



Quality Accuracy Assurance

## Fenestration Testing Laboratory, Inc.

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e-mail: ftldade@aol.com www.ftl-inc.com

Cert. No. 08-0313.01  
Report Date: 01/08/2009  
Completion Date: 11/24/2008  
Expiration Date: 11/24/2016  
Auth. No. FTL08083  
File Number: 08-634  
Page: 1 of 9  
Lab. Number: 5752  
Report Number: 01

### OFFICIAL TEST REPORT

**MANUFACTURER:** C.R. Laurence Company, Inc.  
**ADDRESS:** 2100 E. 38<sup>th</sup> Street  
Vernon, CA 90058

**SPECIFICATIONS:** Florida Building Code  
TAS 202 (Loads)  
ANSI Z97.1; CPSC 16 CFR 1201  
**PROJECT:** Miami-Dade County  
Florida State Approval

### Description Of Sample and Material Characteristics

#### Sample A-1:

**Model Designation:** Series: Weld Block Dry Glazed Aluminum Glass Glazed Railing System

**Overall Size:** 15' 1" (181") by 3' 6" (42") high.

**Railing Parts:** Railing consists of an aluminum \*(alloy 6063-T52) square shoe base, part number \*\*B5S20D. One 2" diameter two piece stainless steel hand rail part number \*\*GR20 at top of system with one plastic glazing cap between glass and hand rail.

#### Glazing:

**Material:** 1/2" clear tempered glass.

**Method:** Sample is pocket glazed with a 3" glazing penetration at shoe base and 1 1/4" at top of hand rail using a vinyl wedge between glass and aluminum. System glazed at bottom with CRL taper lock clamping system which consists of a "L" shaped setting block and taper locking clamps between glass and aluminum, each located 6" from each end and remaining on 12" centers.

**Daylight Opening:** Each lite is 60" by 36" high (total of three lites).

**Railing Installation:** The shoe base was fastened to the steel weld block part number \*\*BSWB5 with a single row of number 1/2-13 by 3/4" long stainless steel socket head cap screws located 6 1/2" from each end and remaining on 12" center, the weld block was welded to a steel test fixture.

**Product markings:** None

#### Sample A-2:

**Model Designation:** Series: Dry Glazed Concrete Mount Aluminum Glass Glazed Railing System

**Overall Size:** 15' 1" (181") by 3' 6" (42") high.

**Railing Parts:** Railing consists of an aluminum \*(alloy 6063-T52) square shoe base, part number \*\*B5S20D. One 2" diameter two piece stainless steel hand rail part number \*\*GR20 at top of system with one plastic glazing cap between glass and hand rail.

#### Glazing:

**Material:** 1/2" clear tempered glass.

**Method:** Sample is pocket glazed with a 3" glazing penetration at shoe base and 1 1/4" at top of hand rail using a vinyl wedge between glass and aluminum. System glazed at bottom with CRL taper lock clamping system which consists of a "L" shaped setting block and taper locking clamps between glass and aluminum, each located 6" from each end and remaining on 12" centers.

**Daylight Opening:** Each lite is 60" by 36" high (total of three lites).

**Railing Installation:** The shoe base was fastened to concrete test slab with a single row of No. 1/2 by 3 3/4" Hilti expansion bolt located 6" from each end and remainder on 6" centers.

**Product markings:** None

*Note: \*\*as per manufacturer*



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### Description Of Sample and Material Characteristics

#### Sample A-3:

**Model Designation:** Series: Weld Block Dry Glazed Aluminum Glass Glazed Railing System

**Overall Size:** 15' 1" (181") by 3' 6" (42") high.

**Railing Parts:** Railing consists of an aluminum \*\*(alloy 6063-T52) square shoe base, part number \*\*B5T20D. One 2" diameter two piece stainless steel hand rail part number \*\*GR20 at top of system with one plastic glazing cap between glass and hand rail.

**Glazing:**

**Material:** 1/2" clear tempered glass.

**Method:** Sample is pocket glazed with a 3" glazing penetration at shoe base and 1 1/4" at top of hand rail using a vinyl wedge between glass and aluminum. System glazed at bottom with CRL taper lock clamping system which consists of a "L" shaped setting block and taper locking clamps between glass and aluminum, each located 6" from each end and remaining on 12" centers.

**Daylight Opening:** Each lite is 60" by 36" high (total of three lites).

**Railing Installation:** The shoe base was fastened to the steel weld block part number \*\*BSWB5 with a single row of number 1/2-13 by 3/4" long stainless steel socket head cap screws located 6 1/2" from each end and remaining on 12" center, the weld block was welded to a steel test fixture.

**Product markings:** None

#### Sample A-4:

**Model Designation:** Series: Dry Glazed Concrete Fascia Mount Aluminum Glass Glazed Railing System

**Overall Size:** 15' 1" (181") by 3' 6" (42") high.

**Railing Parts:** Railing consists of an aluminum square shoe base, part number \*\*B5S20F. One 2" diameter two piece stainless steel hand rail part number \*\*GR20 at top of system with one plastic glazing cap between glass and hand rail.

**Glazing:**

**Material:** 1/2" clear tempered glass.

**Method:** Sample is pocket glazed with a 3" glazing penetration at shoe base and 1 1/4" at top of hand rail using a vinyl wedge between glass and aluminum. System glazed at bottom with CRL taper lock clamping system which consists of a "L" shaped setting block and taper locking clamps between glass and aluminum, each located 3" from each end and remaining on 12 1/2" centers.

**Daylight Opening:** Each lite is 60" by 36" high (total of three lites).

**Railing Installation:** The shoe base was fastened to concrete test slab with a single row of No. 1/2 by 3 3/4" Hilti expansion bolt located 6 1/2" from each end and remainder on 6" centers.

**Product markings:** None

#### Sample A-5:

**Model Designation:** Series: Wet Glazed Concrete Fascia Mount Aluminum Glass Glazed Railing System

**Overall Size:** 15' 1" (181") by 3' 6" (42") high.

**Railing Parts:** Railing consists of an aluminum square shoe base, part number \*\*B5S20F. One 2" diameter two piece stainless steel hand rail part number \*\*GR20 at top of system with one plastic glazing cap between glass and hand rail.

*Note: \*\*as per manufacturer*





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### Description Of Sample and Material Characteristics

#### Sample A-5: (Continued)

**Glazing:**

**Material:** 1/2" clear tempered glass.

**Method:** Sample is pocket glazed with a 3" glazing penetration at shoe base and 1 1/4" at top of hand rail using silicone at shoe base between glass and aluminum and setting blocks 3" from each end and remaining on 18" centers.

**Daylight Opening:** Each lite is 60" by 36" high (total of three lites).

**Railing Installation:** The shoe base was fastened to concrete test slab with a single row of No. 1/2 by 3 3/4" Hilti expansion bolt located 6 1/2" from each end and remainder on 6" center.

**Product markings:** None

#### Sample A-6:

**Model Designation:** Series: Wet Glazed Concrete Mount Aluminum Glass Glazed Railing System

**Overall Size:** 15' 1" (181") by 3' 6" (42") high.

**Railing Parts:** Railing consists of an aluminum \*\* (alloy 6063-T52) square shoe base, part number \*\*B5T20D. One 2" diameter two piece stainless steel hand rail part number \*\*GR20 at top of system with one plastic glazing cap between glass and hand rail.

**Glazing:**

**Material:** 1/2" clear tempered glass.

**Method:** Sample is pocket glazed with a 3" glazing penetration at shoe base and 1 1/4" at top of hand rail using silicone at shoe base between glass and aluminum and setting blocks 3" from each end and remaining on 18" centers.

**Daylight Opening:** Each lite is 60" by 36" high (total of three lites).

**Railing Installation:** The shoe base was fastened to concrete test slab with a single row of No. 1/2 by 3 3/4" Hilti expansion bolt located 6 1/2" from each end and remainder on 6" center.

**Product markings:** None

#### Sample A-7:

**Model Designation:** Series: Dry Glazed Fascia Mount To Steel Aluminum Glass Glazed Railing System

**Overall Size:** 15' 1" (181") by 3' 6" (42") high.

**Railing Parts:** Railing consists of an aluminum square shoe base, part number \*\*B5S20F. One 2" diameter two piece stainless steel hand rail part number \*\*GR20 at top of system with one plastic glazing cap between glass and hand rail.

**Glazing:**

**Material:** 1/2" clear tempered glass.

**Method:** Sample is pocket glazed with a 3" glazing penetration at shoe base and 1 1/4" at top of hand rail using a vinyl wedge between glass and aluminum. System glazed at bottom with CRL taper lock clamping system which consists of a "L" shaped setting block and taper locking clamps between glass and aluminum, each located 3" from each end and remaining on 12 1/2" centers.

**Daylight Opening:** Each lite is 60" by 36" high (total of three lites).

**Railing Installation:** The shoe base was fastened to the steel tube with a single row of number 1/2-13 by 3/4" long stainless steel socket head cap screws located 6 1/2" from each end and remaining on 12" center, the steel tube was welded to a steel test fixture.

