

INNOVA PANEL, LLC

STRUCTURAL INSULATED PANEL - MgO/MgO WALL PANEL

PERFORMANCE RATINGS

GENERAL NOTES:

1. THE PRODUCT SHOWN HEREIN HAS BEEN TESTED TO THE FOLLOWING PERFORMANCE TESTING STANDARDS IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA BUILDING AND RESIDENTIAL CODES EXCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).

1.1. ASTM E330-14

1.2. ASTM E72-10 AND 15

1.3. ASTM E1803-10
2. THE PRODUCT DETAILS CONTAINED HEREIN ARE BASED UPON SIGNED AND SEALED FENESTRATION TESTING LABORATORY TEST REPORT NO. 15-6180/LAB NO. 8897 AND ASSOCIATED LABORATORY DRAWINGS CONSISTENT WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE FLORIDA BUILDING AND RESIDENTIAL CODES EXCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
3. ADEQUACY OF THE EXISTING STRUCTURAL FRAMING SYSTEM AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT TRANSVERSE LOADS TO THE STRUCTURE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.

3.1. PANEL TO FLOOR SUBSTRATE ATTACHMENTS SHOWN ON SHEETS 2 THROUGH 6 ARE REPRESENTATIVE OF AS-TESTED CONDITIONS AND DO NOT REPRESENT AN AS-APPROVED CONDITION.

3.2. ALL ATTACHMENTS TO SUBSTRATES OR STRUCTURAL FRAMING SYSTEM REMAINS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4. THE DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, SITE SPECIFIC DOCUMENTS SHALL BE PREPARED FOR USE WITH THIS DOCUMENT.
5. SEE SIP PANEL SCHEDULE TABLE ON THIS SHEET FOR APPROVED PANEL COMPOSITIONS.
6. SEE PERFORMANCE RATINGS TABLES ON SHEET 8 FOR DESIGN LOADING LIMITATIONS BASED ON THE FOLLOWING PARAMETERS.

6.1. WIND LOADING

6.1.1. DP LIMITATION BASED ON DEFLECTION AT L/360, L/240, L/180 AND L/120.

6.1.2. DP LIMITATION BASED ON ULTIMATE DESIGN LOADING ACHIEVED IN TESTING TO ASTM E330 DIVIDED BY A 1.5 SAFETY FACTOR.

6.2. DIRECT LOADING

6.2.1. RACKING LOADING BASED ON DEFLECTION AT L/360, L/240, L/180 AND L/120 USING A SAFETY FACTOR OF 2.

6.2.2. TENSION LOADING BASED ON DEFLECTION AT L/360, L/240, L/180 AND L/120 USING A SAFETY FACTOR OF 2.

6.2.3. COMPRESSION LOADING BASED ON DEFLECTION AT L/360, L/240, L/180 AND L/120 USING A SAFETY FACTOR OF 2.
7. MAXIMUM PANEL SIZE

7.1. MAXIMUM SUPPORTED SPAN IS 10' (120").

7.1.1. RACKING LOAD RESULTS PROVIDED FOR 10' (120") AND 8' (96") HIGH WALL PANELS.

7.1.2. TENSION AND COMPRESSION LOAD RESULTS PROVIDE FOR 8' (96") WIDE x 1'-4" (16") HIGH HEADER WALL PANELS.

7.2. WIDTH IS NOT LIMITED BASED ON TESTING AND CAN BE CONNECTED USING THE SPLICE PLATE CONNECTION DETAIL SHOWN ON SHEETS 2 AND 3
8. THE MANUFACTURING OF THIS PRODUCT AS DEPICTED IN THIS PRODUCT APPROVAL DOCUMENT INVOLVES THE USE OF ONE OR MORE PATENTS. ANY UNAUTHORIZED DUPLICATION IS A VIOLATION OF THE ISSUED PATENTS.

SIP PANEL SCHEDULE				
EXTERIOR SKIN	INTERIOR SKIN	CORE	OVERALL NOMINAL PANEL THICKNESS	ADHESIVE
12 MM THICK MAGNESIUM OXIDE BOARD BY MGO CORP	12 MM THICK MAGNESIUM OXIDE BOARD BY MGO CORP	3 5/8" 1.0 PCF INSULFOAM EXPANDED POLYSTYRENE (EPS)	4 5/8"	DUPONT BETAFUSE 643 & 654 LAMINATING ADHESIVE

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4	10' HIGH WALL PANEL DETAILS - TRANSVERSE PRESSURE (WIND) LOAD
5	10' HIGH WALL PANEL DETAILS - TENSION LOAD
6	10' HIGH WALL PANEL DETAILS - COMPRESSION LOAD
7	16" HIGH HEADER WALL PANEL DETAILS - TENSION AND COMPRESSION LOAD
8	PERFORMANCE RATINGS

PROJECT NO. 422-0610

GENERAL UPDATE

1/6/23

RJA

UPDATE TO CURRENT EDITION FBC

10/14/20

RJA

DESCRIPTION

DATE

BY

INNOVA PANEL, LLC

1541B North Powerline Road

Pompano Beach, FL, 330639

TITLE: STRUCTURAL INSULATED PANEL - MgO/MgO WALL PANEL

GENERAL NOTES & PANEL SCHEDULE

PREPARED BY:

DRAWN BY: RJA

DATE: 10/12/16

SCALE: NONE

SHEET: 1 OF 8

PTC PRODUCT DESIGN GROUP, LLC

P.O. Box 320715

Longwood, FL 32726-0775

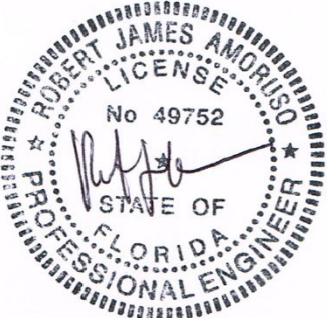
Phone: 321.680.1788

Fax: 321.680.1789

Email: info@ptc-corp.com

Robert J. Amoruso, P.E.

