

# CLADDING FAÇADE SOLUTIONS TEST REPORT

**SCOPE OF WORK**

ASTM E330/E330M TESTING ON  
CFS CF (CONCEALED FASTENED) EQUITONE 8 MM, CEMENT PANELS

**REPORT NUMBER**

M6716.01-109-44

**TEST DATE(S)**

09/28/21 - 09/29/21

**ISSUE DATE**

12/01/21

**RECORD RETENTION END DATE**

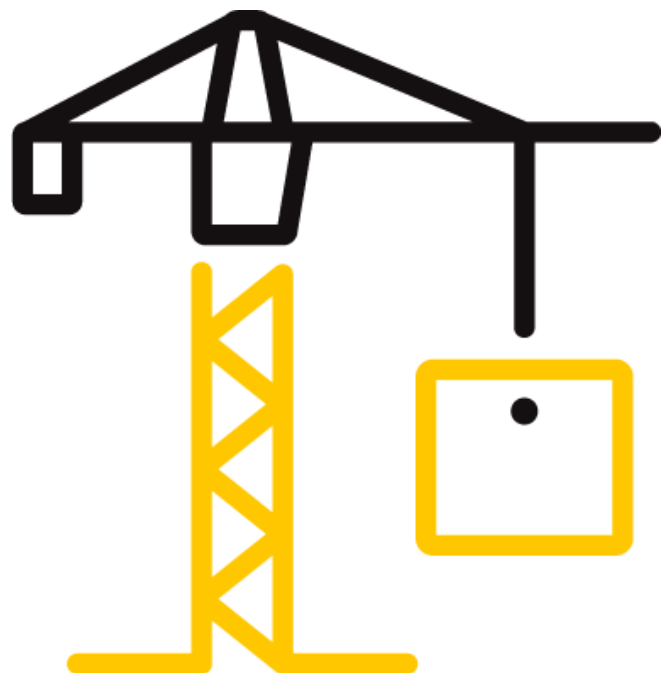
09/29/25

**PAGES**

16

**DOCUMENT CONTROL NUMBER**

ATI 00479 (07/24/17)  
RT-R-AMER-Test-2805  
© 2017 INTERTEK



## TEST REPORT FOR CLADDING FAÇADE SOLUTIONS

Report No.: M6716.01-109-44

Date: 12/01/21

### REPORT ISSUED TO

#### CLADDING FAÇADE SOLUTIONS

5109 Commonwealth Drive  
Fredericksburg, Virginia 22407

### SECTION 1

#### SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Cladding Façade Solutions to perform testing in accordance with ASTM E330/E330M on their CFS CF (Concealed Fastened) Equitone 8 mm, cement panels. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek B&C test facility in York, Pennsylvania.

### SECTION 2

#### SUMMARY OF TEST RESULTS

TITLE	TEST SPECIMEN #1 RESULTS
Negative Design Pressure	-4800 Pa (-100.25 psf)

TITLE	TEST SPECIMEN #2 RESULTS
Positive Design Pressure	+4800 Pa (+100.25 psf)

For INTERTEK B&C:

<b>COMPLETED BY:</b>	Andrew P. Mehalick	<b>REVIEWED BY:</b>	Vicki L. McElwain
<b>TITLE:</b>	Technician – Product Testing	<b>TITLE:</b>	Manager – Product Testing
<b>SIGNATURE:</b>		<b>SIGNATURE:</b>	
<b>DATE:</b>	12/01/21	<b>DATE:</b>	12/01/21

APM:nls

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

## TEST REPORT FOR CLADDING FAÇADE SOLUTIONS

Report No.: M6716.01-109-44

Date: 12/01/21

### SECTION 3

#### TEST METHOD(S)

The specimens were evaluated in accordance with the following:

**ASTM E330/E330M-14**, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

### SECTION 4

#### MATERIAL SOURCE/INSTALLATION

Test specimens were provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of four years from the test completion date.

### SECTION 5

#### EQUIPMENT

Tape Measure Verification: 63788

Weather Station: 63316

Control Panel: 003921

Linear Transducers: 62182, 62187, 64325, 62189, Y003060, 64460

### SECTION 6

#### LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Michael Dasaro	Cladding Façade Solutions
Vicki L. McElwain	Intertek B&C
Andrew P. Mehalick	Intertek B&C

## TEST REPORT FOR CLADDING FAÇADE SOLUTIONS

Report No.: M6716.01-109-44

Date: 12/01/21

### SECTION 7

#### TEST SPECIMEN DESCRIPTION

**Product Type:** Cement Panels

**Series/Model:** CFS CF (Concealed Fastened) Equitone 8 mm

**Product Size(s):**

**Test Specimens #1 and #2:**

OVERALL AREA:	WIDTH		HEIGHT	
	millimeters	inches	millimeters	inches
5.6 m <sup>2</sup> (60.5 ft <sup>2</sup> )				
Overall size	2346	92-3/8	2397	94-3/8
Panel size	1168	46	1194	47

