5.3. FOR ANCHORING INTO METAL STRUCTURE USE #10 PAN OR HEX HEAD SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL WITH 3/4" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
6. INTERIOR AND EXTERIOR FINISHES BY OTHERS. NOT SHOWN FOR CLARITY.
7. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED AND/OR SPECIFIED IN ACCORDANCE WITH ASTM E2112.

PROJECT #417-0906

REGENCY PLUS, INC.
2000 LOCUST GAP HIGHWAY
MT. CARMEL, PA 17851

TITLE SERIES 6814 IMPACT VINYL TILT DOUBLE HUNG WINDOW
INSTALLATION DETAILS

DATE: 1/11/18
DRAWING NO: RPLS0067
SHEET: 2 OF 2



Robert J. Amoroso, P.E.
Florida P.E. No. 49752



Digitally signed
by Robert J
Amoroso
Date: 2018.02.02
13:40:01 -05'00'

PTC Product Design Group, LLC
PO Box 520775
Longwood, FL 32752-0775
321-690-1788 info@ptc-corp.com
FAPC Certificate of Authorization
No. 25935



NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200
FAX (717) 767-4100
www.nctlinc.com

AAMA/WDMA/CSA 101/I.S.2/A440-11

TEST REPORT SUMMARY

Rendered to:

Regency Plus Incorporated
2000 Locust Gap Highway
Mount Carmel, PA 17851

PRODUCT TYPE: Tilt Double Hung

SERIES/ MODEL: "8313"

Title	Summary of Results
Primary Product Designator AAMA/WDMA/CSA 101/I.S.2/A440-11	Class LC-PG50: Size tested 1346 x 1956 mm (~53 x 77 in) - Type H
Positive Design Pressure	+2400 Pa (+50.13 psf)
Negative Design Pressure	-2400 Pa (-50.13 psf)
Operating Force (in motion _{max})	151 N (34 lbf)
Air Infiltration	0.4 L/s/m ² (0.07 cfm/ft ²)
Water Penetration Resistance Test Pressure	360 Pa (7.52 psf)
Uniform Load Structural Test Pressure	±3600 Pa (±75.19 psf)
Forced Entry Resistance	ASTM F588-07 - Grade 10 Pass

Test Completed: 10/10/18

Reference must be made to Report No. NCTL-110-21524-2 dated 10/16/18 for complete test specimen description and data.

For National Certified Testing Laboratories

DIGITAL SIGNATURE

Jay Leader
Technician



NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200
FAX (717) 767-4100
www.nctlinc.com

AAMA/WDMA/CSA 101/I.S.2/A440-11

STRUCTURAL TEST REPORT

NCTL-110-21524-2

REPORT TO:
REGENCY PLUS INCORPORATED
2000 LOCUST GAP HIGHWAY
MOUNT CARMEL, PA 17851

REPORT NUMBER: NCTL-110-21524-2
REPORT DATE: 10/16/18

PRODUCT TYPE: TILT DOUBLE HUNG

SERIES/ MODEL: "8313"



NATIONAL CERTIFIED TESTING LABORATORIES

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FAX (717) 767-4100
www.nctlinc.com

Report Number NCTL-110-21524-2
Report Date 10/16/18
Report To Regency Plus Incorporated
2000 Locust Gap Highway
Mount Carmel, PA 17851
Date Testing Started 10/08/18
Date Testing Completed 10/10/18
Specification AAMA/WDMA/CSA 101/I.S.2/A440-11
NAFS 2011 - North American Fenestration Standard/Specification for
windows, doors, and skylights
Performance Results AAMA/WDMA/CSA 101/I.S.2/A440-11
Class LC-PG50: Size tested 1346 x 1956 mm (~53 x 77 in)-Type H

Description of Specimen Tested

Note: All dimensions are in the order (Width x Height x Thickness) unless otherwise noted.

Model/ Series "8313"
Configuration Tilt Double Hung
Frame Size Overall
1346 mm x 1956 mm (53" x 77")
Sash Size Top Sash
1246 mm x 946 mm (49.063" x 37.188")
Bottom Sash
1270 mm x 940 mm (50" x 37")
Viewing Area Top Sash
1157 mm x 848 mm (45.563" x 33.375")
Bottom Sash
1189 mm x 843 mm (46.813" x 33.188")
Frame & Sash Type Extruded polyvinyl chloride (PVC)
Joint Construction Frame & Sash
Mitered, welded
Glazing Components
Overall 22.28 mm (0.877") nominal
Glass Thickness (2) Lites of 3 mm (0.120") nominal tempered glass
Spacer Type/Size 16.18 mm (0.637") Desiccant-filled stainless steel spacer (Type SS-D)
Glazing System Interior glazed against a (2)-leaf dual durometer back-bedding and a snap-in (2)-leaf dual durometer rigid vinyl glazing bead
Weatherstrip
Type Closed cell foam plug
Size 35 mm (1.375") x 19.05 mm (0.75") x 19.05 mm (0.75")
Location T Top of the exterior jamb track balances and the bottom of the interior jamb tracks

Weatherstrip (continued)

Type	(2) Strips center fin
Size	7.62 mm (0.300") high
Location	Meeting rails and bottom rail
Type	(3) Strips center fin
Size	7.62 mm (0.300") high
Location	Stiles
Type	(1) Strip single-leaf multi-fin bulb-vinyl
Location	Bottom rail

Operating Hardware

Locks	
Type	Metal cam-type sweep
Location	400 mm (15.75") From each end of the interior meeting rail
Keeper	
Type	Metal
Location	Exterior meeting rail at the lock locations
Balance	
Type	(3) Coil spring
Location	Each jamb track
Pivot Bar	
Type	(1) Die-cast T-shaped
Location	Each end of the exterior meeting rail and bottom rail fastened with (3) rivets

Auxiliary

Type	Metal tilt-latch with thumb actuator
Location	Each end of the top rail and interior meeting rail
Type	Safety latch lock
Location	121 mm (4.75") From the bottom of the top stiles
Type	Rigid vinyl cover/ weatherstrip holder/ interior vertical leg
Location	Head and sill
Type	Rigid vinyl cover
Location	Interior head track, top rail
Type	Rigid vinyl cover/ interlock/ weatherstrip holder
Location	Meeting rails
Type	Rigid vinyl glazing bead/ lift handle
Location	Top and bottom rails
Type	Open cell baffle
Size	70 mm (2.75") x 32 mm (1.25") x 14.3 mm (0.563")
Location	Each end of the exterior sill track
Type	Rigid vinyl sash stop
Location	Bottom of the exterior jamb tracks

Reinforcement

Type	U-shaped galvanized steel
Thickness	0.64 mm (0.025")
Location	Bottom rail and exterior meeting rail
Type	Galvanized steel tube
Thickness	1.52 mm (0.060")
Location	Top rail and interior meeting rail

Weep Description

Size	24.97 mm (0.983") wide by 6.35 mm (0.25") high
Location	25.4 mm (1") From each end of the exterior sill face
Size	32 mm (1.270") wide by 7.62 mm (0.300") high with plastic weep cover
Location	92 mm (3.625") From each end of the exterior sill face
Size	9.53 mm (0.375") wide by 9.53 mm (0.375") high
Location	Each end of the interior sill track

Interior/ Exterior Surface Finish

White vinyl (PVC)

Sealant

Location	Snap-in sill insert and screw heads at the exterior jamb tracks
Material	Silicone

Insect Screen

Size	1224 mm (48.188") wide by 1838 mm (72.375")
Corner Construction	Mitered, staked-in-place die cast corner keys
Material	Fiberglass mesh with hollow vinyl spline (2) head retainer springs, (2) plastic tabs at bottom rail and (1) plastic tab at the rails. (1) Strip polypile weatherstrip 5.33 mm (0.210") high at the stiles. (1) Horizontal intermediate located at the stiles.

Installation Method

The window was installed in a 51 mm x 254 mm (2" x 10") spruce-pine-fir lumber test buck and was fastened with (1) #10 x 64 mm (2.5") flat head screw located 152 mm (6"), 483 mm (19") and 813 mm (32") from each end of the exterior jamb tracks. The exterior perimeter was sealed with silicone sealant and the head and sill were bedded in silicone sealant.

Test Results - AAMA/WDMA/CSA 101/I.S.2/A440-2011

<u>Paragraph</u>	<u>Test</u>
9.3.1	Operating Force and Force to Latch - Method B (Force Gauge) ASTM E2068-00(08)
	Initiate Motion = 142 N (32 lbf)
	Allowed = Report Only
	Maintain Motion - Opening = 142 N (32 lbf)
	Maintain Motion - Closing = 151 N (34 lbf)
	Allowed (LC Rating) = 180 N (40.47 lbf)
	Latches = 31 N (7 lbf)
	Allowed = 100 N (22.5 lbf)

NOTE: The results above represent the maximum force among all sash tested.

<u>Paragraph</u>	<u>Test</u>
9.3.2	Air Leakage Resistance ASTM E283-04(12)
	The tested specimen meets or exceeds the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-2011 for air infiltration at 75 Pa (1.6 psf).
	Maximum Allowable = 1.5 L/s/m ² (0.3 cfm/ft ²)
	Total Air Leakage = 1.92 L/s (4.06 cfm)
	Extraneous Air Leakage _{Tare} = 0.98 L/s (2.07 cfm)
	Net Air Leakage = 0.94 L/s (1.99 cfm)
	Air Infiltration Rate = 0.4 L/s/m ² (0.07 cfm/ft ²)

Paragraph
9.3.3

Test
Water Penetration Resistance
ASTM E547-00(09)

3.4 L / (min • m²) (5.0 gph/ft²)

No Leakage after 4 cycles of 5 minutes at 360 Pa (7.52 psf)

NOTE: Tested with and without insect screen

Paragraph
9.3.4.2

Test
Uniform Load Deflection at Design Pressure
ASTM E330-14

No damage after positive 2400 Pa (50.13 psf) held for 10 seconds
No damage after negative 2400 Pa (50.13 psf) held for 10 seconds

Measured Deflection _{Positive} = 16.97 mm (0.668 inches)
Measured Deflection _{Negative} = 25.83 mm (1.017 inches)

Paragraph
9.3.4.3

Test
Uniform Load Structural Test
ASTM E330-14

No damage after positive 3600 Pa (75.19 psf) held for 10 seconds
No damage after negative 3600 Pa (75.19 psf) held for 10 seconds

Measured Permanent Set _{Positive} = 0.20 mm (0.008 inches)
Measured Permanent Set _{Negative} = 1.60 mm (0.063 inches)
Maximum Allowed (0.4%) = 4.83 mm (0.190 inches)

NOTE: Deflection and Permanent Set measurements taken on the meeting rail over a 1208 mm (47.563") span.

Paragraph
5.3.5/ 9.3.5

Test
Forced Entry Resistance
ASTM F588-07

Type A Window Assembly/ Grade 10: = Pass

Test
Disassembly = No Entry
Lock Manipulation = No Entry
Sash Manipulation = No Entry
Test A1 = No Entry
Test A2 = No Entry
Test A3 = No Entry
Test A4 = No Entry
Test A5 = No Entry
Test A7 = No Entry
Lock Manipulation Test = No Entry
Sash Manipulation Test = No Entry

NOTE: 1. T1 = 5 minutes, L1 = 667 N (150 lbf), L2 = 333 N (75 lbf), L3 = 111 N (25 lbf)
2. Loads were held for 60 seconds.

Paragraph
9.3.6.2

Test
Thermoplastic Corner Weld Test (PVC products only) = Pass

Paragraph Test

9.3.6.3 Deglazing Test
ASTM E987-88(09)

Top Sash

Stiles – 230 N (51.71 lbf)	
Maximum Allowed	= 90% (100%)
Left Stile	= 14.0%
Right Stile	= 14.2%
Rails – 320 N (71.94 lbf)	
Maximum Allowed	= 90% (100%)
Top Rail	= 19.4%
Meeting Rail	= 18.8%

Bottom Sash

Stiles – 230 N (51.71 lbf)	
Maximum Allowed	= 90% (100%)
Left Stile	= 14.4%
Right Stile	= 14.0%
Rails – 320 N (71.94 lbf)	
Maximum Allowed	= 90% (100%)
Top Rail	= 19.4%
Meeting Rail	= 20.2%

NOTE: The glass bite was approximately 12.7 mm (0.5")

This test report was prepared by National Certified Testing Laboratory (NCTL), for the exclusive use of the above named client and it does not constitute certification of this product. The results are for the particular specimen tested and do not imply the quality of similar or identical products manufactured or installed from specifications identical to the tested product. The test specimen was supplied to NCTL by the above named client. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen are to be drawn from the ASTM E330 test. **Forced entry resistance test equipment used is in compliance with Section 7 of the ASTM F588-07 test method.** Foam tape is mounted to the perimeter of the test buck prior to clamping to the test wall. It is the assertion of this laboratory that any film employed during testing does not affect measurement values. NCTL is a testing lab and assumes that all information provided by the client is accurate and does not guarantee or warranty any product tested or installed. The results in this report are actual tested values and are applicable to the specimen tested only, using the components and construction methods described herein.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. Component drawings were reviewed for product verification. The bill of materials contains details with any deviations noted. Ambient conditions during the referenced testing are available upon request. A copy of this report along with representative sections of the test specimen will be retained per applicable requirements by NCTL. This report does not constitute certification or approval of the product, which may only be granted by a certification program validator or recognized approval entity. All tests were conducted in full compliance with the referenced specifications and/or test methods. Tests were performed in the order set forth by the applicable standard or specification. This report is the joint property of National Certified Testing Laboratories Inc. and the Client to whom it is issued. Permission to reproduce this report by anyone other than National Certified Testing Laboratories Inc and the Client must be granted in writing by both of the above parties. This report may not be reproduced, except its entirety, without the written consent of NCTL.

National Certified Testing Laboratories

A handwritten signature in black ink that reads "Jay Leader". The signature is written over a circular NCTL logo. Below the signature, the words "DIGITAL SIGNATURE" are printed in a small, black, sans-serif font.

Jay Leader
Technician

A handwritten signature in black ink that reads "Justin L. Bupp". The signature is written over a circular NCTL logo. Below the signature, the words "DIGITAL SIGNATURE" are printed in a small, black, sans-serif font.

Justin L. Bupp
Laboratory Manager

NJL/ dro
Attachments
Appendix A – Revision Summary
Appendix B – Drawings

Appendix A
Revision Log

<u>Identification</u>	<u>Date</u>	<u>Page & Revision</u>
Original Issue	10/16/18	Not Applicable

Appendix B

Drawings

Component Drawings, with Applicable Part Numbers, Manufacturing and Modeling Details, were reviewed (as submitted) for Product Verification. Detailed assembly drawings showing wall thicknesses of all members, corner construction and hardware application are on file and have been compared to the test sample submitted.

(Reference: NCTL-110-21524-2)

See Attached Documentation;
any deviations noted.

Note: The above referenced component drawings (if applicable) along with representative sections of the test specimen will be retained by NCTL per applicable retention requirements. This testing facility assumes that all information provided by the client is accurate.

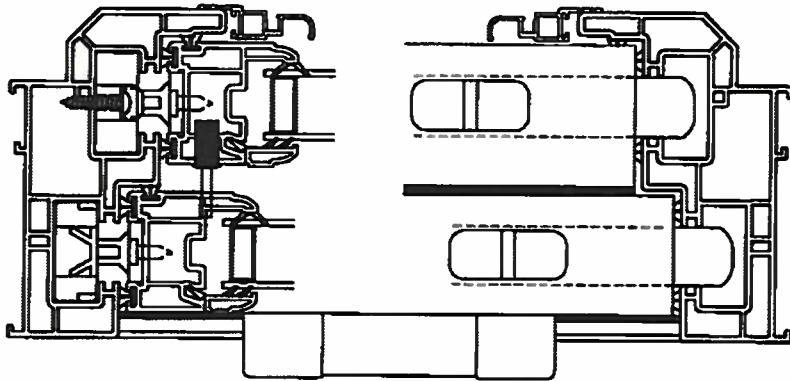
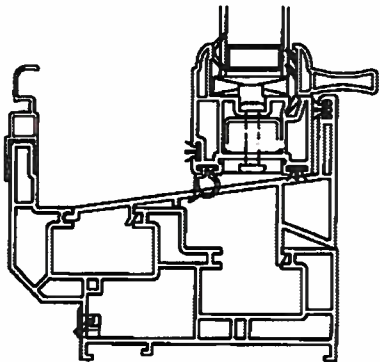
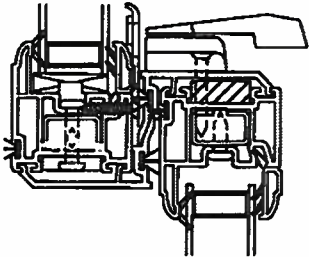
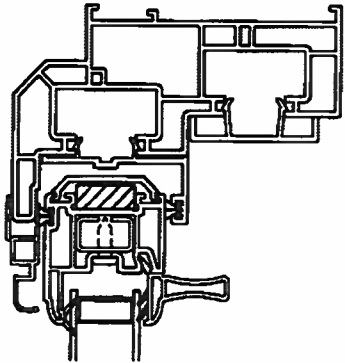
Series Tech 8313 Non-Impact Double Hung / Bill of Material

Supplier	Part Numbers	Description	Quantity
Energi / Royal	IV White 1060 / 7720	Master Frame (H)	2
Energi / Royal	IV White 1060 / 7720	Master Frame (W)	2
Energi / Royal	IV White 1282 / 7750	Sash Frame (Operating Sash) / (H)	4
Energi / Royal	IV White 1282 / 7750	Sash Frame (Operating Sash) / (W)	4
Energi / Royal	IV White 1067 / 7745	Glazing Bead Stop (Operating Sashes) / (H)	4
Energi / Royal	IV White 1067 / 7745	Glazing Bead Stop (Operating Sashes) / (W)	2
Energi / Royal	IV White 1068 / 7747	Glazing Liftrail Handle (Operating Sashes) / (W)	2
Energi / Royal	IV White 1073 / 7724	Pocket Cover Head / (W)	1
Energi / Royal	IV White 1078 / 7725	Sash Cover Head (Keeper Sash) / (W)	1
Energi / Royal	IV White 1180 / 7727	Interlock Cover (Operating Sashes) / (W)	2
Energi / Royal	IV White 1070 / 7736	Sash Stop Frame Cover / (H)	2
Energi / Royal	IV White 1070 / 7736	Sash Stop Frame Cover Head / (W)	1
Energi / Royal	IV White 1181 / 7738	Sloped Sill / (W)	1
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Pocket Cover (W) / 1073 / 7724 / Frame Head	1
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Pocket Cover (W) / 1181 / 7738 / Frame Sill	1
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Sash Frame (H) / 1282 / 7750 / Keeper Sash	4
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Sash Frame (H) / 1282 / 7750 / Lock Sash	4
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Sash Frame (W) / 1282 / 7750 / Lock Sash	1
Ultra-Fab	E20718WN2020	.200 x .340 H-Bulb Seal Sash Frame (W) 1282 / 7750 / Lock Sash	1
Ultra-Fab	W23301NW0000	.187 x .300 Fin Seal Interlock Cover (W) / 1180 / 7727 / Keeper Sash	1
Ultra-Fab	W23301NW0000	.187 x .300 Fin Seal Interlock Cover (W) / 1180 / 7727 / Lock Sash	1
Ultra-Fab	W112257W0000	.270 x .220 Fin Seal Sash Frame (H) / Single Leg Screen Frame	2
Shapes Unlimited	06516NEW192	Single Leg Frame New White	3
Shapes Unlimited	06515NEW192	Double Leg Frame New White	1
Adept	2584	Tension Springs	2
Phifer	3002806	Fiberglass Screen Cloth Charcoal / 60" x 96'	1
Imperial Plastic USA	EX-FLX-Q165-BK	Screen Splines (H / W)	4
Hygrade Metals	CK252X260	Aluminum Corner Keys	4
Hygrade Metals	ST-226-144-0.052	Operating Sash / (W-2) Lock Sash	2
Hygrade Metals	ST-226-144-0.052	Operating Sash / (W-2) Keeper Sash	2
Product Design	H-884	Screen Clip Clear	2
Product Design	H-3150	Screen Clip Clear	2
Product Design	H-808WHZ	Weep Hole Cover White	2
RH Products	HH-66 Vinyl Cement	Interlock Cover (Operating Sash) / Lock Sash (W)	1
RH Products	HH-66 Vinyl Cement	Interlock Cover (Operating Sash) / Keeper Sash (W)	1
Amesbury / Truth	803827	27 lb. 3 Coil / 984 Series / Constant Force Balance	4
S.I.L. Plastic	00156-C001	Liftrail End Caps White	4
Smith Staple	BEA 80/10	Stainless Steel Staples 3/8 x 1/2 Sash (W) (H)	20
Lindenmeyr	W0511022	30PP12-18P50-9/16 X1 3/8 X 3 Foam Block	2
Lamatek	21300-00077	.75 White Balance Plug	4
James Spring Wire	CS025	Hurricane Grade Spring	4
Novagard Silicones	02-MX0150010C2	Accessory Parts Installation Translucent	1
Vision Industries	1057A-003-EW	Hurricane Tilt Latch	4
Vision Industries	3220SS-003-EW	Safe Seal Lock	2
Vision Industries	8292A-003-EW	Safe Seal Keeper	2
Vision Industries	6987	Pivot Bars / T-Shaped Head	4
Frank Lowe	2NB-8K-0.125-032-064	Glass Setting Blocks Sash (W) Top / Sash (H)	12
GLF Corporation	112003	# 5/32" Tri-Rivet .040 / 275 Grip / Sash Pivot Bars	12
GLF Corporation	137341	# 8-18 x 0.850 Flat Wafer Shoulder / Sash / Hurricane Latch	4
GLF Corporation	120376	# 8 x 1 1/4" Tek White / Locks	4
GLF Corporation	116821	# 6 x 1" Tek White / Keepers	4
GLF Corporation	117595	# 6 x 5/8" Tek / Sash Rebar (H)	12
GLF Corporation	117595	# 6 x 5/8" Tek / Sash Rebar (W)	12
GLF Corporation	120766	# 8 x 3/4" Tek / Pan Head (Balance Shoes)	4
GLF Corporation	116506	# 5 x 3/8" Tek / Screen Clips White	4
GLF Corporation	401168	# 12 x 3" Flat / Installation Screws	10
Cardinal	Double Strength Tempered	Operating Lock Sash / 3.1 T Q366 / 15.8 FED / 3.1 T	1
Cardinal	Double Strength Tempered	Operating Lock Keeper / 3.1 T Q366 / 15.8 FED / 3.1 T	1

TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

8313 DH

REV:	DESCRIPTION:	DATE:	BY:
A1	Added heavy reinforcement on a strike	17-03-2018	JL

