



# ETC Laboratories

*Measuring Up To Your Standards And More*

## Corporate Offices / Laboratories

297 Buell Road  
Rochester, NY 14624  
(585) 328-7668  
Fax: (585) 328-7777

### **Fenestration Structural Test Report**

Rendered To  
Dove Industries  
767 Sans Souci Parkway  
Wilkes Barre, PA 18702

**Series / Model**  
6000 Double Hung

**Report Number**  
ETC-07-1081-19147.0

Report Number: ETC-07-1081-19146.0

Original Report: ETC-05-054-16651.0

Test Start Date: 08/10/05

Test Finish Date: 08/10/05

Report Date: 08/24/05

Expiration Date: 08/10/09

**Fenestration Structural Test Report**

Rendered To

Dove Industries  
767 Sans Souci Parkway  
Wilkes Barre, PA 18702

**Series / Model**

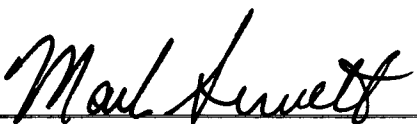
6000 Double Hung

**Summary Description:** The tested product was a PVC Double Hung window with welded frame and sash corners. The IG unit thickness was 7/8 inches nominal with double strength annealed glass. The frame size was 40 inches wide by 63 inches high by 3-1/4 inches deep. The lock and keeper rail was reinforced with aluminum.


**Specification:** The test specimen(s) was evaluated in accordance with ANSI/AAMA/WDMA 101/I.S.2/NAFS-02 "Voluntary Performance Specification for Windows, Skylights and Glass Doors".

**Summary of Results**

Overall Design Pressure	2400 Pa (50 psf)
Maximum Operating Force	85 N (19 lbs)
Air Leakage Rate	0.81 L/sec/m <sup>3</sup> (0.16 scfm/ft <sup>2</sup> )
Maximum Water Pressure Achieved	360 Pa (7.5 psf)
Maximum Structural Pressure Achieved	3600 Pa (75.0 psf)
Forced Entry Resistance – ASTM F588	Pass – Grade 10

**Product Designation****H-R50\* 1016 x 1600 (40 x 63)**


Mark Sennett, Testing Technician



Ben Meunier, Director of Testing  
Person in Responsible Charge

**Referenced Test Reports:** ETC-07-1081-19146.0

Note – The test data in any section below with an “RTR” comment have not been obtained from this specimen but from the Referenced Test Report with a specimen of the same or larger size and identical construction.

**Gateway Performance Test Results**

<u>Specification Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
5.3.1	<u>Operating Force – E2068</u>		
	Force to initiate motion - Maximum	116 N (26 lbf)	200 N (45 lbf)
	Force to keep in motion – Maximum	89 N (20 lbf)	135 N (30 lbf)
5.3.2	<u>Air Leakage Resistance – ASTM E283</u> <b>RTR</b>		
	Test Pressure - 75 Pa (1.57 psf)	0.81 L/sec/m <sup>2</sup> (0.16 scfm/ft <sup>2</sup> )	1.5 L/sec/m <sup>2</sup> (0.30 scfm/ft <sup>2</sup> )
	The tested specimen exceeds the performance levels specified in NASF-01 for air leakage resistance.		
5.3.3	<u>Water Penetration Resistance – ASTM E547</u>		
	204 L/hr/m <sup>2</sup> (5 gal/hr-ft <sup>2</sup> ) – 4 Test cycles – 24 Minutes		
	Note: The client elected to start water testing at a pressure higher than Gateway.		
5.3.4.1	<u>Uniform Load Deflection - ASTM E330</u>		
	Note: The client elected to start structural testing at a pressure higher than Gateway.		
5.3.4.2	<u>Uniform Load Structural - ASTM E330</u>		
	Note: The client elected to start structural testing at a pressure higher than Gateway.		
5.3.5	<u>Forced Entry Resistance – ASTM F588</u> <b>RTR</b>		
	Tool/Lock Manipulation Test	Pass	No Entry
	Tests A1 through A7	Pass	No Entry
	Tool/Lock Manipulation Test	Pass	No Entry

**Auxiliary Test Results**

<u>Specification Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
5.3.6.1	<b><u>Thermoplastic Corner Test – AAMA: RTR</u></b>		
	4 Corners - Frame	Pass	< 100%
	8 Corners - Sash	Pass	< 100%
5.3.6.2	<b><u>Deglazing Test – E987: RTR</u></b>		
	<b><u>Top Sash</u></b>		
	Left Stile 230 N (50 lbs)	3.8 %	<100%
	Right Stile 230 N (50 lbs)	2.8 %	<100%
	Top Rail 320 N (70 lbs)	8.2 %	<100%
	Bottom Rail 320 N (70 lbs)	6.8 %	<100%
	<b><u>Bottom Sash</u></b>		
	Left Stile 230 N (50 lbs)	2.8 %	<100%
	Right Stile 230 N (50 lbs)	3.2 %	<100%
	Top Rail 320 N (70 lbs)	11.0 %	<100%
	Bottom Rail 320 N (70 lbs)	10.2 %	<100%

**Optional Performance Test Results**

The manufacturer specified herein has successfully achieved all the required criteria in section 2 of the referenced specification for the Gateway size of the achieved Performance Rating and has further successfully tested the product to higher performance levels as indicated below.

<u>Specification Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
4.2.2.5	<b><u>Water Resistance - ASTM E 547</u></b>		
	204 L/hr/m <sup>2</sup> (5 gal/hr-ft <sup>2</sup> ) – 4 Test cycles – 24 Minutes		
	<b>Design Pressure – 2400 Pa (50 psf)</b>		
	Test Pressure – 360 Pa (7.5 psf)		
	With and without screen	Pass	No Leakage
	<b><u>Uniform Load Deflection - ASTM E330</u></b>		
	<b>Design Pressure -2400 Pa (50 psf)</b>		
	Test Pressure		
	Positive Load – 2400 Pa (50 psf)	9.86 mm (0.362 in.)	N/A
	Negative Load – 240 Pa (50 psf)	8.71 mm (0.289 in.)	N/A
	Note: Measurements taken under load from the center of the meeting rail.		