*The following descriptions apply to all specimens.*

**Test Wall Construction:** The test wall was constructed from 18-gauge steel studs and tracks. The studs were secured to the track using #6 x 1/2" Tek screws upon the interior and exterior of the tracks. The wall was sheathed with 5/8" exterior gypsum board. The gypsum board was secured using #8 x 1-5/8" self-tapping flat head screws spaced 8" on center. The test wall had an air water vapor barrier placed upon it and stapled into place using 3/8" crown X 1/2" long staples every 12" on center. The vapor barrier allowed for a 3" overlap at each seam and the seams were taped. Clips were placed 1" below the top and 1" above the bottom of the test wall, at each stud and spaced 16" on center. The "L" clips were made from 0.170" thick aluminum and measured 3-3/4" wide, 4-3/4" high, 2" deep. Two #12 x 2-1/2" hex head self-tapping screws were utilized to secure the clips to the test wall. A 1/4" PVC spacer was placed under the clip prior to it being secured to the wall. A 0.075" thick aluminum "T" rail was secured to the clips and were run vertically. The "T" rail measured 3-1/2" wide by 2-1/4" tall and was secured using two #10 x 7/8" hex head self-tapping screws through the clip and into the rail. A 0.113" thick aluminum interlocking installation rail was placed on top of the "T" rail. The interlocking rail was 2-1/2" wide by 1-1/4" tall by 48" long. The rail was secured to the "T" rails using two 1/4" x 1" hex head self-tapping screws through the rail and into the "T" rail. The panel clips were then secured into the interlocking rail and secured into place using one #10 x 1" hex head self-tapping screw through the clip and into the interlocking rail. The clips were spaced 4" from each edge and spaced 16" horizontally and 13" vertically. For negative loads, 2 mil plastic was placed on top of the rail system. For positive loads, the 2 mil plastic was placed on top of the panels to facilitate testing.

**Panel Construction:** The panel was constructed from 8 mm thick fiber cement board. The panels utilized a 1/4"-20 x 7/8" stud to secure the panel to an installation clip. The installation clip was composed of 0.078" thick aluminum and measured 2-1/2" wide by 3-1/2" long by 1-1/8" high. The clip was secured to the stud using a 1/4"-20 nut.

**TEST REPORT FOR CLADDING FAÇADE SOLUTIONS**

Report No.: M6716.01-109-44

Date: 12/01/21

**SECTION 8**

**TEST RESULTS**

The temperature range during testing was 19°C - 26°C (66°F - 78°F). The results are tabulated as follows:

**Test Specimen #1:**

TITLE OF TEST	RESULTS	NOTE
<b>Uniform Load Deflection,</b> per ASTM E330 Deflections taken between fasteners -4800 Pa (-100.25 psf)	0.5 mm (0.02")	1, 2
<b>Uniform Load Deflection,</b> per ASTM E330 Deflections taken between installation rails -4800 Pa (-100.25 psf)	0.3 mm (0.01")	1, 2
<b>Uniform Load Deflection,</b> per ASTM E330 Deflections taken at center of the panel -4800 Pa (-100.25 psf)	1.3 mm (0.05")	1, 2
<b>Uniform Load Structural,</b> per ASTM E330 Permanent set taken between fasteners -7200 Pa (-150.38 psf)	<0.3 mm (<0.01")	1, 2
<b>Uniform Load Structural,</b> per ASTM E330 Permanent set taken between installation rails -7200 Pa (-150.38 psf)	0.3 mm (0.01")	1, 2
<b>Uniform Load Structural,</b> per ASTM E330 Permanent set taken at center of the panel -7200 Pa (-150.38 psf)	0.5 mm (0.02")	1, 2

**TEST REPORT FOR CLADDING FAÇADE SOLUTIONS**

Report No.: M6716.01-109-44

Date: 12/01/21

**Test Specimen #2:**

TITLE OF TEST	RESULTS	NOTE
<b>Uniform Load Deflection,</b> per ASTM E330 Deflections taken between fasteners +4800 Pa (+100.25 psf)	0.5 mm (0.02")	1, 2
<b>Uniform Load Deflection,</b> per ASTM E330 Deflections taken between installation rails +4800 Pa (+100.25 psf)	<0.3 mm (<0.01")	1, 2
<b>Uniform Load Deflection,</b> per ASTM E330 Deflections taken at center of the panel +4800 Pa (+100.25 psf)	0.8 mm (0.03")	1, 2
<b>Uniform Load Structural,</b> per ASTM E330 Permanent set taken between fasteners +7200 Pa (+150.38 psf)	0.3 mm (0.01")	1, 2
<b>Uniform Load Structural,</b> per ASTM E330 Permanent set taken between installation rails +7200 Pa (+150.38 psf)	0.3 mm (0.01")	1, 2
<b>Uniform Load Structural,</b> per ASTM E330 Permanent set taken at center of the panel +7200 Pa (+150.38 psf)	0.3 mm (0.01")	1, 2