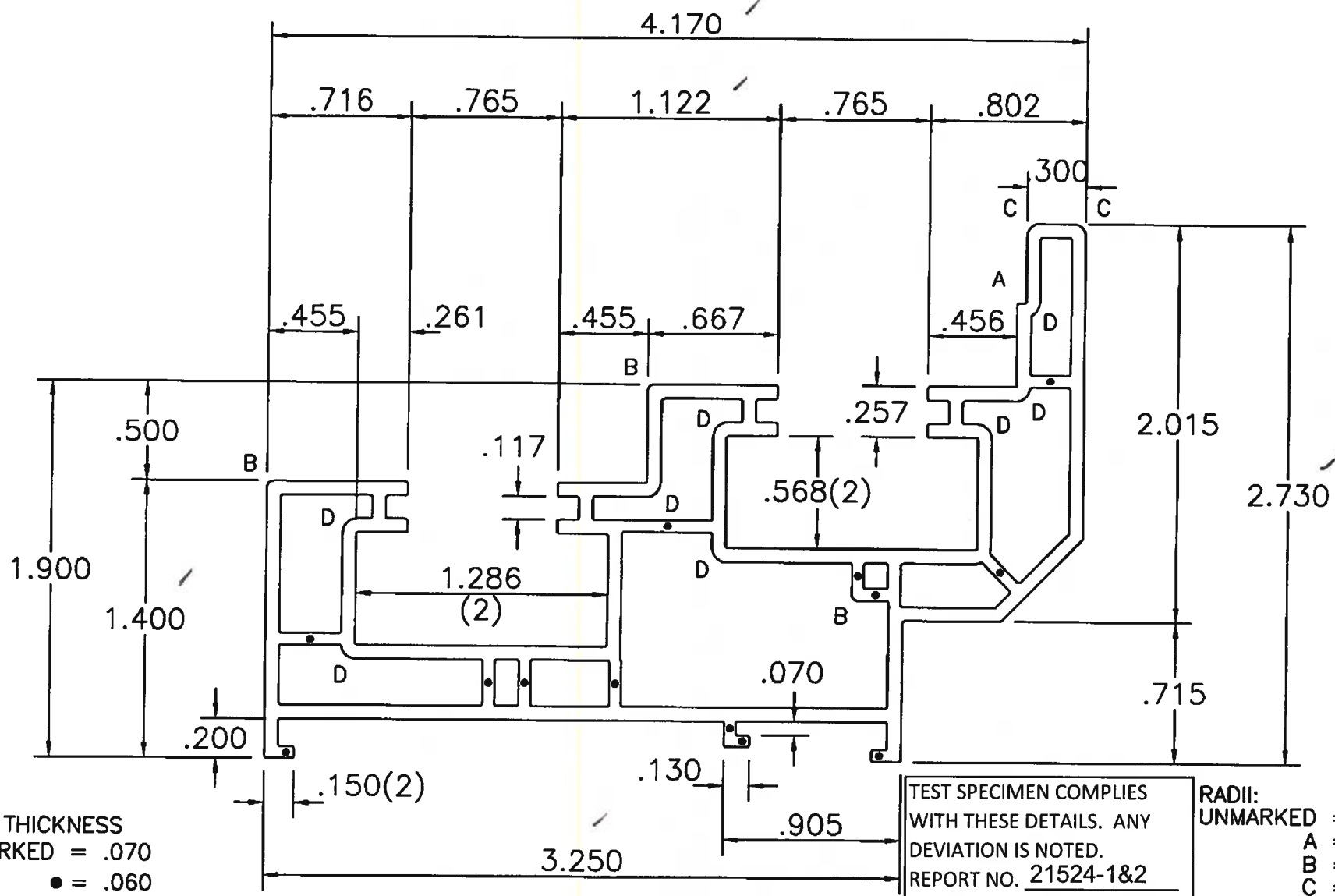


TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

NOTES:

1

<p>ENERGI PENETRATION SOLUTIONS</p>	<small>REGISTRATION SOLUTIONS IS THE SOLE AND EXCLUSIVE OWNER OF THIS PRODUCT DESIGN, AND OF ALL RIGHTS REGARDING THE PATENT, TRADE MARKS AND OTHER INTELLECTUAL PROPERTY RIGHTS ASSOCIATED WITH THIS PRODUCT. PERMISSION TO REPRODUCE THIS DOCUMENT IS GRANTED BY REGISTRATION SOLUTIONS.</small>		CUSTOMER:	LAYOUT:	OWNER:	DESCRIPTION:		
	TITLE: Regency		TITLE: Regency	CHECKED:	JS	8313 DH		
SHEET: 8	MATERIAL: Various	DATE: 10/12/18	SCALE: .67	PROJECT:	SHEETS: 1 / 1	PART: ASM1	DIE NUMBER:	ACAD: 8313 DH



WALL THICKNESS
 UNMARKED = .070
 ● = .060

TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

RADII:
 UNMARKED = .010R
 A = .007R
 B = .030R
 C = .060R
 D = .075R

E N E R G I
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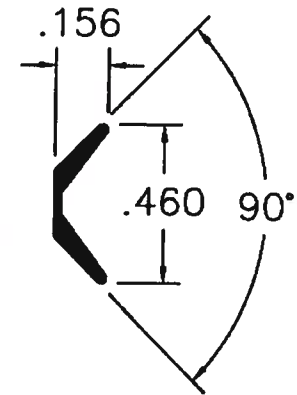
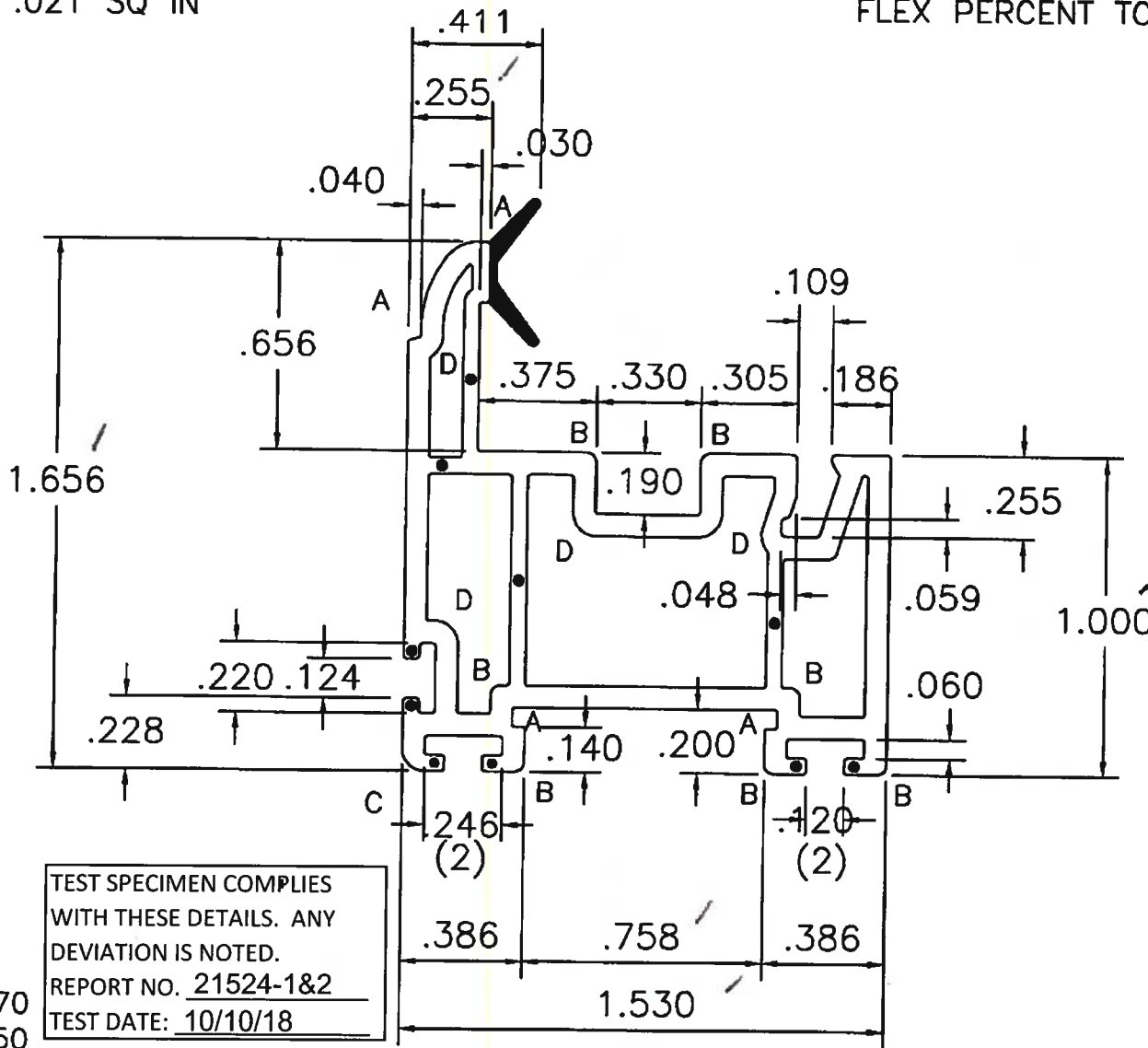
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				DWG # 7720P MATERIAL: RIGID PVC
				CUST. DWG # V2308 AREA: 1.460
				DRAWN BY: MC TYP. WALL THKNS: .070
				DATE: 8/4/09 SCALE: NTS A

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PART # 7720P

FLEX AREA = .021 SQ IN

FLEX PERCENT TO RIGID PVC IS 3.6%



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

WALL THICKNESS
 UNMARKED = .070
 ● = .050

UNMARKED = .015R
 RADII: A = .007R
 B = .030R
 C = .070R
 D = .075R

Page 14 of 23

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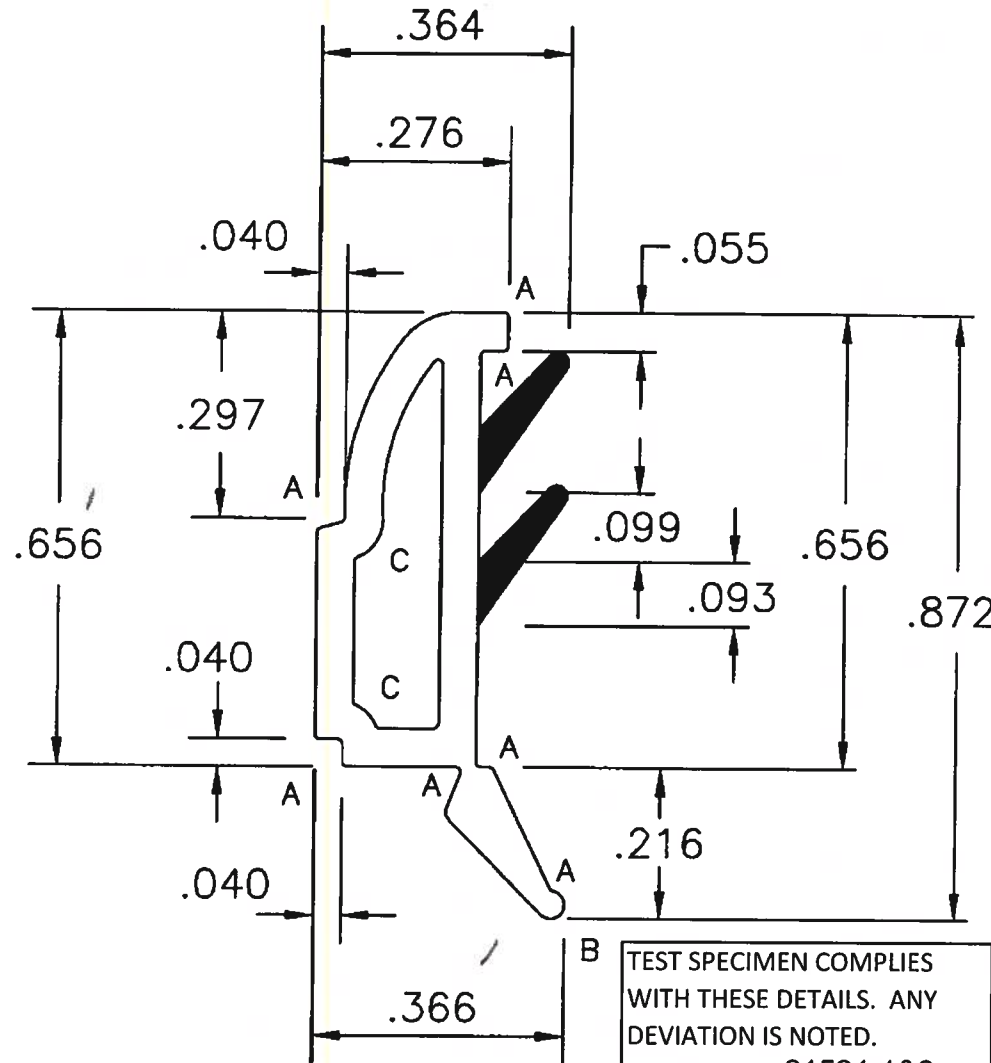
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				SASH
				DWG # 7750F MATERIAL: RIGID
				CUST. DWG # X0034 AREA: .578
				DRAWN BY: MC TYP. WALL THKNS: .070
				DATE: 9-4-09 SCALE: NTS

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PART # 7750F

FLEX AREA = .017 SQ IN

FLEX PERCENT TO RIGID PVC IS 17.5%



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

UNMARKED = .015R
 RADII: A = .007R
 B = .020R
 C = .055R

WALL THICKNESS
 UNMARKED = .055

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E N E R G I
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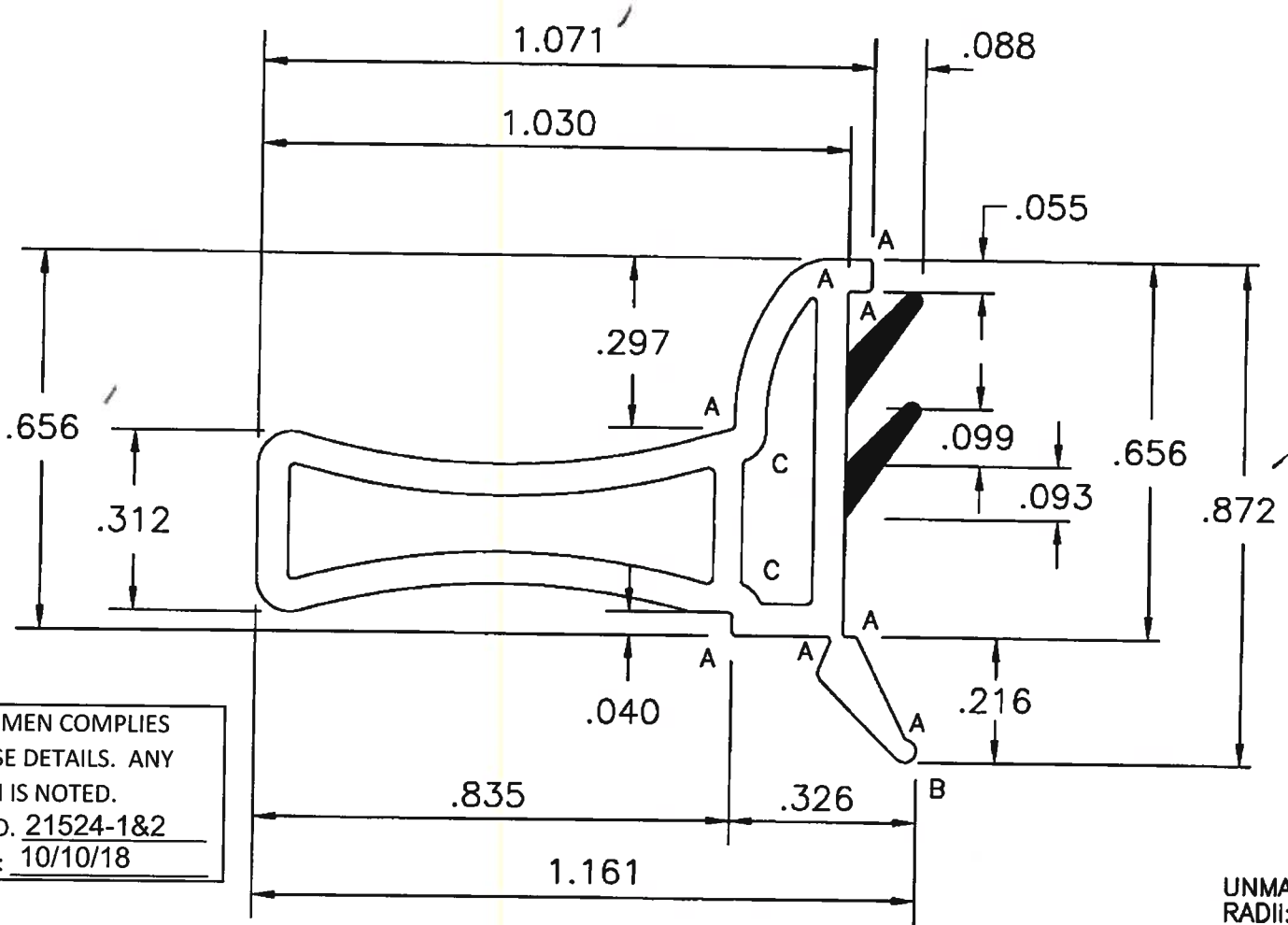
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				DWG # 7745F MATERIAL: RIGID
				CUST. DWG # X0035 AREA: .097
				DRAWN BY: MC TYP. WALL THKNS: .055
				DATE: 8-26-09 SCALE: NTS

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PART # **7745F**

FLEX AREA = .017 SQ IN

FLEX PERCENT TO RIGID PVC IS 8.7%



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

WALL THICKNESS UNMARKED = .055

UNMARKED = .015R
 RADII: A = .007R
 B = .020R
 C = .055R

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E N E R G I
 FENESTRATION SOLUTIONS

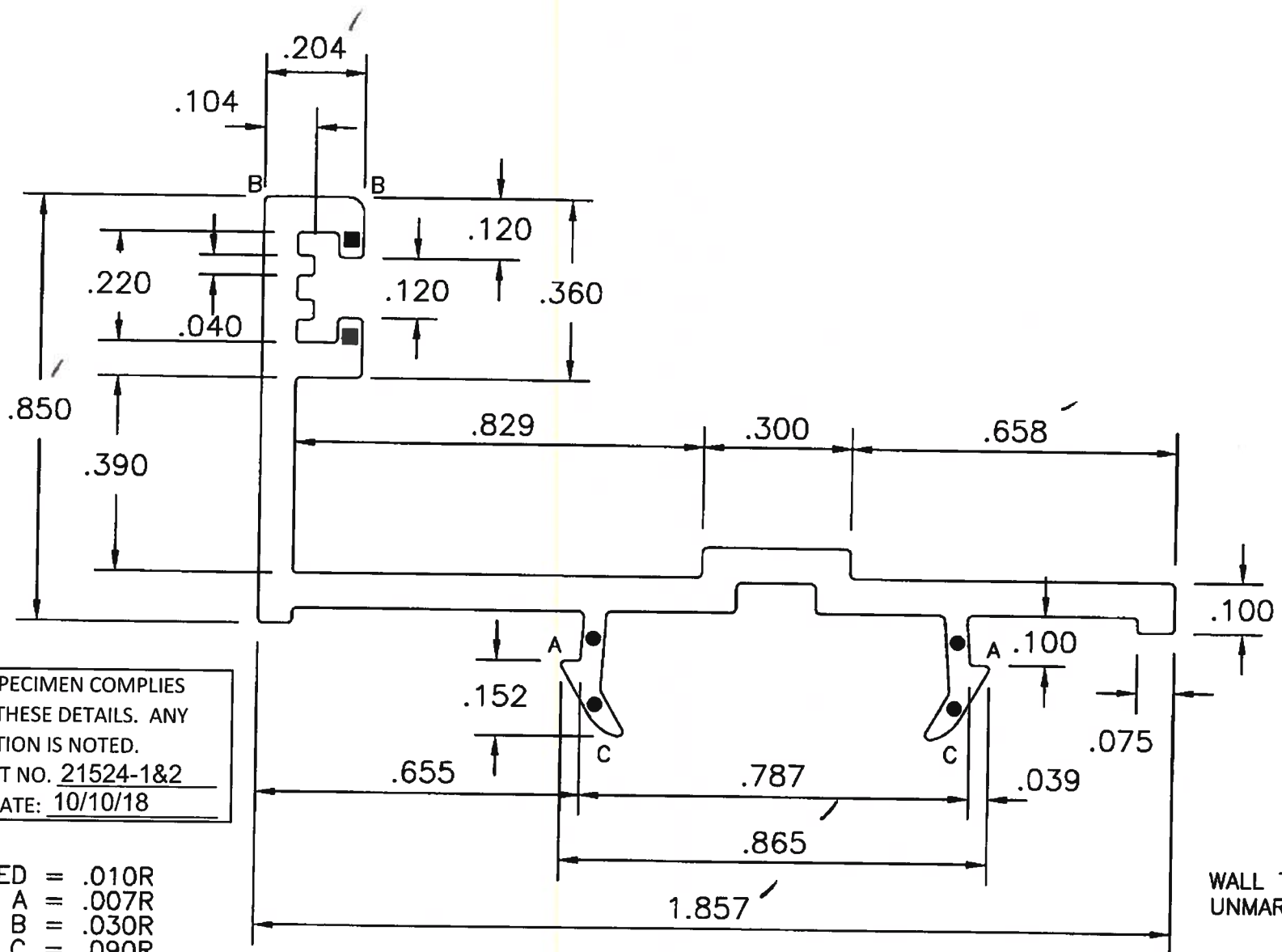
ONE CONTACT PLACE
 DELMONT, PA 15626

PH (724) 468-4563 FAX (724) 468-4198

REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				GLAZING BEAD
				DWG # 7747F MATERIAL: RIGID
				CUST. DWG # X0033 AREA: .195
				DRAWN BY: MC TYP. WALL THKNS: .055
				DATE: 8-27-09 SCALE: NTS

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PART # 7747F



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

RADII:
 UNMARKED = .010R
 A = .007R
 B = .030R
 C = .090R

WALL THICKNESS
 UNMARKED = .070
 ● = .045
 ■ = .050

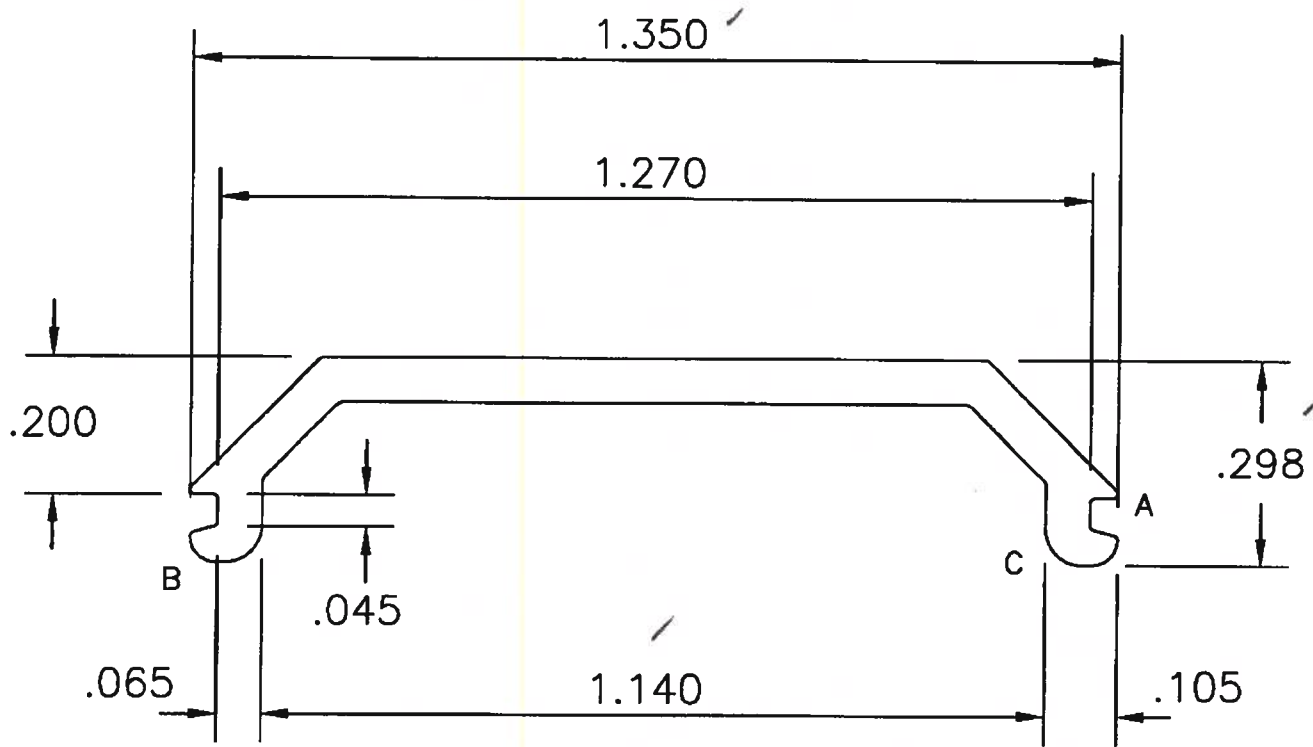
E N E R G I
 FENESTRATION SOLUTIONS
 ONE CONTACT PLACE
 DELMONT, PA 15626