## Specification

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
<u>Uniform Structural Load - ASTM E 330</u>			
	<b>Design Pressure - 2400 Pa (50 psf)</b>		
	Test Pressure		
	Positive Load – 3600 Pa (75.0 psf)	0.787 mm (0.031 in.)	4.90 mm (0.140 in.)
	Negative Load – 3600 Pa (75.0 psf)	2.08 mm (0.082 in.)	4.90 mm (0.140 in.)
	Note: Measurements taken after load from the center of the meeting rail.		

**Conditions, Terms, and General Notes Regarding These Tests**

The product tested **Has Been** compared to the detailed drawings, bill of materials and fabrication information supplied by the client & our analysis indicates the tested product and engineering information supplied by the client **“Are Equivalent”**. This report, in its original form contains product drawings and a Bill of Materials. The report and representative samples will be retained for four years from the report. These test results were obtained by employing all requirements of the designated test methods with no deviations. The test results and specimen supplied for testing are in compliance with the referenced specifications. These results are specific to the product tested by this laboratory. **This report does not constitute a certified product.** ETC Laboratories makes no opinions or endorsements regarding this product and its performance. This report may not be reproduced or quoted in partial form. ETC Laboratories test reports are for the exclusive use of the client so named herein and any other use is strictly prohibited.

**Product Description of Test Specimen(s)**Specimen ItemLaboratory Verification**Frame:**

40 in. W x 63 in. H x 3-1/4 in. D, vinyl, mitered and welded corners.  
Sill has a 3/8 in. H x 0.110 in. D extruded profile with 4-1/4 inches cut from either end, 7/8 in. from the sill tower, which the bottom sash is seated on

## Drainage

Sloped sill

## Method of Installation

Perimeter stops and sealant

**Screen:**

aluminum frame with mitered corners fastened using a corner key, held with spring clips, fiberglass cloth.

**Sashes:**

Top: 35-1/8 in. W x 29-3/4 in. H x 1-5/8 in. D  
Bottom: 36-1/8 in. W x 30-3/4 in. H x 1-5/8 in. D  
Vinyl, mitered and welded corners

## Reinforcement

Aluminum 1-1/8 in. W x 3/4 in. H in the lock rail and 1 in. W x 5/8 in. H in the keeper rail

## Drainage

Slots 5/16 in. W x 3/16 in. D, centered 1-3/4 in. from the interior corners in the glazing bead pocket, draining out oval slots 1 in. W x 1/8 in. D  
3-1/8 in. from the exterior corners

<u>Weather-stripping</u>	<u>Qty (Rows)</u>	<u>Type</u>	<u>Size in. (H x W)</u>	
Frame				
Head	1	Fin-pile	0.300 x 0.187	
Sill	1	Fin-pile	0.200 x 0.187	
Top Sash				
Top Rail	2	Fin-pile	0.250 x 0.187	
Keeper Rail	1	Fin-pile	0.190 x 0.187	
Stiles	3	Fin-pile	0.250 x 0.187	
Bottom Sash				
Lock Rail	1	Fin-pile	0.350 x 0.187	
Bottom rail	1	bulb-seal	0.330 dia. with barb	
Stiles	3	Fin-pile	0.250 x 0.187	
<u>Hardware</u>	<u>Type</u>	<u>Metals</u>	<u>Fastening</u>	<u>Location</u>
Lock	Cam	Die-cast	2-#7x3/4 screws	fitted into routed opening at center of rail
Keeper	Cam	Die-Cast	2-#7x3/4 screw	opposite lock, seated in a cut out in the interior face of the rail
Tilt-Latches	Spring-style	Plastic	Press-in	corners of top rails
Night Latch	Spring out	Plastic	Press-in	stiles of top sash
Pivot Pins	Locking	Die-cast	2-#6-1/2 in. screws	ends of bottom rails
Balances	B & T	Steel	1-#8x1 in. screw	jamb pockets
<b>Glazing:</b>				
Overall Thickness	7/8 in. nominal (0.923 in. actual)			
Thickness of Glass(s)	2 – double strength annealed (0.126 in. / 0.115 in.)			
Spacer	Steel U shaped			
Method of Glazing	Exterior drop-in			
Interior	Wet glazed with silicone			
Exterior	Snap in dual durometer vinyl glazing bead			
<b>Anchorage of Window Frame to Test Buck:</b>				
Type	Perimeter stops and sealant			
<b>Test Buck:</b>				
Mounting Gap	1/4 in.			
Shims	On right jamb at the meeting rail			
Stops:	Exterior stops, Pine, 3/4 x 3/4, full perimeter			
	Interior stops, Pine, 3/4 x 3/4 x 36 in H centered on jambs and 24 in. W centered on head and sill			
Sealant	Silicone			
Buck Size	2 x 8			
Material	SPF - #2			
<b>Specimen Alterations:</b>	None			
<b>Documentation Submitted:</b>	Bill of materials (pp. 1, 2), 8000s001, 8001QC, 8002, 8003, 8007, 8008, 8016, 8025, 8026, 8028, 8044, 8043			