**Product markings:** None

*Note: \*\*as per manufacturer*



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### Description Of Sample and Material Characteristics

**Sample A-8:**

**Model Designation:** Series: Wet Glazed Fascia Mount To Steel Aluminum Glass Glazed Railing

**Overall Size:** 15' 1" (181") by 3' 6" (42") high.

**Railing Parts:** Railing consists of an aluminum square shoe base, part number \*\*B5S20F. One 2" diameter two piece stainless steel hand rail part number \*\*GR20 at top of system with one plastic glazing cap between glass and hand rail.

**Glazing:**

**Material:** 1/2" clear tempered glass.

**Method:** Sample is pocket glazed with a 3" glazing penetration at shoe base and 1 1/4" at top of hand rail using silicone at shoe base between glass and aluminum and setting blocks 3" from each end and remaining on 18" centers.

**Daylight Opening:** Each lite is 60" by 36" high (total of three lites).

**Railing Installation:** The shoe base was fastened to the steel tube with a single row of number 1/2-13 by 3/4" long stainless steel socket head cap screws located 6 1/2" from each end and remaining on 12" center, the steel tube was welded to a steel test fixture.

**Product markings:** None

*Note: \*\*as per manufacturer*

### OFFICIAL TEST RESULTS

Title of Test	Deflection	Measured	Permanent Set	Remarks
<b>Sample A-1: (Temperature: 79.0 F; Barometric Reading: 30.00 inches Hg)</b>				
1/2 Structural Load Test				
Positive Load		76.0 psf		Passed
Negative Load		76.0 psf		Passed
Uniform Design Load Test (ASTM E330)				
Positive Load		76.0 psf		Passed
Reading at hand rail	1.404"		0.049"	
Recovery		97 percent		
Uniform Design Load Test (ASTM E330)				
Negative Load		76.0 psf		Passed
Reading at hand rail	1.420"		0.052"	
Recovery		96 percent		
Uniform Structural Load Test (ASTM E330)				
Positive Load		152.0 psf		Passed
Reading at hand rail	2.583"		0.096"	
Recovery		96 percent		
Uniform Structural Load Test (ASTM E330)				
Negative Load		152.0 psf		Passed
Reading at hand rail	2.673"		0.104"	
Recovery		96 percent		
Drop Load Test at left lite		400 foot pounds		Passed
Drop Load Test at center lite		400 foot pounds		Passed
Drop Load Test at right lite		400 foot pounds		Passed



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### OFFICIAL TEST RESULTS

Title of Test	Deflection	Measured	Permanent Set	Remarks
<b>Sample A-2:</b> (Temperature: 78.0 F; Barometric Reading: 30.03 inches Hg)				
1/2 Structural Load Test				
Positive Load		112.0 psf		Passed
Negative Load		112.0 psf		Passed
Uniform Design Load Test (ASTM E330)				
Positive Load		112.0 psf		Passed
Reading at hand rail	2.283"		0.128"	
Recovery		94 percent		
Uniform Design Load Test (ASTM E330)				
Negative Load		112.0 psf		Passed
Reading at hand rail	2.344"		0.136"	
Recovery		94 percent		
Uniform Structural Load Test (ASTM E330)				
Positive Load		224.0 psf		Passed
Reading at hand rail	3.566"		0.256"	
Recovery		93 percent		
Uniform Structural Load Test (ASTM E330)				
Negative Load		224.0 psf		Passed
Reading at hand rail	3.615"		0.144"	
Recovery		96 percent		
Drop Load Test at left lite		400 foot pounds		Passed
Drop Load Test at center lite		400 foot pounds		Passed
Drop Load Test at right lite		400 foot pounds		Passed
<b>Sample A-3:</b> (Temperature: 79.4 F; Barometric Reading: 29.94 inches Hg)				
1/2 Structural Load Test				
Positive Load		76.0 psf		Passed
Negative Load		76.0 psf		Passed
Uniform Design Load Test (ASTM E330)				
Positive Load		76.0 psf		Passed
Reading at hand rail	1.384"		0.047"	
Recovery		97 percent		
Uniform Design Load Test (ASTM E330)				
Negative Load		76.0 psf		Passed
Reading at hand rail	1.398"		0.050"	
Recovery		96 percent		
Uniform Structural Load Test (ASTM E330)				
Positive Load		152.0 psf		Passed
Reading at hand rail	2.515"		0.098"	
Recovery		96 percent		





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### OFFICIAL TEST RESULTS

Title of Test	Deflection	Measured	Permanent Set	Remarks
<b>Sample A-3: (Continued)</b>				
Uniform Structural Load Test (ASTM E330)				
Negative Load		152.0 psf		Passed
Reading at hand rail	2.615"		0.107"	
Recovery		96 percent		
Drop Load Test at left lite		400 foot pounds		Passed
Drop Load Test at center lite		400 foot pounds		Passed
Drop Load Test at right lite		400 foot pounds		Passed
<b>Sample A-4: (Temperature: 78.5 F; Barometric Reading: 29.97 inches Hg)</b>				
1/2 Structural Load Test				
Positive Load		112.0 psf		Passed
Negative Load		112.0 psf		Passed
Uniform Design Load Test (ASTM E330)				
Positive Load		112.0 psf		Passed
Reading at hand rail	1.104"		0.042"	
Recovery		96 percent		
Uniform Design Load Test (ASTM E330)				
Negative Load		112.0 psf		Passed
Reading at hand rail	1.118"		0.048"	
Recovery		96 percent		
Uniform Structural Load Test (ASTM E330)				
Positive Load		224.0 psf		Passed
Reading at hand rail	2.132"		0.066"	
Recovery		97 percent		
Uniform Structural Load Test (ASTM E330)				
Negative Load		224.0 psf		Passed
Reading at hand rail	2.184"		0.088"	
Recovery		96 percent		
Drop Load Test at left lite		400 foot pounds		Passed
Drop Load Test at center lite		400 foot pounds		Passed
Drop Load Test at right lite		400 foot pounds		Passed
<b>Sample A-5: (Temperature: 79.4 F; Barometric Reading: 30.04 inches Hg)</b>				
1/2 Structural Load Test				
Positive Load		112.0 psf		Passed
Negative Load		112.0 psf		Passed
Uniform Design Load Test (ASTM E330)				
Positive Load		112.0 psf		Passed
Reading at hand rail	1.106"		0.038"	
Recovery		97 percent		



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### OFFICIAL TEST RESULTS

Title of Test	Deflection	Measured	Permanent Set	Remarks
<b>Sample A-5: (Continued)</b>				
Uniform Design Load Test (ASTM E330)				
Negative Load		112.0 psf		Passed
Reading at hand rail	1.114"		0.040"	
Recovery		96 percent		
Uniform Structural Load Test (ASTM E330)				
Positive Load		224.0 psf		Passed
Reading at hand rail	2.128"		0.061"	
Recovery		97 percent		
Uniform Structural Load Test (ASTM E330)				
Negative Load		224.0 psf		Passed
Reading at hand rail	2.170"		0.080"	
Recovery		96 percent		
Drop Load Test at left lite		400 foot pounds		Passed
Drop Load Test at center lite		400 foot pounds		Passed
Drop Load Test at right lite		400 foot pounds		Passed
<b>Sample A-6: (Temperature: 76.0 F; Barometric Reading: 29.98 inches Hg)</b>				
1/2 Structural Load Test				
Positive Load		112.0 psf		Passed
Negative Load		112.0 psf		Passed
Uniform Design Load Test (ASTM E330)				
Positive Load		112.0 psf		Passed
Reading at hand rail	2.288"		0.136"	
Recovery		94 percent		
Uniform Design Load Test (ASTM E330)				
Negative Load		112.0 psf		Passed
Reading at hand rail	2.394"		0.156"	
Recovery		93 percent		
Uniform Structural Load Test (ASTM E330)				
Positive Load		224.0 psf		Passed
Reading at hand rail	3.630"		0.214"	
Recovery		94 percent		
Uniform Structural Load Test (ASTM E330)				
Negative Load		224.0 psf		Passed
Reading at hand rail	3.720"		0.218"	
Recovery		94 percent		
Drop Load Test at left lite		400 foot pounds		Passed
Drop Load Test at center lite		400 foot pounds		Passed
Drop Load Test at right lite		400 foot pounds		Passed