**General Note:** All testing was performed in accordance with the referenced standard(s).

*Note 1: Loads were held for 10 seconds.*

*Note 2: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.*

## TEST REPORT FOR CLADDING FAÇADE SOLUTIONS

Report No.: M6716.01-109-44

Date: 12/01/21

### SECTION 9

#### CONCLUSION

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

## TEST REPORT FOR CLADDING FAÇADE SOLUTIONS

Report No.: M6716.01-109-44

Date: 12/01/21

### SECTION 10 PHOTOGRAPH



**Photo No. 1**  
**Test Specimen Prior to Testing**





Total Quality. Assured.

130 Derry Court  
York, Pennsylvania 17406

Telephone: 717-764-7700  
Facsimile: 717-764-4129  
[www.intertek.com/building](http://www.intertek.com/building)

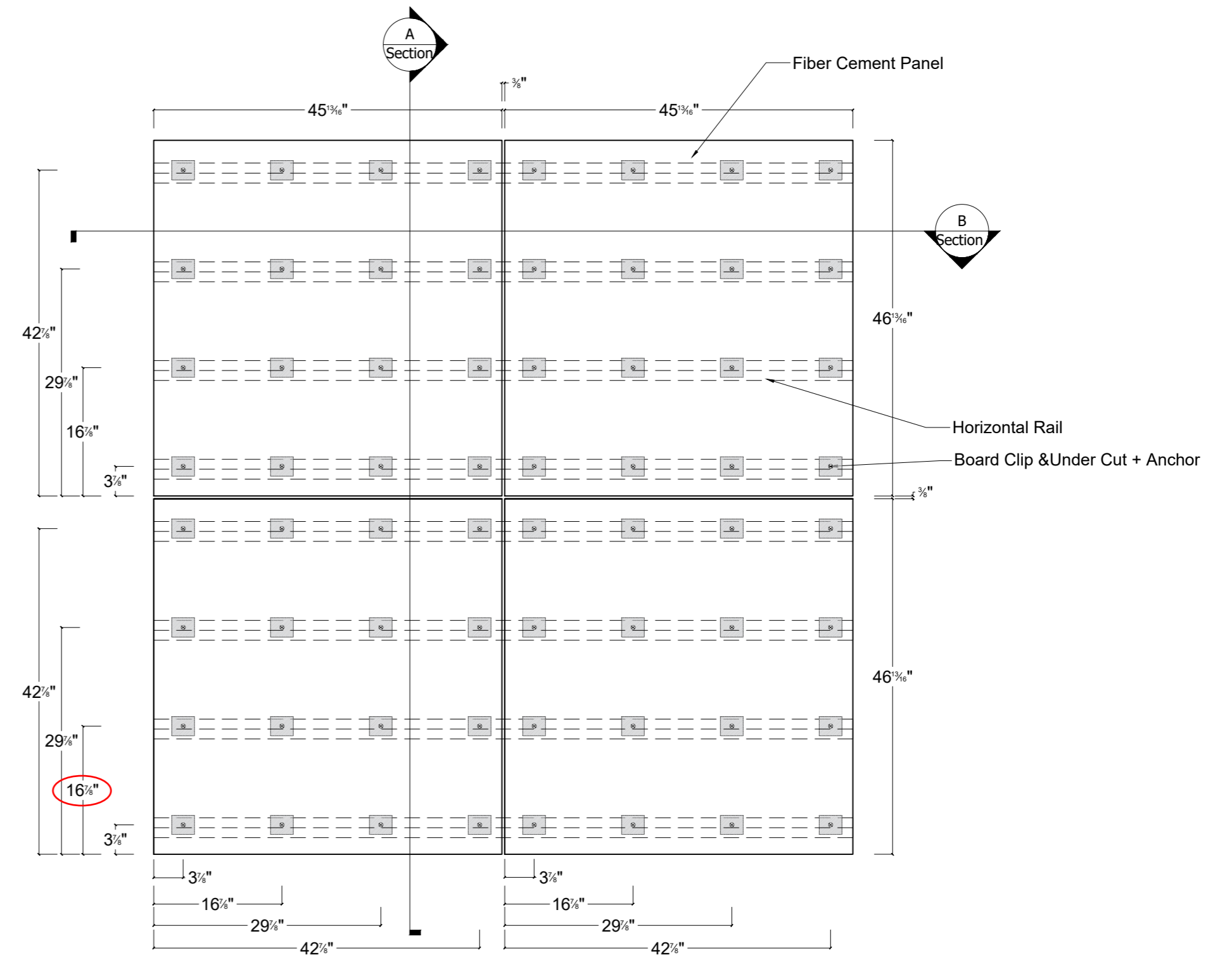
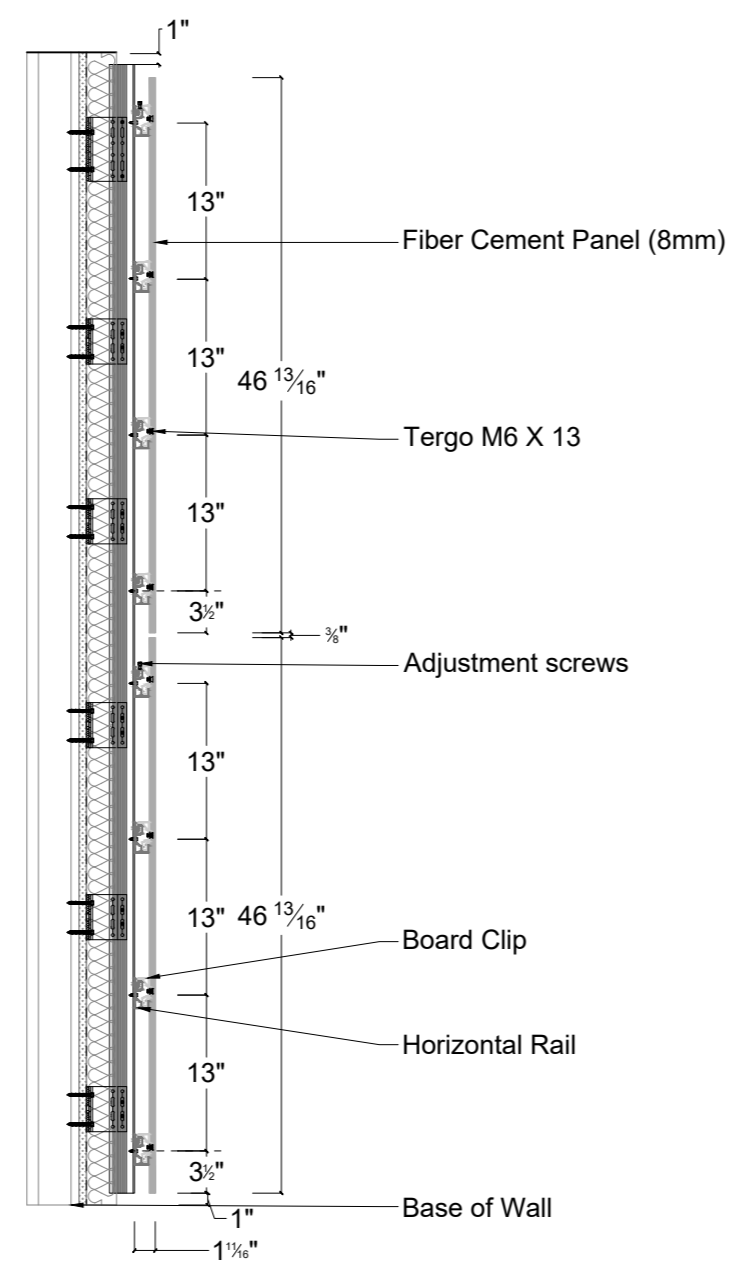
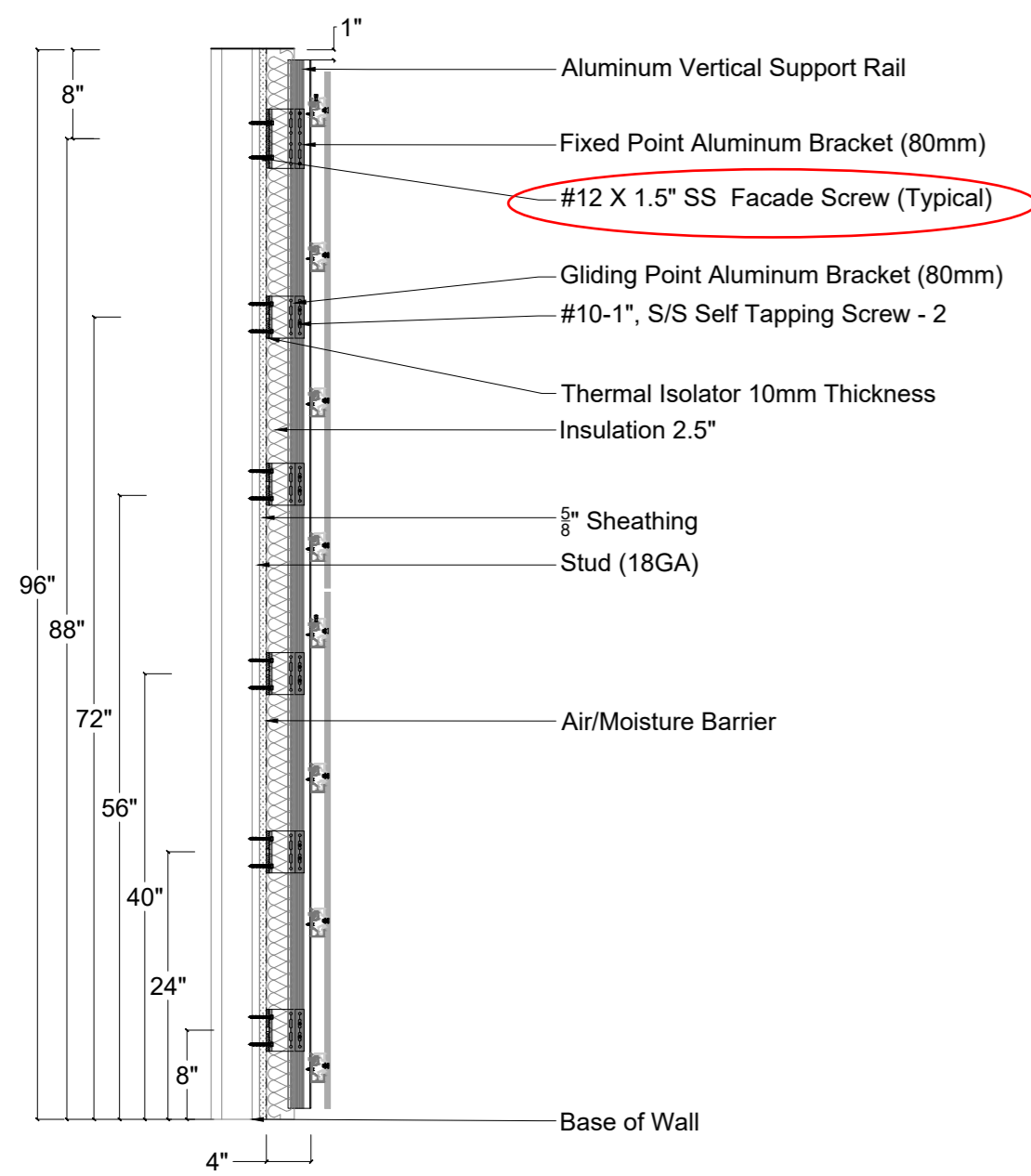
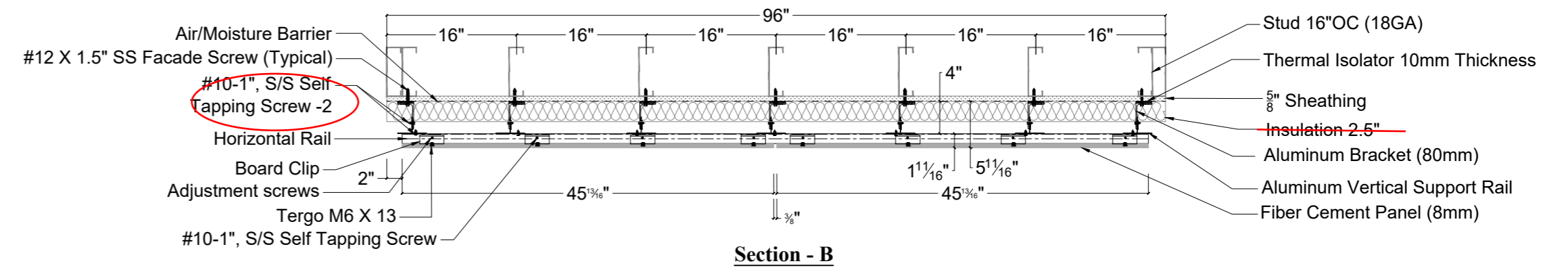
## TEST REPORT FOR CLADDING FAÇADE SOLUTIONS

