Architectural Testing

MIAMI-DADE COUNTY PERFORMANCE TEST REPORT

Report No.: B1576.01-201-18

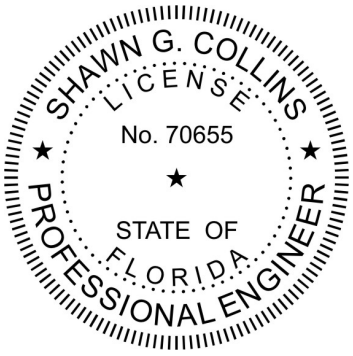
Rendered to:

KML WINDOWS, INC.
Strathroy, Ontario

PRODUCT TYPE: Clad Thick Jamb DG Windows
SERIES/MODEL: Coastal A-Series Direct Glazed Specialty Windows - HPIR

This report contains in its entirety:

Cover Page:	1 page
Report Body:	38 pages
Sketches:	3 pages
Drawings:	24 pages



Digitally Signed by: Shawn G. Collins

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Test Dates:	10/12/11
Through:	10/14/11
Report Date:	01/03/12
Test Record Retention End Date:	10/14/21
Miami-Dade County Notification No.:	ATIMN 11012

1.0 Report Issued To: KML Windows, Inc.
71 Second Street
Strathroy, Ontario, Canada N7G 3H8

2.0 Test Laboratory: Architectural Testing, Inc.
849 Western Avenue North
St. Paul, Minnesota
651-636-3835

3.0 Project Summary:

3.1 Product Type: Clad Thick Jamb DG Windows

3.2 Series/Model: Coastal A-Series Direct Glazed Specialty Windows - HPIR

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. The samples were tested per Florida Building Code, Test Protocols for High Velocity Hurricane Zone, Protocols TAS 201-94, TAS 202-94 and TAS 203-94. Samples #1, #2 and #3 tested met the performance requirements set forth in the protocols for a +70.0 / -80.0 psf *Design Pressure* rating. Samples #4, #5, #6 and #7 tested met the performance requirements set forth in the protocols for a ±70.0 psf *Design Pressure* rating.

3.4 Miami-Dade County Notification No.: ATIMN 11012

3.5 Test Dates: 10/12/11 - 10/14/11

3.6 Test Location: Architectural Testing, Inc. test facility in St. Paul, Minnesota.

3.7 Test Sample Source: The test specimens were provided by the client. Representative samples of the test specimens will be retained by Architectural Testing for a minimum of ten years from the test completion date.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimens reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Mark D. Lewke	Architectural Testing, Inc.
Brian P. Goetzke	Architectural Testing, Inc.
Tony D. Gavin	Architectural Testing, Inc.
Shawn G. Collins, P.E.	Architectural Testing, Inc.
Karl A. Lips-Eakins	Architectural Testing, Inc.

4.0 Test Specifications:

TAS 201-94, *Impact Test Procedures*.

TAS 202-94, *Criteria for Testing Impact and Non Impact Resistant Building Envelope Components Using Uniform Static Air Pressure Loading*.

TAS 203-94, *Criteria for Testing Products Subject to Cyclic Wind Pressure Loading*.

5.0 Test Specimen #1 Description:

5.1 Product Type: Clad Thick Jamb Rectangle DG Window

5.2 Series/Model: Coastal A-Series Direct Glazed Rectangle Specialty Window - HPIR

5.3 Product Sizes:

Overall Area: 50.0 ft²	**Width (inches)**	**Height (inches)**
Overall size	60	120

5.4 Frame Construction:

Frame Member	Material	Description
All	Aluminum / wood	Exterior aluminum cladding was secured onto interior pine wood frame members with 1/4" x 3/8" staples 7" from each end and spaced 8" on center.

	Joinery Type	Detail
Aluminum cladding	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2-1/2" screws per corner
Wood	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2" screws per corner

5.5 Weatherstripping: No weatherstripping was utilized.

5.0 Test Specimen #1 Description: (Continued)

5.6 Glazing:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1" IG	Edgetech silicone foam spacer (1/4" x 1/2")	5.7 mm heat-strengthened / 0.090" SentryGlas Plus by DuPont / 5.7 mm heat-strengthened	6.0 mm Tempered	The glass was set from the interior against a Dow Corning 995 silicone back bedding and back filled. Wood glazing stops with 7/16" by 1/32" double-sided adhesive foam tape were secured with 1-5/8" brad nails 2" from each corner and spaced 6" on center.

Location	Quantity	Daylight Opening	Glass Bite
Frame	1	56" x 116"	1/2"

5.7 Drainage: No drainage was utilized.

5.8 Hardware: No hardware was utilized.

5.9 Reinforcement: No reinforcement was utilized.

6.0 Installation:

The specimen was installed into a wood buck. The rough opening allowed for a 1/2" shim space. The exterior perimeter of the window was sealed with sealant.

Location	Anchor Description	Anchor Location
Frame perimeter	#12 x 2-1/2" screws	Through the frame, 4" from each corner and spaced 6" on center.

7.0 Test Specimen #2 Description:

7.1 Product Type: Clad Thick Jamb DG Springline Window

7.2 Series/Model: Coastal A-Series Direct Glazed Springline Specialty Window - HPIR

7.3 Product Sizes:

Overall Area: 47.4 ft^2	**Width (inches)**	**Height (inches)**
Overall size	60	120

7.4 Frame Construction:

Frame Member	Material	Description
Jambs and sill	Aluminum / wood	Exterior aluminum cladding was secured onto interior pine wood frame members with 1/4" x 3/8" staples, 7" from each end and spaced 8" on center.
Head jamb	Aluminum / LVL	Exterior aluminum cladding was secured onto interior LVL frame members with 1/4" x 3/8" staples 7" from each end and spaced 8" on center.

	Joinery Type	Detail
Aluminum cladding	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2" screws per corner.
Upper wood	Butt	Corners were butted, sealed with wood glue and secured with three #8 x 2" screws per corner. The joint was additionally secured with a 24 gauge, 12" gusset plate secured with eight #8 x 3/4" screws.
Lower wood	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2" screws per corner.

7.5 Weatherstripping: No weatherstripping was utilized.

7.0 Test Specimen #2 Description: (Continued)

7.6 Glazing:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1" IG	Edgetech silicone foam spacer (1/4" x 1/2")	5.7 mm heat-strengthened / 0.090" SentryGlas Plus by DuPont / 5.7 mm heat-strengthened	6.0 mm Tempered	The glass was set from the interior against a Dow Corning 995 silicone back bedding and back filled. Wood glazing stops with 7/16" by 1/32" double-sided adhesive foam tape were secured with 1-5/8" brad nails 2" from each corner and spaced 6" on center.

Location	Quantity	Daylight Opening	Glass Bite
Frame	1	56" x 116"	1/2"

7.7 Drainage: No drainage was utilized.

7.8 Hardware: No hardware was utilized.

7.9 Reinforcement: No reinforcement was utilized.

8.0 Installation:

The specimen was installed into a wood buck. The rough opening allowed for a 1/2" shim space. The exterior perimeter of the window was sealed with sealant.

Location	Anchor Description	Anchor Location
Frame perimeter	Installation clips	The clips were secured to the frame with three #8 x 3/4" screws. The clips were secured to the buck with one #8 x 1-5/8" screw. The clips were 4" from each corner and spaced 6" on center.

9.0 Test Specimen #3 Description:

9.1 Product Type: Clad Thick Jamb DG Archtop Window

9.2 Series/Model: Coastal A-Series Direct Glazed Archtop Specialty Window - HPIR

9.3 Product Sizes:

Overall Area: 49.3 ft²	**Width (inches)**	**Height (inches)**
Overall size	60	120

9.4 Frame Construction:

Frame Member	**Material**	**Description**
Jambs and sill	Aluminum / wood	Exterior aluminum cladding was secured onto interior pine wood frame members with 1/4" x 3/8" staples 7" from each end and spaced 8" on center.
Head jamb	Aluminum / LVL	Exterior aluminum cladding was secured onto interior LVL frame members with 1/4" x 3/8" staples, 7" from each end and spaced 8" on center.

	Joinery Type	**Detail**
Aluminum cladding	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2-1/2" screws per corner
Wood	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2" screws per corner

9.5 Weatherstripping: No weatherstripping was utilized.

9.0 Test Specimen #3 Description: (Continued)

9.6 Glazing:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1" IG	Edgetech silicone foam spacer (1/4" x 1/2")	5.7 mm heat-strengthened / 0.090" SentryGlas Plus by DuPont / 5.7 mm heat-strengthened	6.0 mm Tempered	The glass was set from the interior against a Dow Corning 995 silicone back bedding and back filled. Wood glazing stops with 7/16" by 1/32" double-sided adhesive foam tape were secured with 1-5/8" brad nails 2" from each corner and spaced 6" on center.

Location	Quantity	Daylight Opening	Glass Bite
Frame	1	56" x 116"	1/2"

9.7 Drainage: No drainage was utilized.

9.8 Hardware: No hardware was utilized.

9.9 Reinforcement: No reinforcement was utilized.

10.0 Installation:

The specimen was installed into a wood buck. The rough opening allowed for a 1/2" shim space. The exterior perimeter of the window was sealed with sealant.

Location	Anchor Description	Anchor Location
Frame perimeter	#12 x 2-1/2" screws	Through the frame 4" from each corner and spaced 6" on center.

11.0 Test Specimen #4 Description:

11.1 Product Type: Clad Thick Jamb DG Rectangle Window

11.2 Series/Model: Coastal A-Series Direct Glazed Rectangle Specialty Window - HPIR

11.3 Product Sizes:

Overall Area: 36.0 ft²	**Width (inches)**	**Height (inches)**
Overall size	54	96

11.4 Frame Construction:

Frame Member	**Material**	**Description**
All	Aluminum / wood	Exterior aluminum cladding was secured onto interior pine wood frame members with 1/4" x 3/8" staples, 7" from each end and spaced 8" on center.

	Joinery Type	**Detail**
Aluminum cladding	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2-1/2" screws per corner.
Wood	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2" screws per corner.

11.5 Weatherstripping: No weatherstripping was utilized.

11.0 Test Specimen #4 Description: (Continued)

11.6 Glazing:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1" IG	Edgetech silicone foam spacer (1/4" x 1/2")	5.7 mm annealed / 0.090" SentryGlas Plus by DuPont / 5.7 mm annealed	6.0 mm Tempered	The glass was set from the interior against a Dow Corning 995 silicone back bedding and back filled. Wood glazing stops with 7/16" by 1/32" double-sided adhesive foam tape were secured with 1-5/8" brad nails 2" from each corner and spaced 6" on center.

Location	Quantity	Daylight Opening	Glass Bite
Frame	1	50" x 92"	1/2"

11.7 Drainage: No drainage was utilized.

11.8 Hardware: No hardware was utilized.

11.9 Reinforcement: No reinforcement was utilized.

12.0 Installation:

The specimen was installed into a wood buck. The rough opening allowed for a 1/2" shim space. The exterior perimeter of the window was sealed with sealant.

Location	Anchor Description	Anchor Location
Frame perimeter	#12 x 2-1/2" screws	Through the frame, 4" from each corner and spaced 10" on center.

13.0 Test Specimen #5 Description:

13.1 Product Type: Clad Thick Jamb DG Springline Window

13.2 Series/Model: Coastal A-Series Direct Glazed Springline Specialty Window - HPIR

13.3 Product Sizes:

Overall Area: 36.0 ft²	**Width (inches)**	**Height (inches)**
Overall size	54	96

13.4 Frame Construction:

Frame Member	**Material**	**Description**
Jambs and sill	Aluminum / wood	Exterior aluminum cladding was secured onto interior pine wood frame members with 1/4" x 3/8" staples, 7" from each end and spaced 8" on center.
Head jamb	Aluminum / LVL	Exterior aluminum cladding was secured onto interior LVL frame members with 1/4" x 3/8" staples, 7" from each end and spaced 8" on center.

	Joinery Type	**Detail**
Aluminum cladding	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2-1/2" screws per corner.
Upper wood	Butt	Corners were butted, sealed with wood glue and secured with three #8 x 2" screws per corner. The joint was additionally secured with a 24 gauge, 12" gusset plate secured with eight #8 x 3/4" screws.
Lower wood	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2" screws per corner.

13.5 Weatherstripping: No weatherstripping was utilized.

13.0 Test Specimen #5 Description: (Continued)

13.6 Glazing:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1" IG	Edgetech silicone foam spacer (1/4" x 1/2")	5.7 mm annealed / 0.090" SentryGlas Plus by DuPont / 5.7 mm annealed	6.0 mm Tempered	The glass was set from the interior against a Dow Corning 995 silicone back bedding and back filled. Wood glazing stops with 7/16" by 1/32" double-sided adhesive foam tape were secured with 1-5/8" brad nails 2" from each corner and spaced 6" on center.

Location	Quantity	Daylight Opening	Glass Bite
Frame	1	50" x 92"	1/2"

13.7 Drainage: No drainage was utilized.

13.8 Hardware: No hardware was utilized.

13.9 Reinforcement: No reinforcement was utilized.

14.0 Installation:

The specimen was installed into a wood buck. The rough opening allowed for a 1/2" shim space. The exterior perimeter of the window was sealed with sealant.

Location	Anchor Description	Anchor Location
Frame perimeter	Installation clips	The clips were secured to the frame with three #8 x 3/4" screws. The clips were secured to the buck with one #8 x 1-5/8" screw. The clips were 4" from each corner and spaced 6" on center.

15.0 Test Specimen #6 Description:

15.1 Product Type: Clad Thick Jamb DG Rectangle Window

15.2 Series/Model: Coastal A-Series Direct Glazed Rectangle Specialty Window - HPIR

15.3 Product Sizes:

Overall Area: 14.6 ft^2	**Width (inches)**	**Height (inches)**
Overall size	36	60

15.4 Frame Construction:

Frame Member	**Material**	**Description**
All	Aluminum / wood	Exterior aluminum cladding was secured onto interior pine wood frame members with 1/4" x 3/8" staples, 7" from each end and spaced 8" on center.

	Joinery Type	**Detail**
Aluminum cladding	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2-1/2" screws per corner.
Wood	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2" screws per corner

15.5 Weatherstripping: No weatherstripping was utilized.

15.0 Test Specimen #6 Description: (Continued)

15.6 Glazing:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1" IG	Edgetech silicone foam spacer (1/4" x 1/2")	3.9 mm annealed / 0.090 PVB / 3.9 mm annealed	3.0 mm Tempered	The glass was set from the interior against a Dow Corning 995 silicone back bedding and back filled. Wood glazing stops with 7/16" by 1/32" double-sided adhesive foam tape were secured with 1-5/8" brad nails 2" from each corner and spaced 6" on center.

Location	Quantity	Daylight Opening	Glass Bite
Frame	1	32" x 56"	1/2"

15.7 Drainage: No drainage was utilized.

15.8 Hardware: No hardware was utilized.

15.9 Reinforcement: No reinforcement was utilized.

16.0 Installation:

The specimen was installed into a wood buck. The rough opening allowed for a 1/2" shim space. The exterior perimeter of the window was sealed with sealant.

Location	Anchor Description	Anchor Location
Frame perimeter	#12 x 2-1/2" screws	Through the frame, 4" from each corner and spaced 12" on center.

17.0 Test Specimen #7 Description:

17.1 Product Type: Clad Thick Jamb DG Archtop Window

17.2 Series/Model: Coastal A-Series Direct Glazed Archtop Specialty Window - HPIR

17.3 Product Sizes:

Overall Area: 14.6 ft^2	**Width (inches)**	**Height (inches)**
Overall size	36	60

17.4 Frame Construction:

Frame Member	Material	Description
Jambs and sill	Aluminum / wood	Exterior aluminum cladding was secured onto interior pine wood frame members with 1/4" x 3/8" staples, 7" from each end and spaced 8" on center.
Head jamb	Aluminum / LVL	Exterior aluminum cladding was secured onto interior LVL frame members with 1/4" x 3/8" staples, 7" from each end and spaced 8" on center.

	Joinery Type	Detail
Aluminum cladding	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2-1/2" screws per corner.
Wood	Miter	Corners were miter-cut, sealed with a gasket and secured with two #8 x 2" screws per corner.

17.5 Weatherstripping: No weatherstripping was utilized.

17.0 Test Specimen #7 Description: (Continued)

17.6 Glazing:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1" IG	Edgetech silicone foam spacer (1/4" x 1/2")	3.9 mm annealed / 0.090" PVB / 3.9 mm annealed	3.0 mm tempered	The glass was set from the interior against a Dow Corning 995 silicone back bedding and back filled. Wood glazing stops with 7/16" by 1/32" double-sided adhesive foam tape were secured with 1-5/8" brad nails 2" from each corner and spaced 6" on center.

Location	Quantity	Daylight Opening	Glass Bite
Frame	1	32" x 56"	1/2"

17.7 Drainage: No drainage was utilized.

17.8 Hardware: No hardware was utilized.

17.9 Reinforcement: No reinforcement was utilized.

18.0 Installation:

The specimen was installed into a wood buck. The rough opening allowed for a 1/2" shim space. The exterior perimeter of the window was sealed with sealant.

Location	Anchor Description	Anchor Location
Frame perimeter	Installation clips	The clips were secured to the frame with three #8 x 3/4" screws. The clips were secured to the buck with one #8 x 1-5/8" screw. The clips were 4" from each corner and spaced 12" on center.

19.0 Test Specimen #1 Results: The temperature during testing was 74°F. The results are tabulated as follows:

Protocol TAS 202-94, *Static Air Pressure Tests*

Test Unit #1
Design Pressure: +70.0 / -80.0 psf

Title of Test	Results
Air Infiltration at 1.57 psf (25 mph)	<0.01 cfm/ft²
Air Infiltration at 6.24 psf (50 mph)	<0.01 cfm/ft²

	Indicator Reading (inches)		
Structural Loads 50% of Test Pressure (+52.50 psf)	#1	#2	#3
Maximum Deflection	0.06	0.06	0.06
Permanent Set	0.03	0.03	0.03
Design Pressure (+70.00 psf)			
Maximum Deflection	0.07	0.07	0.07
Permanent Set	0.03	0.03	0.03
50% of Test Pressure (-60.00 psf)			
Maximum Deflection	0.06	0.06	0.06
Permanent Set	0.01	0.01	0.01
Design Pressure (-80.00 psf)			
Maximum Deflection	0.10	0.10	0.11
Permanent Set	0.02	0.02	0.02
Water Infiltration 15% Positive Design Pressure (+10.50 psf)			
Test Pressure (+105.00 psf)			
Maximum Deflection	0.09	0.09	0.10
Permanent Set	0.02	0.02	0.02
Test Pressure (-120.00 psf)			
Maximum Deflection	0.21	0.21	0.22
Permanent Set	0.05	0.05	0.05
Forced Entry - ASTM F 588-07	Pass		

***Note**: See Architectural Testing Sketch #1 for indicator locations.*

19.0 Test Specimen #1 Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs
Missile Length: 96-1/2"
Muzzle Distance from Test Specimen: 16' 0"

Impact #1: Missile Velocity: 49.8 fps	
Impact Area:	Center of glazing
Observations:	Missile hit target area; No rips, tears or penetrations
Results:	Pass

Impact #2: Missile Velocity: 49.9 fps	
Impact Area:	Lower right glazing corner
Observations:	Missile hit target area; No rips, tears or penetrations
Results:	Pass

***Note**: See Architectural Testing Sketch #1 for impact locations.*

19.0 Test Specimen #1 Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #1
Design Pressure: +70.0 / -80.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
14.0 to 35.0	3500	2.15	0.14	0.14	0.16
0 to 42.0	300	2.06	0.15	0.15	0.17
35.0 to 56.0	600	2.20	0.19	0.20	0.22
21.0 to 70.0	100	2.48	0.22	0.22	0.25
			Permanent Set (inches)		
			0.10	0.11	0.10

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
24.0 to 80.0	50	2.89	0.08	0.07	0.07
40.0 to 64.0	1050	2.20	0.08	0.06	0.06
0 to 48.0	50	2.84	0.06	0.05	0.05
16.0 to 40.0	3350	2.18	0.06	0.05	0.05
			Permanent Set (inches)		
			0.04	0.03	0.02

***Observations**: No additional damage or deglazing was observed.*

Result: Pass

***Note**: See Architectural Testing Sketch #1 for indicator locations. Test Specimens #1 and #2 were cycled in a common chamber.*