PH (724) 468-4553 FAX (724) 468-4198

REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				POCKET COVER
				DWG # 7724 MATERIAL: RIGID
				CUST. DWG # 2316 AREA: .248
				DRAWN BY: MC TYP. WALL THKNS: .070
				DATE: 8-13-09 SCALE: NTS

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PART # 7724



WALL THICKNESS
UNMARKED = .065

TEST SPECIMEN COMPLIES
WITH THESE DETAILS. ANY
DEVIATION IS NOTED.
REPORT NO. 21524-1&2
TEST DATE: 10/10/18

RADII:
UNMARKED = .010R
A = .007R
B = .037R
C = .054R



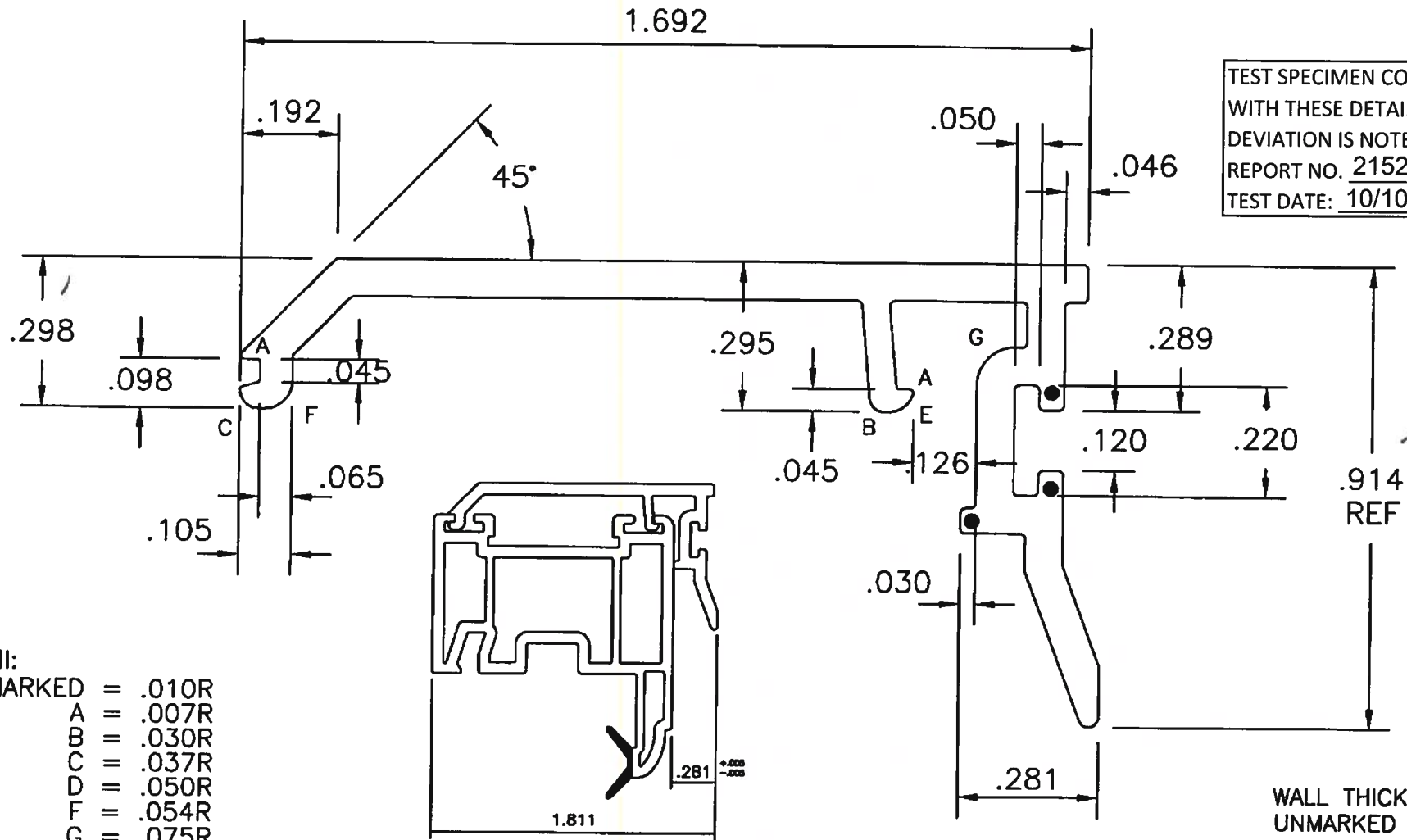
ONE CONTACT PLACE
DELMONT, PA 15626

PH (724) 468-4553 FAX (724) 468-4198

REV.	DATE	DESCRIPTION	BY	DESCRIPTION:	
				SASH COVER	
				DWG # 7725	MATERIAL: RIGID
				CUST. DWG # 2318	AREA: .107
				DRAWN BY: MC	TYP. WALL THKNS: .065
				DATE: 8-14-09	SCALE: NTS

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PART # 7725



- RADII:
 UNMARKED = .010R
 A = .007R
 B = .030R
 C = .037R
 D = .050R
 F = .054R
 G = .075R

WALL THICKNESS
 UNMARKED = .075
 ● = .050

E N E R G I
 FENESTRATION SOLUTIONS

ONE CONTACT PLACE
 DELMONT, PA 15626

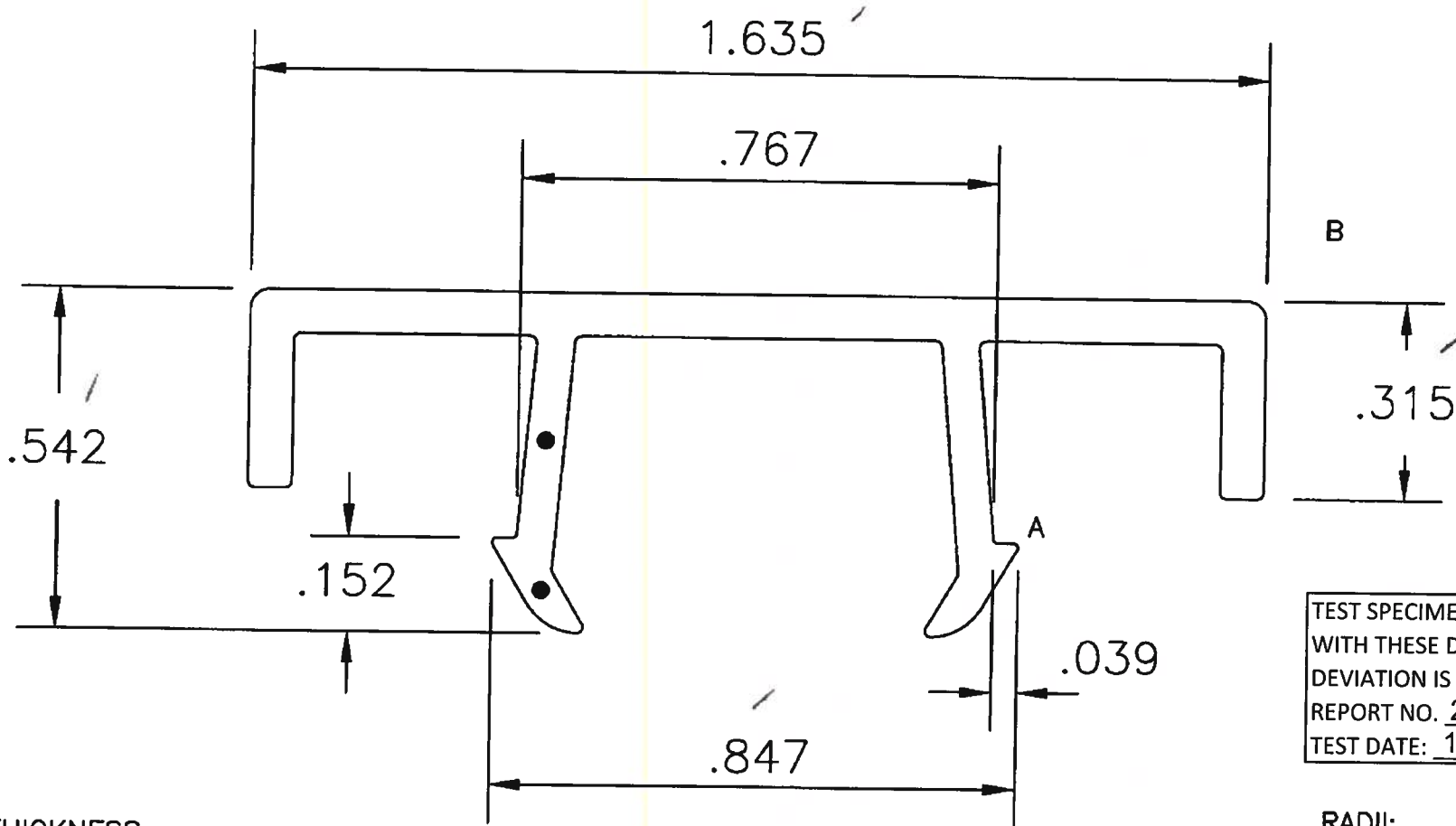
PH (724) 468-4553

FAX (724) 468-4198

REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				INTERLOCK COVER
				DWG # 7727 MATERIAL: RIGID
				CUST. DWG # 2327 AREA: .231
				DRAWN BY: MC TYP. WALL THKNS: .075
				DATE: 8-14-09 SCALE: NTS

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PART # 7727



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

WALL THICKNESS
 UNMARKED = .070
 ● = .060

RADII:
 UNMARKED = .010R
 A = .007R
 B = .030R



ONE CONTACT PLACE
 DELMONT, PA 15628

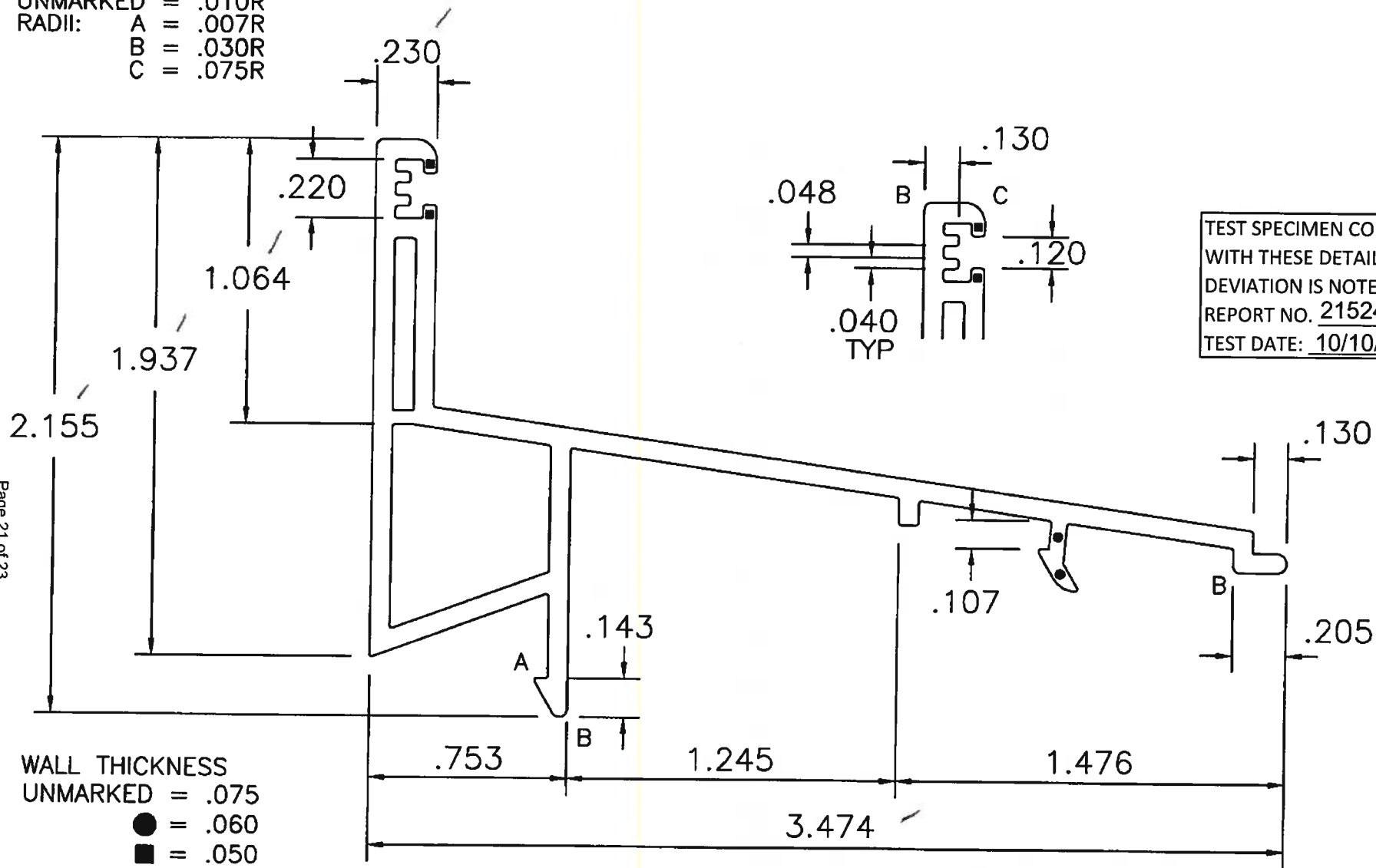
PH (724) 468-4563 FAX (724) 468-4198

REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				FRAME COVER
				DWG # 7736 MATERIAL: RIGID
				CUST. DWG # 2314 AREA: .209
				DRAWN BY: MC TYP. WALL THKNS: .070
				DATE: 8-20-09 SCALE: NTS

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PART # 7736

UNMARKED = .010R
 RADII:
 A = .007R
 B = .030R
 C = .075R



TEST SPECIMEN COMPLIES
 WITH THESE DETAILS. ANY
 DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

WALL THICKNESS
 UNMARKED = .075
 ● = .060
 ■ = .050

Page 21 of 23

E N E R G I
 FENESTRATION SOLUTIONS

ONE CONTACT PLACE
 DELMONT, PA 15626

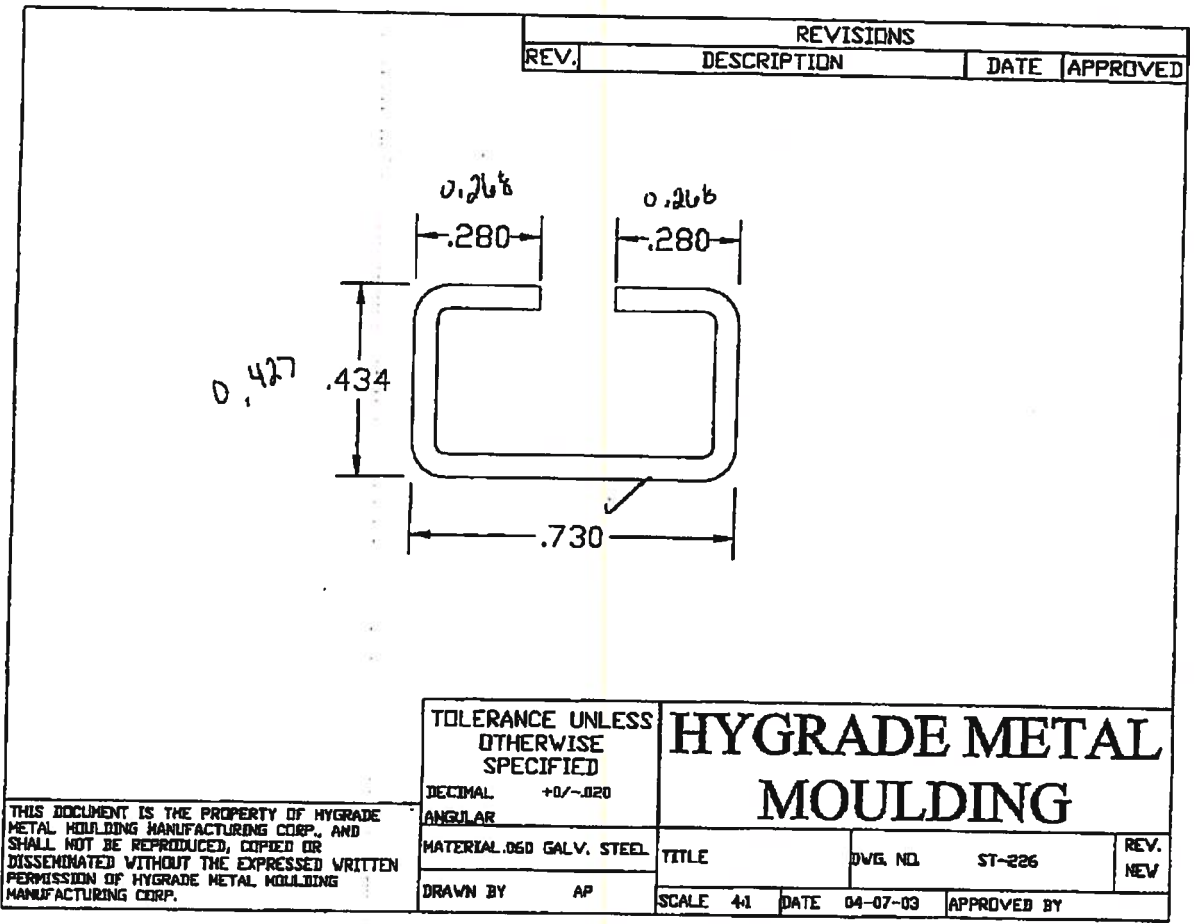
PH (724) 488-4553

FAX (724) 488-4198

REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				SLOPED SILL
				DWG # 7738 MATERIAL: RIGID
				CUST. DWG # 2328 AREA: .635
				DRAWN BY: MC TYP. WALL THKNS: .075
				DATE: 8-20-09 SCALE: NTS

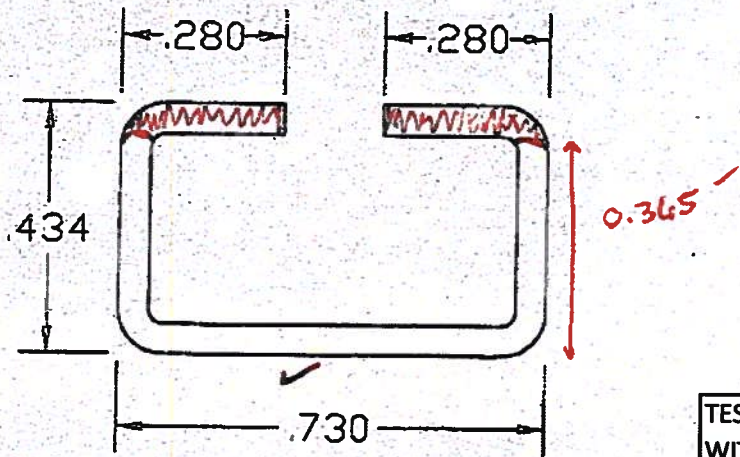
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PART # 7738



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

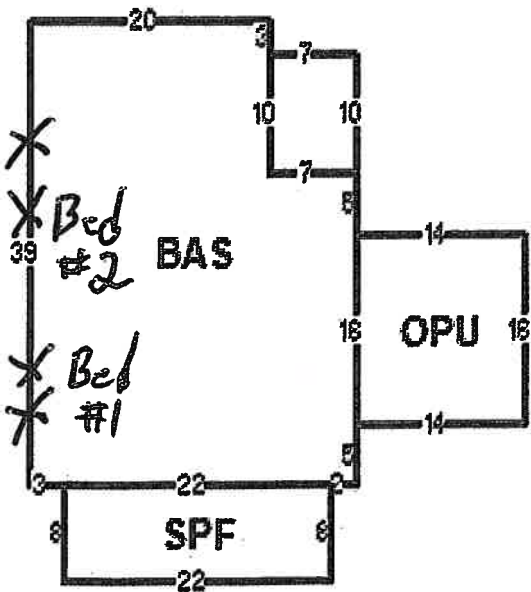
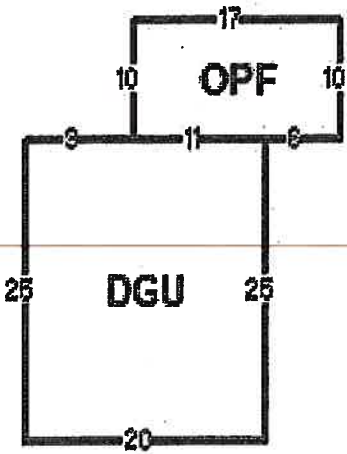
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

THIS DOCUMENT IS THE PROPERTY OF HYGRADE METAL MOULDING MANUFACTURING CORP., AND SHALL NOT BE REPRODUCED, COPIED, OR DISSEMINATED WITHOUT THE EXPRESSED WRITTEN PERMISSION OF HYGRADE METAL MOULDING MANUFACTURING CORP.