Report No.: M6716.01-109-44


Date: 12/01/21

### SECTION 11 DRAWINGS

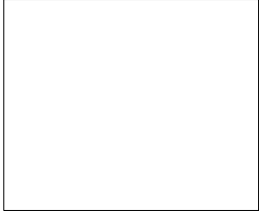
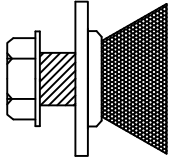


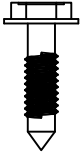
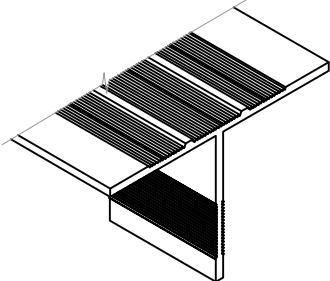
The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

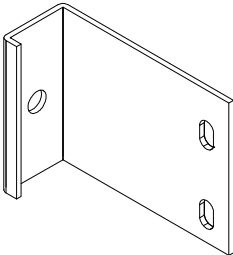
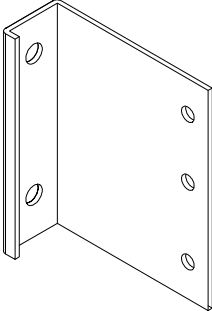
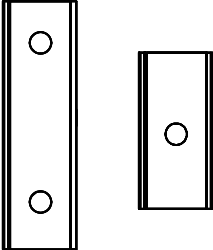
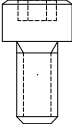