**BILL OF MATERIALS**  
**Model 8000-DH-T000**  
**Replacement Double Hung**  
**August 3, 2005**

8000dht000.doc page 1 of 2

ITEM	DESCRIPTION	CBP PART #	QTY	MATERIAL/SOURCE	NOTES
1	Head	8001 ✓	1	CBP	2
2	Sill	8002 ✓	1	CBP	2
3	Jamb	8003 ✗	2	CBP	2
4	Pull Rail	8015	1	CBP	2
5	Bottom Handle Rail	8025 ✓	1	CBP	2
6	Lock Rail	8026 ✓	1	CBP	2
7	Keeper Rail	8007 ✗	1	CBP	2
8	Top Stile	8008 ✗	2	CBP	2
9	Bottom Stile	8028 ✗	2	CBP	2
10	Glazing Bead	8066	8	CBP	2
11	Sash Stop	763A	4	CBP	2
12	Balance Cover	712	2	CBP (Spiral Balance only)	2
13	Aluminum Stiffener-L ock Rail	8044 ✓	1	Shapes Unlimited	1
14	Aluminum Stiffener-Ke eper Rail	8043 ✓	1	Shapes Unlimited	1
15	Tilt Latch L.H. (.373 Nose)		2	Ashland #76790	1,2,6
16	Tilt Latch R.H. (.373 Nose)		2	Ashland #76890	1,2,6
17	Balance			<b>See Balance Chart Matrix</b>	
18	Jamb Adjuster (1-1/8")		2	Merchants #10M509ASM	1
19	Silicone Glazing Sealant		AR	Dow Corning #1199	1
20	Glazing Block (1" x 2" x 1/8")		AR	Tremco	1
21	Keeper		1	Deco #678111	2,3,4
22	Lock Assembly		1	Deco #678205	2,3,4
<b>SCREWS (#410 Stainless Steel or Zinc Plated)</b>					
23	Balance			<b>See Balance Chart Matrix</b>	
24	Pivot Bar			#6 x 1/2" PH Flat HD Type AB, SMS	
25	Keeper		2	#7 x 3/4" PH Flat HD Tec	2,3
26	Lock		2	#7 x 3/4" PH Flat HD Type AB, SMS	2,3
27	Installation		4	#8 x3/4" 2-1/2" PH Pan HD, Type AB, SMS	
28	Stiffener		AR	#6 x 1/2" PH Flat HD TEC (see detail drawing)	

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 Date Verified: 8/24/05  
 Verified By: MS  
 Report No: 05-084-16651

WEATHERSTRIPPING					
29	Center Fin Pile (Lock Rail)		AR	.187 x .350	
30	Center Fin Pile (Sill)		AR	.187 x .200	
31	Center Fin Pile (Top Rail, Stile)		AR	.187 x .220	
32	Center Fin Pile (Keeper Rail)		AR	.187 x .190	
33	Top Seal (Head)		1	Amesbury #32012	2,5
34	Bottom Seal (Bottom Rail)		1	Amesbury #32690	2,5
OPTIONAL					
35	Transom Clip	727	AR	CBP	2
36	Head Expander	761	1	CBP	2
37	Sill Angle	765	1	CBP	2
38	Block & Tackle Balance Cover	748	2	CBP	2
39	1/2" Mullion Clip	749	AR	CBP	2
40	7/8" Glazing Bead	8016	8	CBP	2
41	Glazing Tape (1/16" x 3/8")		AR	Norton 992	1
42	Tilt Latch L.H. Scallop (use w/Spiral & Block and Tackle)		2	Ashland #78795	1,2,6
43	Tilt Latch R.H. Scallop (use w/Spiral & Block and Tackle)		2	Ashland #78895	1,2,6
44	Premium Vent Stop		2	Vision Industries #1750	1,2,6
45	Vent Latch		2	Ashland # 74725	1,2,6
46	Deluxe Vent Lock		2	Ashland # 86070	1,2,6
47	Deluxe Vent Stop III		2	Ashland # 86107	1,2,6
48	Weep Cover		2	Ashland #60606 or #65605	1,2
49	Screen Frame		AR	5/16"	2

**NOTES:**

1 = Or Approved Equivalent

2 = Specify color (White, Beige, Brown)

3 = For windows over 32" double amount used

4 = Standard tooling made for 2-1/16" hole spacing on lock and keeper

5 = Available Amesbury colors (White color is #21, Beige color is #25, Brown color is #29)

6 = Available Ashland colors (White color is #061, Beige color is #046, Brown color is #053, Cream White is #001)

Completed by	Date	Checked by	Date	Approved by

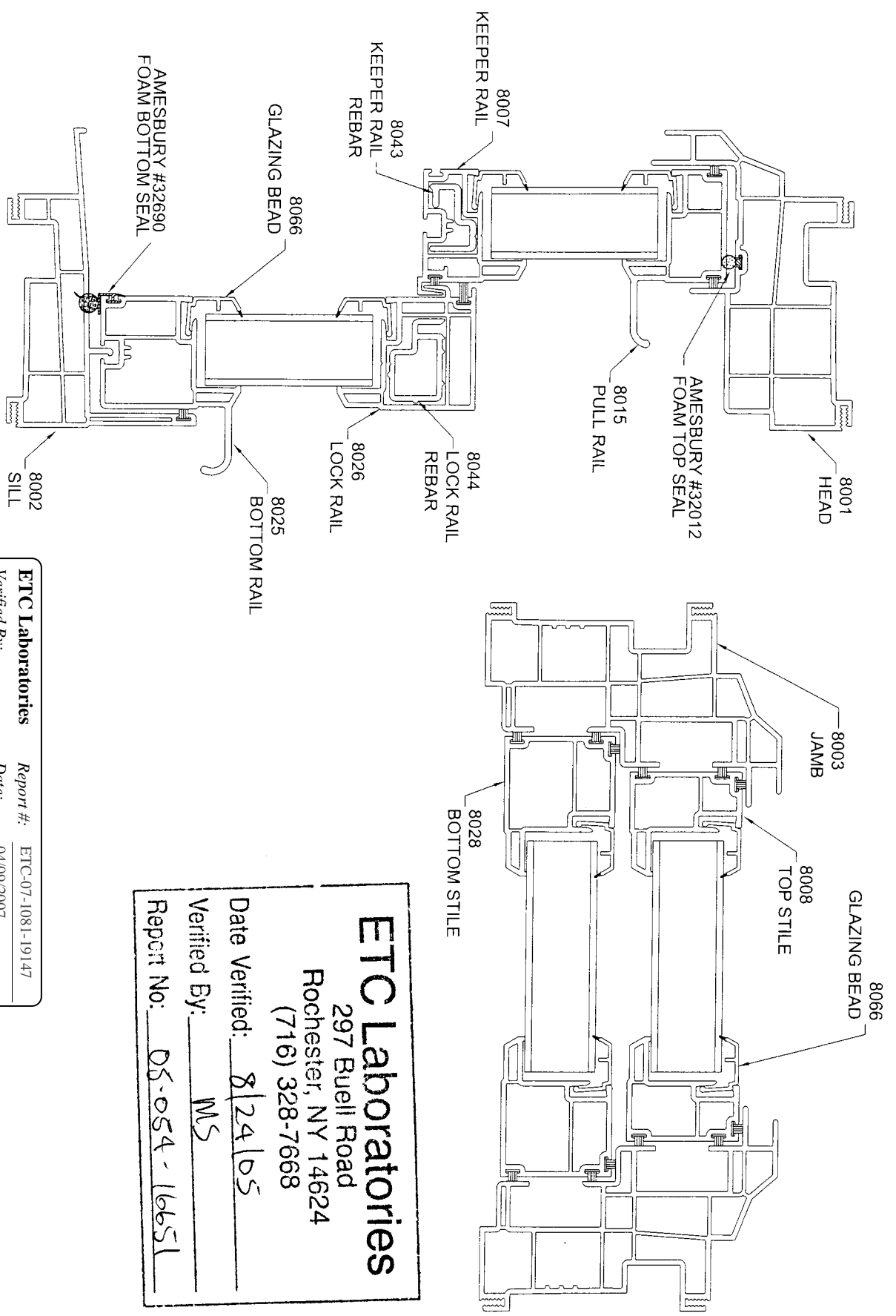
<b>ETC Laboratories</b>	
297 Buell Road	
Rochester, NY 14624	
(716) 328-7668	
Date Verified:	8/24/05
Verified By:	MS
Report No:	05-054-16651