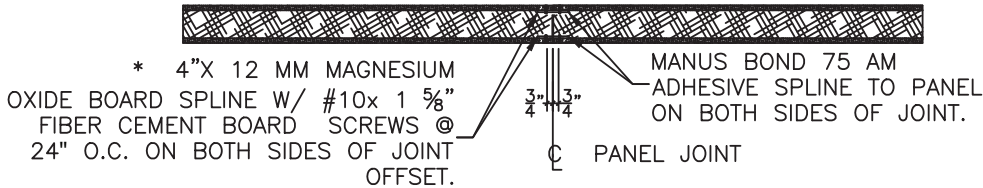
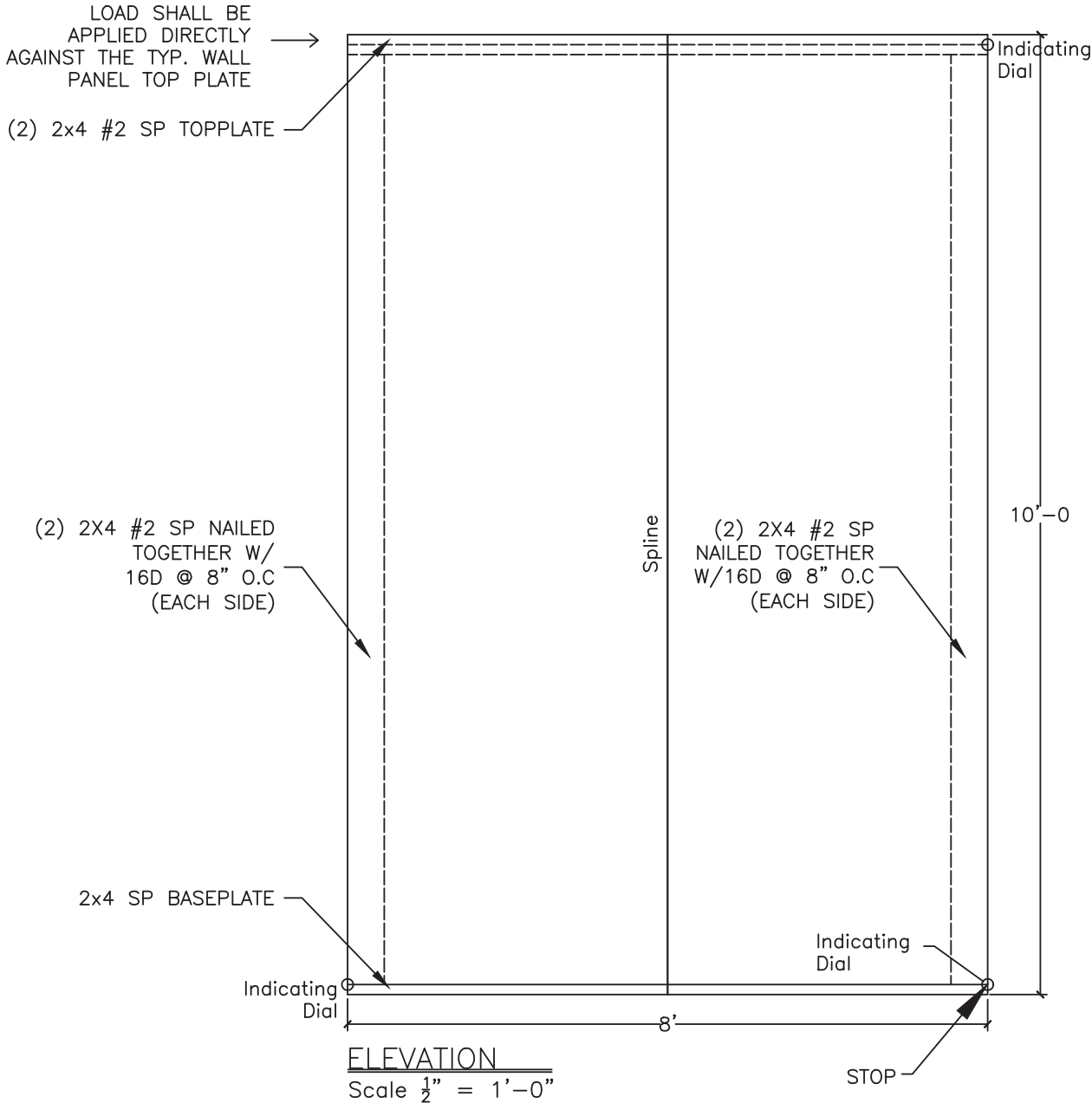
Florida P.E. No. 49752



Digitally signed by Robert J Amoruso

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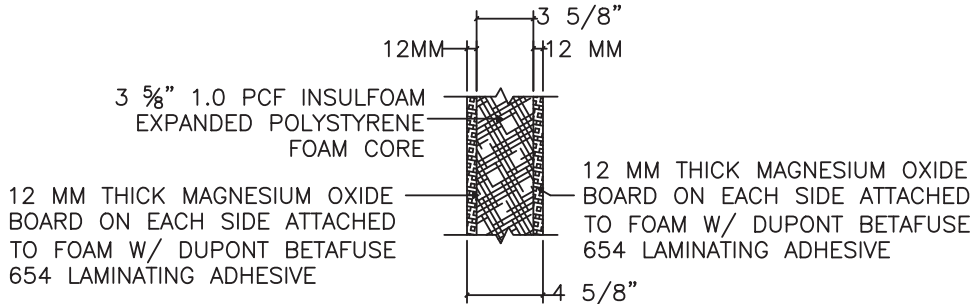
RACKING LOAD FOR 8'-0" (96") WIDE BY 10'-0" (120") HIGH WITH SPLICE



* MAGNESIUM OXIDE BOARD SPLINE
US PATENT # 2014 0250 827 A1

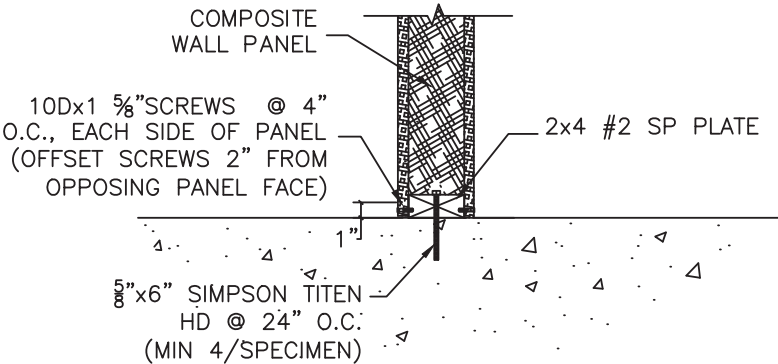
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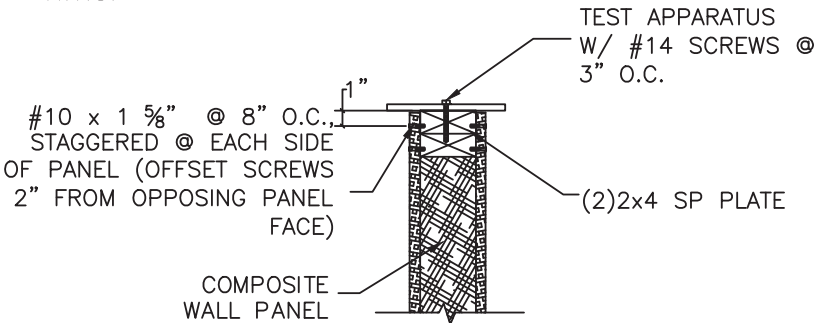
PANEL SECTION

N.T.S.



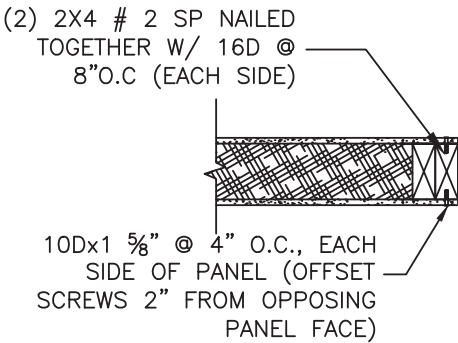
BASEPLATE SECTION

N.T.S.



TOPPLATE SECTION

N.T.S.



EDGE SECTION

N.T.S.