TOLERANCE UNLESS OTHERWISE SPECIFIED DECIMAL +0/-0.020	HYGRADE METAL MOULDING		
MATERIAL .060 GALV. STEEL	TITLE	DWG. NO. ST-226	REV. NEW
DRAWN BY AP	SCALE 4:1	DATE 04-07-03	APPROVED BY

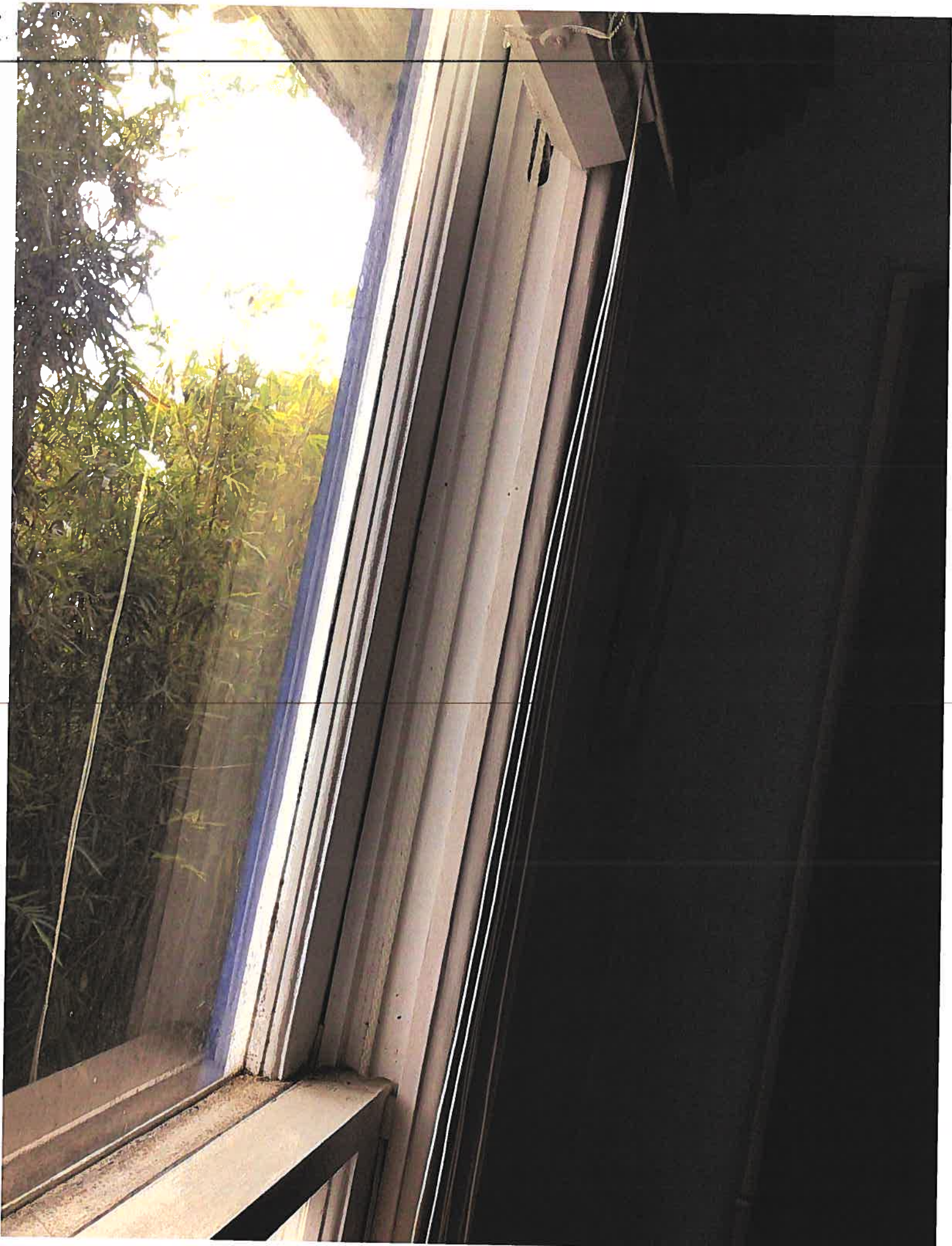
























Product Approval
 USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > [Application Detail](#)



FL # **FL17407-R6**
 Application Type **Revision**
 Code Version **2020**
 Application Status **Approved**

*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

Comments
 Archived

Product Manufacturer **Regency Plus Inc**
 Address/Phone/Email **2000 Locust Gap Highway
 Mount Carmel, PA 17851
 (570) 339-3374
 tony@cwbyrpi.com**

17407.1

Authorized Signature **Tony Procopio
 tony@cwbyrpi.com**

Technical Representative
 Address/Phone/Email **Joe Korzeniecki
 2000 Locust Gap Hwy.
 Mount Carmel, SD 17851
 (570) 339-3374
 joek@window-pros.info**

Quality Assurance Representative
 Address/Phone/Email **Joe Korzeniecki
 2000 Locust Gap Hwy.
 Mount Carmel, PA 17851
 (570) 339-3374
 joek@window-pros.info**

Category **Windows**
 Subcategory **Double Hung**

Compliance Method **Certification Mark or Listing**

Certification Agency **National Accreditation & Management Institute**
 Validated By **National Accreditation & Management Institute**

Referenced Standard and Year (of Standard)	Standard	Year
	AAMA/WDMA/CSA 101/I.S.2/A440	2008
	AAMA/WDMA/CSA 101/I.S.2/A440	2011
	ASTM E1886	13a
	ASTM E1996	12a

Equivalence of Product Standards
 Certified By **Florida Licensed Professional Engineer or Architect
FL17407 R6 Equiv EERNo2524 Rev2 FL17407 6814 DH ss.pdf**

Product Approval Method Method 1 Option A

Date Submitted 11/06/2020

Date Validated 11/06/2020

Date Pending FBC Approval

Date Approved 11/15/2020

Summary of Products

FL #	Model, Number or Name	Description
17407.1	Series 6814 Double Hung Window	Series 6814 Impact Vinyl Tilt Double Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +50/-50 Other:		Certification Agency Certificate FL17407_R6_C_CAC_NI012161-R2.pdf Quality Assurance Contract Expiration Date 09/30/2024 Installation Instructions FL17407_R6_II_RPLS0067_Rev0_6814_DH_ss.pdf Verified By: Robert J. Amoruso, PE FL PE No. 49752 Created by Independent Third Party: Yes Evaluation Reports FL17407_R6_AE_PERNo2524_Rev2_FL17407_6814_DH_ss.pdf Created by Independent Third Party: Yes

[Back](#) [Next](#)

Contact Us :: [2601 Blair Stone Road, Tallahassee FL 32399](#) Phone: 850-487-1824

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Product Approval Accepts:

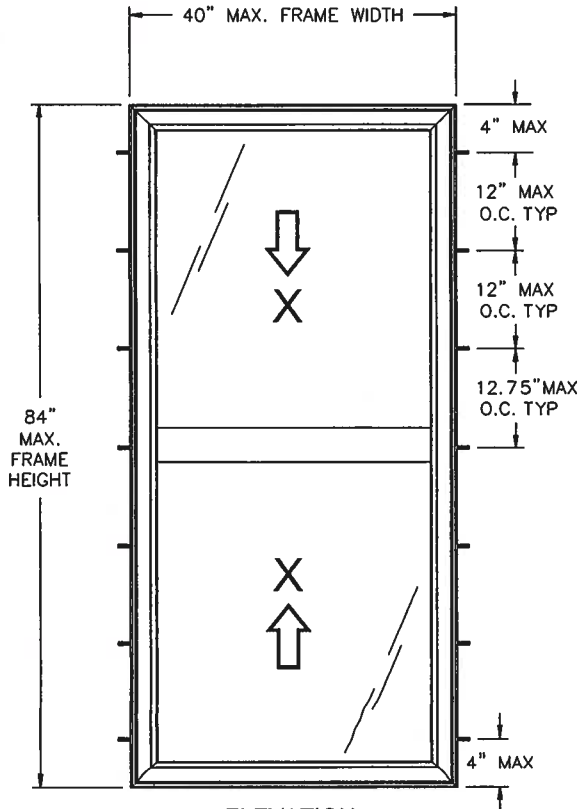


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REGENCY PLUS, INC.

SERIES 6814 IMPACT VINYL TILT DOUBLE HUNG WINDOW INSTALLATION ANCHORAGE DETAILS



ELEVATION
EXTERIOR VIEW

NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE EXCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
2. WOOD FRAMING, 2X WOOD BUCK, METAL FRAMING AND CONCRETE/MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND CONCRETE/MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. 1X BUCK OVER CONCRETE/MASONRY IS OPTIONAL. WHERE 1X BUCKS ARE USED, INSTALLATION ANCHORS WILL PASS THROUGH WINDOW FRAME AND 1X BUCK INTO CONCRETE/MASONRY SUBSTRATE. WHERE 1X BUCK IS NOT USED, INSTALLATION ANCHORS WILL PASS THROUGH WINDOW FRAME INTO CONCRETE/MASONRY SUBSTRATE. DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4. THE PRODUCT SHOWN HEREIN HAS BEEN TESTED TO THE FOLLOWING BY NATIONAL CERTIFIED TESTING LABORATORIES, YORK, PA:
 - 4.1. NCTL-110-17044-1, DATED 9/30/14 TO AAMA/WDMA/CSA 1011.1.S.2/A440-05/08/11.
 - 4.2. NCTL-110-17044-2, DATED 9/30/14 TO ASTM E1886-02/04/05/13A AND ASTM E1996-02/04/06/09/12A.
5. MATERIAL:
 - 5.1. FRAME: EXTRUDED RIGID PVC.
 - 5.2. REINFORCEMENT: GALVANIZED STEEL TUBE - ALL SASH RAIL MEMBERS. GALVANIZED STEEL BAR - ALL SASH STILE MEMBERS.
6. GLAZING:
 - 6.1. GLAZING DETAIL AS TESTED: 7/8" NOMINAL O.A. IGU COMPRISED OF FROM EXTERIOR TO INTERIOR - LAMI LITE OF 1/8" ANNEALED GLASS x 0.090" KURARAY AMERICA TROSIFOL PVB INTERLAYER x 1/8" ANNEALED GLASS, DESICCANT STEEL SPACER, 1/8" TEMPERED SACRIFICIAL LITE. INTERIOR GLAZED WITH SIKAFLEX 552 BACK-BEDDING (OR EQUIVALENT), TWO (2) LEAF DUAL DUROMETER BACK-BEDDING AND A SNAP-IN TWO (2) LEAF DUAL DUROMETER GLAZING BEAD WITH 7/16" GLASS BITE.
 - 6.2. AS TESTED GLAZING MEETS ASTM E1300-09a FOR THE DESIGN CONDITIONS SHOWN IN THIS PRODUCT APPROVAL DOCUMENT.
 - 6.3. ALTERNATE GLAZING MEETING THE REQUIREMENTS OF AAMA/WDMA/CSA 1011.1.S.2/A440 SHALL BE ALLOWED PER ASTM E1300.
7. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
8. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
9. FOR ANCHORING INTO CONCRETE/MASONRY USE 3/16" HEX HEAD TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/2" MINIMUM EMBEDMENT INTO CONCRETE WITH 1 1/8" MINIMUM EDGE DISTANCE AND 1" MINIMUM EMBEDMENT INTO MASONRY WITH 2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
10. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 PAN HEAD WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/8" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 3/4" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
11. FOR ANCHORING INTO METAL STRUCTURE USE #10 PAN OR HEX HEAD SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL WITH 3/4" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
12. ALL FASTENERS TO BE CORROSION RESISTANT.
13. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:
 - 13.1. WOOD - MINIMUM SPECIFIC GRAVITY (G) OF 0.42 (NON-HVHZ)
 - 13.2. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI
 - 13.3. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, MEDIUM WEIGHT WITH DENSITY > 117 PCF
 - 13.4. METAL STRUCTURE: STEEL 18GA (0.0428"), 33KSI OR ALUMINUM 6063-T5 0.048" THICK MINIMUM

NOTES:

1. MAXIMUM TOP SASH SIZE: 36-1/8" X 40" WITH D.L.O. 33-3/4" X 36-7/8".
2. MAXIMUM BOTTOM SASH SIZE: 37-3/16" X 40-15/16" WITH D.L.O. 33-3/4" X 36-7/8".
3. 1" X 1/4" WEEP HOLES LOCATED AT SILL FACE 1-1/2" FROM EACH END.
4. 1-1/4" X 5/16" WEEP HOLE WITH PLASTIC COVER LOCATED AT EXTERIOR SILL FACE 3-1/2" FROM EACH END.

HARDWARE SCHEDULE

A.	(2) METAL CAM-TYPE SWEEP LOCK 11-1/4" FROM EACH END INTERIOR MEETING RAIL
B.	(2) METAL KEEPER IN EXTERIOR MEETING RAIL AT LOCK POSITIONS
C.	(1) 4-COIL SPRING BALANCE SYSTEM AT EACH JAMB TRACK
D.	(1) DIE-CAST PIVOT BAR AT EACH END OF BOTTOM RAIL
E.	(1) STEEL BAR REINFORCEMENT AT STILES
F.	(1) GALVANIZED STEEL TUBE AT RAILS

TABLE OF CONTENT

SHEET	DESCRIPTION
1	ELEVATION, ANCHORING AND NOTES
2	INSTALLATION DETAILS

DESIGN PRESSURE RATING (PSF)	IMPACT RATING
+50.0/-50.0	LARGE AND SMALL MISSILE IMPACT

WIND ZONE 4, MISSILE LEVEL D

PROJECT #417-0906

REGENCY PLUS, INC.
2000 LOCUST GAP HIGHWAY
MT. CARMEL, PA. 17851
TITLE: SERIES 6814 IMPACT VINYL TILT DOUBLE HUNG WINDOW
ELEVATION, ANCHORING AND NOTES

DATE:	1/11/18
DRAWING NO.:	RPLSD067
SCALE:	N.T.S.
REV.:	1 OF 2

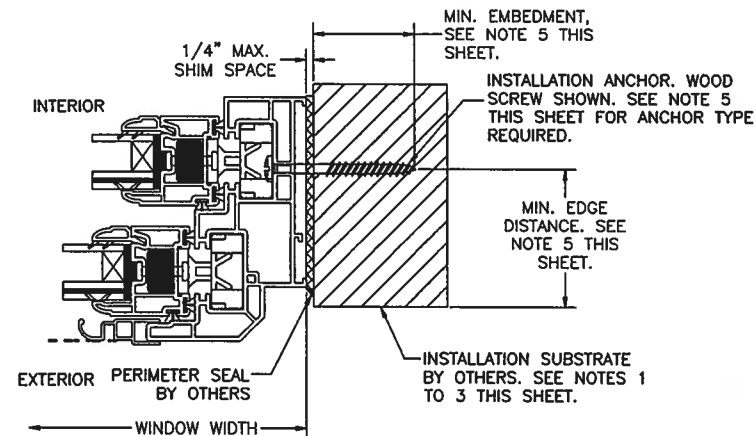
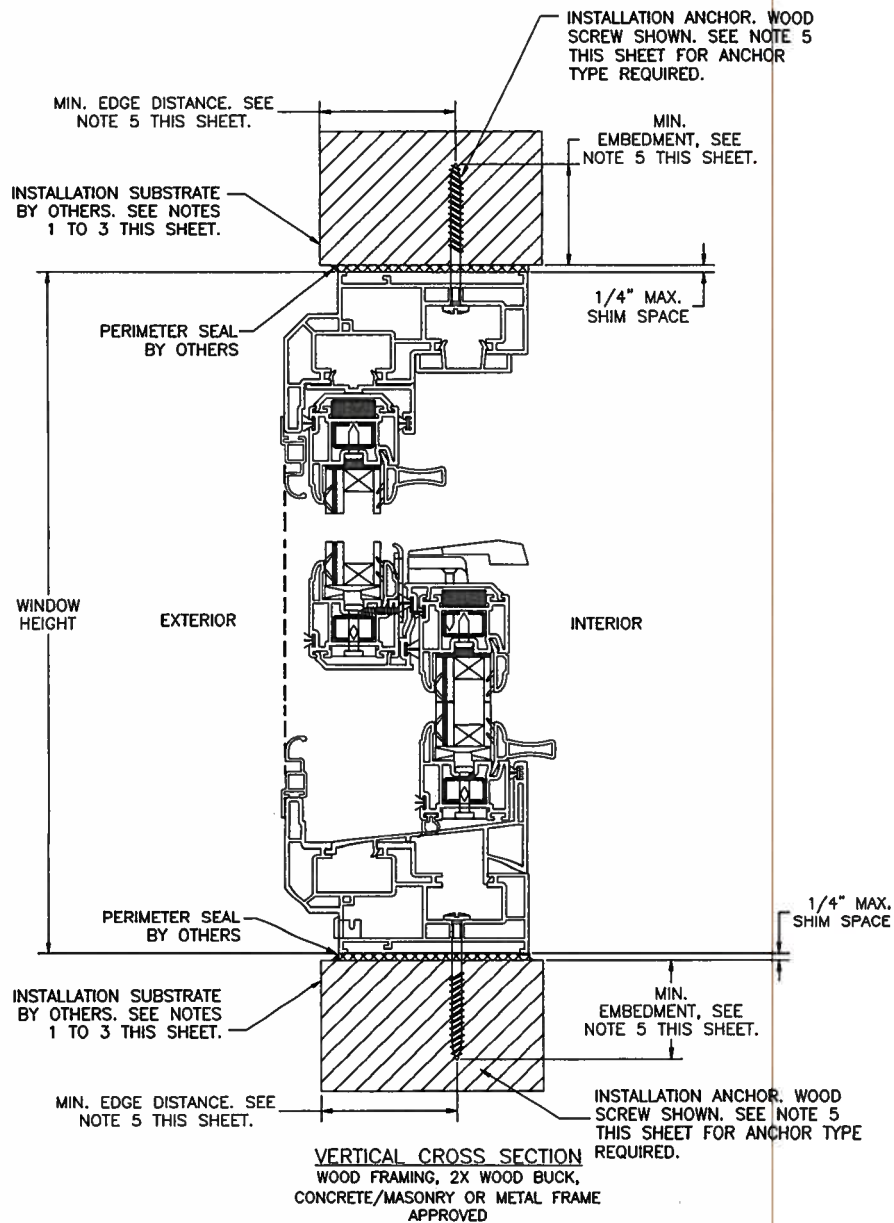


Robert J. Amoruso, P.E.
Florida P.E. No. 49752



Digitally signed
by Robert J
Amoruso
Date: 2018.02.02
13:38:41 -05'00'

PTC Product Design Group, LLC
PO Box 520775
Longwood, FL 32752-0775
321-690-1788 info@ptc-corp.com
FBPE Certificate of Authorization
No. 25935



INSTALLATION NOTES:

1. APPROVED INSTALLATION SUBSTRATES INCLUDE THE FOLLOWING:
 - 1.1. WOOD FRAMING
 - 1.2. STEEL STUD FRAMING AND
 - 1.3. CONCRETE AND/OR MASONRY
2. SUBSTRATE OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND CONCRETE/MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. 1X BUCK OVER CONCRETE/MASONRY IS OPTIONAL. WHERE 1X BUCK IS NOT USED, DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
5. SUBSTRATE ANCHORING METHODS:
 - 5.1. FOR ANCHORING INTO CONCRETE/MASONRY USE 3/16" HEX HEAD TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/2" MINIMUM EMBEDMENT INTO CONCRETE WITH 1 1/8" MINIMUM EDGE DISTANCE AND 1" MINIMUM EMBEDMENT INTO MASONRY WITH 2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
 - 5.2. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 PAN HEAD WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/8" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 3/4" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
 - 5.3. FOR ANCHORING INTO METAL STRUCTURE USE #10 PAN OR HEX HEAD SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL WITH 3/4" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS. ANCHOR LOCATIONS HAVE +/- 1" TOLERANCE.
6. INTERIOR AND EXTERIOR FINISHES BY OTHERS. NOT SHOWN FOR CLARITY.
7. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED AND/OR SPECIFIED IN ACCORDANCE WITH ASTM E2112.

PROJECT #417-0906

REGENCY PLUS, INC.
2000 LOCUST GAP HIGHWAY
MT. CARMEL, PA 17851

DATE: 11/11/18
DRAWING NO: RPLS0067
SCALE: N.T.S.
REV: 2 OF 2

PREPARED BY: PTC

Robert J. Amoruso, P.E.
Florida P.E. No. 49752



Digitally signed
by Robert J
Amoruso
Date: 2018.02.02
13:40:01 -05'00'

PTC Product Design Group, LLC
PO Box 520775
Longwood, FL 32752-0775
321-690-1788 info@ptc-corp.com
FBPE Certificate of Authorization
No. 25935



NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200
FAX (717) 767-4100
www.nctlinc.com

AAMA/WDMA/CSA 101/I.S.2/A440-11

TEST REPORT SUMMARY

Rendered to:

Regency Plus Incorporated
2000 Locust Gap Highway
Mount Carmel, PA 17851

PRODUCT TYPE: Tilt Double Hung

SERIES/ MODEL: "8313"

Title	Summary of Results
Primary Product Designator AAMA/WDMA/CSA 101/I.S.2/A440-11	Class LC-PG50: Size tested 1346 x 1956 mm (~53 x 77 in) - Type H
Positive Design Pressure	+2400 Pa (+50.13 psf)
Negative Design Pressure	-2400 Pa (-50.13 psf)
Operating Force (in motion _{max})	151 N (34 lbf)
Air Infiltration	0.4 L/s/m ² (0.07 cfm/ft ²)
Water Penetration Resistance Test Pressure	360 Pa (7.52 psf)
Uniform Load Structural Test Pressure	±3600 Pa (±75.19 psf)
Forced Entry Resistance	ASTM F588-07 - Grade 10 Pass

Test Completed: 10/10/18

Reference must be made to Report No. NCTL-110-21524-2 dated 10/16/18 for complete test specimen description and data.

For National Certified Testing Laboratories

DIGITAL SIGNATURE

Jay Leader
Technician



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FAX (717) 767-4100
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AAMA/WDMA/CSA 101/I.S.2/A440-11

STRUCTURAL TEST REPORT

NCTL-110-21524-2

REPORT TO:
REGENCY PLUS INCORPORATED
2000 LOCUST GAP HIGHWAY
MOUNT CARMEL, PA 17851

REPORT NUMBER: NCTL-110-21524-2
REPORT DATE: 10/16/18

PRODUCT TYPE: TILT DOUBLE HUNG

SERIES/ MODEL: "8313"



NATIONAL CERTIFIED TESTING LABORATORIES

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FAX (717) 767-4100
www.nctlinc.com

Report Number NCTL-110-21524-2
Report Date 10/16/18
Report To Regency Plus Incorporated
2000 Locust Gap Highway
Mount Carmel, PA 17851
Date Testing Started 10/08/18
Date Testing Completed 10/10/18
Specification AAMA/WDMA/CSA 101/I.S.2/A440-11
NAFS 2011 - North American Fenestration Standard/Specification for
windows, doors, and skylights
Performance Results AAMA/WDMA/CSA 101/I.S.2/A440-11
Class LC-PG50: Size tested 1346 x 1956 mm (~53 x 77 in)-Type H

Description of Specimen Tested

Note: All dimensions are in the order (Width x Height x Thickness) unless otherwise noted.

Model/ Series "8313"
Configuration Tilt Double Hung
Frame Size Overall
1346 mm x 1956 mm (53" x 77")
Sash Size Top Sash
1246 mm x 946 mm (49.063" x 37.188")
Bottom Sash
1270 mm x 940 mm (50" x 37")
Viewing Area Top Sash
1157 mm x 848 mm (45.563" x 33.375")
Bottom Sash
1189 mm x 843 mm (46.813" x 33.188")
Frame & Sash Type Extruded polyvinyl chloride (PVC)
Joint Construction Frame & Sash
Mitered, welded
Glazing Components
Overall 22.28 mm (0.877") nominal
Glass Thickness (2) Lites of 3 mm (0.120") nominal tempered glass
Spacer Type/Size 16.18 mm (0.637") Desiccant-filled stainless steel spacer (Type SS-D)
Glazing System Interior glazed against a (2)-leaf dual durometer back-bedding and a snap-in (2)-leaf dual durometer rigid vinyl glazing bead
Weatherstrip
Type Closed cell foam plug
Size 35 mm (1.375") x 19.05 mm (0.75") x 19.05 mm (0.75")
Location T Top of the exterior jamb track balances and the bottom of the interior jamb tracks

Weatherstrip (continued)

Type	(2) Strips center fin
Size	7.62 mm (0.300") high
Location	Meeting rails and bottom rail
Type	(3) Strips center fin
Size	7.62 mm (0.300") high
Location	Stiles
Type	(1) Strip single-leaf multi-fin bulb-vinyl
Location	Bottom rail

Operating Hardware

Locks	
Type	Metal cam-type sweep
Location	400 mm (15.75") From each end of the interior meeting rail
Keeper	
Type	Metal
Location	Exterior meeting rail at the lock locations
Balance	
Type	(3) Coil spring
Location	Each jamb track
Pivot Bar	
Type	(1) Die-cast T-shaped
Location	Each end of the exterior meeting rail and bottom rail fastened with (3) rivets

Auxiliary

Type	Metal tilt-latch with thumb actuator
Location	Each end of the top rail and interior meeting rail
Type	Safety latch lock
Location	121 mm (4.75") From the bottom of the top stiles
Type	Rigid vinyl cover/ weatherstrip holder/ interior vertical leg
Location	Head and sill
Type	Rigid vinyl cover
Location	Interior head track, top rail
Type	Rigid vinyl cover/ interlock/ weatherstrip holder
Location	Meeting rails
Type	Rigid vinyl glazing bead/ lift handle
Location	Top and bottom rails
Type	Open cell baffle
Size	70 mm (2.75") x 32 mm (1.25") x 14.3 mm (0.563")
Location	Each end of the exterior sill track
Type	Rigid vinyl sash stop
Location	Bottom of the exterior jamb tracks

Reinforcement

Type	U-shaped galvanized steel
Thickness	0.64 mm (0.025")
Location	Bottom rail and exterior meeting rail
Type	Galvanized steel tube
Thickness	1.52 mm (0.060")
Location	Top rail and interior meeting rail

Weep Description

Size	24.97 mm (0.983") wide by 6.35 mm (0.25") high
Location	25.4 mm (1") From each end of the exterior sill face
Size	32 mm (1.270") wide by 7.62 mm (0.300") high with plastic weep cover
Location	92 mm (3.625") From each end of the exterior sill face
Size	9.53 mm (0.375") wide by 9.53 mm (0.375") high
Location	Each end of the interior sill track

Interior/ Exterior Surface Finish

White vinyl (PVC)

Sealant

Location	Snap-in sill insert and screw heads at the exterior jamb tracks
Material	Silicone

Insect Screen

Size	1224 mm (48.188") wide by 1838 mm (72.375")
Corner Construction	Mitered, staked-in-place die cast corner keys
Material	Fiberglass mesh with hollow vinyl spline (2) head retainer springs, (2) plastic tabs at bottom rail and (1) plastic tab at the rails. (1) Strip polypile weatherstrip 5.33 mm (0.210") high at the stiles. (1) Horizontal intermediate located at the stiles.