20.0 Test Specimen #2 Results: (Continued)

Protocol TAS 202-94, *Static Air Pressure Tests*

Test Unit #2
Design Pressure: +70.0 / -80.0 psf

Title of Test	Results
Air Infiltration at 1.57 psf (25 mph)	<0.01 cfm/ft²
Air Infiltration at 6.24 psf (50 mph)	<0.01 cfm/ft²

	Indicator Reading (inches)		
Structural Loads 50% of Test Pressure (+52.50 psf)	#1	#2	#3
Maximum Deflection	0.08	0.08	0.07
Permanent Set	0.01	0.02	0.01
Design Pressure (+70.00 psf)			
Maximum Deflection	0.08	0.08	0.07
Permanent Set	0.01	<0.01	<0.01
50% of Test Pressure (-60.00 psf)			
Maximum Deflection	0.11	0.11	0.10
Permanent Set	0.02	0.03	0.02
Design Pressure (-80.00 psf)			
Maximum Deflection	0.16	0.17	0.15
Permanent Set	0.04	0.05	0.04
Water Infiltration 15% Positive Design Pressure (+10.50 psf)			
Test Pressure (+105.00 psf)			
Maximum Deflection	0.11	0.11	0.12
Permanent Set	0.02	0.02	0.02
Test Pressure (-120.00 psf)			
Maximum Deflection	0.28	0.27	0.24
Permanent Set	0.06	0.06	0.04
Forced Entry - ASTM F 588-07	Pass		

***Note**: See Architectural Testing Sketch #1 for indicator locations.*

20.0 Test Specimen #2 Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs
Missile Length: 96-1/2"
Muzzle Distance from Test Specimen: 16' 0"

Impact #1: Missile Velocity: 50.0 fps	
Impact Area:	Center of glazing
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

Impact #2: Missile Velocity: 49.3 fps	
Impact Area:	Upper right glazing corner
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

***Note**: See Architectural Testing Sketch #1 for impact locations.*

20.0 Test Specimen #2 Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #2
Design Pressure: +70.0 / -80.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
14.0 to 35.0	3500	2.15	0.08	0.09	0.07
0 to 42.0	300	2.06	0.09	0.10	0.08
35.0 to 56.0	600	2.20	0.12	0.13	0.11
21.0 to 70.0	100	2.48	0.15	0.15	0.13
			Permanent Set (inches)		
			0.04	0.05	0.04

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
24.0 to 80.0	50	2.89	0.17	0.17	0.18
40.0 to 64.0	1050	2.20	0.16	0.15	0.16
0 to 48.0	50	2.84	0.12	0.12	0.11
16.0 to 40.0	3350	2.18	0.10	0.10	0.08
			Permanent Set (inches)		
			0.02	0.02	0.01

***Observations**: No additional damage or deglazing was observed.*

Result: Pass

***Note**: See Architectural Testing Sketch #1 for indicator locations. Test Specimens #1 and #2 were cycled in a common chamber.*

21.0 Test Specimen #3 Results: (Continued)

Protocol TAS 202-94, *Static Air Pressure Tests*

Test Unit #3
Design Pressure: +70.0 / -80.0 psf

Title of Test	Results
Air Infiltration at 1.57 psf (25 mph)	<0.01 cfm/ft²
Air Infiltration at 6.24 psf (50 mph)	<0.01 cfm/ft²

	Indicator Reading (inches)		
Structural Loads 50% of Test Pressure (+52.50 psf)	#1	#2	#3
Maximum Deflection	0.07	0.07	0.06
Permanent Set	0.02	0.02	0.01
Design Pressure (+70.00 psf)			
Maximum Deflection	0.08	0.08	0.07
Permanent Set	0.02	0.02	0.02
50% of Test Pressure (-60.00 psf)			
Maximum Deflection	0.09	0.09	0.08
Permanent Set	0.01	0.01	0.02
Design Pressure (-80.00 psf)			
Maximum Deflection	0.12	0.12	0.11
Permanent Set	0.03	0.03	0.03
Water Infiltration 15% Positive Design Pressure (+10.50 psf)			
Test Pressure (+105.00 psf)			
Maximum Deflection	0.09	0.10	0.10
Permanent Set	0.03	0.03	0.03
Test Pressure (-120.00 psf)			
Maximum Deflection	0.20	0.19	0.19
Permanent Set	0.06	0.06	0.06
Forced Entry - ASTM F 588-07	Pass		

***Note**: See Architectural Testing Sketch #1 for indicator locations.*

21.0 Test Specimen #3 Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs
Missile Length: 96-1/2"
Muzzle Distance from Test Specimen: 16' 0"

Impact #1: Missile Velocity: 49.1 fps	
Impact Area:	Center of glazing
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

Impact #2: Missile Velocity: 50.1 fps	
Impact Area:	Upper right glazing corner
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

***Note**: See Architectural Testing Sketch #1 for impact locations.*

21.0 Test Specimen #3 Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #3
Design Pressure: +70.0 / -80.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
14.0 to 35.0	3500	2.03	0.05	0.06	0.06
0 to 42.0	300	2.44	0.06	0.07	0.07
35.0 to 56.0	600	1.80	0.08	0.09	0.10
21.0 to 70.0	100	2.26	0.09	0.11	0.10
			Permanent Set (inches)		
			0.02	0.03	0.03

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
24.0 to 80.0	50	2.12	0.08	0.07	0.06
40.0 to 64.0	1050	1.43	0.10	0.08	0.08
0 to 48.0	50	2.70	0.05	0.04	0.04
16.0 to 40.0	3350	1.99	0.05	0.05	0.05
			Permanent Set (inches)		
			0.04	0.03	0.03

***Observations**: No additional damage or deglazing was observed.*

Result: Pass

***Note**: See Architectural Testing Sketch #1 for indicator locations.*

22.0 Test Specimen #4 Results: (Continued)

Protocol TAS 202-94, *Static Air Pressure Tests*

Test Unit #4
Design Pressure: ±70.00 psf

Title of Test	Results
Air Infiltration at 1.57 psf (25 mph)	<0.01 cfm/ft^2
Air Infiltration at 6.24 psf (50 mph)	<0.01 cfm/ft^2

	Indicator Reading (inches)		
Structural Loads 50% of Test Pressure (+52.50 psf)	#1	#2	#3
Maximum Deflection	0.05	0.05	0.05
Permanent Set	0.01	0.01	0.01
Design Pressure (+70.00 psf)			
Maximum Deflection	0.06	0.06	0.06
Permanent Set	0.01	0.01	0.01
50% of Test Pressure (-52.50 psf)			
Maximum Deflection	0.08	0.09	0.08
Permanent Set	0.03	0.03	0.03
Design Pressure (-70.00 psf)			
Maximum Deflection	0.13	0.13	0.13
Permanent Set	0.04	0.04	0.04
Water Infiltration 15% Positive Design Pressure (+10.50 psf)			
Test Pressure (+105.00 psf)			
Maximum Deflection	0.11	0.11	0.11
Permanent Set	0.03	0.03	0.03
Test Pressure (-105.00 psf)			
Maximum Deflection	0.19	0.19	0.21
Permanent Set	0.04	0.04	0.04
Forced Entry - ASTM F 588-07	Pass		

***Note**: See Architectural Testing Sketch #2 for indicator locations.*

22.0 Test Specimen #4 Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs
Missile Length: 96-1/2"
Muzzle Distance from Test Specimen: 16' 0"

Impact #1: Missile Velocity: 49.1 fps	
Impact Area:	Center of glazing
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

Impact #2: Missile Velocity: 49.9 fps	
Impact Area:	Lower right glazing corner
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

***Note**: See Architectural Testing Sketch #2 for impact locations.*

22.0 Test Specimen #4 Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #4
Design Pressure: ±70.00 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
14.0 to 35.0	3500	1.84	0.05	0.07	0.05
0 to 42.0	300	2.80	0.06	0.07	0.06
35.0 to 56.0	600	1.77	0.09	0.09	0.09
21.0 to 70.0	100	2.76	0.10	0.10	0.11
			Permanent Set (inches)		
			0.03	0.03	0.02

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
21.0 to 70.0	50	2.58	0.11	0.10	0.10
35.0 to 56.0	1050	1.71	0.10	0.10	0.10
0 to 42.0	50	2.44	0.09	0.08	0.08
14.0 to 35.0	3350	1.76	0.08	0.07	0.07
			Permanent Set (inches)		
			0.05	0.04	0.04

***Observations**: No additional damage or deglazing was observed.*

Result: Pass

***Note**: See Architectural Testing Sketch #2 for indicator locations. Test Specimens #4 and #5 were cycled in a common chamber.*

23.0 Test Specimen #5 Results: (Continued)

Protocol TAS 202-94, *Static Air Pressure Tests*

Test Unit #5
Design Pressure: ±70.00 psf

Title of Test	Results
Air Infiltration at 1.57 psf (25 mph)	<0.01 cfm/ft²
Air Infiltration at 6.24 psf (50 mph)	<0.01 cfm/ft²

	Indicator Reading (inches)		
Structural Loads 50% of Test Pressure (+52.50 psf)	#1	#2	#3
Maximum Deflection	0.03	0.03	0.03
Permanent Set	0.01	0.01	0.01
Design Pressure (+70.00 psf)			
Maximum Deflection	0.04	0.04	0.04
Permanent Set	0.01	0.01	0.01
50% of Test Pressure (-52.50 psf)			
Maximum Deflection	0.05	0.05	0.05
Permanent Set	0.02	0.02	0.02
Design Pressure (-70.00 psf)			
Maximum Deflection	0.07	0.07	0.07
Permanent Set	0.02	0.02	0.02
Water Infiltration 15% Positive Design Pressure (+10.50 psf)			
Test Pressure (+105.00 psf)			
Maximum Deflection	0.07	0.07	0.07
Permanent Set	0.01	0.01	0.01
Test Pressure (-105.00 psf)			
Maximum Deflection	0.11	0.11	0.11
Permanent Set	0.03	0.03	0.03
Forced Entry - ASTM F 588-07	Pass		

***Note**: See Architectural Testing Sketch #2 for indicator locations.*

23.0 Test Specimen #5 Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs
Missile Length: 96-1/2"
Muzzle Distance from Test Specimen: 16' 0"

Impact #1: Missile Velocity: 49.2 fps	
Impact Area:	Center of glazing
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

Impact #2: Missile Velocity: 49.4 fps	
Impact Area:	Upper right glazing corner
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

***Note**: See Architectural Testing Sketch #2 for impact locations.*

23.0 Test Specimen #5 Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #5
Design Pressure: ±70.00 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
14.0 to 35.0	3500	1.84	0.03	0.03	0.03
0 to 42.0	300	2.80	0.03	0.03	0.03
35.0 to 56.0	600	1.77	0.04	0.04	0.04
21.0 to 70.0	100	2.76	0.04	0.05	0.04
			Permanent Set (inches)0.04		
			0.01	0.01	0.01

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
21.0 to 70.0	50	2.58	0.04	0.04	0.05
35.0 to 56.0	1050	1.71	0.04	0.04	0.04
0 to 42.0	50	2.44	0.03	0.03	0.04
14.0 to 35.0	3350	1.76	0.02	0.02	0.03
			Permanent Set (inches)		
			0.02	0.02	0.02

***Observations**: No additional damage or deglazing was observed.*

Result: Pass

***Note**: See Architectural Testing Sketch #2 for indicator locations. Test Specimens #4 and #5 were cycled in a common chamber.*

24.0 Test Specimen #6 Results: (Continued)

Protocol TAS 202-94, *Static Air Pressure Tests*

Test Unit #6
Design Pressure: ±70.00 psf

Title of Test	Results
Air Infiltration at 1.57 psf (25 mph)	<0.01 cfm/ft²
Air Infiltration at 6.24 psf (50 mph)	<0.01 cfm/ft²

	Indicator Reading (inches)		
Structural Loads 50% of Test Pressure (+52.50 psf)	#1	#2	#3
Maximum Deflection	0.02	0.03	0.03
Permanent Set	0.01	0.01	0.01
Design Pressure (+70.00 psf)			
Maximum Deflection	0.03	0.04	0.03
Permanent Set	0.02	0.01	0.01
50% of Test Pressure (-52.50 psf)			
Maximum Deflection	0.02	0.03	0.03
Permanent Set	0.01	0.01	0.02
Design Pressure (-70.00 psf)			
Maximum Deflection	0.03	0.04	0.04
Permanent Set	0.01	0.01	0.02
Water Infiltration 15% Positive Design Pressure (+10.50 psf)			
Test Pressure (+105.00 psf)			
Maximum Deflection	0.04	0.04	0.04
Permanent Set	0.02	0.01	0.01
Test Pressure (-105.00 psf)			
Maximum Deflection	0.05	0.07	0.06
Permanent Set	0.02	0.02	0.02
Forced Entry - ASTM F 588-07	Pass		

***Note**: See Architectural Testing Sketch #3 for indicator locations.*

24.0 Test Specimen #6 Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs
Missile Length: 96-1/2"
Muzzle Distance from Test Specimen: 16' 0"

Impact #1: Missile Velocity: 50.0 fps	
Impact Area:	Center of glazing
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

Impact #2: Missile Velocity: 49.8 fps	
Impact Area:	Lower right glazing corner
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

***Note**: See Architectural Testing Sketch #3 for impact locations.*

24.0 Test Specimen #6 Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #6
Design Pressure: ±70.00 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
14.0 to 35.0	3500	1.31	0.01	0.02	0.03
0 to 42.0	300	1.52	0.03	0.04	0.04
35.0 to 56.0	600	1.80	0.03	0.05	0.06
21.0 to 70.0	100	1.68	0.04	0.06	0.07
			Permanent Set (inches)		
			0.01	0.02	0.02

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
21.0 to 70.0	50	1.71	0.03	0.03	0.03
35.0 to 56.0	1050	1.35	0.02	0.02	0.02
0 to 42.0	50	1.52	0.02	0.02	0.02
14.0 to 35.0	3350	1.34	0.02	0.02	0.02
			Permanent Set (inches)		
			0.02	0.02	0.02

***Observations**: No additional damage or deglazing was observed.*

Result: Pass

***Note**: See Architectural Testing Sketch #3 for indicator locations. Test Specimens #6 and #7 were cycled in a common chamber.*

25.0 Test Specimen #7 Results: (Continued)

Protocol TAS 202-94, *Static Air Pressure Tests*

Test Unit #7
Design Pressure: ±70.00 psf

Title of Test	Results
Air Infiltration at 1.57 psf (25 mph)	<0.01 cfm/ft²
Air Infiltration at 6.24 psf (50 mph)	<0.01 cfm/ft²

	Indicator Reading (inches)		
Structural Loads 50% of Test Pressure (+52.50 psf)	#1	#2	#3
Maximum Deflection	0.04	0.04	0.04
Permanent Set	0.01	0.01	0.01
Design Pressure (+70.00 psf)			
Maximum Deflection	0.05	0.05	0.05
Permanent Set	0.02	0.01	0.01
50% of Test Pressure (-52.50 psf)			
Maximum Deflection	0.02	0.03	0.04
Permanent Set	0.01	0.01	0.02
Design Pressure (-70.00 psf)			
Maximum Deflection	0.03	0.05	0.05
Permanent Set	0.01	0.01	0.02
Water Infiltration 15% Positive Design Pressure (+10.50 psf)			
Test Pressure (+105.00 psf)			
Maximum Deflection	0.07	0.07	0.07
Permanent Set	0.02	0.01	0.01
Test Pressure (-105.00 psf)			
Maximum Deflection	0.05	0.06	0.06
Permanent Set	0.02	0.02	0.01
Forced Entry - ASTM F 588-07	Pass		

***Note**: See Architectural Testing Sketch #3 for indicator locations.*

25.0 Test Specimen #7 Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs
Missile Length: 96-1/2"
Muzzle Distance from Test Specimen: 16' 0"

Impact #1: Missile Velocity: 49.8 fps	
Impact Area:	Center of glazing
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

Impact #2: Missile Velocity: 49.6 fps	
Impact Area:	Upper right glazing corner
Observations:	Missile hit target area; no rips, tears or penetrations
Results:	Pass

***Note**: See Architectural Testing Sketch #3 for impact locations.*

25.0 Test Specimen #7 Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #7
Design Pressure: ±70.00 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
14.0 to 35.0	3500	1.31	0.01	0.01	0.01
0 to 42.0	300	1.52	0.04	0.04	0.03
35.0 to 56.0	600	1.80	0.04	0.04	0.04
21.0 to 70.0	100	1.68	0.05	0.05	0.04
			Permanent Set (inches)		
			0.01	0.01	0.01

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (seconds)	Maximum Deflection at Indicator (inches)		
			#1	#2	#3
21.0 to 70.0	50	1.71	0.06	0.06	0.07
35.0 to 56.0	1050	1.35	0.06	0.07	0.07
0 to 42.0	50	1.52	0.05	0.06	0.06
14.0 to 35.0	3350	1.34	0.04	0.05	0.05
			Permanent Set (inches)		
			0.03	0.03	0.03

***Observations**: No additional damage or deglazing was observed.*

Result: Pass

***Note**: See Architectural Testing Sketch #3 for indicator locations. Test Specimens #6 and #7 were cycled in a common chamber.*

26.0 Test Equipment:

Cannon: Constructed from steel piping utilizing compressed air to propel the missile

Missile: 2x4 Southern Pine

Timing Device: Electronic Beam Type

Cycling Mechanism: Computer controlled centrifugal blower with electronic pressure measuring device

Deflection Measuring Device: Linear transducers and dial indicators

27.0 Laboratory Compliance Statements: The following are provided as required by the protocols for the testing reported herein.

Upon completion of testing, specimens tested for TAS 201-94 met the requirements of Section 1626 of the Florida Building Code, Building (2007).

Upon completion of testing, specimens tested for TAS 202-94 met the requirements of Section 1620 of the Florida Building Code, Building (2007).

Upon completion of testing, specimens tested for TAS 203-94 met the requirements of Section 1626 of the Florida Building Code, Building (2007).

Tape and film were not used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

The service life of this report will expire on the stated Test Record Retention End Date, at which time such materials as drawings, data sheets, samples of test specimens, copies of this report, and any other pertinent project documentation, shall be discarded without notice.

If test specimen contains glazing, no conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimens can be made. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimens tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.