TEST

TESTING STANDARD: ASTM E1803-14 (ASTM E72-10, SECTION 14)

SPECIMENS TESTED: THREE (3)

TEST SPECIMEN: (2) 4'x10'x 4 5/8" PANELS AS SHOWN ABOVE

SEE TABLE 1, SHEET 8 FOR TEST RESULTS

PROJECT NO. 422-0610

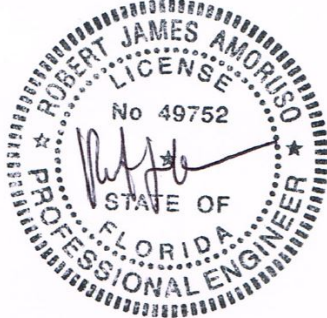
		RJA	BY
	1/6/23	RJA	DATE
GENERAL UPDATE	10/14/20	RJA	
UPDATE TO CURRENT EDITION FBC			
DESCRIPTION	REV		

INNOVA PANEL, LLC
1541B North Powerline Road
Pompano Beach, FL, 330639

TITLE: STRUCTURAL INSULATED PANEL - MgOMgO WALL PANEL
10' HIGH WALL PANEL DETAILS - RACKING LOAD

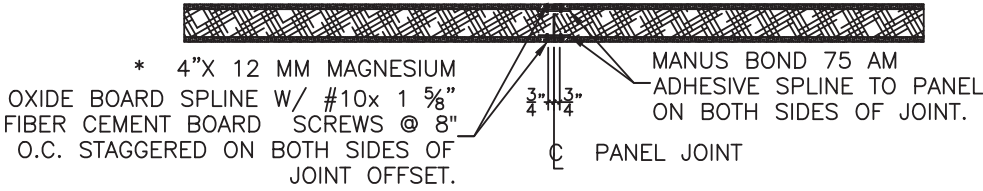
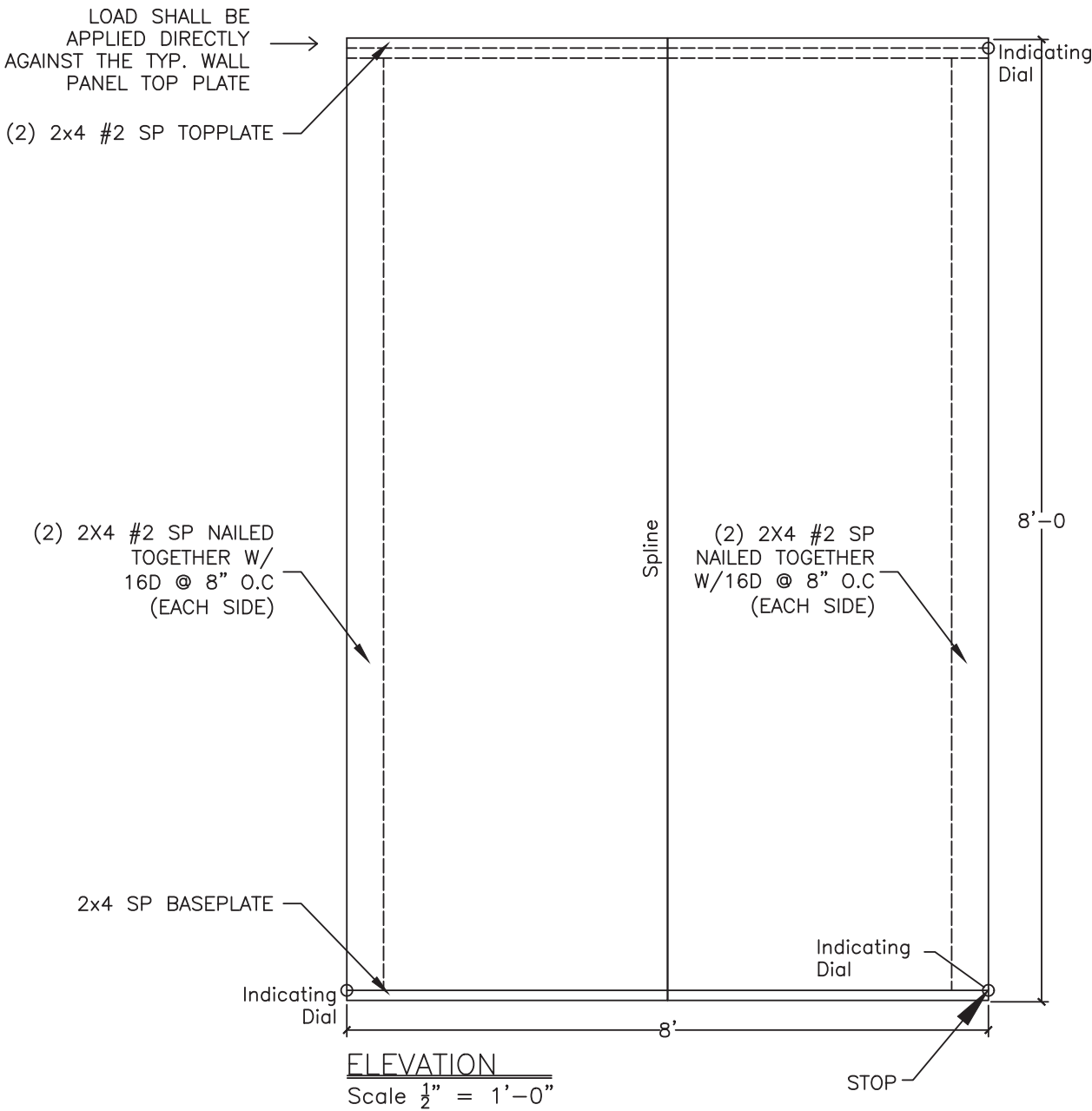
DATE:	10/12/16	DRAWING NO:	IEBS0007	SHEET:	2 OF 8
DRAWN BY:	RJA	SCALE:	NONE	REV:	C
PREPARED BY:					
PTC PRODUCT DESIGN GROUP, LLC P.O. Box 520775 Longwood, FL 32752-0775 FBPE Cert. of Auth. No. 25935					
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Amoruso
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16:08:34 -05'00'

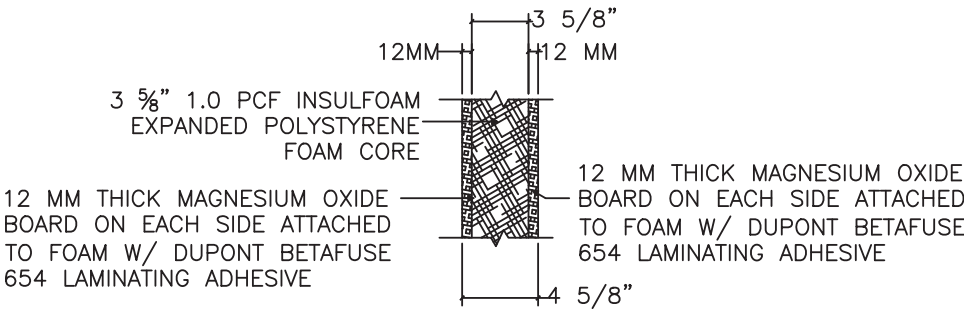
RACKING LOAD FOR 8'-0" (96") WIDE BY 8'-0" (96") HIGH WITH SPLICE