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### OFFICIAL TEST RESULTS

Title of Test	Deflection	Measured	Permanent Set	Remarks
<b>Sample A-7:</b> (Temperature: 78.6 F; Barometric Reading: 30.01 inches Hg)				
1/2 Structural Load Test				
Positive Load		112.0 psf		Passed
Negative Load		112.0 psf		Passed
Uniform Design Load Test (ASTM E330)				
Positive Load		112.0 psf		Passed
Reading at hand rail	1.087"		0.048"	
Recovery		96 percent		
Uniform Design Load Test (ASTM E330)				
Negative Load		112.0 psf		Passed
Reading at hand rail	1.218"		0.050"	
Recovery		96 percent		
Uniform Structural Load Test (ASTM E330)				
Positive Load		224.0 psf		Passed
Reading at hand rail	2.104"		0.063"	
Recovery		97 percent		
Uniform Structural Load Test (ASTM E330)				
Negative Load		224.0 psf		Passed
Reading at hand rail	2.215"		0.090"	
Recovery		96 percent		
Drop Load Test at left lite		400 foot pounds		Passed
Drop Load Test at center lite		400 foot pounds		Passed
Drop Load Test at right lite		400 foot pounds		Passed
<b>Sample A-8:</b> (Temperature: 79.4 F; Barometric Reading: 29.97 inches Hg)				
1/2 Structural Load Test				
Positive Load		112.0 psf		Passed
Negative Load		112.0 psf		Passed
Uniform Design Load Test (ASTM E330)				
Positive Load		112.0 psf		Passed
Reading at hand rail	1.104"		0.045"	
Recovery		96 percent		
Uniform Design Load Test (ASTM E330)				
Negative Load		112.0 psf		Passed
Reading at hand rail	1.219"		0.050"	
Recovery		96 percent		
Uniform Structural Load Test (ASTM E330)				
Positive Load		224.0 psf		Passed
Reading at hand rail	2.140"		0.074"	
Recovery		97 percent		





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### OFFICIAL TEST RESULTS

Title of Test	Deflection	Measured	Permanent Set	Remarks
<b>Sample A-8: (Continued)</b>				
Uniform Structural Load Test (ASTM E330)				
Negative Load		224.0 psf		Passed
Reading at hand rail	2.210"		0.053"	
Recovery		98 percent		
Drop Load Test at left lite		400 foot pounds		Passed
Drop Load Test at center lite		400 foot pounds		Passed
Drop Load Test at right lite		400 foot pounds		Passed

*Note:* At conclusion of above tests, there was no apparent damage to the railing systems. The test specimens were covered with a 4 mil plastic sheeting to seal from air leakage when load tests were conducted, however this had no effect on the above test results.

REPORT REVISION HISTORY			
Rev	Description of Change	Author of Report	Effective Date
0	Initial Release	LBS	01/08/2009

**Remarks:** Representative samples of the test specimens, detailed drawings and DVD will be retained by Fenestration Testing Laboratory for a period of five years from the original test date, and test report for a period of ten years. Due to the code cycle change of four years, it is recommended that this report be evaluated during the life span of this document.

This product was tested and meets the requirement set forth by the Florida Building Code (2004) TAS 202 (loads) and Section 2407. This product was tested in accordance with CPSC 16 CFR 1201, Category II, with no deviations.

Drawings referenced in this document are an integral part of this report, therefore, are required when distributing this test report. Test results obtained represent the actual value of the tested specimens and do not constitute opinion, endorsement, or certification by this laboratory. This test report is considered the exclusive property of the client named herein and is applicable to the sample tested. This report may not be reproduced without the approval of Fenestration Testing Laboratory, Inc.

Testing was conducted as per instructions received from your company representative.

Witnessed by:  
Mr. Michael Wenzel, P.E.  
Mr. Carlos Rionda, P. E.

Laboratory Technicians:  
Mr. Roberto Robleto

Author of Report:  
Ms. Leigh B. Sanchez

**FENESTRATION TESTING LABORATORY, INC.**

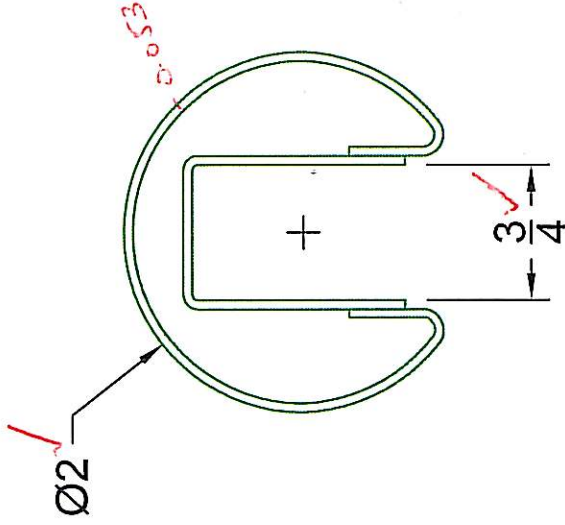
**Manny Sanchez**  
Chief Executive Officer

FENESTRATION TESTING LAB, INC

LAB # 5752

DATE: 2/10/09

DRAWING VERIFIED BY: unk



ARCHITECTURAL PRODUCTS  
LOS ANGELES, CA 90058  
PH: 800-421-6144 FX: 800-262-3299  
WWW.CRLAURENCE.COM



DESCRIPTION: 2" DIAMETER STAINLESS STEEL CAP RAIL

16 GA S.S. T304 ALLOY

CAT. NO: GR20xx

PART NO: GR20xx

DRAWN BY: R.A.

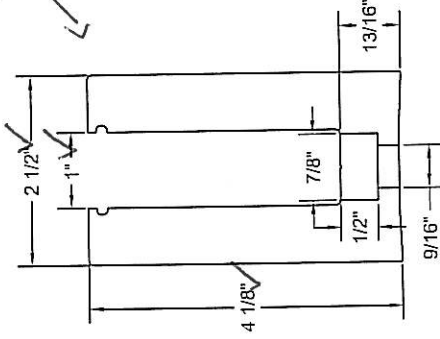
DATE: 10/15/08

SCALE: N.T.S.

SHT 1 OF 1

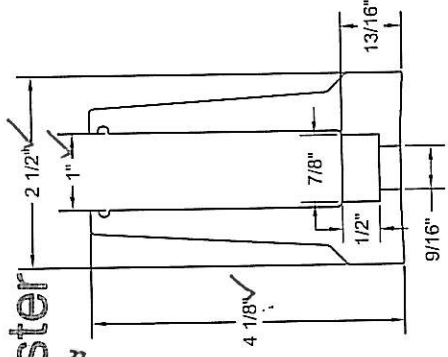
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Webster



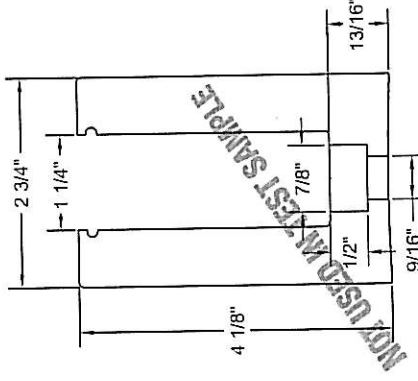
B5S20D

1/2" GLASS SQUARE BASE SHOE  
DRILLED AT 12" ON CENTER  
samples A-1, A-2



B5T20D

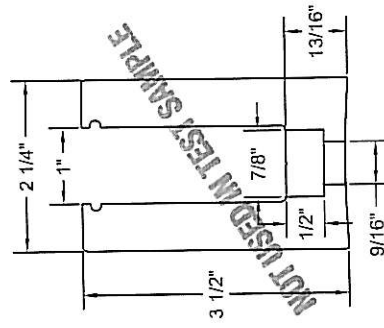
1/2" GLASS TAPERED BASE SHOE  
DRILLED AT 12" ON CENTER  
samples A-3, A-6



B7S20D

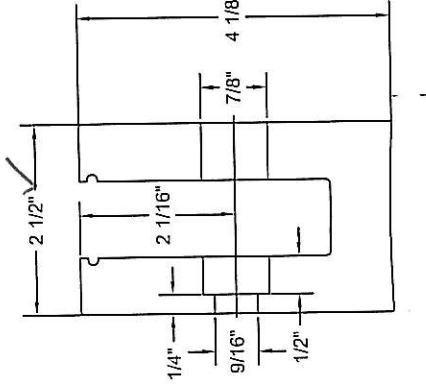
3/4" GLASS SQUARE BASE SHOE  
DRILLED AT 12" ON CENTER

FENESTRATION TESTING LAB, INC.