Digitally Signed for: Eric J. Schoenthaler by Jan Brustad

Eric J. Schoenthaler
Project Manager

Digitally Signed by: Shawn G. Collins

Shawn G. Collins, P.E.
Laboratory Support Engineer

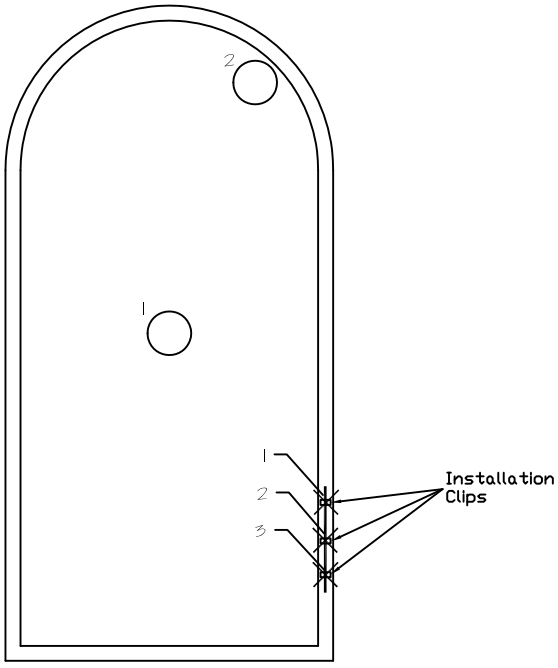
EJS:es/cmd

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Sketches (3)
Appendix-B: Drawings (24)

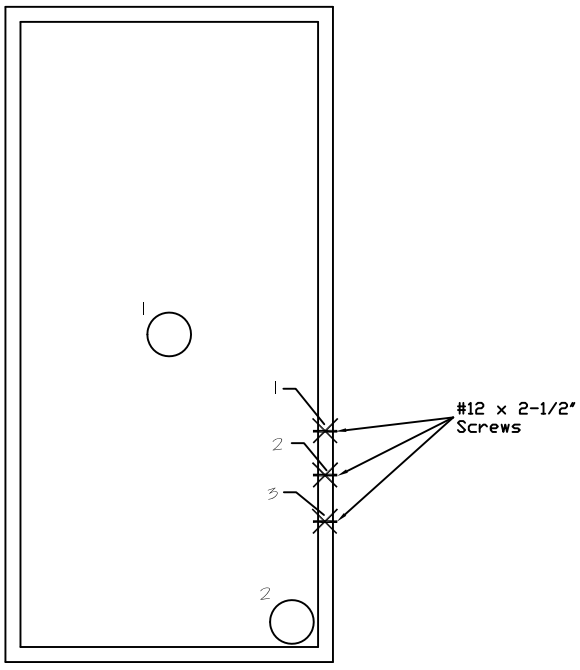
Appendix A

Sketches

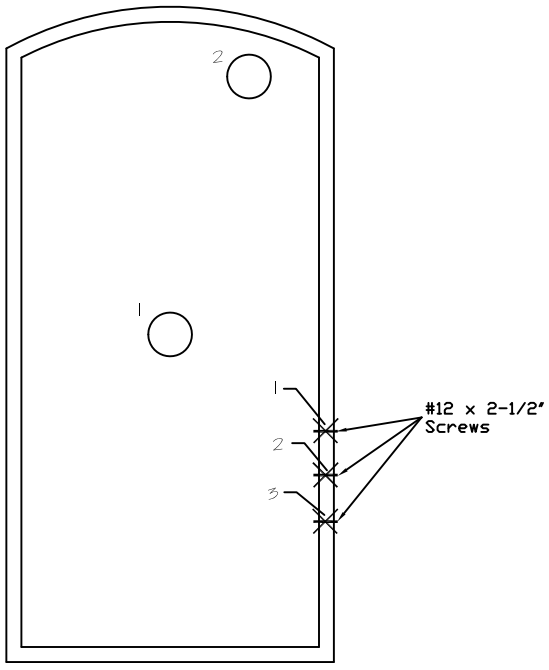
SKETCH #1



Test Specimen #2



Test Specimen #1



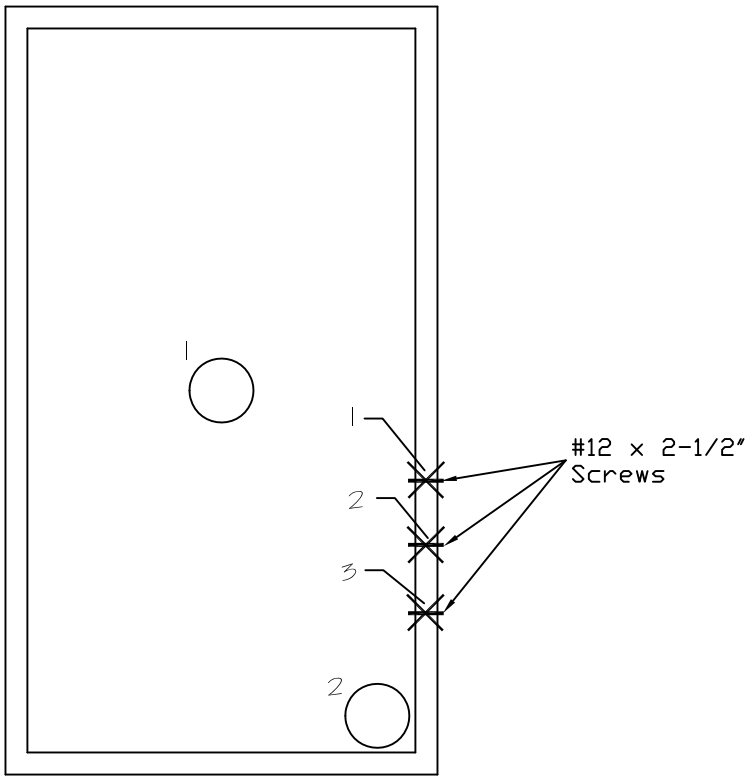
Test Specimen #3

X = INDICATOR LOCATION

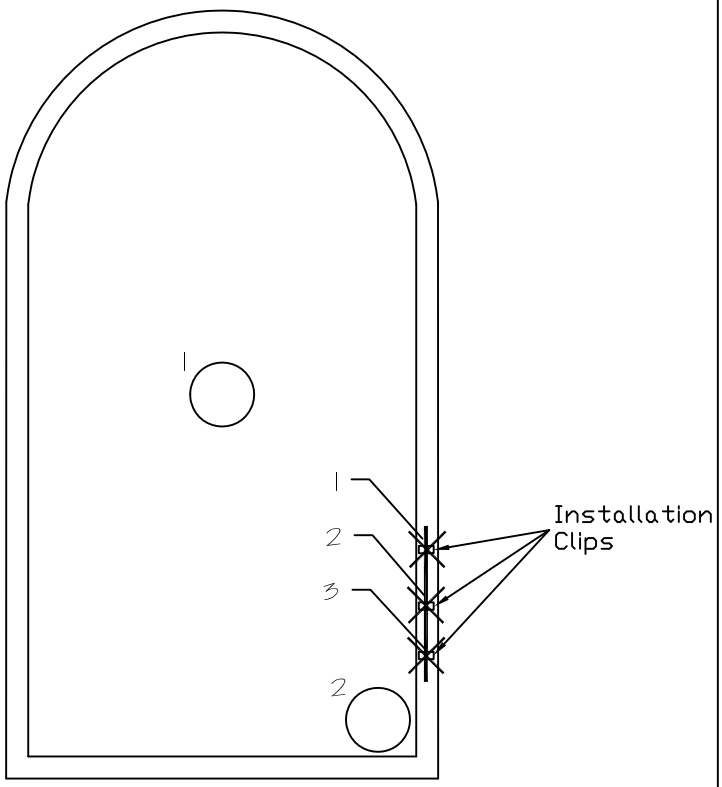
X◯ = IMPACT LOCATION

PROJECT NO.	CLIENT:		DRAWING	DWG. BY:	PAGE
B1576.01-201-18	KML WINDOWS, INC. PROJECT NAME: Coastal Aluminum Clad A Series Direct Glazed Fixed Window	Architectural Testing	IMPACT & INDICATOR LOCATIONS	JAJ DATE: 10/19/11	1 OF 3

SKETCH #2



Test Specimen #4



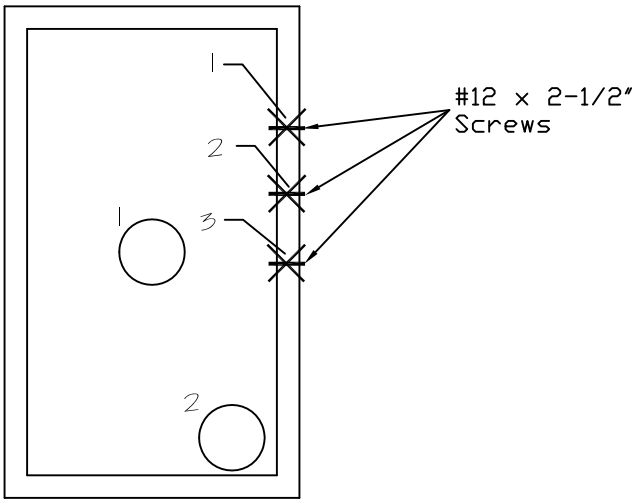
Test Specimen #5

X = INDICATOR LOCATION

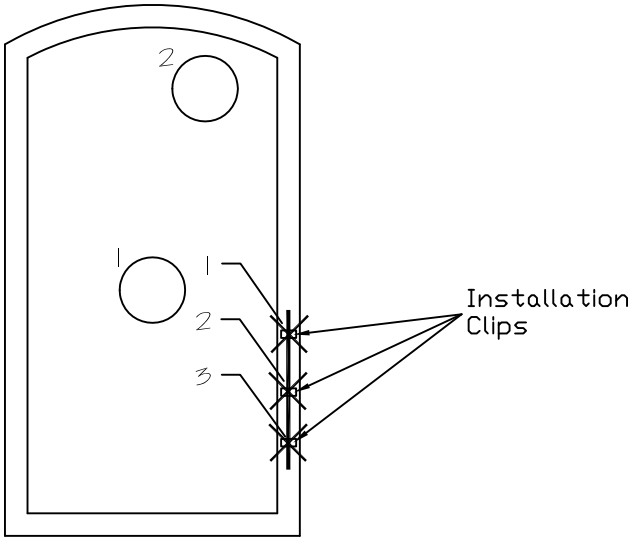
X◯ = IMPACT LOCATION

PROJECT NO. B1576.01-201-18	CLIENT: KML WINDOWS, INC. PROJECT NAME: Coastal Aluminum Clad A Series Direct Glazed Fixed Window	Architectural Testing	DRAWING IMPACT & INDICATOR LOCATIONS	DWG. BY: JAJ DATE: 10/19/11	PAGE 2 OF 3

SKETCH #3



Test Specimen #6



Test Specimen #7

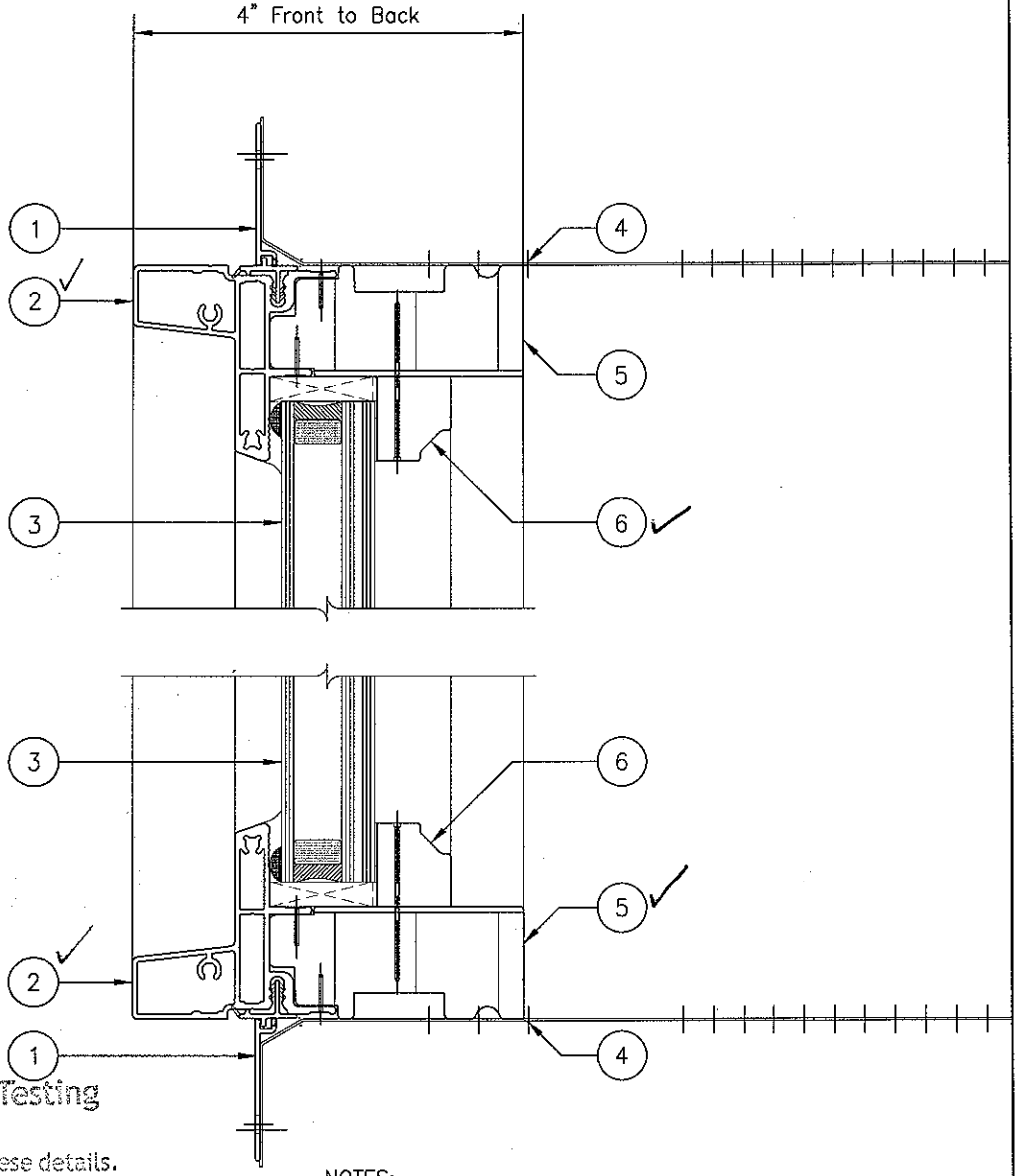
X = INDICATOR LOCATION

X◯ = IMPACT LOCATION

PROJECT NO. B1576.01-201-18	CLIENT: KML WINDOWS, INC. PROJECT NAME: Coastal Aluminum Clad A Series Direct Glazed Fixed Window	Architectural Testing	DRAWING IMPACT & INDICATOR LOCATIONS	DWG. BY: JAJ DATE: 10/19/11	PAGE 3 OF 3

Appendix B

Drawings



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1577, B1580, B1582

Date 10/27/11 Tech SK

NOTES:
REFER TO PROCESS DOCUMENT PP09KM0022 – SPECIFICATIONS FOR ALUMINUM CLAD DIRECT GLAZED WINDOWS FOR SEALANT & FASTENER LOCATIONS AND SPECIFICATIONS.

* PROFILE OR PART DOES NOT APPEAR IN SECTIONS SHOWN

NO.	DESCRIPTION	BY	DATE	ECN NO.
04	COASTAL INSTALLATION CLIP CHANGED	RBB	29 DEC 10	200178

ITEM	DESCRIPTION	PROFILE OR P/N
6	3/4" x 7/8" STOP – LINEAL	PF2173
5	AKGT 2-19/32" FRAME MEMBER – LINEAL	PF2158
4	COASTAL INSTALLATION CLIP	PN-113960
3	INSUL GLAZED UNIT (as per order)	
2	2" ALUMINUM FRAME CLADDING – LINEAL	PF2146
1	NAILING FLANGE – LINEAL	PF2079

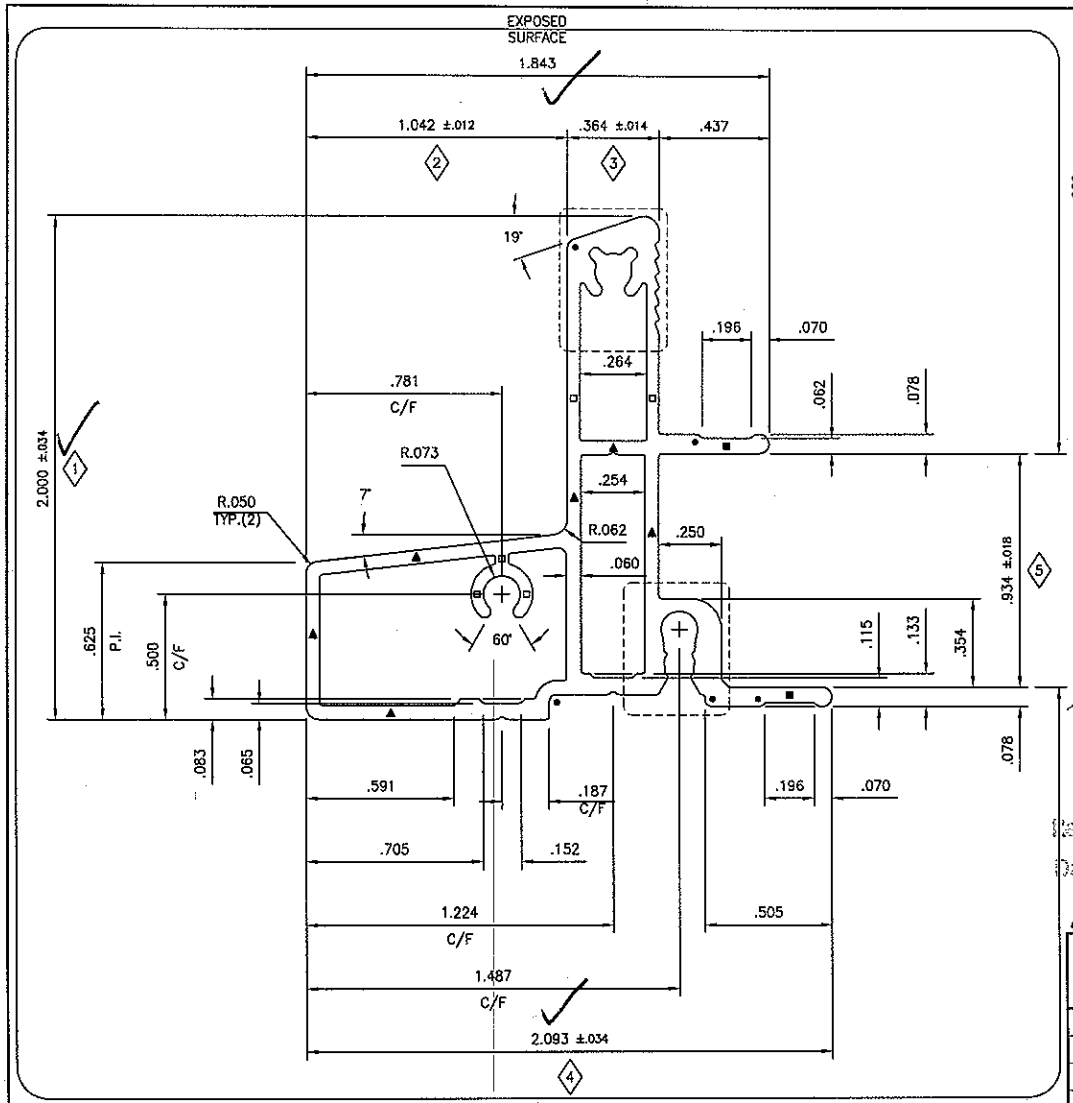
KML WINDOWS INC.
an Andersen® company

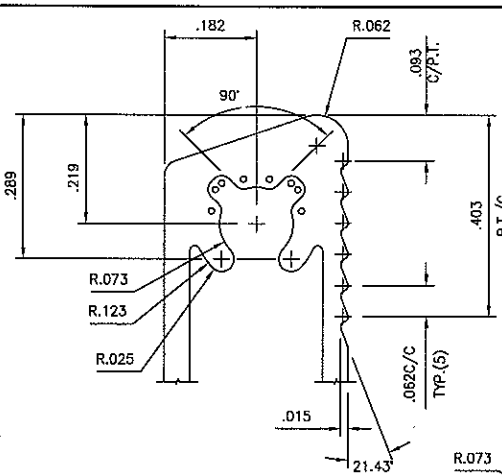
Title:
COASTAL AKGT ARCHITECTURAL SERIES
ALUMINUM CLAD FIXED WINDOW 'BOM'

RELEASED

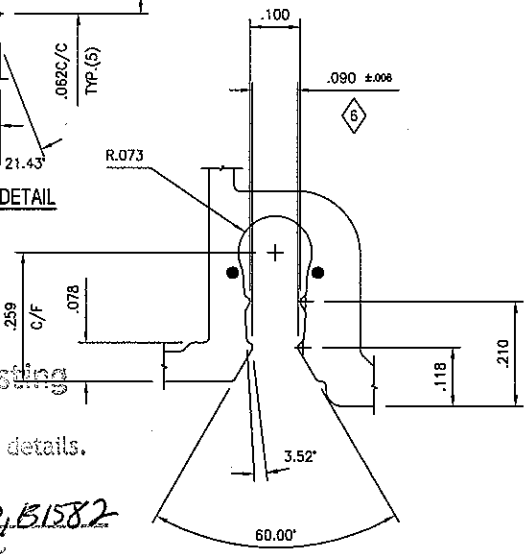
Drawn: SMD Chk'd:
Date: 17 FEB 2009 Scale: HALF SIZE

Drawing Number SK2761





GLAZING BEAD/SCREW BOSS DETAIL
4X FULL SIZE



NAILING FIN GROOVE DETAIL
4X FULL SIZE

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1577, B1580, B1582

Date 10/27/11 Tech

▲WALLS = 0.055

NOTES:
1. CRITICAL DIMENSIONS USED: 1 THRU 6.
2. DIMENSIONS WITHOUT TOLERANCES USE ALUMINUM INDUSTRY STANDARDS.
3. ALL DIMENSIONS APPLY TO POST PAINTING.
4. FINISH SPECIFICATION:
   PRIME PAINTED – PP09KM0053
   PAINTED (2604) – PP09KM0047
5. REFER TO CAD DRAWING FOR ALL UNSPECIFIED DIMENSIONS.