* MAGNESIUM OXIDE BOARD SPLINE
US PATENT # 2014 0250 827 A1

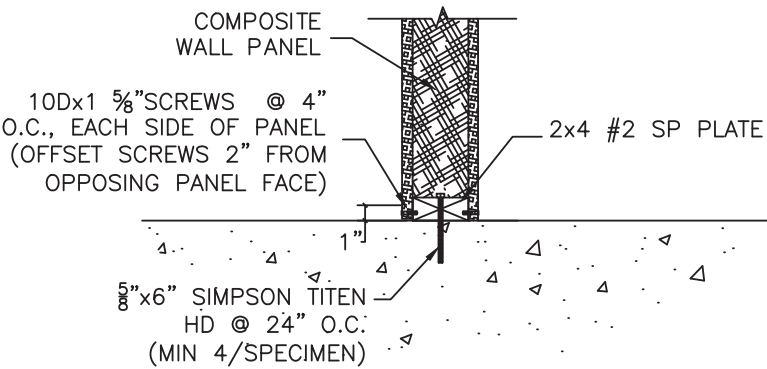
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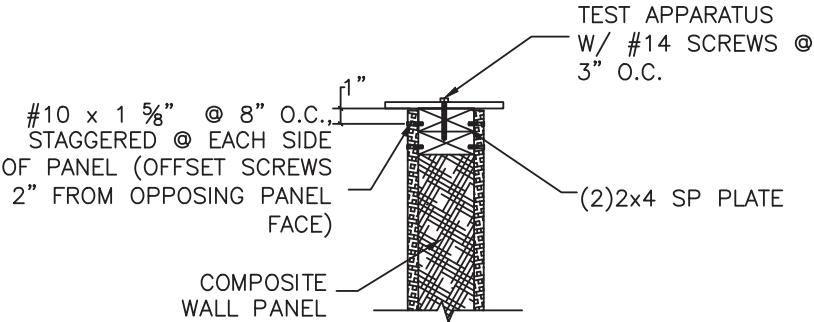
PANEL SECTION

N.T.S.



BASEPLATE SECTION

N.T.S.



TOPPLATE SECTION

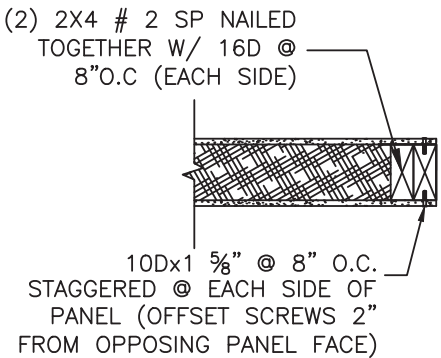
N.T.S.

TEST

TESTING STANDARD: ASTM E72-10, SECTION 14

SPECIMENS TESTED: THREE (3)

TEST SPECIMEN: (2) 4'x8'x 4 5/8" PANELS AS SHOWN ABOVE



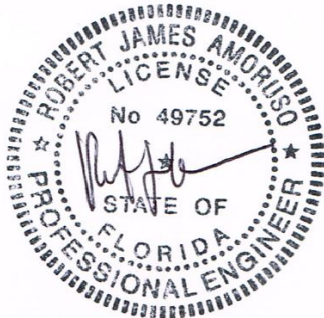
EDGE SECTION

N.T.S.

PROJECT NO. 422-0610		RJA	BY
		1/6/23	DATE
	GENERAL UPDATE	10/14/20	
	C	B	REV
	UPDATE TO CURRENT EDITION FBC		DESCRIPTION

INNOVA PANEL, LLC 1541B North Powerline Road Pompano Beach, FL, 330639				
TITLE: STRUCTURAL INSULATED PANEL - MgO/MgO WALL PANEL 8' HIGH WALL PANEL DETAILS - RACKING LOAD				
PREPARED BY:	DRAWN BY:	RJA	DATE:	10/12/16
	SCALE:	NONE	DRAWING NO:	IEBS0007
	REV:	C	SHEET:	3 OF 8
 PTC PRODUCT DESIGN GROUP, LLC P.O. Box 520775 Longwood, FL 32752-0775 Phone: 321.690.1788 Fax: 321.690.1789 Email: info@ptc-corp.com FBPE Cert. of Auth. No. 25935				

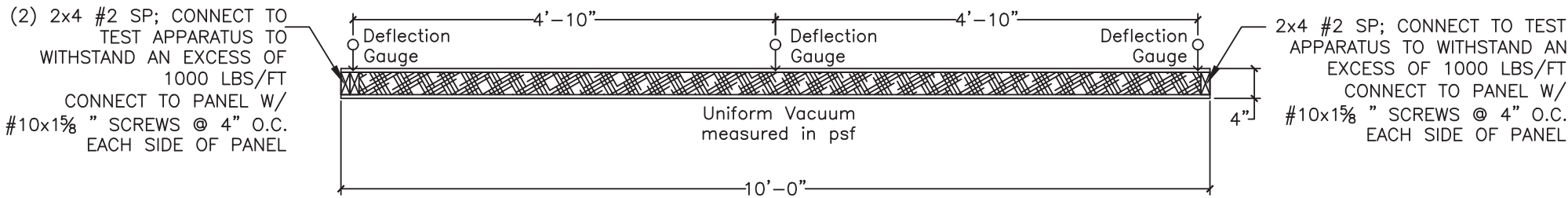
Robert J. Amoruso, P.E.
Florida P.E. No. 49752



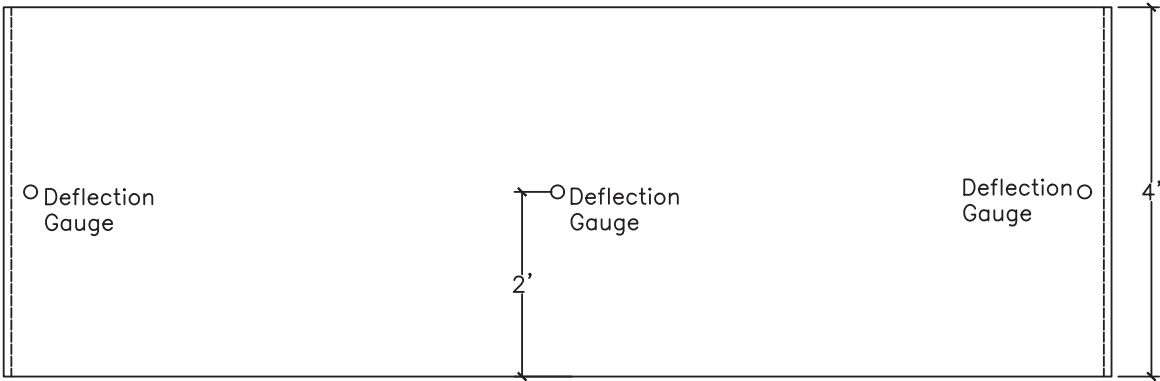
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by Robert J
Amoruso
Date: 2024.02.15
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SEE TABLE 2, SHEET 8 FOR TEST RESULTS

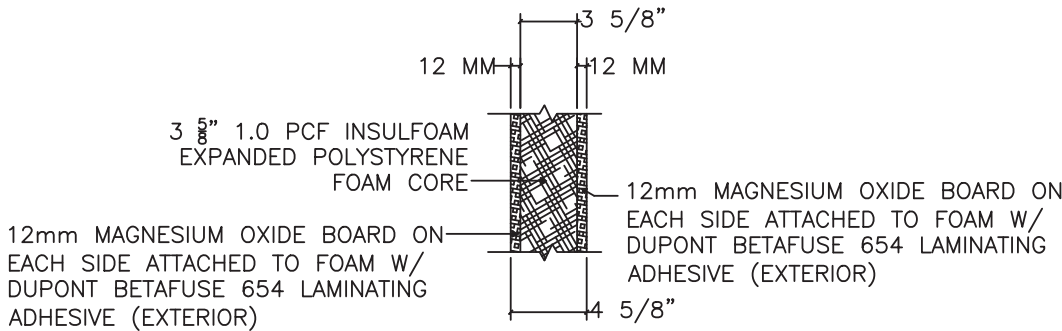
PRESSURE (WIND) LOAD FOR 4'-0" (48") WIDE BY 10'-0" (120") HIGH



ELEVATION
N.T.S.