B5L20D -1/2" GLASS

LOW PROFILE SQUARE BASE SHOE  
DRILLED AT 12" ON CENTER



B5S20F

1/2" GLASS SQUARE FASCIA BASE SHOE  
DRILLED AT 12" ON CENTER  
samples A-4, A-5, A-7, A-8

LAB # 5752

DATE: 2/10/09

DRAWING VERIFIED BY: *mk*

Not able to  
Webster

DESCRIPTION:

ARCHITECTURAL PRODUCTS  
PH: 800-421-6144 FX: 800-262-3299  
WWW.CRLAURENCE.COM

ISO 9000

CRL  
C.R. LAURENCE CO. ®

CAT. NO:	GRS	DATE:	4/28/08
FILE NAME:	GRS_1	SCALE:	
DRAWN BY:	C.O	SHT	1 OF 5



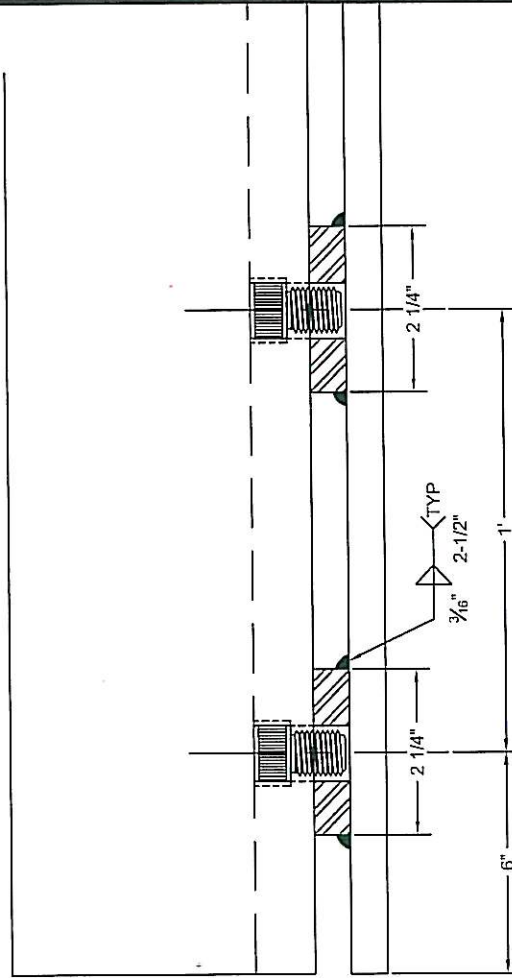
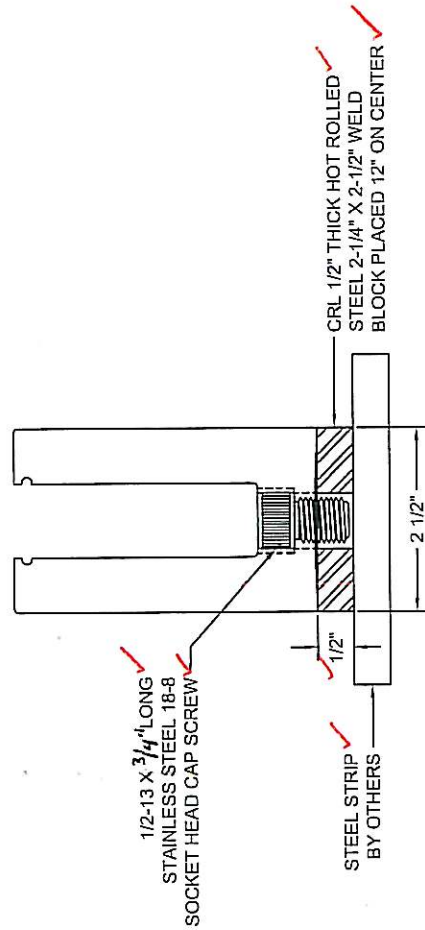
PENETRATION TESTING LAB, INC.

LAB # 5752

DATE: \_\_\_\_\_

DRAWING VERIFIED BY: unk  
Samples A-1 & A-3

## TYPICAL WELD BLOCK DETAILS



Only items checked in red have been  
verified by laboratory

DESCRIPTION:

ARCHITECTURAL PRODUCTS  
PH: 800-421-6144 FX: 800-262-3299  
WWW.CRLAURENCE.COM

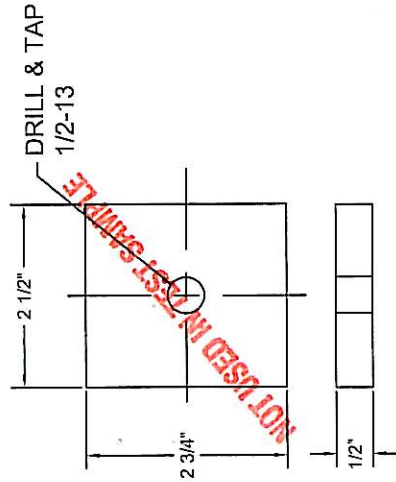


CRLAURENCE CO. ®

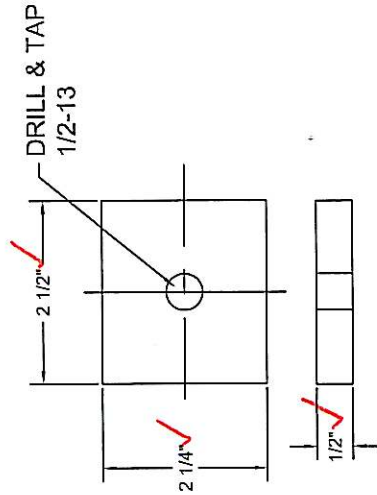
CAT. NO: GRS DATE: 4/28/08

FILE NAME: GRS\_1 SCALE:

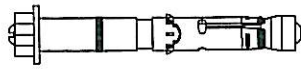
DRAWN BY: C.O. SHT 4 OF 5



BSWB7  
HOT ROLLED STEEL WELD SHOE  
FOR 3/4" GLASS BASE SHOE



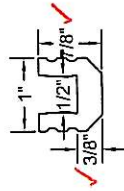
BSWB5  
HOT ROLLED STEEL WELD BLOCK  
FOR 1/2" GLASS SQUARE, TAPERED AND  
LOW PROFILE BASE SHOE  
Samples A-1 & A-3



EBA334  
HLT EXPANSION BOLT  
Samples A-2, A-4  
A-5, A-6



SHCS12X34  
SOCKET HEAD CAP SCREW  
Samples A-1, A-3, A-7, A-8



GR5UB4  
1/2" GLASS RUBBER  
SETTING BLOCK  
Samples A-5, A-6, A-8



GR7UB4  
3/4" GLASS RUBBER  
SETTING BLOCK

FENESTRATION TESTING LAB, INC

LAB # 5752

DATE: 2/10/09

DRAWING VERIFIED BY: unf

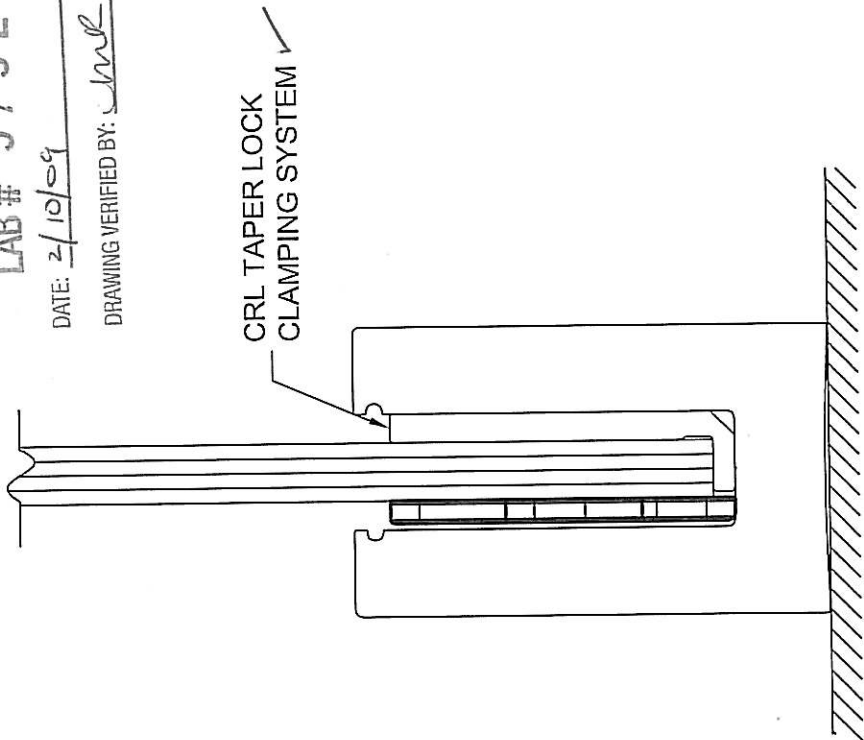
Only items checked in red have been  
verified by laboratory

CRL C.R. LAURENCE CO. ©		ARCHITECTURAL PRODUCTS PH: 800-421-6144 FX: 800-262-3299 WWW.CRLAURENCE.COM		DESCRIPTION:		CAT. NO: GRS	DATE: 4/28/08
						FILE NAME: GRS_1	SCALE:
						DRAWN BY: C.O	SHT 3 OF 5