UNLESS OTHERWISE SPECIFIED: □ WALLS = 0.050 ■ WALLS = 0.062 ○ RADII = 0.020 ● RADII = 0.031 BREAK ALL CORNERS WITH: R 0.010 P.I. = POINT OF INTERSECTION P.T. = POINT OF TANGENCY			
ALLOY: 6063 or EQUIVALENT		TEMPER:	T5
HARDNESS:	WEBSTER 7 OR ABOVE AS EXTRUDED		
SHAPE:	HOLLOW	C.C.O. (in.):	2.53752
AREA (sq.in.):	0.56718	PERIMETER (in.):	9.39880
WT. (lbs\ft):	0.66020	WT. (kg\m):	0.98250
LENGTH:			
MIN. BENDING RADIUS:			

NO.	DESCRIPTION	BY	DATE	ECN NO.
03	Walls Increased by .005 – ▲	GMM	14 JUL 09	200128

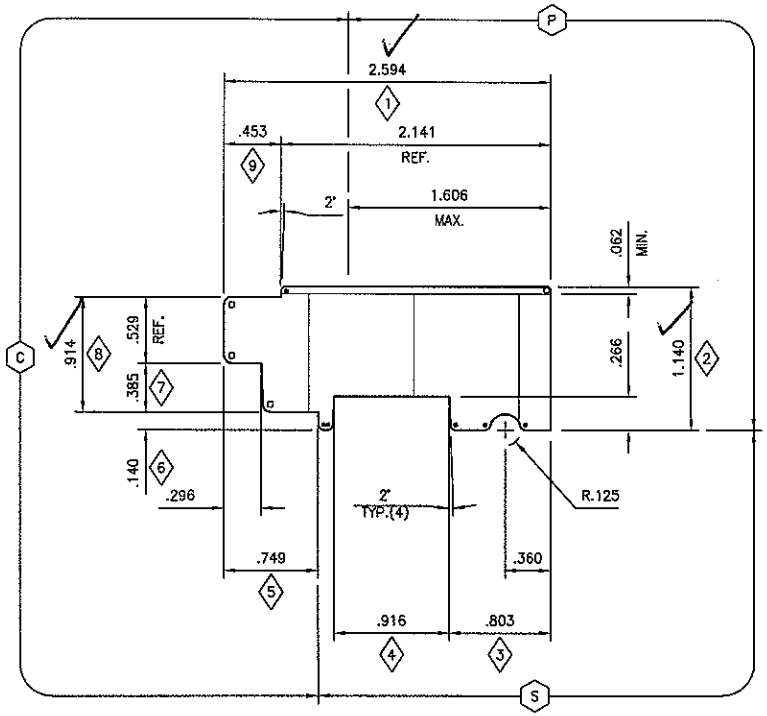
KML WINDOWS INC.
an Andersen® company

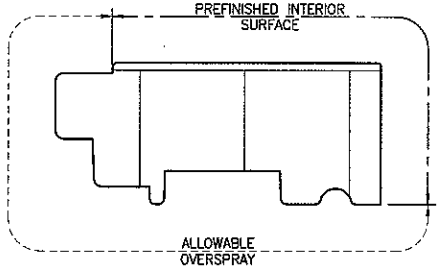
Title: DG ALUMINUM FRAME CLADDING
2" THICK JAMB

Drawn: GMM Chk'd:
Date: 21 JAN 2009 Scale: 2X FULL SIZE

Drawing Number PF2146

EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED





Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1577, B1580, B1583

Date 10/27/11 Tech JK

NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 9.

TOLERANCE UNLESS OTHERWISE SPECIFIED:
DIMS < or = 1" ±.010
DIMS 1" to 3" ±.015
DIMS > 3" ±.031
ANGLES ±1°
RADII ±.015
LENGTH DIMS < or = 36" ±.015
LENGTH DIMS > 36" ±.031

STANDARD RADIUS MARKERS:
● RADII = 0.040 ■ RADII = ○ RADII = 0.031 □ RADII = 0.062

PINE	B228 P (AS SHOWN) or B214	P.I.	B228 P or B214
MAHOG	B228 M (AS SHOWN)	ALDER	B228 A (AS SHOWN)
OAK	B228 O (AS SHOWN)	HICKORY	B228 H (AS SHOWN)
CHERRY	B228 C (AS SHOWN)	WALNUT	B228 W (AS SHOWN)
MAPLE	B228 D (AS SHOWN)	OTHER	
VG FIR	B228 F (AS SHOWN)	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
03	NOSING DIM'S CHANGED	SMD	04 JAN 10	200115

KML WINDOWS INC. an Andersen® company

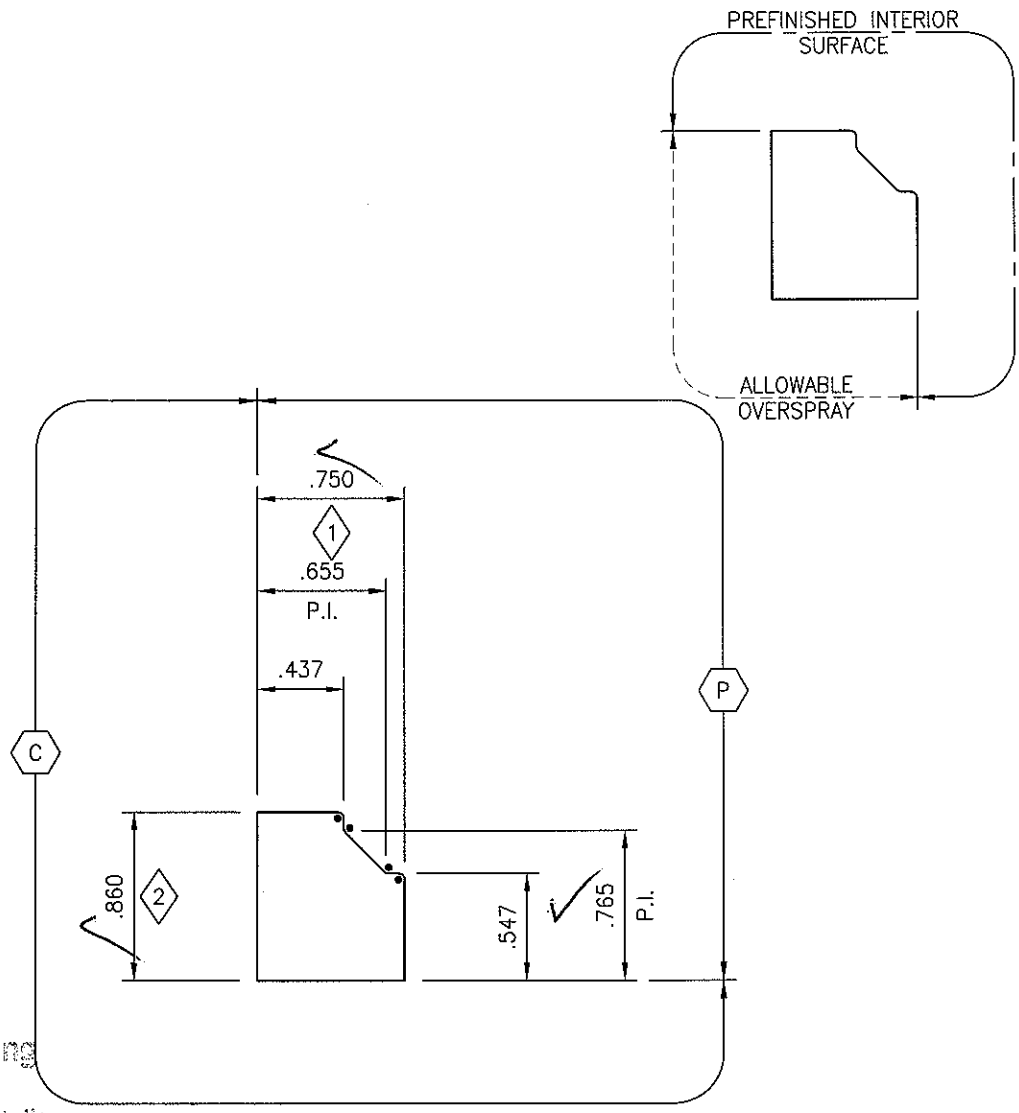
Title: AKGT 2-19/32" FRAME MEMBER
- LINEAL -

RELEASED

Drawn: GMM Chk'd:
Date: 05 FEB 2009 Scale: FULL SIZE

Drawing Number PF2158 (1 of 2)

EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1577, B1580, B1582

Date 10/27/11 Tech

NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 2.

TOLERANCE UNLESS OTHERWISE SPECIFIED:

DIMS < or = 1"	±.010	RADII	±.015
DIMS 1" to 3"	±.015	LENGTH DIMS < or = 36"	±.015
DIMS > 3"	±.031	LENGTH DIMS > 36"	±.031
ANGLES	±1°		

STANDARD RADIUS MARKERS:
● RADII = 0.031 ■ RADII = ○ RADII = □ RADII =

PINE	5/4" CLEAR SOLID	P.I.	5/4" CLEAR SOLID – PINE
MAHOG	4/4" CLEAR SOLID	ALDER	4/4" CLEAR SOLID
OAK	4/4" CLEAR SOLID	HICKORY	4/4" CLEAR SOLID
CHERRY	4/4" CLEAR SOLID	WALNUT	4/4" CLEAR SOLID
MAPLE	4/4" CLEAR SOLID	OTHER	
VG FIR	4/4" CLEAR SOLID	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
01	RELEASED TO PRODUCTION	SMD	22 JUL 09	200128

KML WINDOWS INC.
an Andersen® company

Title: 3/4" x 7/8" STOP
- LINEAL -

RELEASED

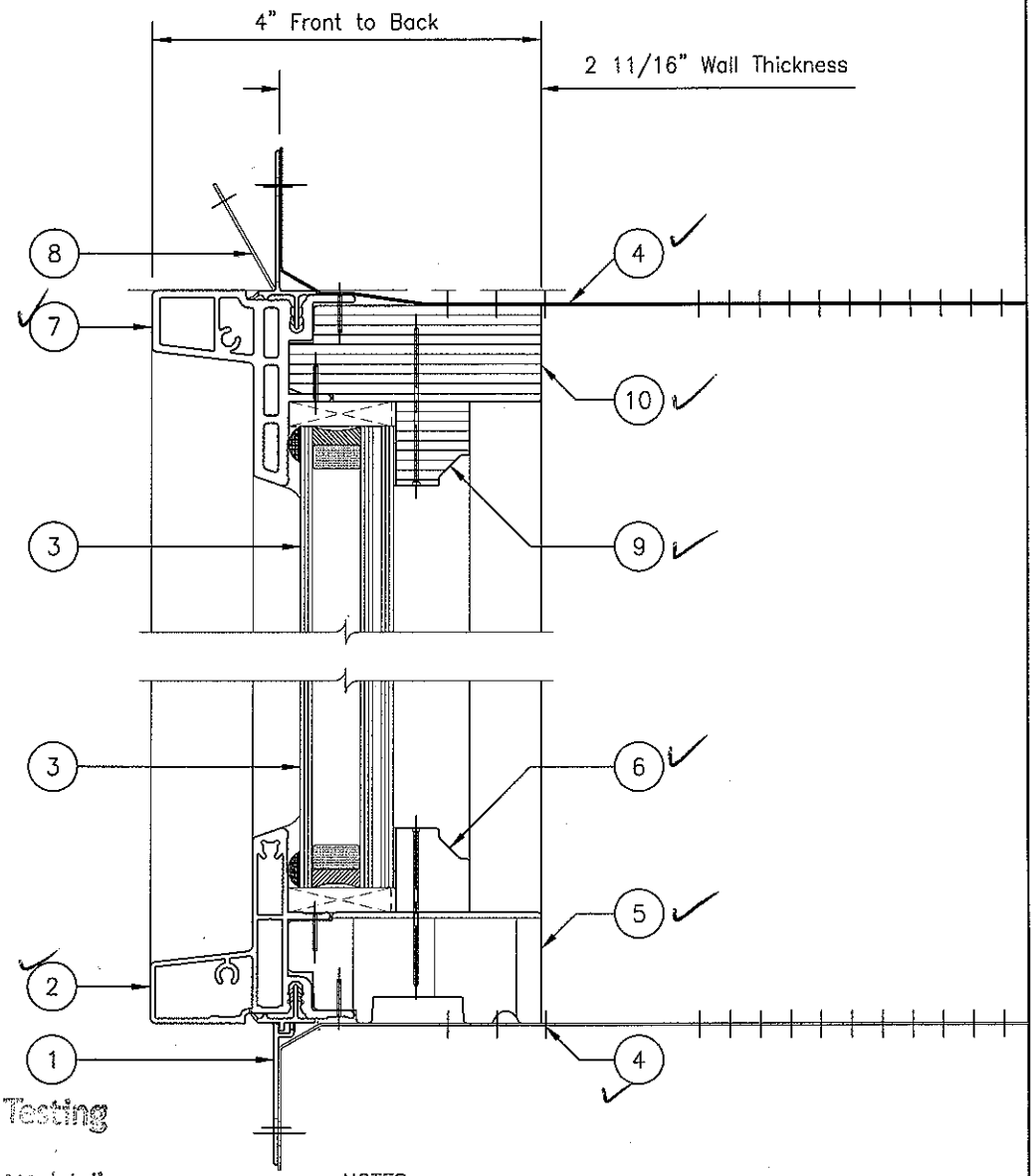
Drawn: GMM Chk'd:
Date: 20 FEB 2009 Scale: FULL SIZE

Drawing Number PF2173

KML WINDOWS INC. an Andersen® company	**Process Specification**	**Title:** Specifications for Aluminium Clad Direct Glazed Windows	**Number:** PP09KM0022 **Page:** 2 of 3
Issued By: Graham Marks		**Approved By:** Sean Dixon	

Specifications	Standard Hallmark Certified Products	Impact Certified Products (Coastal)
Standards	ANSI/AAMA/NWWDA 101/I.S.2-NAFS-02, A440-05 & A440-08	ASTM E1886/E1996-02 & 05 Missile Level D Wind Zone 4 and Florida Building Code HVHZ (TAS 201-94, TAS 202-94 & TAS-203-94)
Rating	F-LC30 125"x84" (NAFS-02) FW-LC30 125"x84" (A440-05) LC-PG-30-FW 125"x84" (A440-08) F-C50 125"x84" (NAFS-02) FW-C50 125"x84" (A440-05) CW-PG50-FW 125"x84" (A440-08)	**Standard Direct Glazed Units** DP +70-80 **A-Series Direct Glazed Units** 36" x 60" (Tested Size): +70/-70 54" x 96" (Tested Size): +70/-70 60" x 120" (Tested Size): +70/-80
Frame Member Corner Assembly	(2 AKG)(3) # 8 x 2" screws each corner – Standard Jamb (3) #8 x 2" screws each corner – Thick Jamb (2) minimum #8 x 2" screws each corner- A Series Jamb ✓	
Frame Member Corner Sealing	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets
Springline Unit Frame Member – Leg to Curved Head Assembly Butt Joint	Castle Drill Method – Butt Joint (3) #8 x 2" P.H., SQ, SMS Screw (1) 24 GA – 12" Galvanized Gusset Plate per Side (8) #8 x ¾" P.H., P.D., SMS Screws	Architectural Testing Test sample complies with these details. Deviations are noted.
Springline Unit Frame Member – Leg to Curved Head Sealing Butt Joint	PVA Wood Glue for wood to wood butt joint	Report# B1576, B1577, B1580, B1582 Date 10/27/11 Tech SW
Frame Cladding Corner Sealing	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets
Large Springline Unit with 2 pcs. Curved Frame Cladding Center Joint Sealing	Use Butyl Tape between curved center Butt Joint. Drill & Pump Dow Corning 1199 silicone sealant into both sides of frame extrusion cavity.	
Frame Cladding Assembly & Frame Cladding Corner Assembly	1/4" x 3/8" staples @ 7"(max.) from ends & 8" O.C. maximum. Also, staples on back of jamb, random as required. Dry fit no sealant Standard Jamb- (1) #8 x 1" screws & (1) #8x2 ½" Thick Jamb- (2) #8 x 1" screws A Series Jamb- (2) #8 x 2 ½" screws	1/4" x 3/8" Staples @ 7" (max.) from ends & 8" O.C. maximum. Also, staples on back of jamb, random as required. Dry fit no sealant Standard Jamb- (1) #8 x 1" screws & (1) #8x2 ½" Thick Jamb- (2) #8 x 1" screws & (1) #8 x 2 ½" A- Series Jamb- (2) #8 x 2 ½" screws ✓
Glazing Method	Glass is set from interior against a bed of Dow Corning 1199 silicone sealant with a double sided adhesive foam tape and a perimeter cap bead of Dow 891 silicone sealant. Color match silicone to standard cladding color options. Wood glazing stops with double sided adhesive tape and fastened with 1-1/4" staples @ 2" from ends & 8" O.C. maximum.	Glass is set from interior against a 1/8" bed of Dow Corning 995 Black Structural Silicone Sealant using glazing bumpons spacers to obtain glazing bead thickness for all color options except White 995 silicone is used for White Cladding Option. Structural Silicone is also used in the full perimeter in the Glazing Cavity. Wood Glazing stops with double sided adhesive tape and fastened with 1-1/4" staples (Standard or Thick jamb) or 1 5/8" brad nails (A-Series jamb) @ 2" from ends & 6" O.C. maximum.

Specifications	Standard Hallmark Certified Products	Impact Certified Products (Coastal)
Glass Options	Any Monolithic or Insulated unit that meets the size and wind-load requirements of ASTM E1300 that does not exceed product rating. Architectural Testing Test sample complies with these details. Deviations are noted. Report# 1576, 1577, 1580 & 1582 Date 10/27/11 Tech SJK	**Standard Direct Glazed Units** **1)** Up to 36" x 84" Frame size use 3/16" AN./.090 PVB/ 3/16" AN. Laminated glass. Laminated Glass can be used as Monolithic or in an Insulated unit with 1/8" Annealed Glass. **2)** Up to 48"x84" Frame size use ¼" AN./.090 PVB/1/4" AN. Laminated glass. Laminated Glass can be used as Monolithic or in an insulated unit with 5/32" Annealed glass. **3)** Up to 60" x 120" Frame size use 1/4" HS./.090 SGP/ 1/4" HS. Laminated Glass. Laminated Glass can be use as Monolithic or in an Insulated Unit with 3/16" Anneal Glass. **A-Series Direct Glazed Units** **1)** Up to 36" x 60" Frame size use 5/32" AN./.090 PVB/ 1/8" AN. Laminated glass. Laminated Glass must be used as part of an Insulated unit with 1/8" Annealed Glass. **** Insul. Unit exterior light can also be supplied in tempered glass.** **2)** Up to 54" x 96" Frame size use ¼" AN./.090 SGP/1/4" AN. Laminated glass. Laminated Glass must be used as part of an Insulated unit with 1/4" Tempered Glass. **3)** Up to 60" x 120" Frame size use 1/4" HS/.090 SGP/1/4" HS Laminated Glass. Laminated Glass must be used as part of an Insulated unit with 1/4" Tempered Glass.
Frame Size Restrictions	125" x 84" maximum size. **Note-** Other sizes available by Comparative or Extrapolation analysis per WDMA I.S. 11.	60" x 120" maximum size. **Note-** Other sizes available by Comparative or Extrapolation analysis per WDMA I.S. 11.
Frame Installation Clip Options	Standard installation clip fastened to frame with (2) #8 x ¾", FH, PD, SS screws. Clip spacing: 4" from corners and O.C. spacing as noted on the production order paperwork. Sheer Screw Option Thru Jamb - #10 x 3" @ 4" from corner and 8" minimum & 24" O.C. maximum.	Coastal installation clip fastened to the frame with (1) #8 x ¾", FH, PD, screw. Clip spacing: 4" from corners and O.C. spacing as noted on the production order paperwork. An additional (2) #8 x ¾", FH, PD, SS frame screws per clip shipped loose, to be fastened once clip rotated. Sheer screw option through jamb #12 x 2-1/2" @ 4" from corners and 6" O.C. maximum.



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1578, B1581

Date 10/27/11 Tech

NOTES:
REFER TO PROCESS DOCUMENT PP09KM0022 – SPECIFICATIONS FOR ALUMINUM CLAD DIRECT GLAZED WINDOWS FOR SEALANT & FASTENER LOCATIONS AND SPECIFICATIONS.