Installation Method

The window was installed in a 51 mm x 254 mm (2" x 10") spruce-pine-fir lumber test buck and was fastened with (1) #10 x 64 mm (2.5") flat head screw located 152 mm (6"), 483 mm (19") and 813 mm (32") from each end of the exterior jamb tracks. The exterior perimeter was sealed with silicone sealant and the head and sill were bedded in silicone sealant.

Test Results - AAMA/WDMA/CSA 101/I.S.2/A440-2011

<u>Paragraph</u>	<u>Test</u>
9.3.1	Operating Force and Force to Latch - Method B (Force Gauge) ASTM E2068-00(08)
	Initiate Motion = 142 N (32 lbf)
	Allowed = Report Only
	Maintain Motion - Opening = 142 N (32 lbf)
	Maintain Motion - Closing = 151 N (34 lbf)
	Allowed (LC Rating) = 180 N (40.47 lbf)
	Latches = 31 N (7 lbf)
	Allowed = 100 N (22.5 lbf)

NOTE: The results above represent the maximum force among all sash tested.

<u>Paragraph</u>	<u>Test</u>
9.3.2	Air Leakage Resistance ASTM E283-04(12)
	The tested specimen meets or exceeds the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-2011 for air infiltration at 75 Pa (1.6 psf).
	Maximum Allowable = 1.5 L/s/m ² (0.3 cfm/ft ²)
	Total Air Leakage = 1.92 L/s (4.06 cfm)
	Extraneous Air Leakage _{Tare} = 0.98 L/s (2.07 cfm)
	Net Air Leakage = 0.94 L/s (1.99 cfm)
	Air Infiltration Rate = 0.4 L/s/m ² (0.07 cfm/ft ²)

Paragraph Test
 9.3.3 Water Penetration Resistance
 ASTM E547-00(09)

3.4 L/ (min• m²) (5.0 gph/ft²)

No Leakage after 4 cycles of 5 minutes at 360 Pa (7.52 psf)

NOTE: Tested with and without insect screen

Paragraph Test
 9.3.4.2 Uniform Load Deflection at Design Pressure
 ASTM E330-14

No damage after positive 2400 Pa (50.13 psf) held for 10 seconds

No damage after negative 2400 Pa (50.13 psf) held for 10 seconds

Measured Deflection ^{Positive} = 16.97 mm (0.668 inches)

Measured Deflection ^{Negative} = 25.83 mm (1.017 inches)

Paragraph Test
 9.3.4.3 Uniform Load Structural Test
 ASTM E330-14

No damage after positive 3600 Pa (75.19 psf) held for 10 seconds

No damage after negative 3600 Pa (75.19 psf) held for 10 seconds

Measured Permanent Set ^{Positive} = 0.20 mm (0.008 inches)

Measured Permanent Set ^{Negative} = 1.60 mm (0.063 inches)

Maximum Allowed (0.4%) = 4.83 mm (0.190 inches)

NOTE: Deflection and Permanent Set measurements taken on the meeting rail over a 1208 mm (47.563") span.

Paragraph Test
 5.3.5/ 9.3.5 Forced Entry Resistance
 ASTM F588-07

Type A Window Assembly/ Grade 10: = Pass

Test
 Disassembly = No Entry
 Lock Manipulation = No Entry
 Sash Manipulation = No Entry
 Test A1 = No Entry
 Test A2 = No Entry
 Test A3 = No Entry
 Test A4 = No Entry
 Test A5 = No Entry
 Test A7 = No Entry
 Lock Manipulation Test = No Entry
 Sash Manipulation Test = No Entry

NOTE: 1. T1 = 5 minutes, L1 = 667 N (150 lbf), L2 = 333 N (75 lbf), L3 = 111 N (25 lbf)
 2. Loads were held for 60 seconds.

Paragraph Test
 9.3.6.2 Thermoplastic Corner Weld Test (PVC products only) = Pass

Paragraph Test
 9.3.6.3 Deglazing Test

ASTM E987-88(09)

Top Sash

Stiles – 230 N (51.71 lbf)	
Maximum Allowed	= 90% (100%)
Left Stile	= 14.0%
Right Stile	= 14.2%
Rails – 320 N (71.94 lbf)	
Maximum Allowed	= 90% (100%)
Top Rail	= 19.4%
Meeting Rail	= 18.8%

Bottom Sash

Stiles – 230 N (51.71 lbf)	
Maximum Allowed	= 90% (100%)
Left Stile	= 14.4%
Right Stile	= 14.0%
Rails – 320 N (71.94 lbf)	
Maximum Allowed	= 90% (100%)
Top Rail	= 19.4%
Meeting Rail	= 20.2%

NOTE: The glass bite was approximately 12.7 mm (0.5")

This test report was prepared by National Certified Testing Laboratory (NCTL), for the exclusive use of the above named client and it does not constitute certification of this product. The results are for the particular specimen tested and do not imply the quality of similar or identical products manufactured or installed from specifications identical to the tested product. The test specimen was supplied to NCTL by the above named client. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen are to be drawn from the ASTM E330 test. **Forced entry resistance test equipment used is in compliance** with Section 7 of the ASTM F588-07 test method. Foam tape is mounted to the perimeter of the test buck prior to clamping to the test wall. It is the assertion of this laboratory that any film employed during testing does not affect measurement values. NCTL is a testing lab and assumes that all information provided by the client is accurate and does not guarantee or warranty any product tested or installed. The results in this report are actual tested values and are applicable to the specimen tested only, using the components and construction methods described herein.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. Component drawings were reviewed for product verification. The bill of materials contains details with any deviations noted. Ambient conditions during the referenced testing are available upon request. A copy of this report along with representative sections of the test specimen will be retained per applicable requirements by NCTL. This report does not constitute certification or approval of the product, which may only be granted by a certification program validator or recognized approval entity. All tests were conducted in full compliance with the referenced specifications and/or test methods. Tests were performed in the order set forth by the applicable standard or specification. This report is the joint property of National Certified Testing Laboratories Inc. and the Client to whom it is issued. Permission to reproduce this report by anyone other than National Certified Testing Laboratories Inc and the Client must be granted in writing by both of the above parties. This report may not be reproduced, except its entirety, without the written consent of NCTL.

National Certified Testing Laboratories



DIGITAL SIGNATURE

Jay Leader
Technician



DIGITAL SIGNATURE

Justin L. Bupp
Laboratory Manager

NJL/ dro
Attachments
Appendix A – Revision Summary
Appendix B – Drawings

Appendix A
Revision Log

<u>Identification</u>	<u>Date</u>	<u>Page & Revision</u>
Original Issue	10/16/18	Not Applicable

Appendix B

Drawings

Component Drawings, with Applicable Part Numbers, Manufacturing and Modeling Details, were reviewed (as submitted) for Product Verification. Detailed assembly drawings showing wall thicknesses of all members, corner construction and hardware application are on file and have been compared to the test sample submitted.

(Reference: NCTL-110-21524-2)

See Attached Documentation;
any deviations noted.

Note: The above referenced component drawings (if applicable) along with representative sections of the test specimen will be retained by NCTL per applicable retention requirements. This testing facility assumes that all information provided by the client is accurate.

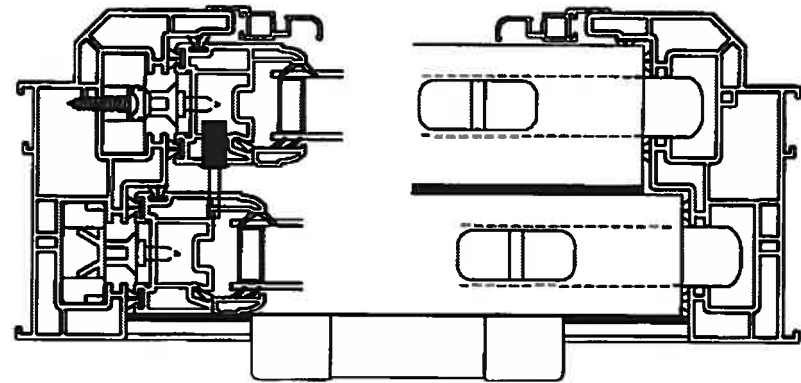
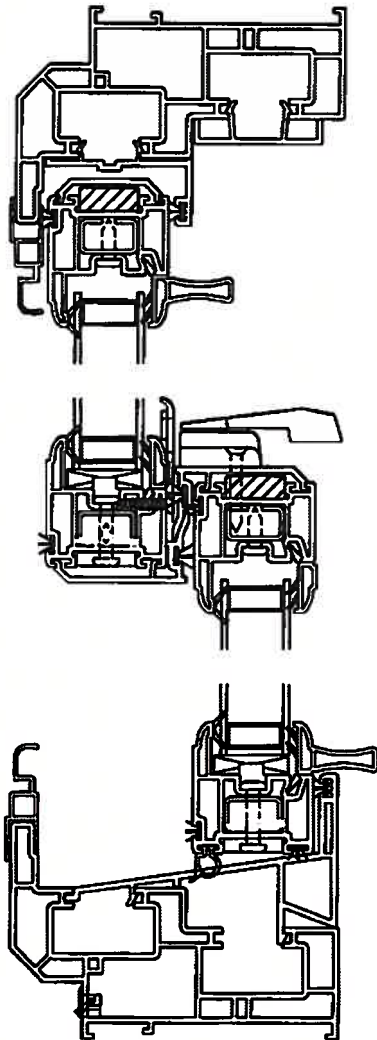
Series Tech 8313 Non-Impact Double Hung / Bill of Material

Supplier	Part Numbers	Description	Quantity
Energi / Royal	IV White 1060 / 7720	Master Frame (H)	2
Energi / Royal	IV White 1060 / 7720	Master Frame (W)	2
Energi / Royal	IV White 1282 / 7750	Sash Frame (Operating Sash) / (H)	4
Energi / Royal	IV White 1282 / 7750	Sash Frame (Operating Sash) / (W)	4
Energi / Royal	IV White 1067 / 7745	Glazing Bead Stop (Operating Sashes) / (H)	4
Energi / Royal	IV White 1067 / 7745	Glazing Bead Stop (Operating Sashes) / (W)	2
Energi / Royal	IV White 1068 / 7747	Glazing Llifrail Handle (Operating Sashes) / (W)	2
Energi / Royal	IV White 1073 / 7724	Pocket Cover Head / (W)	1
Energi / Royal	IV White 1078 / 7725	Sash Cover Head (Keeper Sash) / (W)	1
Energi / Royal	IV White 1180 / 7727	Interlock Cover (Operating Sashes) / (W)	2
Energi / Royal	IV White 1070 / 7736	Sash Stop Frame Cover / (H)	2
Energi / Royal	IV White 1070 / 7736	Sash Stop Frame Cover Head / (W)	1
Energi / Royal	IV White 1181 / 7738	Sloped Sill / (W)	1
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Pocket Cover (W) / 1073 / 7724 / Frame Head	1
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Pocket Cover (W) / 1181 / 7738 / Frame Sill	1
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Sash Frame (H) / 1282 / 7750 / Keeper Sash	4
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Sash Frame (H) / 1282 / 7750 / Lock Sash	4
Ultra-Fab	W23303NW0000	.210 x .300 Fin Seal Sash Frame (W) / 1282 / 7750 / Lock Sash	1
Ultra-Fab	E20718WN2020	.200 x .340 H-Bulb Seal Sash Frame (W) 1282 / 7750 / Lock Sash	1
Ultra-Fab	W23301NW0000	.187 x .300 Fin Seal Interlock Cover (W) / 1180 / 7727 / Keeper Sash	1
Ultra-Fab	W23301NW0000	.187 x .300 Fin Seal Interlock Cover (W) / 1180 / 7727 / Lock Sash	1
Ultra-Fab	W112257W0000	.270 x .220 Fin Seal Sash Frame (H) / Single Leg Screen Frame	2
Shapes Unlimited	06516NEW192	Single Leg Frame New White	3
Shapes Unlimited	06515NEW192	Double Leg Frame New White	1
Adept	2584	Tension Springs	2
Phifer	3002606	Fiberglass Screen Cloth Charcoal / 60" x 96'	1
Imperial Plastic USA	EX-FLX-Q165-BK	Screen Spline (H / W)	4
Hygrade Metals	CK252X260	Aluminum Corner Keys	4
Hygrade Metals	ST-226-144-0.052	Operating Sash / (W-2) Lock Sash	2
Hygrade Metals	ST-226-144-0.052	Operating Sash / (W-2) Keeper Sash	2
Product Design	H-884	Screen Clip Clear	2
Product Design	H-3150	Screen Clip Clear	2
Product Design	H-808WHZ	Weep Hole Cover White	2
RH Products	HH-66 Vinyl Cement	Interlock Cover (Operating Sash) / Lock Sash (W)	1
RH Products	HH-66 Vinyl Cement	Interlock Cover (Operating Sash) / Keeper Sash (W)	1
Amesbury / Truth	803827	27 lb. 3 Coil / 984 Series / Constant Force Balance	4
S.I.L. Plastic	00156-C001	Llifrail End Caps White	4
Smith Staple	BEA 80/10	Stainless Steel Staples 3/8 x 1/2 Sash (W) (H)	20
Lindenmeyr	W0511022	30PP12-16P50-9/16 X1 3/8 X 3 Foam Block	2
Lamatek	21300-00077	.75 White Balance Plug	4
James Spring Wire	CS025	Hurricane Grade Spring	4
Novagard Silicones	02-MX0150010C2	Accessory Parts Installation Translucent	1
Vision Industries	1057A-003-EW	Hurricane Tilt Latch	4
Vision Industries	3220SS-003-EW	Safe Seal Lock	2
Vision Industries	8292A-003-EW	Safe Seal Keeper	2
Vision Industries	6987	Pivot Bars / T-Shaped Head	4
Frank Lowe	2NB-8K-0.125-032-064	Glass Setting Blocks Sash (W) Top / Sash (H)	12
GLF Corporation	112003	# 5/32" Tri-Rivet .040 / 275 Grip / Sash Pivot Bars	12
GLF Corporation	137341	# 8-18 x 0.850 Flat Wafer Shoulder / Sash / Hurricane Latch	4
GLF Corporation	120376	# 8 x 1 1/4" Tek White / Locks	4
GLF Corporation	116821	# 6 x 1" Tek White / Keepers	4
GLF Corporation	117595	# 6 x 5/8" Tek / Sash Rebar (H)	12
GLF Corporation	117595	# 6 x 5/8" Tek / Sash Rebar (W)	12
GLF Corporation	120766	# 8 x 3/4" Tek / Pan Head (Balance Shoes)	4
GLF Corporation	116506	# 5 x 3/8" Tek / Screen Clips White	4
GLF Corporation	401168	# 12 x 3" Flat / Installation Screws	10
Cardinal	Double Strength Tempered	Operating Lock Sash / 3.1 T Q366 / 15.8 FED / 3.1 T	1
Cardinal	Double Strength Tempered	Operating Lock Keeper / 3.1 T Q366 / 15.8 FED / 3.1 T	1

TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

8313 DH

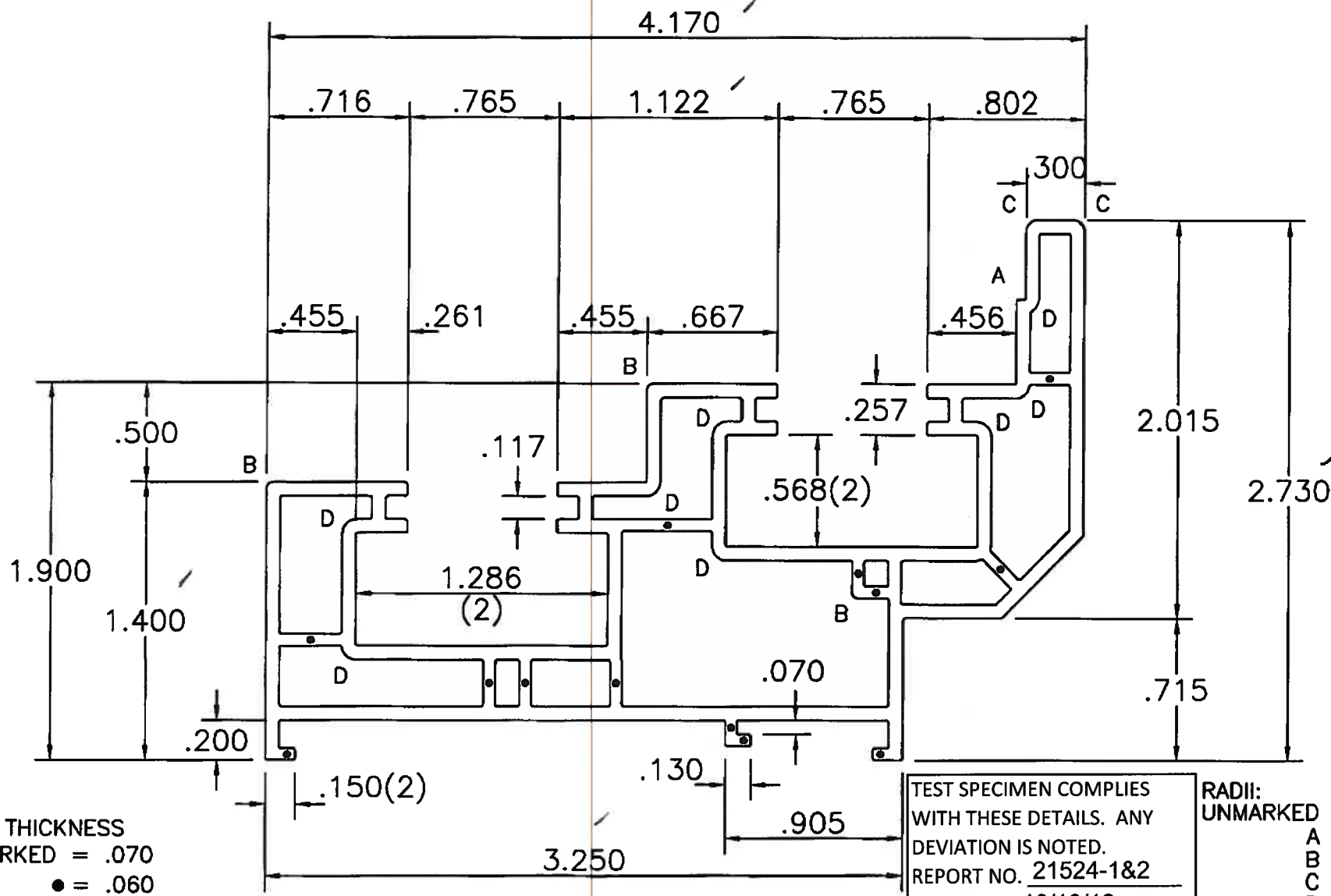
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A1	Added Energy calibration on a wire	17-Dec-2018	JY



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 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

NOTES:

 <small>ENERGY SOLUTIONS</small>	<small>CONTRACTOR/CLIENT/ENGINEER/ARCHITECT/GENERAL CONTRACTOR/INSTALLER/OPERATOR/MAINTENANCE PERSONNEL/REGULATORY AGENCIES/OTHER STAKEHOLDERS</small>	CUSTOMER: Regency	LAYOUT:	DRAWN: JS	DESCRIPTION: 8313 DH
	<small>THIS DRAWING IS THE PROPERTY OF ENERGI. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. ANY REUSE OR MODIFICATION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF ENERGI IS STRICTLY PROHIBITED.</small>	TITLE: Regency	CHECKED:	PROJECT:	SHEET: 1 / 1
	SHEET: 8	MATERIAL: Various	DATE: 10/12/18	SCALE: .87	JOB NUMBER: 8313 DH



WALL THICKNESS
 UNMARKED = .070
 ● = .060

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 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

RADI:
 UNMARKED = .010R
 A = .007R
 B = .030R
 C = .060R
 D = .075R



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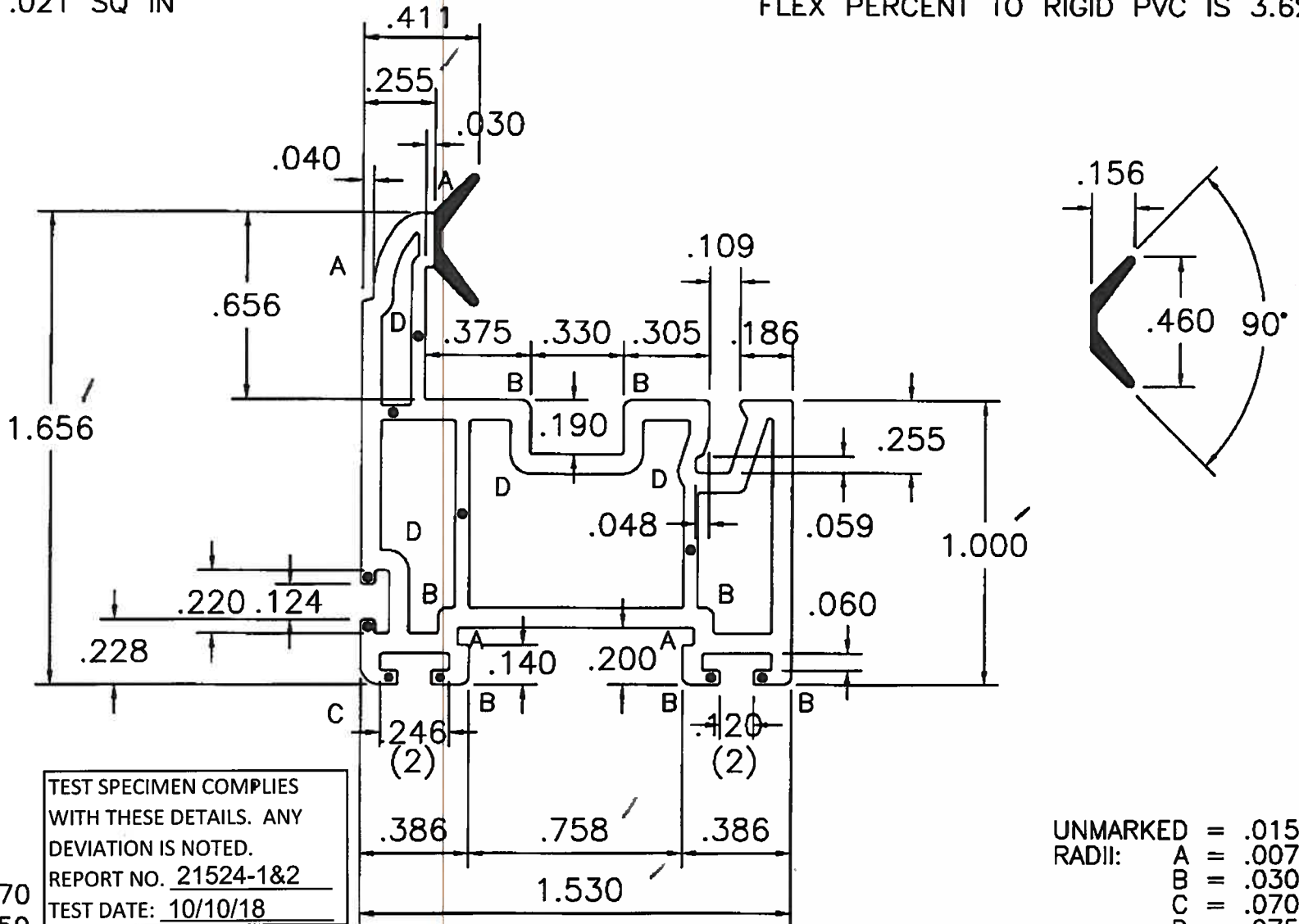
REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				DH MAIN FRAME
				DWG # 7720P MATERIAL: RIGID PVC
				CUST. DWG # V2308 AREA: 1.460
				DRAWN BY: MC TYP. WALL THKNS: .070
				DATE: 8/4/09 SCALE: NTS A