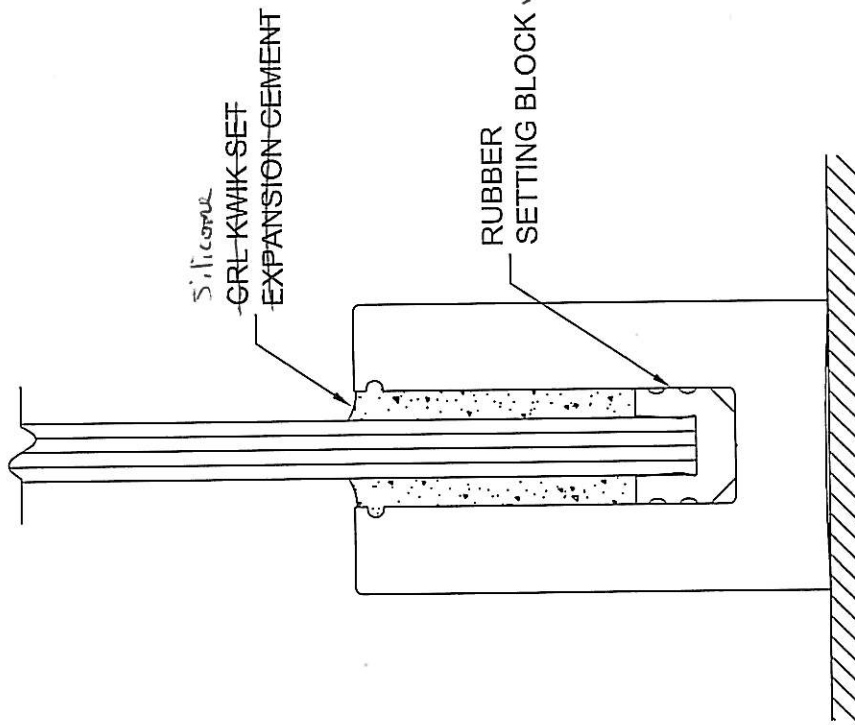
LAB # 5752

DATE: 2/10/09

DRAWING VERIFIED BY: *ml*



CRL TAPER LOCK  
CLAMPING SYSTEM ✓



Silicone  
CRL-KWIK-SET  
EXPANSION CEMENT

RUBBER  
SETTING BLOCK ✓

## WET SET APPLICATION

Samples A-5, A-6, A-8

## DRY GLAZE APPLICATION

Samples A-1, A-2, A-3, A-4, A-7

DESCRIPTION:

ARCHITECTURAL PRODUCTS  
PH: 800-421-6144 FX: 800-262-3299  
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**CRL**  
C.R. LAURENCE CO. ®

CAT. NO: GRS

DATE: 4/28/08

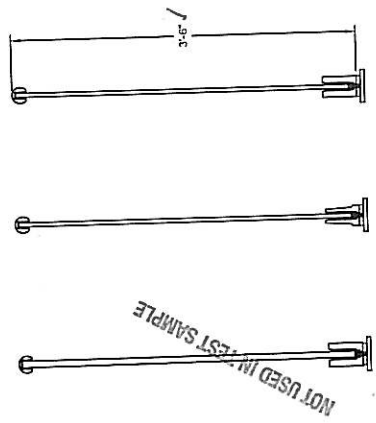
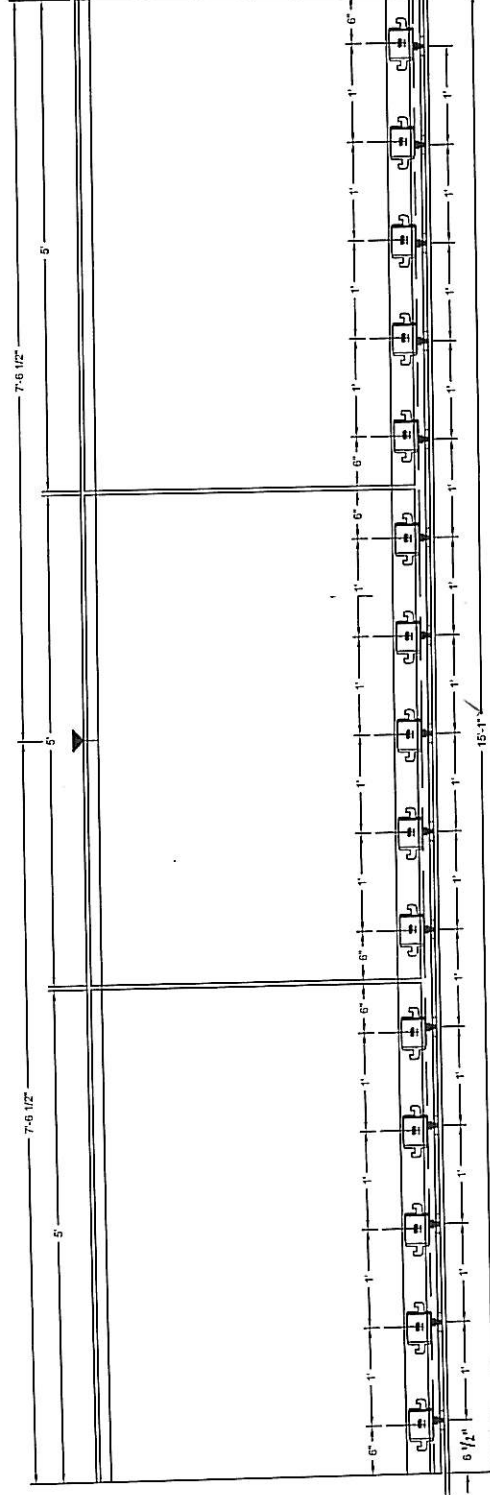
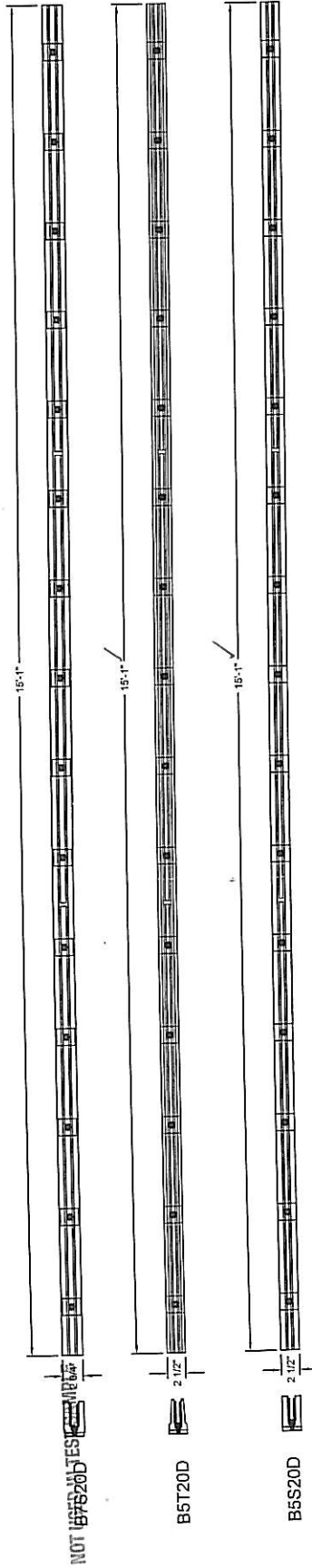
FILE NAME: GRS\_1

SCALE:

DRAWN BY: C.O

SHT 2 OF 5





NOT USED IN TEST SAMPLE

FENESTRATION TESTING LAB, INC

LAB # 5752

DATE: 2/10/09

DRAWING VERIFIED BY: [Signature]