**ETC Laboratories**

Report #: ETC-07-1081-19147

Verified By: \_\_\_\_\_

Date: 04/09/2007



**ETC Laboratories**  
 297 Buell Road  
 Rochester, NY 14624  
 (716) 328-7668

Date Verified: 8/24/05  
 Verified By: MS  
 Report No: 05-054-16651

**ETC Laboratories** Report #: ETC-07-1081-19147  
 Verified By: \_\_\_\_\_ Date: 04/09/2007

No	REVISION	DATE	BY
1	UPDATED PART PRIORITIES	03/31/05	ETC

**CHELSEA BUILDING PRODUCTS, INC.**  
 565 CEDAR WAY, OAKMONT PA, 15139

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PRELIMINARY PART #		MODEL 8000-DH-T000	
REPLACEMENT DOUBLE HUNG			
DRAWN BY:	DESIGNED BY:	DATE	SCALE
BLG		09/29/04	NTS-1
CHECKED BY:	APPROVED BY:	DRAWING NO.	
		8000S001	

QC PRINT NUMBER: 8001QC DRAWN BY: jpp APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

PART NAME: 8001 DESCRIPTION: HEAD SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

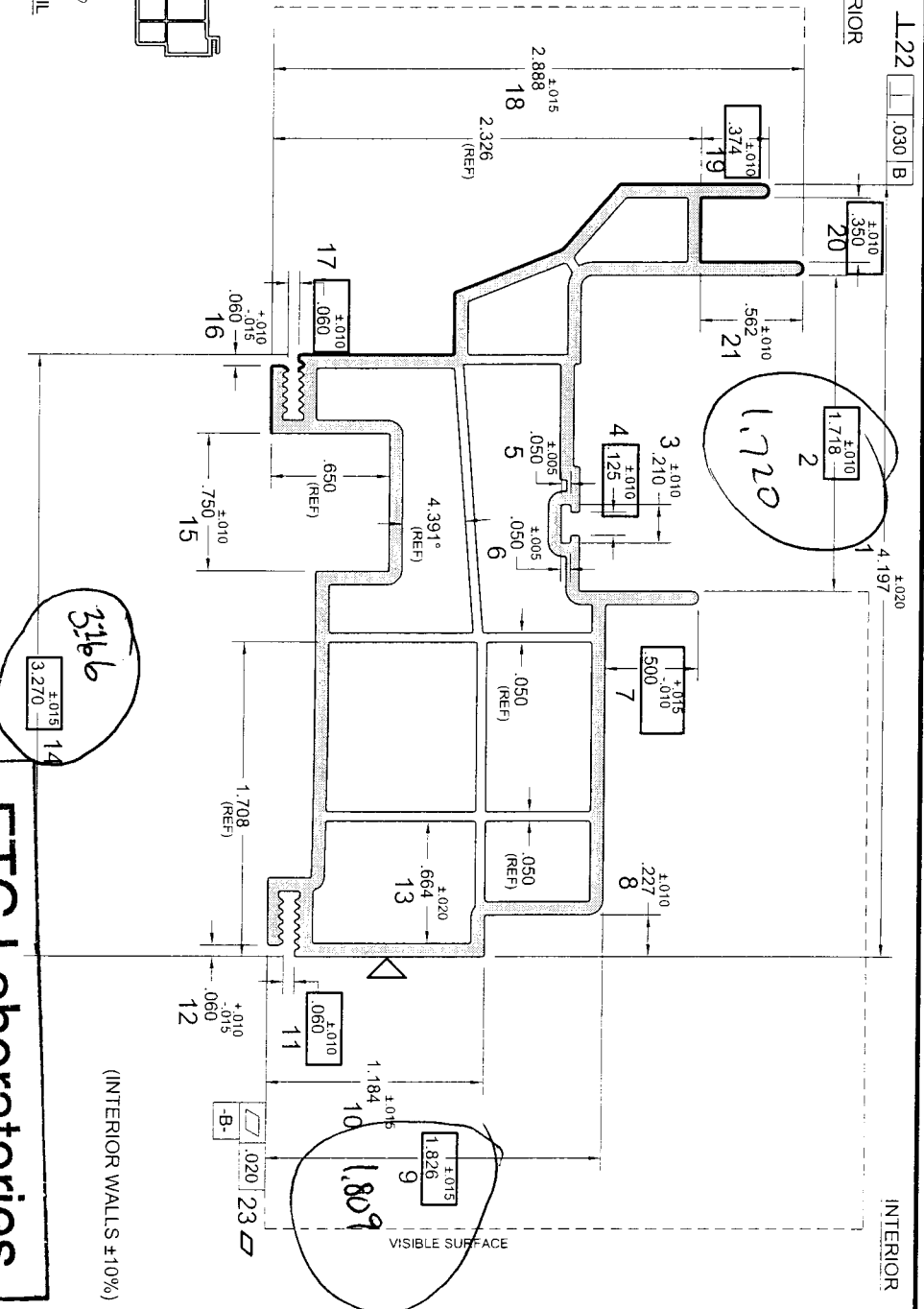
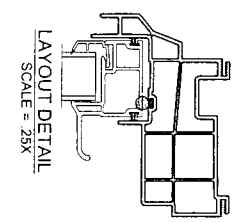
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555 CEDAR WAY, OAKMONT PA 15119