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PART # 7720P

FLEX AREA = .021 SQ IN

FLEX PERCENT TO RIGID PVC IS 3.6%



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 TEST DATE: 10/10/18

WALL THICKNESS
 UNMARKED = .070
 ● = .050

UNMARKED = .015R
 RADII: A = .007R
 B = .030R
 C = .070R
 D = .075R

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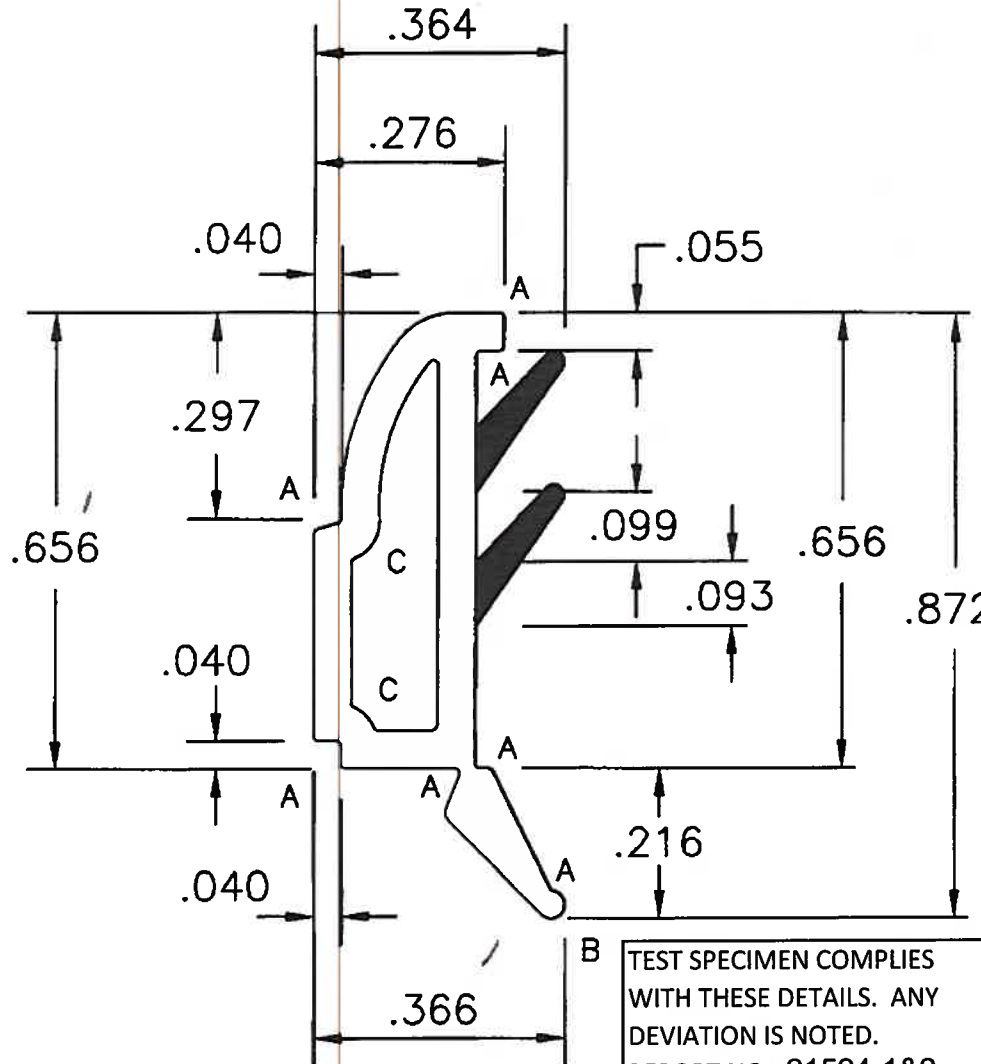
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				SASH
				DWG # 7750F MATERIAL: RIGID
				CUST. DWG # X0034 AREA: .578
				DRAWN BY: MC TYP. WALL THKNS: .070
				DATE: 9-4-09 SCALE: NTS

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PART # 7750F

FLEX AREA = .017 SQ IN

FLEX PERCENT TO RIGID PVC IS 17.5%



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 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

UNMARKED = .015R
 RADII: A = .007R
 B = .020R
 C = .055R

WALL THICKNESS
 UNMARKED = .055

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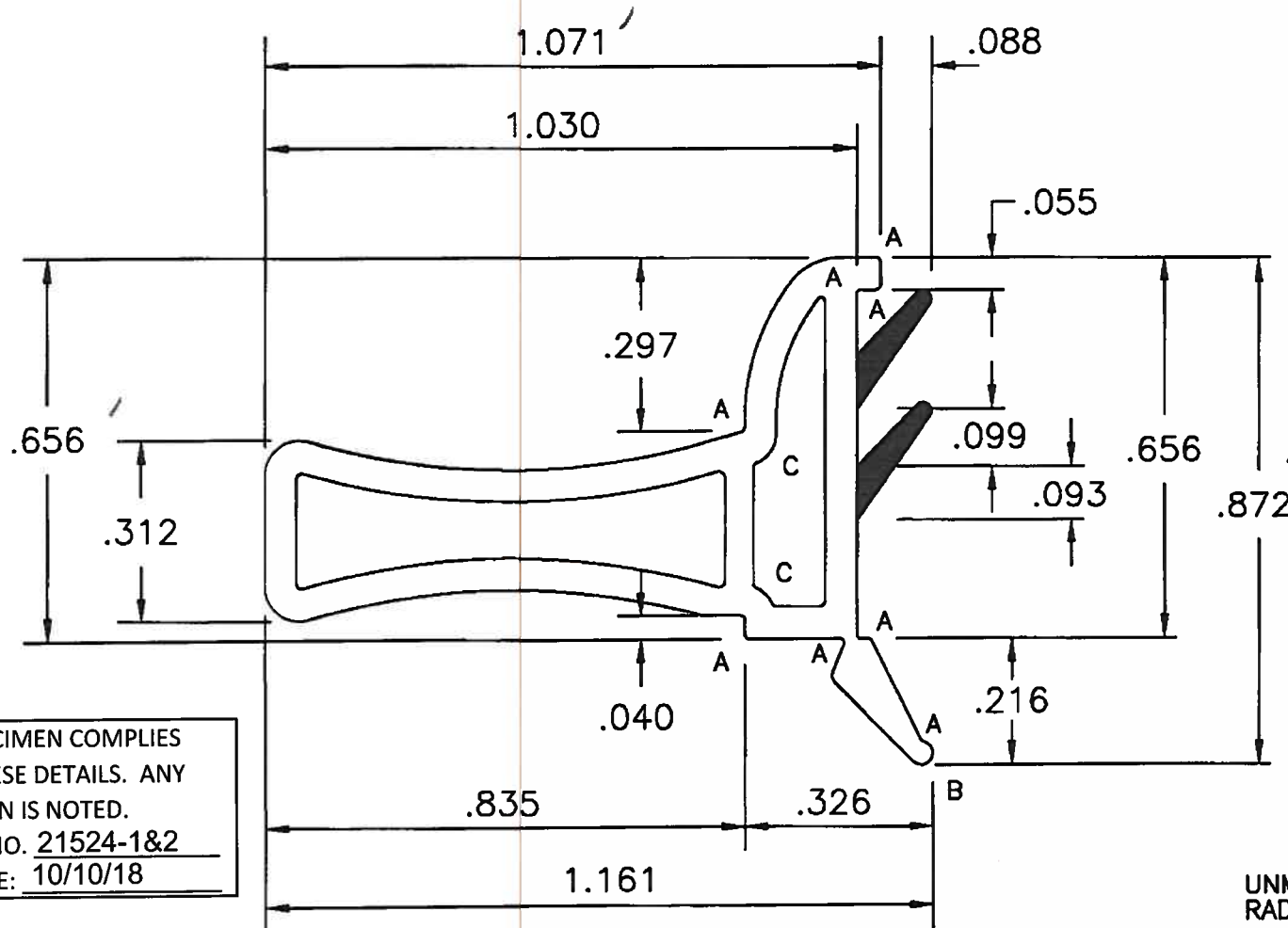
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REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				GLAZING BEAD
			DWG #	7745F
			MATERIAL:	RIGID
			CUST. DWG #	X0035
			AREA:	.097
			DRAWN BY:	MC
			TYP. WALL THKNS:	.055
			DATE:	8-26-09
			SCALE:	NTS
			PART #	7745F

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FLEX AREA = .017 SQ IN

FLEX PERCENT TO RIGID PVC IS 8.7%



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 TEST DATE: 10/10/18

WALL THICKNESS
 UNMARKED = .055

UNMARKED = .015R
 RADII: A = .007R
 B = .020R
 C = .055R

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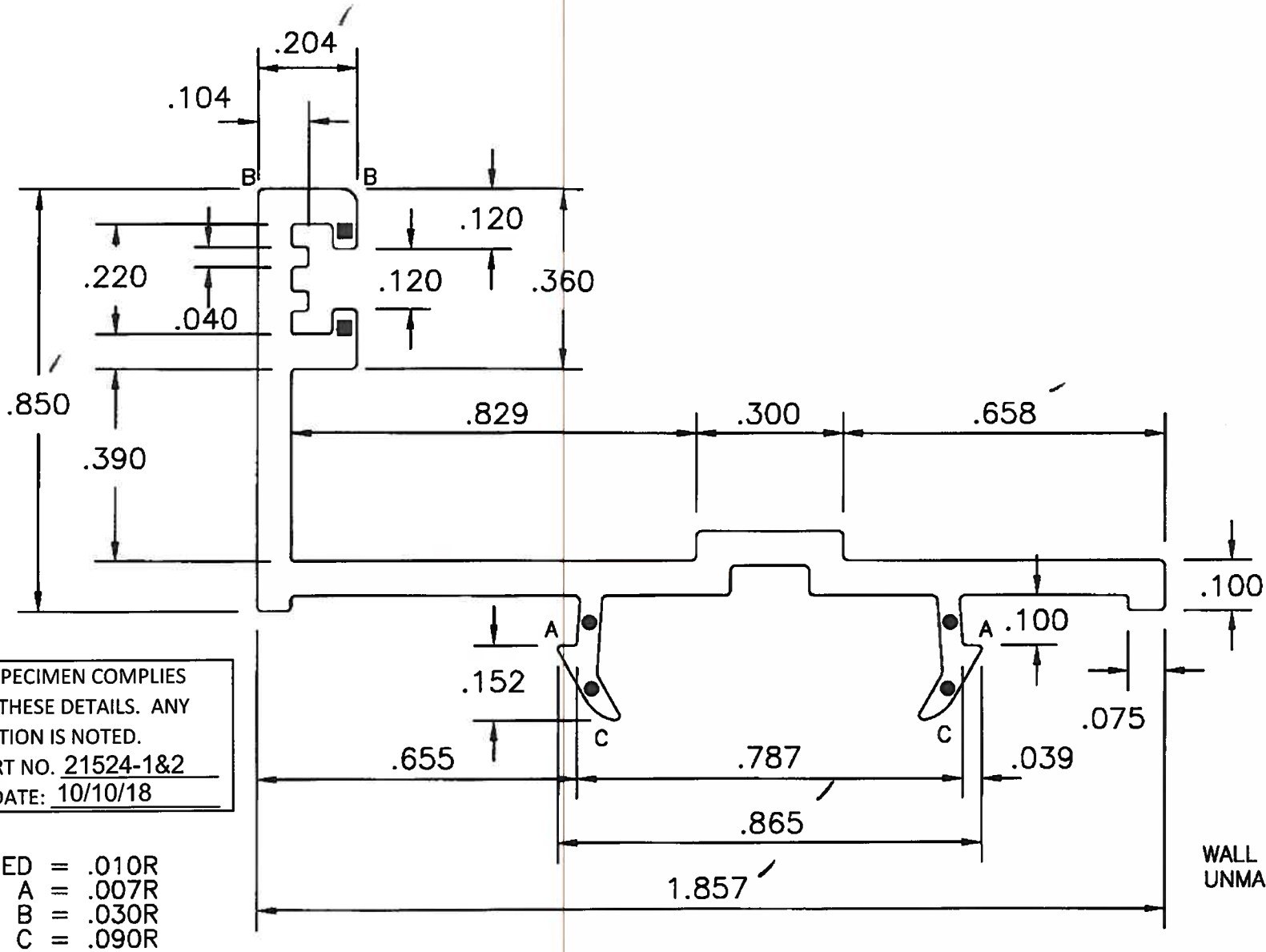
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REV.	DATE	DESCRIPTION	BY	DESCRIPTION: GLAZING BEAD	
				DWG # 7747F	MATERIAL: RIGID
				CUST. DWG # X0033	AREA: .195
				DRAWN BY: MC	TYP. WALL THKNS: .055
				DATE: 8-27-09	SCALE: NTS

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RADII:
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 A = .007R
 B = .030R
 C = .090R

WALL THICKNESS
 UNMARKED = .070
 ● = .045
 ■ = .050



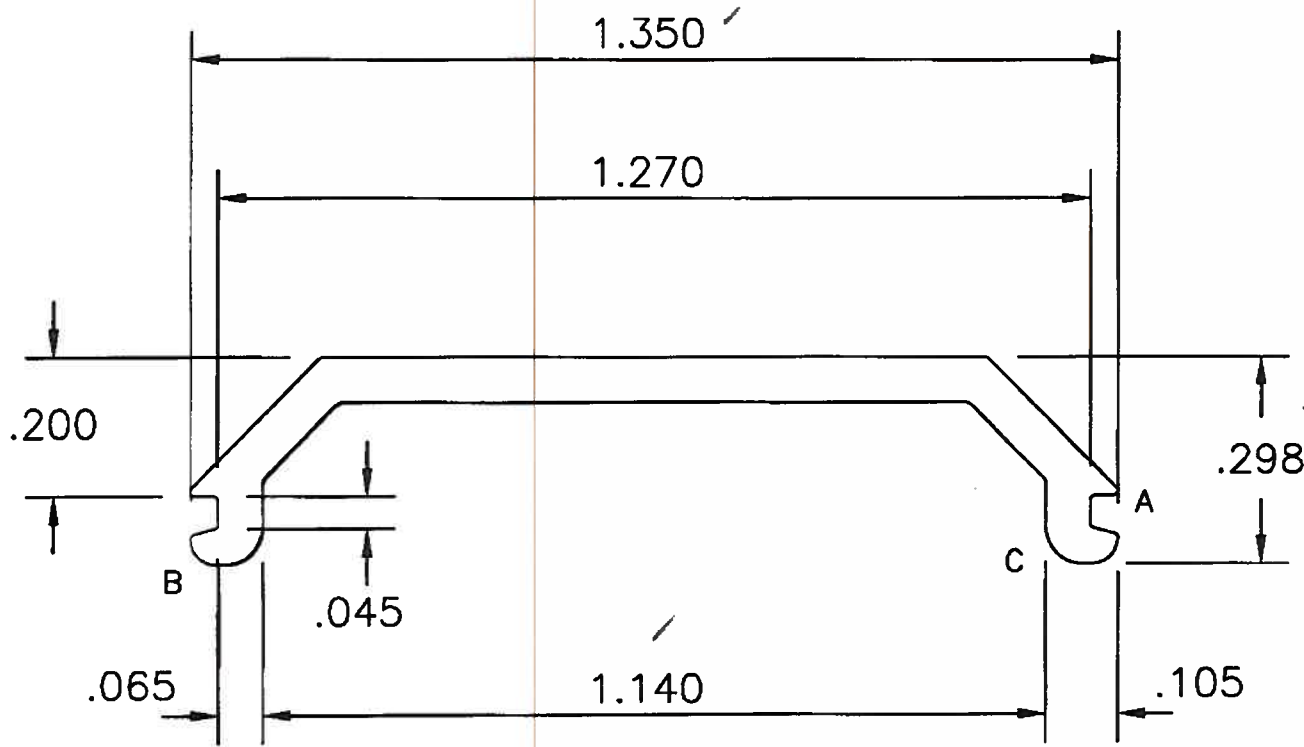
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REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				POCKET COVER
				DWG # 7724 MATERIAL: RIGID
				CUST. DWG # 2316 AREA: .248
				DRAWN BY: MC TYP. WALL THKNS: .070
				DATE: 8-13-09 SCALE: NTS A

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WALL THICKNESS
UNMARKED = .065

TEST SPECIMEN COMPLIES
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DEVIATION IS NOTED.
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RADII:
UNMARKED = .010R
A = .007R
B = .037R
C = .054R



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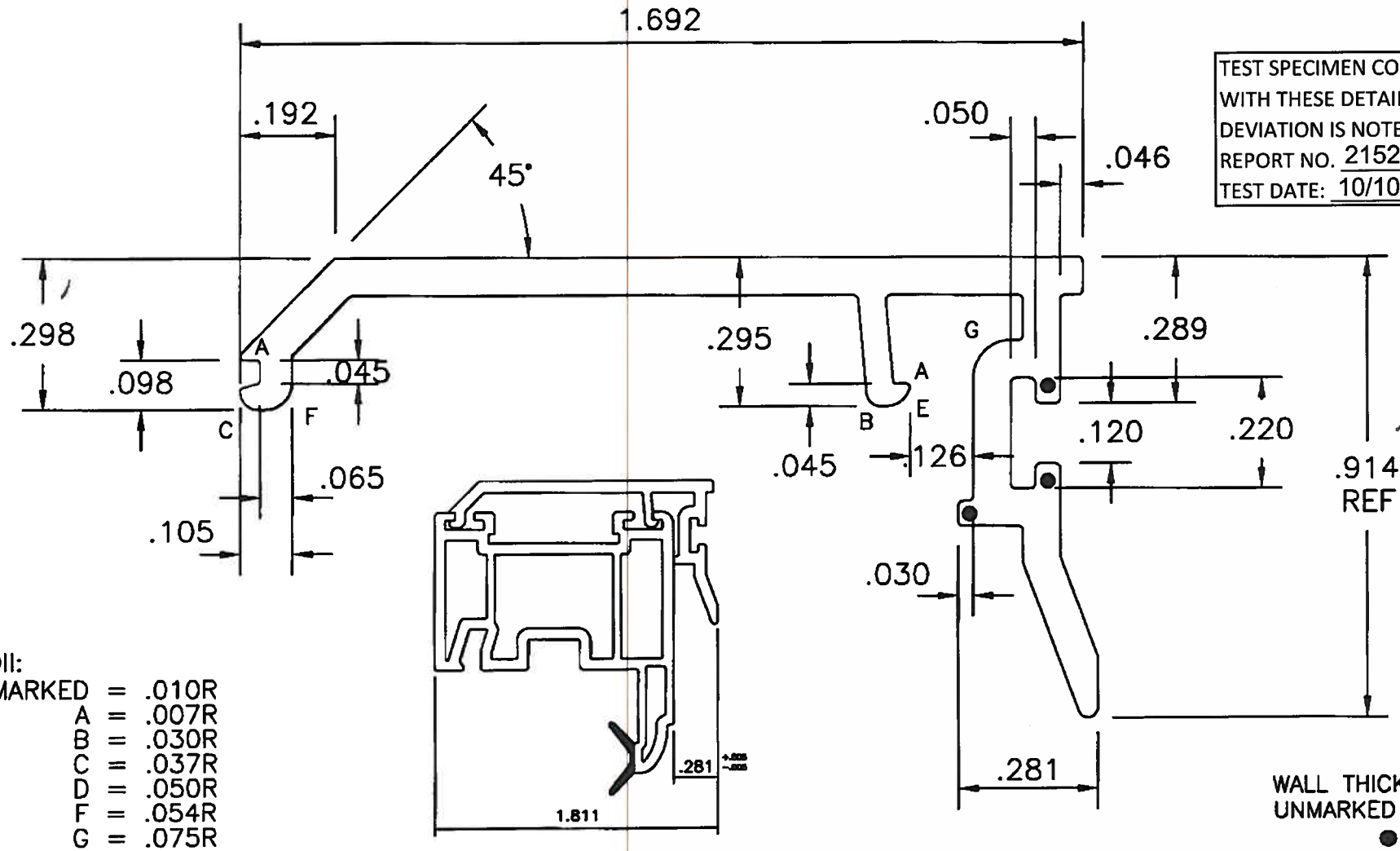
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FAX (724) 468-4198

REV.	DATE	DESCRIPTION	BY	DESCRIPTION: SASH COVER		
				DWG #	7725	MATERIAL: RIGID
				CUST. DWG #	2318	AREA: .107
				DRAWN BY:	MC	TYP. WALL THKNS: .065
				DATE:	8-14-09	SCALE: NTS

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- RADII:
 UNMARKED = .010R
 A = .007R
 B = .030R
 C = .037R
 D = .050R
 F = .054R
 G = .075R