Only items checked in red have been verified by laboratory

CAT. NO: TEST 1

DATE: 10/15/08

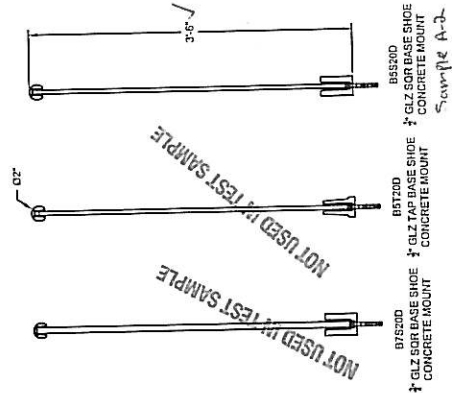
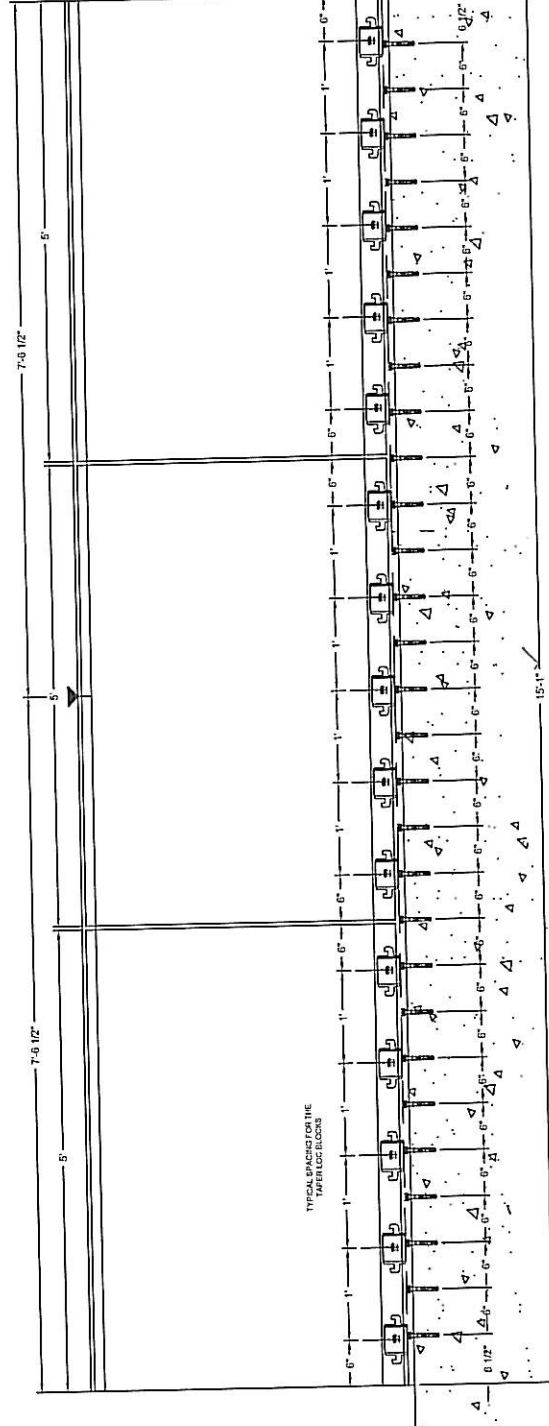
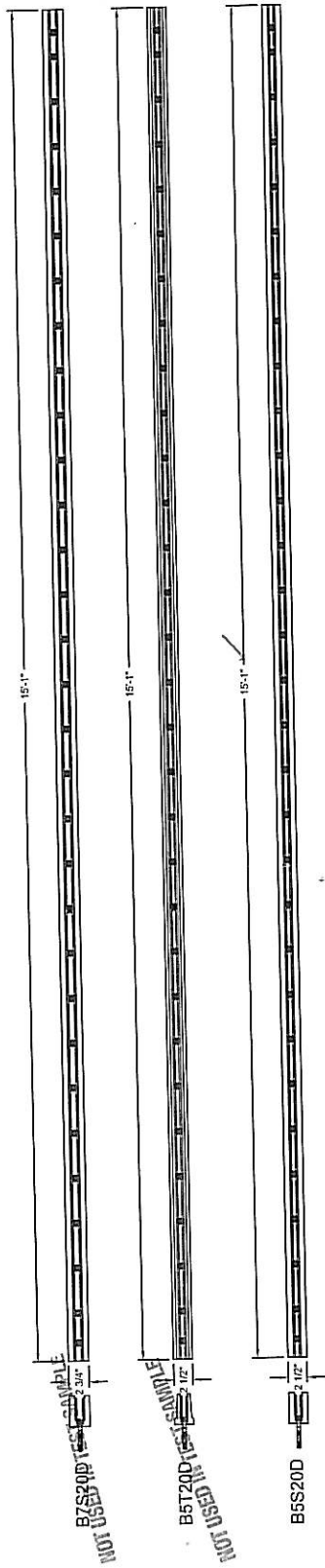
PART NO: N.T.S.

DESCRIPTION: TEST 1 - DRY GLAZE TAPER-LOC SYSTEM

CAP SCREWS @ 12" ON CENTER ATTACHED TO WELD BLOCKS ON STEEL SUBSTRATE

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FENESTRATION TESTING LAB, INC

LAB # 5752

Only items checked in red have been  
verified by laboratory

DATE: 2/11/09

DRAWING VERIFIED BY: *MLP*

CAT. NO: TEST 2

DATE: 10/15/08

PART NO:

SCALE: N.T.S.

DRAWN BY:

SHT 2 OF 8

DESCRIPTION: TEST 2 - DRY GLAZE TAPER-LOC SYSTEM

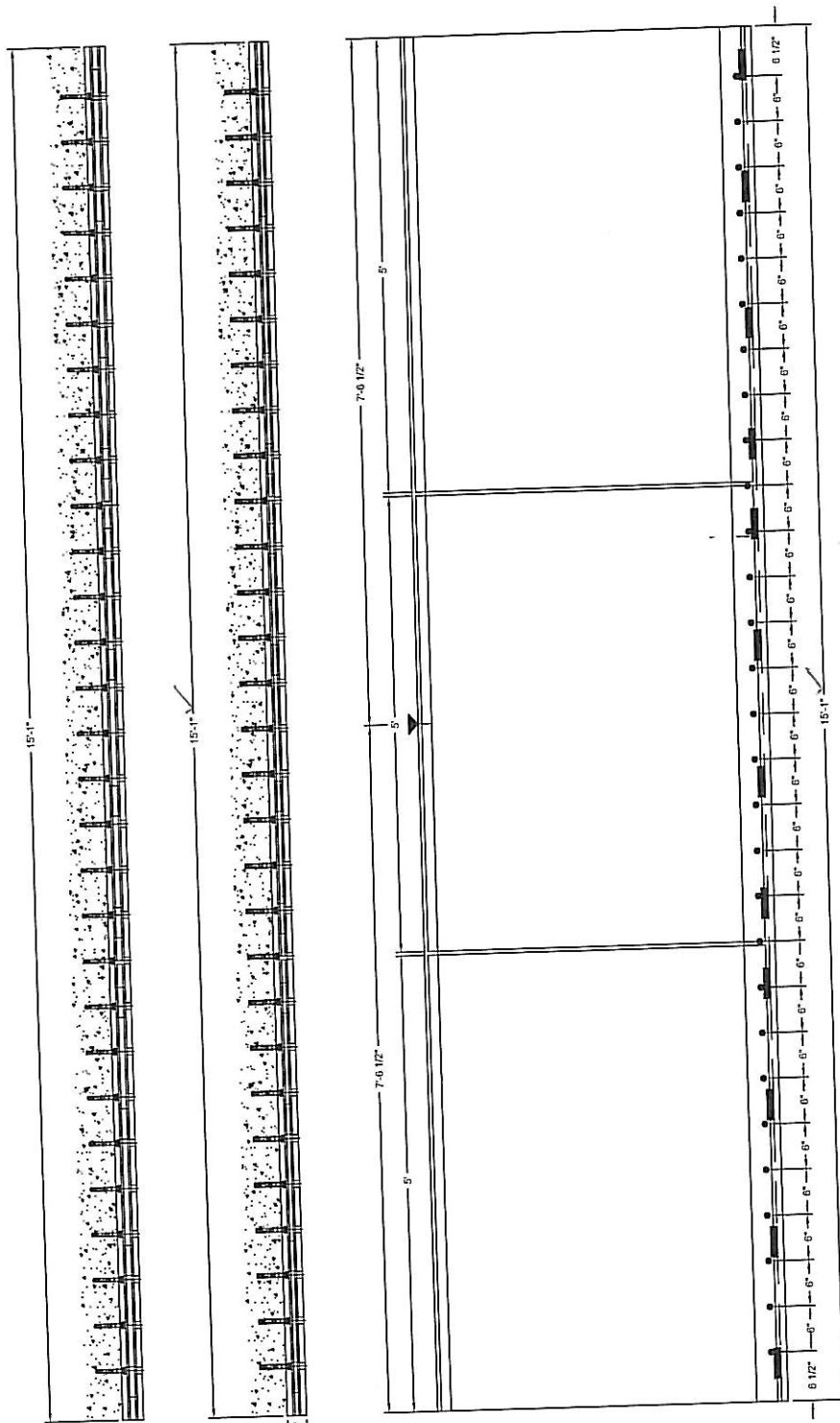
ANCHOR BOLTS @ 6" ON CENTER ATTACHED TO CONCRETE

ARCHITECTURAL PRODUCTS  
LOS ANGELES, CA 90058  
PH: 800-421-6144 FX: 800-262-3299  
WWW.ARPAL.COM



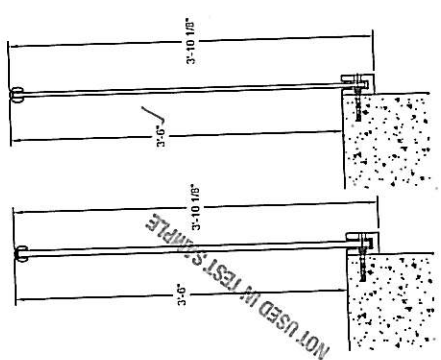






NOT USED IN TEST SAMPLE  
 B7S20D  
 2 1/2"

B5S20D  
 2 1/2"