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- NOTES:
- MATERIAL - RIGID P.V.C.
  - FLEXIBLE P.V.C. = [Symbol]
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  - LAMINATE = [Symbol]
  - THINNER INTERIOR WALLS = [Symbol]
  - WALL THICKNESS = .072
  - RADIUS = .010
  - LOCATION FOR IMPACT TEST [Symbol]
  - ANGULARITY = [Symbol]
  - PERPENDICULARITY = [Symbol]
  - PARALLELISM = [Symbol]
  - FLATNESS = [Symbol]
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  - ANGULARITY TO BE ± 1°
  - PROFILE MUST MEET Q.303 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q.304 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q.901 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q.902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

Verified By: ETC Laboratories  
Report #: ETC-07-1081-19147  
Date: 04/09/2007

POSITION	SIZE	WEATHERSTRIP TYPE
FUNCTIONAL CHECK		
AMESBURY #32012 FOAM SEAL		
727 TRANSOM CLIP		
748 1/2" MULL CLIP		











QC PRINT NUMBER: 8016QC DRAWN BY: JPP APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

PART NAME: 8016 DESCRIPTION: GLAZING BEAD 7/8" GLASS SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

CHELSEA BUILDING PRODUCTS, INC.  
565 CEDAR WAY, OAKMONT PA 15139

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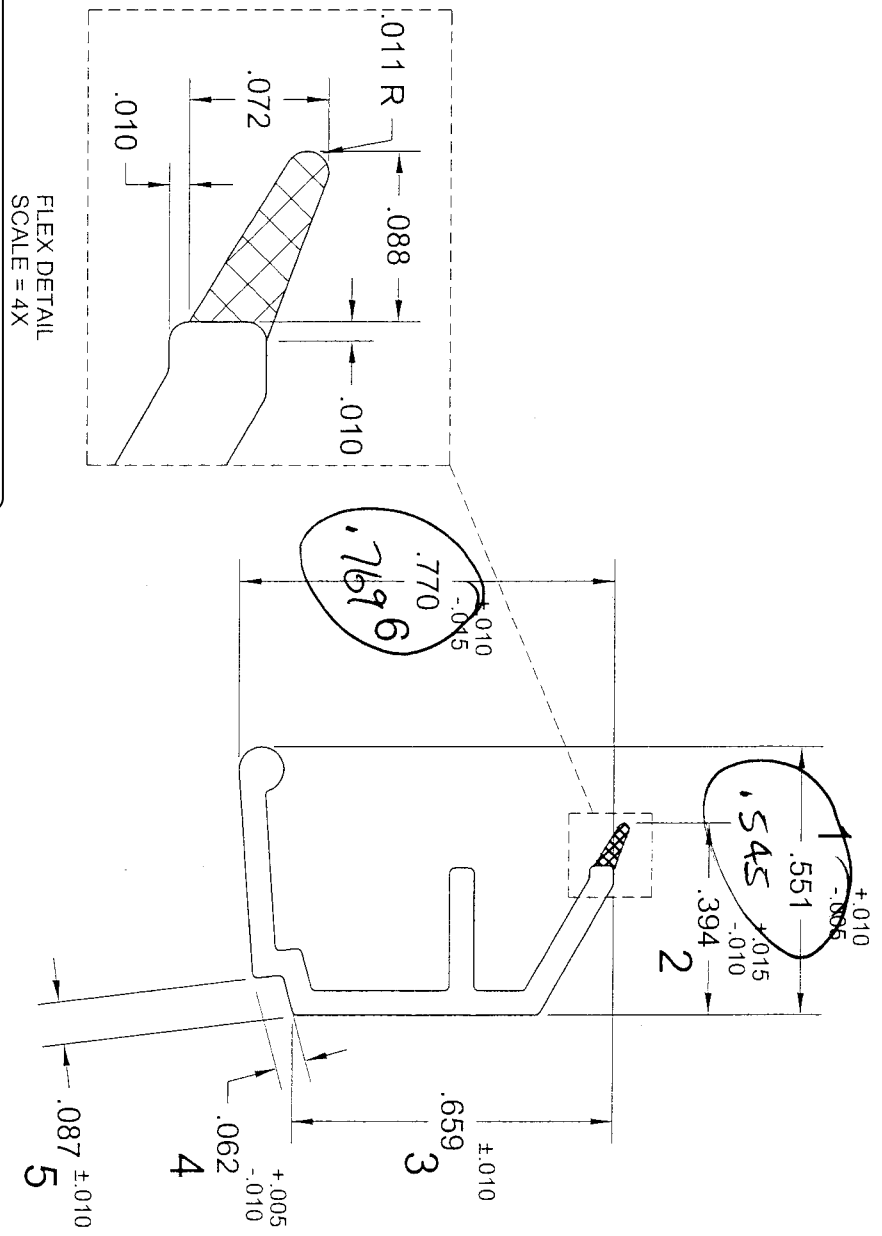
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  16. PROFILE MUST MEET Q.304 PER AAMA SPECIFICATIONS
  17. PROFILE MUST MEET Q.901 PER AAMA SPECIFICATIONS
  18. PROFILE MUST MEET Q.902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

WEATHERSTRIP SPECIFICATION	POSITION	SIZE	WEATHERSTRIP TYPE
FUNCTIONAL CHECK			
8000 SERIES SASH			

NO.	REVISION
1	REVISED DIM. 1 AND 5

Use the calliper diagram as your guide to measure the following control points:  
 Measure the following control points using #1 on the calliper diagram.  
 Measure the following control points using #2 on the calliper diagram.  
 Measure the following control points using #3 on the calliper diagram.  
 Measure the following control points using #4 on the calliper diagram.  
 Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.  
 Auditor- 1 sample per shift recorded 1 hour after shift start.