* PROFILE OR PART DOES NOT APPEAR IN SECTIONS SHOWN

ITEM	DESCRIPTION	PROFILE OR P/N
10	AKGT 2–19/32" FRAME MEMBER – CURVED	PF2158
9	3/4" x 7/8" STOP – CURVED ✓	PF2173
8	FLEXIBLE NAILING FLANGE	PF2080
7	2" ALUMINUM FRAME CLADDING – BENDABLE	PF2145
6	3/4" x 7/8" STOP – LINEAL	PF2173
5	AKGT 2–19/32" FRAME MEMBER – LINEAL	PF2158
4	COASTAL INSTALLATION CLIP ✓	PN–113960
3	INSUL GLAZED UNIT (as per order) ✓	
2	2" ALUMINUM FRAME CLADDING – LINEAL	PF2146
1	NAILING FLANGE – LINEAL	PF2079

NO.	DESCRIPTION	BY	DATE	ECN NO.
04	COASTAL INSTALLATION CLIP CHANGED	RBB	29 DEC 10	200178

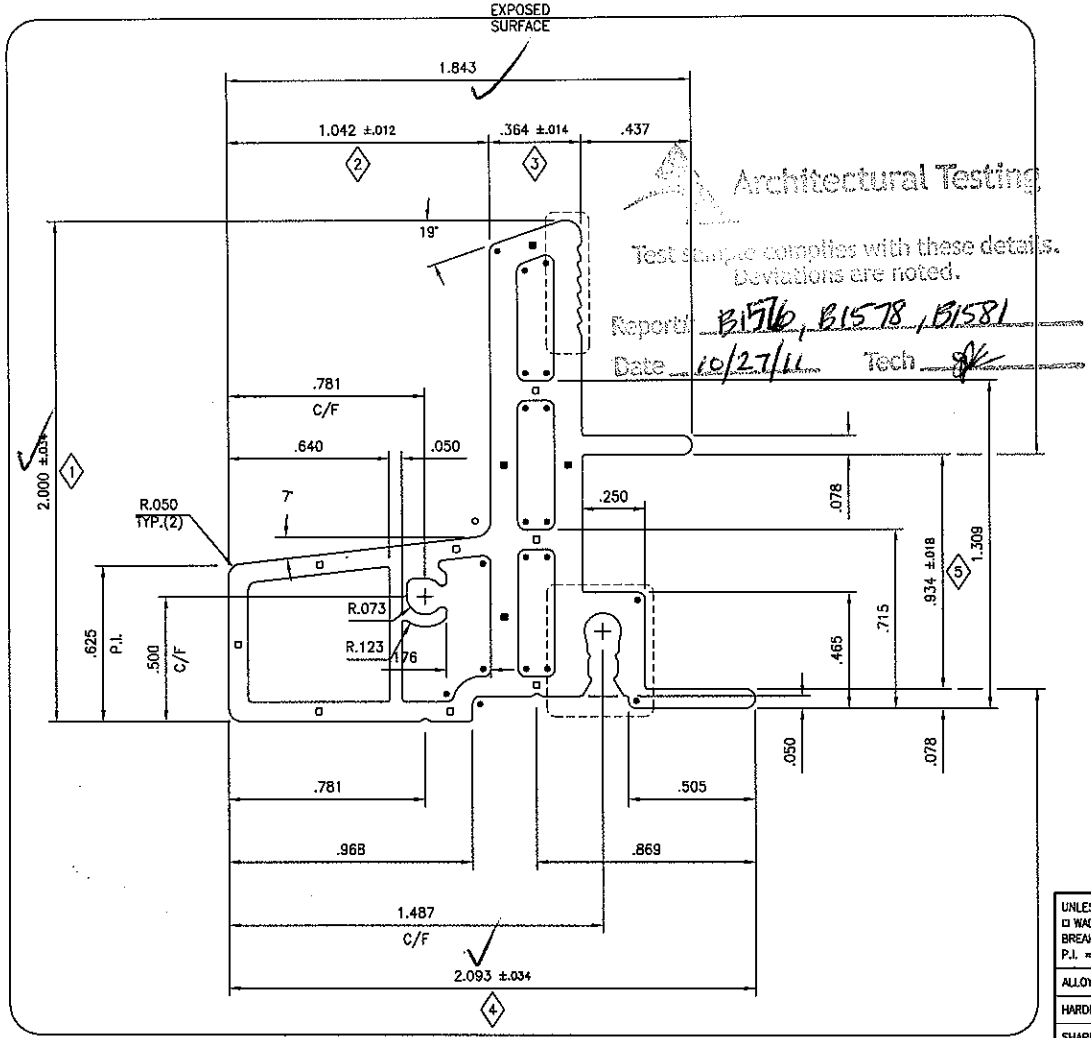
KML WINDOWS INC.
an Andersen® company

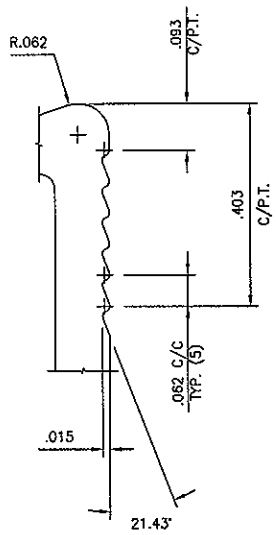
Title:
COASTAL AKGT ARCHITECTURAL SERIES
ALUMINUM CLAD FIXED WINDOW 'BOM'

RELEASED

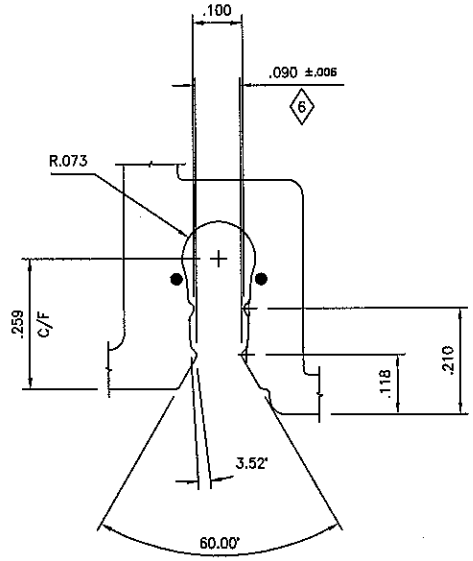
Drawn: SMD Chk'd:
Date: 17 FEB 2009 Scale: HALF SIZE

Drawing Number SK2761





GLAZING BEAD DETAIL
4X FULL SIZE



NAILING FIN GROOVE DETAIL
4X FULL SIZE

NOTES:
1. CRITICAL DIMENSIONS USED: 1 THRU 6.
2. DIMENSIONS WITHOUT TOLERANCES USE ALUMINUM INDUSTRY STANDARDS.
3. ALL DIMENSIONS APPLY TO POST PAINTING.
4. FINISH SPECIFICATION:
   PRIME PAINTED – PP09KM0053
   PAINTED (2604) – PP09KM0047
5. REFER TO CAD DRAWING FOR ALL UNSPECIFIED DIMENSIONS.

UNLESS OTHERWISE SPECIFIED:
□ WALLS = 0.078 ■ WALLS = 0.109 ○ RADII = 0.062 ● RADII = 0.031
BREAK ALL CORNERS WITH: R 0.010
P.I. = POINT OF INTERSECTION P.T. = POINT OF TANGENCY

ALLOY: 6063 or EQUIVALENT		TEMPER:	T4
HARDNESS:	WEBSTER 2 TO 5 AS EXTRUDED		
SHAPE:	HOLLOW	C.C.D. (in.):	2.53752
AREA (sq.in.):	0.84381	PERIMETER (in.):	9.43343
WT. (lbs\ft):	0.98220	WT. (kg\m):	1.46170
LENGTH:			
MIN. BENDING RADIUS: 8.500" EFS			

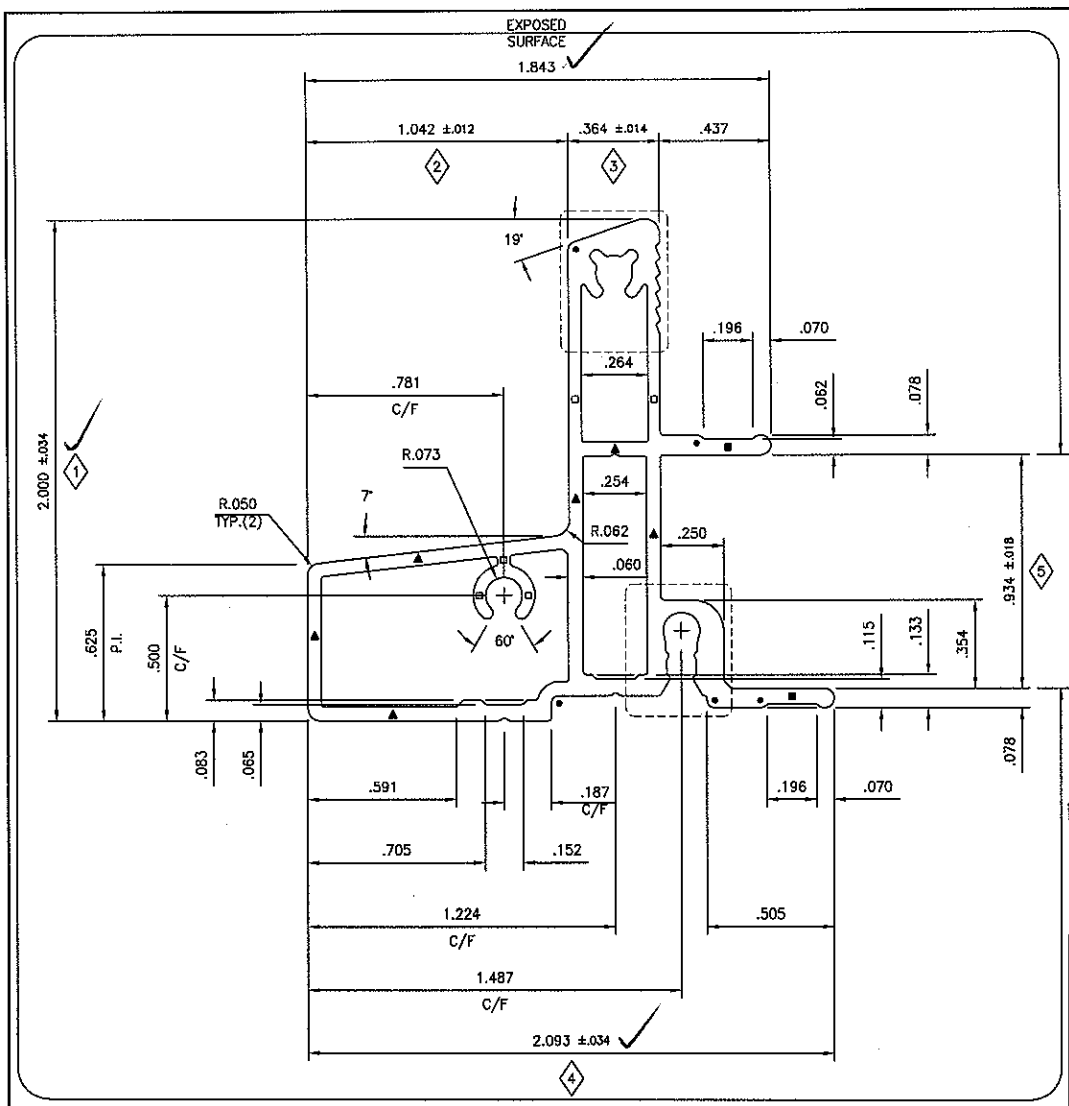
NO.	DESCRIPTION	BY	DATE	ECN NO.
02	REVISED SCREW BOSS AT SUPPLIERS REQUEST	JCA	30 NOV 09	200160

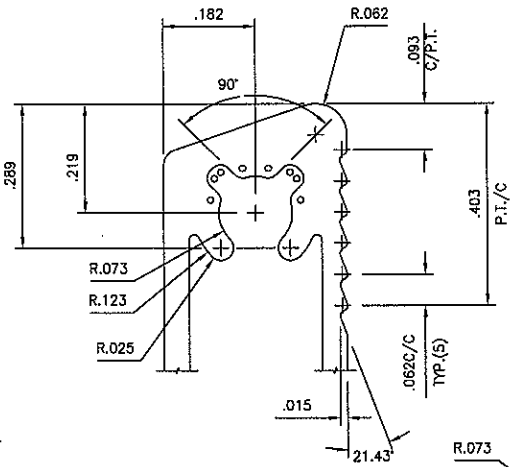
KML WINDOWS INC.
an Andersen® company

Title:
DG ALUMINUM FRAME CLADDING
2" THICK JAMB - BENDABLE

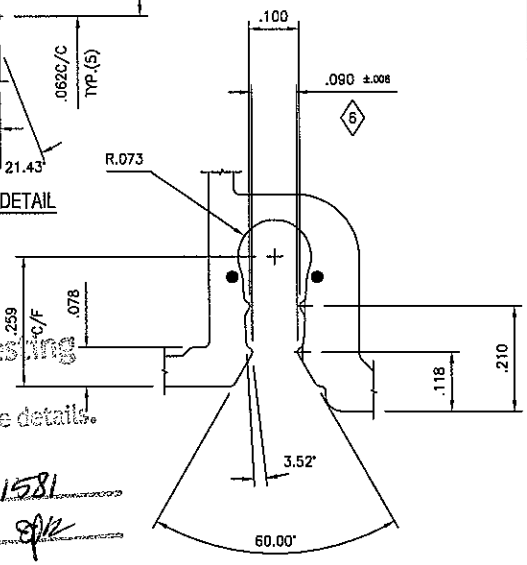
Drawn: GMM Chk'd:
Date: 21 JAN 2009 Scale: 2X FULL SIZE

Drawing Number PF2145





GLAZING BEAD/SCREW BOSS DETAIL
4X FULL SIZE



NAILING FIN GROOVE DETAIL
4X FULL SIZE

Architectural Testing
Test sample complies with these details. Deviations are noted.
Report# B1576, B1578, B1581
Date 10/27/11 Tech

▲WALLS = 0.055

NOTES:
1. CRITICAL DIMENSIONS USED: 1 THRU 6.
2. DIMENSIONS WITHOUT TOLERANCES USE ALUMINUM INDUSTRY STANDARDS.
3. ALL DIMENSIONS APPLY TO POST PAINTING.
4. FINISH SPECIFICATION:
   PRIME PAINTED – PP09KM0053
   PAINTED (2604) – PP09KM0047
5. REFER TO CAD DRAWING FOR ALL UNSPECIFIED DIMENSIONS.

UNLESS OTHERWISE SPECIFIED: □ WALLS = 0.050 ■ WALLS = 0.062 ○ RADII = 0.020 ● RADII = 0.031 BREAK ALL CORNERS WITH: R 0.010 P.I. = POINT OF INTERSECTION P.T. = POINT OF TANGENCY			
ALLOY: 6063 or EQUIVALENT		TEMPER:	T5
HARDNESS:	WEBSTER 7 OR ABOVE AS EXTRUDED		
SHAPE:	HOLLOW	C.C.D. (in.):	2.53752
AREA (sq.in.):	0.56718	PERIMETER (in.):	9.39880
WT. (lbs\ft):	0.66020	WT. (kg\m):	0.98250
LENGTH:			
MIN. BENDING RADIUS:			

NO.	DESCRIPTION	BY	DATE	ECN NO.
03	Walls Increased by .005 – ▲	GMM	14 JUL 09	200126

KML WINDOWS INC. an Andersen company

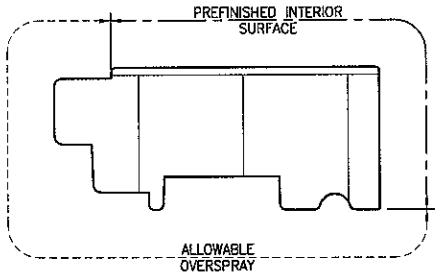
Title: DG ALUMINUM FRAME CLADDING
2" THICK JAMB

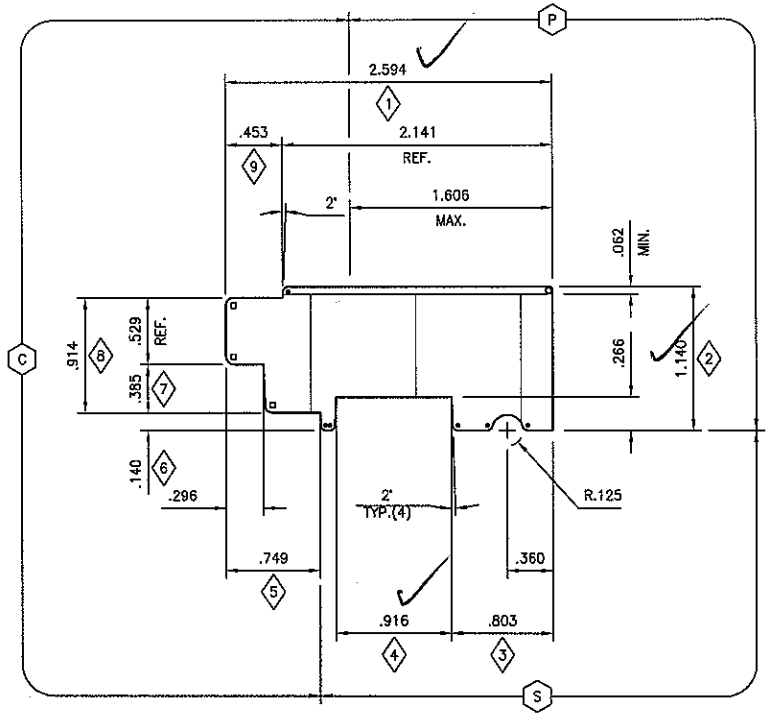
Drawn: GMM Chk'd:
Date: 21 JAN 2009 Scale: 2X FULL SIZE

Drawing Number PF2146

RELEASED

EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED





Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B15716, B15978, B15981

Date 10/27/11 Tech

NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 9.

TOLERANCE UNLESS OTHERWISE SPECIFIED:
DIMS < or = 1" ±.010
DIMS 1" to 3" ±.015
DIMS > 3" ±.031
ANGLES ±1°
RADII ±.015
LENGTH DIMS < or = 36" ±.015
LENGTH DIMS > 36" ±.031

STANDARD RADIUS MARKERS:
● RADII = 0.040 ■ RADII = ○ RADII = 0.031 □ RADII = 0.062

PINE	B228 P (AS SHOWN) or B214	P.I.	B228 P or B214
MAHOG	B228 M (AS SHOWN)	ALDER	B228 A (AS SHOWN)
OAK	B228 O (AS SHOWN)	HICKORY	B228 H (AS SHOWN)
CHERRY	B228 C (AS SHOWN)	WALNUT	B228 W (AS SHOWN)
MAPLE	B228 D (AS SHOWN)	OTHER	
VG FIR	B228 F (AS SHOWN)	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
03	NOSING DIM'S CHANGED	SMD	04 JAN 10	200115

KML WINDOWS INC. an Andersen® company

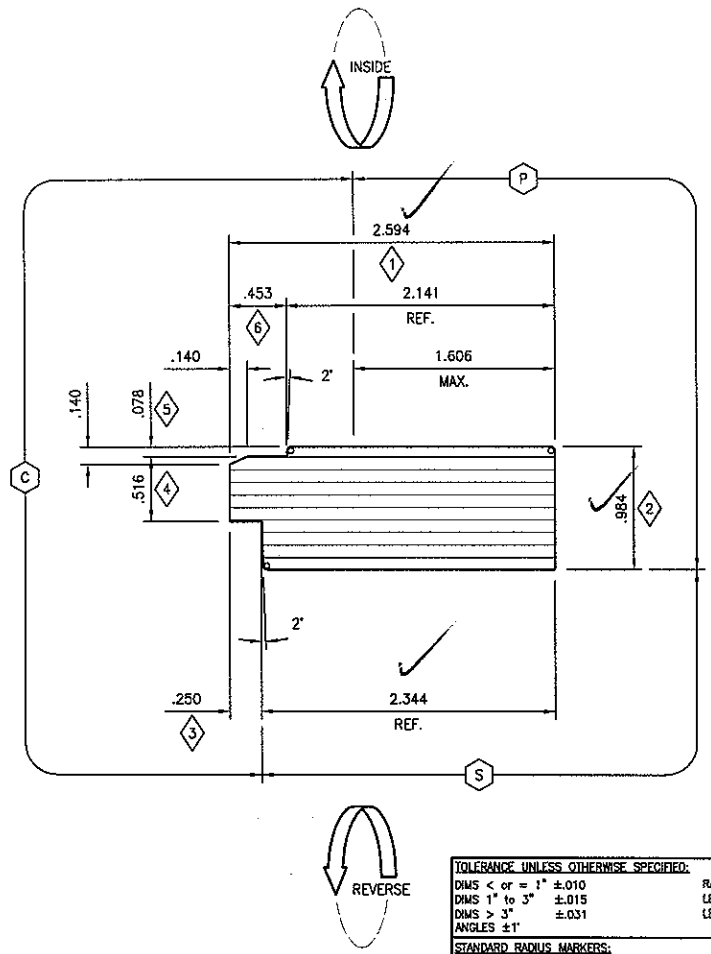
Title: AKGT 2-19/32" FRAME MEMBER - LINEAL -

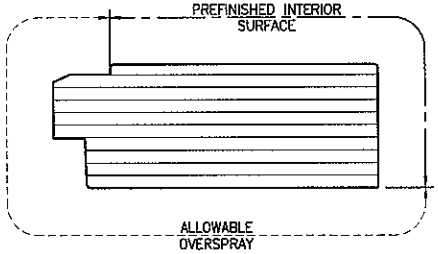
RELEASED

Drawn: GMM Chk'd:
Date: 05 FEB 2009 Scale: FULL SIZE

Drawing Number PF2158 (1 of 2)

EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED





Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1578, B1581

Date 10/27/11 Tech

NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 6.