	Report #:	M6716.01-109-44
	Date:	10/19/2021
	Verified by:	<i>Andrew P. Mahabadi</i>

<b>Mock Up Drawing</b> (Concealed Fastener System)	
---	---

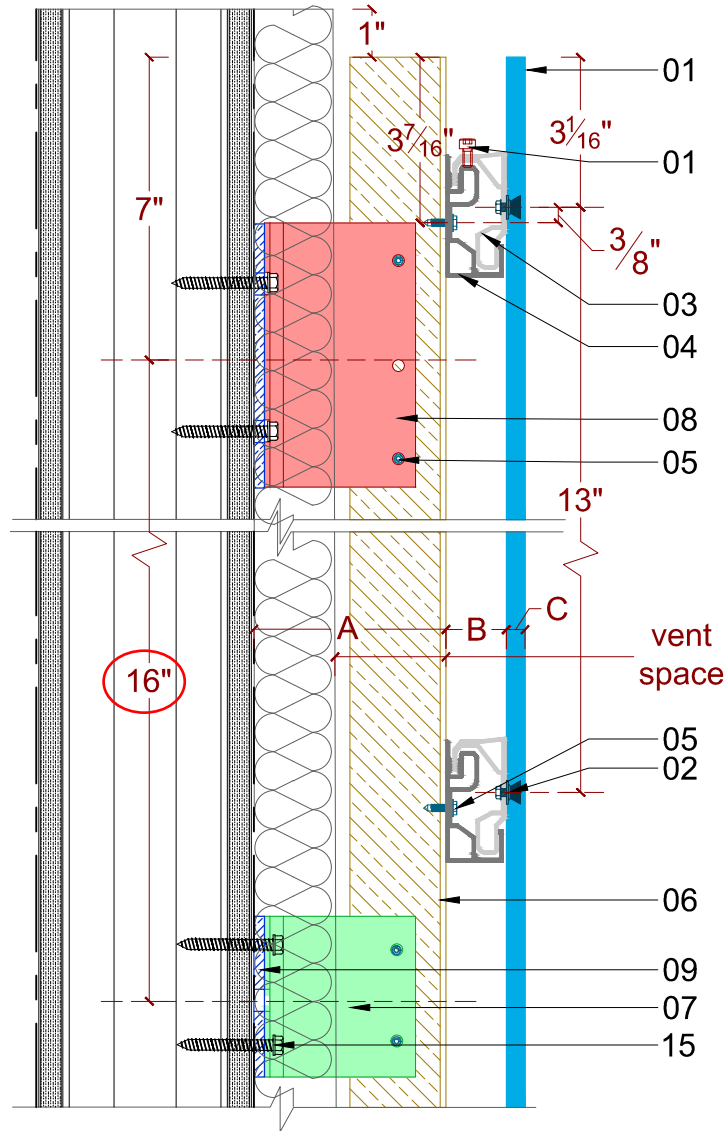
## CFS FIBER CEMENT PANEL Concealed Fastened Testing Component List

No	Materials	
01	Fiber Cement Panel	
02	Under Cut + Anchor	
03	Board Clip	
04	Horizontal Rail	
05	#10-1", S/S Self Tapping Screw	
06	Aluminum Vertical Support Rail	

07	Gliding Point Aluminum Bracket	
08	Fixed Point Aluminum Bracket	
09	Thermal Isolator	
10	Adjustment Screws	

	Report #: M6716.01-109-44
	Date: 10/19/2021
	Verified by: <i>Andrew P. Mohabed</i>