IF ANY CONTROL POINTS ARE NOT IN SPEC. CORRECTIVE ACTION REQUIRED



ETC Laboratories  
 Verified By: Report #: ETC-07-1081-19147  
 Date: 04/09/2007

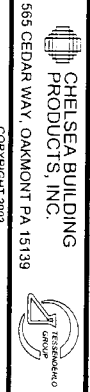
ETC Laboratories  
 CUSTOMER LENGTH: CHELSEA BUILDING PRODUCTS  
 297 Buell Road  
 Rochester, NY 14624  
 (716) 328-7666

Date Verified: 8/24/05  
 Verified By: MS  
 No. 05-054-16651



QC PRINT NUMBER: 8026qc DRAWN BY: JPP APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

PART NAME: 8026 DESCRIPTION: LOCK RAIL SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

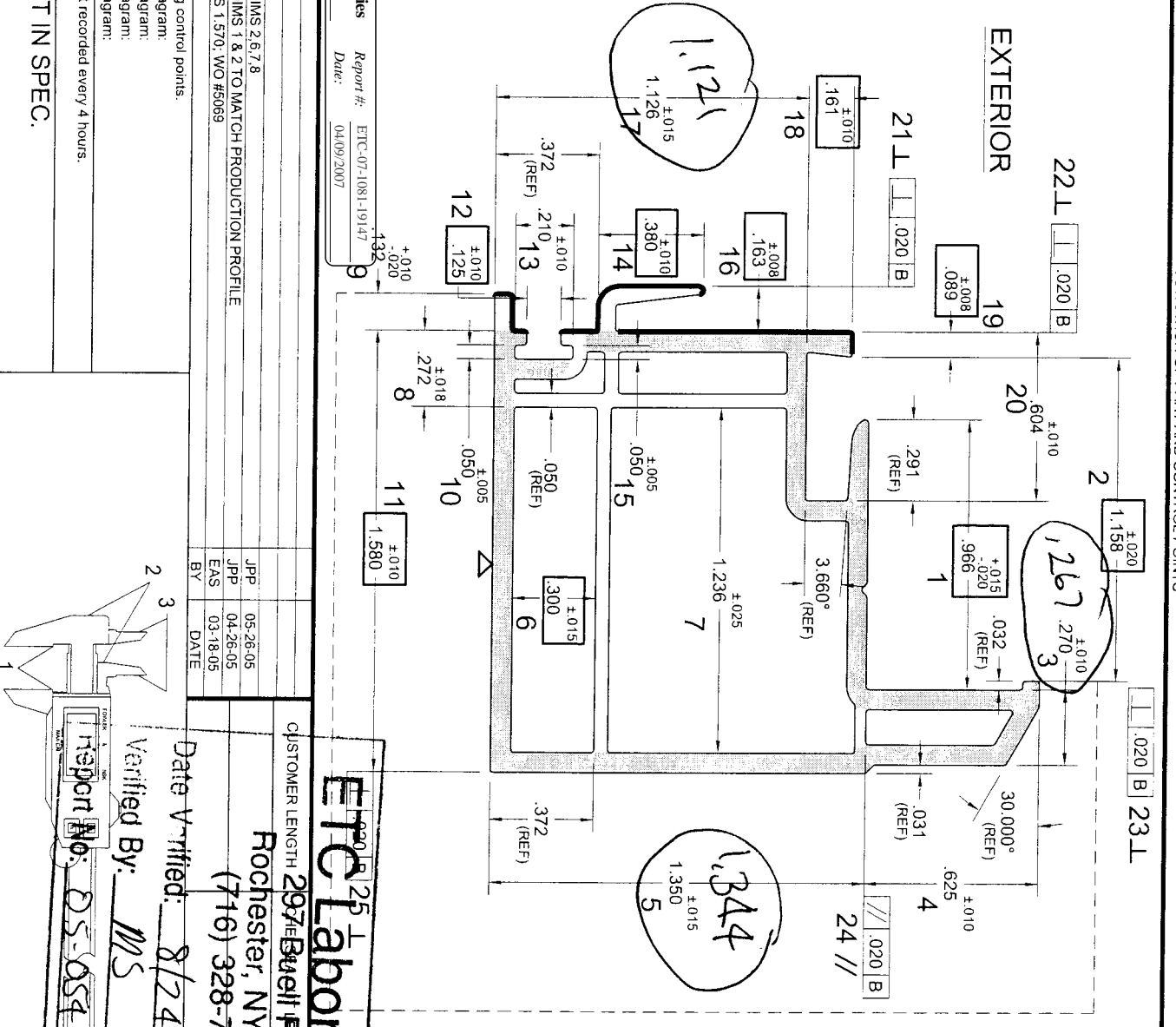


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- NOTES:
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  - EXTERIOR COATING = [Symbol]
  - LAMINATE = [Symbol]
  - THINNER INTERIOR WALLS = [Symbol]
  - WALL THICKNESS = .072
  - RADIUS = .010
  - LOCATION FOR IMPACT TEST [Symbol]
  - ANGULARITY = [Symbol]
  - PERPENDICULARITY = [Symbol]
  - PARALLELISM = [Symbol]
  - FLATNESS = [Symbol]
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  - PROFILE MUST MEET Q.304 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q.901 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q.902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE
FUNCTIONAL CHECK		
.187 WOOLPILE		
8066 GLAZING BEAD		
1" GLASS BLOCK		