B7S20F  
 1/2" SZ SGR BASE SHOE  
 FASCIA MOUNT  
 Sample A-5

FENESTRATION TESTING LAB, INC

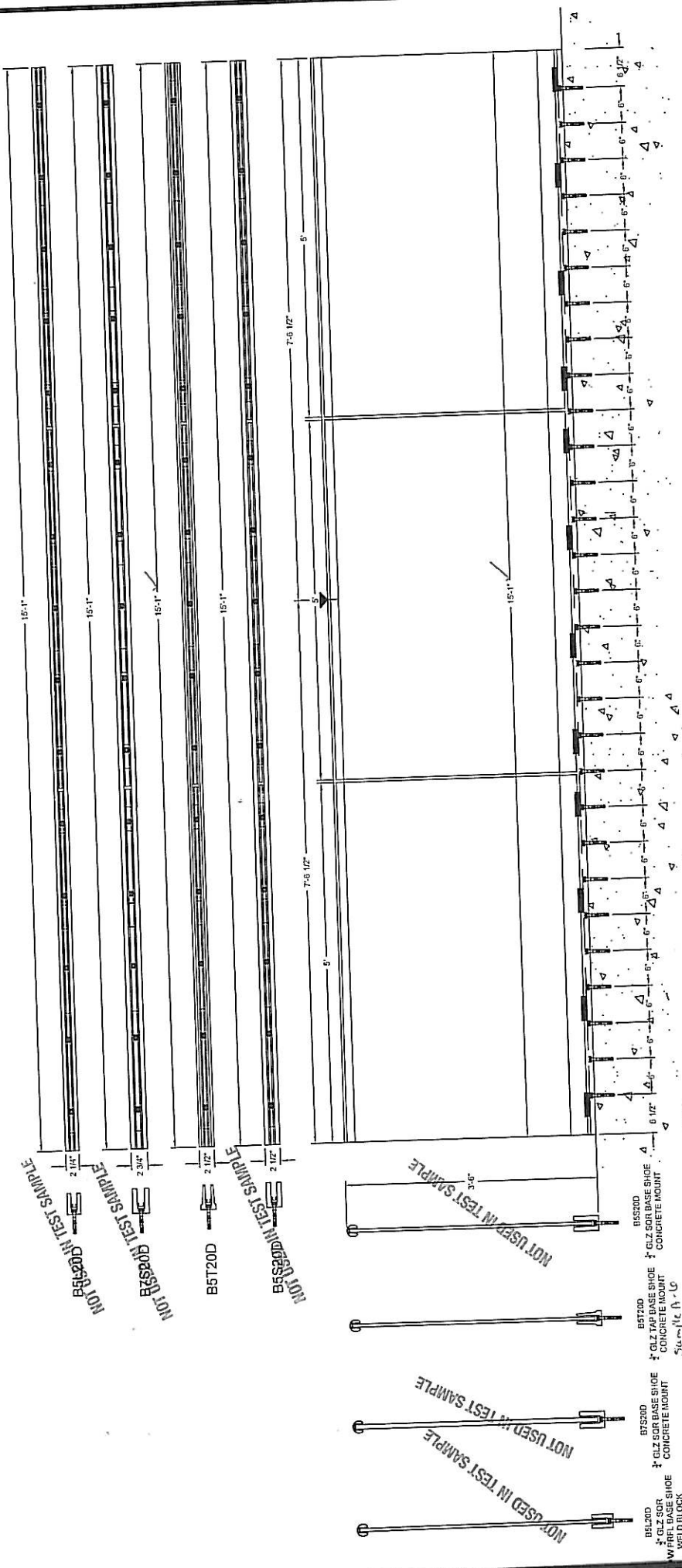
LAB # 5752

DATE: 2-10-20

DRAWING VERIFIED BY: *[Signature]*

Only items checked in red have been  
 verified by laboratory

<b>ARCHITECTURAL PRODUCTS</b> LOS ANGELES, CA 90068 (800) 333-3300	DESCRIPTION: <b>TEST 8 - DRY GLAZE TAPER-LOC SYSTEM</b> ALUMINUM BOLTS @ 2" FASCIA MOUNTED TO CONCRETE		CAT. NO: <b>TEST 8</b>	DATE: <b>10/15/08</b>
			PART NO:	SCALE: <b>N.T.S.</b>
			DRAWN BY:	CUT A OF 8



FENESTRATION TESTING LAB, INC

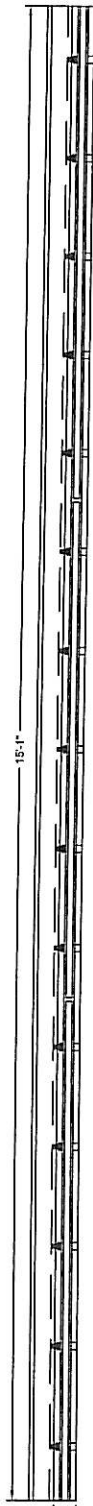
LAB # 5752

Only items checked in red have been  
verified by laboratory

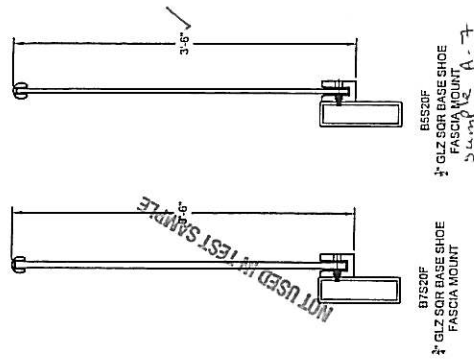
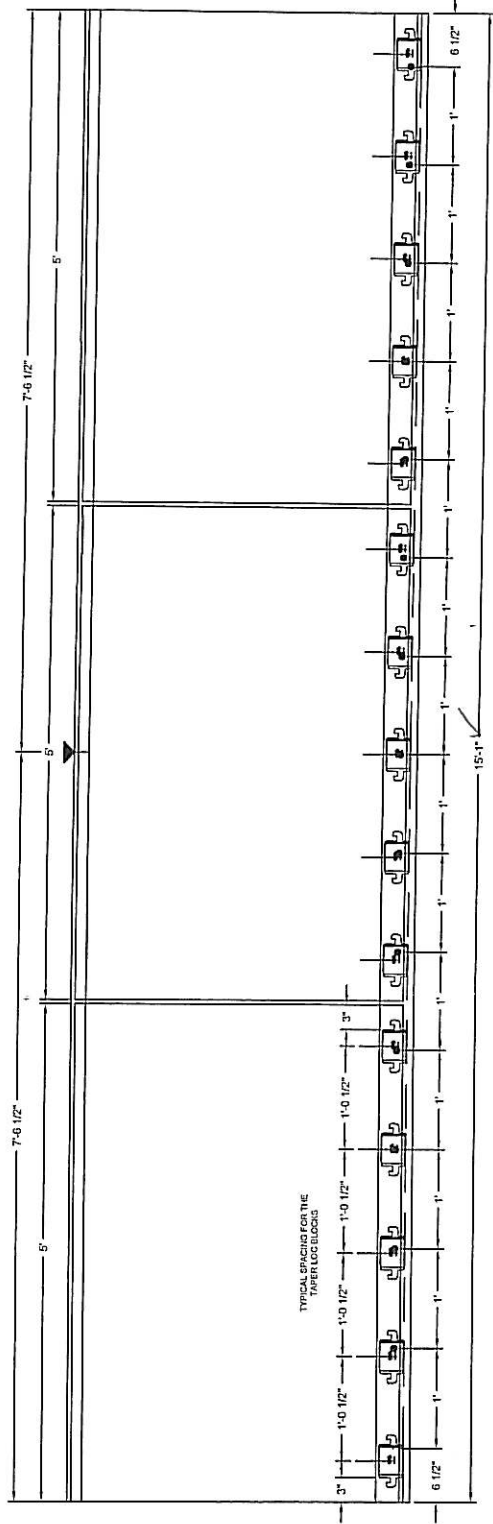
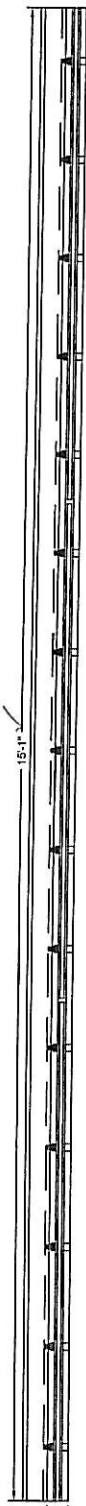
DATE: 2/10/09  
DRAWING VERIFIED BY: *WAK*

<b>ARCHITECTURAL PRODUCTS</b> LOS ANGELES, CA 90058 TEL: 800.471.6144 FAX: 800.262.3299	DESCRIPTION: <b>TEST 6 - WET GLAZE SYSTEM</b> <b>ANCHOR BOLTS @ 6" ON CENTER ATTACHED TO CONCRETE</b>		CAT. NO.: TEST 6 PART NO.: DRAWN BY:	DATE: 10/15/08 SCALE: N.T.S. SHT 6 OF 8
---	--	--	--	---

NOT USED IN TEST SAMPLE  
B7S20D  
2 3/4"



B6S20D  
2 1/2"