WALL THICKNESS
 UNMARKED = .075
 ● = .050

E N E R G I
 FENESTRATION SOLUTIONS

ONE CONTACT PLACE
 DELMONT, PA 15626

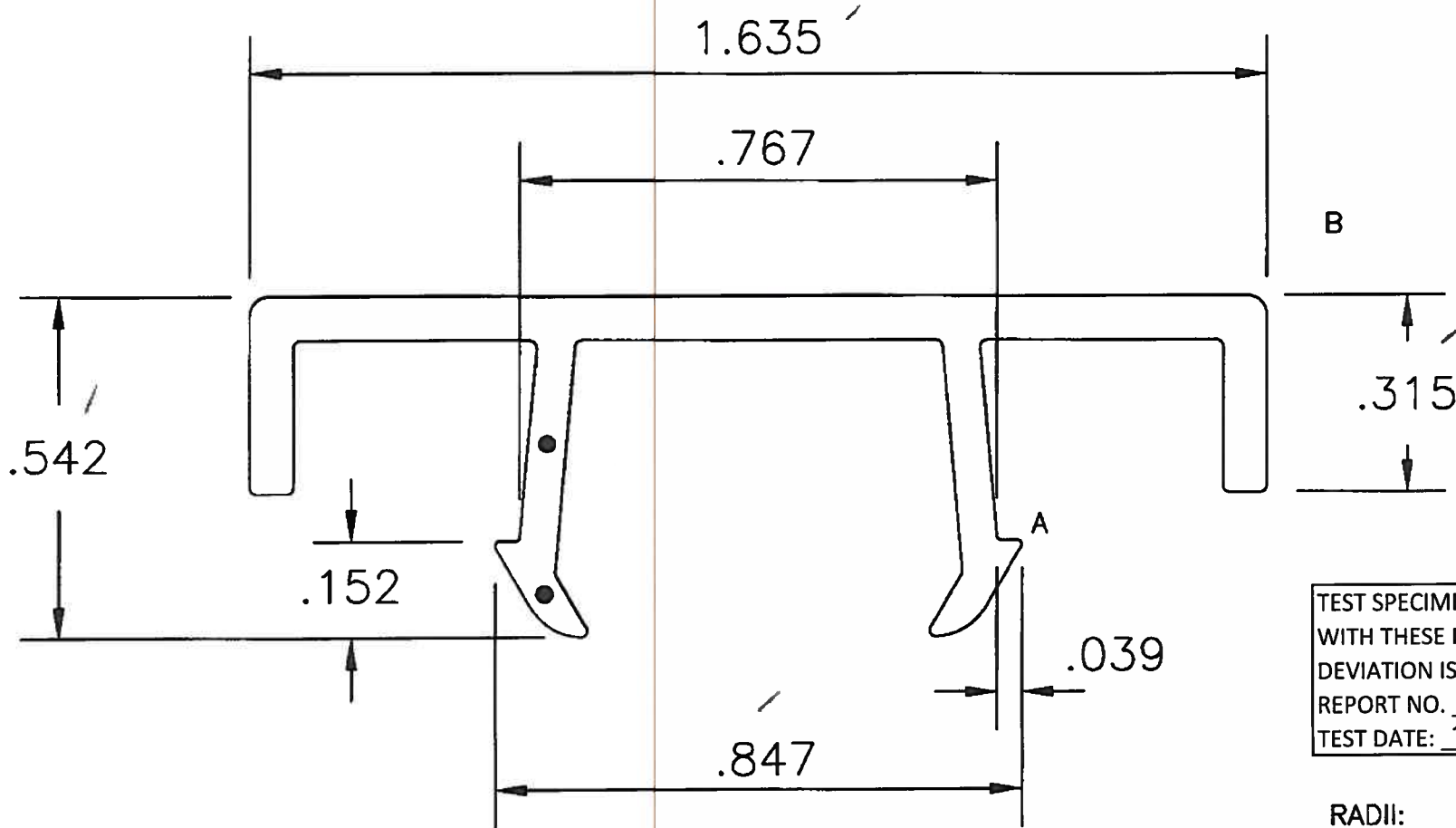
PH (724) 468-4653

FAX (724) 468-4198

REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				INTERLOCK COVER
				DWG # 7727 MATERIAL: RIGID
				CUST. DWG # 2327 AREA: .231
				DRAWN BY: MC TYP. WALL THKNS: .075
				DATE: 8-14-09 SCALE: NTS

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PART # 7727



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

RADII:
 UNMARKED = .010R
 A = .007R
 B = .030R

WALL THICKNESS
 UNMARKED = .070
 ● = .060

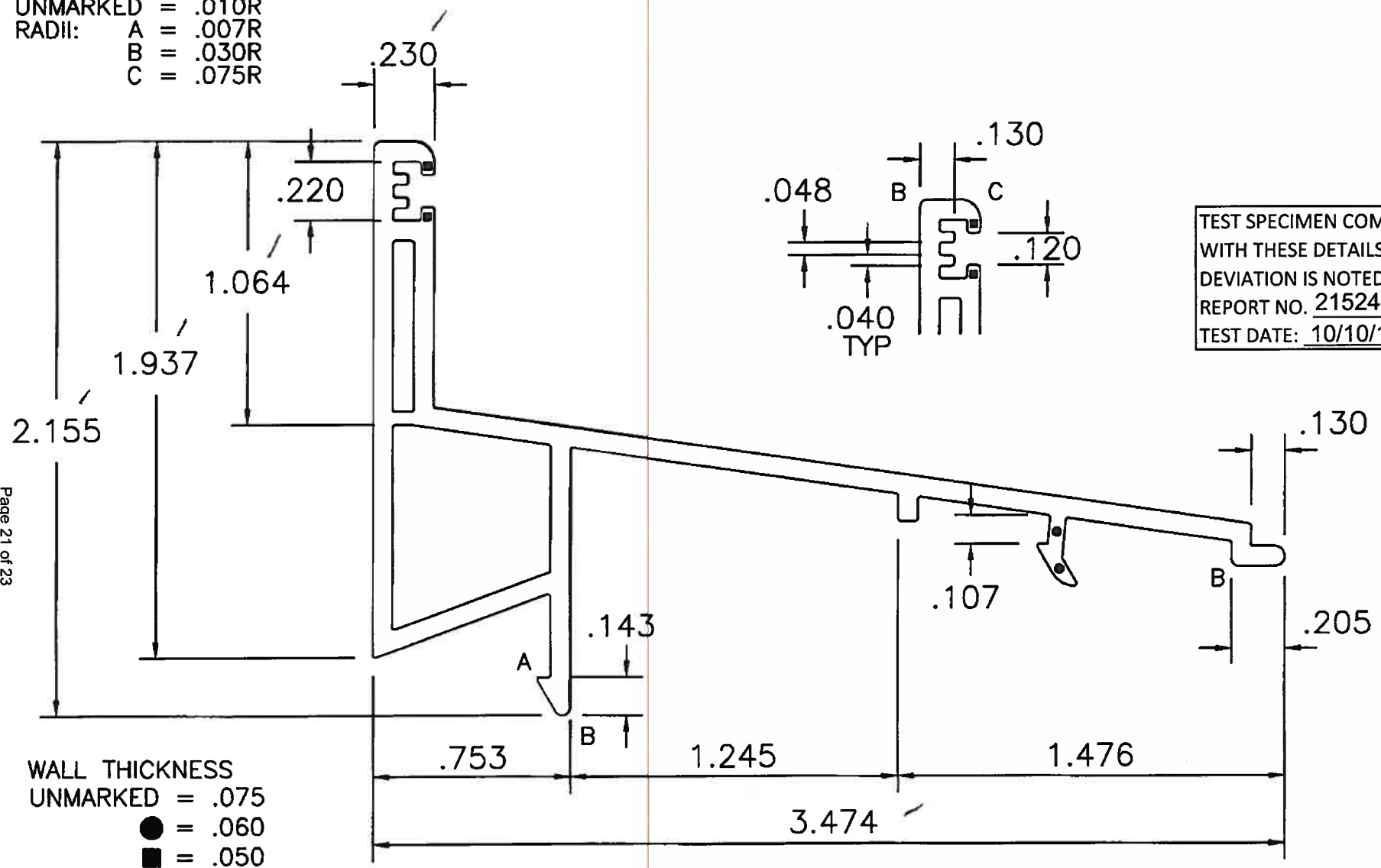
E N E R G I
FENESTRATION SOLUTIONS
 ONE CONTACT PLACE
 DELMONT, PA 15626
 PH (724) 468-4553 FAX (724) 468-4188

REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				FRAME COVER
			DWG #	7736 MATERIAL: RIGID
			CUST. DWG #	2314 AREA: .209
			DRAWN BY:	MC TYP. WALL THKNS: .070
			DATE:	8-20-09 SCALE: NTS

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PART # 7736

UNMARKED = .010R
 RADII: A = .007R
 B = .030R
 C = .075R



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

WALL THICKNESS
 UNMARKED = .075
 ● = .060
 ■ = .050

Page 21 of 23



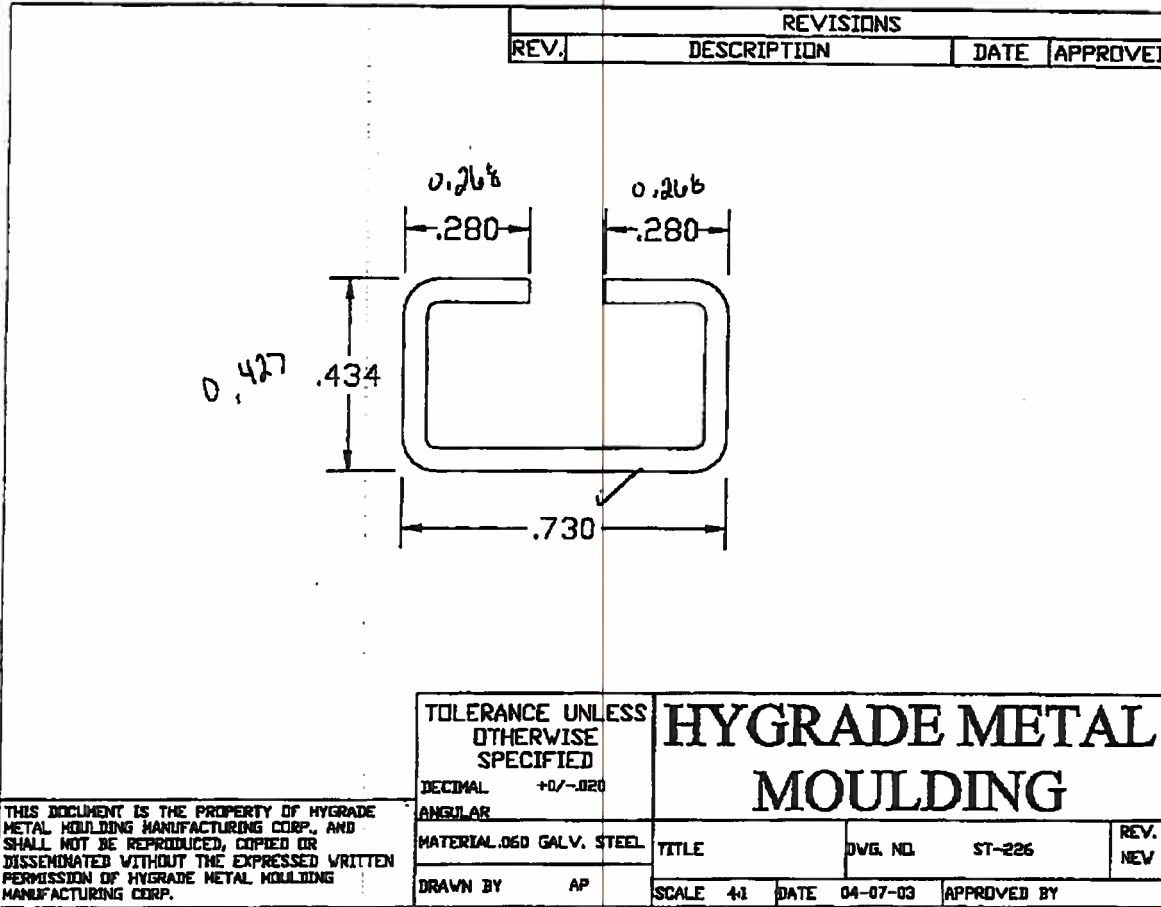
ONE CONTACT PLACE
 DELMONT, PA 15626

PH (724) 468-4563 FAX (724) 468-4198

REV.	DATE	DESCRIPTION	BY	DESCRIPTION:
				SLOPED SILL
				DWG # 7738 MATERIAL: RIGID
				CUST. DWG # 2328 AREA: .635
				DRAWN BY: MC TYP. WALL THKNS: .075
				DATE: 8-20-09 SCALE: NTS

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PART # 7738

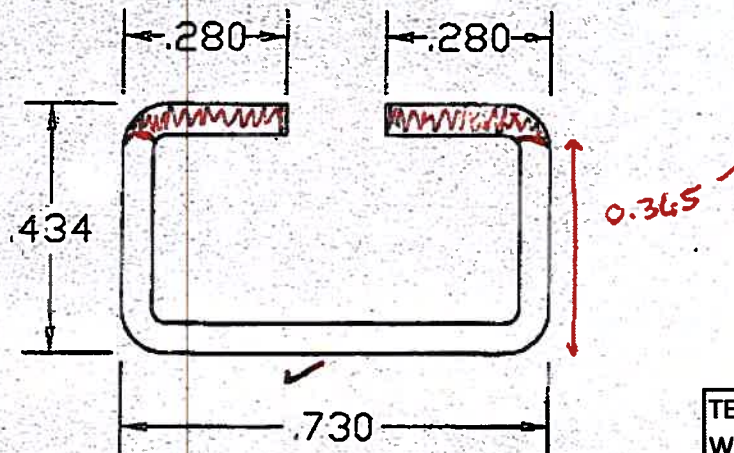


TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.

REPORT NO. 21524-1&2

TEST DATE: 10/10/18

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. 21524-1&2
 TEST DATE: 10/10/18

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TOLERANCE UNLESS OTHERWISE SPECIFIED
 DECIMAL +0/-0.020
 ANGULAR
 MATERIAL .060 GALV. STEEL
 DRAWN BY AP

HYGRADE METAL MOULDING

TITLE	DWG. NO. ST-226	REV. NEW
SCALE 4:1	DATE 04-07-03	APPROVED BY

Conservation™ Windows

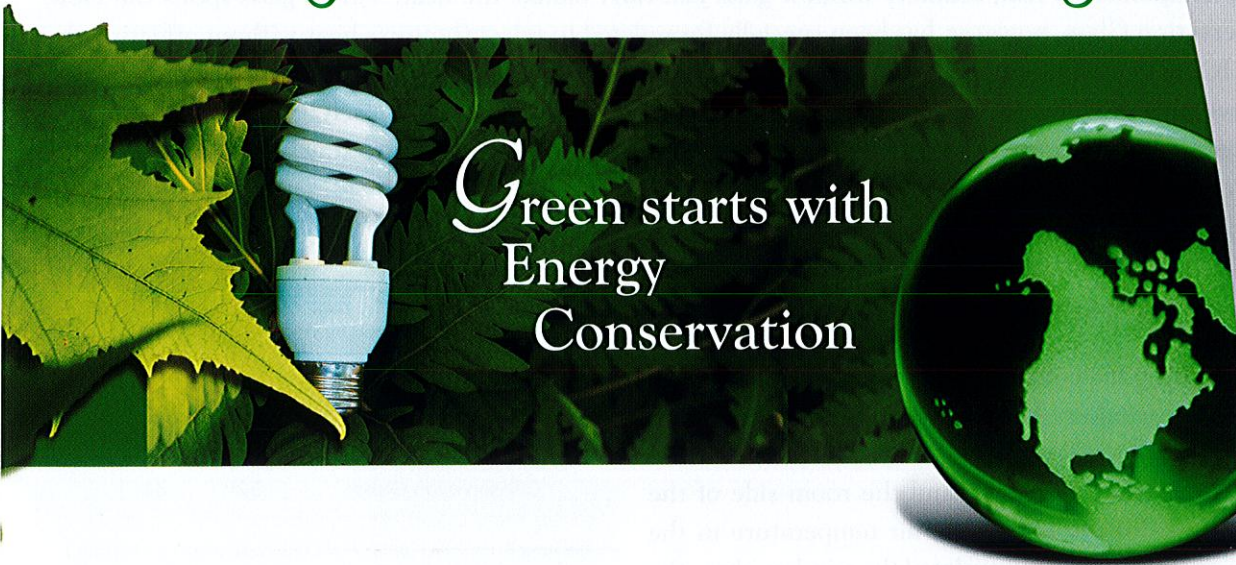


*O*ur Vision is to provide to you warmth in the winter and cool in the summer, while keeping energy costs low. The excellent thermal properties of the Conservation Window line makes that goal attainable!



Conservation™ Windows

Saving the Future... Today



Green starts with Energy Conservation

We have made a commitment to improving our environment. Energy efficient windows and doors can make the difference. A growing number of people and scientists worldwide believe that the earth is warming due to human generation of “greenhouse” gases. Yet, few are aware of how much energy efficient windows and doors can do to help. They can significantly reduce energy consumption in both hot and in cold climates and continue conserving energy for many years to come.....

By using products that reduce energy consumption, one diminishes their environmental footprint, limiting the usage of fossil fuels and lowering carbon emissions. Conservation Windows provide some of the countries most energy efficient window systems, doing our part in helping people protect the environment while saving money on their home’s heating and cooling costs

Look for the Label

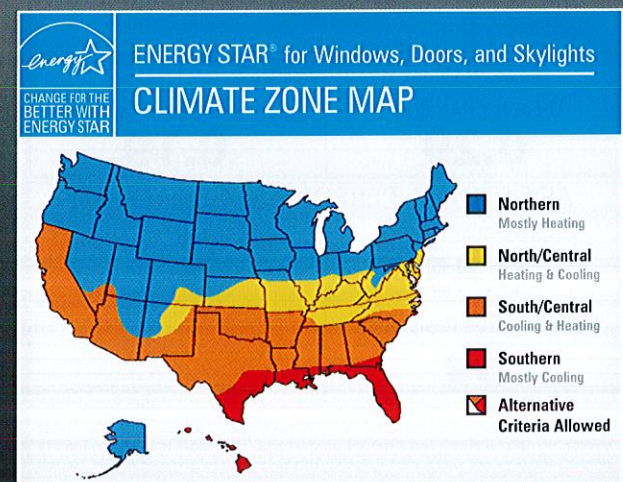
The National Fenestration Rating Council’s (www.afrc.org) Energy Performance Label provides “apples to apples” testing data in order to help consumers compare the performance characteristics of different brands of windows and doors. Conservation Windows tests all of their products to these exacting standards.

ENERGY STAR

ENERGY STAR® (www.energystar.gov) is a United States Government supported program dedicated to helping consumers protect the environment through the investment in energy efficient products. Conservation Windows exceed ENERGY STAR’s performance guidelines in every state of the country.

Something to think about...

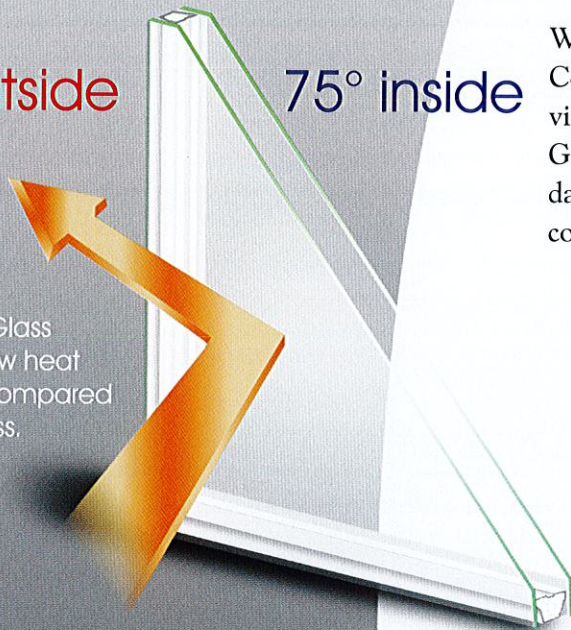
If all single pane residential windows in the United States were replaced with ENERGY STAR® qualifying models, the nation would save over \$12 billion per year in energy costs.



The Conservation Window Line Beats the Heat...

90° outside

75° inside



Conservation Glass reduces window heat gain by 64% compared to ordinary glass.

When temperatures soar, ordinary window glass just can't handle the heat. Tinted glass spoils the view. Conservation Glass, however, has been specially formulated to reject the sun's heat without affecting the view. It lets more light in and keeps out the heat so your home stays cool and comfortable. Conservation Glass coating provides the ultimate in performance and clarity of all LoE products. It blocks 95% of the sun's damaging ultraviolet rays so it will help your furniture, carpets and curtains to stay beautiful for years to come.

...is Bold on Cold...

During the cold weather, the insulating effect of your windows has a direct impact on how your rooms feel. Typically, 80% of the exposed surface of a window is glass, and the room-side of the glass directly affects the air temperature in the room. The better insulated the window glass, the warmer your room will be.

Inside Glass and Outside Temperatures

The table below compares the room-side center of glass temperatures of four different glass types against two different winter conditions.

	-20° F	+20° F
Single-plane, clear	0°	31°
Double-plane, clear	37°	51°
Ordinary low-e	47°	58°
Conservation Glass	52°	61°

The Superior insulating capability of Conservation Glass is a key factor in the construction of comfortable windows for cold climates. The dramatic comfort improvement from windows with warm glass surfaces also means the relative humidity of the indoor air can be controlled and maintained properly. Proper humidity of levels (not too much, not too little) will improve comfort and promote a healthier living environment.

...Performs above the Norm!

- Solar Heat Gain Coefficient – (SHGC)

The amount of solar radiation that enters a building as heat. The lower the number, the better the window is at reducing heat loss.

- U-Factor – this represents the heat flow rate through a window expressed in BTU/hr/ft/F using winter weather conditions of 0 F outside and 70 F inside. The smaller the number, the better the window is at reducing heat.

- UV and Fading Transmission – These regions includes all of the ultraviolet energy and most of the visible spectrum and will give the best representation of UV protection and relative fading rates. The lower the number, the better the window is for reducing fading potential of carpets and interior furnishings.

GLASS PERFORMANCE

PRODUCT	VISIBLE LIGHT TRANSMITTANCE %	SOLAR HEAT GAIN COEFFICIENT	WINTER U-FACTOR (AIR/ARGON)	UV	FADING TRANSMISSION
Single-plane, clear	90%	.86	1.04/--	.71	.84
Double-plane, clear	81%	.76	.48/--	.56	.74
Ordinary low-e	75%	.72	.35/.31	.44	.63
Conservation Glass	66%	.27	.29/.24	.05	.43



CONSERVATION WINDOWS

TECH 2000 SERIES 1712

PVC Vinyl Frame

Double Glazing • Argon Fill • Low-E

Product Type: Double Hung

ENERGY PERFORMANCE RATINGS

U-Factor (U.S./I-P)

0.29

Solar Heat Gain Coefficient

0.19

ADDITIONAL PERFORMANCE RATINGS

Visible Transmittance

0.45

Air Leakage (U.S./I-P)

0.1

Condensation Resistance

59

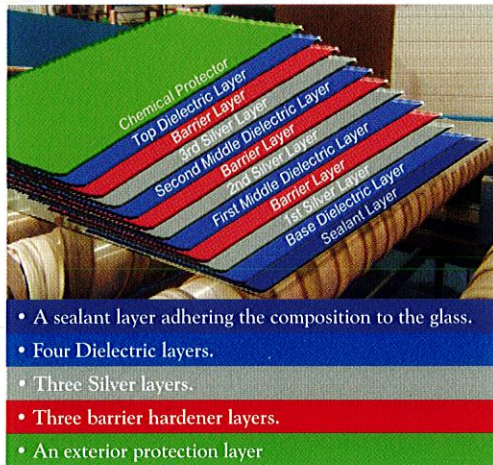
Manufacturer stipulates that these ratings conform to application NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult

Windows that make sense...

Responsible environmental stewardship is our goal.

No matter where you live, Conservation Windows will help you achieve your goal saving resources and money with your heating and cooling. Our Conservation Glass system is a dual glazed insulated glass unit which consists of 3 layers of silver, a stainless steel spacer system and an air space filled with high density Argon gas.