## CFS FIBER CEMENT PANEL - CF



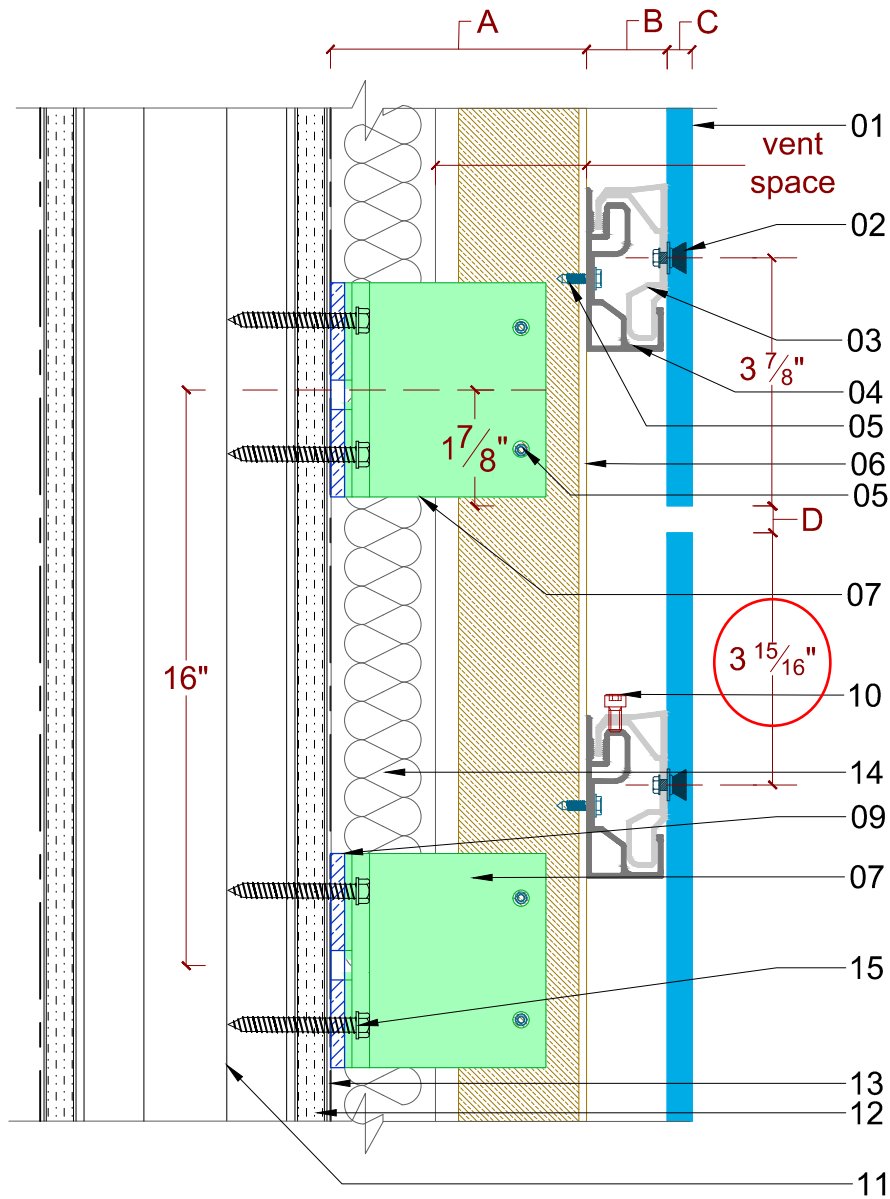
No	Materials
01	Fiber Cement Panel
02	Under Cut + Anchor
03	Board Clip
04	Horizontal Rail
05	#10-1", S/S Self Tapping Screw
06	Aluminum vertical support rail
07	Gliding Point Aluminum Bracket
08	Fixed Point Aluminum Bracket
09	Thermal Isolator
10	Adjustment screws
11	Metal Stud Framing (18 Gauge)
12	Sheathing (5/8" - Gypsum board)
13	Air / Moisture Barrier
14	Insulation (Mineral wool) Thickness varies
15	Facade Screw #12 x1.5" SS

1 Vertical Section Detail  
Scale: NTS

<b>intertek</b> <small>Total Quality. Assured.</small>	Report #:	M6716.01-109-44
	Date:	10/19/2021
	Verified by:	<i>Andrew P. Mehabet</i>

DIMENSION LEGEND		
Code	Measurements	Remarks
A	4" (100mm)	
B	1 <sup>5</sup> / <sub>16</sub> " (34mm)	
C	<sup>3</sup> / <sub>8</sub> " (8mm)	