FENESTRATION TESTING LAB, INC

LAB # 5752

DATE: 2/15/09

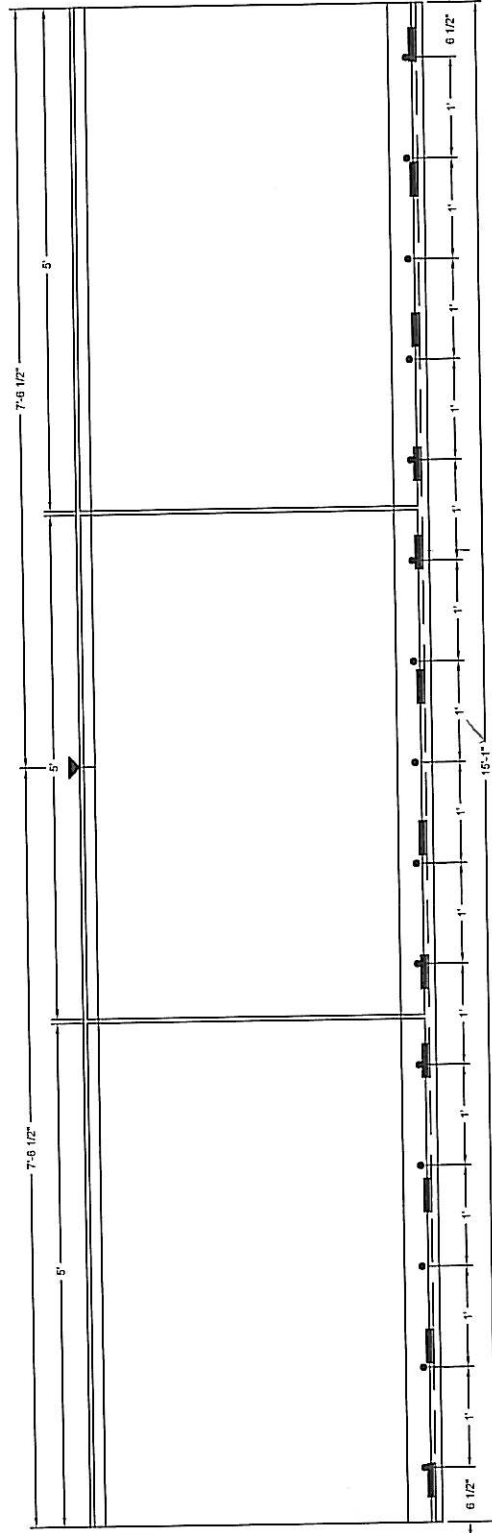
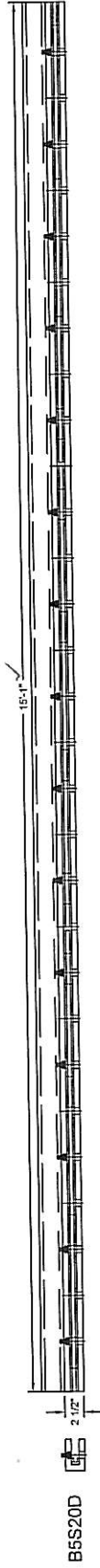
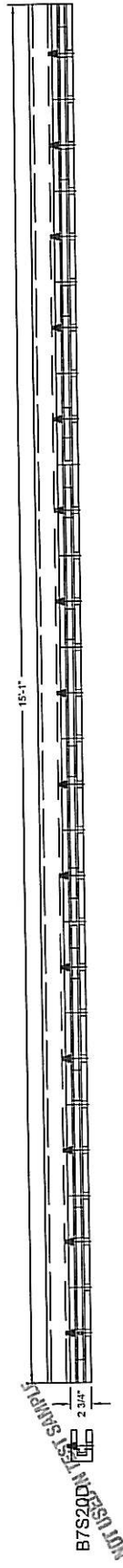
DRAWING VERIFIED BY: JAL/c

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verified by laboratory

DESCRIPTION:  
TEST 3 - DRY GLAZE TAPER-LOC SYSTEM  
CAP SCREWS @ 12" ON CENTER FASCIA MOUNT TO STEEL SUBSTRATE

CAT. NO. TEST 3  
PART NO.  
DATE: 10/15/08  
SCALE: N.T.S.





B6520F  
3" GLZ SOR BASE SHOE  
FASCIA MOUNT  
Sample A-8

B7520F  
3" GLZ SOR BASE SHOE  
FASCIA MOUNT  
Sample A-8

FENESTRATION TESTING LAB, INC

LAB # 5752

DATE: 10/10/08

DRAWING VERIFIED BY: [Signature]

Only items checked in red have been  
verified by laboratory

DESCRIPTION:  
TEST 7 - WET GLAZE SYSTEM

ARCHITECTURAL PRODUCTS  
LOS ANGELES, CA 90058  
PH: 800-421-6144 FX: 800-262-3299

ISO 9000

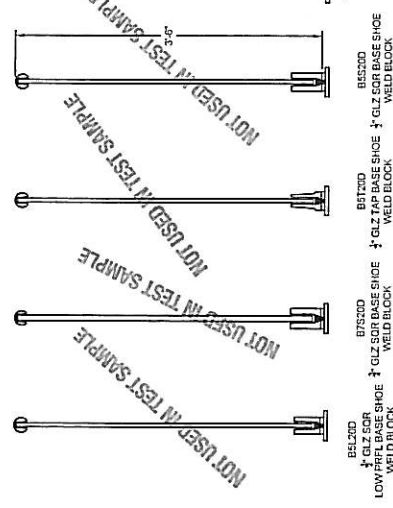
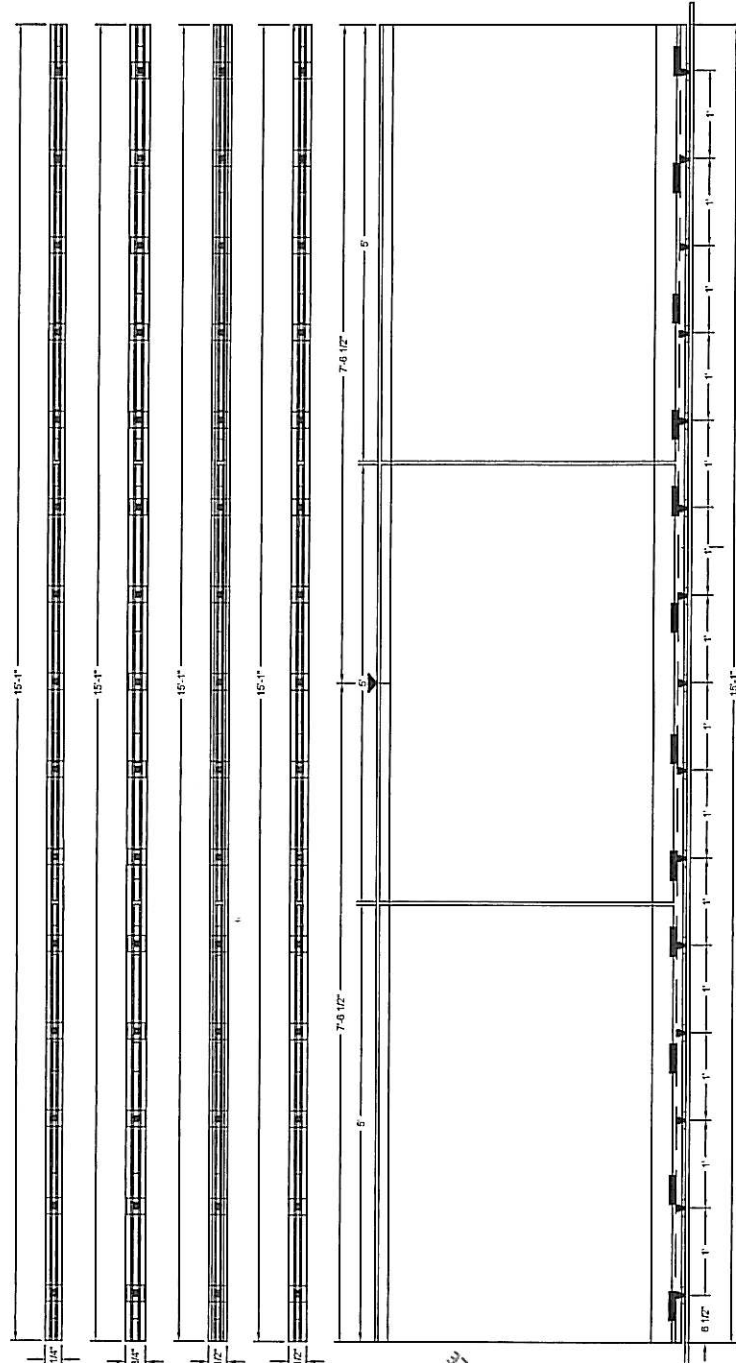
CRL

CAT. NO: TEST 7

DATE: 10/15/08

PART NO:

SCALE: N.T.S.





Quality Accuracy Assurance

## Fenestration Testing Laboratory, Inc.

8148 N.W. 74th Avenue Medley, FL 33166 Phone: 305/885/3328 Fax: 305/885/3329

e-mail: fildade@aol.com www.ftl-inc.com

February 13, 2009

RE: Letter Certifying Independence  
Client: C.R. Laurence Company Inc  
Address: 2100 E38th Street Verona, CA 90058  
Series: Weld Block Dry Glazed Aluminum Glass Glazed Railing System\_  
Laboratory Number: 5752

To whom it may concern:

Fenestration Testing Laboratory certifies the following:

- Fenestration Testing Laboratory, nor it's company representatives, have any financial interest in the above referenced company
- Fenestration Testing Laboratory, nor it's company representatives, have any controlling interest in the above referenced company
- The above referenced company is not affiliated to Fenestration Testing Laboratory, nor it's company representatives

If you have any questions, please do not hesitate to contact us at (305) 885-3328.

Sincerely,

Fenestration Testing Laboratory, Inc.

  
Manny Sanchez  
Chief Executive Officer