TOLERANCE UNLESS OTHERWISE SPECIFIED:
DIMS < or = 1" ±.010
DIMS 1" to 3" ±.015
DIMS > 3" ±.031
ANGLES ±1°
RADII ±.015
LENGTH DIMS < or = 36" ±.015
LENGTH DIMS > 36" ±.031

STANDARD RADIUS MARKERS:
● RADII = ■ RADII = ○ RADII = 0.031 □ RADII =

PINE	10 Layers – MS1009	P.I.	10 Layers – MS1009
MAHOG	10 Layers – MS1005	ALDER	10 Layers – MS1081
OAK	10 Layers – MS1007	HICKORY	10 Layers – MS1083
CHERRY	10 Layers – MS1001	WALNUT	10 Layers – MS1084
MAPLE	10 Layers – MS1082	OTHER	
VG FIR	10 Layers – MS1080	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
03	NOSING DIM'S CHANGED	SMD	04 JAN 10	200115

KML WINDOWS INC.
an Andersen® company

Title:
AKGT 2-19/32" FRAME MEMBER
- CURVED -

RELEASED

Drawn: GMM Chk'd:
Date: 05 FEB 2009 Scale: FULL SIZE

Drawing Number PF2158 (2 of 2)

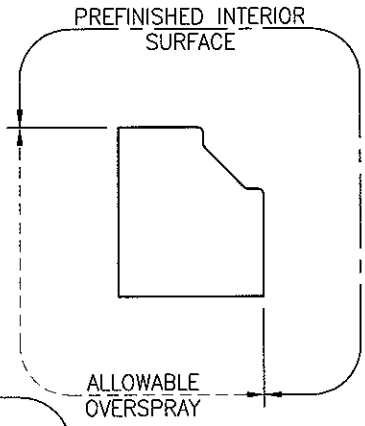
EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED

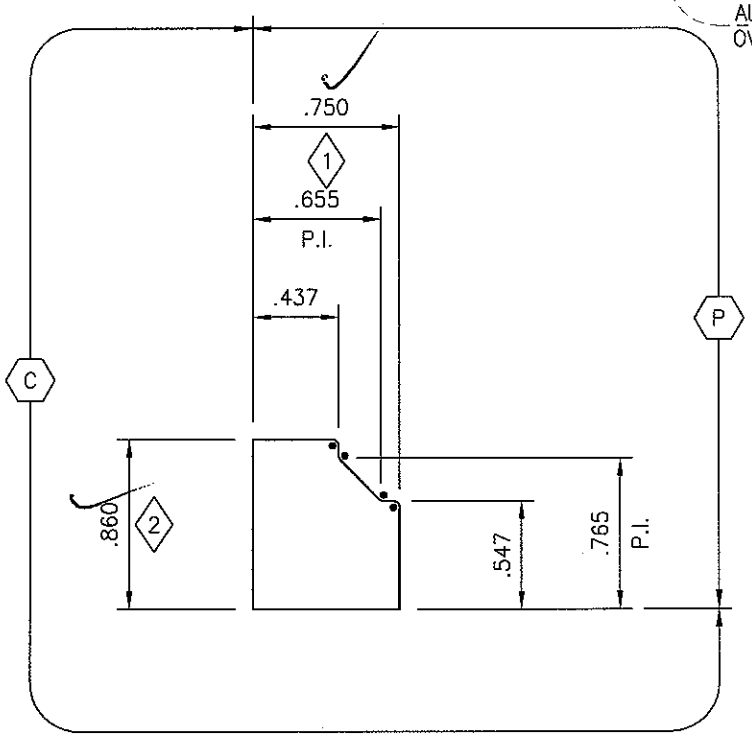
Architectural Testing

Test sample complies with these details. Deviations as noted.

Report# B1576, B1578, B1581

Date 10/27/11 Tech





NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 2.

TOLERANCE UNLESS OTHERWISE SPECIFIED:

DIMS < or = 1"	±.010	RADII	±.015
DIMS 1" to 3"	±.015	LENGTH DIMS < or = 36"	±.015
DIMS > 3"	±.031	LENGTH DIMS > 36"	±.031
ANGLES	±1°		

STANDARD RADIUS MARKERS:

● RADII = 0.031 ■ RADII = ○ RADII = □ RADII =

PINE	5/4" CLEAR SOLID	P.I.	5/4" CLEAR SOLID - PINE
MAHOG	4/4" CLEAR SOLID	ALDER	4/4" CLEAR SOLID
OAK	4/4" CLEAR SOLID	HICKORY	4/4" CLEAR SOLID
CHERRY	4/4" CLEAR SOLID	WALNUT	4/4" CLEAR SOLID
MAPLE	4/4" CLEAR SOLID	OTHER	
VG FIR	4/4" CLEAR SOLID	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
01	RELEASED TO PRODUCTION	SMD	22 JUL 09	200128

KML WINDOWS INC. an Andersen® company

Title: 3/4" x 7/8" STOP - LINEAL -

RELEASED

Drawn: GMM Chk'd:

Date: 20 FEB 2009 Scale: FULL SIZE

Drawing Number PF2173

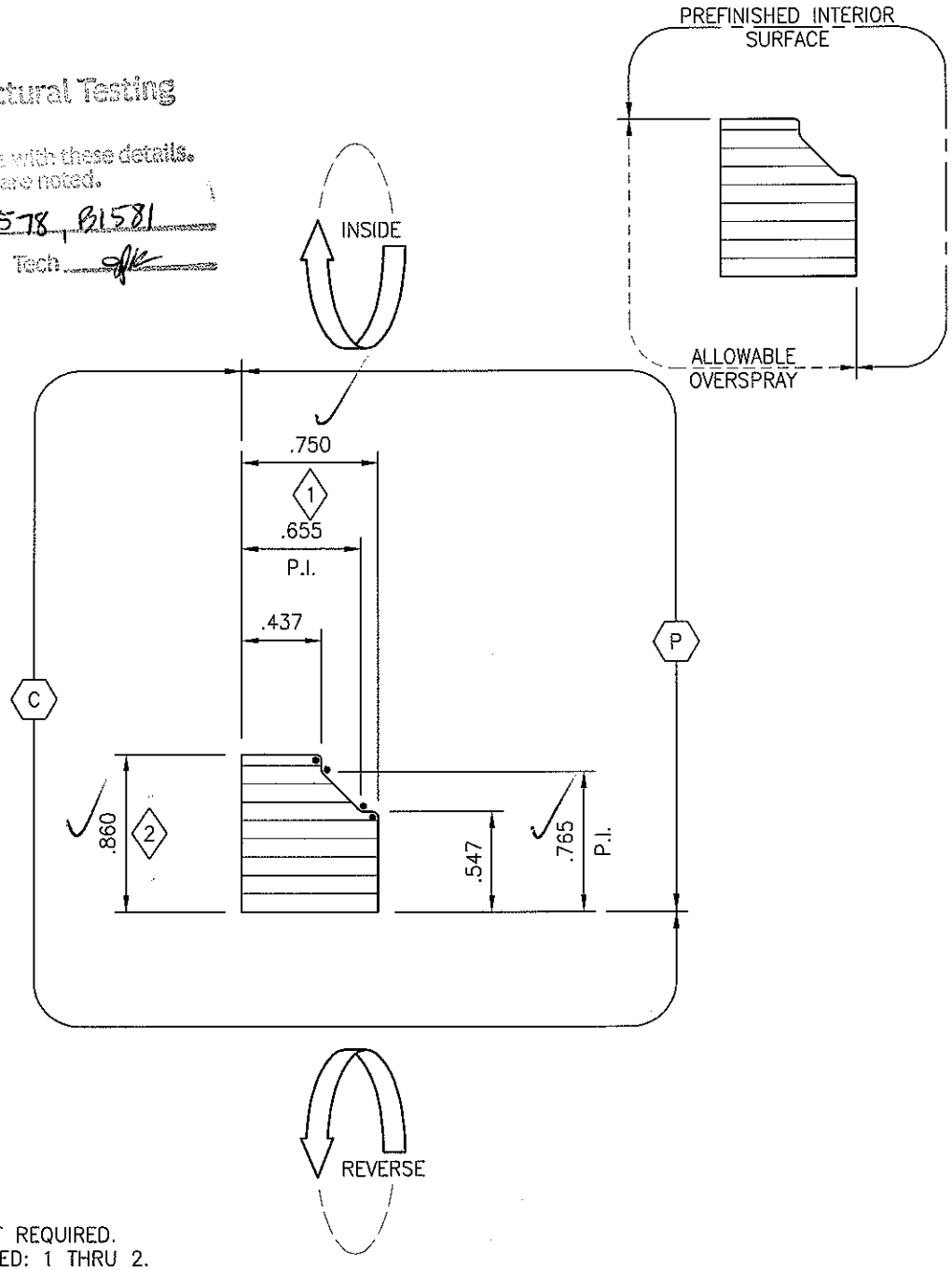
EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED

Architectural Testing

Test sample complies with these details. Deviations are noted.

Report: B1576, B1578, B1581

Date: 10/27/11 Tech:



NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 2.

TOLERANCE UNLESS OTHERWISE SPECIFIED:

DIMS < or = 1"	±.010	RADII	±.015
DIMS 1" to 3"	±.015	LENGTH DIMS < or = 36"	±.015
DIMS > 3"	±.031	LENGTH DIMS > 36"	±.031
ANGLES	±1°		

STANDARD RADIUS MARKERS:

● RADII = 0.031 ■ RADII = ○ RADII = □ RADII =

PINE	9 LAYERS - MS1010	P.I.	9 LAYERS - MS1010
MAHOG	9 LAYERS - MS1022	ALDER	9 LAYERS - MS1043
OAK	9 LAYERS - MS1017	HICKORY	9 LAYERS - MS1087
CHERRY	9 LAYERS - MS1023	WALNUT	9 LAYERS - MS1088
MAPLE	9 LAYERS - MS1029	OTHER	
VG FIR	9 LAYERS - MS1044	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
01	RELEASED TO PRODUCTION	SMD	22 JUL 09	200128

KML WINDOWS INC. an Andersen® company

Title: 3/4" x 7/8" STOP - CURVED -

RELEASED

Drawn: GMM Chk'd:

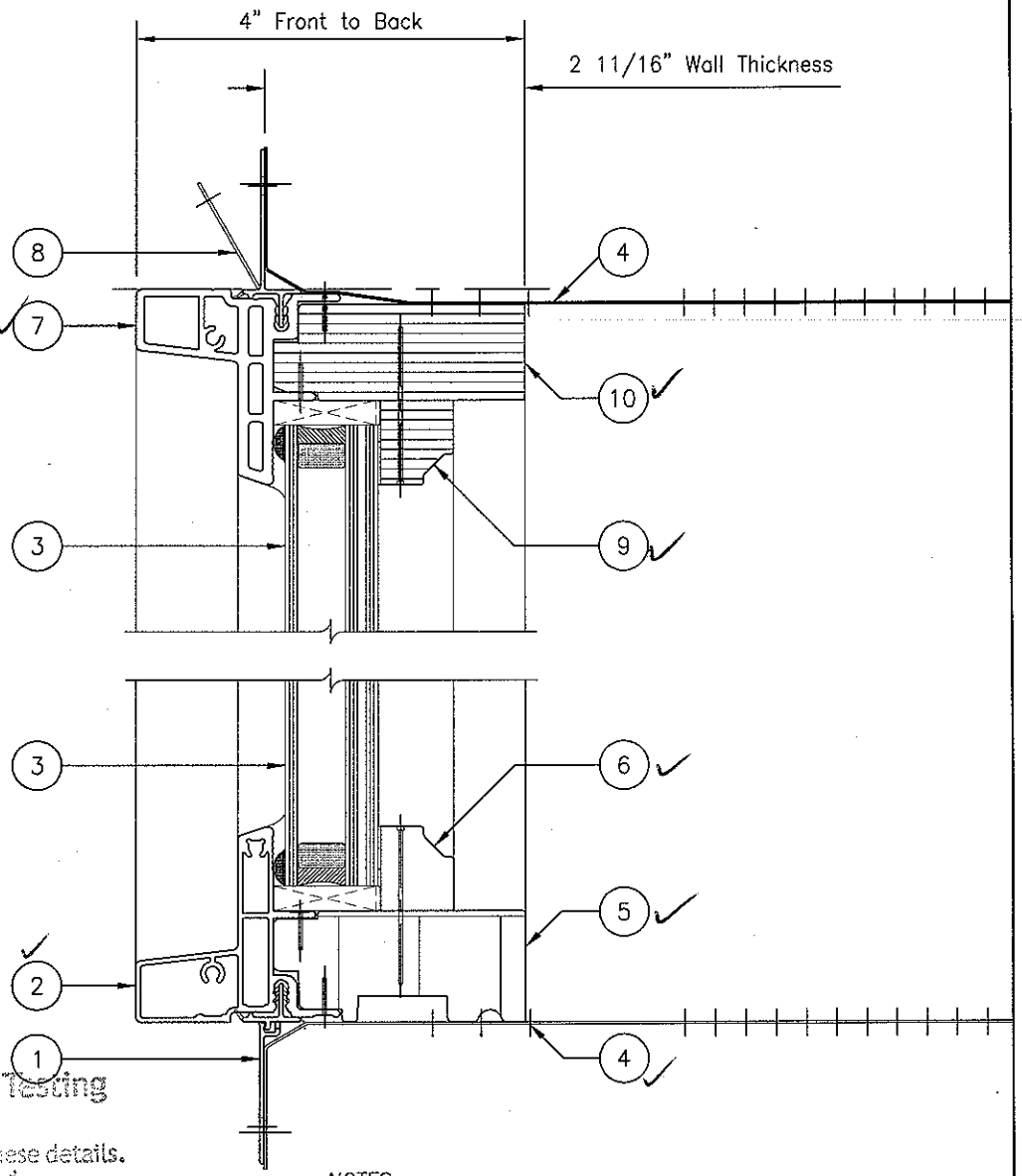
Date: 20 FEB 2009 Scale: FULL SIZE

Drawing Number PF2173

Specifications	Standard Hallmark Certified Products	Impact Certified Products (Coastal)
Standards	ANSI/AAMA/NWWDA 101/I.S.2-NAFS-02, A440-05 & A440-08	ASTM E1886/E1996-02 & 05 Missile Level D Wind Zone 4 and Florida Building Code HVHZ (TAS 201-94, TAS 202-94 & TAS-203-94)
Rating	F-LC30 125"x84" (NAFS-02) FW-LC30 125"x84" (A440-05) LC-PG-30-FW 125"x84" (A440-08) F-C50 125"x84" (NAFS-02) FW-C50 125"x84" (A440-05) CW-PG50-FW 125"x84" (A440-08)	**Standard Direct Glazed Units** DP +70-80 **A-Series Direct Glazed Units** 36" x 60" (Tested Size): +70/-70 54" x 96" (Tested Size): +70/-70 60" x 120" (Tested Size): +70/-80
Frame Member Corner Assembly	(2 AKG)(3) # 8 x 2" screws each corner – Standard Jamb (3) #8 x 2" screws each corner – Thick Jamb (2) minimum #8 x 2" screws each corner- A Series Jamb ✓	
Frame Member Corner Sealing	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets
Springline Unit Frame Member – Leg to Curved Head Assembly Butt Joint	Castle Drill Method – Butt Joint (3) #8 x 2" P.H., SQ, SMS Screw ✓ (1) 24 GA – 12" Galvanized Gusset Plate per Side ✓ (8) #8 x ¾" P.H., P.D., SMS Screws	
Springline Unit Frame Member – Leg to Curved Head Sealing Butt Joint	PVA Wood Glue for wood to wood butt joint	
Frame Cladding Corner Sealing	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets
Large Springline Unit with 2 pcs. Curved Frame Cladding Center Joint Sealing	Use Butyl Tape between curved center Butt Joint. Drill & Pump Dow Corning 1199 silicone sealant into both sides of frame extrusion cavity.	
Frame Cladding Assembly & Frame Cladding Corner Assembly	1/4" x 3/8" staples @ 7"(max.) from ends & 8" O.C. maximum. Also, staples on back of jamb, random as required. Dry fit no sealant Standard Jamb- (1) #8 x 1" screws & (1) #8x2 ½" Thick Jamb- (2) #8 x 1" screws A Series Jamb- (2) #8 x 2 ½" screws	1/4" x 3/8" Staples @ 7" (max.) from ends & 8" O.C. maximum. Also, staples on back of jamb, random as required. Dry fit no sealant Standard Jamb- (1) #8 x 1" screws & (1) #8x2 ½" Thick Jamb- (2) #8 x 1" screws & (1) #8 x 2 ½" A- Series Jamb- (2) #8 x 2 ½" screws ✓
Glazing Method	Glass is set from interior against a bed of Dow Corning 1199 silicone sealant with a double sided adhesive foam tape and a perimeter cap bead of Dow 891 silicone sealant. Color match silicone to standard cladding color options. Wood glazing stops with double sided adhesive tape and fastened with 1-1/4" staples @ 2" from ends & 8" O.C. maximum.	Glass is set from interior against a 1/8" bed of Dow Corning 995 Black Structural Silicone Sealant using glazing bumpons spacers to obtain glazing bead thickness for all color options except White 995 silicone is used for White Cladding Option. Structural Silicone is also used in the full perimeter in the Glazing Cavity. Wood Glazing Stops with double sided adhesive tape and fastened with 1-1/4" staples (Standard or Thick jamb) or 1 5/8" brad nails (A-Series jamb) @ 2" from ends & 6" O.C. maximum.

Architectural Testing
Test sample complies with these details. Variations are noted.
Report# B1576, B1578, B1581
Date 10/27/11 Tech

Specifications	Standard Hallmark Certified Products	Impact Certified Products (Coastal)
Glass Options	Any Monolithic or Insulated unit that meets the size and wind-load requirements of ASTM E1300 that does not exceed product rating. Architectural Testing Test sample complies with these details. Deviations are noted. Report# B1576, B1578, B1581 Date 10/27/11 Tech SPK	**Standard Direct Glazed Units** **1)** Up to 36" x 84" Frame size use 3/16" AN./.090 PVB/ 3/16" AN. Laminated glass. Laminated Glass can be used as Monolithic or in an Insulated unit with 1/8" Annealed Glass. **2)** Up to 48"x84" Frame size use ¼" AN./.090 PVB/1/4" AN. Laminated glass. Laminated Glass can be used as Monolithic or in an insulated unit with 5/32" Annealed glass. **3)** Up to 60" x 120" Frame size use 1/4" HS./.090 SGP/ 1/4" HS. Laminated Glass. Laminated Glass can be use as Monolithic or in an Insulated Unit with 3/16" Anneal Glass. **A-Series Direct Glazed Units** **1)** Up to 36" x 60" Frame size use 5/32" AN./.090 PVB/ 1/8" AN. Laminated glass. Laminated Glass must be used as part of an Insulated unit with 1/8" Annealed Glass. **** Insul. Unit exterior light can also be supplied in tempered glass.** **2)** Up to 54" x 96" Frame size use ¼" AN./.090 SGP/1/4" AN. Laminated glass. Laminated Glass must be used as part of an Insulated unit with 1/4" Tempered Glass. **3)** Up to 60" x 120" Frame size use 1/4" HS/.090 SGP/1/4" HS Laminated Glass. Laminated Glass must be used as part of an Insulated unit with 1/4" Tempered Glass.
Frame Size Restrictions	125" x 84" maximum size. **Note-** Other sizes available by Comparative or Extrapolation analysis per WDMA I.S. 11.	60" x 120" maximum size. **Note-** Other sizes available by Comparative or Extrapolation analysis per WDMA I.S. 11.
Frame Installation Clip Options	Standard installation clip fastened to frame with (2) #8 x ¾", FH, PD, SS screws. Clip spacing: 4" from corners and O.C. spacing as noted on the production order paperwork. Sheer Screw Option Thru Jamb - #10 x 3" @ 4" from corner and 8" minimum & 24" O.C. maximum.	Coastal installation clip fastened to the frame with (1) #8 x ¾", FH, PD, screw. Clip spacing: 4" from corners and O.C. spacing as noted on the production order paperwork. An additional (2) #8 x ¾", FH, PD, SS frame screws per clip shipped loose, to be fastened once clip rotated. Sheer screw option through jamb #12 x 2-1/2" @ 4" from corners and 6" O.C. maximum.