## CFS FIBER CEMENT PANEL - CF



### 2 Horizontal Panel Joint Detail

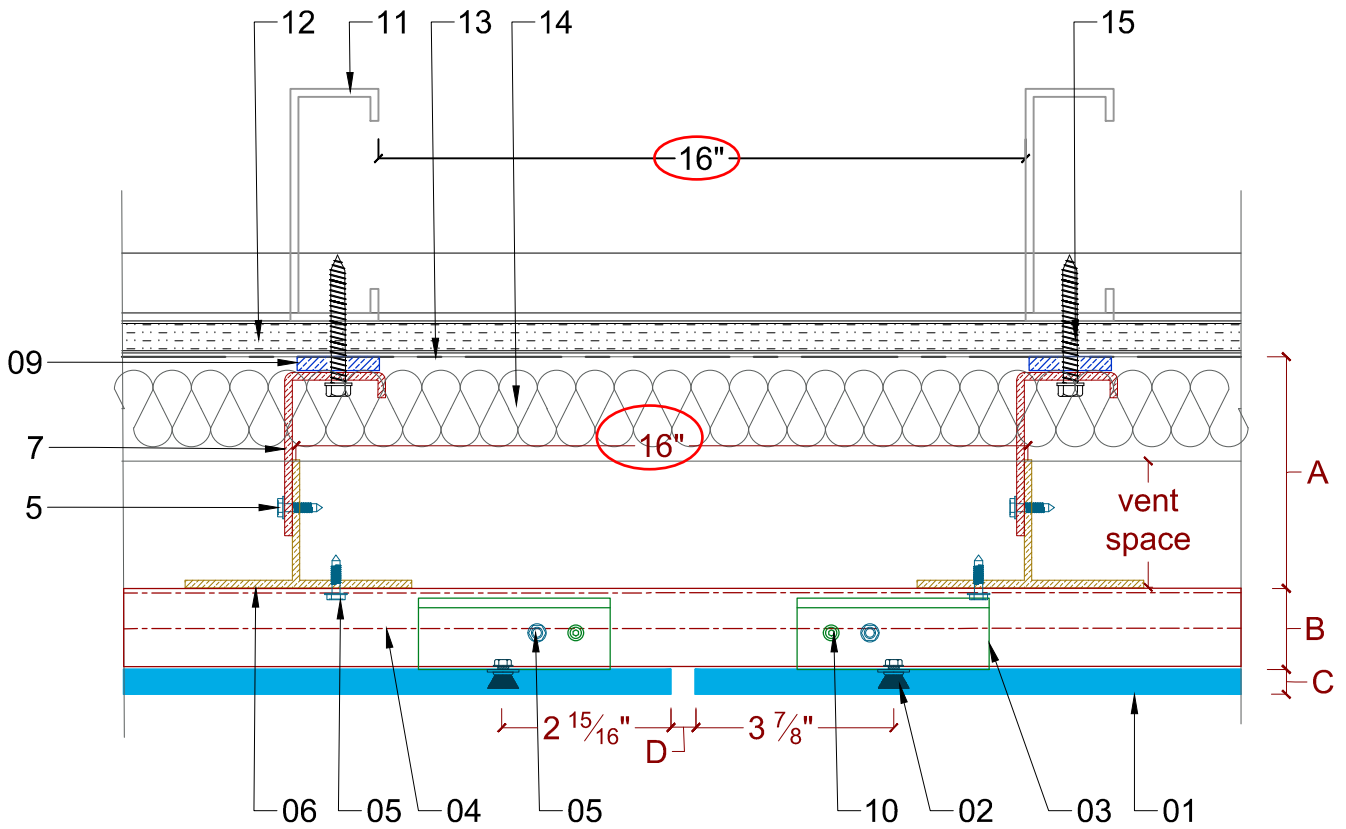
Scale: NTS

No	Materials
01	Fiber Cement Panel
02	Under Cut + Anchor
03	Board Clip
04	Horizontal Rail
05	#10-1", S/S Self Tapping Screw
06	Aluminum vertical support rail
07	Gliding Point Aluminum Bracket
08	Fixed Point Aluminum Bracket
09	Thermal Isolator
10	Adjustment screws
11	Metal Stud Framing (18 Gauge)
12	Sheathing (5/8" - Gypsum board)
13	Air / Moisture Barrier
14	Insulation (Mineral wool) Thickness varies
15	Facade Screw #12 x1.5" SS

 Total Quality. Assured.	Report #:	M6716.01-109-44
	Date:	10/19/2021
	Verified by:	<i>Andrew P. Mehabet</i>

DIMENSION LEGEND		
Code	Measurements	Remarks
A	4" (100mm)	
B	1 5/16" (34mm)	
C	3/8" (8mm)	
D	3/8" (8mm)	

## CFS FIBER CEMENT PANEL - CF



**3 Vertical Panel Joint Detail**

Scale: NTS

No	Materials
01	Fiber Cement Panel
02	Under Cut + Anchor
03	Board Clip
04	Horizontal Rail
05	#10-1", S/S Self Tapping Screw
06	Aluminum vertical support rail
07	Gliding Point Aluminum Bracket
08	Fixed Point Aluminum Bracket
09	Thermal Isolator
10	Adjustment screws
11	Metal Stud Framing (18 Gauge)
12	Sheathing (5/8" - Gypsum board)
13	Air / Moisture Barrier
14	Insulation (Mineral wool) Thickness varies
15	Facade Screw #12 x1.5" SS

	Report #:	M6716.01-109-44
	Date:	10/19/2021
	Verified by:	<i>Antonio P. Mehalik</i>

DIMENSION LEGEND		
Code	Measurements	Remarks
A	4" (100mm)	
B	1 5/16" (34mm)	
C	3/8" (8mm)	
D	3/8" (8mm)	



Total Quality. Assured.

130 Derry Court  
York, Pennsylvania 17406

Telephone: 717-764-7700  
Facsimile: 717-764-4129  
[www.intertek.com/building](http://www.intertek.com/building)

## TEST REPORT FOR CLADDING FAÇADE SOLUTIONS

Report No.: M6716.01-109-44

Date: 12/01/21

### SECTION 12

#### REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	12/01/21	N/A	Original Report Issue