PLAN
N.T.S.



PANEL SECTION
N.T.S.

TEST

TESTING STANDARD: ASTM E330-02

SPECIMENS TESTED: THREE (3)

TEST SPECIMEN: 4'x10'x 4 5/8" PANELS AS SHOWN ABOVE

SPECIMEN SHOWN ROTATED 90 DEG.

SEE TABLE 3, SHEET 8 FOR TEST RESULTS

PROJECT NO. 422-0610

		RJA	BY
		1/6/23	DATE
	GENERAL UPDATE		
	UPDATE TO CURRENT EDITION FBC	10/14/20	
	DESCRIPTION		
	REV		

INNOVA PANEL, LLC
1541B North Powerline Road
Pompano Beach, FL, 330639

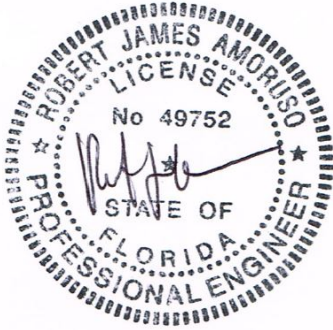
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10' HIGH WALL PANEL DETAILS - PRESSURE (WIND) LOAD

DATE:	10/12/16	DRAWING NO:	IEBS0007	SHEET:	4 OF 8
DRAWN BY:	RJA	SCALE:	NONE	REV:	C

PREPARED BY:

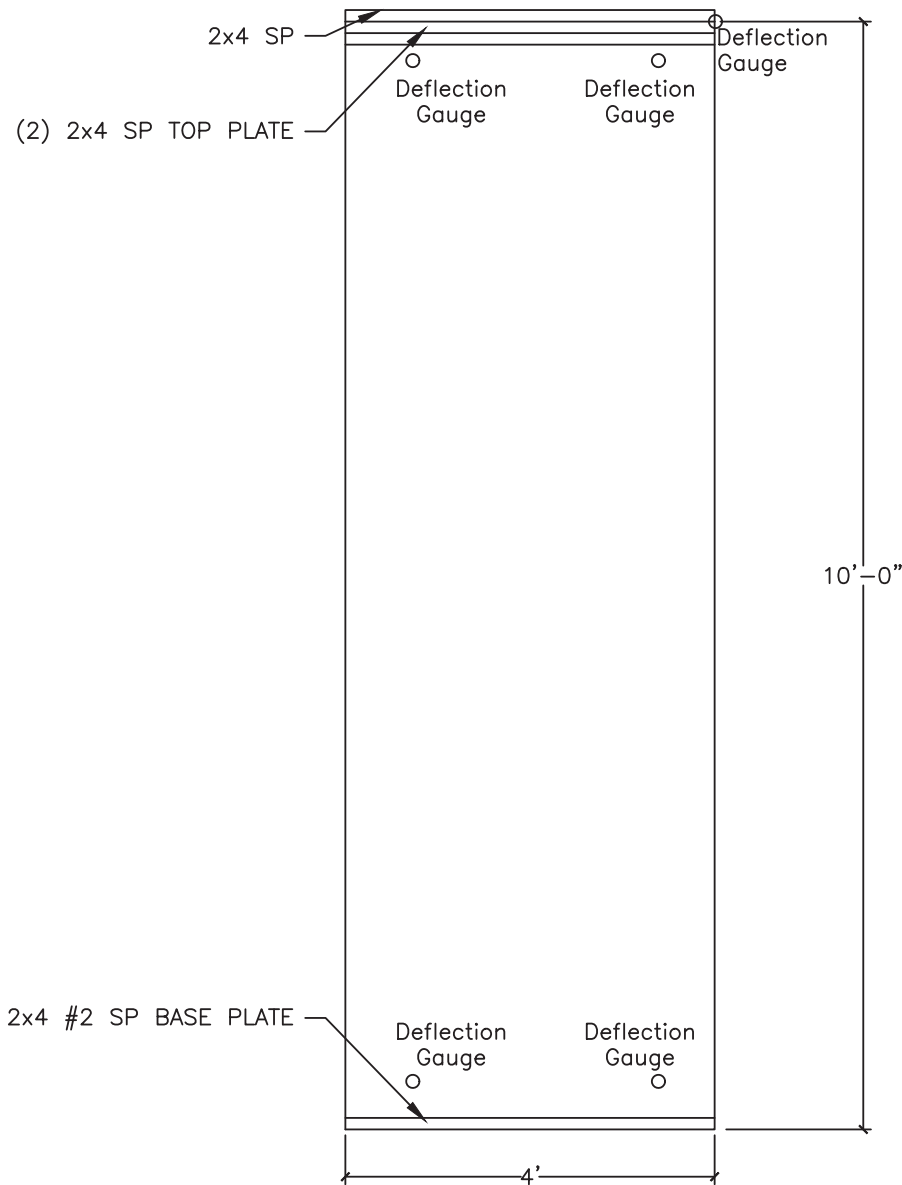
PTC PRODUCT DESIGN GROUP, LLC
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by Robert J
Amoruso
Date: 2024.02.15
16:09:01 -05'00'

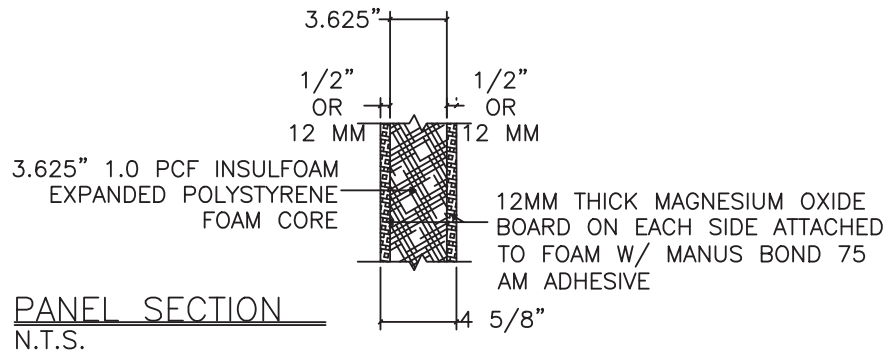
TENSILE LOAD FOR 4'-0" (48") WIDE BY 10'-0" (120") HIGH



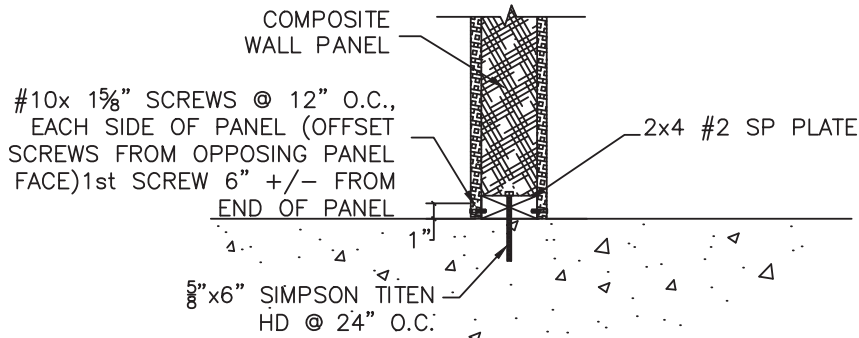
ELEVATION
Scale 1/2" = 1'-0"