ETC Laboratories Report # ETC-07-1081-19147 Date: 04/09/2007

Customer Length: 297 Buell Road Rochester, NY 14624 (716) 328-7668

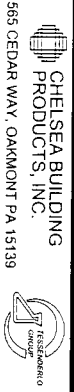
Verified By: MMS Date Verified: 8/24/05

Report No: 05-084-16657

IF ANY CONTROL POINTS ARE NOT IN SPEC. CORRECTIVE ACTION REQUIRED

QC PRINT NUMBER: 8028qc DRAWN BY: JPP APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

PART NAME: 8028 DESCRIPTION: BOTTOM STYLE SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

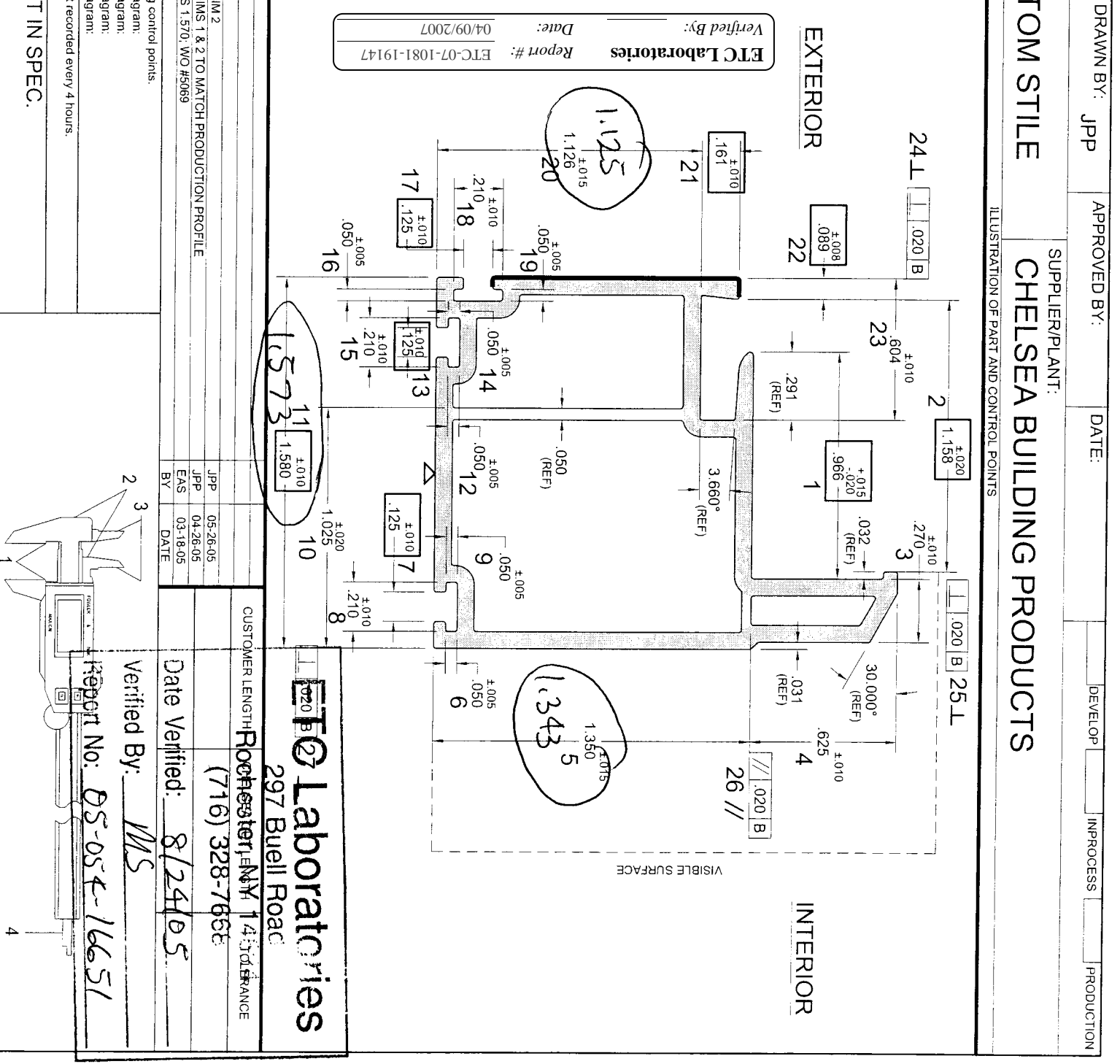


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- NOTES:**
- MATERIAL = RIGID P.V.C.
  - FLEXIBLE P.V.C. = [XXXXXX]
  - EXTERIOR COATING = [XXXXXXXXXX]
  - LAMINATE = [ZZZZZZ]
  - THINNER INTERIOR WALLS = [ ]
  - WALL THICKNESS = .072
  - RADIUS = .010
  - LOCATION FOR IMPACT TEST [ ]
  - ANGULARITY = [ ]
  - PERPENDICULARITY = [ ]
  - PARALLELISM = [ ]
  - FLATNESS = [ ]
  - SPECIFICATION LENGTH TO ±.3/8"
  - ANGULARITY TO BE ± 1°
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  - PROFILE MUST MEET Q.304 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q.901 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q.902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE
FUNCTIONAL CHECK		
.187 WOOLPILE		
8066 GLAZING BEAD		
1" GLASS BLOCK		



NO.	REVISION
3	REVISED DIM 2
2	REVISED DIMS 1 & 2 TO MATCH PRODUCTION PROFILE
1	WIDTH WAS 1.570, W/O #5069

DRAWN DATE: 11-04-04

Use the caliper diagram as your guide to measure the following control points:  
 Measure the following control points using #1 on the caliper diagram.  
 Measure the following control points using #2 on the caliper diagram.  
 Measure the following control points using #3 on the caliper diagram.  
 Measure the following control points using #4 on the caliper diagram.