Conservation Glass Composition



Endur INSULATING GLASS

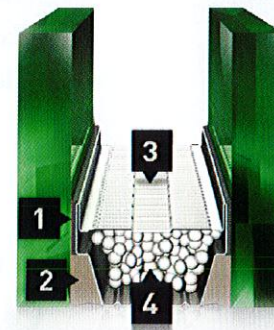
A lot of manufacturers talk about performance, i.e., U-Factors and SHGCs. But what about durability? Performance over the long haul? That's where Endur IG™ excels. Endur IG continues the Cardinal tradition of long-term performance. It delivers the industry's lowest failure rate, the only comprehensive 20-year factory warranty plus outstanding thermal performance and solar control. Exceptional longevity and performance ... that's how we help protect your brand and your reputation. New Endur IG, what the future of insulating glass looks like.

Nothing Endures like Endur IG

With over 500,000,000 IG units under warranty, Cardinal knows a thing or two about building long-lasting IG units. Our units have proven themselves over and over in the field and in the lab. The only way we'd change a thing is if we could improve it. We have.

Still the industry's lowest failure rate

Endur IG is built on the proven technologies that help Cardinal IG units achieve the industry's lowest failure rate - only 0.20% over twenty years - allowing us to offer the industry's only comprehensive 20-year factory warranty, because endurance is just as important as performance.



Enjoy the comfort and beauty of your home... ...all over again.

- Ideal balance of solar control and high visibility.
- Year-round comfort and energy savings.
- Suitable for all areas.
- Spectrally selective - The ultimate in solar heat control, fading protection and visibility.
- Warm wintertime inside surface temperatures with less condensation.
- Outperforms tinted glass used in warmer climates without darkening your view.
- Allows you to enjoy your view in the summertime.
- 12 layer patented protection.
- Three ways to save...
 - Annual energy savings
 - A/C equipment savings
 - Tax benefits
- The perfect window no matter where you live.





Double-Hung Windows

A window best suited to traditional architectural styles. Our double-hung provides a Classic appearance in any home. We offer double-hung windows that allows the sashes to tilt inside your home designed for ease of cleaning. Beneath its traditional appearance, this low maintenance vinyl window is hard at work providing durable, energy efficient performance.

- Durable design seals out wind and rain.
- Hi-Performance Conservation Glass controls energy bills.
- Coved interior glazing beads adds beauty and the full width lift rail allows for ease of operation.
- Pretensioned constant force balance systems for a lifetime of worry free operation.
- Ventilation night latches provide secure airflow.
- Extruded aluminum screen frame.
- Florida approved.



Sliding & Tilt-in Sliding Windows

The modern convenience of a sliding window is an ideal solution where a projecting window interferes with walkways, patios and decks. These windows easily slide open with either side of the window being operational. Select from a standard slider with lift out sashes or a Tilt-In slider with easy swing in sashes for easy cleaning providing a great outdoor view from the comfort of your home.

- Easy lift out sashes on the traditional sliding windows.
- Tilt-In slider sashes swing in for ease of cleaning.
- Hi-Performance Conservation Glass controls energy bills.
- Coved interior glazing beads adds beauty and the full length slide rails allow for ease of operation.
- Brass rollers with stainless steel axels for easy sliding.
- Ventilation night latches provide secure airflow.
- Extruded aluminum screen frames.
- Florida approved.

Conservation Windows

Double-Hung Windows

Sliding Windows

Casement & Awning Windows

Our Casement & Awning Windows perfectly compliment the simplicity of modern design while providing maximum view and ventilation. Cherished for their clean, uncluttered views and their ease of operation- opening and closing with the turn of one easy to reach handle.

- Designed to optimize view and airflow.
- Hi-Performance Conservation Glass controls energy bills.
- Adjustable hinge system ensures squareness.
- Single lever locking handle.
- Multi-point locking system for added security.
- Hinged to open outward.
- Extruded aluminum screen frame.
- Florida approved.

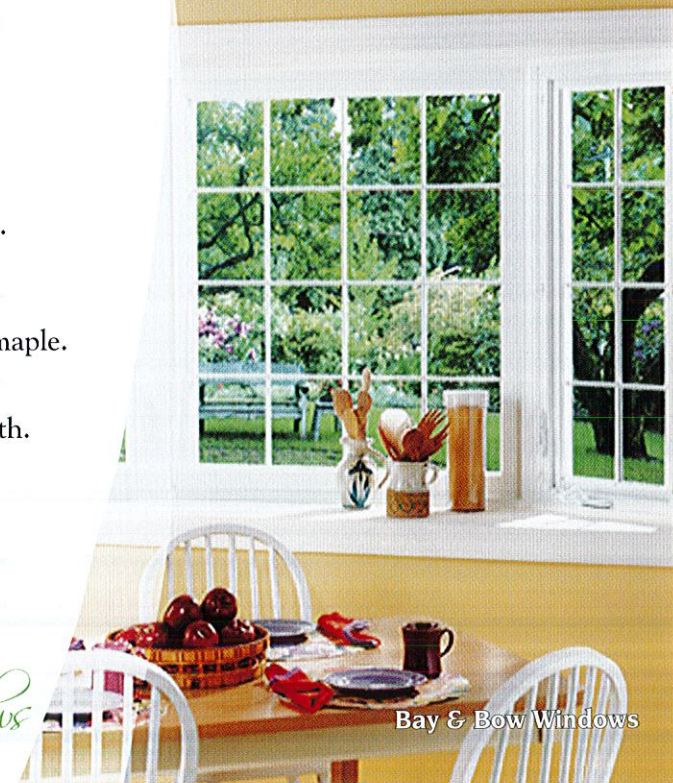


Casement & Awning Windows

Bay & Bow Windows

Our Bay and Bow Windows are ideal for both Traditional and Victorian architecture while increasing the sense of openness in any room. These windows are a combination of Conservation windows that reach out into the world and capture the view. Designed to be both beautiful and functional, our Bay and Bow Windows are the perfect addition to any home.

- 1" Hardwood cabinet-grade veneer head and seat board available in select white birch, red oak and maple.
- 3/4" Eastern White Pine struts and end jambs.
- 1/4" All threaded steel rods between the struts tie the head and seat board together for added strength.
- Low pressure polyurethane foam sealant between the struts.
- Available prefabricated hip roof systems.
- Available standing seam roof cladding.
- Available prefabricated insulated seat boards



Bay & Bow Windows



Garden Windows

Our Garden Windows add light and architectural interest to any room. Garden Windows work especially well above your kitchen sink and in bathrooms allowing you to greatly improve your homes appearance while dramatically changing the feel of the room.

- Solid vinyl fusion-welded construction.
- Dual trapezoid-shaped Casement vents.
- Multipoint locking system.
- Corrosion-resistant hardware.
- 1-1/4" Birch veneer surround.
- Safety laminated glass roof.
- Available oak surrounds and casing.
- Available garden window shelf.



Sliding Patio Doors

Our Sliding Patio Door redefines quality, technology and innovation. It is the perfect combination of all the best qualities of a window – in a door. This door lets in the view and brilliance of a window while creating an energy efficient entryway.

- A beautiful contemporary design.
- Displays the maximum glass area using Hi-Performance Conservation Glass.
- The doors slide easily and smoothly on nylon tandem panel rollers.
- Styles and interlocks are steel reinforced.
- Twin point locking system.
- Anti-theft security bar.
- Decorative grid patterns and styles available.
- Extruded aluminum screen frame.

Conservation Windows

Garden Windows

Sliding Patio Doors

Decorative Options

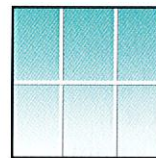
Window Solid Color and Interior Woodgrans

Conservation Windows are available in Euro-White, Solid Tan, White in/Tan out, White in/Brown out and Woodgrain in/White out.

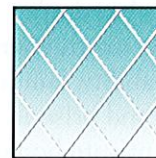


Windows Interior Grids

Grids are available in white, tan or dark oak in both Contoured and Colonial design. Choose from Colonial, Diamond, Prairie or Classic Double Prairie. All grids are enclosed within the insulated glass unit for easy cleaning.



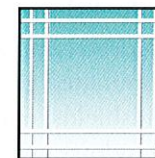
Colonial



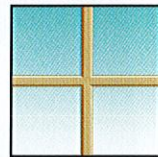
Diamond



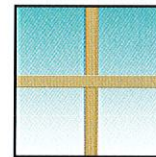
Prairie



Classic
Double Prairie



Contoured
Beige



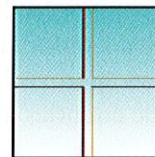
Colonial
Beige



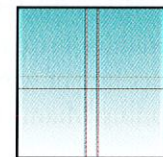
Contoured
White



Colonial
White



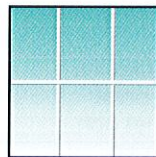
Contoured
Dark Oak



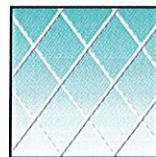
Colonial
Dark Oak

Grooved Glass

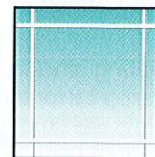
One special window or your entire home can be enhanced with the elegance of custom grooved glass.



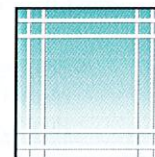
Colonial



Diamond



Prairie



Classic
Double Prairie

Conservation Windows...creating products that reduce usage of our collective natural energy resources.

Conservation Windows

HURRICANE GLASS™

by Regency Plus Inc.

Offering Security & Hurricane Protection

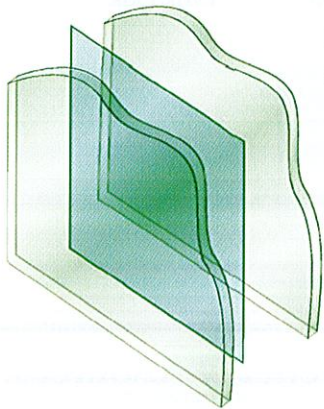
Hurricane Glass

Windows are typically the weakest point in any building; the only thing guarding the majority of the opening is the glass, and glass is notoriously breakable. If you like the light and air a window affords but don't want to compromise on storm protection and security, it may be worth your while to invest in Hurricane laminated glass. Because of its durability, laminated glass is standard in car windshields, curtain walls, skylights, and prisons, but it's become popular for windows and patio door panels in private homes. Certain area building codes require Hurricane glass. Our Hurricane glass consists of two panes of glass bonded together with a specially formulated layer of plastic, three times thicker than in a car windshield to enhance structural integrity and reduce breakability. Conservation Windows offers a Hurricane glass impact line of windows approved for use in High Velocity Hurricane Zones including Miami-Dade counties in Florida.

Other Benefits

In addition to security and energy applications, Hurricane glass has other advantages:

- **Soundproofing and noise reduction.** The thicker the glass, the harder it is for sound to come in. Double-pane Hurricane glass with an air gap in between the panes can effectively reduce noise from construction sites, blaring radios, or city traffic.
- **Weather-resistance.** Whether it be a hurricane, tornado or severe thunderstorm, Hurricane glass, especially in a sealed frame, is excellent for keeping out damaging hail stones and flying debris.



Security

It's easy enough for a burglar to smash a regular pane of glass and climb into your house, but if your window has Hurricane glass, even though it may break, it is still virtually impossible for that burglar to enter your home using standard home invasion devices. Since the fragments stay bonded together no widespread shattered glass to worry about either.



Disaster Protection

Hurricanes, tornadoes, severe thunderstorms and other natural disasters can really do a number on regular glass panes. Our Hurricane glass has been lab tested to withstand several hits from a 9 lb. 2x4 traveling 50ft. per second..This qualifies it to effectively protect the inside of your home from gale force winds and flying debris. Again, even if the glass does break, the fragments stay bonded together, so you don't have to worry about injuries from flying glass shards.



Energy Benefits

For the energy-conscious, Low-E³ Hurricane glass can be a blessing. Regular windows let in a lot of heat and damaging ultraviolet rays. Low-E³ laminated glass panes significantly reduce the amount of heat and UV rays coming in through the windows. This will help you save on cooling costs and provide protection for you, your carpeting and furniture from long term UV damage.

Conservation Windows

Lifetime Warranties

We Stand Behind our Products

Lifetime Transferable Non-prorated Warranty

Conservation Windows will repair or replace, free of charge, any vinyl or insulated glass that is found defective for the lifetime of the current owner. As an added bonus this warranty is transferable, which means, if you ever decide to sell your home, this feature could play a pivotal role in your selling strategy.

Free Lifetime Service Pledge

Conservation windows will guarantee free service for the life of the product including labor, workmanship and materials.

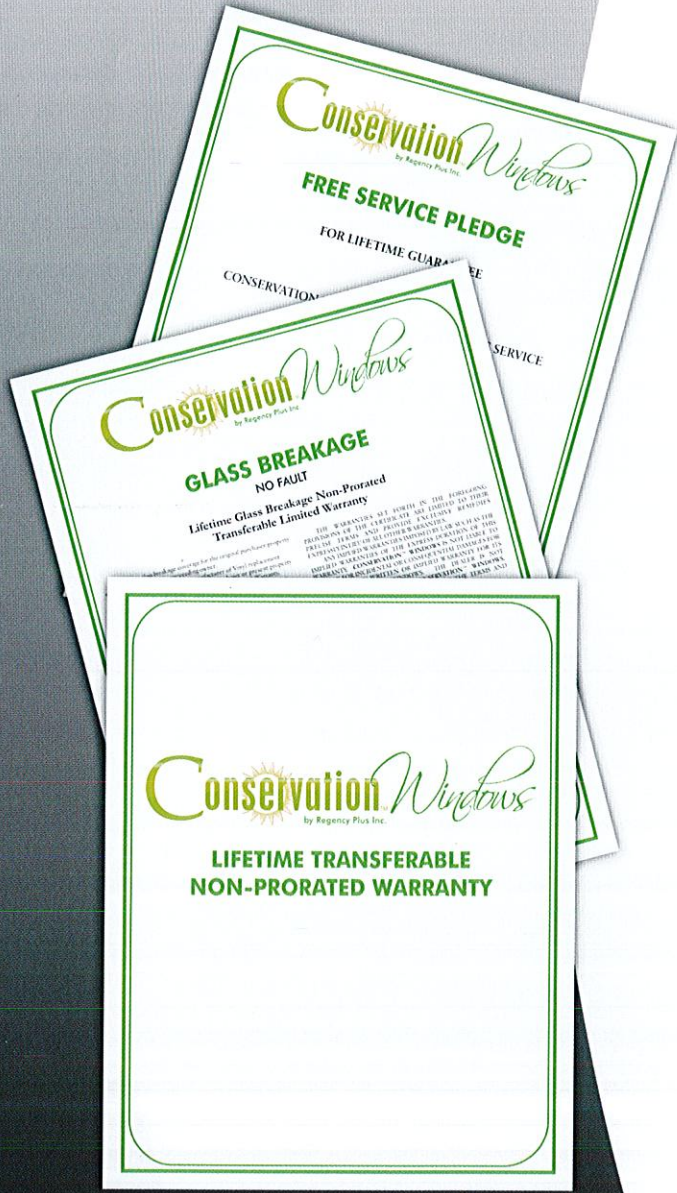
Glass Breakage - No Fault

Lifetime Glass Breakage Non-Transferable Limited Warranty. Conservation Windows will provide replacement glass, when and if necessary, for the lifetime of the current home owner and again, if you sell your home, this warranty is transferable.

The full versions of the above warranties will be included in your window investment portfolio.

If you have any questions regarding Conservation Windows please feel free to ask one of our sales representatives for more details.

Guaranteed Quality and Performance!



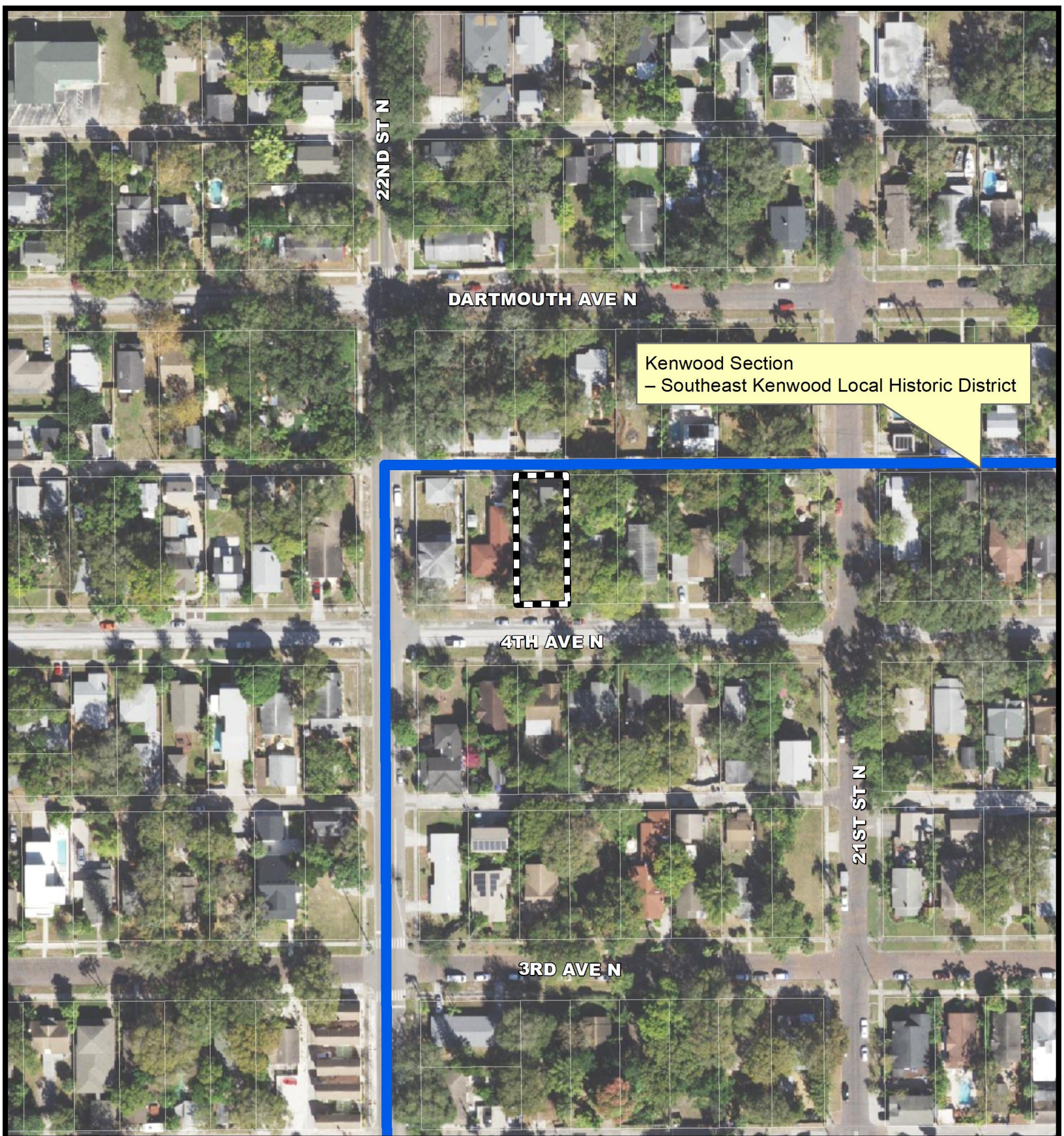
Conservation™ Windows

by:



Appendix B:

Maps of Subject Property



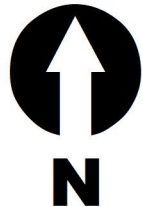
Kenwood Section
– Southeast Kenwood Local Historic District

Community Planning and Preservation Commission

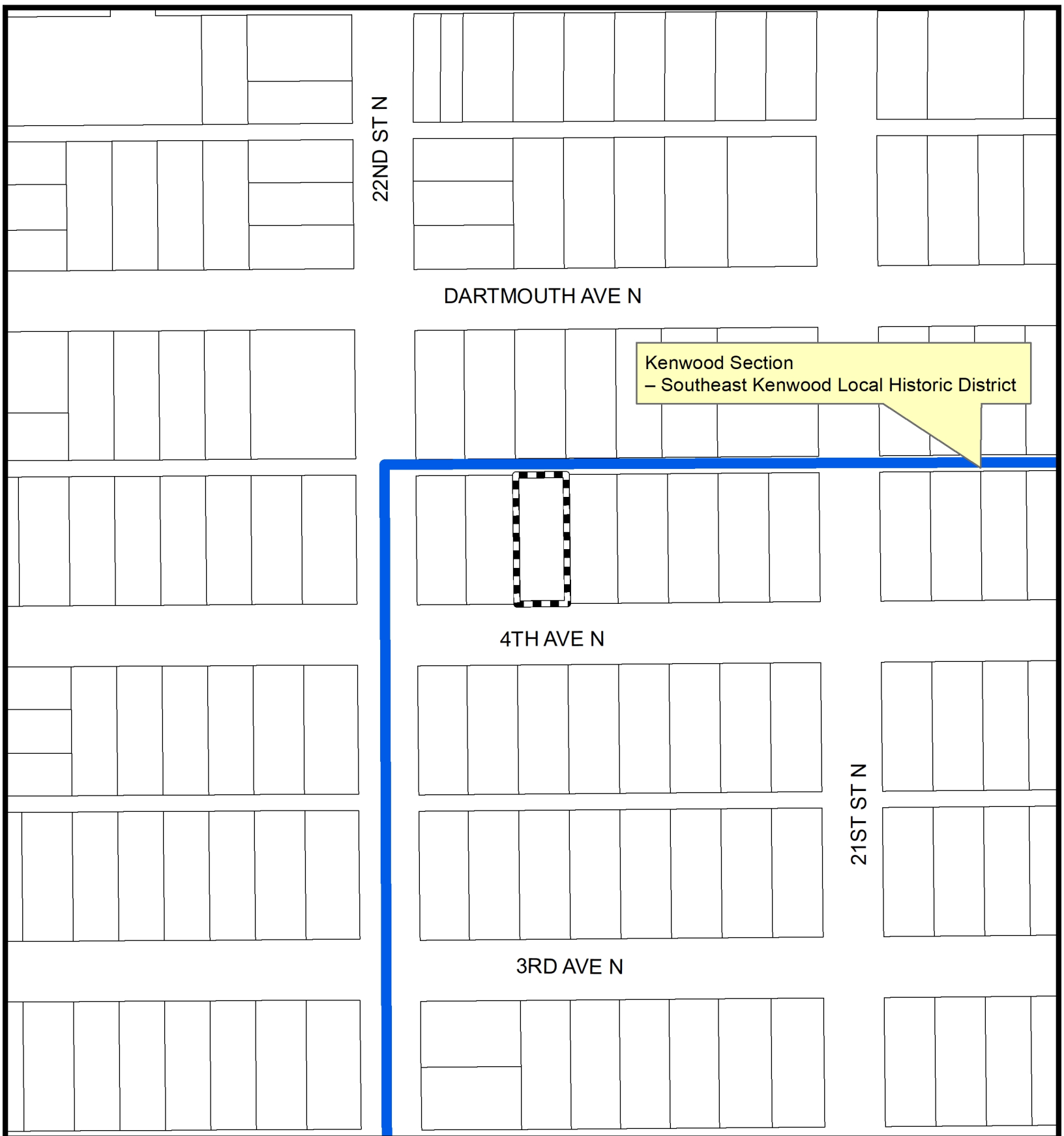
2145 4th Ave N

**AREA TO BE APPROVED,
SHOWN IN** 

**CASE NUMBER
22-90200100**



**SCALE:
1" = 140'**



Kenwood Section
 - Southeast Kenwood Local Historic District

Community Planning and Preservation Commission

2145 4th Ave N

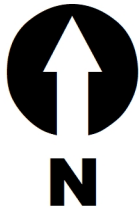
AREA TO BE APPROVED,

SHOWN IN



CASE NUMBER

22-90200100



SCALE:
 1" = 140'