TEST

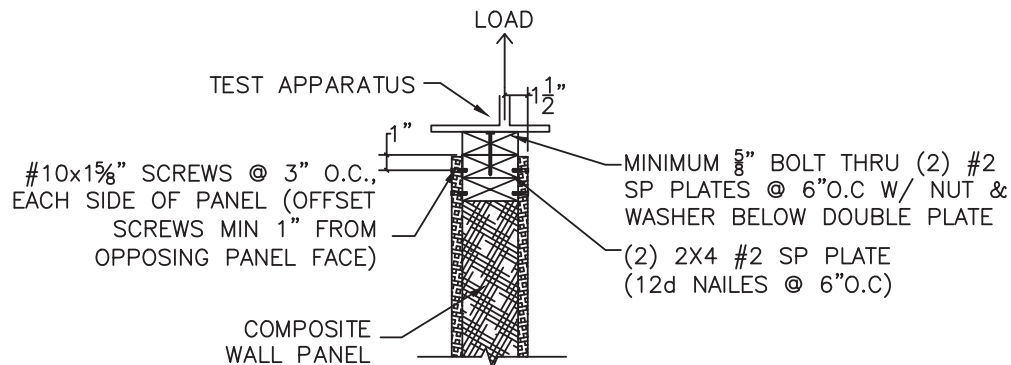
TESTING STANDARD: ASTM E72-10, SECTION 10 TENSION LOAD TEST
SPECIMENS TESTED: THREE (3)
TEST SPECIMEN: 4'x10'x 4 5/8" PANELS AS SHOWN ABOVE



PANEL SECTION
N.T.S.



BASEPLATE SECTION
N.T.S.



TOPPLATE SECTION
N.T.S.

SEE TABLE 4, SHEET 8 FOR TEST RESULTS

PROJECT NO. 422-0610

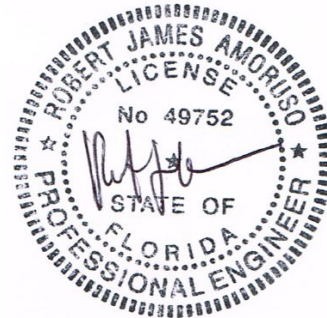
INNOVA PANEL, LLC
1541B North Powerline Road
Pompano Beach, FL, 330639

TITLE: STRUCTURAL INSULATED PANEL - MgOMgO WALL PANEL
10' HIGH WALL PANEL DETAILS - TENSION LOAD

DATE:	10/12/16
DRAWING NO:	IEBS0007
SHEET:	5 OF 8

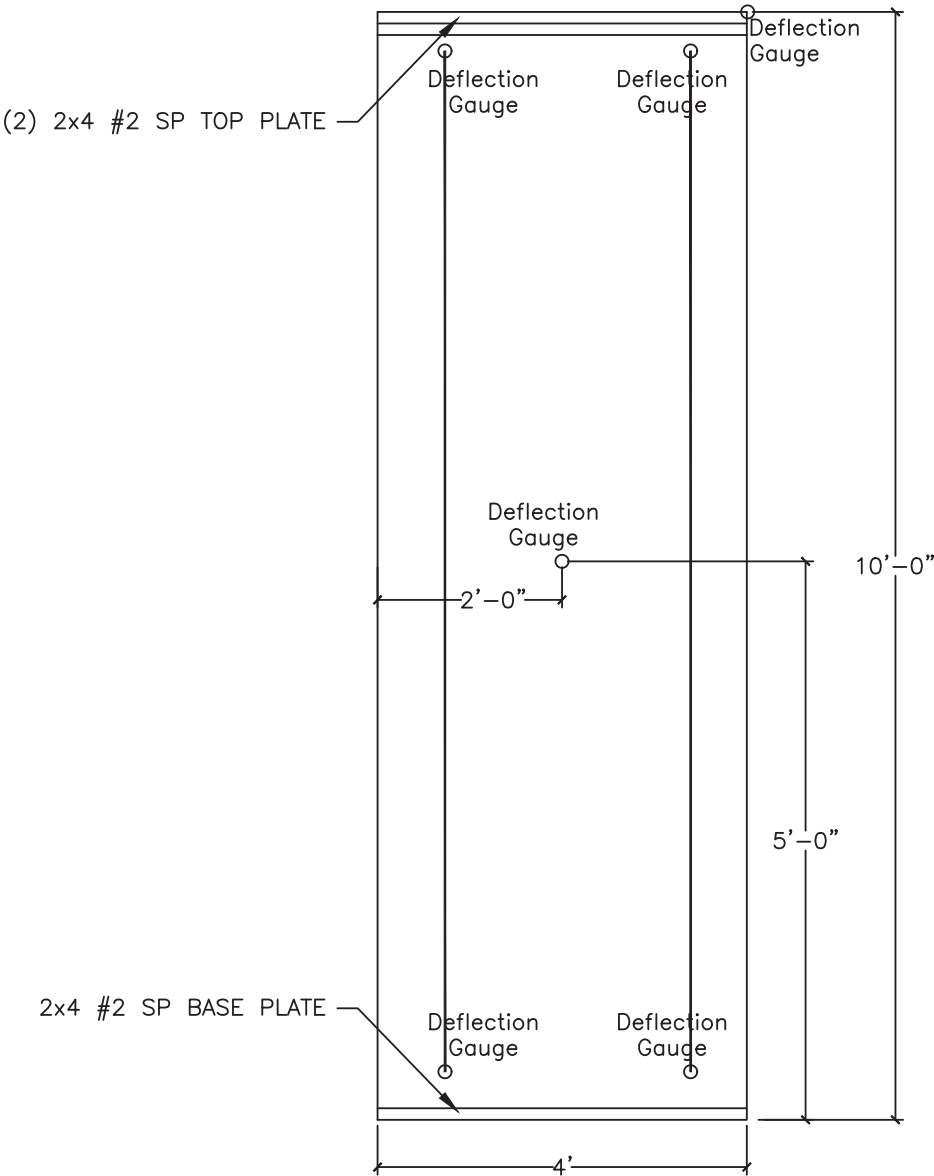
GENERAL UPDATE	1/6/23	RJA
UPDATE TO CURRENT EDITION FBC	10/14/20	RJA
DESCRIPTION	DATE	BY

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



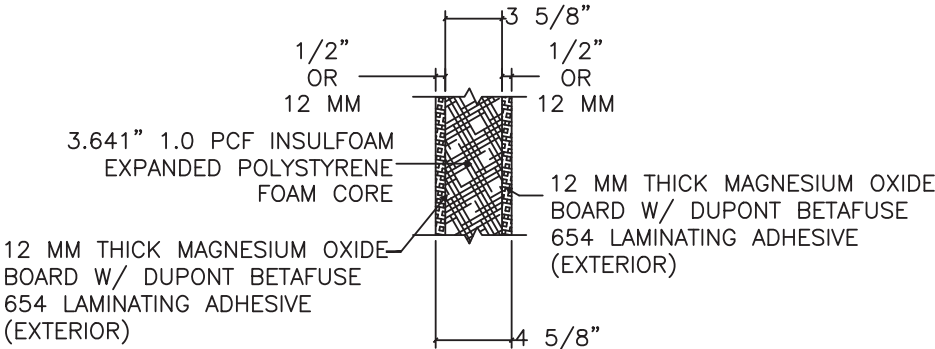
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Amoruso
Date: 2024.02.15
16:09:14 -05'00'