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1579, B1583

Date 10/27/11 Tech

NOTES:
REFER TO PROCESS DOCUMENT PP09KM0022 – SPECIFICATIONS FOR ALUMINUM CLAD DIRECT GLAZED WINDOWS FOR SEALANT & FASTENER LOCATIONS AND SPECIFICATIONS.

* PROFILE OR PART DOES NOT APPEAR IN SECTIONS SHOWN

NO.	DESCRIPTION	BY	DATE	ECN NO.
04	COASTAL INSTALLATION CLIP CHANGED	RBB	29 DEC 10	200178

ITEM	DESCRIPTION	PROFILE OR P/N
10	AKGT 2-19/32" FRAME MEMBER – CURVED	PF2158
9	3/4" x 7/8" STOP – CURVED	PF2173
8	FLEXIBLE NAILING FLANGE	PF2080
7	2" ALUMINUM FRAME CLADDING – BENDABLE	PF2145
6	3/4" x 7/8" STOP – LINEAL	PF2173
5	AKGT 2-19/32" FRAME MEMBER – LINEAL	PF2158
4	COASTAL INSTALLATION CLIP	PN-113960
3	INSUL GLAZED UNIT (as per order)	
2	2" ALUMINUM FRAME CLADDING – LINEAL	PF2146
1	NAILING FLANGE – LINEAL	PF2079

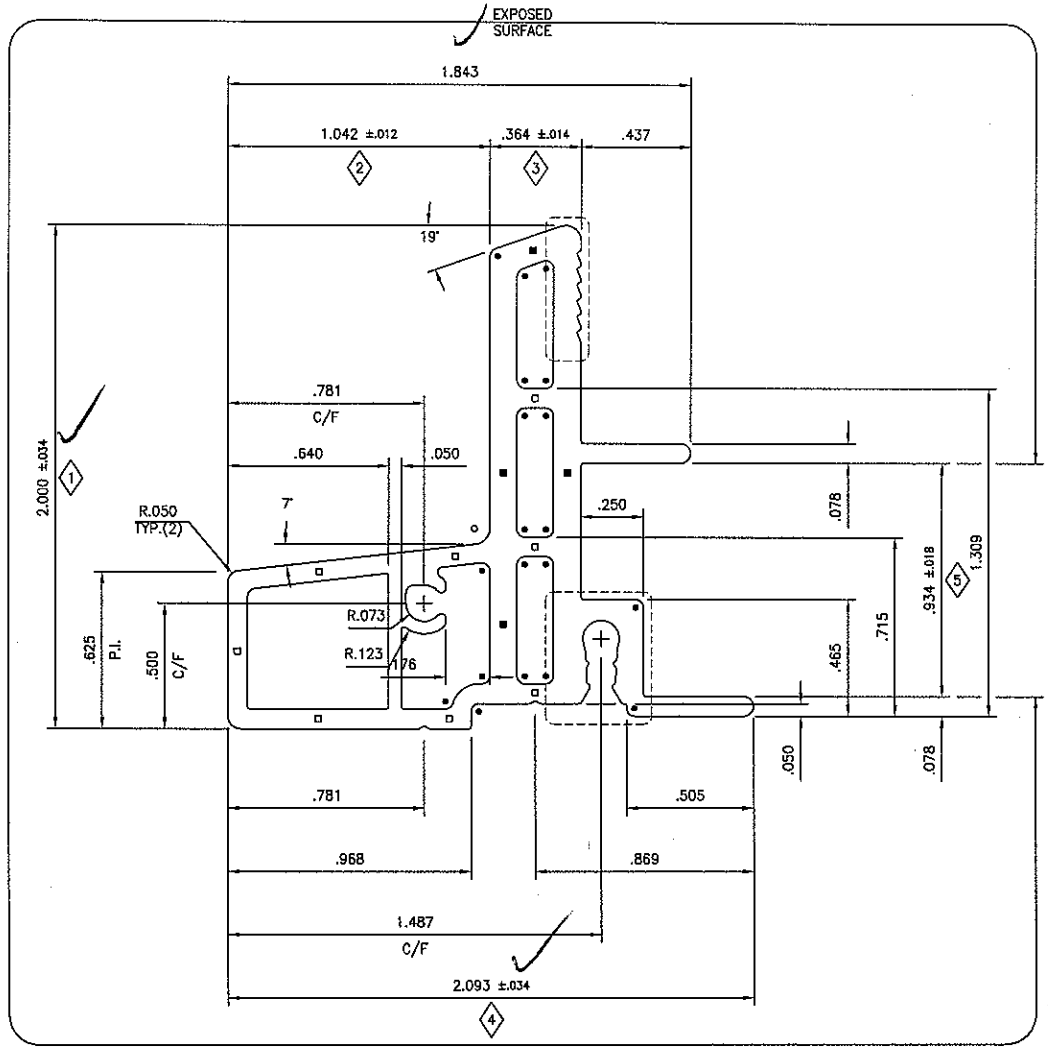
KML WINDOWS INC.
an Andersen® company

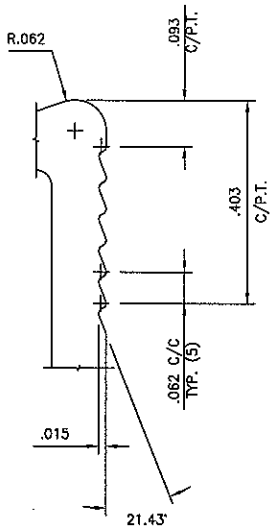
Title:
COASTAL AKGT ARCHITECTURAL SERIES
ALUMINUM CLAD FIXED WINDOW 'BOM'

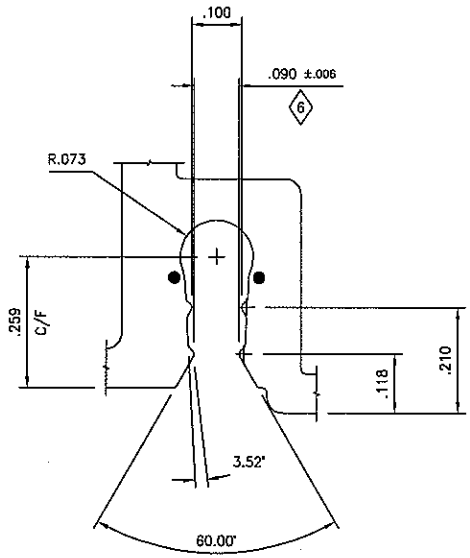
RELEASED

Drawn: SMD Chk'd:
Date: 17 FEB 2009 Scale: HALF SIZE

Drawing Number SK2761







GLAZING BEAD DETAIL
4X FULL SIZE

NAILING FIN GROOVE DETAIL
4X FULL SIZE

Architectural Test

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1579, B1583

Date 10/27/11 Tech

NOTES:
1. CRITICAL DIMENSIONS USED: 1 THRU 6.
2. DIMENSIONS WITHOUT TOLERANCES USE ALUMINUM INDUSTRY STANDARDS.
3. ALL DIMENSIONS APPLY TO POST PAINTING.
4. FINISH SPECIFICATION:
   PRIME PAINTED – PP09KM0053
   PAINTED (2604) – PP09KM0047
5. REFER TO CAD DRAWING FOR ALL UNSPECIFIED DIMENSIONS.

UNLESS OTHERWISE SPECIFIED:
□ WALLS = 0.078 ■ WALLS = 0.109 ○ RADII = 0.062 ● RADII = 0.031
BREAK ALL CORNERS WITH: R 0.010
P.I. = POINT OF INTERSECTION P.T. = POINT OF TANGENCY

ALLOY: 6063 or EQUIVALENT	TEMPER:	T4	
HARDNESS:	WEBSTER 2 TO 5 AS EXTRUDED		
SHAPE:	HOLLOW	C.C.D. (in.):	2.53752
AREA (sq.in.):	0.84381	PERIMETER (in.):	9.43343
WT. (lbs\ft):	0.98220	WT. (kg\m):	1.46170
LENGTH:			
MIN. BENDING RADIUS: 8.500" EFS			

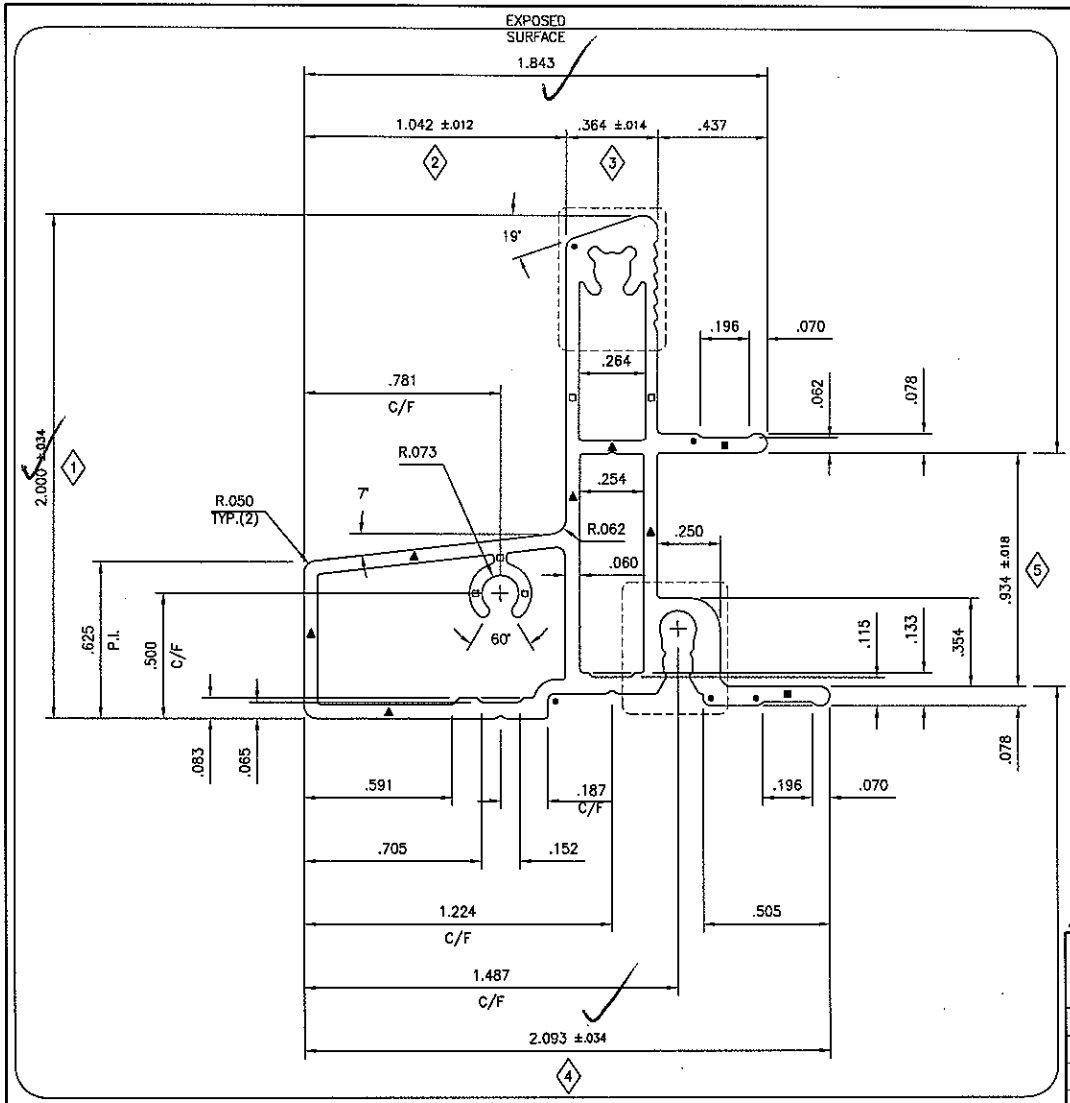
NO.	DESCRIPTION	BY	DATE	ECN NO.
02	REVISED SCREW BOSS AT SUPPLIERS REQUEST	JCA	30 NOV 09	200160

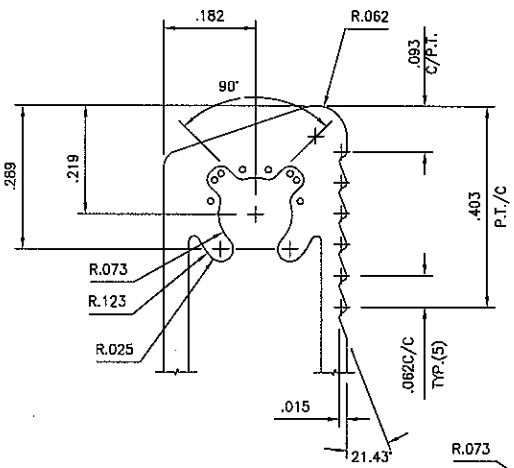
KML WINDOWS INC.
an Andersen® company

Title:
DG ALUMINUM FRAME CLADDING
2" THICK JAMB - BENDABLE

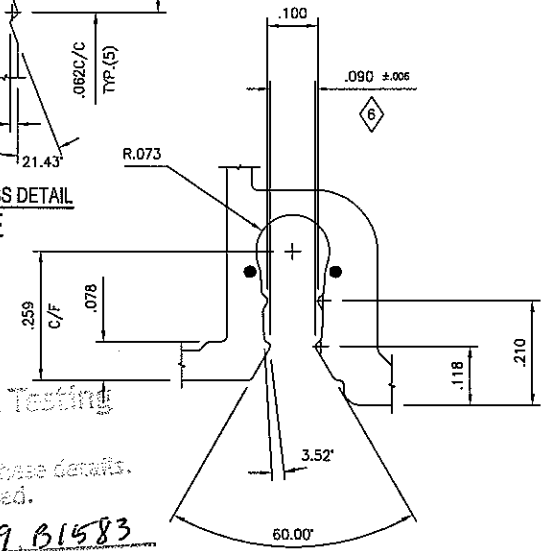
Drawn: GMM Chk'd:
Date: 21 JAN 2009 Scale: 2X FULL SIZE

Drawing Number PF2145





GLAZING BEAD/SCREW BOSS DETAIL
4X FULL SIZE



NAILING FIN GROOVE DETAIL
4X FULL SIZE

Architectural Testing Inc.
Test sample complies with these details. Deviations are noted.
Report# B1576, B1579, B1583
Date 10/27/11 Tech

▲WALLS = 0.055

NOTES:
1. CRITICAL DIMENSIONS USED: 1 THRU 6.
2. DIMENSIONS WITHOUT TOLERANCES USE ALUMINUM INDUSTRY STANDARDS.
3. ALL DIMENSIONS APPLY TO POST PAINTING.
4. FINISH SPECIFICATION:
   PRIME PAINTED – PP09KM0053
   PAINTED (2604) – PP09KM0047
5. REFER TO CAD DRAWING FOR ALL UNSPECIFIED DIMENSIONS.

UNLESS OTHERWISE SPECIFIED: □ WALLS = 0.050 ■ WALLS = 0.062 ○ RADII = 0.020 ● RADII = 0.031 BREAK ALL CORNERS WITH: R 0.010 P.I. = POINT OF INTERSECTION P.T. = POINT OF TANGENCY			
ALLOY: 6063 or EQUIVALENT		TEMPER:	T5
HARDNESS:	WEBSTER 7 OR ABOVE AS EXTRUDED		
SHAPE:	HOLLOW	C.C.D. (in.):	2.53752
AREA (sq.in.):	0.56718	PERIMETER (in.):	9.39880
WT. (lbs\ft):	0.66020	WT. (kg\m):	0.98250
LENGTH:			
MIN. BENDING RADIUS:			

NO.	DESCRIPTION	BY	DATE	ECN NO.
03	Walls Increased by .005 – ▲	GMM	14 JUL 09	200128

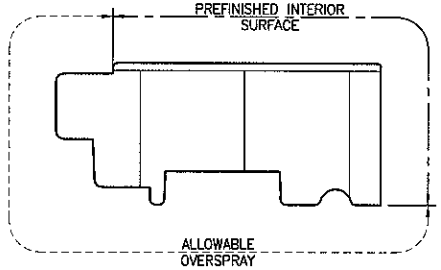
KML WINDOWS INC. an Andersen® company

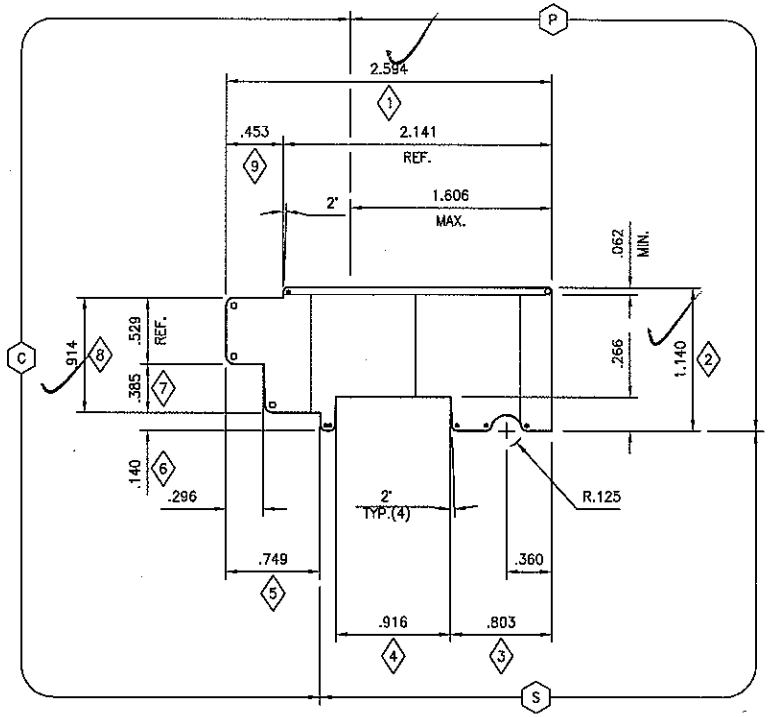
Title: DG ALUMINUM FRAME CLADDING
2" THICK JAMB

Drawn: GMM Chk'd:
Date: 21 JAN 2009 Scale: 2X FULL SIZE

Drawing Number PF2146

EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED





Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1579, B1583

Date 10/27/11 Tech SM

NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 9.