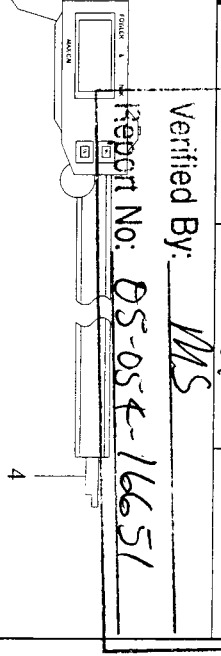
Frequency of sampling: Process Specialist: 3 samples per shift recorded every 4 hours.  
 Auditor: 1 sample per shift recorded 1 hour after shift start.

**IF ANY CONTROL POINTS ARE NOT IN SPEC. CORRECTIVE ACTION REQUIRED**

**ETC Laboratories**  
 297 Buell Road  
 Rochester, NY 14609  
 (716) 328-7668

CUSTOMER LENGTH: 14' 0" DISTANCE

Date Verified: 8/24/05  
 Verified By: WIS  
 Report No: DS-054-16651

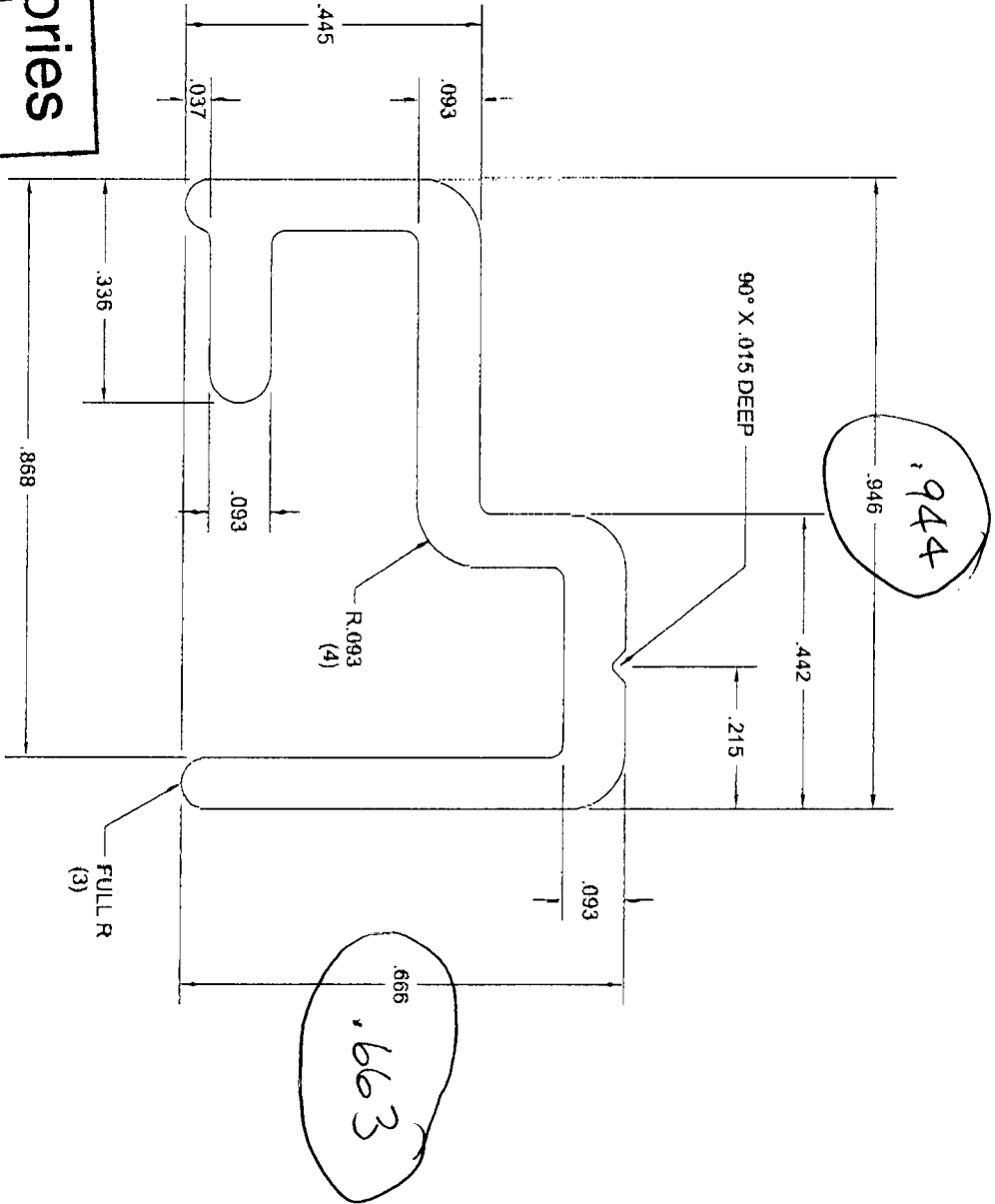




8708

ETC Laboratories  
 Report #: ETC-07-1081-19147  
 Date: 04/09/2007  
 Verified By:

**ETC Laboratories**  
 297 Bush Road  
 Rochester, NY 14624  
 (716) 323-7000  
 Date Verified: 8/24/05  
 Verified By: MS  
 Dtd No: 05-054-16651



1	HORIZONTAL WALL THICKNESS .093 WAS 0.18	BLG	07/20/06
NO.	REVISION	BY	DATE

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 565 CEDAR WAY, OAKKONT PA 15139  
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MATERIAL: 6063 T5 ALUMINIUM	
PRELIMINARY PART #	
UNLESS OTHERWISE SPECIFIED	
MATERIAL	ALUMINIUM
EXTERIOR COATING	XXXXXXXXXX
FLEXIBLE P.V.C.	1923
TOTAL AREA	2261
STANDARD WT/FT	
WALLS	.076
RADII	.015 R
ANGULARITY	±1°
TITLE: KEEPER RAIL ALUMINIUM STIFFENER	
DRAWN BY: BLG	DESIGNED BY: BLG
CHECKED BY:	APPROVED BY:
DATE: 11/08/04	SCALE: NTS-1
DRAWING NO: 8043	