COMPRESSION LOAD FOR 4'-0" (48") WIDE BY 10'-0" (120") HIGH

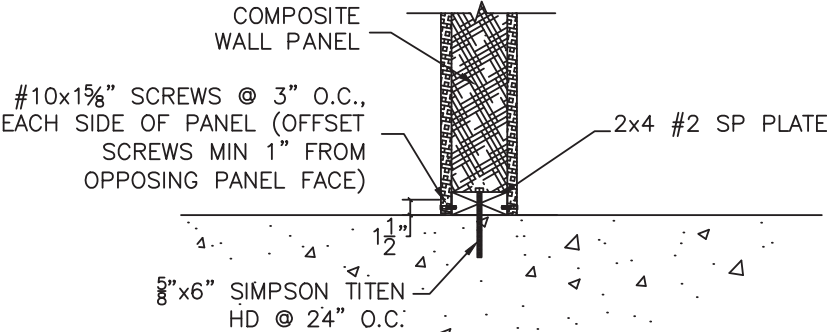


ELEVATION
Scale 1/2" = 1'-0"

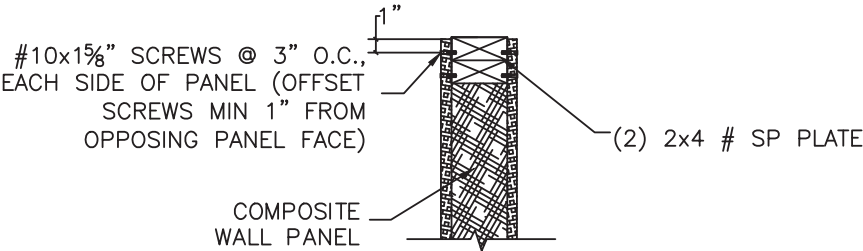
TEST
TESTING STANDARD: ASTM E72-10, SECTION 9 COMPRESSION LOAD TEST
SPECIMENS TESTED: THREE (3)
TEST SPECIMEN: 4'x10'x 4 5/8" PANELS AS SHOWN ABOVE



PANEL SECTION
N.T.S.



BASEPLATE SECTION
N.T.S.



TOPPLATE SECTION
N.T.S.

SEE TABLE 5, SHEET 8 FOR TEST RESULTS

PROJECT NO. 422-0610

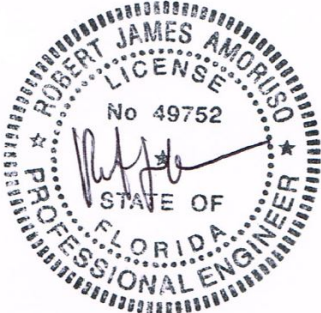
		RJA	BY
	1/6/23	RJA	DATE
GENERAL UPDATE			
UPDATE TO CURRENT EDITION FBC	10/14/20	RJA	
DESCRIPTION		REV	

INNOVA PANEL, LLC
1541B North Powerline Road
Pompano Beach, FL, 330639

TITLE: STRUCTURAL INSULATED PANEL - MgOMgO WALL PANEL
10' HIGH WALL PANEL DETAILS - COMPRESSION LOAD

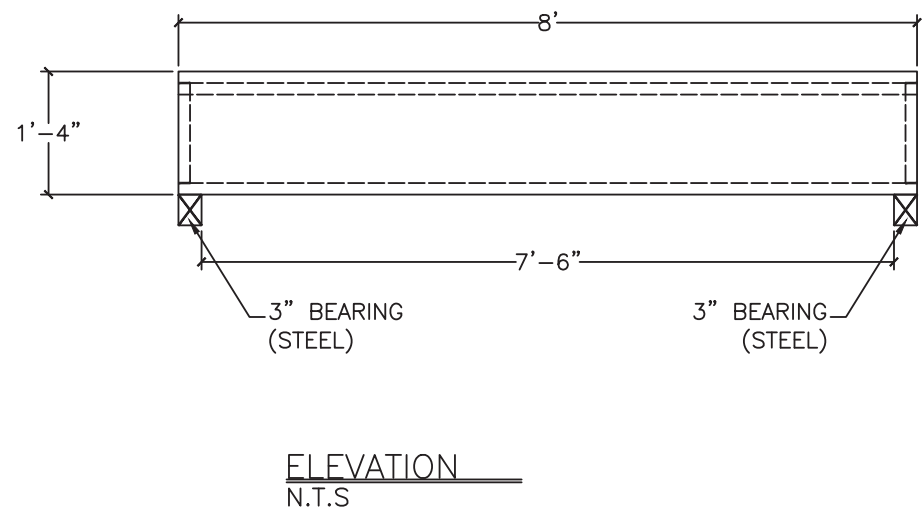
DATE:	10/12/16	DRAWING NO:	IEBS0007	SHEET:	6 OF 8
DRAWN BY:	RJA	SCALE:	NONE	REV:	C
PREPARED BY:					
PTC PRODUCT DESIGN GROUP, LLC P.O. Box 520775 Longwood, FL 32752-0775 FBPE Cert. of Auth. No. 25935					
Phone: 321.690.1788 Fax: 321.690.1789 Email: info@ptc-corp.com					

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Florida P.E. No. 49752

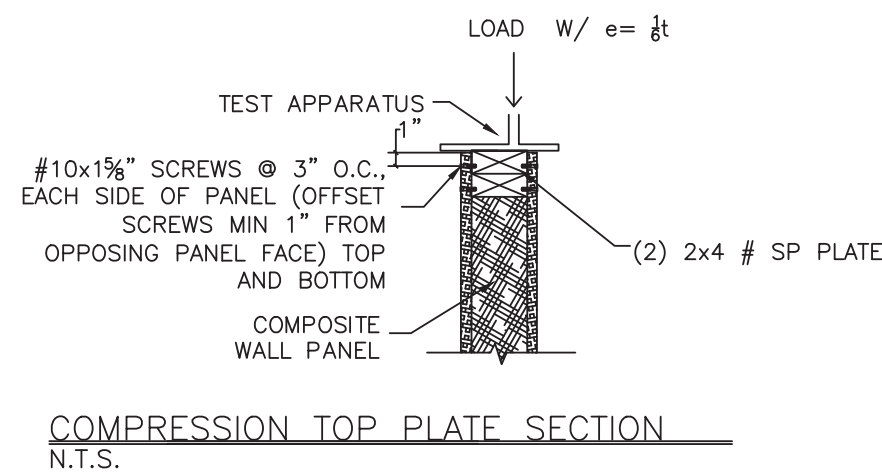
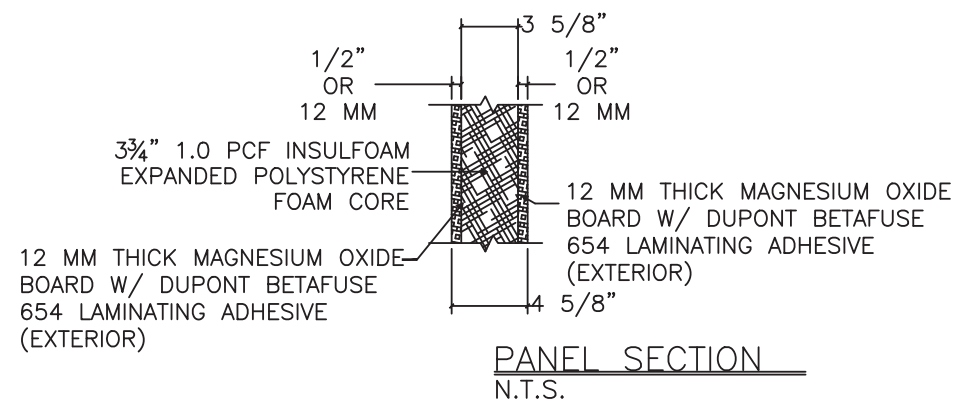