TOLERANCE UNLESS OTHERWISE SPECIFIED:

DIMS < or = 1"	±.010	RADII	±.015
DIMS 1" to 3"	±.015	LENGTH DIMS < or = 36"	±.015
DIMS > 3"	±.031	LENGTH DIMS > 36"	±.031
ANGLES	±1°		

STANDARD RADIUS MARKERS:
● RADII = 0.040 ■ RADII = ○ RADII = 0.031 □ RADII = 0.062

PINE	B228 P (AS SHOWN) or B214	P.I.	B228 P or B214
MAHOG	B228 M (AS SHOWN)	ALDER	B228 A (AS SHOWN)
OAK	B228 O (AS SHOWN)	HICKORY	B228 H (AS SHOWN)
CHERRY	B228 C (AS SHOWN)	WALNUT	B228 W (AS SHOWN)
MAPLE	B228 D (AS SHOWN)	OTHER	
VG FIR	B228 F (AS SHOWN)	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
03	NOSING DIM'S CHANGED	SMD	04 JAN 10	200115

KML WINDOWS INC. an Andersen® company

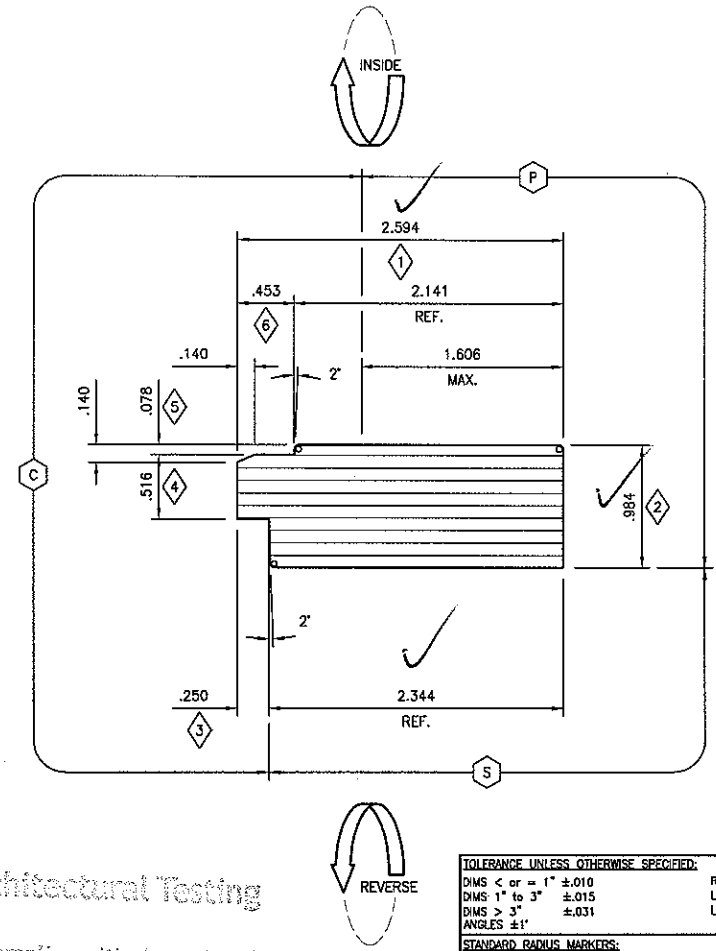
Title: AKGT 2-19/32" FRAME MEMBER - LINEAL -

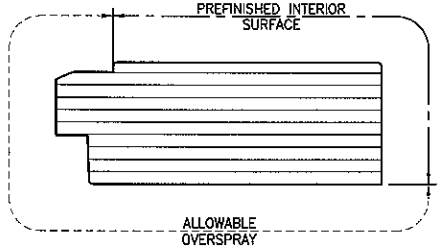
Drawn: GMM Chk'd:

Date: 05 FEB 2009 Scale: FULL SIZE

Drawing Number PF2158 (1 of 2)

EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED





Architectural Testing

Test sample complies with these details. Deviations are noted.

Report# B1576, B1579, B1583

Date 10/27/11 Tech SDW

NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 6.

TOLERANCE UNLESS OTHERWISE SPECIFIED:
DIMS < or = 1" ±.010
DIMS 1" to 3" ±.015
DIMS > 3" ±.031
ANGLES ±1°
RADII ±.015
LENGTH DIMS < or = 36" ±.015
LENGTH DIMS > 36" ±.031

STANDARD RADIUS MARKERS:
● RADII = ■ RADII = ○ RADII = 0.031 □ RADII =

PINE	10 Layers – MS1009	P.I.	10 Layers – MS1009
MAHOG	10 Layers – MS1005	ALDER	10 Layers – MS1081
OAK	10 Layers – MS1007	HICKORY	10 Layers – MS1083
CHERRY	10 Layers – MS1001	WALNUT	10 Layers – MS1084
MAPLE	10 Layers – MS1082	OTHER	
VG FIR	10 Layers – MS1080	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
03	NOSING DIM'S CHANGED	SMD	04 JAN 10	200115

KML WINDOWS INC. an Andersen® company

Title: AKGT 2-19/32" FRAME MEMBER - CURVED -

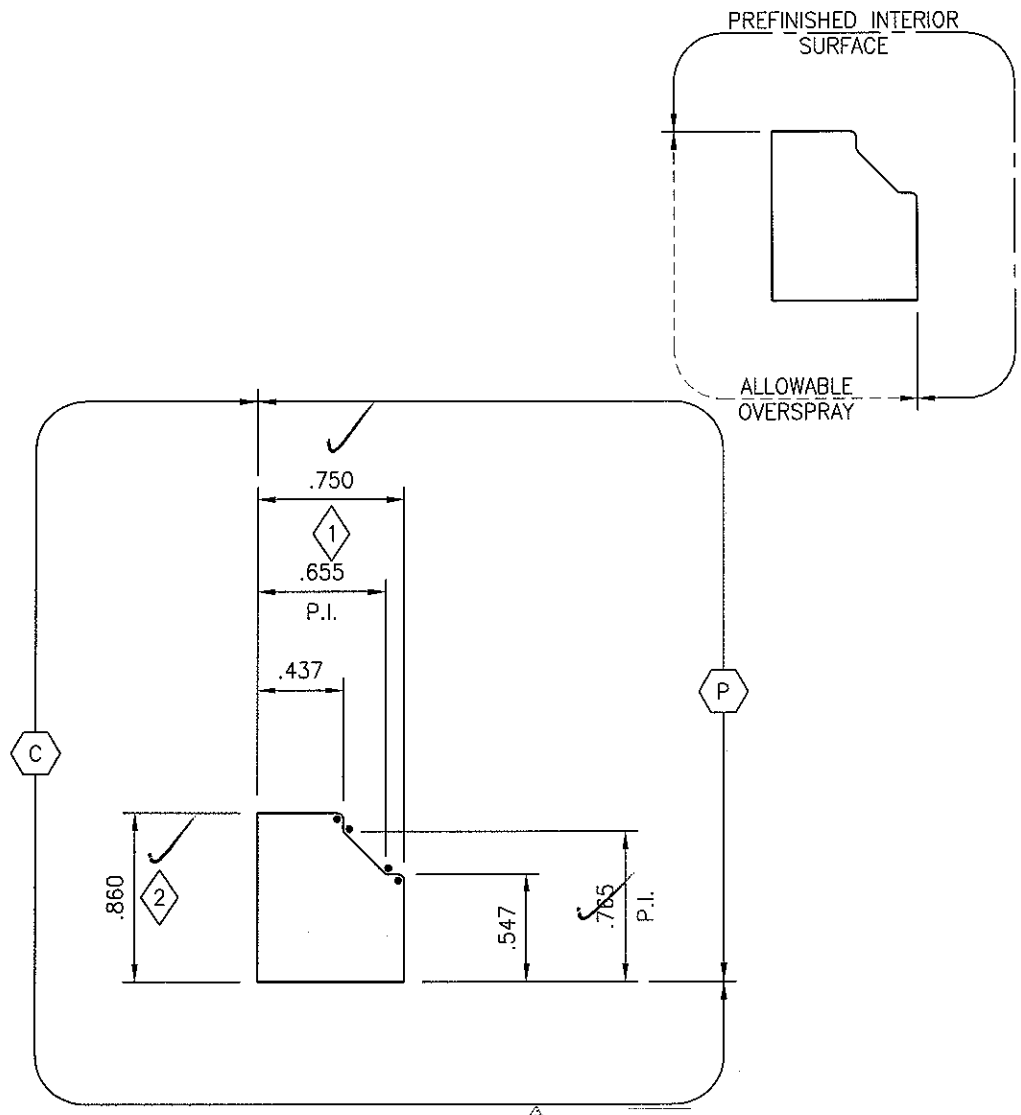
Drawn: GMM Chk'd:

Date: 05 FEB 2009 Scale: FULL SIZE

Drawing Number PF2158 (2 of 2)

RELEASED

EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1579, B1583

Date 10/27/11 Tech

NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 2.

TOLERANCE UNLESS OTHERWISE SPECIFIED:

DIMS < or = 1"	±.010	RADII	±.015
DIMS 1" to 3"	±.015	LENGTH DIMS < or = 36"	±.015
DIMS > 3"	±.031	LENGTH DIMS > 36"	±.031
ANGLES	±1°		

STANDARD RADIUS MARKERS:

● RADII = 0.031 ■ RADII = ○ RADII = □ RADII =

PINE	5/4" CLEAR SOLID	P.I.	5/4" CLEAR SOLID – PINE
MAHOG	4/4" CLEAR SOLID	ALDER	4/4" CLEAR SOLID
OAK	4/4" CLEAR SOLID	HICKORY	4/4" CLEAR SOLID
CHERRY	4/4" CLEAR SOLID	WALNUT	4/4" CLEAR SOLID
MAPLE	4/4" CLEAR SOLID	OTHER	
VG FIR	4/4" CLEAR SOLID	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
01	RELEASED TO PRODUCTION	SMD	22 JUL 09	200128

KML WINDOWS INC.
an Andersen® company

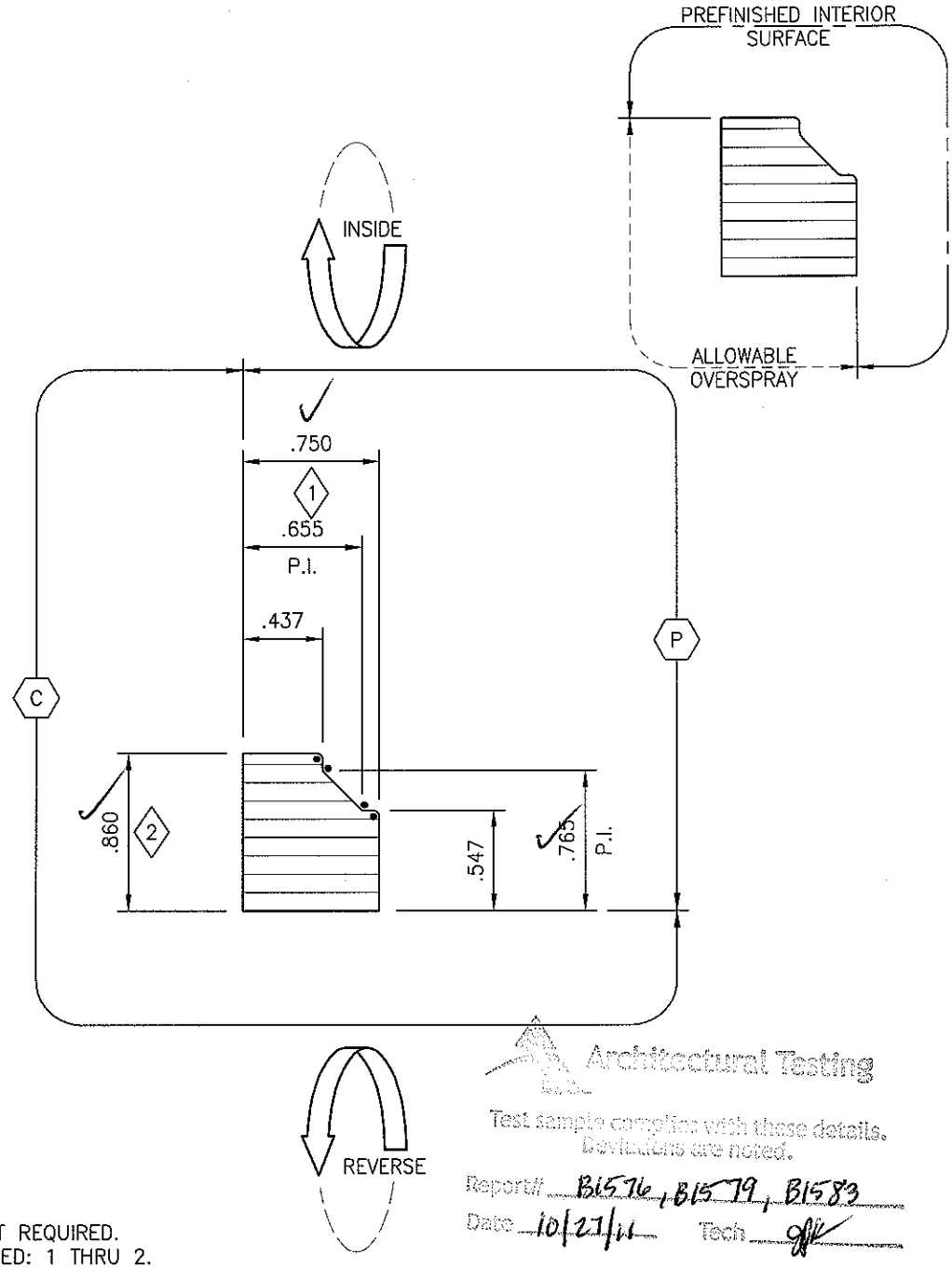
Title: 3/4" x 7/8" STOP
- LINEAL -

RELEASED

Drawn: GMM Chk'd:
Date: 20 FEB 2009 Scale: FULL SIZE

Drawing Number PF2173

EXPOSED SURFACES (P) PRIMARY (S) SECONDARY (C) CONCEALED



Architectural Testing Inc.
Test sample complies with these details. Deviations are noted.
Report# B1576, B1579, B1583
Date 10/27/11 Tech

NOTES:
1. PRESERVATIVE TREATMENT REQUIRED.
2. CRITICAL DIMENSIONS USED: 1 THRU 2.

TOLERANCE UNLESS OTHERWISE SPECIFIED:

DIMS < or = 1"	±.010	RADII	±.015
DIMS 1" to 3"	±.015	LENGTH DIMS < or = 36"	±.015
DIMS > 3"	±.031	LENGTH DIMS > 36"	±.031
ANGLES	±1°		

STANDARD RADIUS MARKERS:
● RADII = 0.031 ■ RADII = ○ RADII = □ RADII =

PINE	9 LAYERS – MS1010	P.I.	9 LAYERS – MS1010
MAHOG	9 LAYERS – MS1022	ALDER	9 LAYERS – MS1043
OAK	9 LAYERS – MS1017	HICKORY	9 LAYERS – MS1087
CHERRY	9 LAYERS – MS1023	WALNUT	9 LAYERS – MS1088
MAPLE	9 LAYERS – MS1029	OTHER	
VG FIR	9 LAYERS – MS1044	OTHER	

NO.	DESCRIPTION	BY	DATE	ECN NO.
01	RELEASED TO PRODUCTION	SMD	22 JUL 09	200128

KML WINDOWS INC. an Andersen® company

Title: 3/4" x 7/8" STOP - CURVED -

RELEASED

Drawn: GMM Chk'd:
Date: 20 FEB 2009 Scale: FULL SIZE

Drawing Number PF2173

Specifications	Standard Hallmark Certified Products	Impact Certified Products (Coastal)
Standards	ANSI/AAMA/NWWDA 101/I.S.2-NAFS-02, A440-05 & A440-08	ASTM E1886/E1996-02 & 05 Missile Level D Wind Zone 4 and Florida Building Code HVHZ (TAS 201-94, TAS 202-94 & TAS-203-94)
Rating	F-LC30 125"x84" (NAFS-02) FW-LC30 125"x84" (A440-05) LC-PG-30-FW 125"x84" (A440-08) F-C50 125"x84" (NAFS-02) FW-C50 125"x84" (A440-05) CW-PG50-FW 125"x84" (A440-08)	**Standard Direct Glazed Units** DP +70-80 **A-Series Direct Glazed Units** 36" x 60" (Tested Size): +70/-70 54" x 96" (Tested Size): +70/-70 60" x 120" (Tested Size): +70/-80
Frame Member Corner Assembly	(2 AKG)(3) # 8 x 2" screws each corner – Standard Jamb (3) #8 x 2" screws each corner – Thick Jamb (2) minimum #8 x 2" screws each corner- A Series Jamb ✓	
Frame Member Corner Sealing	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets
Springline Unit Frame Member – Leg to Curved Head Assembly Butt Joint	Castle Drill Method – Butt Joint (3) #8 x 2" P.H., SQ, SMS Screw (1) 24 GA – 12" Galvanized Gusset Plate per Side (8) #8 x ¾" P.H., P.D., SMS Screws	
Springline Unit Frame Member – Leg to Curved Head Sealing Butt Joint	PVA Wood Glue for wood to wood butt joint	
Frame Cladding Corner Sealing	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets	Preformed EPDM or Silicone (depends on color) two sided adhesive foam gaskets
Large Springline Unit with 2 pcs. Curved Frame Cladding Center Joint Sealing	Use Butyl Tape between curved center Butt Joint. Drill & Pump Dow Corning 1199 silicone sealant into both sides of frame extrusion cavity.	
Frame Cladding Assembly & Frame Cladding Corner Assembly	1/4" x 3/8" staples @ 7"(max.) from ends & 8" O.C. maximum. Also, staples on back of jamb, random as required. Dry fit no sealant Standard Jamb- (1) #8 x 1" screws & (1) #8x2 ½" Thick Jamb- (2) #8 x 1" screws A Series Jamb- (2) #8 x 2 ½" screws	1/4" x 3/8" Staples @ 7" (max.) from ends & 8" O.C. maximum. Also, staples on back of jamb, random as required. Dry fit no sealant Standard Jamb- (1) #8 x 1" screws & (1) #8x2 ½" Thick Jamb- (2) #8 x 1" screws & (1) #8 x 2 ½" A- Series Jamb- (2) #8 x 2 ½" screws
Glazing Method	Glass is set from interior against a bed of Dow Corning 1199 silicone sealant with a double sided adhesive foam tape and a perimeter cap bead of Dow 891 silicone sealant. Color match silicone to standard cladding color options. Wood glazing stops with double sided adhesive tape and fastened with 1-1/4" staples @ 2" from ends & 8" O.C. maximum.	Glass is set from interior against a 1/8" bed of Dow Corning 995 Black Structural Silicone Sealant using glazing bumpons spacers to obtain glazing bead thickness for all color options except White 995 silicone is used for White Cladding Option. Structural Silicone is also used in the full perimeter in the Glazing Cavity. Wood Glazing Stops with double sided adhesive tape and fastened with 1-1/4" staples (Standard or Thick jamb) or 1 5/8" brad nails (A-Series jamb) @ 2" from ends & 6" O.C. maximum.

Structural Testing
Complies with these details.
Deviations are noted.
Report# B1576, B1579, B1583
Date 10-27-11 Tested SM

Specifications	Standard Hallmark Certified Products	Impact Certified Products (Coastal)
Glass Options	Any Monolithic or Insulated unit that meets the size and wind-load requirements of ASTM E1300 that does not exceed product rating.	**Standard Direct Glazed Units** **1)** Up to 36" x 84" Frame size use 3/16" AN./.090 PVB/ 3/16" AN. Laminated glass. Laminated Glass can be used as Monolithic or in an Insulated unit with 1/8" Annealed Glass. **2)** Up to 48"x84" Frame size use ¼" AN./.090 PVB/1/4" AN. Laminated glass. Laminated Glass can be used as Monolithic or in an insulated unit with 5/32" Annealed glass. **3)** Up to 60" x 120" Frame size use 1/4" HS./.090 SGP/ 1/4" HS. Laminated Glass. Laminated Glass can be use as Monolithic or in an Insulated Unit with 3/16" Anneal Glass. **A-Series Direct Glazed Units** **1)** Up to 36" x 60" Frame size use 5/32" AN./.090 PVB/ 1/8" AN. Laminated glass. Laminated Glass must be used as part of an Insulated unit with 1/8" Annealed Glass. **** Insul. Unit exterior light can also be supplied in tempered glass.** **2)** Up to 54" x 96" Frame size use ¼" AN./.090 SGP/1/4" AN. Laminated glass. Laminated Glass must be used as part of an Insulated unit with 1/4" Tempered Glass. **3)** Up to 60" x 120" Frame size use 1/4" HS/.090 SGP/1/4" HS Laminated Glass. Laminated Glass must be used as part of an Insulated unit with 1/4" Tempered Glass.
Frame Size Restrictions	125" x 84" maximum size. **Note-** Other sizes available by Comparative or Extrapolation analysis per WDMA I.S. 11.	60" x 120" maximum size. **Note-** Other sizes available by Comparative or Extrapolation analysis per WDMA I.S. 11.
Frame Installation Clip Options	Standard installation clip fastened to frame with (2) #8 x ¾", FH, PD, SS screws. Clip spacing: 4" from corners and O.C. spacing as noted on the production order paperwork. Sheer Screw Option Thru Jamb - #10 x 3" @ 4" from corner and 8" minimum & 24" O.C. maximum.	Coastal installation clip fastened to the frame with (1) #8 x ¾", FH, PD, screw. Clip spacing: 4" from corners and O.C. spacing as noted on the production order paperwork. An additional (2) #8 x ¾", FH, PD, SS frame screws per clip shipped loose, to be fastened once clip rotated. Sheer screw option through jamb #12 x 2-1/2" @ 4" from corners and 6" O.C. maximum.

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B1576, B1579, B1583

Date 10/27/11 Tech