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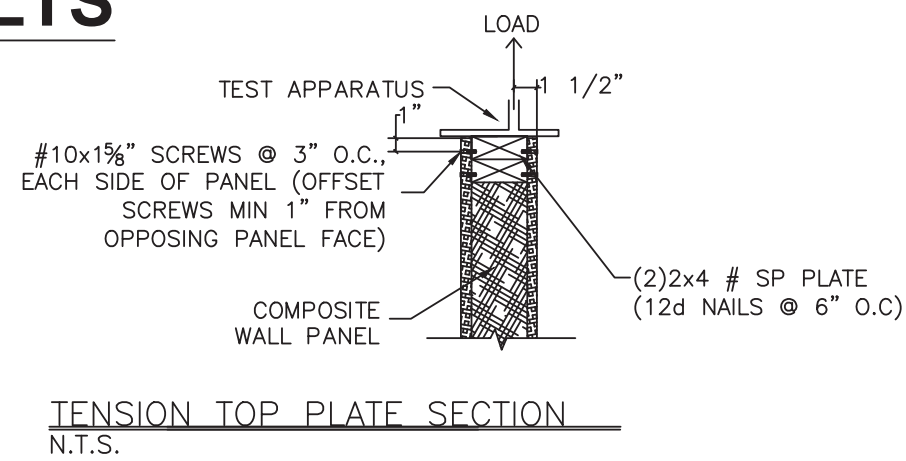
TENSION & COMPRESSION LOAD FOR 8'-0" (96") WIDE BY 1'-4" (16") HIGH



TEST
TESTING STANDARD: ASTM E72-10, COMPRESSIVE AND TENSILE LOAD TEST, "TWO-POINT"
LOADING (SIMILAR TO FIGURE 3)
SPECIMENS TESTED: THREE (3)
TEST SPECIMEN: 8'x1'-4"x4 5/8" PANELS, AS SHOWN ABOVE



SEE TABLE 6, SHEET 8 FOR TEST RESULTS



PROJECT NO. 422-0610			
		RJA	BY
	GENERAL UPDATE	1/6/23	DATE
	UPDATE TO CURRENT EDITION FBC	10/14/20	
	DESCRIPTION	REV	

INNOVA PANEL, LLC
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Longwood, FL 32752-0775
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TITLE: STRUCTURAL INSULATED PANEL - MgOMgO WALL PANEL
6" HIGH HEADER WALL PANEL DETAILS - TENSION & COMP. LOAD

DRAWN BY: RJA
SCALE: NONE
REV: C

DATE: 10/12/16
DRAWING NO: IEBS0007
SHEET: 7 OF 8

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

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by Robert J
Amoruso
Date: 2024.02.15
16:09:43 -05'00'

PERFORMANCE RATINGS SUMMARY									
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Table 1 - 8' wide x 10' high (See Sheet 2)			
ALLOWABLE RACKING SHEAR LOADS			
Deflection Limitation	Deflection Ratio	LOAD (lbs) *	DISTRIBUTED LOAD (lbs/ft)
	L/360	1751	219
	L/240	2380	297
	L/180	2996	374
	L/120	4281	535
* ACTING ON 8' WIDE TEST SPECIMEN			

Table 2 - 8' wide x 8' high (See Sheet 3)			
ALLOWABLE RACKING SHEAR LOADS			
Deflection Limitation	Deflection Ratio	LOAD (lbs) *	DISTRIBUTED LOAD (lbs/ft)
	L/360	1339	167
	L/240	2024	253
	L/180	2866	358
	L/120	4795	599
* ACTING ON 8' WIDE TEST SPECIMEN			

Table 3 - 8' wide x 10' high (See Sheet 4)			
ALLOWABLE UNIFORM TRANSVERSE PRESSURE (WIND) LOADS (PSF)			
DP Limitation	DP	63.3	psf
Deflection Limitation	L/360	n/a *	psf
	L/240	31.9	psf
	L/180	41.9	psf
	L/120	63.2	psf
* L/360 was exceeded in testing.			

Table 4 - 4' wide x 10' high (See Sheet 5)		
ALLOWABLE TENSION LOADING		
Load Limitation	LOAD (lbs) *	DISTRIBUTED LOAD (lbs/ft)
	2106	527
* ACTING ON 4' WIDE TEST SPECIMEN		

Table 5 - 4' wide x 10' high (See Sheet 6)		
ALLOWABLE COMPRESSION LOADING		
Load Limitation	LOAD (lbs) *	DISTRIBUTED LOAD (lbs/ft)
	5737	1434
* ACTING ON 4' WIDE TEST SPECIMEN		

Table 6 - 8' wide x 1'-4" high (See Sheet 7)		
ALLOWABLE TENSION LOADING		
Load Limitation	LOAD (lbs) *	DISTRIBUTED LOAD (lbs/ft)
	2034	254
* ACTING ON 8' WIDE TEST SPECIMEN		

Table 6 - 8' wide x 1'-4" high (See Sheet 7)		
ALLOWABLE COMPRESSION LOADING		
Load Limitation	LOAD (lbs) *	DISTRIBUTED LOAD (lbs/ft)
	3750	469
* ACTING ON 8' WIDE TEST SPECIMEN		

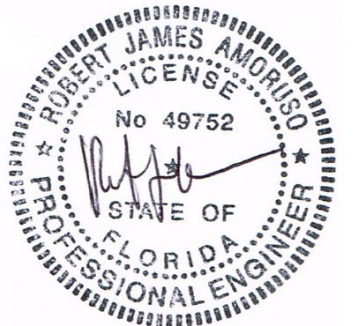
PROJECT NO. 422-0610				
C	GENERAL UPDATE	1/6/23	RJA	
B	UPDATE TO CURRENT EDITION FBC	10/14/20	RJA	
REV	DESCRIPTION	DATE	BY	

INNOVA PANEL, LLC 1541B North Powerline Road Pompano Beach, FL, 330639		TITLE: STRUCTURAL INSULATED PANEL - MgO/MgO WALL PANEL	
PERFORMANCE RATINGS		DATE:	
DRAWN BY:	RJA	10/12/16	
SCALE:	NONE	DRAWING NO:	
REV:	C	IEBS0007	
PREPARED BY:		SHEET: 8 OF 8	



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by Robert J
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Date: 2024.02.15
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